

**Annexure:**



**REQUEST FOR PROPOSAL (RFP)**  
**FOR**  
**SELECTION OF SYSTEM INTEGRATOR FOR**  
**EGOVERNANCE SOLUTION AND IT**  
**TRANSFORMATION OF DIRECTORATE**  
**GENERAL OF SHIPPING, GOVT OF INDIA**  
**VOLUME 1 OF 3**

**Tender Reference: DGS/E-Gov./21.12.2021**

**Last Date for Submission of Tender: 03/02/2022**

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4. This RFP includes certain statements, estimates, projections, targets and forecasts with respect to the project - eGovernance Solution and IT Transformation of DGS. Such statements estimates, projections, targets and forecasts reflect various assumptions made by the management, officers and employees of DGS, which assumptions (and the base information on which they are made) may or may not prove to be correct. No representation or warranty is given as to the reasonableness of forecasts or the assumptions on which they may be based and nothing in this RFP is, or should be relied on as, a promise, representation or warranty.

## Abbreviations

Abbreviation	Full Form
AMC	Annual Maintenance Contract
AOA	Article of Agreement
APAC	Automated Program Analysis for Cybersecurity
APAR	Annual Performance Appraisal Report
API	Application Program Interface
ASC	Annual Service Contract
ASI	Application Software and Interfaces
ATOM	Any Transport over MPLS
BE	Bachelor of Engineering
BOM	Bill of Material
BOQ	Bill of Quantity
CAD	Computer Aided design
CCA	Controller of Certifying authority
CCB	Change Control Board
CCN	Change Control Note
CDC	Continuous Discharge certificates
CGHS	Central Government Health Scheme
CMS	Content Management System
CMT	Change management, Migration and transitioning
COC	Certificate of Compliance
COE	Certificate of Endorsement
COP	Certificate of Proficiency
COS	Certificate of Service
COTS	Commercial off-the-shelf
CPWD	Central Public Works Department
CS	Commercial Score
CSC	Client Side Computing
CSE	Customer Service Executive
CVO	Chief Vigilance Officer
CVS	Concurrent Versions System
DBA	Database Administrator
DC	Data Centre
DD	Demand Draft
DDOS	Distributed Denial of Service
DGS	Directorate General of Shipping

Abbreviation	Full Form
DHTML	Dynamic Hyper Text Markup Language
DMZ	Demilitarized Zone
DOC	Document of Compliance
DOM	Document object Model
DPC	Department promotion committee
DR	Disaster Recovery
DRC	Disaster Recovery Centre
DSC	Digitally Signed Certificates
DSD	Data Scanning and Digitization
EMD	Earnest Money Deposit
EMS	Enterprise management system
FOBOT	Fibre optic break out tray
FRS	Functional Requirement Specification
FSI	Flag State Inspection
FSICS	Flag State Inspection Computerised System
GMDSS	Global Maritime Distress and Safety System
GOI	Government of India
HR	Human Resource
HRMS	Human Resource Management System
HTML	Hypertext Markup Language
HTTPS	Hypertext Transfer Protocol Secure
ICT	Information Communications Technology
IFM	IT facilities management
IIITB	International Institute of Information Technology, Bangalore
IME	Institute of Marine Engineer
IMO	International Maritime Organization
IMU	Indian Maritime University
INDOS	Indian National Database of Seafarers
IOMOU	Indian Ocean Memorandum of Understanding
IPR	Intellectual Property Rights
ISM	International Safety Management

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Abbreviation	Full Form
ISO	ISO policies
IT	Information Technology
ITIL	Information technology Infrastructure Library
IVR	Interactive Voice Response
KPI	Key Performance Indicator
LLP Act	Limited Liability Partnership Act
LRIT	Long Range Identification Tracking
MACP	Modified Assured Career Progression
MathML	Mathematical Markup Language
MBA	Master of Business Administration
MCA	Master of Computer Application
MDM	Mobile Device Management
MHTML	MIME (Multipurpose Internet Mail Extensions) Hypertext Markup Language
MIS	Management Information System
MMD	Mercantile Marine Department
MMSI	Maritime Mobile Service Identity
MOU	Memorandum of Understanding
MPLS	Multiprotocol label switching
MS Act	Merchant Shipping Act
MSA	Master Service Agreement
MSL	Merchant Shipping Law
MSP	Managed Service Provider
MSV	mechanized sailing vessels
MTI	Maritime Training Institute
MTO	Multimodal Transport Operators
NDA	Non-Disclosure Agreement
NSIC	National Small Industries Corporation
NWB	National welfare board
NWI	Networking infrastructure
ODBC	Open Database Connectivity
ODF	Open Document Format
OECD	Organisation for Economic Co-operation and Development

Abbreviation	Full Form
OEM	Original Equipment Manufacturer
OFC	Optical Fibre Cable
OMA	Open Mobile Alliance
ONM	Operations and maintenance
OTDR	Optical Time Domain Reflectometer
OWASP	Open web application security project
PBG	Performance Bank Guarantee
PDC	Primary Data Centre
PGM	Project governance and management
PIU	Project Implementation Unit
PKI	Public Key Infrastructure
PMO	Project Management Office
PO	Principal Officer
POP	Point of presence
POS	Point of Sale
PQ	Pre-Qualification Criteria
PSC	Port State Control
PSU	Public Sector Undertaking
PT	Performance Testing
QCBS	Quality cum Cost Based Selection
REST	Representational State Transfer
RFP	Request for proposal
RO (S)	Regional Office (Sails)
RPO	Recovery Point Objective
RPS	Recruitment and Placement Agencies for Seafarers
RR	Recruitment Rule
RSS	Rich Site Summary
RTF	Rich Text Format
RTI	Right to Information
RTO	Recovery Time Objective
SC	Subscriber Connector
SDLC	System Development Life cycle
SEO	Seamen Employment Office
SI	System Integrator
SIC	Surveyor in Charge
SIT	System Integration Testing
SLA	Service Level Agreement
SM	Shipping Master

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Abbreviation	Full Form
SMC	Safety Management Certificate
SMLC	System Maintenance Life cycle
SMS	Safety Management System
SMS	Short Message Service
SOA	Service Oriented Architecture
SOAP	Simple Object Access Protocol
SOLAS	Safety Of Life At Sea
SPFO	Seamen's Provident Fund Organization
SRS	Software Requirement Specifications
SSC	Staff selection Committee
SSDG	State e-Governance Service Delivery Gateway
STCW	Standard of Training Certificate And Watch Keeping Code
STQC	Standardization Testing and Quality Certification
SVG	Scalable Vector Graphics
SWFS	Seamen's Welfare Fund Society
SWO	Seamen's Welfare office
TAT	Turnaround time
TCO	Total Cost of Ownership
TS	Technical Score
UAT	User Acceptance Testing
UDDI	Universal Description, Discovery, and Integration
UPSC	Union Public Service Commission
URI	Uniform Resource Identifier
URN	Uniform Resource Name
UTP	Unshielded Twisted Pair
VCC	Vigilance Clearance Certificate
VLAN	Virtual Local Area Network
VM Attack	Virtual Machine Attack
VPN	Virtual Private Network

Abbreviation	Full Form
W3C	World Wide Web Consortium
WCAG	Web Content Accessibility Guidelines
WebDAV	World Wide Web Distributed Authoring and Versioning
WSDL	Web Services Description Language
WSRP	Web Services for Remote Portlets
XBRL	Extensible Business Reporting Language
XHTML	Extensible Hypertext Markup Language
XML	Extensible Markup Language
XPS	XML (Extensible Markup Language) Paper Specification
XSLT	Extensible Stylesheet Language Transformations
HTTP	Hyper Text Transfer Protocol
SMTP	Simple Mail Transfer Protocol
IIS	Internet Information Services
FTP	File Transfer Protocol
PAAS	Platform As A Service
NDPP	National Digital Preservation Programme
ICSA	International Computer Security association
EAL4	Evaluation Assurance Level
DNS	Domain Name Server
LDAP	Lightweight Directory Access Protocol
SSL	Secure Sockets Layer
TSL	Transport Layer Security
ARP	Address Resolution Protocol
UDP	USER Datagram Protocol
SHL	Secure Shell
DC	Data Center
DR	Disaster Recovery
VM	Virtual Machine
TCP	Transfer Control Protocol
SAN	Storage Area Network
DDOS	Distributed Denial of Service
MEITY	Ministry of Electronics and Information Technology

## Contents

<b>1</b>	<b>Overview .....</b>	<b>8</b>
1.1	Request for Proposal Datasheet.....	8
1.2	Introduction .....	11
1.3	Structure of RFP .....	11
<b>2</b>	<b>Background Information .....</b>	<b>12</b>
2.1	Basic Information.....	12
2.2	Key Information .....	12
2.2.1	Objectives.....	12
2.2.2	About the Organization .....	12
<b>3</b>	<b>Instruction to the Bidders .....</b>	<b>15</b>
3.1	General .....	15
3.2	Compliant Proposals / Completeness of Response .....	15
3.3	Pre-Bid Meeting & Clarifications .....	16
3.3.1	Pre-Bid Conference .....	16
3.3.2	Responses to Pre-Bid Queries and Issue of Corrigendum .....	16
3.3.3	Firm Prices .....	17
3.3.4	Bid Prices .....	17
3.3.5	Discount .....	18
3.4	Eligible bidders.....	18
3.4.1	Sole Bidder .....	18
3.4.2	Consortium of Firms .....	18
3.5	Inclusion of MSMEs in Project Delivery .....	19
<b>4</b>	<b>Key Requirements of the Bid .....</b>	<b>20</b>
4.1	Right to Terminate the Process .....	20
4.2	Right to Vary Scope of Contract .....	20
4.3	RFP Document Fees and Purchase .....	20
4.4	Earnest Money Deposit (EMD) .....	20
4.5	Submission of Proposal.....	21
4.6	Authentication of Bids.....	21
4.7	Bidder Authorization .....	21
4.8	Consortium Conditions .....	22
4.9	Local Conditions.....	22
4.10	Sub-Contracting .....	23
<b>5</b>	<b>Preparation and Submission of Proposal .....</b>	<b>24</b>

5.1	Bidder Preparation Conditions.....	24
5.2	Proposal preparation Costs .....	24
5.3	Language .....	24
5.4	Venue & Deadline for Submission of Proposals .....	25
5.5	Late Bids .....	25
5.6	Modification and Withdrawal of Bids .....	25
5.7	Address for Correspondence.....	25
5.8	Contacting the DGS .....	25
5.9	Bid Submission .....	25
<b>6</b>	<b>Evaluation of Bids .....</b>	<b>28</b>
6.1	Tender Opening .....	28
6.2	Bid validity .....	28
6.3	Criteria for Evaluation.....	28
6.4	Pre-Qualification Criteria .....	28
6.5	Technical Bid Evaluation .....	32
6.6	Commercial Bid Evaluation .....	42
<b>7</b>	<b>Appointment of System Integrator .....</b>	<b>44</b>
7.1	Award Criteria .....	44
7.2	Right to Accept Any Proposal and To Reject Any or All Proposal(s) .....	45
7.3	Notification of Award .....	45
7.4	Contract Finalization and Award.....	46
7.5	Performance Bank Guarantee .....	46
7.6	Signing of Contract.....	46
7.7	Failure to Agree with the Terms and Conditions of the RFP .....	46
<b>8</b>	<b>Rejection Criteria .....</b>	<b>47</b>
8.1	General Rejection Criteria .....	47
8.2	Technical Rejection Criteria.....	47
8.3	Commercial Rejection Criteria .....	48
<b>9</b>	<b>Constitution of Team .....</b>	<b>49</b>
<b>10</b>	<b>Project and Payment Schedule.....</b>	<b>52</b>
10.1	Project Timelines.....	52
10.2	Deliverables schedule .....	55
10.3	Payment schedule.....	59
10.4	Terms of payment .....	61
10.5	Invoicing and settlement.....	62

10.6	Taxes .....	62
10.7	Adherence to Deliverables .....	63
<b>11</b>	<b>Annexure.....</b>	<b>64</b>
11.1	Annexure: Technical Bid Forms.....	64
11.1.1	Tech 1: Technical Bid - Covering Letter .....	64
11.1.2	Tech 2: Particulars of the Bidder (please fill separate sheet for each consortium members) .....	67
11.1.3	Tech 3: Financial Capability .....	68
11.1.4	Tech 4: Profile of Resource .....	69
11.1.5	Tech 5: Certificate from HR demonstrating its Organization Strength .....	71
11.1.6	Tech 6: Technical Solution.....	72
11.1.7	Tech 7: Approach & Methodology .....	73
11.1.8	Tech 8: Project Plan & Deployment of Personnel.....	74
11.1.9	Tech 9: Format of Deployment of Personnel.....	75
11.1.10	Tech 10: Details of Experience of Bidder in Various projects .....	76
11.1.11	Tech 11: List of Sub-Contractors and OEMs and their details .....	78
11.1.12	Tech 12: Details of ineligibility for corrupt or fraudulent practices / blacklisted with any of the Government or Public Sector Units .....	79
11.1.13	Tech 13: Format for Consortium Agreement .....	80
11.2	Pre-qualification Bid Forms .....	81
11.2.1	Tech 14: Bank Guarantee for Earnest Money Deposit .....	81
11.2.2	Tech 15: CERTIFICATE OF CONFORMITY/ NO DEVIATION.....	82
11.2.3	Tech 16: Format – Declaration for No Conflict of Interest.....	83
11.2.4	Tech 17: Compliance Sheet for Pre-Qualification Proposal.....	84
11.2.5	Tech 18: Unpriced Bill of Material .....	85
11.3	Comp 1: Summary of Commercial Proposal.....	86
11.3.1	A1: Software & Related Cost (Implementation phase) .....	87
11.3.2	A2: Transitioning and change management training cost (Implementation phase)...	91
11.3.3	A3: IT certification cost.....	93
11.3.4	A4: System integration and manpower cost (Implementation phase) .....	94
11.3.5	A5: System integration and manpower cost (ONM phase) .....	96
11.3.6	A6: Software & Related Cost (ONM phase) .....	97
11.3.7	A7: Transitioning and change management training cost (ONM phase).....	100
11.3.8	Total Project Value: .....	102



## 1 Overview

### 1.1 Request for Proposal Datasheet

Sr No.	Bid Information	Details
1.	RFP Issuing Authority	Directorate General of Shipping
2.	RFP reference No and Date	DGS/E-Gov./21.12.2021
3.	Earnest Money Deposit (EMD)	<b>INR 45,00,000 /- (Rupees Forty-five Lakhs only)</b> , in the form of Bank Guarantee issued by a Nationalized / Scheduled Bank and drawn in favour of "Directorate General of Shipping" payable and encashable at Mumbai, valid for a period of 180 days from the date of submission of bid
4.	Availability of documents	The tender is available and downloadable on e-Tendering Website: <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a>  All Subsequent changes to the Bidding document shall be published on the above-mentioned website.
5.	Last date and time for submission of queries for clarifications	All the queries/clarification requests should be received on or before 05/01/2022 by 5:00 PM, through email only with subject line as follows: "Pre-Bid queries - <Bidder's Name>_DGS". The queries shall be submitted in an excel file as per the format prescribed in the RFP Volume 1 Clause 3.3.1 The Pre-Bid queries to be sent to the following email IDs: Email ID 1: <a href="mailto:singh.deependra@gov.in">singh.deependra@gov.in</a> Email ID 2: <a href="mailto:dgship-dgs@nic.in">dgship-dgs@nic.in</a>
6.	Date, time and venue of pre-bid conference	10/01/2022 at 11:00 AM  Directorate General of Shipping, Government of India, 9th Floor, Beta Building, i-Think Techno campus, Kanjurmarg (East), Mumbai - 400042

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

7.	Last date, time (deadline) and venue for receipt of proposals in response to RFP notice	03/02/2022 at 4:00 PM Submission of proposal will happen through Central Public Procurement Portal: <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a>
8.	Last date and time (deadline) for receipt of EMD in response to RFP notice	03/02/2022 at 4:00 PM Submission of scanned copies will happen through Central Public Procurement Portal: <a href="http://www.eprocure.gov.in">www.eprocure.gov.in</a> Address: Directorate General of Shipping, Government of India, 9th Floor, Beta Building, i-Think Techno campus, Kanjurmarg (East), Mumbai - 400042
9.	Date, time and venue of opening of Technical Proposals received in response to the RFP notice	04/02/2022 at 4:05 PM Directorate General of Shipping, Government of India, 9th Floor, Beta Building, i-Think Techno campus, Kanjurmarg (East), Mumbai - 400042
10.	Place, time and date of Technical Presentations by the bidders	To be communicated later
11.	Place, time and date of opening of Financial Proposals received in response to the RFP notice	To be communicated later
12.	Contact person for queries	Mr. Deependra Singh Bisen < <a href="mailto:singh.deependra@gov.in">singh.deependra@gov.in</a> >

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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13.	Method of Selection	<p>The method of selection is Quality cum Cost Based Selection (QCBS).</p> <p>The weights given to the Technical and Commercial Bids are:</p> <p>Technical = 70% and Commercial = 30%</p>

## 1.2 Introduction

The Directorate General of Shipping, India deals with implementation of shipping policy and legislation so as to ensure the safety of life and ships at sea, prevention of marine pollution, promotion of maritime education and training in co-ordination with the International Maritime Organization, regulation of employment and welfare of seamen, development of coastal shipping, augmentation of shipping tonnage, examination and certification of Merchant Navy Officers, Supervision and Control of the allied offices under its administrative jurisdiction.

With reducing operating strength and with the advent of technology and modern practices, a need has been felt to realign its processes with industry leading practices through use of information technology

## 1.3 Structure of RFP

Directorate General of Shipping invites bids from eligible parties (hereafter referred as “Bidder”) for appointment as System Integrator and provide a comprehensive solution as specified in the Scope of Work Section (Volume II) of this RFP.

This Request for Proposal (RFP) document for Appointment of the System Integrator towards eGovernance solution and IT transformation of Directorate General of Shipping comprises of the following:

- Volume I: Instructions on the Bid process for the purpose of responding to this RFP. This broadly covers:
  - General instructions for bidding process
  - Bid evaluation process including the parameters for Technical evaluation and commercial evaluation to facilitate DGS in determining bidder’s suitability as the implementation partner
  - Payment schedule
  - Project Schedule
  - Technical Bid Formats
  - Commercial bid format
- Volume II: Functional and Technical Requirements of the project. The contents of the document broadly cover the following areas:
  - About the project and its objectives
  - Scope of work for the bidder
  - Functional and Technical requirements
  - Indicative Bill of Material (BOM)

The bidder is expected to respond to the requirements as completely and in as much relevant detail as possible, and focus on demonstrating bidder’s suitability to become the system integrator for the eGovernance Solution and IT Transformation Project of DGS.

- Volume III: Master Service Agreement (MSA), including general conditions of contract, Service Level Agreement (‘SLA’) and Non-Disclosure Agreement (‘NDA’).

The bidders are expected to examine all instructions, forms, terms, Project requirements and other information in the RFP documents. Failure to furnish all information required as mentioned in the RFP documents or submission of a proposal not substantially responsive to the RFP documents in every respect will be at the Bidder's risk and may result in rejection of the proposal.

## 2 Background Information

### 2.1 Basic Information

- I. DGS invites proposals (“Bids”) to this Request for Proposal (“RFP”) from System Integrator Agencies (“Bidders”) for the “eGovernance Solution and IT Transformation of DGS” as described in Volume II of this RFP, “Scope of Work”.
- II. The tenure of the contract of the successful bidder shall be for a term of Implementation Period plus 3 years of Operations and Maintenance phase (“The Term”)
- III. DGS reserves the right to extend the contract by 2 years on the same terms & conditions and on the contract prices decided pursuant to this tender
- IV. Proposals must be received not later than time, date and venue mentioned in the Fact Sheet. Proposals that are received late WILL NOT be considered in this procurement process.
- V. Bidders are advised to study the tender document carefully. Submission of bid shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.

### 2.2 Key Information

#### 2.2.1 Objectives

The primary objectives of this envisaged project is to undertake an IT transformation exercise and enable all the processes in the organization through the implementation of Comprehensive eGovernance solution. The system objectives are:

- To move towards a paperless regime
- Improve transparency and provide speedy service delivery through adoption of web-based communication, and latest technology advances
- Computerize and automate all its functions related to Shipping and seafarer operations and maintenance and internal administration
- Facilitate integration with Ministry of Ports, Shipping and Waterways’ IT systems for data exchange enabling the creation of unified dashboards for different stakeholders
- Enhance the existing e-Governance operations and processes with ease of accessibility and resolution of existing issues with the same
- Improve the user interactions, integration channels, and enhance Ease of Doing Business
- Provide support to initiatives and align with the vision and objectives, of the Ministry of Ports, Shipping and Waterways
- Assist the Ministry of Ports, Shipping and Waterways and DGS to advance the Data Governance Quality Index (DGQI) of the Ministry of Ports, Shipping and Waterways

Upon implementation of the solution, it is expected that the system will establish proper information flow to help and support decision making. The implementation will result in increased customer satisfaction, better financial results, transparency and consistency in business operation and processes.

#### 2.2.2 About the Organization

##### I. Vision and organizational objectives

- Vision  
To be recognized globally as a highly effective, efficient, responsible and progressive maritime administration

- **Mission**

Provide an effective supervisory and regulatory regime conducive to:

1. achieve safe, efficient and secure shipping,
  2. protect the marine environment,
  3. all-round growth of maritime university and
- Provide support to the Government of India in developing and implementing a holistic and integrated maritime development program that has a positive impact on national economy;
  - Develop and Implement policies that facilitate an environment which is conducive for promoting an investment in the expansion of a modern merchant fleet under the Indian flag and develop globally competitive ship building and repair facilities;
  - Develop and sustain a high-quality human resource management catering to global needs including national maritime industry for competent seafarers;
  - Ensure good governance by adhering to the highest standards of integrity, quality and efficiency in delivery of shipping services through constant innovation, technology upgradation and value addition
  - Develop measures to ensure compliance of relevant international instruments relating to safety and security of ships, protection of environment and welfare of seafarers.

## **II. Vision for this Project:**

Create a sustainable IT environment with Major IT transformation for DGS that integrates technology into the framework of the DGS Business, Services and an emphasis on complete automation and governance and footfall free office.

## **III. Key objectives of the organization include but are not limited to:**

- Matters affecting Merchant Shipping & navigation and administration of the Merchant Shipping Law;
- Measures to ensure safety of life and ships at sea;
- Development of Indian Shipping;
- International Conventions relating to Maritime matters;
- Provision of facilities for training of Officers and ratings for Merchant Navy
- Regulation of Employment of Seamen and their welfare;
- Development of Sailing Vessel Industry and
- Regulation of Ocean freight rates in overseas trades

The Directorate is headed by the Directorate General of Shipping ('DGS'), who is assisted by:

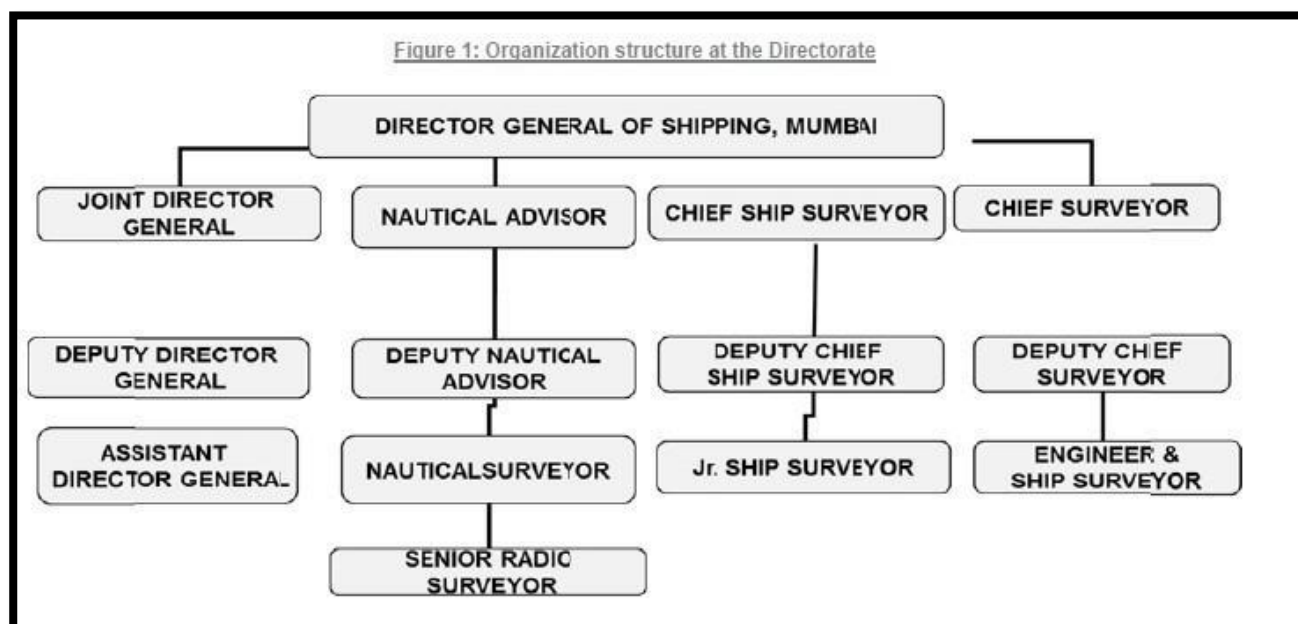
### *Administrative side:*

- Joint Director General of Shipping,
- Dy. Director General of Shipping
- Assistant Director General of Shipping and Executive Officers

### *Technical side:*

- The Nautical Advisor, supported by Dy. Nautical Advisors and Nautical Surveyors;
- The Chief Surveyor, on the Engineering side, supported by Dy. Chief Surveyors, Dy. Chief Ship Surveyor, Engineer & Ship Surveyors and Ship Surveyor and with supporting staff.
- The Nautical Advisor and the Chief Surveyor are also the Chief Examiners of Masters/Mates and Engineers respectively on behalf of the Director General of Shipping

**Organization structure of the DGS (Comprising Field offices, Allied offices and autonomous bodies etc.)**



The directorate operates through various departments and offices, spread across locations in India which are as follows:

DGS Headquarters	Mercantile Marine department (MMD)	Allied Offices	Autonomous bodies
Directorate General of Shipping Administrative wing Engineering wing Nautical wing Naval architecture	1. Mumbai 2. Chennai 3. Kolkata 4. Kochi 5. Kandla  Subordinate offices 6. Vishakhapatnam 7. Tuticorin 8. Noida 9. Goa 10. Mangalore 11. Port Blair 12. Haldia 13. Paradeep 14. Jamnagar	1. Seamen Employment offices at Mumbai, Kolkata and Chennai 2. Shipping office 3. Regional office (SAILS), at Mumbai, Jamnagar and Tuticorin. 4. Seamen's welfare office (SWO), Chennai	1. Seamen's Welfare Fund Society (SWFS) 2. Seamen's Provident Fund Organization (SPFO) 3. National Shipping Board

### **3 Instruction to the Bidders**

#### **3.1 General**

- I. While every effort has been made to provide comprehensive and accurate background information and requirements and specifications, Bidders must form their own conclusions about the solution needed to meet the requirements. Bidders and recipients of this RFP may wish to consult their own legal advisers in relation to this RFP.
- II. All information supplied by the successful bidder may be treated as contractually binding on the bidder, on successful award of the assignment by the DGS on the basis of this RFP.
- III. No commitment of any kind, contractual or otherwise shall exist unless and until a formal written contract has been executed by or on behalf of the DGS. Any notification of preferred bidder status by the DGS shall not give rise to any enforceable rights by the Bidder.
- IV. The DGS may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of the DGS.
- V. This RFP supersedes and replaces any previous public documentation & communications, and Bidders should place no reliance on such communications.
- VI. No oral conversations or agreements with any official, agent, or employee of DGS shall affect or modify any terms of this tender and any alleged oral agreement or arrangement made by a bidder with any agency, official or employee of DGS shall be superseded by the definitive agreement that results from this tender process.
- VII. Neither the bidder nor any of bidder's representatives shall have any claims whatsoever against DGS or any of their respective officials, agents, or employees arising out of or relating to this tender or these procedures (other than those arising under a definitive service agreement with the bidder in accordance with the terms thereof).
- VIII. All proposals and accompanying documentation of the Technical proposal will become the property of DGS and will not be returned after opening of the technical proposals.
- IX. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it.
- X. Interested eligible Bidders may obtain further information and inspect the tender documents at the office of the Directorate General of Shipping, Government of India, 9th Floor, Beta Building, i-Think Techno campus, Kanjurmarg (East), Mumbai - 400042

#### **3.2 Compliant Proposals / Completeness of Response**

- I. Bidders are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of the bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.
- II. Failure to comply with the requirements of this paragraph may render the Proposal noncompliant and the Proposal may be rejected. Bidders must:
  - a) Include all documentation specified in this RFP;
  - b) Follow the format of this RFP and respond to each element in the order as set out in this RFP.
  - c) Comply with all requirements as set out within this RFP

DGS shall at its sole discretion be entitled to determine the adequacy / sufficiency of the information provided by the bidder.



### 3.3 Pre-Bid Meeting & Clarifications

#### 3.3.1 Pre-Bid Conference

- I. DGS shall hold a pre-bid virtual meeting with the prospective bidders on 10/01/2022 at 11:00 AM. The link for the meeting will be shared with the bidders who share pre-bid queries.
- II. The Bidders will have to ensure that their queries for Pre-Bid meeting should reach to Directorate General of Shipping, Government of India, 9th Floor, Beta Building, i-Think Techno campus, Kanjurmarg (East), Mumbai - 400042 by email on or before 05/01/2022 by 5:00 PM.
- III. The queries should necessarily be submitted in the following format

#### Name of Person(s) Representing the Company/ Firm:

Name of Person	Designation	Email ID(s)	Tel. Nos. & Fax Nos.

S. No	RFP Document Reference (s) (Page Number and Section Number)	Content of RFP Requiring Clarification	Points of Clarification
1.			
2.			
3.			
4.			
5.			

- IV. DGS shall not be responsible for ensuring that the bidders' queries have been received by them. Any requests for clarifications after the indicated date and time may not be entertained by the DGS.
- V. Queries must be strictly submitted only in the prescribed format (.XLS/.XLSX). Queries not submitted in the prescribed format will not be considered/ responded at all by the procuring entity.

#### 3.3.2 Responses to Pre-Bid Queries and Issue of Corrigendum

- I. The Nodal Officer notified by the DGS will endeavour to provide timely response to all queries. However, DGS makes no representation or warranty as to the completeness or accuracy of any response; neither response nor does DGS undertake to answer all the queries that have been posed by the bidders. The responses to the queries from all bidders will be distributed to all.

- II. At any time prior to the last date for receipt of bids, DGS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP Document by a corrigendum.
- III. The Corrigendum (if any) & clarifications to the queries from all bidders will be posted on the website mentioned in the Proposal Data Sheet.
- IV. Any such corrigendum shall be deemed to be incorporated into this RFP.
- V. In order to provide prospective Bidders reasonable time for taking the corrigendum into account, DGS may, at its discretion, extend the last date for the receipt of Proposals. Notifications regarding extensions, corrigendum, will be published on the website mentioned in the tender schedule and there shall be no paper advertisement.

#### 3.3.3 Firm Prices

- I. Prices quoted must be firm and final and shall remain constant throughout "The Term" of the contract and shall not be subject to any upward modifications, on any account whatsoever. The Bid Prices shall be indicated in Indian Rupees (INR) only.
- II. The Commercial Bid should clearly indicate the price to be charged without any qualifications whatsoever and should include all taxes, duties, fees, levies, works contract tax and other charges as may be applicable in relation to the activities proposed to be carried out.
- III. The taxes quoted in the offer should be as per the prevailing tax rates. Any subsequent increase in the tax rates or introduction of new tax will be paid by DGS. Similarly, any benefits arising due to downward revision in tax rates, or any exemptions availed by the Bidder organization should be passed on to DGS.
- IV. A proposal submitted with an adjustable price quotation or conditional proposal shall be treated as non-responsive and the bid may be rejected.

#### 3.3.4 Bid Prices

- I. The Bidder shall indicate in the Proforma prescribed, the unit rates and total Bid Prices of the equipment / services, it proposes to provide under the Contract. Prices should be shown separately for each item as detailed in Tender Documents.
- II. The Bidder shall prepare the bid based on details provided in the tender documents. It must be clearly understood that the Scope of Work is intended to give the Bidder an idea about the order and magnitude of the work and is not in any way exhaustive and guaranteed by DGS. The Bidder shall carry out all the tasks in accordance with the requirement of the tender documents and it shall be the responsibility of the Bidder to fully meet all the requirements of the tender documents.
- III. If at any stage during the currency of the contract, the solution proposed does not meet the functional requirements, conceptual design, performance requirements / SLA, and other requirements of Tender, the Bidder shall revise the required specifications and/or quantities as proposed by the Bidder in his bid in order to meet the said objectives/targets. This is applicable for upward revisions only with the consent of DGS; downward revisions will not be allowed for the bidder. All such provisions shall be made by the Bidder within the lump sum contract price, at no extra cost to DGS and without any impact to DGS whatsoever.

### 3.3.5 Discount

The Bidder is advised not to indicate any separate discount. Discount, if any, should be merged with the quoted prices. Discount of any type, indicated separately, will not be taken into account for evaluation purpose.

## 3.4 Eligible bidders

- I. Bidder should be eligible to operate in conformity with the provisions of the laws in India and shall have a registered office within India.
- II. Bidder should not have any conflict of interest with any parties included in the Bidding process.
- III. Bids may be submitted in either of the following categories of bidders only:

### 3.4.1 Sole Bidder

The Sole Bidder must be a System Integrator (SI) company which has the capabilities to deliver the entire scope as mentioned in the tender. The Sole Bidder cannot bid as a part of any other consortium bid under this tender.

### 3.4.2 Consortium of Firms

Bids can be submitted by a consortium of firms. The total number of consortium members cannot exceed two, including the lead bidder of the consortium. The consortium must provide the details of formation of the consortium, percentage of stake of each consortium member and the role of each member of the consortium with reference to this project.

Bids submitted by a consortium should comply with the following requirements also:

- I. Any of the Lead Bidders cannot be a Consortium Member with another bidder in a separate bid or a sole bidder in separate bid.
- II. The list of Consortium Members needs to be declared in the bid which cannot be changed by the bidder later on.
- III. No consortium member should be blacklisted by any governing authority.
- IV. Any change in the consortium member at a later date should not be allowed for cases where the consortium has benefited from the non-lead bidders credentials/ experience
- V. Lead Bidder shall be responsible and liable for the successful completion of the entire project. Please note that the consortium together will be jointly and severally liable for the scope of their activities.
- VI. The Lead Bidder should confirm unconditional acceptance of full responsibility for executing the 'Scope of Work' and meeting all obligations of this tender. This confirmation should be furnished as part of the Technical Bid.
- VII. The Lead Bidder and the Consortium Members shall enter into a tri-partite agreement with the DGS.
- VIII. The lead bidder and consortium members shall clearly define the roles and responsibilities / scope of work in the Memorandum of Understanding (MoU) to be signed and submitted to DGS. The MoU shall be prepared on a stamp paper of requisite value and shall be submitted along with the Technical. It shall be the responsibility of the bidders to adhere to the MoU being submitted and no interchange of responsibilities later shall be considered by DGS
- IX. MoU / Agreement should also be addressed to the DGS clearly stating the following at the minimum:

- Names of Lead Bidder and Consortium member
- The MoU / Agreement is applicable to this tender and shall be binding on the Consortium members for the contract period.
- Consortium members have read and examined in detail all the bidding documents in respect of the above-mentioned tender, in respect to product(s) / services offered / supplied.
- Roles and Responsibilities of the Consortium members shall be clearly defined.
- In case of any dissatisfaction or default on part of the lead Bidder, Consortium member would provide the level of support desired by DGS without any financial liability.
- The Bidder and the consortium member should not be involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this contract.
- The bidder and the Consortium member should not have been black-listed by any Central / State Government or Public Sector Undertakings.
- DGS reserves the right to review, approve and amend the terms of the Consortium Contract or any contract or agreements entered into by and between the members of such Consortium and no such agreement/contract shall be executed, amended, modified and/or terminated without the prior written consent of DGS. An executed copy of each of such agreements/contracts shall, immediately upon execution be submitted by the Lead Bidder to DGS.

### **3.5 Inclusion of MSMEs in Project Delivery**

Bidders are encouraged to include Micro, Small and Medium Enterprises (MSMEs) in the delivery of the project. Bidders are encouraged to earmark a minimum of 20% of the total contract for procuring goods and services from MSEs. The procurement through MSEs should be in line with Order dated 23rd March 2014 regarding procurement policy for Micro and Small Enterprises (MSEs). Activities that can be sub-contracted to MSME/MSE partners are restricted to those defined under Sub-Contracting Clause 4.10 below.

## **4 Key Requirements of the Bid**

### **4.1 Right to Terminate the Process**

- I. DGS may terminate the RFP process at any time and without assigning any reason. DGS makes no commitments, express or implied, that this process will result in a business transaction with anyone.
- II. This RFP does not constitute an offer by DGS. The bidder's participation in this process may result DGS selecting the bidder to engage towards execution of the contract. Right to Vary Scope of Contract
  - i. DGS may at any time, by a written order given to the bidder, make changes within the quantities, specifications, services or scope of the Contract as specified.
  - ii. If any such change causes an increase or decrease in the cost of, or the time required for the bidder's performance of any part of the work under the Contract, whether changed or not changed by the order, an equitable adjustment on mutually agreed terms shall be made in the Contract Price or time schedule, or both, and the Contract shall accordingly be amended. Any claims by the bidder for adjustment under this Clause must be asserted within thirty (30) days from the date of the bidder's receipt of the DGS's changed order.

### **4.2 Right to Vary Scope of Contract**

- I. DGS reserves the right to negotiate with the bidder(s) whose proposal has been most responsive. On this basis the draft contract agreement would be finalized for award & signing.
- II. DGS may at any time, by a written order given to the Bidder, make changes within the quantities, specifications, services or scope of the Contract as specified.
- III. In case of increase in quantity of any line item(s) of the Bill of Material, the bidder agrees to carry out / provision for such additional requirement at the rate as provided in the financial bid. In case of decrease in quantity of any line item(s) of the Bill of Material, the bidder shall reduce the quoted cost with the rate quoted in the Financial bid.

### **4.3 RFP Document Fees and Purchase**

- I. The Bidders shall download the tender document from the e-Tendering website as mentioned in the Proposal Data Sheet.
- II. The Bidders have to upload the scanned image of the demand draft towards cost of tender document (mentioned in the Proposal Data Sheet) along with the online bid submission. The actual DD will be submitted at the address, date and time mentioned in Data Sheet.
- III. The downloading of the tender documents shall be carried out strictly as provided on the web site.
- IV. The tender document fee is non-refundable and not exempted.

### **4.4 Earnest Money Deposit (EMD)**

- I. Bidder shall submit EMD of Rs. 45,00,000/- (Rupees Forty-five lakh only) in the form of Bank Guarantee ('BG') drawn in favour of "Directorate General of Shipping" from any Nationalized / Scheduled Bank having its branch at Mumbai and encashable at Mumbai. The BG validity period shall be same as the period of tender validity. BG shall be verified independently by the DGS with the bank before finalisation of technical offers; In the event of lack of confirmation of issue of the BG by the bank, the bid shall stand disqualified.

- II. The EMD is required to protect the DGS against the risk of Bidder's conduct, which would warrant the EMD forfeiture.
- III. Unsuccessful Bidder's EMD will be returned as promptly as possible after the award of the contract to the successful bidder. The EMD, for the amount mentioned above, of successful bidder would be returned upon submission of Performance Bank Guarantee/ Security Deposit.
- IV. The EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it.
- V. The bid / proposal submitted without EMD, mentioned above, will be summarily rejected.
- VI. The Bidder has to upload the scanned image of the BG towards EMD (mentioned in the Proposal Data Sheet) along with the online bid submission. The actual BG shall be submitted at the address, time and date as mentioned in Data Sheet.
- VII. The EMD may be forfeited:
  - a. If a bidder withdraws its bid during the period of bid validity.
  - b. In case of a successful bidder, if the bidder fails to sign the contract in accordance with this RFP.
  - c. If a bidder fails to provide required information during the evaluation process or is found to be non-responsive

#### **4.5 Submission of Proposal**

- 1. The bidders should submit their responses as per the format given in this RFP in the following manner:
  - a. Pre-Qualification Proposal and Technical Proposal
  - b. Commercial Proposal
- 2. Please Note that prices should not be indicated in the Technical Proposal but should only be indicated in the Commercial Proposal. Also, a bidder cannot submit more than 1 bid or alternative offers with more than one Standard Integrated solution.
- 3. Submission of proposal will happen through Central Public Procurement Portal.

#### **4.6 Authentication of Bids**

The Proposal should be accompanied by a power-of-attorney in the name of the signatory of the Proposal.

#### **4.7 Bidder Authorization**

- I. The "Bidder" as used in the tender documents shall mean the one who has signed the Tender Forms. The Bidder may be either the Principal Officer or his duly Authorized Representative, in either case, he/she shall submit a power of attorney. All certificates and documents (including any clarifications sought and any subsequent correspondences) received hereby, shall be furnished and signed by the Principal Officer / authorized signatory.
- II. It is further clarified that the individual signing the tender or other documents in connection with the tender must certify whether he/she signs as the Constituted attorney of the firm, or a company.
- III. The authorization shall be indicated by written power-of-attorney accompanying the bid.

- IV. Any change in the Principal Officer / authorized signatory shall be intimated to DGS in advance.

#### **4.8 Consortium Conditions**

- I. The Consortium shall have not more than 2 members / partners. The share of the lead member shall not be less than 50% in the Consortium. The equity of each partner of the consortium shall be stated clearly in the MoU submitted by the bidder
- II. The lead member shall be responsible for participating in the tender, execution, signing all the documents related therewith up to signing of agreement and execution of all the contractual obligations there after (in case of award of contract) i.e. responsible for establishing and operating the total access control solution to DGS including warranty and Comprehensive AMC obligations on a turn-key basis.
- III. In case of consortium the experience and financial criteria should be jointly fulfilled. Validity of the consortium agreement entered upon should continue for entire period of contract as specified in the tender or extended period and should be irrevocable for the above periods and should include clause nominating the Lead member to act on behalf of all the Consortium members.
- IV. The Lead member must be authorized to receive instruction / communications from DGS, authorized to incur liabilities and shall deliver all the provisions of the contract on behalf of consortium members. The consortium should furnish MOU indicating the name of lead partner.
- V. However, all the members of the consortium must also, jointly and severally, be responsible for satisfactory execution and performance of the contract. An irrevocable affidavit shall be furnished on suitable non-judicial stamp paper duly notarized giving undertaking for jointly and severally owning responsibility towards contractual obligations throughout the contract period.

#### **4.9 Local Conditions**

- I. It will be incumbent upon each Bidder to fully acquaint himself with the local conditions and other relevant factors which would have any effect on the performance of the contract and / or the cost.
- II. The Bidder is expected to obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into contract. Obtaining such information shall be at Bidder's own cost.
- III. Failure to obtain the information necessary for preparing the bid and/or failure to perform activities that may be necessary for the providing services before entering into contract will in no way relieve the successful Bidder from performing any work in accordance with the Tender documents.
- IV. It will be imperative for each Bidder to fully inform themselves of all legal conditions and factors which may have any effect on the execution of the contract as described in the bidding documents. DGS shall not entertain any request for clarification from the Bidder regarding such conditions.
- V. It is the responsibility of the Bidder that such factors have properly been investigated and considered while submitting the bid proposals and that no claim whatsoever including those for financial adjustment to the contract awarded under the bidding documents will be entertained by DGS and that neither any change in the time schedule of the contract nor any financial adjustments arising thereof shall be permitted by the DGS on account of failure of



the Bidder to appraise themselves of local laws and site conditions.

#### **4.10 Sub-Contracting**

The bidder may use the services of a sub-contractor to leverage their specialized experience. Sub-contracting would be subject to the following conditions:

- i. All sub-contracting arrangements must form part of the bid.
- ii. All sub-contracting contracts must be entered into by the bidder / lead bidder.
- iii. Sub-contracting should not dilute the responsibility and liability of the bidder.
- iv. Any changes in sub-contractors must be approved by DGS prior to conclusion of any contract between the bidder and the sub-contractor.
- v. DGS retains the right to request discontinuation of sub-contracting of activities at any time during the contract period.



## **5 Preparation and Submission of Proposal**

### **5.1 Bidder Preparation Conditions**

- i. The bidder shall prepare the bid based on details provided in the tender documents. It must be clearly understood that the quantities, specifications and diagrams that are included in the tender document are intended to give the bidder an idea about the scope and magnitude of the work and are not in any way exhaustive and guaranteed by DGS
- ii. The bidder shall carry out the sizing of the solution based on internal assessment and analysis, which may include the use of modelling techniques wherever necessary.
- iii. The bidder must propose a solution best suited to meet the requirements of the DGS. If, during the sizing of the solution, any upward revisions of the specifications and/or quantity as given in this tender document, are required to be made to meet the conceptual design and/or requirements of tender, all such changes shall be included in the technical proposal and their commercial impact, thereof, included in the commercial bid.
- iv. If, during the sizing of the solution, any additional product that is not listed in the tender document is required to be included to meet the conceptual design, performance requirements and other requirements of tender, all such product(s) should be included by the bidder in the technical proposal and their commercial impact, thereof, included in the commercial bid.
- v. DGS will in no case be responsible or liable for any costs associated with the design/sizing of the proposed solution, regardless of the conduct or outcome of the Tendering process.
- vi. If at any stage during the currency of the contract, the solution proposed does not meet the functional requirements, conceptual design, performance requirements/SLA, and other requirements of tender, the bidder shall revise the required specifications and/or quantities as proposed by the bidder in his bid in order to meet the said objectives/targets. All such provisions shall be made by the bidder within the lump sum contract price, at no extra cost to DGS and without any impact to DGS whatsoever.

### **5.2 Proposal preparation Costs**

- I. The bidder shall be responsible for all costs incurred in connection with participation in the RFP process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, participation in meetings/discussions/ presentations, preparation of proposal, in providing any additional information required by DGS to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process.
- II. DGS will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

### **5.3 Language**

The Bids prepared by the Bidder and all correspondence and documents relating to the bids exchanged by the Bidder and the DGS, shall be written in English language, provided that any printed literature furnished by the Bidder may be written in another language so long the same is accompanied by an English translation in which case, for purposes of interpretation of the bid, the English translation shall govern.

## **5.4 Venue & Deadline for Submission of Proposals**

Proposals, in its complete form in all respects as specified in the RFP, must be submitted to DGS through Central Public Procurement Portal.

## **5.5 Late Bids**

- I. Bids received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained
- II. The bids submitted by telex/telegram/fax/e-mail etc. shall not be considered. No correspondence will be entertained on this matter.
- III. DGS reserves the right to modify and amend any of the above-stipulated condition/ criterion depending upon project priorities vis-à-vis urgent commitments.

## **5.6 Modification and Withdrawal of Bids**

- I. No bid may be altered / modified after submission to the DGS. Unsolicited correspondences in this regard from Bidder will not be considered.
- II. No bid may be withdrawn in the interval between the last date for receipt of bids and the expiry of the bid validity period specified by the Bidder in the Bid.
- III. Prices in any form or by any reason before opening the Commercial Bid should not be revealed. If price change is envisaged due to any clarification, revised Bids can be called from all the bidders by DGS.
- IV. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its EMD.

## **5.7 Address for Correspondence**

The Bidder shall designate the official mailing/e-mail address, place and fax number to which all correspondence shall be sent by the DGS.

## **5.8 Contacting the DGS**

- I. No Bidder shall contact the DGS on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded.
- II. Any effort by a Bidder to influence the DGS's bid evaluation, bid comparison or contract award decisions shall result in the rejection of the Bidder's bid.

## **5.9 Bid Submission**

- I. Bidders are required to enrol on the e-Tendering website on the link provided in the Proposal Data sheet
- II. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- III. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the e-Tendering Portal.
- IV. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India with their profile.
- V. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- VI. Bidder shall then log in to the site through the secured log-in by entering their user ID /

password and the password of the DSC / e-Token.

- VII. The proposal should contain ATLEAST the following submission for on the e-Tendering Portal. However, this is not an exhaustive list, bidder is expected to go through the tender and provide documents as necessary
- VIII. During Online Bid Preparation stage, bidders are allowed to make any changes or modifications in the bid data uploaded by them in Technical as well as Commercial envelope. Once a bidder successfully completes the Bid Preparation stage (by generating the Hash Values), system won't allow him/her to make any further changes or modifications in the bid data.

**Technical Bid:** The list of Documents to be submitted as part of Technical bid is provided below.

Covering Letter – Technical Bid	Please refer Tech 1
Prequalification compliance sheet	Please refer Tech 17
Bidder Details	Please refer Tech 2
Financial Capabilities	Please refer Tech 3
Profile of Resource	Please refer Tech 4
Manpower Details	Please refer Tech 5
Technical Solution	Please refer Tech 6
Unpriced Bill of Material	Please refer Tech 18
Approach and Methodology	Please refer Tech 7
Project Plan and development	Please refer Tech 8
Deployment of Personnel	Please refer Tech 9
Details of Experience of Bidder in Various Projects	Please refer Tech 10
List of Sub-Contractors and OEMs and their details	Please refer Tech 11
Black-listing Certificate	Please refer Tech 12
Format of Consortium Agreement	Please refer Tech 13
Bank Guarantee for Earnest Money Deposit	Please refer Tech 14
Certificate of Conformity / No Deviation	Please refer Tech 15
Declaration for No Conflict of Interest	Please refer Tech 16
Compliance sheet for Functional Requirements	Please refer Annexure_Consolidated

Compliance sheet for Technical Requirements	Please refer Annexure_Consolidated
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**Commercial Bid:** The commercial bid format has been given as a standard format with the tender document. Bidders are required to provide details as per the format. If the format is found to be modified by the bidder, the bid may be rejected at the discretion of DGS.

- I. Bidder is responsible to download Tender document and download Addendums / Amendments / Errata / Replies to the queries of the Party etc., if any, issued by DGS, from the website before submission of the Tender. Any shortfall in submission of the said Addendums/ Amendments / Errata/ Replies to the queries of the Party etc. along with the downloaded documents while submitting the Tender may not be considered.
- II. Bid process will be over after the contract is signed with the selected bidder.
- III. DGS shall not be responsible for non-receipt / non-delivery of the bid documents due to any reason whatsoever.

## **6 Evaluation of Bids**

- I. DGS will constitute a Proposal Evaluation Committee to evaluate the responses of the bidders
- II. The Proposal Evaluation Committee shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence may lead to rejection.
- III. The decision of the Proposal Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation/discussion with the Committee.
- IV. The Proposal Evaluation Committee may ask for meetings with the Bidders to seek clarifications on their proposals.
- V. The Proposal Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations without assigning any reason thereof.
- VI. Each of the responses shall be evaluated as per the criteria and requirements specified in the RFP.

### **6.1 Tender Opening**

- I. The Proposals submitted will be opened by officer authorized by DGS in the presence of Bidders or their representatives who may be present at the time of opening.
- II. The representatives of the bidders should be advised to carry the identity card or a letter of authority from the tendering firms to identify their bonafide for attending the opening of the proposal.

### **6.2 Bid validity**

The offer submitted by the Bidders should be valid for minimum period of 180 days from the date of submission of Tender. Bid validity may be extended by the bidder by submitting a letter to DGS and confirming all terms and conditions of the bid remain same.

### **6.3 Criteria for Evaluation**

- I. The overall objective of this evaluation process is to select the capable and qualified firm in the business domain of developing and rolling out the integrated application, related hardware and other infrastructure, providing associated capacity building, training and handholding support as well as associated managed services and who will provide a comprehensive solution towards Supply, Installation, Integration, Commissioning, Development, Deployment, Operation & Management of the said system and hardware provisioning at DGS.
- II. First the Pre-Qualification Proposal will be evaluated and only those bidders who qualify the requirements will be eligible for next set of evaluations. Technical Proposal and Commercial Proposal of Bidders who do not meet the Pre-Qualification criteria shall not be evaluated.
- III. The technical score of all the bidders would be calculated as per the criteria mentioned below. All the bidders who achieve at least 70% marks in the technical evaluation would be eligible for the next stage, i.e. Financial Bid opening.
- IV. Proposals of bidders would be evaluated as per Technical Evaluation Criteria.

### **6.4 Pre-Qualification Criteria**

- I. The prospective Bidder shall have to enclose along with the Technical Bid, documentary evidences in support of Pre-Qualification Criteria. The technical evaluation of the bid will be considered only for the Bidders qualifying the pre-qualification criteria.

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DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

- II. An indicative format for the Pre-Qualification Proposal is as follows [Please customize this list on the basis of Pre-Qualification Criteria Finalized below]

S. No	Criteria	Pre-qualification Criteria description	Supporting Document	Response (Yes / No)	Reference in Response to Pre-Qualification Bid (Section # and Page #)

- III. The pre-qualification criteria for Bidder are as follows:

S.NO	PQ #	Condition	Criteria	Supporting Document
1.	PQ1	<b>Legal Entity</b>	The bidder / Lead Bidder in case of consortium should be a company registered in India under the Companies Act, 1956 / LLP Act, 2008 and subsequent amendments thereto. The bidder should be operational in India for at least last five financial years (including name change / impact of mergers or acquisitions) as of 31st March 2020 as evidenced by the Certificate of Incorporation and / or Certificate of Commencement of Business issued by the Registrar of Companies, India.	Copy of certificate for Registration To be submitted for - <ul style="list-style-type: none"> <li>• Single Bid - Bidder</li> <li>• Consortium Bid – Lead Bidder</li> </ul>
2.	PQ2	<b>Annual Turnover</b>	The Bidder / lead bidder in case of consortium must have a minimum average turnover of INR 100 Crores (One Hundred Crores only) for the last three financial years ending 31st March 2020 as evidenced by the audited accounts of the company. In case of consortium, consortium member	Copy of Audited Annual Balance sheet for last three years ending 31.03.2020 with Certificate from a CA stating Annual Turnover for the last three years In case of: <ul style="list-style-type: none"> <li>• Single Bid – Bidder</li> <li>• Consortium Bid – Lead bidder and consortium members</li> </ul>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

S.NO	PQ #	Condition	Criteria	Supporting Document
			(except Lead Bidder) must have a minimum turnover of INR 15 Crores (Fifteen Crores)	
3.	PQ3	<b>Financial: Net worth</b>	<p>The bidder (for single firm) should have a positive net worth for 3 consecutive years i.e. 2017-18, 2018-19 and 2019-20</p> <p>In case of a Consortium, the Lead Member must have positive net worth</p>	CA Certificate for 3 Years
4.	PQ4	<b>Certification</b>	<p>1. The bidder / Lead Bidder in case of consortium must have been assessed for CMMI Level 5 certification</p> <p>In case of consortium, consortium member must have at least CMMI Level 3 certification</p>	<p>Copy of valid certificate</p> <p>In case of:</p> <ul style="list-style-type: none"> <li>• Single Bid – Bidder</li> <li>• Consortium Bid – Consortium members</li> </ul>
5.	PQ5	<b>Technical Capability</b>	<p>The Bidder (Single firm or any member of the consortium) must have experience in implementation of at least one project of amount not less than Rs. 16 crores</p> <p>OR</p> <p>two projects of amount not less than Rs. 12 crores</p> <p>OR</p> <p>Three projects of amount not less than Rs. 8 crores</p> <p>Each of which includes Application Development, Software Support, training, support manpower &amp; maintenance involving services to any state / central government organization in India during the last seven financial years.</p>	<p>Copy of work order / MSA / PO and Completion Certificate from the client;</p> <p>OR</p> <p>Copy of work order / MSA / PO and Self Certificate of Completion (Certified by CS/independent auditor of the bidding entity);</p> <p>OR</p> <p>Copy of work order / MSA / PO and Phase Completion Certificate (Certified by Client OR CS/independent auditor of the bidding entity);</p> <p>In case of:</p>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

S.NO	PQ #	Condition	Criteria	Supporting Document
				<ul style="list-style-type: none"> <li>Single Bid – Bidder</li> </ul> Consortium Bid – Any member
6.	PQ6	<b>Mandatory Undertaking</b>	The Bidder shall furnish an affirmative statement as to existence of, absence of, or potential for conflict of interest on the part of the bidder, due to prior, current, or proposed contracts, engagements, or affiliations with any of the clients – that may have an impact of the contract with Purchaser	Declaration by authorised signatory of the Bidder In case of: <ul style="list-style-type: none"> <li>Single Bid – Bidder</li> <li>Consortium Bid – All member</li> </ul>
7.	PQ7	<b>Blacklisting by Govt.</b>	The Bidder / all members in case of consortium shall not be under a declaration of ineligibility / banned / blacklisted by any State or Central Government /PSU any other Government institutions in India for any reason as on last date of submission of the Bid or convicted of economic offence in India for any reason as on last date of submission of the Bid.	Declaration by authorised signatory. In case of: <ul style="list-style-type: none"> <li>Single Bid – Bidder</li> <li>Consortium Bid – All members</li> </ul>
8.	PQ8	<b>EMD</b>	The bidder / Lead Bidder in case of consortium must submit EMD to DGS as per tender format	Bank Guarantee against EMD shall be submitted by Bidder



## 6.5 Technical Bid Evaluation

- I. Technical Bids will then be evaluated for the following parameters. In case of consortium, all members will be evaluated against criteria jointly unless specified otherwise.

#	Evaluation Criteria for the proposed solution	Max Marks
<b>A</b>	<b>Bidder Experience</b>	<b>400</b>
A.1	System Integration Experience	250
A.2	Shipping / Maritime Domain Experience	100
A.3	Mobile Application Development Experience	50
<b>B</b>	<b>Resource Requirements</b>	<b>300</b>
B.1	Project Manager	40
B.2	Business Analyst (nos. 3)	90
B.3	Subject Matter Expert	40
B.4	Database Administrator	30
B.5	Change Management Specialist / Trainer (nos. 2)	30
B.6	Mobile App Specialist	30
B.7	Solution Architect	40
<b>C</b>	<b>Technical Solution</b>	<b>300</b>
C.1	Solution Design and Approach	150
C.2	Technical Presentation	100
C.3	Compliance to Functional and Technical Requirements	50
	<b>TOTAL</b>	<b>1000</b>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

B	Resource Requirements					
	Resource	Maximum Marks			Total No. of resources	Total Maximum Marks
		Projects	Work Experience	Certification		
B.1	Project Manager	35		5	1	40
B.2	Business Analyst	10	20		3	90
B.3	Subject Matter Expert	20	20		1	40
B.4	Database Administrator	15	15		1	30
B.5	Change Management Specialist / Trainer	5	10		2	30
B.6	Mobile App specialist	30			1	30
B.7	Solution Architect	35		5	1	40

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

#	PARAMETER	MAX. MARKS	EVIDENCE TO BE SUBMITTED
<b>TOTAL</b>		<b>1000</b>	
<b>A</b>	<b>Bidder Experience</b>	<b>400</b>	
A.1	<p>System Integration Experience</p> <p>The Bidder / Lead bidder in case of consortium, must have System Integrator experience of large successful Go-Live / completed project during the last 7 years (as on the last date of bid submission). The implementation must include application development / customization, Operations and maintenance services, Training &amp; Capacity Building, Providing Technical Man-power Support</p> <p><u>37.5 marks per project will be allotted. The bidder can submit a maximum of 4 projects. Maximum 150 marks will be awarded.</u></p> <p><u>Additionally, marks will be awarded as follows for the above considered projects:</u></p> <ul style="list-style-type: none"> <li>In case the above said experience is for an Indian Government / Indian PSU client – 15 Additional Marks per project. <u>The bidder can submit a maximum of 4 projects. Maximum 60 marks will be awarded.</u></li> <li>In case the value of the above cited experience is &gt; 15 Crores each – 10 Additional Marks per project. <u>The bidder can submit a maximum of 4 projects. Maximum 40 marks will be awarded.</u></li> </ul> <p>The additional criteria shall be evaluated only for the submitted projects (maximum 4).</p>	250	<p>Copy of work order / MSA / PO and Completion Certificate from the client;</p> <p>OR</p> <p>In case of the project under Non - Disclosure Agreement (NDA), Company Secretary of the bidder or certifying authority of bidder should provide the certificate of completion + completion certificate from the client</p> <p>OR</p> <p>Copy of work order / MSA / PO and Self Certificate of Completion (Certified by CS/independent auditor of the bidding entity);</p> <p>OR</p> <p>Copy of work order / MSA / PO and Phase Completion Certificate (Certified by Client OR CS/independent auditor of the bidding entity);</p> <p>Please provide project details as per format "Tech 10"</p> <p><b>Note:</b></p> <p>For International projects, the bidder has to provide copy of</p>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

			purchase order along with a case study of the project.
A.2	<p>The Bidder / any member of consortium must have experience of successful Go-Live / completed project (other than the projects given in Criteria A.1) for IT solution in <b>Shipping / Maritime domain in India or abroad as System Integrator*</b> in last 7 years (as on the last date of bid submission)</p> <p><b>50 marks per project (Maximum 2 projects)</b></p> <p>*Here, System Integrator shall necessarily mean projects where scope of work includes <b>Application Development / Customization Services and Maintenance Services</b></p>	100	<p>Copy of work order / MSA / PO and Completion Certificate from the client;</p> <p>OR</p> <p>In case of the project under Non - Disclosure Agreement (NDA), Company Secretary of the bidder or certifying authority of bidder should provide the certificate of completion + completion certificate from the client</p> <p>OR</p> <p>Copy of work order / MSA / PO and Self Certificate of Completion (Certified by CS/independent auditor of the bidding entity);</p> <p>OR</p> <p>Copy of work order / MSA / PO and Phase Completion Certificate (Certified by Client OR CS/independent auditor of the bidding entity);</p> <p>Please provide project details as per format "Tech 10"</p> <p><b>Note:</b></p> <p>For International projects, the bidder has to provide copy of purchase order along with a case study of the project.</p>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

A.3	<p>The bidder / any member of the consortium must have experience in Designing, developing and integrating mobile applications on diverse platforms (Android, iOS, Windows, etc.) during the last 7 years (as on the last date of bid submission) including any of the following components:</p> <ol style="list-style-type: none"> <li>Workflow based mobile application (5 marks)</li> <li>Analytics and reporting (5 marks)</li> <li>payment gateway integration or any other third-party integration (5 marks)</li> <li>application performance monitoring/management (5 marks)</li> <li>OTP based authentication for mobile login (5 marks)</li> </ol> <p>25 marks per project will be allotted. A bidder can submit maximum of 2 projects.</p>	50	<ul style="list-style-type: none"> <li>Work Order + Completion Certificates from the client;</li> </ul> <p>OR</p> <p>In case of the project under Non - Disclosure Agreement (NDA), Company Secretary of the bidder or certifying authority of bidder should provide the certificate of completion + completion certificate from the client</p> <p>OR</p> <ul style="list-style-type: none"> <li>Work Order + Self-Certificate of Completion (Certified by the Statutory Auditor);</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Work Order + Phase Completion Certificate (for ongoing projects) from the client</li> </ul> <p>Please provide project details as per format "Tech 10"</p>
<b>B</b>	<b>Resource Requirements</b>	<b>300</b>	
B.1	<p>Project Manager (Full Time)</p> <ul style="list-style-type: none"> <li>BE / BTech / MCA / MTech and MBA with at least 12 years of Total work experience</li> </ul> <p><b>Award of marks will be as follows:</b></p> <ul style="list-style-type: none"> <li>Experience of implementing end to end Projects as a Project Manager for scope as defined in the criteria A.1 <ul style="list-style-type: none"> <li>&gt; 6 Projects – 20 Marks</li> <li>4 – 6 Projects – 15 Marks</li> </ul> </li> </ul>	40	<p>Signed Technical Bid</p> <p>Please provide resource details as per format "Tech 4"</p>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

	<ul style="list-style-type: none"> <li>○ 2 – 4 Projects – 10 Marks</li> <li>○ &lt; 2 – 0 Marks</li> <li>• Experience of implementing end to end Projects as a Project Manager for scope as defined in the criteria A.2 <ul style="list-style-type: none"> <li>○ &gt; 4 Projects – 15 Marks</li> <li>○ 2 – 4 Projects – 10 Marks</li> <li>○ &lt; 2 – 0 Marks</li> </ul> </li> <li>• Certifications: PMP / Prince2 Certification. Documentary proof to be submitted. <ul style="list-style-type: none"> <li>○ Certified: 5 Marks</li> <li>○ Not Certified: 0 Marks</li> </ul> </li> </ul>		
B.2	<p>Business Analyst (nos. 3)</p> <ul style="list-style-type: none"> <li>• BE / BTech / MCA / MTech and MBA with at least 5 years of Total work experience</li> </ul> <p><b>Award of marks will be as follows:</b></p> <ul style="list-style-type: none"> <li>• Total Number of Years of Experience working in India or abroad <ul style="list-style-type: none"> <li>○ &gt; 8 years – 20 Marks</li> <li>○ 6 to 8 years – 10 Marks</li> <li>○ 5 to 6 years – 5 Marks</li> </ul> </li> <li>• Experience of implementing end to end integrated projects as a business analyst: <ul style="list-style-type: none"> <li>○ &gt; 4 projects – 10 Marks</li> <li>○ 2 - 4 projects – 5 Marks</li> <li>○ &lt; 2 projects – 0 Marks</li> </ul> </li> </ul> <p>Each of the resource shall be awarded 30 marks subject to a maximum of 90 marks for 3 resources</p>	90	<p>Signed Technical Bid</p> <p>Please provide resource details as per format “Tech 4”</p>
B.3	<p>Subject Matter Expert</p> <ul style="list-style-type: none"> <li>• BE / BTech / MCA / MTech and MBA with at least 10 years of Total work experience</li> </ul>	40	<p>Signed Technical Bid (Same as above)</p> <p>Please provide resource details as per format “Tech 4”</p>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

	<p><b>Award of marks will be as follows:</b></p> <ul style="list-style-type: none"> <li>• Experience of implementing end to end Projects for scope as defined in the criteria A.2 <ul style="list-style-type: none"> <li>○ &gt; 4 Projects – 20 Marks</li> <li>○ 2 to 4 Projects – 10 marks</li> <li>○ &lt; 2 Projects – 0 Marks</li> </ul> </li> <li>• Number of Years of Experience working in Shipping Management companies in India or abroad <ul style="list-style-type: none"> <li>○ &gt; 8 years – 20 Marks</li> <li>○ 6 to 8 years – 10 Marks</li> <li>○ 4 to 6 years – 5 Marks</li> <li>○ &lt; 4 years – 0 Marks</li> </ul> </li> </ul>		
B.4	<p>Database Administrator</p> <ul style="list-style-type: none"> <li>• BE / BTech / MCA / MTech / MBA with at least 8 years of Total work experience</li> </ul> <p><b>Award of marks will be as follows:</b></p> <ul style="list-style-type: none"> <li>• Number of Years of Experience working as Database Administrator (DBA) <ul style="list-style-type: none"> <li>○ &gt; 6 years - 15 Marks</li> <li>○ 3 to 6 years - 10 Marks</li> <li>○ &lt; 3 years – 0 Marks</li> </ul> </li> <li>• Experience as DBA with full capability to setup and run proposed database solution independently: <ul style="list-style-type: none"> <li>○ &gt;4 Projects – 15 marks</li> <li>○ 2 to 4 Projects – 10 marks</li> </ul> </li> </ul>	30	<p>Signed Technical Bid (same as above)</p> <p>Please provide resource details as per format “Tech 4”</p>
B.5	<p>Change Management Specialist / Trainer (nos. 2)</p> <p><b>Any graduation degree from recognised university / institute with at least 8 years of experience and at</b></p>	30	<p>Signed Technical Bid (same as above)</p> <p>Please provide resource details as per format “Tech 4”</p>

	<p><b>least 2 years of total work experience in all of the following:</b></p> <p><b>a) Conducting large scale awareness, training, promotional programs.</b></p> <p><b>b) Expertise in development of course material for training on technical area</b></p> <p><b>Should have worked on at least one of project cited in criteria A1 / A2 or similar projects</b></p> <p><b>Award of marks will be as follows:</b></p> <ul style="list-style-type: none"> <li>• Experience: Total Number of years as a change management expert / trainer <ul style="list-style-type: none"> <li>○ &gt; 7 years – 10 Marks</li> <li>○ 5 to 7 years – 7 marks</li> <li>○ 2 – 5 Years – 5 marks</li> </ul> </li> </ul> <p>Certificate:</p> <p>Providing training to government organisations: Certificate from client mentioning resource name for providing trainings.</p> <p>2.5 marks per client maximum of 5 marks.</p> <p>Each of the resource shall be awarded 15 marks subject to a maximum of 30 marks for 2 resources</p>		
B.6	<p><b>Mobile app specialist</b></p> <ul style="list-style-type: none"> <li>• B.E./B.Tech./MCA/M.Tech degree with at least 5 years' work experience in designing, developing, implementing and maintaining mobile apps.</li> </ul> <p>Award of marks to individuals shall be as follows:</p> <p>Experience in working on projects with expertise in designing, developing,</p>	30	<p>Signed Technical Bid</p> <p>Please provide resource details as per format "Tech 4"</p>



SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

	<p>implementing and maintaining mobile apps;</p> <ul style="list-style-type: none"> <li>○ &gt;8 Projects – 30 marks</li> <li>○ 4 – 8 Projects – 20 marks</li> <li>○ &lt; 4 Projects – 0 Marks</li> </ul>		
B.7	<p><b>Solution Architect</b></p> <p>BE / BTech / MCA / MTech / MBA with 10 years' work experience</p> <p>Award of marks will be as follows:</p> <ul style="list-style-type: none"> <li>• Experience as Solution Architect in large Turnkey projects each of them being of value more than 25 Cr. <ul style="list-style-type: none"> <li>○ &gt; 5 Projects – 20 Marks</li> <li>○ 3 to 5 Projects – 10 Marks</li> <li>○ &lt; 3 Projects - 0 Marks</li> </ul> </li> </ul> <p>Additional 5 marks will be provided for a project with PSU / Government Bodies / Autonomous Organization (under any Indian Government law) in India to a maximum of 15 marks.</p> <ul style="list-style-type: none"> <li>• Certifications: TOGAF / Zachman Framework / any other relevant certification</li> </ul> <p>Documentary proof to be submitted.</p> <ul style="list-style-type: none"> <li>○ Certified: 5 Marks</li> <li>○ Not Certified: 0 Marks</li> </ul>	40	<p>Signed Technical Bid (same as above)</p> <p>Please provide resource details as per format "Tech 4"</p>
<b>C</b>	<b>Technical Solution</b>	<b>300</b>	
C.1	<p>Solution Design and Approach (as part of Bid Response Document)</p> <p>Marks will be awarded as below:</p> <ul style="list-style-type: none"> <li>• Approach and Methodology for implementation and Operations and Maintenance (Phase I &amp; Phase II) - 40 Marks</li> </ul>	150	Signed Technical Bid

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

	<ul style="list-style-type: none"> <li>• Solution Design meeting all the proposed functionalities – 40 Marks</li> <li>• Detailed Project Plan covering scope of work, activities &amp; deliverables as per timelines, key personnel deployment, risk mitigation measures – 30 Marks</li> <li>• Approach towards integration with external systems – 20 Marks</li> <li>• Project Governance Methodology – 10 Marks</li> <li>• Change Management and Training – 10 Marks</li> </ul>		
C.2	<p>Technical Presentation</p> <p>a) Understanding of the project objective</p> <p>b) Approach &amp; methodology of the proposed solution</p> <p>c) Demo of the proposed system</p> <p>d) Question and Answers</p>	100	<p>Presentation to Authorities of DGS (Inclusive of any site visit for designated DGS officials which could be done before or after the presentation). Evaluation of this shall be communicated accordingly to the committee for awarding of marks.</p> <p>The bidders are expected to present their key resources which will be leading the implementation and whose profiles would be evaluated by the evaluation committee</p>
C.3	<p>Compliance to Functional Requirement specifications and Technical Requirement specifications as Listed in Annexure of the Tender</p>	50	<p>Signed Functional requirement compliance sheet with the Technical Bid</p> <p>MAF provided by OEM stating that product being proposed meets the requirement criteria as mentioned in the RFP including changes issued &amp; Technical specification compliance sheet with the Technical Bid</p>

Please note that:

All Resources proposed by the Bidder should be Full Time Employee with the Bidder organisation for a minimum of 1 year

Bidders are required to use the format provided below and respond to each of the functional requirement mentioned in Vol II, (excluding, sample forms and logic) with one of the below mentioned answer keys:

F = Fully provided "Out-of-the-Box" in proposed product /solution

C = Configuration / Customization required

N = New Development

Sr. No.	Process Type	System Requirement	Response (F/C/N)	Comments (if any)

The Bidders may also add explanatory details as necessary in the "comments" column.

Please note that:

Bidders must use only one response code per requirement.

In case of any unanswered response OR more than one response against any requirement it will be treated as "non-response"

## 6.6 Commercial Bid Evaluation

- I. The Financial Bids of technically qualified bidders (i.e. above 70% marks) will be opened on the prescribed date in the presence of bidder representatives.
- II. Only fixed price financial bids indicating total price for all the deliverables and services specified in this bid document will be considered.
- III. The bid price will include all taxes and levies and shall be in Indian Rupees and mentioned separately.
- IV. Any conditional bid would be rejected.
- V. Errors & Rectification: Arithmetical errors will be rectified on the following basis: "If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail".
- VI. Bidder should provide all prices as per the prescribed format provided in Annexure.
- VII. Bidder should not leave any field blank. In case the field is not applicable, Bidder must indicate "0" (Zero) in all such fields.
- VIII. All the prices (even for taxes) are to be entered in Indian Rupees ONLY (%age values are not allowed)
- IX. It is mandatory to provide breakup of all Taxes, Duties and Levies wherever applicable and/or payable. DGS shall take into account all Taxes, Duties & Levies for the purpose of Evaluation
- X. DGS reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.
- XI. The Bidder needs to account for all Out of Pocket expenses related to Boarding, Lodging and

other related items in the commercial bids. Any additional charges have to be borne by the bidder. For the purpose of evaluation of Commercial Bids, the DGS shall make appropriate assumptions as mentioned below to arrive at a common bid price for all the Bidders. This however shall have no co-relation with the Contract value or actual payment to be made to the Bidder

- XII. The price quoted in the Commercial Proposal shall be the only payment, payable by DGS to the successful Bidder for completion of the contractual obligations by the successful Bidder under the contract, subject to the terms of payment specified as in the proposed commercial bid or the one agreed between DGS and the Bidder after negotiations.
- XIII. It is mandatory to provide break up of all taxes, duties and levies wherever applicable and/or payable. The taxes quoted in the offer should be as per the prevailing tax rates. Any subsequent increase in the tax rates or introduction of new tax will be paid by DGS. Similarly, any benefits arising due to downward revision in tax rates, or any exemptions availed by the Bidders organization should be passed on to DGS. The bid amount shall be inclusive of packing, forwarding, transportation, insurance till Go live, delivery charges and any other charges as applicable. Any other charges as applicable shall be borne by the bidder.
- XIV. Percentage (%) of taxes etc. if any, to be claimed shall be indicated in the Price bid, otherwise it will be presumed that rates are inclusive of all taxes and no plea would be accepted in this regard after opening of the tenders and during the validity of the contract.
- XV. The Bidders are advised not to indicate any separate discount. Discount, if any, should be merged with the quoted prices. Discount of any type, indicated separately, will not be taken into account for evaluation purpose. However, in the event of such an offer, without considering discount, is found to be the lowest, DGS shall avail such discount at the time of award of Contract. For future purposes, Unit prices of all individual components will be discounted accordingly (by the overall discount % in case overall discount % is given or by the individual component discount % in case item wise discount given) to arrive at component-wise unit prices.

## 7 Appointment of System Integrator

### 7.1 Award Criteria

- I. Evaluation criteria proposed to be adopted will be Quality cum Cost Based System (QCBS) where Technical Bid Score will get a weightage of 70% and Commercial Bid Score a weightage of 30%.
- II. The bidder would be technically evaluated out of 1000 marks. All the bidders who secure overall minimum of 70% (700 Marks out of 1000 across all the components together) will be considered as technically qualified. Technical score of all bidders will be calculated on the basis of the following formula:
- III. Technical Score of bidder (TS) = Technical Marks received by the bidder x 70%
- IV. The Bid having the Lowest Commercial Quote shall be termed as the Lowest Evaluated Bid and will be awarded 1000 marks. Commercial score of all the other bidders will be calculated on the basis of the following formula:
- V. Commercial score of bidder (CS) =  $\frac{\text{Commercial Quote of the lowest bidder} \times 1000 \times 30\%}{\text{Commercial Quote of the bidder}}$
- VI. Final Score of the bidder: Final Score of each bidding party will be computed by adding the Technical score and Commercial Score on the basis of the following formula:  
**Total Score = TS + CS**
- VII. The bidder whose bid has secured the "Highest Total Score" out of 1000 as per above evaluation will be considered as best evaluated Bid. In case of a tie where two or more bidders achieve the same highest overall score, the bidder with the higher technical score will be invited first for negotiations
- VIII. DGS is not bound to accept the best evaluated bid or any bid and reserves the right to accept any bid, wholly or in part.
- IX. Example demonstrating the calculation of Technical Score and Commercial Scores is provided below:

Bidder	Marks Received by bidder	Technical Score of bidder (TS)
Bidder 1	880	616
Bidder 2	900	630
Bidder 3	800	560
Bidder 4	950	665

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Commercial Score of a bidder (CS) = {lowest discounted quote / Bidder's discounted quote} X 1000  
(adjusted to 2 decimals)

Bidder	Commercial Quote Provided by Bidder	Calculation of commercial score	Commercial Score of Bidder (CS)
Bidder 1	110	$(110/110)*1000*30\%$	300.00
Bidder 2	140	$(110/140)*1000*30\%$	235.71
Bidder 3	160	$(110/160)*1000*30\%$	206.25
Bidder 4	130	$(110/130)*1000*30\%$	253.85

**Total Score for each bidder**

Bidder	Technical Score (TS)	Commercial Score (CS)	Total Score
Bidder 1	616	300.00	916.00
Bidder 2	630	235.71	865.71
Bidder 3	560	206.25	766.25
Bidder 4	665	253.85	918.85

The bidder with the highest final score shall be treated as the successful bidder. In the above example, Bidder 4 will be treated as successful bidder.

## 7.2 Right to Accept Any Proposal and To Reject Any or All Proposal(s)

DGS reserves the right to accept or reject any proposal, and to annul the tendering process / Public procurement process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for DGS action.

## 7.3 Notification of Award

- I. Prior to the expiration of the validity period, DGS will notify the successful bidder in writing or by fax or email, that its proposal has been accepted. In case the tendering process has not been completed within the stipulated period, DGS may like to request the bidders to extend the validity period of the bid.
- II. The notification of award will constitute the formation of the contract. Upon the successful bidder's furnishing of Performance Bank Guarantee DGS will notify each unsuccessful bidder and return their EMD.

#### **7.4 Contract Finalization and Award**

- I. The written advice to any change shall be issued by DGS to the bidders up to 4 (four) weeks prior to the due date of commencement of services.
- II. The selected Bidder/s should convey acceptance of the award of contract by returning duly signed and stamped duplicate copy of the award letter within 7 days of receipt of the communication.
- III. Upon notification of award to the successful Bidder, DGS will promptly notify each unsuccessful Bidder.

#### **7.5 Performance Bank Guarantee**

DGS will require the selected bidder to provide a Performance Bank Guarantee, within 15 days from the Notification of award, for a value equivalent to 10% of the total bid value and should be valid till 6 months post the Contract Period. The Performance Guarantee shall contain a claim period of three months from the last date of validity. In case the Contract Term is extended, the Performance Bank Guarantee should also be extended within 15 days of approval of contract extension and should be valid till 6 months post the Contract Extension Term. The selected bidder shall be responsible for extending the validity date and claim period of the Performance Guarantee as and when it is due on account of non-completion of the project and Warranty period. In case the selected bidder fails to submit performance guarantee within the time stipulated, DGS at its discretion may cancel the order placed on the selected bidder without giving any notice. DGS shall invoke the performance guarantee in case the selected Vendor fails to discharge their contractual obligations during the period or DGS incurs any loss due to Vendor's negligence in carrying out the project implementation as per the agreed terms & conditions.

#### **7.6 Signing of Contract**

After the DGS notifies the successful bidder that its proposal has been accepted, DGS shall enter into a contract, incorporating all clauses, pre-bid clarifications and the proposal of the bidder between DGS and the successful bidder. The Draft Legal Agreement is provided as a separate document as a template.

#### **7.7 Failure to Agree with the Terms and Conditions of the RFP**

- I. Failure of the successful bidder to agree with the Draft Legal Agreement and Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the award, in which event DGS may award the contract to the next best evaluated bidder or call for new proposals from the interested bidders.
- II. In such a case, the DGS shall invoke the PBG of the successful bidder.

## **8 Rejection Criteria**

Besides other conditions and terms highlighted in the RFP document, bids may be rejected under following circumstances:

### **8.1 General Rejection Criteria**

- Bids not qualifying under Pre-qualification criteria.
- Bids submitted without or improper EMD
- Bids received through Telex /Telegraphic / Fax / E-Mail except wherever required
- Bids which do not confirm unconditional validity of the bid as prescribed in the Tender
- If the information provided by the Bidder is found to be incorrect / misleading at any stage / time during the Tendering Process
- Any effort on the part of a Bidder to influence the DGS' s bid evaluation, bid comparison or contract award decisions
- Bids received by the DGS after the last date for receipt of bids prescribed by the DGS
- Bids without signature of person (s) duly authorized on required pages of the bid
- Bids without power of authorization and any other document consisting of adequate proof of the ability of the signatory to bind the Bidder.
- If it is found that multiple bidders have submitted separate tenders/ quotations under different names of firms/ establishments but with common address for such establishments/ firms, are managed or governed by the same person/ persons jointly or severally, such tenders shall be liable for penal and legal action including blacklisting.
- If it is found that firms have tendered separately under different names for the same contract, all such tender(s) shall stand rejected and tender deposit of each such firm/ establishment shall be forfeited. In addition, such firms/ establishments shall be liable at the discretion of the DGS for further penal action including blacklisting.
- The Bidders not confirming unconditional acceptance of full responsibility of providing services in accordance with the Scope of work, General Terms & Conditions and Service Level Agreements of this tender.
- Bidders not complying with the General Terms and conditions as stated in the Tender Documents.
- Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect.

### **8.2 Technical Rejection Criteria**

- Technical Bid containing commercial details.
- Revelation of Prices in any form or by any reason before opening the Commercial Bid
- Failure to furnish all information required by the Tender Document or submission of a bid not substantially responsive to the Tender Document in every respect.
- Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidder.
- Bidders not complying with the Technical and General Terms and conditions as stated in the Tender Documents.
- The Bidder not confirming unconditional acceptance of full responsibility of providing services in accordance with the Scope of work and Service Level Agreements of this tender.
- If the bid does not conform to the timelines indicated in the bid.



- Bidder not complying with the eligibility criteria.

### **8.3 Commercial Rejection Criteria**

- Incomplete Price Bid
- Price Bids that do not conform to the Tender's price bid format.
- Total price quoted by the Bidder does not include all statutory taxes and levies applicable. If there is an arithmetic discrepancy in the commercial bid calculations the bidder shall rectify the same. If the Bidder does not accept the correction of the errors, its bid may be rejected.
- Financial Bids that are less than 50% of the average bid price will be disqualified. The average bid price is computed by adding all Financial Bid values of ALL the technically qualified bidders and dividing the same by the number of technically qualified bidders.
- Bidders not quoting for the complete scope of Work as indicated in the Tender documents, addendum (if any) and any subsequent information given to the Bidders.
- Revelation of Prices in any form or by any reason before opening the Commercial Bid

## 9 Constitution of Team

- i. Key Personnel involved in the project shall be on the payrolls of the Lead Bidder or any of the consortium members.
- ii. The bidder should have a defined hierarchy and reporting structure for various teams that would be part of the project.
- iii. All the concerned staff should log an attendance on a daily basis at their respective reporting location.
- iv. The bidder shall ensure that all the personnel identified for this project have high level of integrity. The bidder shall undertake necessary due diligence to ensure that the personnel have high standard of trustworthiness. The bidder should obtain an undertaking from each of the personnel assigned and the same should be submitted to the DGS or its nominated agencies/ partners as and when demanded by DGS or its nominated agencies/ partners. In addition, DGS could also get the background verification checks of the bidder personnel. Any information needed for this activity by DGS should be provided immediately by bidder.
- v. Bidder can provide additional manpower on the basis of their estimate of effort required to complete the scope of work given in of the tender.
- vi. The bidder should provide sufficient Non-Key Personnel to complete the scope of work. Bidder need not submit the names of such Non-Key Personnel along with the tender.
- vii. Bidder can offer more than one key personnel for a role to improve the quality of key personnel keeping in mind the scope of work as provided in the tender.
- viii. For a project of such a large scale and complexity, it is imperative that the bidder should deploy best of class professionals to ensure successful execution of this project. The bidder will in its proposal include the names and detailed curriculum vitae of their key personnel who will be working full time on this project. For successful completion and execution of project the bidder shall have to deploy minimum resources as provided in the table below.
- ix. The bidder is free to propose and deploy as many resources as possible apart from the below list for the successful and timely completion of the project. DGS or its nominated agencies / partners will provision space for \_\_\_\_ Bidder personnel in its premises. For the key personnel working out of DGS' / its nominated agencies / partners office, DGS will provide them with basic office infrastructure like seating space, fan, etc. The bidder team is expected to bring their own laptops and data cards (as required).

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Sr. No.	Level	Min. No. of People	Minimum Onsite Deployment	
			During Phase I	Period (in months)
1.	Project Manager	1	100%	12
2.	Business Analyst	3	100%	12
3.	Subject Matter Expert	1	100%	12
4.	Database Administrator	1	75%	9
5.	Change Management Specialist / Trainer	2	75%	9
6.	Mobile app specialist	1	75%	9
7.	Solution Architect	1	100%	12

Sr. No.	Level	Min. No. of People	Minimum Onsite Deployment	
			During Phase II	Period (in months)
1.	Project Manager	1	100% for first 6 months after Go-Live, 20% afterwards	12
2.	Business Analyst	2	100% for first 6 months after Go-Live, 20% afterwards	6
3.	Subject Matter Expert	1	100% for first 6 months	6
4.	Database Administrator	1	100% for first 6 months after Go-Live, 20% afterwards	12
5.	Change Management Specialist / Trainer	2	100% for first 6 months after Go-Live, 20% afterwards	12

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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Sr. No.	Level	Min. No. of People	Minimum Onsite Deployment	
			During Phase II	Period (in months)
6.	Mobile app specialist	1	100% for first 6 months after Go-Live, 20% afterwards	12
7.	Solution Architect	1	100% for first 6 months	6
8.	Application Support	2	100%	36

## 10 Project and Payment Schedule

### 10.1 Project Timelines

The envisaged project shall be implemented in following 2 Phases:

- **Phase 1 - Full scale deployment of system across all locations and system stabilization:**

The full-scale deployment phase shall begin with the project charter, wherein the bidder is expected to clearly detail out the complete project plan & overall project approach. Key activities expected during this phase are requirements gathering, detailed solution design, development of the system, applications, data migration, user trainings, final testing of the overall solution including UAT, final deployment & go-live of the entire system as per scope of work. Detailed timelines of the expected deliverables are given in the table below.

Post full scale deployment, next step is to stabilize the operations of the system. This shall include activities like updating the system as per feedback provided from the users, developing application interfaces as required, assist in conducting outreach programs for external users in forms of monthly workshop, training programs, SMS and email to the registered Mobile no. and email ID for pre-defined events.

- **Phase 2 - Operations and maintenance phase:**

Overall the entire phase will require dedicated application software support for the users, performance monitoring of the entire solution, adherence to the IT policies & procedures, patches/ upgrades of all components, configuration management and version control, management of updates and changes requested by user, support for all system components, tracking of issues / problems / bugs / defects raised by user, on-going project updates, SLA compliance reporting. Along with this, very important activity is to develop the required application interfaces with external systems as specified in the scope of work. Bidder has to ensure that required personnel are available to develop the interfaces during the entire phase of the project.

	Phase I				Phase II
	T – (T+6 months)	(T+7 months) – (T+10 months)	T+10 months	(T+10 months) – (T+12 months)	Y1 – Y3
Deployment		UAT	Go-Live		
Stabilization				Stabilization	
Operations and Maintenance					ONM

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Activity code	Track	Description	Timeline	Acceptance criteria
<b>Phase 1 - Full scale deployment of system across all locations and system stabilization</b>				
1.1	PGM	Project kick-off meeting or Agreement signing whichever is earlier	T	D1
1.2	PGM	Submission of project charter	T + 1 months	D2
1.3	ASI	Business and system requirements study including interfaces	T + 3 months	D3
1.4	ASI	Solution design including configuration requirements, interface design, etc.	T + 4 months	D4
1.5	ASI	Deployment of complete application software with all modules & required functionalities for user acceptance testing	T + 7 months	D5
1.5.1	ASI	DGS Dashboard and analytics with user manual	T + 9 months	D5-1
1.6	CMT	Data migration plan	T + 1 months	D6
1.7	CMT	Submission of change management plan covering training and transitioning requirements	T + 4 months	D7
1.8	CMT	Completion of change management activities including training as required for UAT	T + 7 months	D8
1.9	CMT	Completion of change management activities including training as required for go-live	T + 10 months	D9
1.10	CMT	Completion of data migration	T + 10 months	D10
1.11	All	Full scale deployment of the system	T + 10 months	D11

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Activity code	Track	Description	Timeline	Acceptance criteria
1.12	All	Successful completion of system stabilization	T + 12 months	D12
1.13	All	Stable operations (SLA compliance) of the system for the 2 months post full scale deployment	T1 = T + 12 months	D13
1.14	CRT	STQC Certifications and complete security audit	T + 10 months	D14
<b>Phase 2 - Operations and maintenance phase</b>				
2.1	ONM	Operations and maintenance of the entire solution for a period of 3 years after stabilization	T1 + 36 months	D15

Track	Description
PGM	Project governance and management
ASI	Application software and interfaces
CMT	Change management, Migration and transitioning
ONM	Operations and maintenance
CRT	STQC Certification (Relevant to Mgmt. System, Product Certification (IT & E-Gov))
ALL	All tracks

Note:

- i. Timelines defined for Phase I start from T i.e. Project kick-off meeting or Agreement signing whichever is earlier
- ii. As per plan, T1 i.e. kick-off for Phase II is defined based on completion of Phase I provided DGS provides sign-off for the completion of Phase I of the project & all defined deliverables & milestones thereof
- iii. Project tracks are defined to map the project timelines with the scope of work defined in Volume II of the RFP

## 10.2 Deliverables schedule

- I. The bidder has to deliver the following deliverables to DGS as part of an assurance to fulfil the obligations under the Payment schedule & meet the applicable SLA. The table given below may not be exhaustive and Bidder is responsible to provide all those deliverables which may be specified in this RFP but not listed here and those agreed by the Bidder in response to any request from DGS. The timelines for producing each of these deliverables will be in line and closely linked with the overall project timeline as indicated in the table above.
- II. Any conflict with respect to project and/or deliverable timelines will have to be resolved by bidder in consultation with DGS and/or its designated agencies and approved by DGS. Thereafter the approved timelines will have to be adhered to by bidder, unless specified otherwise. It is to be noted that upon completion of Go-live, bidder is required to submit all the updated system design documents, specifications, source code, application deployment files, user manuals, administration manuals and all other applicable deliverables listed below.
- III. Following is a brief description of the deliverables & expected submission timelines

Deliverables	Deliverable Description	Expected Timelines
D1	Kick-off presentation and/or Duly signed agreement	T
D2	Project charter should cover the following: <ul style="list-style-type: none"> <li>• Setting up of PMIS</li> <li>• Study of scope of work &amp; functional coverage</li> <li>• Detailed project plan</li> <li>• Governance Structure for Project Implementation</li> <li>• Project implementation approach</li> <li>• Detailed Project Plan with work breakdown structure</li> <li>• Delivery schedule</li> <li>• Key milestones</li> <li>• Resource deployment</li> <li>• Change &amp; communication management plan</li> <li>• Change control procedure</li> <li>• Exit management plan</li> <li>• Draft SRS template</li> </ul>	T + 1 months
D3	Software Requirements Specifications (SRS) should cover the following: <ul style="list-style-type: none"> <li>• Detailed requirement captures and analysis</li> <li>• Software requirement</li> <li>• Functional requirement</li> </ul>	T + 3 months



SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Deliverables	Deliverable Description	Expected Timelines
	<ul style="list-style-type: none"> <li>Flow chart, process workflows and interconnections of each modules</li> <li>Interface specifications</li> <li>Application security requirements</li> <li>Mapping of FRS &amp; SRS</li> <li>Requirements sign-off from DGS</li> <li>List of implemented open source components, along with compliance sheet as per e-Gov standards</li> <li>Identify third party interfaces required along with the type / specifications</li> <li>Finalization of data analysis tools and techniques for output MIS / reports / parameters</li> <li>Dashboard design with list of MIS / reports with source of data availability</li> <li>Detail integration requirements with MIS / Reports / dashboards of inter &amp; intra Ministries (API details, data fields to be shared, data fields required from other ministry systems, process flows, flow charts, design diagrams, etc.)</li> </ul>	
D4	<p>System Design &amp; Configuration report should cover the following:</p> <ul style="list-style-type: none"> <li>Business Blueprint Document</li> <li>System Configuration and module wise configuration needs as per the design envisaged</li> <li>Legacy and Third-party System Integration / interface Report and integration of same with the envisaged solutions</li> <li>Customization Development Plan and Design / development plan of components of functionalities</li> <li>High Level Software Design document including Software Architecture design, Logical and Physical Database Design</li> <li>Low Level Software Design document including Programming Logic, Workflows</li> <li>Website and Mobile app User Interface Usability Report</li> <li>Finalization of KPIs / KRAs for Dashboard</li> <li>Wireframe design of dashboard</li> </ul>	T + 4 months
D5	<p>Software Deployment report should cover the following:</p> <ul style="list-style-type: none"> <li>Complete Source Code with documentation</li> <li>Test Plans and Test cases (including Unit Test Plan, System / Integration Test Plan, User Acceptance Test Plan, Security Test Plan, Load Test Plan)</li> </ul>	T + 7 months

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Deliverables	Deliverable Description	Expected Timelines
	<ul style="list-style-type: none"> <li>Software Testing Documentation (including details of defects / bugs / errors and their resolution)</li> <li>User Acceptance Test Cases, Test Data and Test Results, User Acceptance Test Scripts, Unit Test Cases, Integration Test Results / Cases</li> <li>System Integration Test (SIT) Report including Performance Test (PT) Report</li> <li>Security Test Report</li> <li>Dashboard and analytical tool deployment with data validation report</li> <li>Requirement Traceability Matrix (RTM)</li> </ul>	
D5-1	<p>DGS Dashboard and analytics with user manual</p> <ul style="list-style-type: none"> <li>List of MIS / Reports with recommended visualisations</li> <li>List of external data point integrations with detailed integration process flows and documentation</li> <li>Data Analysis tools, techniques, and usability documentation</li> <li>Data Analysis output / parameters / MIS / Reports</li> <li>User access and dashboard MIS mapping matrix</li> </ul>	T + 9 months
D6	<p>Data migration report should cover the following:</p> <ul style="list-style-type: none"> <li>Data migration assessment</li> <li>Migration &amp; transitioning approach</li> <li>Detailed data migration plan</li> <li>Scripts required for importing data that has been migrated</li> <li>Data back-up and archival process document</li> </ul>	T + 1 months
D7	<p>Change Management &amp; Training report should cover the following:</p> <ul style="list-style-type: none"> <li>Detailed training plan</li> <li>Communication plan</li> <li>Training Materials and Curriculums</li> </ul>	T + 4 months
D8	<p>Change Management &amp; Training completion for UAT report should cover the following:</p> <ul style="list-style-type: none"> <li>Training session-wise completion reports</li> <li>Certification from DGS officials confirming successful completion of Change Management &amp; Trainings</li> </ul>	T + 7 months

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

<b>Deliverables</b>	<b>Deliverable Description</b>	<b>Expected Timelines</b>
D9	<p>Change Management &amp; Training completion for Go-live report should cover the following:</p> <ul style="list-style-type: none"> <li>• Training session-wise completion reports</li> <li>• Submission of Final Training Documents</li> <li>• Certification from DGS officials confirming successful completion of Change Management &amp; Trainings</li> </ul>	T + 10 months
D10	<p>Data migration completion report should cover the following:</p> <ul style="list-style-type: none"> <li>• Details of actual data that has been migrated</li> <li>• Detailed methodology used for data migration with flow charts, size of data migrated, data validation reports.</li> <li>• Certificate from DGS officials confirming successful completion of data migration</li> </ul>	T + 10 months
D11	<p>Go-live report should cover the following:</p> <ul style="list-style-type: none"> <li>• UAT sign-off</li> <li>• Complete updated Source Code and updated Deployment script with documentation</li> <li>• Deployment sign-off from DGS</li> <li>• User Manuals and System Manuals</li> <li>• Sign-off from DGS on Dashboard and Data Analytics requirements</li> <li>• DGS approved Security Testing, Load Testing, Unit Testing and System Acceptance report</li> <li>• DB entity relationship diagram</li> <li>• Pending Issues in the system, dependencies</li> <li>• Updated System Design documents, specifications for every change request</li> <li>• Updated user Manuals, administration manuals, training manuals</li> <li>• Go-Live Certificate from DGS indicating readiness for roll-out with trainings</li> </ul>	T + 10 months
D12	Certification of successful completion of system stabilization from DGS	T + 12 months
D13	<p>System stabilization report should cover the following:</p> <ul style="list-style-type: none"> <li>• Report indicating results, observations and action items</li> </ul>	T1 = T + 12 months

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Deliverables	Deliverable Description	Expected Timelines
	<ul style="list-style-type: none"> <li>Latest source code, application deployment files, configuration files for entire solution</li> <li>Detailed change description</li> <li>Sign off from DGS for pending issues in the system</li> </ul>	
D14	<ul style="list-style-type: none"> <li>STQC report and Certificate (Relevant to Mgmt. System, Product Certification (IT &amp; E-Gov)) including GIGW (Guidelines for Indian Government Website) Certificate</li> <li>Security Audit Certificate from CERT-IN / CERT-IN empanelled agencies</li> </ul>	T + 10 months
D15	<p>SLA Compliance Reports (Monthly) should cover the following:</p> <ul style="list-style-type: none"> <li>Performance Monitoring reports for system</li> <li>SLA Compliance Reports</li> <li>Count of SMS sent</li> <li>Training session-wise completion reports</li> <li>Patches / Upgrades of all components</li> <li>Incremental updates to solution</li> <li>Change Requests Managed</li> <li>Issue / Problem / Bugs / Defect Tracker</li> <li>On-Going Project Updates</li> <li>Audit / Standard Compliance Reports</li> </ul>	T1 + 36 months

### 10.3 Payment schedule

Payment would be done on the basis of components given in the following tables:

The bidder alone shall invoice all payments only after receiving due approval / acceptance of Deliverables / Services / Goods from DGS or any nominated agency.

Sr. No.	Milestone	Timeline	Deliverable	Payments (% of payments)
		T=0 at kick-off	D1	NA
1	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'Project charter' – D2</li> <li>Submission and Acceptance of 'Data migration report' – D6</li> </ul>	T + 1 months	D2, D6	2.5% of the project cost

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

2	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'Software requirement Specification document'</li> </ul>	T + 3 months	D3	5% of the project cost
3	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'System Design and Configuration Report' – D4</li> <li>Submission and Acceptance of 'Change Management &amp; Training report' – D7</li> </ul>	T + 4 months	D4, D7	2.5% of the project cost
4	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'Change Management &amp; Training completion for UAT report' – D8</li> </ul>	T + 7 months	D8	5% of the project cost
5	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'Software Deployment Report' – D5</li> </ul>	T + 7 months	D5	5% of the project cost
6	<ul style="list-style-type: none"> <li>Submission and Acceptance of Dashboards and Analytics – D5-1</li> </ul>	T + 9 months	D5-1	5% of the project cost
7	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'STQC Report and certificate (Relevant to Mgmt. System, Product Certification (IT &amp; E-Gov))' – D14</li> <li>Submission and Acceptance of 'Security Audit Certificate from CERT-IN / CERT-IN empanelled agencies' – D14</li> </ul>	T + 10 months	D14	5% of the project cost
8	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'Data Migration Completion Report' – D10</li> <li>Submission and Acceptance of 'Go-live Report' – D11</li> </ul>	T + 10 months	D10, D11	10% of the Project cost
9	<ul style="list-style-type: none"> <li>Submission and Acceptance of 'Certification of successful completion of system stabilization from DGS' – D12</li> <li>Submission and Acceptance of 'System stabilization report' – D13</li> </ul>	T1 = T + 12 months	D12, D13	10% of the Project cost
10	<ul style="list-style-type: none"> <li>Quarterly payment for next 3 years (ONM Phase)</li> </ul>	T1 + 36 months	D15	50% of the Project cost (Equal payout in quarters at quarter end)

- For point number 9 from the above table, Quarterly Payment for ONM Phase, Total Pay-out for SMS usage will be borne by DGS.
- The payments shall be made to the successful bidder based on the payment components provided in the table above. The payments shall be based on the completion of the key milestones defined in the project plan and acceptance of the deliverables associated with the milestones by DGS.
- The overall project is broadly divided into two key phases, Implementation phase and Operations & Maintenance phase. The initial payment of key components described in the above table shall be paid upfront after completion of the milestones & remaining payment shall be in equal instalments of quarterly payments during the Phase II: Operations & Maintenance phase as per defined timelines.
- Each component has a ceiling percentage value defined to determine the upper limit of component-wise payment to be paid by DGS. The ceiling value is the maximum cost to be paid by DGS for a component in terms of percentage of the total cost of the entire project as specified in the 'Commercial Quote / Bid' by the successful bidder.
- All components defined in the above table shall together constitute the total cost of the entire project.
- A monitoring body will be set up by DGS to monitor the progress of bidder for the smooth implementation and performance of project as per the agreed timelines of all deliverables and SLAs. DGS may ask for representation from the bidder. The monitoring body will meet for review of all deliverables submitted during the contract. It will be the responsibility of the bidder to provide all information required for review by the monitoring body in timely manner.

**Note:**

- The bidder(s) has to ensure that their financial proposal is structured in such a way that the costs during Implementation Phase quoted in the project do not exceed more than 50% of total costs of the project. In case the bidder quotes higher figures towards capital costs the same shall be restricted to 50% while making payments towards Implementation Cost. Any value quoted towards Implementation Costs over and above 50% limit will be paid in equal quarterly instalments for next three years along with quarterly payment for each quarter during the Operations and Maintenance Phase.
- DGS reserves the right to extend the contract by 2 years on the same terms & conditions and on the contract prices decided pursuant to this tender

## **10.4 Terms of payment**

- I. In consideration of the obligations undertaken by the bidder under this Agreement and subject to the provisions of this Agreement, DGS shall pay the bidder for successful delivery of Services / Deliverables / Goods and System in pursuance of this Agreement, in accordance with the Terms of Payment Schedule set out in this clause.
- II. DGS shall not be required to make any payments in respect of the Services, Deliverables, obligations and scope of work mentioned in the RFP and Agreement other than those covered in the table as per Payment Schedule. For the avoidance of doubt, it is expressly clarified that

the payments shall be deemed to include all ancillary and incidental costs and charges arising in the course of performance of obligations under the RFP and Agreement including consultancy charges, infrastructure costs, project costs, implementation and management charges and all other related costs including taxes which are addressed in this Clause.

### **10.5 Invoicing and settlement**

- I. The bidder shall submit its invoices in accordance with the following principles:
  - a. Generally, and unless otherwise agreed in writing between the Parties, the bidder shall raise an invoice as per scheduled payment milestones; and
  - b. Any invoice presented in accordance with this Clause shall be in a form agreed with DGS.
- II. The bidder alone shall invoice all payments only after receiving due approval / acceptance of Deliverables / Services / Goods from DGS or any nominated agency. Such invoices shall be correct and accurate and shall be raised in a timely manner.
- III. Subject to accomplishment to obligations of bidder and delivery of Deliverables / Services / Goods to the satisfaction of DGS, payment shall be made by DGS within 45 working days of the receipt of invoice along with supporting documents.
- IV. Notwithstanding anything contained in clause (III) above, DGS shall be entitled to delay or withhold payment of any invoice or part of it where DGS disputes such invoice or part of it provided that such dispute is bona fide. The withheld amount shall be limited to that which is in dispute. A notice of such withholding shall be provided within 10 days of receipt of the applicable invoice.
- V. The bidder shall be solely responsible to make payment to its personnel, sub-contractors, OEMs, third parties.

### **10.6 Taxes**

- I. DGS shall be responsible for withholding taxes from the amounts due and payable to the bidder wherever applicable under extant law. The bidder shall pay for all taxes in connection with this Agreement, SLAs, scope of work and any other engagement required to be undertaken as a part of this Agreement, including, but not limited to, property, sales, use, excise, value-added, goods and services, consumption and other similar taxes or duties
- II. DGS shall provide the bidder with the original tax receipt of any withholding taxes paid by DGS or its nominated agencies on payments under this Agreement within reasonable time after payment. The bidder agrees to reimburse and hold DGS or its nominated agencies harmless from and against any claims, losses, expenses (including attorney fees, court fees) etc. arising out of deficiency (including penalties and interest) in payment of taxes that is the responsibility of the bidder.
- III. If, after the date of this Agreement, there is any unforeseen change in the levies or rate of levy under the applicable laws of India with respect to indirect taxes and duties, which are directly payable by the bidder for providing the Deliverables/Services i.e. service tax or any such other applicable tax from time to time, which increase or decreases the cost incurred by the bidder in performing the Services, then the remuneration and reimbursable expense otherwise payable by the DGS under this Agreement shall be increased or decreased accordingly by correspondence between the Parties hereto, and corresponding adjustments shall be made. However, in case of

any new or fresh tax or levy imposed after submission of the proposal the bidder shall be entitled to reimbursement on submission of proof of payment of such tax or levy.

### **10.7 Adherence to Deliverables**

- I. The bidder has to deliver the deliverables mentioned in Deliverables Schedule to DGS as part of an assurance to fulfil the obligations under the SLA. The table given in Project Timeline & Deliverables Schedule may not be exhaustive and bidder is responsible to provide all those deliverables which may be specified in this RFP but not listed here and those agreed by bidder in response to any request from DGS. The timelines for producing each of these deliverables will be in line and closely linked with the overall project timelines.
- II. Any conflict with respect to project and/or deliverable timelines will have to be resolved by bidder in consultation with DGS and / or its designated agencies and approved by DGS. Thereafter the approved timelines will have to be adhered to by bidder, unless specified otherwise. It is to be noted that upon completion of Go-live, bidder is required to submit all the updated system design documents, specifications, source code, application deployment files, user manuals, administration manuals and all other applicable deliverables listed in Deliverables Schedule.



## 11 Annexure

### 11.1 Annexure: Technical Bid Forms

#### 11.1.1 Tech 1: Technical Bid - Covering Letter

<<On Bidder / Lead Bidder Letterhead>>

Date:

To:

Directorate General of Shipping

9<sup>th</sup> Floor, Beta Building,

i-Think Techno campus

Kanjurmarg (East), Mumbai - 400042

**Subject: Selection of System Integrator for eGovernance solution and IT transformation of Directorate General of Shipping**

Dear Sir,

1. We hereby request to be qualified with the Directorate General of Shipping as a Tenderer for **“Selection of System Integrator for eGovernance solution and IT transformation of Directorate General of Shipping”** against **DGS/E-Gov./21.12.2021-Vol-I**. I / We declare that all the services shall be performed strictly in accordance with the RFP documents and we agree to all the terms and conditions in the RFP.
2. I / We confirm that I / we am / are withdrawing all the deviations, counter clauses, proposed modifications in the Scope of work, Terms and Conditions, Functional Requirement Specifications and Technical Specifications which may have been mentioned in our proposal.
3. We authorize Directorate General of Shipping or its authorized representatives to conduct any investigations to verify the statements, documents and information submitted and to clarify the financial and technical aspects of this application. For this purpose, we hereby authorize (any public official, engineer, bank, depository, manufacturer, distributor, etc.) or any other person or firm to furnish pertinent information deemed necessary and requested by Directorate General of Shipping to verify statements and information provided in this application or regarding our competence and standing.
4. The names and positions of persons who may be contacted for further information, if required, are as follows:

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail id: \_\_\_\_\_

5. We declare that the statements made and the information provided in the duly completed application are complete, true and correct in every detail. On verification at any time in the

- future if it is found that information furnished with this application and statements made therein are not true, incomplete or incorrect, we hereby authorize Directorate General of Shipping to reject our application.
6. We confirm having submitted the information as required by you in Qualification Criteria. In case you require any other further information / documentary proof in this regard before evaluation of our bid, we agree to furnish the same in time to your satisfaction.
  7. We undertake, if our proposal is accepted, to provide all the services related to **“Selection of System Integrator for eGovernance solution and IT transformation of Directorate General of Shipping”** put forward in the bid document or such features as may subsequently be mutually agreed between us and DGS or its appointed representatives.
  8. We agree for unconditional acceptance of all the terms and conditions set out in the bid document and also agree to abide by this bid response for a period of 180 days from the date fixed for bid opening and it shall remain binding upon us with full force and virtue. Till a formal contract is prepared and executed, this bid response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and DGS.
  9. We hereby declare that in case the contract is awarded to us, we will submit Performance Bank Guarantee equivalent to 10 % of total contract value as quoted in the commercial bid in the form prescribed in the RFP.
  10. I/We understand that Directorate General of Shipping reserves the right to reject any application without assigning any reason thereof.
  11. I/We hereby undertake that I/We have not made any payment or illegal gratification to any person/authority connected with the bid process so as to influence the bid process and have not committed any offence under the PC Act in connection with the bid.
  12. All the prices mentioned in our Tender are in accordance with the terms as specified in the RFP documents.
  13. We hereby confirm that our prices include all taxes. However, all the taxes are quoted separately under relevant sections.
  14. We understand that the actual payment would be made as per the existing tax rates during the time of payment.
  15. We have indicated in the relevant forms enclosed, the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.
  16. We further confirm that the prices stated in our bid are in accordance with your Instruction to Bidders included in Tender documents.
  17. In case you require any other further information/documentary proof before/during evaluation of our Tender, we agree to furnish the same in time to your satisfaction.
  18. We declare that our Bid Price is for the entire scope of the work as specified in the tender document. These prices are indicated in Commercial Bid submitted as part of the requirements of Tender.
  19. Our commercial proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal.
  20. We understand you are not bound to accept any Proposal you receive.
  21. We hereby declare that our Tender is made in good faith, without collusion or fraud and the information contained in the Tender is true and correct to the best of our knowledge and belief.

22. I/We shall disclose any payments made or proposed to be made to any intermediaries (agents, etc.) in connection with the bid.
23. It is hereby confirmed that I/We are entitled to act on behalf of our corporation/ company/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.
24. We declare that we have read through the Tender document, all related clarifications and corrigendum.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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11.1.2 Tech 2: Particulars of the Bidder (please fill separate sheet for each consortium members)

SI No.	Information Sought	Details to be Furnished
A	Name and address of the bidding Company	
B	In case of consortium, please indicate name of Lead Bidder	
C	Incorporation status of the firm (public limited / private limited, etc.)	
D	Year of Establishment	
E	Date of registration	
F	ROC Reference No.	
G	Details of registration with appropriate authorities for service tax	
H	Name, Address, email, Phone nos. and Mobile Number of Contact Person	

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

11.1.3 Tech 3: Financial Capability

**<<To be completed by the Bidder / In case of consortium, by each partner as appropriate to demonstrate that they meet the requirements>>**

**<<On the letterhead of the Chartered Accountant >>**

**<<To be submitted along with Audited Financial Statements>>**

Date

To:

Directorate General of Shipping

9<sup>th</sup> Floor, Beta Building,

i-Think Techno campus

Kanjurmarg (East), Mumbai - 400042

We have examined the books of accounts and other relevant records of <<Bidder / consortium Partner Name along with registered address>>. On the basis of such examination and according to the information and explanation given to us, and to the best of our knowledge & belief, we hereby certify that the annual turnover, Profit before Tax and Profit after tax for the three years i.e. from FY 2017-18 to FY 2019-20 was as per details given below:

Information from Balance Sheets (in Indian Rupees)			
	2017-18	2018-2019	2019-20
Annual Turnover			
Profit before Tax			
Profit After Tax			

(Signature of the Chartered Accountant)

Name :

Designation :

Membership Number :

Date :

Company Seal :

Business Address :

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

11.1.4 Tech 4: Profile of Resource

1.	Name of the employee					
2.	Name of the employer	<<Name of the Bidder / Consortium Member >>				
3.	Proposed position					
4.	Date of Birth					
5.	Nationality					
6.	Total years of relevant experience					
7.	Certifications	Note: Please attach copies of relevant certificates				
8.	Education	Qualification	Name of School / College / University	Degree Obtained	Date Attended	
		Note: Please attach copies of relevant certificates				
9.	Language	Language	Read	Write	Speak	
10	Employment Record	Employer	Position	From (MM / YYYY)	To (MM / YYYY)	Exp. in Months

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

		<i>(Starting with present position list in reverse order)</i>															
11	Relevant Experience	<p><i>(Give an outline on the experience most pertinent to tasks mentioned in the project. Describe degree of responsibility held on these relevant assignments). (Details shall be provided as per the number of project experience in the evaluation criteria specified in section I – Clause 1.28 of the RFP. Bidders are expected to clearly state the total number of projects for the respective criterion as applicable.)</i></p> <p><i>Maximum 8 Projects:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Name of Assignment/Project</b></td> <td></td> </tr> <tr> <td>Year</td> <td></td> </tr> <tr> <td>Location</td> <td></td> </tr> <tr> <td>Client</td> <td></td> </tr> <tr> <td>Main project features</td> <td></td> </tr> <tr> <td>Positions held</td> <td></td> </tr> <tr> <td>Activities performed</td> <td></td> </tr> </table>		<b>Name of Assignment/Project</b>		Year		Location		Client		Main project features		Positions held		Activities performed	
<b>Name of Assignment/Project</b>																	
Year																	
Location																	
Client																	
Main project features																	
Positions held																	
Activities performed																	
12	Certification	<p>I, the undersigned, certify that to the best of my knowledge and belief, this bio-data correctly describes myself, my qualifications, and my experience.</p>  <p>Date:</p> <p>Place <span style="float: right;">Signature of the employee / Authorized Signatory</span></p>															

11.1.5 Tech 5: Certificate from HR demonstrating its Organization Strength

**<<On the letterhead of the Bidding Organization>>**

**<<In case of consortium, separate certificates to be submitted from respective HR  
authorized representatives>>**

Date:

To:

Directorate General of Shipping

9<sup>th</sup> Floor, Beta Building,

i-Think Techno campus

Kanjurmarg (East), Mumbai - 400042

This is to certify that the number of full-time employees having experience in implementing all the major modules/solution components of the proposed solution in <<Organization Name>> is greater than <<Number>> as on DD/MM/YYYY

For <Organization Name>

HR Signature (with Organization Stamp)

HR Name



#### 11.1.6 Tech 6: Technical Solution

The Bidder is required to describe the proposed Technical Solution in this section. The Technical Solution would be evaluated on the following broad parameters. The DGS reserves the rights to add, delete, or modify these parameters at any time during the Tender process, without assigning any reasons whatsoever and without being required to intimate the Bidders of any such change.

- Clear articulation and description of the design and technical solution and various components
- Extent of compliance to functional and technical requirements specified in the scope of work and in accordance with leading practices.
- Technical Design and clear articulation of benefits to DGS of various components of the solution vis-à-vis other options available.

The Bidder should provide **detailed design** for the following listing all assumptions that have been considered:

- Proposed Solution, in detail (including various tools to be used)
- Proposed Technical architecture
- Capabilities of the proposed solution to address the functional requirements
- Database design considerations
- Application Security Architecture
- Data Migration approach
- Testing approach
- Risk Management Plan

#### 11.1.7 Tech 7: Approach & Methodology

1. The Bidder should cover details of the methodology proposed to be adopted for planning and implementation of solutions relating to establishment of the DGS solution.
2. The Bidder may give suggestions on improvement of the scope of work given and may mention the details of any add on services related to this project over and above what is laid down in the tender document. List of deliverables should also be identified and explained.
3. The Bidder shall describe the knowledgebase, best practices and tools that will be used by the project team for the execution of scope of work activities.
4. The Bidder should cover details of the methodology proposed to be adopted for operations and maintenance of the DGS solution.
5. The bidder shall cover the details for best practices from imparting similar kind of training for users in an organization similar to the DGS based on bidder's prior implementation experience in the same
6. Detailed Methodology and approach provided for training of the different stakeholders within DGS
7. Best practices from undertaking Change Management for users in an organization similar to DGS based on bidder's prior implementation experience in the same.
8. Detailed Training Plan indicating the number of training sessions, batch sizes and number of batches with respect to all the stakeholders, and all different kinds of training vis-à-vis the requirements in the tender.
9. Project Methodology should contain but not limited to following
  - Overall implementation methodology (Objective of phases, deliverables at each phase, etc.)
  - Methodology for performing business design
  - Methodology for quality control and testing of configured system
  - Methodology of internal acceptance and review mechanism for deliverables by the bidder.
  - Proposed Acceptance criteria for deliverables
  - Methodology and approach along with proposed tools and processes which will be followed by the bidder during project implementation
  - Change Management and Training Plan
  - Risk and Quality management plan

#### 11.1.8 Tech 8: Project Plan & Deployment of Personnel

S. No	Item of Activity	Month-Wise Program					
		M1	M2	M3	M4	M5	.....
1	Activity 1						
1.1	Sub-Activity 1						
1.2	Sub-Activity 2						
2	Activity 2						
	..						
3	Activity 3						
3.1	Sub-Activity 1						
3.2	Sub- Activity 2						

- Indicate all main activities of the assignment, including delivery of reports (e.g.: inception, interim, and final reports), and other benchmarks such as Bidder approvals. For phased assignments indicate activities, delivery of reports, and benchmarks separately for each phase.
- Duration of activities shall be indicated in the form of a bar chart.

Note: The above activity chart is just for the purpose of illustration. Bidders are requested to provide detailed activity & phase wise timelines for executing the project with details of deliverables & milestones as per their proposal.

#### 11.1.9 Tech 9: Format of Deployment of Personnel

1. The Bidder should provide a detailed resource deployment plan in place to ensure that technically qualified staff is available to deliver the project.
2. The Bidder should provide the summary table of details of the manpower that will be deployed on this project along with detailed CVs of key personnel

No.	Name of Staff	Education Qualification and Designation	Area of Expertise	Deployment Period (In Months)						Total Man-Months Proposed	Full Time/ Part Time
				M1	M2	M3	M4	M5	n		
1											
2											
3											

11.1.10 Tech 10: Details of Experience of Bidder in Various projects

As per the format below, the bidder should provide information for each project on similar assignments required for pre-qualification and technical evaluation criteria.

Sr. No.	Credential for < Prequalification Criteria No. / Technical Criteria No>		
	Name of the Organization - <<Name of the Bidder / Consortium Member that have executed / executing the project>>		
	Parameter	Details	
<b>General Information</b>			
1.	Customer Name		
2.	Name of the contact person and contact details for the client of the assignment		
3.	Whether client visit can be organized	(YES / NO)	
<b>Project Details</b>			
4.	Project Title		
5.	Start Date and End Date		
6.	Date of Go-Live		
7.	Total Cost of the project		
8.	Current Status (Live / completed / on-going / terminated / suspended)		
9.	No of staff provided by your company		
10.	Please indicate the current or the latest AMC period with the client (From Month – Year to Month-Year)		
11.	Please indicate whether the client is currently using the implemented solution		
<b>Size of the project</b>			
12.		Total users	

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF  
DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

Sr. No.	Credential for < Prequalification Criteria No. / Technical Criteria No>				
	Name of the Organization - <<Name of the Bidder / Consortium Member that have executed / executing the project>>				
	Parameter	Details			
	Number of total users and concurrent users of the solution at the client location(s):	Concurrent users			
13.	Training responsibilities of Bidder				
14.	Any other information to be shared with DGS				
<b>Narrative Description of the Project:</b>					
<b>Detailed Description of actual services provided by Bidder:</b>					
<b>Documentary Proof:</b>					

11.1.11 Tech 11: List of Sub-Contractors and OEMs and their details

**List of Sub-Contractors**

Sr. No.	Role	Name of Sub-Contractor / OEM	Responsibility	Products/Services Offered

**List of OEMs**

Sr. No.	Role	Name of OEM	Responsibility	Products/Services Offered

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

11.1.12 Tech 12: Details of ineligibility for corrupt or fraudulent practices / blacklisted with any  
of the Government or Public Sector Units

**<<On the letterhead of the Bidding Organization>>**

**<<In case of consortium, separate certificates to be submitted from respective authorized  
representatives>>**

Date:

To:

Directorate General of Shipping  
9<sup>th</sup> Floor, Beta Building,  
i-Think Techno campus  
Kanjurmarg (East), Mumbai - 400042

**Subject:** Declaration for not being under an ineligibility for corrupt or fraudulent practices or  
blacklisted with any of the Government or Public Sector Units in India

Dear Sir,

We, the undersigned, hereby declare that

- We are not under a declaration of ineligibility / banned / blacklisted by any State or Central Government / any other Government institutions in India for any reason as on last date of submission of the Bid or convicted of economic offence in India for any reason as on last date of submission of the Bid

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :



11.1.13      Tech 13: Format for Consortium Agreement

(Company letterhead)

[Date]

To

Directorate General of Shipping

9th Floor, Beta Building,

i-Think Techno campus

Kanjurmarg (East), Mumbai - 400042

Sir,

Sub: Declaration on Consortium

I / We as Lead Partner of the Consortium, hereby declare the Roles and Responsibilities of the Consortium members:

Sr. No.	Member	Role	Responsibilities

I / We understand that as Lead Partner, I / we are be responsible for executing at least one component of the scope of work from the following components:

1. Application Development and Maintenance
2. Transitioning and Change Management

I / We understand that if this information / declaration is found to be false or incorrect, Directorate General of Shipping reserves the right to reject the Bid or terminate the Contract with us immediately without any compensation to us.

Yours faithfully,

Authorized Signatory of the Lead Partner

Designation

Date

Time

Seal

Business Address

## 11.2 Pre-qualification Bid Forms

### 11.2.1 Tech 14: Bank Guarantee for Earnest Money Deposit

WHEREAS \_\_\_\_\_ (Name of Tenderer) (hereinafter called 'the tenderer') has submitted its tender dated \_\_\_\_\_ (date) for the execution of \_\_\_\_\_ (Name of work) (hereinafter called 'the tender')

KNOW ALL MEN by these presents that we \_\_\_\_\_ (Name of Bank) having our registered office at \_\_\_\_\_ (hereinafter called 'the Bank') are bound unto the Directorate General of Shipping, Mumbai appointed by Government of India under Merchant Shipping Act 1958 (hereinafter called 'the Employer') in the sum of Rs. \_\_\_\_\_/- (Rs. \_\_\_\_\_) for which payment well and truly to be made to the said Employer the Bank binds itself, its successors and assigns by these presents.

The CONDITIONS of this obligation are

- a) If the Tenderer withdraws its Tender during the period of Tender validity specified in the Tender; or
- b) If the Tenderer having been notified of the acceptance of his Tender by the Employer during the period of Tender Validity;
  - i. fails or refuses to execute the Agreement, if required; or
  - ii. fails or refuses to furnish the Performance Security, in accordance with the General Conditions of Contract.

We undertake to pay the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or both of two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including the date upto \_\_\_\_\_ (it shall be valid upto one eighty (180) days after the date of expiry of the period of tender validity), and any demand in respect thereof should reach our \_\_\_\_\_ branch situated in Mumbai limits for encashment not later than the date of expiry of this guarantee.

Dated \_\_\_\_\_ day of \_\_\_\_\_ 2022

Name of the Bank

Signature & Name & Designation

Seal of the Bank

11.2.2 Tech 15: CERTIFICATE OF CONFORMITY/ NO DEVIATION

**<<To be submitted on the Company Letter head of the Lead Bidder>>**

Date:

To:

Directorate General of Shipping

9th Floor, Beta Building,

i-Think Techno campus

Kanjurmarg (East), Mumbai – 400042

This is to certify that, the specifications of Software/ hardware which I/ We have mentioned in the Technical bid, and which I/ We shall supply if I/ We am/ are awarded with the work, are in conformity with the minimum specifications of the bidding document and that there are no deviations of any kind from the requirement specifications.

Also, I/ we have thoroughly read the RFP and by signing this certificate, we hereby submit our token of unconditional acceptance to all the terms & conditions of the bidding document without any deviations.

I/ We also certify that the price I/ we have quoted is inclusive of all the cost factors involved in the end-to-end implementation and execution of the project, to meet the desired Standards set out in the bidding Document.

Thanking you,

Yours faithfully

(Signature of the Authorized signatory of the Bidding Organization)

Name :

Designation :

Date :

Company Seal :

Business Address :

11.2.3 Tech 16: Format – Declaration for No Conflict of Interest

**<<To be submitted on the Company Letter head of the Lead Bidder>>**

Date:

To

Directorate General of Shipping,  
9th Floor, Beta Building,  
i-Think Techno campus  
Kanjurmarg (East), Mumbai – 400042

Sir,

Sub: Undertaking on No Conflict of Interest

I / We as System Integrator (SI) do hereby undertake that there is absence of, actual or potential conflict of interest on our part, on part of our Consortium partner (in case of a Consortium) due to prior, current, or proposed contracts engagements, or affiliations with Directorate General of Shipping, Government of India.

I / We also confirm that there are no potential elements (time frame for service delivery, resource, financial or other) that would adversely impact our ability to complete the requirements of this RFP.

We undertake and agree to indemnify and hold Directorate General of Shipping, Government of India harmless against all claims, losses, damages, costs, expenses, proceeding fees of legal advisors (on a reimbursement basis) and fees of other professionals incurred (in the case of legal fees & fees of professionals, reasonably) Directorate General of Shipping, Government of India and / or its representatives, if any such conflict arises later.

Yours faithfully,

Authorized Signatory

Designation

Date

Time

Seal

Business Address

#### 11.2.4 Tech 17: Compliance Sheet for Pre-Qualification Proposal

The Bidder is required to fill relevant information in the format given below. The pre-qualification bid must contain documentary evidences and supporting information to enable DGS to evaluate the eligibility of the Bidder without ambiguity.

Sr. No	Qualification Criteria	Documents Information to be provided in the submitted proposal	Compliance (Yes / No)	Reference & Page Number
1.	<b>PQ 1</b>			
2.	<b>PQ 2</b>			
3.	<b>PQ3</b>			
4.	<b>PQ4</b>			
5.	<b>PQ5</b>			
6.	<b>PQ6</b>			
7.	<b>PQ7</b>			
8.	<b>PQ8</b>			
9.	<b>PQ9</b>			

#### 11.2.5 Tech 18: Unpriced Bill of Material

The Bidder should provide the proposed Bill of Material (BoM) here. Bidder should refer to the Indicative BoM provided in the Section 4.3 Unpriced Bill of Material of Volume II of this tender and should reproduce the same here. The details of the make / brand and make / brand details against each line item, wherever applicable, should be mentioned. The bid may be considered non-responsive in the absence of such details. Once the bidder provides this information in the submitted bid, the bidder cannot change it with any other component / equipment etc. of lower specifications / performance; it can only be upgraded at the time of actual deployment / installation. The Bidder may add any additional line item in the table below, that may be required to fulfil the tender and project requirements in totality. Kindly note that the indicative / estimated quantity provided in the RFP would be used for evaluation purposes; however, the payment would be done on actual usage basis.

Sr. No	BOM Item	Unit of measurement	Quantity Proposed	Make / Brand	Make / Brand Details	Full Compliance with RFP Requirements (Yes / No)

### 11.3 Comp 1: Summary of Commercial Proposal

Sr. No.	Project Components / Services	Total Cost #
1	Software & Related cost	A1 + A6
2	Transitioning and change management cost	A2 + A7
3	IT Certification cost	A3
4	System Integrator and manpower cost	A4 + A5

# The total cost would be considered for commercial evaluation of the bids. This however may not have co-relation with the Total Contract value or actual payment to be made to the successful bidder.

# All payments will be done at actuals against accepted deliverables along with supporting invoices and documentation.

All price must be quoted in INR only. All units must be clearly specified.

## 11.3.1 A1: Software &amp; Related Cost (Implementation phase)

- The description of functions/modules listed below is available in Volume II of the RFP.
- In case, any of the bidders has readily available software for combining any of the following functions, they may accordingly define the same in their technical bid and distribute evenly while filling up the commercial bid.
- For e.g. there is readily available solution covering functions as defined below. So, the bidder may mention in the technical bid the list of functions that are available as a combined solution and no separate cost can be determined for the same. Hence, the total cost for these modules/functions is distributed evenly between the modules/functions.

Sr. No.	Software Function/Module	Unit	Quantity (A1.1)	Rate (A1.2)	Other cost (A1.4)	Total Price (Rs.) $A1.3 = (A1.1 \times A1.2) + A1.4$
1.	Exemptions and Plan Approvals					
2.	Ship Registration					
3.	Charter Permissions and licensing					
4.	ISM Audits					
5.	Inspections					
6.	Annual Inspection of MSVs					
7.	Individual's profile					
8.	INDOS Application					
9.	CDC					
10.	Examinations					
11.	Certifications					



Sr. No.	Software Function/Module	Unit	Quantity (A1.1)	Rate (A1.2)	Other cost (A1.4)	Total Price (Rs.) A1.3 = (A1.1*A1.2) + A1.4
12.	Sea Service					
13.	RPS					
14.	Shipping Company					
15.	MTI					
16.	SPFO					
17.	SWFS					
18.	RO Sails					
19.	Development of CMS portal for website					
20.	Data Migration module					
21.	MTO					
22.	Approval of Service providers					
23.	ISPS Audits					
24.	Mobile App					
25.	Development of Application Programming interfaces and gateways (SMS, email, payment, third party system, external systems, etc.)					

Sr. No.	Software Function/Module	Unit	Quantity (A1.1)	Rate (A1.2)	Other cost (A1.4)	Total Price (Rs.) A1.3 = (A1.1*A1.2) + A1.4
26.	PMIS					
27.	MIS Reporting, Analytics & Forecasting					
28.	SLA Monitoring and Incident Management system					
29.	SIEM (Security Information and event management)					
30.	Vigilance Modules					
31.	Website					
<b>Any Other Modules</b>						
32.	<Any other modules....>					
<b>Sub-Total (A1.3)</b>						

**Taxes: Against A1 components**

Subtotal (A1.3)	Tax	Tax rate	Tax amount	Total A1 = (A1.3 + Tax amount)
	CGST			
	SGST			
	IGST			
<b>Total (in Figures) (A1)</b>				
<b>Total (in Words) (A1)</b>				

**\*Total (A1) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:

## 11.3.2 A2: Transitioning and change management training cost (Implementation phase)

S. No.	Description	No. of Trainings (A2.1)	Cost per session of training <sup>#</sup> (A2.2)	Total A2.3 = (A2.1 * A2.2)
1.	Executive leadership Workshop			
2.	Functional Heads			
3.	Functional users			
4.	Administrators			
5.	Employees of Support Functions			
Sub-Total				

<sup>#</sup> Please note that - Unit cost per training session including training material, training sessions, videos, consumables, etc.

**Tax: Against A2 components**

Subtotal (A2.3)	Tax	Tax rate	Tax amount	Total A2 = (A2.3 + Tax amount)
	CGST			
	SGST			
	IGST			
<b>Total (in Figures) (A2)</b>				
<b>Total (in Words) (A2)</b>				

**\*Total (A2) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:

## 11.3.3 A3: IT certification cost

Sr. No.	Description	Quantity (A3.1)	Rate (A3.2)	Total Price (Rs.) A3.3= (A3.1 * A3.2)
1.	STQC Certification	1		
2.	Security Audit Certificate from CERT-IN / CERT-IN empanelled agencies	1		
<b>Sub-Total (A6.3)</b>				

**Tax: Against A3 components**

Subtotal (A3.3)	Tax	Tax rate	Tax amount	Total A3= (A3.3 + Tax amount)
	CGST			
	SGST			
	IGST			
<b>Total (in Figures) (A3)</b>				
<b>Total (in Words) (A3)</b>				

**\*Total (A3) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:

## 11.3.4 A4: System integration and manpower cost (Implementation phase)

Sr. No.	Description	Manpower Quantity (A4.1)	Manpower Rate (A4.2) (Man-month rate)	Period (P) (in months)	Total Price (Rs.) $A4.3 = (A4.1 * A4.2 * P)$
1.	Project Manager				
2.	Business Analyst				
3.	Subject Matter Expert				
4.	Database Administrator				
5.	Change Management Specialist / Trainer				
6.	Mobile app specialist				
7.	Solution Architect				
8.	<Others>				
<b>Sub-Total (A4.4)</b>					

**Tax: Against A4 component**

Sub-total (A4.4)	Tax	Tax rate	Tax amount	Total A4 = (A4.4 + Tax amount)
	CGST			
	SGST			
	IGST			
<b>Total (in Figures) (A4)</b>				
<b>Total (in Words) (A4)</b>				

**\*Total (A4) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:



## 11.3.5 A5: System integration and manpower cost (ONM phase)

Sr. No.	Description	Nos.	Man months	Man month Rate	Year 1	Year 2	Years 3	Total Price (excluding taxes, duties, levies)	GST	Total Price (including taxes, duties, levies)
A	B		(A)	(B)	1	2	3	C = (1+2+3)	D	E
1	Project Manager									
2	Business Analyst									
3	Subject Matter Expert									
4	Database Administrator									
5	Change Management Specialist / Trainer									
6	Mobile app specialist									
7	Solution Architect									
8	Application Support									
9	<Others>									
	<b>Total (A5)</b>									

**\*Total (A5) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:

## 11.3.6 A6: Software &amp; Related Cost (ONM phase)

Sr. No.	Software Function / Module	Year 1	Year 2	Years 3	Total Price (excluding taxes, duties, levies)	GST	Total Price (including taxes, duties, levies)
		1	2	3	A = (1+2+3)	D	F = A + D
1	Exemptions and Plan Approvals						
2	Ship Registration						
3	Charter Permissions and licensing						
4	ISM Audits						
5	Inspections						
6	Annual Inspection of MSVs						
7	Individual's profile						
8	INDOS Application						
9	CDC						
10	Examinations						
11	Certifications						
12	Sea Service						
13	RPS						

Sr. No.	Software Function / Module	Year 1	Year 2	Years 3	Total Price (excluding taxes, duties, levies)	GST	Total Price (including taxes, duties, levies)
		1	2	3	A = (1+2+3)	D	F = A + D
14	Shipping Company						
15	MTI						
16	SPFO						
17	SWFS						
18	RO Sails						
19	Development of CMS portal for website						
20	Data Migration module						
21	MTO						
22	Approval of Service providers						
23	ISPS Audits						
24	Mobile App						
25	Application Programming interfaces and gateways (SMS, email, payment, third party system, external systems, etc.)						
26	PMIS						

Sr. No.	Software Function / Module	Year 1	Year 2	Years 3	Total Price (excluding taxes, duties, levies)	GST	Total Price (including taxes, duties, levies)
		1	2	3	A = (1+2+3)	D	F = A + D
27	MIS Reporting, Analytics & Forecasting						
28	SLA Monitoring and Incident Management system						
29	SIEM (Security Information and event management)						
30	Vigilance Modules						
31	Website						
32	<Any other modules....>						
	<b>Total (in Figures) (A6)</b>						
	<b>Total (in Words) (A6)</b>						

**\*Total (A6) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:

## 11.3.7 A7: Transitioning and change management training cost (ONM phase)

S. No.	Description	No. of Trainings in Phase II (A7.1)	Cost per session of training <sup>#</sup> (A7.2)	Total A7.3 = (A7.1 * A7.2)
1.	Executive leadership Workshop			
2.	Functional Heads			
3.	Functional users			
4.	Administrators			
5.	Employees of Support Functions			
Sub-Total				

<sup>#</sup> Please note that - Unit cost per training session including training material, training sessions, videos, consumables, etc.

**Tax: Against A7 components**

Subtotal (A7.3)	Tax	Tax rate	Tax amount	Total A7 = (A7.3 + Tax amount)
	CGST			
	SGST			
	IGST			
<b>Total (in Figures) (A7)</b>				
<b>Total (in Words) (A7)</b>				

**\*Total (A7) will be considered for Commercial Evaluation**

Authorised signatory on behalf of the bidder:

Full name: .....

Address: .....

Seal of the Firm:

## 11.3.8 Total Project Value:

Sr. No	Description	Implementation			Operations & Maintenance (OnM)			TOTAL PROJECT VALUE $V = (V3) + (V6)$
		Total Price (V1)	Total Tax Value (V2)	Total Implementation Value (V3)	Total Price (V4)	Total Tax Value (V5)	Total OnM Value (V6)	
1.	Software and related cost			A1			A6	
2.	Transitioning and change management Cost			A2			A7	
3.	IT Certification Cost			A3				
4.	System Integrator and manpower Cost			A4			A5	
TOTAL VALUE (in Words)								

Total Value (in Words) is \_\_\_\_\_

Authorised signatory on behalf of the bidder:

Full name:

Address:

Seal of the Firm:



REQUEST FOR PROPOSAL (RFP)  
FOR  
SELECTION OF SYSTEM INTEGRATOR FOR  
EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE  
GENERAL OF SHIPPING  
VOLUME 2 OF 3

Tender Number: DGS/E-Gov./21.12.2021



**Disclaimer:**

1. This Request for Proposal ("RFP") is issued by Directorate General of Shipping ("DGS")
2. The information contained in this RFP or subsequently provided to Bidders, whether verbally or in documentary or any other form by or on behalf of DGS or any of its employees or advisers, is provided to Bidders on the terms and conditions set out in this RFP and all other terms and conditions subject to which such information is provided.
3. This RFP is not a contract and is neither an offer nor invitation by DGS to the prospective Bidders or any other person. Whilst the information in this RFP has been prepared in good faith, it is not and does not purport to be comprehensive or to have been independently verified. Neither DGS, nor any of its officers or employees, nor any of their advisers nor consultants accept any liability or responsibility for the accuracy, reasonableness or completeness of, or for any errors, omissions or misstatements in the information or makes any representation or warranty, express or implied, with respect to the information contained in this RFP or on which this RFP is based or with respect to any written or oral information made or to be made available to any of the recipients or their professional advisers and, so far as permitted by law and liability therefore is hereby expressly disclaimed.
4. The purpose of this RFP is to provide the Bidder(s) with information that may be useful to them in the formulation of their Proposals in pursuant to this RFP. The information contained in this RFP is selective and is subject to updating, expansion, revision and amendment at the sole discretion of DGS. This RFP document is not exhaustive and does not purport to contain all the information that a Bidder may require for the purpose of making a decision for participation in this bidding process. Neither DGS nor any of its officers, employees nor any of its advisers nor consultants undertakes to provide any Party with access to any additional information or to update the information in this RFP or to correct any inaccuracies therein which may become apparent. Each Bidder should conduct its own analysis of the information contained in this RFP, to correct any inaccuracies therein and is advised to carry out its own investigations in the project, the regulatory regime which applies thereto and by and all matters pertinent to DGS and to seek its own professional advice on the legal, financial and regulatory consequences of entering into an agreement or arrangement relating to the project.
5. DGS accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Bidder upon the statements contained in this RFP.

## CONTENTS

<b>1</b>	<b>SCOPE OF WORK .....</b>	<b>4</b>
1.1	INTRODUCTION .....	4
1.2	SCOPE OVERVIEW .....	4
1.3	DESIGN PRINCIPLES .....	14
1.3.1	<i>Architectural principles</i> .....	14
1.3.2	<i>Security Principles</i> .....	15
1.3.3	<i>Management Principles</i> .....	17
1.4	DETAILED SCOPE OF WORK .....	18
1.4.1	<i>Project management</i> .....	18
1.4.2	<i>Designing, configuration / development, implementation and support of entire IT application portfolio for service delivery and operations</i> .....	22
1.4.2.1	Functional coverage .....	22
1.4.2.2	Requirement gathering .....	27
1.4.2.3	Solution design .....	29
1.4.2.4	Scope and Guidelines for DGS Website .....	31
1.4.2.5	Scope and Guideline for Mobile App Development .....	35
1.4.2.6	DGS performance measurement and monitoring dashboards .....	37
1.4.2.7	Analytics and Business Intelligence .....	38
1.4.2.8	Procurement of software components, solution configuration / development and testing .....	39
1.4.2.9	Solution testing .....	41
1.4.2.10	User training .....	43
1.4.2.11	Full scale deployment and Go-live, Post deployment and stabilization, Post-stabilization support and operations, Incremental updates to solution .....	44
1.4.2.12	Documentation of Solution .....	45
1.4.2.13	Software Application Maintenance .....	46
1.4.2.14	Migration, transitioning support and change management .....	49
1.4.2.15	Implementation and adherence to IT policies as defined by DGS .....	56
1.4.2.16	Other key requirements .....	57
1.4.2.17	Roles and Responsibilities .....	60
<b>2</b>	<b>BUSINESS PROCESSES .....</b>	<b>60</b>
2.1	DESCRIPTION OF KEY PROCESSES .....	60
2.1.1	<i>Generic functions available to users</i> .....	60
2.2	CORE COMPONENTS IN THE SOLUTION .....	76
2.2.1	<i>User group</i> .....	76
2.2.2	<i>Role of access</i> .....	76
2.2.3	<i>End user computing</i> .....	77
2.2.4	<i>Method of access</i> .....	78
2.2.5	<i>Applications</i> .....	78
2.2.5.1	Capabilities .....	78
2.2.5.2	Key operational and performance dashboards .....	82
2.2.5.3	MIS .....	89
2.2.5.4	Analytics and Forecasting .....	89
2.2.5.5	CMS solution .....	89
2.2.5.6	Email solution .....	89
2.2.5.7	SMS solution .....	89
2.2.5.8	DSC .....	90
2.2.5.9	Backup and Archival .....	90
2.2.5.10	Identity Management .....	90
2.2.5.11	Configuration management .....	90
2.2.5.12	SLA management system (Part of Enterprise Management System) .....	90
2.2.5.13	CAPTCHA .....	91

2.2.5.14	System Interfaces .....	91
2.2.6	External Systems .....	91
2.2.7	Network Infrastructure .....	93
<b>3</b>	<b>ACCEPTANCE AND CERTIFICATION REQUIREMENTS .....</b>	<b>93</b>
<b>4</b>	<b>DETAILED REQUIREMENTS AND SPECIFICATIONS .....</b>	<b>97</b>
4.1	FUNCTIONAL REQUIREMENT SPECIFICATIONS .....	97
4.2	TECHNICAL REQUIREMENTS SPECIFICATIONS .....	97
4.3	UNPRICED BILL OF MATERIAL .....	97
<b>5</b>	<b>ANNEXURES .....</b>	<b>98</b>
5.1	DGS HQ AND ITS ALLIED OFFICES LIST .....	98
5.2	ROLES & RESPONSIBILITIES OF THE PARTIES .....	0
5.3	EXISTING E-GOVERNANCE SOLUTION AT DGS: .....	0

# **1 Scope of Work**

## **1.1 Introduction**

Directorate General of Shipping (DGS) intends to establish an integrated e-Governance solution that will support all activities and functions being carried out by Directorate General of Shipping. Adoption of this solution is expected to enable DGS to improve its business processes and supporting activities, closely monitor the performance in all areas of operations and management, improved levels of operations and efficient service delivery to all relevant stakeholders.

Objective of the solution is to be implemented is to enable DGS:

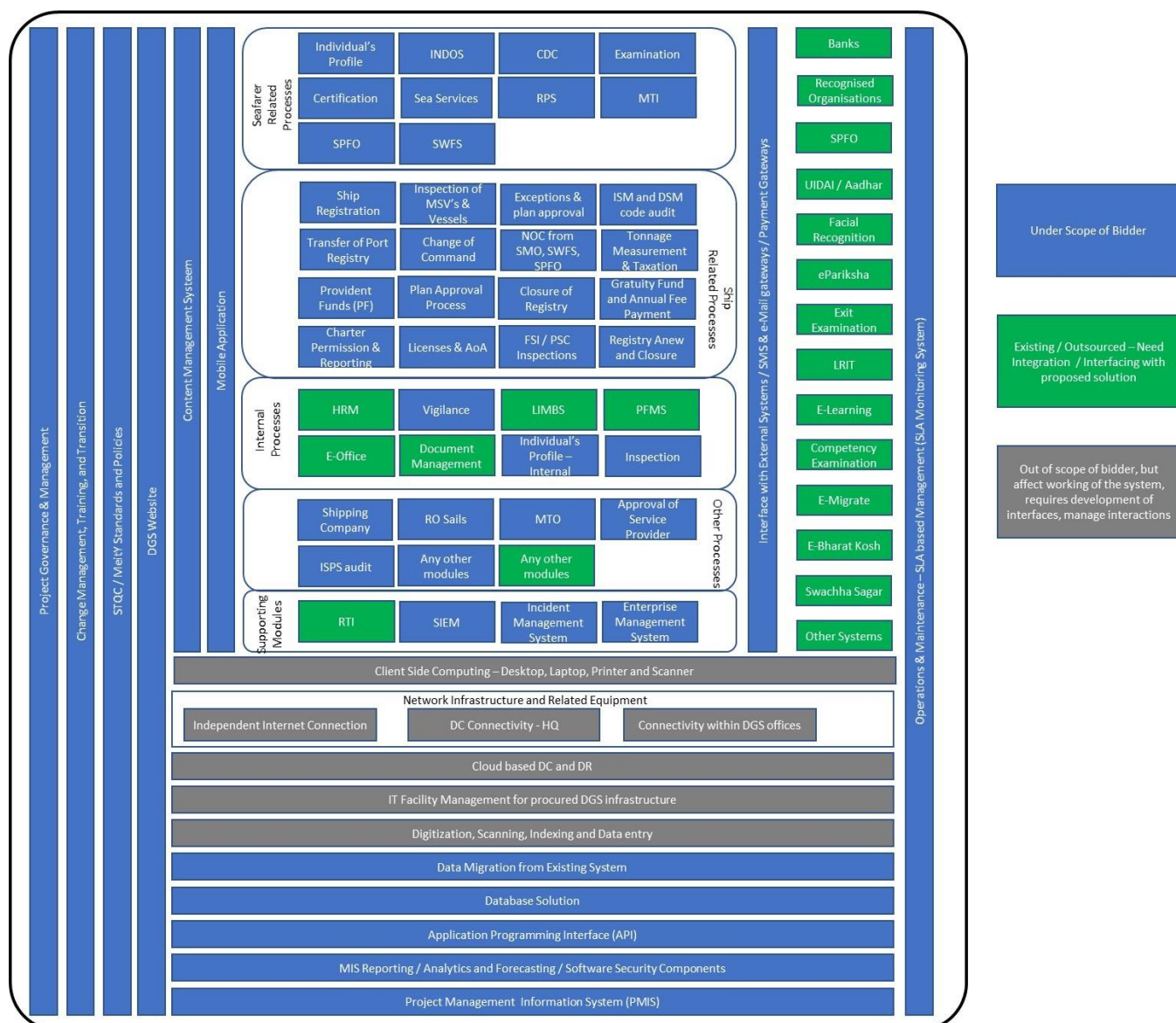
- To develop and implement a comprehensive system to increase efficiency, and effectiveness of overall DGS operations
- Facilitate movement towards digitization of processes
- Improve transparency and provide efficient service delivery to its customers through adoption of web-based communication, easy availability of services, and latest technology advances
- Computerize and automate all its functions related to shipping and seafarer operations and maintenance, internal administration and maintenance.
- Enable digitalization of physical records within DGS as required
- Integration with external applications including payment gateway
- Through the integrated e-Governance solution, Directorate General of Shipping is pursuing to improve its operational efficiency and effectiveness leading to a customer centric service delivery with focus on ease of doing business, and an improved stakeholders' satisfaction.

## **1.2 Scope overview**

The scope of work for the bidder is to help DGS achieve the aforementioned objectives by providing necessary services as required.

Following is the detailed functional scope for envisaged entire DGS e-Governance Solution, the details about each component described in later sections.

# SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA



please refer Annexure 5.3 for details of existing e-gov solution.

The Scope is divided into three different components;

1. Components, under scope of bidder (Blue sections)
2. Components, DGS currently using, procured externally or will procure separately, however bidder should integrated those components in e-Governance solution (Green section).
3. Components, out of scope of bidder, however, will be part of the solution. Bidder need to develop / manage those integrations & interfaces as and when required (Grey section)

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

#	Process Name	Department Housed In																
		Internal*																
		Engineering Dept, DGS	Nautical Dept, DGS	Naval Architecture, DGS	Administrative Wing, DGS	Engineering Dept, MMD	Nautical Dept, MMD	Naval Architecture, MMD	Training Dept, DGS	SMO	INDoS Cell	SEO	Internal Examiner	DGS Exam Centre	SPFO	SWFS	MTT	RO (Sails)
SF	Seafarer Related Processes																	
SF 1	Individual (Seafarer's) Profile																	
SF 2	CDC																	
SF 3	Examinations																	
SF 4	Certifications																	
SF 5	Sea Service																	
SF 6	RPS																	
SF 7	MTI																	
SF 8	SPFO																	
SF 9	SWFS																	
SF 10	INDOS																	

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

#	Process Name	Department Housed In																
		Internal*																
		Engineering Dept, DGS	Nautical Dept, DGS	Naval Architecture, DGS	Administrative Wing, DGS	Engineering Dept, MMD	Nautical Dept, MMD	Naval Architecture, MMD	Training Dept, DGS	SMO	INDoS Cell	SEO	Internal Examiner	DGS Exam Centre	SPFO	SWFS	MTT	RO (Sails)
SH	Ship Related Processes																	
SH 1	Plan Approval																	
SH 2	Tonnage Measurement																	
SH 3	Ship Registration (including registration and discharge of mortgage)																	
SH 4	Registry anew																	
SH 5	Transfer of port of registry																	
SH 6	Change of Command																	
SH 7	NOC from SMO, SWFS																	

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

#	Process Name	Department Housed In																
		Internal*																
		Engineering Dept, DGS	Nautical Dept, DGS	Naval Architecture, DGS	Administrative Wing, DGS	Engineering Dept, MMD	Nautical Dept, MMD	Naval Architecture, MMD	Training Dept, DGS	SMO	INDoS Cell	SEO	Internal Examiner	DGS Exam Centre	SPFO	SWFS	MTT	RO (Sails)
	and SPFO prior to closure of registry																	
SH 8	Closure of registry																	
SH 9	ISM and DSM code audits																	
SH 10	FSI/ PSC Inspections																	
SH 11	Charter Permissions and licenses																	
SH 12	Charter permission for foreign flag vessels																	
SH 13	Annual Inspections of MSVs																	
SH 14	Inspection of vessels for																	



SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

#	Process Name	Department Housed In																
		Internal*																
		Engineering Dept, DGS	Nautical Dept, DGS	Naval Architecture, DGS	Administrative Wing, DGS	Engineering Dept, MMD	Nautical Dept, MMD	Naval Architecture, MMD	Training Dept, DGS	SMO	INDoS Cell	SEO	Internal Examiner	DGS Exam Centre	SPFO	SWFS	MTT	RO (Sails)
	petroleum license																	
SH 15	Tonnage taxation																	
SH 17	PF, Gratuity and annual fee payment																	
SH 18	AoA																	
OT	Other Processes																	
OT 1	Shipping Company																	
OT 2	RO Sails																	
OT 3	MTO																	
OT 4	Approval of Service Providers																	
OT 5	ISPS Audits																	

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

#	Process Name	Department Housed In																
		Internal*																
		Engineering Dept, DGS	Nautical Dept, DGS	Naval Architecture, DGS	Administrative Wing, DGS	Engineering Dept, MMD	Nautical Dept, MMD	Naval Architecture, MMD	Training Dept, DGS	SMO	INDoS Cell	SEO	Internal Examiner	DGS Exam Centre	SPFO	SWFS	MTT	RO (Sails)
IP	Internal Processes																	
IP1	HRM - Human Resource Processes (E)																	
IP2	Vigilance processes																	
IP3	LIMBS - Legal Information Management & briefing system (E)																	
IP4	PFMS - Public Financial Management System (E)																	
IP5	Individual's Profile - Internal																	

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

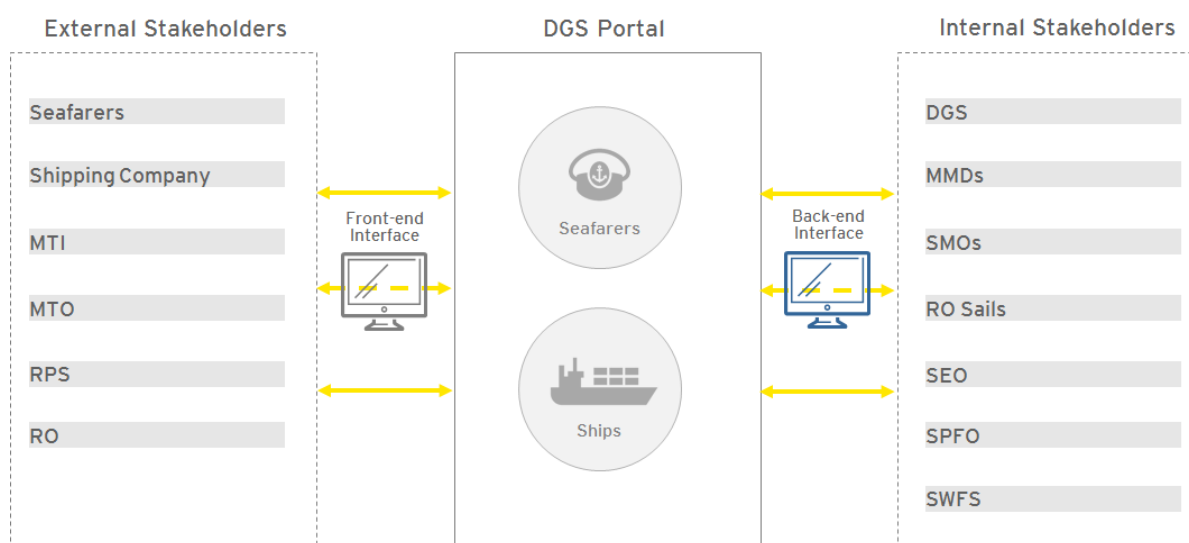
#	Process Name	Department Housed In																
		Internal*																
		Engineering Dept, DGS	Nautical Dept, DGS	Naval Architecture, DGS	Administrative Wing, DGS	Engineering Dept, MMD	Nautical Dept, MMD	Naval Architecture, MMD	Training Dept, DGS	SMO	INDoS Cell	SEO	Internal Examiner	DGS Exam Centre	SPFO	SWFS	MTT	RO (Sails)
IP 6	e-Office (E )																	
IP 7	Document Managem ent (E)																	
IP 8	Inspection																	
SM	Supportin g Modules																	
SM 1	RTI (E)																	
SM 2	SIEM – Security Informatio n & Event Managem ent																	
SM 3	Incident Managem ent System																	
SM 4	Enterprise Managem ent System																	

(E) – External Systems

### Proposed System:

The new e-governance system proposes to anchor the complete gamut of services and actions along the two anchors i.e. Ships and Seafarers as depicted in the diagram below. Hence, data would be primarily stored as either linked to a Seafarer or a Ship. The stakeholders, both external and internal (as listed below) will interact with the portal through a front-end and a back-end interface respectively. Bidder to design and develop interfaces as per requirements.

*Figure 1: Proposed DGS Portal*



The e-governance system will be accessed through DGS's website. Some of the key features of this website will be:

- ▶ Provision for external stakeholders to apply for User IDs and temporary password to allow access to the interface for availing DGS services
- ▶ Access to all DGS related recent updates, circulars, office orders, notifications etc.
- ▶ Give feedback for MTI's and/or view the MTI real-time ratings
- ▶ Access to DGS contact information, FAQ's and 'Help' (redirect applicant to a DGS email id)
- ▶ Access to different modules of DGS e-Governance solution as per assigned roles.

### Proposed Front-End Interface:

The front-end interface would allow the various external stakeholders (seafarers, shipping companies, MTI's etc.) to interact with the database through their own profiles. These profiles will be accessed through a User ID and password, received upon approval from DGS and would allow the stakeholders to avail all DGS services relevant to them. In addition to services offered, the interface would allow them to submit feedback and grievances, verify details w.r.t other external stakeholders as well as view all notifications. Although the interface would be customised for each stakeholder, an illustrative sample of the interface is shown below:

*Figure 2: Front-End Interface Sample*



**Note:** This is an illustrative template and does not reflect the actual design of the portal. Furthermore, the template would be customized for each stakeholder.

### Proposed Back-End Interface:

The back-end interface would allow the various internal stakeholders (all DGS departments and allied offices) to interact with the database through their own profiles. These profiles will be accessed by authorized personnel through a User ID and password and would allow them to view all applications submitted to them for approval and subsequent action. Besides the function of giving approvals, the interface would allow the departments to generate MIS reports, analyse reports and forecast findings, verify details for seafarers and ships and view all notifications etc. Although the interface would be customised for each stakeholder, an illustrative sample of the interface is shown below:

*Figure 3: Proposed Back-End Interface*



## 1.3 Design principles

### 1.3.1 Architectural principles

1. Architecture should be highly flexible to support incremental upgrades in functionality across various services and functions delivered by the system. It should be able to accommodate changing business environment within DGS.
2. Architecture should have highly modular design to enable addition / modification / suspension of new modules and functionalities
3. Bidder shall propose Service Oriented Architecture (SOA) based architecture while designing the solution. SOA defines integration architectures based on the concept of a service becomes relevant especially when there are multiple applications in an enterprise and point-to-point integration between them involves complexity. When multiple applications are involved services shall be able to communicate with each other which shall be achieved by implementation of SOA through web services where the services are exposed for other applications.
4. The system should be highly accessible and available through various devices across multiple locations
5. The principle of architecture should ensure keep data loss to a minimum
6. The architecture should be cloud ready and should support interoperability through cloud platforms
7. Each input should be formed as unique case in the system
8. There should be no single point of failure in the system
9. Bidder has to maintain principle of first-time-right data capture. System should provide for maker-checker functionality for all data inputs. System should allow multiple levels of checkers and approvals which may be configured within the system
10. Forms should provide client side validation of inputs.

11. All transactions and user activity being carried out within the system should be logged along with timestamp and client machine details in a format such they are searchable and allow for post-mortem analysis as required. These should be recorded for future purpose for a defined period. In case of any judicial proceedings, the records should be maintained as long as the proceedings.
12. The system must be reliable against software failures. Integrity, confidentiality and availability of data must be assured.
13. System should provide for seamless integration with various internal and external systems through required interfaces. Unique identity of the user should be maintained across the system with single-sign-on facility, that would avoid the need for user to log into multiple times on same system. This facility should be implemented without bypassing any security principles.
14. The underlying technology needs to be user friendly by having ease of use principle. Ease-of-use is a positive incentive for use of applications. It encourages users to work within the integrated information environment instead of developing isolated systems to accomplish the task outside of the enterprise's integrated information environment. The knowledge required to operate one system will be similar to others if the look and feel of the applications are similar. By having ease of-use principle, training can be kept to a minimum thereby aiding IT change management and the risk of using a system improperly can be minimized.
15. Training can be kept frequently thereby aiding IT change management and the risk of using a system improperly can be minimized.
16. Vendor lock-in should be avoided.
17. The bidder should document all the integration efforts of the proposed solution.
18. API based approach: Open standard based APIs will support data exchange mechanisms between third party systems.
19. Interoperability: The system is expected to be interoperable. It is the ability to have applications and computers from different sources and platforms work seamlessly together on and across networks. This is the key to sharing resources and reduction in long-term development costs
20. N – Tier Model: N-Tier model is the framework in which application user interface, logic, data, and their associated processing and tiers are separated from each other in logical manner. Partitioned code is more flexible in response to changes in internal logic, platforms, and structures; this isolates/minimizes the impact of change. It is easier to support, is more scalable and supports interoperability.
21. Openness: Open API, open standards and open source products should be considered for designing the system. The system integrator should consider scalability, security and performance of the system while deciding on the system and adherence to the open architecture design principle.
22. Reliability: The system must have appropriate measures to ensure processing reliability for the data received or accessed through the solution. Shipping related operations are critical in nature and require reliability to ensure stakeholder confidence.

### **1.3.2 Security Principles**

1. The bidder should follow security principles such as “Defence in Depth with Zero trust mechanism”, a multi-layer defence mechanism, so that an attacker has to defeat multiple mechanisms to perform a successful attack. Zero Trust is a security concept centred on

the belief that organizations should not automatically trust anything inside or outside its perimeters and instead must verify anything and everything trying to connect to its systems before granting access.

2. Bidder has to ensure the cloud enabled security architecture model to facilitate effective incident response resolution, forensic investigation during incident analysis with best practices like real time internal network defence, etc.
3. Bidder has to be aware of threat and its mitigation for the application which include spoofing, tempering, repudiation, information disclosure, denied of service and elevation of privilege along with OWASP (Open web application security project) testing guidelines.
4. The system should be compliant to CERT-In, and MeiTY guidelines for Web / Application / Network Security. It should provide log in, both by user and by terminal. The System should provide the date and time of all transaction with details of creation, read, update, delete or print. Access should be restricted at different levels of data file, program, module, screen, record, field database table, row or column.
5. All the Applications and Infra changes have to be by secure SMLC (Security Management Life Cycle) and Change Management principle driven respectively.
6. The bidder should follow the principle of "*least privilege*". Each user and program should operate using the fewest privileges possible. This principle limits the damage from an accident, error, or attack. It also reduces the number of potential interactions among privileged programs, so unintentional, unwanted, or improper uses of privilege are less likely to occur. This idea can be extended to the internals of a program: only the smallest portion of the program which needs those privileges should have them. The bidder will have to design its solution utilizing similar industry recognized security principles.
7. All IT operations will be governed by the IT Policy which will be provided to the successful bidder. The bidder will have to prepare detailed procedures for the same and implement accordingly. All project documentation should be prepared by the bidder as per the policy and related regulations.
8. The privacy of data has to be ensured by the bidder at all times. The bidder has to ensure that data sharing is done as per the policy.
9. Bidder has to adopt technical, physical and administrative measure in order to protect personal data from loss, misuse or alteration based on global best practices for privacy and security such as OECD, APAC, IT act, Indian act compliance, CSA security guidance, ISO 27001, ISO 27002, ISO 27017 and ITIL standards
10. The system must follow a role-based access control at all levels. The bidder should implement logical access control based on policy prepared by Purchaser for application, subsystem, or group of systems. All the access logs need to be captured and monitored.
11. Application Access should follow 2 Factor Authentication.
12. All databases and data stores must be encrypted. Safeguard data while at rest and in transit. Identify and classify the data in terms of criticality / sensitivity and define their levels.
13. Bidder has to ensure data security life cycle as a principle in securing data while creating, storing, sharing, archiving or destroy.
14. Bidder has to ensure database protection with database activity monitoring and file activity monitoring
15. Bidder shall get the Vulnerability Assessment (VA) and Penetration Testing (PT) as security audit conducted by CERT-In empanelled agency before deployment/ Go-Live of project. The cost of which should be borne by the bidder.



16. Security in design would encompass security risk assessment on user specifications, secure information architecture, proper role based access design and secure application and database design.
17. The bidder has to ensure that their Application Development must follow secured SDLC process development and deployment by taking OWASP Top 10 and SANS top 25 into consideration. Similarly, Application maintenance should follow secured SMLC.
18. The system must be secure at all user touch points by using suitable security protocols and data protection methods Industry best practices for coding of application so as to ensure sustenance to the Application Vulnerability Assessment
19. Audit trails and Audit logging mechanism to be built in the system to ensure that user action can be established and investigations (if any) can be aided. (E.g. Logging of IP Address etc.)
20. Data should be visible to authorize entity only. Data alterations etc. through unauthorized channel should be prevented.
21. Appropriate authentication mechanism adhering to industry best practices regarding Password Policies etc.
22. The bidder will ensure that the critical data stores are minimized, and stored data has to be encrypted at all times.
23. The bidder has to ensure that access to data is given through application layer (via an application) at all times.
24. As a part of Service delivery process, the bidder has to ensure segregation of services and segregation of duties.
25. For operations phase security activities such as performing backups, holding training classes, managing cryptographic keys, keeping up with user administration and access privileges, and updating security software are some examples that have to be done by the bidder.
26. VPN and VLNS should be the principle of operations for remote access and isolation of internal traffic.
27. Web facing application should be deployed in DMZ (Demilitarized) zone and the Database Server should be deployed in the secured zone while deploying the application on cloud.
28. Service provider has to adopt metrics to measure risk management performance. E.g. Cyber security information exchange framework, security content automation protocol etc.
29. Monthly / Periodic reporting on security breaches and attempts plus the action taken to thwart the same and providing the same to DGS.
30. Any public procurement for cyber security products should adhere MeitY Public Procurement (Preference to Make in India) Order 2019 guidelines
31. Performing periodic review of security configurations for inconsistencies and redundancies against security policy.
32. The bidder should embed a security incident response plan within the Business continuity and disaster recovery plan to response in an efficient and effective manner in case of a disaster.

### **1.3.3 Management Principles**

1. The management of system shall be SLA based, through automated SLA monitoring system.

2. SLA management will take place via Enterprise Management System (EMS) which will provide system generated reports on level of compliance/non-compliance against defined SLA parameters
3. System should have a Security Information and Event Management (SIEM) solution that provides end-to-end, comprehensive, modular and integrated management of IT Security components to maximize the availability of application services and SLA performance
4. Application Management shall follow all processes as per to ISO 20000/ ITIL standards. This includes Configuration Management, Incident Management, Performance Management and Capacity Management.
5. Real time reporting to help management and administrators to take quick decisions
6. Application Security Management should intelligently perform root-cause analysis to rapidly bring the system back to normal working conditions
7. The system should be upgradeable without affecting the production
8. It should be possible to proactively manage all software components maintenance and licenses throughout their life cycle.

## **1.4 Detailed scope of work**

The various activities which are envisaged to be undertaken by bidder have been detailed out in subsequent sections. Bidder is expected to consider these when preparing the response.

### **1.4.1 Project management**

Bidder is expected to adopt industry best practices throughout the contract duration for project governance and management necessarily covering:

- A. Creation and update of project management plan
- B. Monitoring and execution of project as per plan
- C. Change control management
- D. Providing regular status updates

The details are as below:

#### **a. Overview**

- i. Bidder shall arrange a project kick off meeting of the proposed team members with the DGS officials on the said date.
- ii. Bidder shall discuss the project charter to foster a mutual understanding for the project.
- iii. Bidder should define the project governance structure detailing and highlighting roles and responsibilities for all stakeholders involved from bidder's team, DGS team, other vendors/ stakeholders. Requirements that are expected from DGS need to be jointly arrived at and have to be signed off between the bidder, DGS and all relevant parties involved.

#### **b. Resource deployment**

- i. Bidder has to propose named resources for all the key roles as mentioned in the technical evaluation criteria and as per the requirements of the project. The proposed resources must be part of

the project team and must be available for discussion with the client at client location (If COVID-19 restrictions are imposed, then virtual meeting can be arranged after approval from DGS).

- ii. Bidder has to necessarily maintain a team of requisite size of skilled professionals as per the requirements of the project.
- iii. Bidder shall ensure that each member of the Key Personnel devotes substantial working time to perform the services to which that person has been assigned as per the proposal. Without DGS's prior written consent. The clauses of non-disclosure agreement shall always operate in any such case.

c. Resource Evaluations

- i. Bidder shall carry out an evaluation of the performance of each member of the Key Personnel in connection with the Services at least once in each Contract Year. Bidder shall provide reasonable written notice to DGS of the date of each evaluation of each member of the Key Personnel and DGS shall be entitled to provide bidder with input for each such evaluation.
- ii. Bidder shall promptly provide the results of each evaluation to DGS, subject to Applicable Law.

d. Resource Replacement

- i. In case the resource has resigned, then the bidder has to inform DGS within one week of such resignation.
- ii. Bidder shall promptly initiate a search for a replacement and use commercially reasonable efforts (including the expenditure of reasonable sums, such as to engage the services of a recruiting firm) to ensure that the role of any member of the Key Personnel is not vacant for any longer than 30 days, subject to reasonable extensions requested by bidder of DGS.
- iii. Before assigning any replacement member of the Key Personnel to the provision of the Services, bidder shall provide DGS with:
  - a. A resume, curriculum vitae and any other information about the candidate that is reasonably requested by DGS; and
  - b. An opportunity to interview the candidate, if required.
- iv. The bidder has to provide replacement resource, who scores at least the same marks as the resource proposed originally on the same evaluation parameters defined in this RFP document. Once this confirmation is received, DGS may request for an interview of the candidate and notify bidder within mutually agreed timelines. If DGS does not request an interview within mutually agreed timelines, then it would be deemed as accepted.
- v. If DGS does object to the appointment, bidder shall not assign the individual to that position and shall seek an alternative candidate in accordance with this Section.

- vi. The bidder has to ensure at least 4 weeks of overlap period in such replacements.
- e. Resource High Attrition

If in the first 6 month period from the Contract Effective Date or in any rolling 12 months period during the Term, 15 percent or more of the members of the Key Personnel cease or reduce their involvement in the Services for any reason other than with DGS's prior written consent, bidder shall:

  - i. Provide DGS with a reasonably detailed explanation as to the reasons for such change, including, where applicable and permitted, notes from any exit interviews conducted by bidder with any departing member of the Key Personnel; and
  - ii. If such change to Key Personnel has or is likely to have any material adverse impact on the provision of the Services or any substantial part thereof, undertake, at its own costs, such remediation acts as are reasonably necessary in order to improve the retention of the Key Personnel including making reasonable changes to the human resources policies and procedures applicable to the Key Personnel (including those related to compensation, benefits and other conditions so that they are competitive with the market) as may be necessary to ensure that such policies and procedures comply with Best Industry Practice.
- f. Project plan
  - i. The Bidder shall define a detailed project plan for the project that would cover all aspects of the DGS eGovernance solution as per the project milestones defined in this RFP.
  - ii. Bidder is expected to detail the project implementation approach, phases involved, highlighting dependencies Project plan should necessarily cover areas of time, scope, quality, and risk management for the entire project.
  - iii. Plan should also include a work breakdown structure detailing various components expected as outcomes which need to be mutually agreed with DGS. In addition, bidder should also provide timelines for sharing of supplementary plans such as development schedule, user testing plan, pilot release plan, deployment plan, etc. Considering that the project involves a major transformational change within DGS, bidder will be expected to detail out a comprehensive change and communications management strategy and plan. The project plan will be revised within mutually decided timeline and shared with all stakeholders. On a monthly basis, bidder will provide a project status report which will necessarily highlight milestones achieved / missed, milestones currently in execution, deviations observed, changes made to project plan, issues raised and resolved/pending. The format for status report will be mutually agreed with DGS. Bidder along with DGS's consent will

define a change control procedure to monitor implementation of any changes in the contract subject to conditions as laid out in this tender under RFP Volume I. No change will be accepted without approval of the change control board (CCB) formed and defined as a part of project governance structure.

g. Progress updates

- i. Bidder is required to design and implement a comprehensive and effective project planning and management methodology together with efficient and reliable tools.
- ii. Project management exercise shall commence at the start of the project and shall continue till the end of O&M Phase of the project.
- iii. To have an effective project management system in place, it is necessary for Bidder to use a Project Management Information System (PMIS) to monitor the Project Progress. Bidder shall address at the minimum the following using PMIS:
  1. Create an organized set of activities for the project.
  2. Coordinate and collaborate with various stakeholders including the DGS, respective officials and their concerned departments etc.
  3. Establish and measure resource assignments and responsibilities.
  4. Construct a project plan schedule including milestones.
  5. Measure project deadlines, and performance objectives.
  6. Track and manage deliverable approval process flow
  7. Manage payment authorization workflow
  8. Communicate the project plan to stakeholders with meaningful reports.
  9. Provide facility for detecting problems and inconsistencies in the plan.
- iv. During the project implementation Bidder shall report to DGS on following items:
  1. Results accomplished during the period.
  2. Cumulative deviations to date from schedule of progress on milestones as specified in this RFP read with the agreed and finalized Project Plan.
  3. Corrective actions to be taken to return to planned schedule of progress.
  4. Proposed revision to planned schedule provided such revision is necessitated by reasons beyond the control of Bidder.
  5. Other issues and outstanding problems, and actions proposed to be taken.
  6. Interventions required from DGS before the next reporting period.
  7. Issue Management to help identify and track the issues that need attention and resolution.

8. Scope Management to manage the scope and changes through a formal management and approval process.
  9. Risk Management to identify and manage the risks that can hinder the project progress.
  10. Bidder shall update and maintain the Project Plan throughout the duration of the engagement.
- h. Communications management  
Bidder shall develop and submit a communication plan to outlines the needs of project stakeholders.
- i. Operations and maintenance  
Bidder will operate and maintain all the software components of the System for a period of THREE years after Go-Live date. During O&M phase, bidder shall ensure that service levels are monitored on continuous basis; service levels are met and are reported to DGS. After Go-Live, if any system/sub-system/module that is deployed during the O&M phase must be added in the system only after proper induction procedures are followed including hardening and security testing.

#### **1.4.2 Designing, configuration / development, implementation and support of entire IT application portfolio for service delivery and operations**

The component covers all software applications and other related components which are required for functioning of DGS eGovernance Processes. Bidder is expected to design a comprehensive ICT solution and implementation strategy for the project with consent of DGS. The following sub-components are expected to be covered under this component at the minimum. Bidder may add additional components as felt necessary

##### **1.4.2.1 Functional coverage**

The scope of software and applications to be covered by the bidder includes all processes, functions and activities being carried out by DGS. This will include following processes but not limited to:

- Entire Shipping and seafarer operations
- Entire internal application, other processes and supporting modules.
- Integration to existing available components as required in integrated eGovernance solution.
- Workflow management consisting of all workflows of DGS departments
- Frontend software stack and backend database solution
- Enterprise management system with SLA monitoring and management
- Software security solutions as per requirements of RFP
- Enterprise level SMS and Email solution
- Interfaces to Payment gateway
- Website content management solution
- SPFO & SWFS
- Single sign-on functionality

- Designing and developing necessary interfaces as required for seamless integration with other systems to get required information
- Office collaboration tools and interfaces
- Any other components as required for functioning of solution as per requirements

The integrated solutions (COTS / Bespoke / developed as above) should have to be integrated with payment gateway, SMS gateway, Aadhar etc. The system is required to integrate with payment gateways and SMS service providers for enabling payments and issuing notifications to internal and external users. The system should allow agents and other third parties to conduct financial transactions as per the rights.

The key requirements of payment gateways:

- a. It supports secure integration with Payment Service Provider.
- b. It should be able to present a unified interface to integrate with all Payment Service Providers
- c. Support integration with Payment Service Providers using web services over secured protocols such as HTTP/S
- d. Support bank accounts reconciliation
- e. Should provide and preserve all logs for all transactions
- f. Submit Periodic Reconciliation Report to respective port authorities
- g. Support transaction reports to monitor and track payments
- h. Should support multicurrency processing and settlement directly to merchant account
- i. Should support real time integration with SMS and emails
- j. Should be compliant to standards like PCI DSS

API layer will make sure that the access and feature control are verified through functionality key. API layer will be required for specific functions and services intended for external systems including customers, partners and suppliers. The APIs will be governed and managed through the API management tool. The API manager should primarily allow the developer community to design, register, publish and manage services.

The integration solution framework is expected to satisfy the following requirements:

- a. API level access provided should be through HTTPS or Encrypted channel (at least 2048 bit SHA 256 encryption or higher)
- b. The system should have provision to support issuance of license key including validation of the same.
- c. App signature authentication will be through the license key, time stamp, app version and other meta data
- d. Port partners and government systems will be registered with the port systems and get the access of license key for access of the system through either of the channels namely MPLS or internet.
- e. APIs would be stateless in nature
- f. MSP would deploy a developer sandbox for the users to test the APIs with dummy data



- g. MSP would be required to provide the API design document with specifications including description of API, owner, author, input parameters and type, output (s), error codifications

The key capabilities to be considered under proposed solution for API management should include:

- repository
- publishing
- metering
- version manager
- analytics
- throttling
- Central management portal

The Bidder is required to undertake the following broad level activities under the integration layer:

**1. Integration layer design, development, test and implementation**

- The Bidder is required to design the integration layer components to facilitate exchange of information between DGS and stakeholder systems
- The exchange is to be based on APIs and Messaging hub, wherein API would be given higher preference over messaging hub
- The Bidder is expected to undertake a detailed study of the information exchange between DGS and other stakeholder systems to identify the list of APIs to be implemented.

**2. Authentication and authorization**

- Bidder will set up the requisite process as well as system to build, operate & manage and sustain APIs for DGS in a secured and controlled environment.
- Authorized stakeholder systems approved by DGS authorities shall be able to communicate with the APIs
- Messaging hub will have a direct communication over secured channel
- Bidder should create an administrative portal to enable stakeholders to have a user account to manage their services
- License Key shall allow enabling of various services for a given stakeholder
- The admin portal shall allow the port or the authorized agency to manage the license keys for the stakeholders
- The Bidder will design authentication services for stakeholders:
  - Test APIs in sandbox
  - Configure authorisation policy for new APIs
  - Grant user access the available APIs and associated properties
  - Blacklist / suspend / block access

**3. API definition**

- The Bidder is required to undertake a study of the information exchange between ports and stakeholders to design the system requirements for the API layer



- Based on the solution description and requirements, the Bidder is required to develop standardized APIs to expose Port EBS systems to stakeholders
- Bidder will be defining API specifications document which would contain information including description, author/owner, input, output parameters
- A test environment should be made available which should have similar catalog to the production environment with API stubs for testing purposes before migration to production environment

#### **4. API publishing**

- The Bidder should define and establish the procedure to publish new APIs in test and production environment in discussion with the DGS authorities
- The solution proposed should have a catalog to register the APIs which are being published in production environment
- The Bidder will be required to support stakeholders in functional, security and performance testing prior to publishing APIs in production

#### **5. Version control**

- MSP is expected to establish procedure for managing version control of the APIs up to retire / archival of APIs
- The proposed solution should support in API version control
- The system should support in versioning and roll back as per requirement
- The proposed system should support retiring and archival of APIs as a part of the API lifecycle management

#### **6. API governance**

- The API lifecycle should be defined by the Bidder and corresponding governance procedures should be established after discussions with the port authorities
- The Bidder should establish plan to define and enforce SLAs for consuming resources
- The proposed solution should support API throttling wherein traffic is throttled or a notification may be issued to the appropriate authority / owner
- The system should generate reports on SLA and also allow configuration of SLA parameters
- The proposed solution should allow API metering
- The Bidder is required to configure the system to regulate the recording and limit the usage of APIs for stakeholders as per the policy controls

#### **7. API security**

- The proposed framework developed by the MSP should define the API security guidelines
- The proposed system should inspect the headers for APIs genuineness before acceptance.
- It should apply all security checks e.g. DDoS Attacks, XML Denial of Service (xDoS), Slow down or disable an XML based System, Message Snooping, XML Document Size Attacks, XML Document Width Attacks, XML Document Depth Attacks, Jumbo Payloads, Recursive Elements, Public Key DoS, XML

Flood, Resource Hijack etc. to ensure rightful and secured access to API consumers

- The MSP is required to configure the proposed solution to meet the security requirements and also support in undertaking security review of the API before being published to the production environment

#### **8. Audit support**

- The MSP is required to configure the solution to allow audit logging of transactions.
- The audit logs should capture at least the following information:
  - Credentials
  - Transactional logs
  - IP address and date / time stamp
  - Session details (time, id, key)
  - License key

#### **9. Reporting**

- The MSP is required to customize the proposed solution to generate reports on API usage and performance
- The solution should be capable of generating reports/online view that shows API related information such as
  - most/least accessed APIs
  - highest/lowest/average response time
  - data volumes transferred
  - transfer rates,
  - maximum and minimum response time over a period of time
  - rejected API requests
  - API catalogs
  - API versions
  - List of stakeholder wise registered APIs
  - API throttling limits (hard and soft)
  - API notifications
  - API activity – port wise
  - API activity customer / partner / vendor / PCS wise
  - Blocked / Hotlisted / Archived / Suspended APIs

SMS services are required for notifications and generation of OTP for registration of users in the DGS ecosystem.

The SMS gateway should support the following features:

- a. The gateway must be as per prevailing TRAI/DoT norms
- b. Support automated alerts that allows to set up triggers that will automatically send out reminders
- c. Resend the SMS in case of failure of the message
- d. Must have common features like non-acceptance of landline nos., unacceptable mobile nos.
- e. Should support notifications with long text messages

- f. The message shall be sent through command line interface/API, web Interface provided by the Service Provider
- g. The vendor / service provider shall maintain DND controls
- h. Should provide standard reports like success/failure report on current as well as historical/cumulative basis.

Email services are required to be integrated with the e-Governance systems to send alerts / notifications / intimations / automated messages to register email ids. The users will be allowed to register for sms and email alerts for applicable cases.

Requirement of any user licenses, system software etc required for the purpose is to be supplied by the firm till maintenance contract period. The firm has to study the requirements properly so that operation, maintenance and administration can continue smoothly without any interruption from the day of acceptance of the system.

No excuse of ignorance on any activities, functions, reports, bills, outputs etc. shall be entertained during operation and maintenance period. The firm shall develop the suitable interface to integrate it with the integrated application, so that all the benefits of the new system environment are made available to the users and the monitoring of shipping operations are made feasible for the DGS management.

Provide recommendations on Data security and management.

Other functions as mentioned in the functional architecture, process flows, requirement specifications and other sections within this tender.

#### **1.4.2.2 Requirement gathering**

1. Bidder shall study the business processes to supplement the understanding gathered from the high-level business processes included in this RFP document. Therefore, Bidder's objective should be to develop comprehensive understanding of the existing business processes of DGS before designing/ proposing the solution.
2. A detailed analysis of processes has to be done and functional requirements have to be identified. Broad-level proposed processes and related functional requirements and specifications are included in later sections of this tender. Department manuals and existing processes and related inefficiencies will be shared with the bidder after signing of contract.
3. As part of the preparation of SRS the selected Bidder shall be responsible for preparing and submitting detailed requirement specification documents as per IEEE or equivalent standards.
4. Bidder is required to update the FRS and SRS as and when any enhancements / modifications are made to the overall solution to ensure that the documentation is updated at all times for the entire duration of the Contract.
5. Bidder shall consider these documents as a base, translate these into logical system requirements and develop a systems requirements specifications (SRS) document. Here the bidder is expected to expand on the individual workflows within specific workflows and capture functional logic and check points involved in each workflow. The SRS document should necessarily contain the following details:
  - A. User groups, roles and types of access

- B. System attributes
  - C. Use cases for workflows
  - D. Sequence diagrams for workflows identified
  - E. Functional logic and checks expected from the system while execution of the project
  - F. Software components which will be used including Shipping and seafarer operations systems, ERP, electronic workflows, etc.
  - G. Reporting requirements
  - H. Interfaces with other DGS systems and external systems
  - I. Security requirements
  - J. Audit and application logging requirements
  - K. Archival requirements
  - L. Migration requirements
  - M. SLA monitoring requirements
  - N. Functional, non-functional, performance and external interface requirements
  - O. Other details which are required to clearly articulate software requirements
6. Bidder will conduct workshops with relevant users of the systems wherever necessary, to obtain more details on the requirements of the project and have to get a sign-off the requirements. The bidder should identify the customization requirements for the implementation. Any changes required in the proposed processes will have to be explicitly discussed and agreed with DGS and relevant stakeholders.
7. Bidder shall also carryout detailed requirement study for preparing the Business Blueprint Document along with Design Documents for implementation of the applications and web portal. Preparing the Project Implementation Plan (in PMIS) is also an essential part of the project; hence it is expected from the bidder to perform following task very meticulously before finalizing the project implementation plan.
- a. Although, an indicative FRS has been provided, the bidder is responsible to carry out an independent system study at DGS headquarter, regional offices and field offices, to thoroughly understand the functional and operational processes of DGS by:
    - i. Interacting with concerned officials and understanding the whole purpose
    - ii. Reviewing the existing systems, processes, and existing application software
    - iii. Understanding/ assessment of data migration requirement, strategy and data migration plan
    - iv. Understanding/ assessment of data inputs and outputs requirements by collecting all input forms, registers and report formats of DGS
    - v. Understanding/ assessment of existing applications from prospective of integration with proposed application
    - vi. Collecting the formats of all existing report, application, forms etc. to incorporate in the new e-Governance system
  - b. Conducting a detailed assessment of the functional, technical and operational requirements.

- c. Identify the core application modules/ sub-modules proposed to be implemented/ developed and rolled out under this project.
- d. The bidder shall carry out the study of the existing systems for the exact requirement of interfacing/ integration and data migration from the existing legacy applications.
- e. The bidder shall conduct the preliminary study of the existing website and gather detailed requirements through consultation with DGS officials.
- f. The successful bidder shall also be required to assess cloud, hardware and networking requirement for the solution i.e. minimum capacity requirement of cloud, Desktops/ Laptops for internal users, upgradation of existing network etc. for the successful usage of the system without facing any bottleneck from cloud, hardware and network capacity side. The bidder shall submit the assessment report to DGS along with the requirement study so that DGS could take required measures during procurement of these facilities.
- g. Based on the above study, preparing the Business Blueprint Document clearly highlighting the gaps and the best practices available in the proposed Standard solution. The document will indicate the additions/ modifications that need to be made to the business processes in view of the implementation. The bidder shall obtain the Sign-off on Business Blueprint Document from DGS.
- h. Based on the approved Business Blueprint Document, finalize the Design Documents.
- i. Preparation and submission of Project Implementation Plan, Resource Deployment Plan, Governance Structure, Design Documents and Requirement Documents (including technical, non-technical, functional, operational requirements etc.).
- j. Bidder should finalize DGS website design & required functionalities during FRS.
- k. Bidder should finalize mobile application functionality after discussion with DGS and submit the wireframe of mobile application along with FRS.

#### **1.4.2.3 Solution design**

1. The bidder is expected to adopt any of the following approaches or combination of following approaches:
  - A. Configuration / Customization of an existing application that may be Commercially available Off-the-shelf product (COTS)
  - B. Be-spoke development of the application
  - C. Combination of above 2 options
2. Irrespective of the option above chosen by the Bidder, the Bidder is required to meet all the requirements of this RFP including the activities listed, timelines and deliverables mentioned in this RFP, functional, performance, service level related and any other requirements stated in this RFP.
3. Bidder may propose Open source tools, wherever feels necessary as per defined guidelines by GOI.
4. Design should be complied with latest Indian e-Governance standards and specifications and those updated time-to-time

5. The Bidder shall ensure bilingual (English & Hindi) support and other relevant standard formats for display, Printing and transmitting of data.
6. The Bidder must ensure that the solution technology components adhere to flexibility, interoperability, usability, availability, manageability, security and integration standards
7. Design should make use of common government components wherever possible
8. Design should comply to minimum functional requirements as specified within this tender
9. Design should be flexible to adapt to changes required as per directives from ministry of shipping and DGS
10. The bidder shall make necessary provisions for management reports, dashboards, Mail/SMS gateway and Data migration in line with the expectations of users provided in the functional requirements and understood during requirement gathering phase.
11. Bidder shall prepare a complete system design for the solution envisaged. The design will necessarily cover the following:
  - A. Solution architecture covering minimum technical architecture view, data architecture view, application architecture view, network architecture view, data centre architecture view, security architecture view, end user computing view
  - B. Software components and their interaction with each other
  - C. Customizations which are being made in the products being installed
  - D. Interfaces with other systems internal and external
  - E. Data architecture
  - F. Format of all input screens including data entry requirements
  - G. Documentation of detailed data requirements (input /output /outcome) defined during SRS
  - H. Flow of screens and controls of the software
  - I. Format of all reports that would be generated by the proposed system
  - J. Access control mechanisms, data security and audit trails to ensure that databases are not tampered with or modified by unauthorized users
  - K. User input forms and screen designs for all processes
  - L. Report design for operations users and end users
  - M. Dashboard design for leadership and senior stakeholders
  - N. Enablement of Single sign-on, access control measures
  - O. Other software components as required
12. Bidder shall build a complete audit trail of all transactions (for e.g. add, update and delete) using transaction log reports, so that errors in data, intentional or otherwise, can be traced and reversed. The most appropriate level of security commensurate with the value to that function for which it is deployed must be chosen. Access Controls must be provided to ensure that the datasets are not tampered with or modified by the system operators. Implement data security to allow for changes in technology and business needs. Based on the requirements analysis conducted above, the bidder must develop a comprehensive system.
13. Design and Implementation of the System Architecture: The bidder shall be entirely responsible for the architecture of the system implemented to satisfy all features, functions, performance and security as described in this document . System architecture description provided in this document is for reference only. The bidder should ensure all possible and required improvements.



14. The system design must be such as to require the minimal installation, if at all, at the user's end, besides the Internet Browser. The proposed system should be able to support all latest common browsers (like Internet Explorer, Mozilla, Chrome, Safari etc.) and should work on popular operating systems on computers and other portable devices including mobile phones, tablets and other handheld devices proposed within the solution.
15. Bidder shall consider users' inputs when they are finalizing all design components including user interfaces, mode of data entry, storage and retrieval, outputs reports, queries and the application design as a whole.
16. Low-level design document (LLD) will be prepared and updated
17. The design document will be regularly updated to incorporate changes as applicable. All changes being done will be mutually discussed with relevant DGS officials.
18. Sufficient knowledge transfer will be provided to nominated DGS officials about maintaining the design documents.
19. Bidder to ensure that data quality assessment protocol and mechanism should be clearly documented during the design phase of the project, and the audit team of bidder should revisit / revise the protocol /mechanism in every 6 months as per the requirements and standards.
20. Following indicative list of key protocols should be considered:
  - Incoming data should be filtered / cleaned after checking for missing values, logical flaws in data, incorrect values etc.
  - Summary statistics of incoming data are generated and checked for errors/abnormalities
  - Existence and accuracy of metadata for all the project's data should be periodically checked
  - There should be a system for identifying duplicate data and removing redundancies.
  - There should be a system to ensure data is accurate, consistent, and traceable to origin/source, whenever it is reproduced by any agency (data integrity).
21. Apart from data qual assessment, backchecks may be deployed to further improve data quality and increase its reliability including but not limited to
  - Social Audits (Citizen participation that focuses on government performance and accountability)
  - Telephonic backchecks/verification with beneficiaries
  - Multimedia data – citizen voice, video, images as evidence
  - Sample inspections based on data.
  - Third party data verification/ data audits (Data audited by third parties), etc.
22. Data quality assessment of collected data against data quality protocols/ mechanism should be done automatically.

#### **1.4.2.4 Scope and Guidelines for DGS Website**

1. The competent and professional organizations/firms having proven expertise in System Study, Design, Development, Implementation and Maintenance of Websites / Web Portals / Web enabled applications using latest available technologies like PHP, JAVA, .NET, CMS, open source tech., etc.

2. Bidder to carry out study, requirement understanding and analysis with respect to developing new integrated common website for DGS after undertaking the study of the existing Websites:
  - Preliminary study for existing websites of DGS.
  - Requirement gathering through consultation with DGS.
  - Finalisation of CMS and Database configuration.
3. Design, Development and Maintenance of Common Integrated Website. The new website shall be integrated with technologies like Face recognition, Payment Gateway, e-Forms, Financial technology devices etc. as per requirement of RFP.
4. It has been ensured that all stationery of the DGS as well as advertisements/public messages issued by the concerned Department prominently display the URL of the web site.
5. The website shall have options for multiple level of administrative control having varied rights for all the modules so that they are able to add/modify/remove content through Content Management System (CMS) pertaining to their respective Centre/Domain as per their assigned rights.
6. The website shall have provisions of Content Contributor/Creator, Moderator and Approver System wherein only authorised individual from DGS can upload the content on the website pertaining to their Centre/respective domain which after the due approval by the approving authority would be available to the Website Manager/Webmaster/Publisher for final uploading onto the website.
7. The Website to be developed shall meet the requirements of DGS and must be GIGW (Guideline for Indian Government Website) certified from STQC and security audited from CERT-IN / CERT-IN Empanelled vendors.
8. Bidder shall carry out the Data migration / Porting of existing data into the new website.
9. The selected bidder will have the sole responsibility to deploy and maintain the website.
10. The selected bidder should assess the capacity planning and assessment for the solution.
11. Bidder should conduct a workshop for finalizing Website design / styles before development of web pages.
12. Website should have the following clearly defined policies and plans approved.
  - Copyright Policy.
  - Content Contribution, Moderation & Approval (CMAP) policy.
  - Content Archival (CAP) policy.
  - Content Review (CRP) policy.
  - Hyper linking Policy.
  - Privacy Policy.
  - Terms & Conditions.
  - Website Monitoring Plan.
  - Contingency Management Plan.
  - Security Policy.
13. Source of all documents, not owned by the dept. that have been reproduced in part or full, is mentioned.
14. Website should be readable even when style sheets are switched off or not loaded.



15. Web pages should allow the user to bypass repeated blocks of content.
16. Web pages should allow resizing of text without the use of assistive technology.
17. Due permissions have been obtained for publishing any content protected by copyright.
18. Due permissions should be obtained from user to collect, store and use their personal data.
19. Home page of website displays the last updated/reviewed date.
20. Complete information including title, size format and usage instructions is provided for all downloadable material.
21. With respect to each, Circular, Notification, Document, Form, Scheme, Service and Recruitment notice, The following should be clearly listed in the Website:
  - Complete title
  - Language (if other than English)
  - Purpose/procedure to apply (as applicable)
  - Validity (if applicable)
22. All outdated, irrelevant content (like Announcements, Tenders, Recruitment notices, News and Press Releases) is removed from the website and/or placed into the archives as per the archival policy.
23. The language should be free from spelling and grammatical errors.
24. Mechanism should be in place to ensure that there are no 'broken links' (internal as well as external) or 'Page not found' errors.
25. There should not be any links to 'under construction' pages.
26. The mechanism should be in place to check the accuracy of Hyperlinked Content and Clear indications are given when a link leads out to a non-government website.
27. Website provides a prominent link to the 'e-Governance Portal' from the Home Page and Pages belonging to Portal load in new browser window.
28. Association to Government is demonstrated by the use of Emblem/Logo in proper ratio and colour, prominently displayed on the homepage of the website.
29. Ownership information is displayed on the homepage and on all important entry pages of the website and each subsequent page is a standalone entity in terms of ownership, navigation, and context of content.
30. Website should use Cascading Style Sheets to control layouts/styles and incorporates responsive design features to ensure that the interface displays well on different screen sizes.
31. Website should be readable even when style sheets are switched off or not loaded.
32. Proper page title and language attribute along with metadata for page like keywords and description are appropriately included.
33. Data tables should have been provided with necessary tags/mark-up.
34. The website should have a readily available Help section linked from all pages of the website.
35. All information about the department, useful for the citizen and other stakeholders, is present in the 'About Us' section and mechanism is in place to keep the information up to date.
36. Website should have a 'Contact Us' page providing complete contact details of important functionaries in the department and this is linked from the Home Page and all relevant places in the website.

37. Feedback should be collected through online forms and mechanism is in place to ensure timely response to feedback/queries received through the website.
38. The website should have been tested on multiple browsers. Hindi/Regional language fonts should have been tested on popular browsers for any inconsistency (loss of layout).
39. Minimum content as prescribed in the guidelines is present on the homepage and all subsequent pages.
40. It is to ensure through content moderation and approval policy that Website content is free from offensive/discriminatory language.
41. Text is readable both in electronic and print format and the content prints correctly on an A4 size paper.
42. Website should have cleared security audit
43. Website should be in the nic.in or gov.in domain.
44. Website should be bilingual with a prominent language selection link and uses Unicode characters.
45. Documents/Pages in multiple languages should be updated simultaneously.
46. Documents should be provided either in HTML or other accessible formats. Download details (File Format Size) & instruction for viewing these is provided.
47. Mechanism should be in place to ensure that all tender/recruitment notices are published/linked through the website.
48. All documents should have a publish date on the main page.
49. All non-text content (like images) has a text alternative that provides equivalent information as the image itself.
50. Scanned Images of text should not have been used.
51. The visual presentation of text and images of text has a contrast ratio of at least 4.5:1 between the foreground and background. Large scale text and images of text should have a contrast ratio of 3:1.
52. Text could be resized without assistive technology up to 200 percent without loss of content or functionality.
53. There should be a mechanism to pause, stop or hide scrolling, blinking or auto updating content that starts automatically and lasts for more than 5 seconds.
54. Web pages should not contain any content that flashes for more than three times in a second.
55. Instructions provided for understanding and operating content should not rely solely on sensory characteristics such as shape, size, visual location, orientation, or sound.
56. Colour should not be used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
57. Captions or transcript should be provided for all pre-recorded and live audio and video content.
58. For any audio on a Web page that plays automatically for more than 3 seconds, a mechanism is available to pause, stop or control the volume of the audio independently by from system volume level.
59. Information, structure, and relationships that are conveyed visually on a web page must also be programmatically determined or should be available in text.

60. When the sequence in which content is presented affects its meaning, a correct reading sequence could be programmatically determined.
61. All functionality that is available on the web page should be operable through keyboard.
62. Complete web page should be navigable using keyboard only (using tab or arrow keys).
63. Current navigation location (Keyboard focus indicator) is visible on the webpage while operating or navigating the page through a keyboard.
64. Web pages allow the user to bypass blocks of content like navigation menus that are repeated on multiple pages (by using the skip to content link).
65. Any web page within the website is locatable either through “search” or a “sitemap”.
66. Navigational mechanisms that are repeated across the website occur in the same relative order on each page.
67. If a webpage can be navigated sequentially and the navigation sequence affect the meaning of operation, then all components must receive focus in the same meaningful sequence (Creating a logical tab order through links, form controls, and objects).
68. The purpose of each link should be clear.
69. Time limit for time dependent web functions should be adjustable by the user.
70. Complete & self-explanatory title that describes the topic and purpose of the page should have been provided.
71. Headings wherever used, correctly describe topic or purpose of content.
72. Language of the complete web page should have been indicated. If there is a change in language within a webpage it also indicated.
73. Nomenclature of components that have the same functionality is uniform across the website.
74. When any component on the web page receives focus or its settings are changed it should not initiate change in context.
75. Changing the setting of any user interface components should not automatically cause a change in context.
76. If an input error is detected, the item should be identified, and the error is described to the user in text. Suggestions for correction if known are provided to the user.
77. Labels or instructions should have been provided wherever input from the users is required.
78. For Web pages that cause legal commitments or financial transactions a mechanism should be available for reviewing, confirming, and correcting information before finalizing the submission.
79. Web Page should use mark-up language as per specification.
80. Name and Role of all interface components should be programmatically determined.
81. The solution should be capable enough to upgrade onto new technologies such as Machine Learning (ML), Artificial Intelligence (AI), Blockchain, Internet of Things (IoT), Big Data, etc.

#### **1.4.2.5 Scope and Guideline for Mobile App Development**

1. Bidder to design a mobile application with the same setup and services as e-Governance Portal. The same users from portal should login from mobile application and access the services on the go.

2. Mobile application should have capabilities to enter data, submit forms, view forms, request services, etc.
3. Bidder to release mobile application for cross platform i.e. for iOS , windows, and Android platforms.
4. Mobile Applications should be compatible with the all leading mobile operating systems.
5. Bidder to maintain release management of mobile applications same as e-Governance Portal.
6. Bidder should conduct A/B testing before releasing final version of mobile application, and feedback of citizen's / user's should be considered after due verification from DGS.
7. Mobile app and APIs have been security audited by Cert-in empanelled vendors.
8. Platform accessibility features should have been optimally used and features behave as intended.
9. Bidder should conduct a workshop with DGS for finalizing mobile application UI designs.
10. Bidder to maintain proper labels for all UI elements.
11. The role for a UI element should be available programmatically so that assistive technology can report this either through speech or Braille.
12. Hints should have been provided for all active UI control elements.
13. The changes of state of UI controls should be dynamically updated and accurately available to the assistive technologies.
14. Related UI elements should have been grouped together.
15. A non-interactive space of at least one point for iOS or 1 DP for android should have been provided between actionable UI elements.
16. Touch targets are at least 9x9mm regardless of screen size.
17. Focus should be always on the active UI control.
18. When a UI control has context specific menu items, users should be informed that such a menu is present and should be able to activate those menu items.
19. Content when navigated using the screen reader gestures forms a meaningful sequence.
20. The app should resize its UI elements in accordance with device settings for text size.
21. Color contrast ratio between foreground text for up to 18-point font and background is at least 4.5:1.
22. Color & shape should not the only means to communicate important information.
23. Focus is changed only when the user activates a UI element that is designated for confirming an action such as the Submit button.
24. Appropriate keyboard should be invoked by the app depending on the type of field or the data that needs to be provided by the user.
25. Gestures should not require 3 or more fingers to interact with UI elements.
26. Session timeouts should have been configured only specific to sensitive information, otherwise for general read only text sessions timeout should have been avoided. If a timeout cannot be avoided, then an option should have been provided for users to extend the time limit before the timeout occurs.
27. Captions should have been provided for all audio content and subtitles/transcript have been provided for all video content that is accompanied by audio (if any).
28. For videos that do not have an audio equivalent, audio description for the video content that is crucial for blind users to understand the content should has been provided.

29. No content should flash more than 3 times in one second.
30. Bidder to adhere all GIGW guidelines for mobile app development.
31. It is the responsibility of bidder to maintain the mobile application versions on play store / apple store / window's store / etc.

#### **1.4.2.6 DGS performance measurement and monitoring dashboards**

Dashboards are to be deployed on the web portal and on the mobile app. The bidder to develop Dashboard and Analytical tool as a part of solution.

1. Development and deployment of well-designed interface which includes user administration, data security, data integration and customisation features to create and maintain reports, charts, MIS etc.
2. Design and deploy dashboards for different user levels (including public data) clearly highlighting the action areas at different stages.
3. The dashboards should have access controlled and the charts to be shown will vary depending on the user level accessing the portal.
4. Generate reports to be printed or for further analysis. Reports will be both pre-defined format reports and custom reports. Custom reports generator will give the user flexibility to apply filters on pre-defined parameters and generate reports.
5. Sharing of reports / queries, through portal, to the Ministry based on role-based access.
6. Creating a Business Intelligence dashboard personalized by job role
7. Generate email and / or SMS based alerts for senior management
8. Ability to access select dashboards on mobile devices
9. The proposed solution should have real time customizable dashboards for various stakeholders.
10. Key features of the dashboard under the proposed solution:
  - a) Visual presentation of KPI/KRAs with drill-down capability to lowest level to gain total visibility
  - b) Capturing trends over time and identifying pre-empt trends
  - c) Measure efficiencies/inefficiencies in processes
  - d) User friendly one stop access to multiple automated reports, etc.
  - e) Data visualisation can be of type Bar Chart / Histograms, Pie Charts, Scatter Plots, Heat Maps, Tree maps, Gantt Chart, interactive graphs, specialized visualizations- Stripe graphics, streamgraph, etc. as per the data visualisation requirements.
  - f) Capability of visualizing the dashboard information on maps
  - g) Dashboards / MIS must support multilingual features as per GIGW norms.
  - h) Dashboards / MIS must support features for differently abled as per GIGW norms such as screen reading tools , magnifiers ,vibrating alerts, voice over reader features, there features should also be available in mobile app to facilitate differently able users.
  - i) Ability to download MIS/ dashboard bulk data in excel, CSV, pdf, dta, other machine readable formats.
  - j) A minimum concurrency of 10,000 is expected for the open for all dashboard (to be accessed by citizens); the same is expected to increase with time and it would be the bidder's responsibility to maintain the solution to meet the required concurrency
  - k) A concurrency of 500 is expected for the user dashboard (excluding citizens) i.e. analytics solution; the same is expected to increase with time and it would be the bidder's responsibility to maintain the solution to meet the required concurrency

- l) The bidder should develop an open dashboard for citizens (view only access to users), publish it on the e-Gov portal. The other dashboard should have the role based access for different stakeholders as defined by DGS.
  - m) The dashboard would display multi-level real-time information, but not limited to the KPIs defined in **Section 2.2.5.2 Key Operational and Performance Dashboard**
11. Bidder to take approval from project steering committee to publish dashboards to public domain (without credentials)
  12. All reports / MIS / dashboard should be populated on real time / near real time data.
  13. All non-personal, non-sensitive data should be available on data.gov.in. the mechanism of integration should be approved by the steering committee.
  14. All MIS/reports on dashboard should be compliant with the Local Government Directory (LGD). Unique LGD codes have been created for each state, dist., sub-dist., block, village, and local body by GoI. All MIS must use the same codes so that data on different platforms is easily integrable.
  15. Well defined and relevant KPA and KPI should be identified by involving executives having in-depth knowledge on the Ministry / Department projects. Secure and quality data should be extracted to visualise the KPIs. The KPI visualisation is made appealing and helps give insight to problem areas in productivity and performances of KPAs. The insight thus helps timely decision making and in challenging KPIs and also in updating them. Self-service reporting should also be available within the solution.
  16. The overall dashboards should be flexible enough to accommodate changes in design, source of data, and type of data seamlessly.
  17. Bidder should integrate the eGov data with different ministry dashboards (e.g. Unnati Dashboard).
  18. Bidder is responsible to creating API and exchanging relevant data (approved by DGS) with different Ministries for availability of information in a seamless manner.

#### **1.4.2.7 Analytics and Business Intelligence**

1. DGS is seeking the capability to analyze data and transform the data into intelligence and insight. This system would help identify further interventions required for development of Indian Shipping, Ease of Shipping and at the same time build upon the interventions already identified.
2. The bidder shall provide comprehensive pre-active monitoring through Business Intelligence (Dashboards and reports) and Analytics. The mechanism should allow for generating reports and analysis.
3. The bidder should undertake data analysis on collected data and display the output in dashboards / MIS in real time basis. Data analysis should be of following type (non-exhaustive):
  - Descriptive data analysis (e.g. basic cross tabulation, frequency distribution, mean, median etc. )
  - Exploratory data analysis (e.g. correlation etc.)
  - Inferential data analysis (Using a small sample of data to infer about a larger population)
  - Predictive analysis (Using historical or current data to find patterns to make predictions about the future)



- Causal analysis (Looks at the cause and effect of relationships between variables, focused on finding the cause of a correlation)
  - Mechanistic Analysis (Understand exact changes in variables that lead to other changes in other variables)
4. Bidder should also analyse cross sectoral data i.e. data available through integration with the inter Ministry, intra Ministry and other sectoral data.
  5. The system should allow customizable reports. The generation of the report shall not impair the System performance. DGS shall prescribe reports to be developed which will be identified at requirements stage or during operations phase.
  6. The reporting and analysis tool has to be robust enough but at the same time have a powerful interface to enable slicing and dicing of data and new view creation on the fly.
  7. The reports are expected to be simple n- column reports with certain reports having graphs, maps, and other infographics.
  8. The Data Analytics module should also have a user interface to extract raw data for self - analytics and report generation.
  9. The module must support Geo-analytics and Geo-plotting of results as and when desired.
  10. The Data Analytics module should also allow for ad-hoc queries pertaining to the module for quick access to information and allow users to input parameters to view the data from different perspectives.
  11. The bidder would enable DGS to have a complete set of tools to support decision making. These applications will be essential to analyze KPIs in a structured and comprehensive manner.
  12. It is essential that the system be built ready for future requirements. The system should be flexible enough to support advanced analytics, artificial intelligence, and machine learning requirements without significant modifications.
  13. The Tool is to be designed to be easy-to-use, reliable, and capable of handling large volumes of sensitive data. It is to be designed as a platform powered by a faceless Open API architecture.
  14. The bidder shall carry out a detailed requirement phase upon award of the contract to review the data analytics requirements of DGS.
  15. The predictive and descriptive data analysis should help DGS users to undertake at least following activities (non-exhaustive):
    - a) Usability of process activities by end users and feedback on processes, that would help to decide on redesigning / re-engineering of activities.
    - b) Do mild course correction through design and implementation changes
    - c) Guide funding decisions like inter component allocation, etc.
    - d) Decide quarterly releases to implementation agencies
    - e) Fraud management and analysis
    - f) Decision making with key KPIs.
    - g) Day to day delivery and monitoring implementation of e-Gov project, etc.

#### **1.4.2.8 Procurement of software components, solution configuration / development and testing**

1. The bidder shall deploy a dedicated team experienced in installation, configuration, customization, integration and testing, implementation, deployment of the proposed

solution. Every custom development must be documented in detail and the code / script should be properly annotated with comments.

2. The bidder has to implement application software and database software using latest available technologies after in-depth study of the prevailing ground conditions, processes, and workflows.
3. To ensure strategic control in e-Governance applications and systems from a long-term perspective, and as a Government of India initiative for adoption of open source software, bidder may propose open source software as per defined guidelines of Government of India (GOI). While proposing open source solutions, bidder should refer procurement guidelines and framework defined as per e-Governance standards by Department of Electronics and Information Technology (DeitY), Government of India. However, bidder is free to select COTS / bespoke product as per requirement of RFP.
4. Bidder shall be responsible for procurement of necessary licenses for proper functioning of the software. All licenses will be procured in the name of DGS and will include ASC/AMC for the entire duration of the contract. Bidder will maintain an inventory of all software components procured (commercially or open source), license renewals, etc. This list will be made available to DGS on request. All licenses should be perpetual in nature such that bidder can easily transfer those licenses to DGS.
5. Solution shall be able to handle the peak workloads. Bidder is expected to conduct the sizing of the application.
6. Bidder shall ensure that latest patches/upgrades for software components being used will be applied in consultation with DGS
7. Bidder shall be responsible for configuration / customization of the software components procured as required for the solution
8. Bidder shall carryout development of any software which is required within solution adopting industry leading practices.
9. Bidder shall maintain a software configuration management system with appropriate version control for the software deployed
10. Bidder to provide conference room pilot for each software components.
11. Bidder shall adopt leading practices for release deployment in production environment
12. Bidder shall be responsible to carry out white box and black box testing, unit testing, integration testing, volume testing, performance testing, penetration and vulnerability testing
13. Testing cases executed, testing logs, bugs fixed, testing results, etc. will be maintained by bidder and shall be made available to DGS on request if required.
14. Comprehensive development and rollout plan for each of the software component will be provided by bidder and status updates against planned milestones will be provided in project status update reports periodically
15. Post deployment bug fixing, patches, fine-tuning, minor changes, etc. will have to be carried out by bidder as a part of ongoing support and maintenance of the software
16. While writing the source code for application modules the bidder should ensure high-quality documentation standards to improve the readability of the software module. An illustrative list of comments that each module contained within the source file should be preceded by is outlined below –
  - A. The name of the module



- B. The date when module was created
  - C. A description of what the module does
  - D. A list of the calling arguments, their types, and brief explanations of what they do
  - E. A list of required files and/or database tables needed by the module
  - F. Error codes/Exceptions
  - G. Operating System (OS) specific assumptions
  - H. A list of locally defined variables, their types, and how they are used
  - I. Modification history indicating who made modifications, when the modifications were made, and what was done.
17. Apart from the above bidder needs to follow appropriate coding standards and guidelines inclusive of but not limited to the following while writing/configuring the system –
- A. Proper and consistent indentation
  - B. Inline comments
  - C. Structured programming
  - D. Meaningful variable names
  - E. Appropriate spacing
  - F. Declaration of variable names
  - G. Meaningful error messages

A key component of the contract is development / customization and implementation of a comprehensive integrated IT solution which supports all service delivery processes and functions of DGS. These have to provide for necessary amendments/ upgrades / modifications that may be required in future, also taking into account any change in DGS Acts/Rules or any relevant notifications by DGS from time to time relating to any services envisaged under DGS. These components have been elaborated in the subsequent sections within this tender. Various subcomponents within are:

Bidder should consider the communication channels and interface

- 1. Redesign, redevelopment and maintaining content on DGS website open to public
- 2. Creation of DGS e-Governance portal for registered users of DGS including seafarer, shipping companies, training institutes, government agencies, DGS employees, ship manager, shipping agents, Port authority, Seamen and other external stakeholders
- 3. Development of mobile application to provide selected services to the user
- 4. Interface with external agencies & submission of third party data
- 5. Managing SMS and Email interfaces to enable push-pull services and alerts through these medium

#### **1.4.2.9 Solution testing**

The BIDDER shall provide details of tests being carried out during the implementation (e.g. including conference room pilots, unit tests, System integration tests, Stress tests and final user acceptance test.)

BIDDER has to prepare a testing strategy documents which will include testing plans, schedules, content, training approach and methodology. Testing strategy should define the requirements and goals of software configuration, determine the tools and

methods used to check that the system responds correctly, determine how and when the test will be performed and recommend how the approval process should occur.

The test strategy document shall guide the project team through the implementation to ensure that planning and conducting testing activities in the various phases of software implementation are proper.

Bidder would be required to provide testing tools for carrying out the above testing. However, the third-party agency may also use its own tools if it is found necessary to undertake successful acceptance testing.

The following testing should be done by BIDDER:

**1. Unit Testing / User Acceptance Testing:**

After development and customization/configuration of the software solution, the BIDDER shall, conduct tests to demonstrate the readiness of the system which meets all the requirement specifications (functional and Non-functional) as brought out in this RFP.

On the basis of these tests, a report would be submitted by the BIDDER for review and approval by DGS. BIDDER should perform following as a part of the scope:

- a) Unit testing shall cover all the custom developed objects as part of configuration/customization phase.
- b) This shall be tested thoroughly to make sure that the test results (output data) are correct, and reflect the business processes defined in the Business blueprint report.
- c) BIDDER shall perform a code review for each of the custom development as a part of quality procedure and submit it to DGS.

**2. Integration testing:**

- a) The purpose of the integration test is to execute the integrated components, including simulation of live operations, and analyse the results that are important for the functional verification of the production system.
- b) Integration testing shall be accomplished through the execution of predefined business flows, or scenarios, that emulate how the system will run the processes of DGS.
- c) These business flows, using migrated data from the existing systems, shall be performed in a multifaceted computing environment comprising of software products, third-party software, system interfaces and the solution components & subcomponents.
- d) Integration testing shall focus on cross-functional integration points, as well as end-to-end business processes.

**3. Performance and load Testing:**

- a) BIDDER will be responsible for carrying out the performance and load testing of the developed application in a production like simulated environment arranged by BIDDER at its own cost.
- b) Various performance parameters such as transaction response time, throughput, hits per second and transactions per second etc. should be taken into account.

- c) Test cases along with test results to be shared with DGS. The BIDDER should use suitable simulation tools in accordance with the agreed test procedures keeping in view DGS's projected future load of transactional users as proposed by BIDDER and agreed by DGS.

#### **4. Security Testing (Penetration and Vulnerability testing):**

- a) The solution provided by BIDDER should be in compliance with security requirements as mentioned in the RFP including but not limited to security controls in the application, at the network layer, and security monitoring system deployed by the BIDDER.
- b) The solution shall pass vulnerability and penetration testing for rollout of each phase. The solution should pass web application security testing for the portal and security configuration review of the baseline infrastructure.
- c) BIDDER should carry out security and vulnerability testing on the developed solution. Security testing to be carried out in the exact same environment/architecture that would be set up for production. Security test report and test cases should be shared with DGS.
- d) During Operation & Maintenance phase, vulnerability and penetration testing to be conducted on yearly basis.

#### **5. System Acceptance:**

- a) The BIDDER will develop acceptance test procedures for DGS approval. The purpose of this acceptance is to ensure conformance to the required process operations, response times, and integrity of the software after installation, and to eliminate any operational bugs. Acceptance testing has to be conducted in the test system with migrated data.
- b) For this BIDDER ensure the completeness of following activities:
  - i. Fine tuning of the software, ensuring all required related software components are installed.
  - ii. All the acceptance tests should be carried out before Go-Live at site.
  - iii. At the satisfactory conclusion of these acceptance tests, the implementation of the software shall be considered complete for migration and Go-live.

#### **1.4.2.10 User training**

1. Bidder is expected to train end users so as to enable them to test and use the system in totality. Details about trainings have been covered in the "Migration, transitioning support and change management " component later
2. Training will be provided to DGS e-governance officials so as to enable them to carry out minor changes / configurations
3. Identified users within DGS will be trained by the selected bidder on the entire functionality of the solution
4. Train the trainer model may be adopted by bidder
1. Change management, training, migration and transition

Bidder is expected to manage all activities related to change management, training, and migration of data and transitioning to new system. This includes

- A. Change Management and Capacity Building strategy for effective use of the system
- B. Carrying out training of various internal and external users of the system
- C. Creation of user manuals / tutorials for using the system

Data migration of legacy system including designing templates for data capture from existing systems / manual forms which are required in the existing system and other as mentioned subsequently

#### **1.4.2.11 Full scale deployment and Go-live, Post deployment and stabilization, Post-stabilization support and operations, Incremental updates to solution**

1. Bidder shall ensure that the software solution is properly rolled out.
2. Any changes in solution to be done at no additional cost to DGS until Implementation Period or until date of Go-live, whichever is later. Any changes requested during this period will not constitute under 'Change-request' category.
3. Bidder will be responsible for the generation and submission of necessary documentation required during various stages viz. Planning, Development / Customization, Commissioning and Rollout. Prior approval of DGS would be required on all such documentation before commencement of activity.
4. The software solution would be considered acceptable only after the conditions and requirements of this tender are completely met to the satisfaction of DGS.
5. Bidder should be responsible for co-ordination with vendors, troubleshooting, addressing borderline issues, coordinating with users at DGS, to ensure successful rollout of the application
6. Development of necessary solution requirements, configuring the specific functional modules, third party applications, development of interfaces wherever and whenever necessary.
7. The Bidder shall ensure that the proposed solution provides adequate interfacing mechanisms (both at the application and data level) with a view to integrate future applications of DGS. Such interfaces shall follow industry standards such as Application Programming Interface (API's) and web services. Along with API's the bidder shall develop interface to upload data manually using CSV formats.
8. The Bidder shall supply and install the application, database and related software, integration tools, along with the customized source code and requisite perpetual licenses for the solution, if any. The Bidder shall also describe and document the process to be followed for installing and operating the same.
9. The winning bidder at the time of software development, may propose a design of the hardware configuration in line with contemporary principles and ensure that it comprises various servers including database, application, web servers etc. However, the decision of finalizing hardware / cloud will be with DGS and bidder to adhere to the decision.
10. The Bidder shall consider stakeholder inputs when they are finalizing all processes including user interfaces, mode of data entry, , output reports, queries and the application design as a whole.

11. The Bidder must ensure that granularity is built in the solution, sub-modules and individual functionalities so that these functionalities can be enabled or disabled through the application administrator as per requirement.
12. The system must possess easy-to-use user interfaces, able to perform tasks with minimum of clicks, maximum select options and provide suitable short-cuts wherever possible and guided through screens.
13. The Bidder shall create and manage all necessary master files for the proposed solution.

**14. Integration and interfaces**

Bidder is also expected to develop and provide necessary software interfaces with all internal and external systems. The interfaces are expected to help seamless workflow and interactions as far as possible. Single-sign on and other user friendly integration features are expected as part of the solution. Indicative lists of interfaces and integrations have been provided in the tender. These may be further enhanced by bidder at the time of implementation. Bidder will be expected to provide options of integration / interfacing with different systems. It is understood that some interfaces require involvement of third parties which may be delay implementation of these interfaces. Bidder is expected to proactively highlight any such delays and provide updated plan for implementation of all such interfaces. Bidder shall also provide interface for uploading data in CSV formats for manual data upload. Bidder is expected to develop, and support interfaces as required to ensure complete service delivery from DGS as a single unit

**1.4.2.12 Documentation of Solution**

1. The Bidder must ensure that complete documentation of the system is provided with comprehensive user manuals, and adhere to standard methodologies in the project life cycle as per ISO standard and/or CMM models. The following documents are the minimum requirements:
  - a. Communication Plan listing all stakeholders in the project, defining their roles and responsibilities
  - b. All Architecture documents, Design documents and, testing and deployment manuals etc.
  - c. Quality Assurance Plan stating the planned actions to ensure satisfactory delivery conforming to functional and technical requirements of solution as stipulated in the tender document.
  - d. Interface Control Document, documenting the interface characteristics of one or more systems and any previously documented information together with any agreements between interface owners.
  - e. Test Plan containing information on the software test environment to be used for independent testing, the test cases to be performed, and the overall testing schedule. This includes, schedule, resources, tools, procedures, environment definition, test cases, and software test results.
  - f. Operations Manual providing instructions for installing the application, troubleshooting, interpreting message logs, and FAQs (Frequently Asked Questions).

- g. User Manual (online or downloadable content) providing detailed instructions in the form of a narrative on how to use the application. In addition, it shall describe how to access, submit inputs to, and interpret outputs from the application.
  - h. A data dictionary listing out all the data elements shall be prepared.
  - i. Known error databases
- 2. The Bidder shall maintain all documentation related to the system including software artefact and database with adequate traceability matrix and version control.

#### **1.4.2.13 Software Application Maintenance**

- 1. The objective of application maintenance is to provide application maintenance and support services, including request based services (problem requests/defect fixes), enhancements, configuration management and post release support. As part of these services, Bidder should provide support for bug fixes, enhancements, operational support, and assistance to DGS.
- 2. Bidder should be required to undertake the Application maintenance and Support services.
- 3. Bidder shall ensure compliance to SLAs as indicated in this RFP and any upgrades/major changes to the software shall be accordingly planned by Bidder ensuring the SLA requirements are met at no additional cost to the DGS.
- 4. Bidder to procure ITIL certified Incident management system tool for incident / ticket handling and Enterprise Management System along with SLA monitoring.
- 5. SLA should be auto calculated, and output report should be available to DGS on monthly / quarterly basis.
- 6. Bidder to provide ticket-based resolution support during O&M phase.
- 7. Bidder shall address all the errors/bugs/gaps in the functionality in the solution implemented by the Bidder at no additional cost during the O&M phase.
- 8. Any changes/upgrades to the software performed during the support phase shall subject to the comprehensive and integrated testing by the Bidder to ensure that the changes implemented in the system meets the specified requirements and doesn't impact any other function of the system. Release management for application software will also require DGS approval. A detailed process in this regard will be finalised by Bidder in consultation with DGS.
- 9. Issue log for the errors and bugs identified in the solution and any change done in the solution shall be maintained by the Bidder and periodically submitted to the DGS team.
- 10. Bidder shall maintain version control and configuration information for application software and any system documentation.
- 11. Any additional changes required would follow the Change Control Procedure. DGS may engage an independent agency / designated agency to validate the estimates submitted



by the Bidder. The inputs of such an agency would be taken as the final estimate for efforts required. Bidder to propose the cost of such changes in terms of man month rate basis and in terms of Function point/Work Breakdown Structure (WBS) basis in the proposal.

12. Bidder should commit to provide all necessary resources and expertise to resolve any issues and carry out required changes, optimizations and modification so that complete system as a whole works according to the specified requirements and satisfaction of DGS.
13. Bidder should ensure that the entire solution as a whole is operational and run according to stipulated performance standards.
14. Bidder should ensure efficient knowledge transfer on a continuous basis so as to ensure that application knowledge is passed on to new members subsequently joining the team.
15. The following sections explain the scope of each activity Bidder is expected to perform under application maintenance and support services for the period of contract.
16. **End User Support:** The end user support would include all activities related to resolving the bugs / defects reported by application users. Every bug / defect should be logged. Every bug / defect should be categorized on the severity levels.
17. Bidder should identify the solution and take necessary approvals from DGS and release the patch for UAT after fixing the defects.
18. Bidder should document defects / bugs encountered as well as document the resolution of the same. Bidder should also update the Consolidated List of Common Errors and their Resolution document.
19. Bidder activities would be monitored as per SLAs defined in this tender
20. **Application enhancement / New Development**  
The application may require modifications or enhancements in the functionality. The enhancements or new development may also be required to fix some complex problem requests or defect fixes and upgrade the application performance.
  - A. Bidder should ensure that correct version of the application / program units are being considered to carry out application enhancements/ new development.
  - B. Bidder should follow the configuration management plan for configuration management and version control using the version control software.
  - C. Bidder should support DGS in carrying out the UAT for the modifications / enhancements.
21. Configuration management and version control
  - A. As the application undergoes enhancements and modifications due to problem requests, defect fixes and change requests, it becomes increasingly important to keep the source code under version control and the system under configuration management.
  - B. With the objective of keeping track of the version updates in the application, Bidder should adhere to the configuration management process defined in conjunction with DGS.
  - C. Bidder may be required to assist DGS personnel in ensuring that a copy of the production environment is backed up and stored in the repository before the new / modified components are copied to Production. Bidder may be required to assist DGS personnel in restoring the backed up application versions for testing purpose mainly addressing the restorability of the media.

22. Release management

Release management procedure should be defined in conjunction with DGS to ensure smooth transition of the application changes from release environment to production environment. As part of the release management Bidder should perform the following activities:

- i. Bidder should group the related change requests, assess their development progress and accordingly prepare a schedule for their release.
- ii. Bidder should in consultation with DGS prepare a detailed release plan for every release. This plan should include the release number and date of release. It should also contain details about the change request to be released.

23. SI to upgrade the system if any latest version of software is available either nationally or internationally within 45 days of launch in India or 12 months from launch internationally or as agreed with DGS. All updates and patches will be provided at no extra cost to DGS.

24. Following are Industry standards for which bidder should comply with;

#	Component / Application / System	Prescribed Standard
1	Workflow Design	WFMC / BPM Standard
2	Portal Development	W3C Specification
3	Information Access/Transfer Protocols	SOAP, HTTP/HTTPS (at least 2048 bit SHA 256 encryption or higher)
4	Interoperability	Web Services, Open Standard
5	Scanned Documents	TIFF / PDF (Resolution of 600 X 600 dpi)
6	Digital Signature	RSA standards
7	Document Encryption	PKCS specification
8	Information Security	ISO 27001 certified system
9	Operational Integrity & Security Management	ISO 27002, ISO 27017 certified system
10	Operation	ISO 9001 certification
11	IT Infrastructure Management	ITIL/ EITM specification
12	Service Management	CMMI / ISO / IEC 20000
13	Project Documentation	IEEE/ISO specifications for documentation

24. **Quality Audits:**

- A. The bidder is expected to align all phases of the project and sustenance as per best industry standards e.g. CMMI, ITIL, ISO 20000, ISO 27001, etc. It is expected that an independent Quality Team of bidder shall independently and regularly audit this system against these standards and processes laid down by bidder. The frequency of such audits must be at least once per half-year for every process. The result of the audit shall be directly shared with DGS with an effective action plan for mitigations of observations/non-compliances, if any.
- B. DGS, at its discretion, may also engage independent auditors to audit any/some/all standards/processes. The bidder shall support all such audits as per calendar agreed



in advance. The result of the audit shall be shared with the bidder who has to provide an effective action plan for mitigations of observations/non-compliances, if any.

#### **1.4.2.14 Migration, transitioning support and change management**

##### **1. Migration**

- A. Bidder will be required to carry out migration of data, business rules, checks, etc. as required for functioning of the solution.
- B. Data migration including entry and validation of all data (and porting) is the responsibility of the bidder.
- C. Data shall be migrated from the current application and media to the new application prior to the 'go-live' of the respective location.
- D. The Bidder needs to do the following on data migration from the existing legacy systems and/or
  - i. Data stored otherwise
  - ii. Design the data migration & acceptance methodology and plan
  - iii. Risk Identification and Mitigation Plan for Data Migration
  - iv. Mapping of the data
  - v. Identifying the data gaps
  - vi. Perform data cleansing for incorrect/ incomplete data
  - vii. Providing templates for data collection
  - viii. Extraction and Loading of the data
  - ix. Listing of errors during data migration
  - x. Corrections of the migrated data during Data Quality Assessment and Review
  - xi. Final porting of the data into the solution
  - xii. Meta tagging of key words
  - xiii. Testing and obtain sign off on migrated data.
  - xiv. The tool / utility for performing data migration must be designed by the Bidder after adequate study of the data to be migrated.
- E. Data Assessment: The study of the source/legacy systems must provide comprehensive insights into the content, structure, quality and integrity of the source/legacy systems.
- F. Risk Identification and Mitigation Plan for Data Migration: The Bidder shall identify all risks associated with the data migration and enumerate mitigation measures and prepare a Risk Identification and Mitigation plan for Data Migration. The plan must address the contingency measures to be adopted during the event of a data migration failure. It must also clearly specify measures to be taken to prevent data loss. It may be preferable to consider migration of data to a backup system at the same time as the new system to address data loss due to system failures.
- G. Data Mapping and cleansing: Since there would be significant difference between existing database table structures and database table structures of new application, there must be mapping done between existing tables and proposed tables and data be made compatible for migration into new tables. A comprehensive data mapping exercise must be undertaken by the Bidder before embarking on data migration. A

good data map will detail an in-depth cross-referencing of all mutual fields across the source system and the target system. It must include the following (but not limited to):

- i. Names of applicable to and from fields
  - ii. Lengths and data types of these fields
  - iii. Mapping of relationships between entities
  - iv. Check on the constraints, unique fields and integrity checks
  - v. Any logic involved in mapping such as string truncations or validations against any business rules.
- H. The Bidder shall be responsible for migration of operational data as required, including financial transaction data such as ongoing contracts, employee transaction data etc.
- I. In the event of any gaps in data migration, the Bidder shall discuss with DGS, document the findings and get it signed-off from DGS. Bidder shall then promptly carry out required migration and close the gaps identified during the duration of contract.
- J. Bidder shall run mock data migration tests to validate the conversion programs that have been written.
- K. Bidder shall validate the data before uploading the same to the production environment.
- L. Bidder shall support in conducting the acceptance testing and verifying the completeness and accuracy of the data migrated from the legacy systems to the proposed solution.
- M. Bidder to refer Annexure 5.3 for details list of existing modules (not limited), whose data will be migrated to newly developed e-Governance solution.

## **2. Transitioning**

1. DGS is expected to provide necessary support for transitioning to the new system. Bidder will make data entry as required to populate information as required. This includes but is not limited to defining asset masters, making maintenance schedules, creation/modification of policy rules, etc.
2. Certain data which is recorded in registers / papers / files which needs to be captured in the system as master / configuration / operations data
3. Bidder is expected to design and provide templates in excel for capturing this data. Bidder will make data entry in the excel template provided
4. Sufficient time needs to be provided to bidder to digitize the data. Bidder is expected to regularly follow-up in case of delays and provide timely escalations, in absence of which the delay will be considered on part of bidder
5. In addition, as users get used to the new system, bidder is expected to generate MIS reports based on the details submitted in the system. These need to be factored in change management and appropriate training sessions need to be planned and conducted for the same

## **3. Change management and capacity building**

1. Scope of work for training and capacity building for bidder includes:
  - A. DGS employees
  - B. DGS Partners
  - C. Customers and end users (limited user sample)

2. The bidder's scope of work also includes preparing the necessary documentation, presentations, flowcharts, training aids as required for successful delivery of such trainings.
3. The details provided in this section are indicative and due to the complex nature of the project the number of training sessions may increase. Over and above the team considered for performing the training as detailed in subsequent sections, bidder has to provision for two personnel to handle additional training needs.
4. Further the bidder has to provide cost for additional and optional training sessions in its commercial proposal in case more training sessions are required. Bidder has to conduct such additional training sessions on DGS's request.
5. The bidder shall impart training to DGS employees and other key stakeholders on the usage and maintenance of the system. Bidder will develop a training and capacity building strategy that will also include a detailed plan of implementation. The strategy has to be multi- pronged and training may need to be repeated for better understanding of the systems and its applications.
6. The Bidder shall propose different training modules for different user profiles at appropriate timelines.
7. The Bidder shall provide such additional training as they deem necessary in order to ensure that the training imparted is comprehensive and complete.
8. The Bidder shall provide a change management plan to DGS which addresses the various aspects of capacity building and training. Bidder will provide tentative number of sessions envisaged by bidder for each type of user considering their function and interaction with system.
9. DGS reserves right to reasonably increase number of trainings being conducted for particular / all type of users. The training schedule will have to be modified accordingly and that will be considered as basis for further trainings till go-live and thereafter.
10. The bidder must also prepare Training Modules/content to enable the users for self-learning.
11. DGS envisages that the training and capacity building sessions for all stakeholders would primarily be based on 'Train the Trainer' concept. These master trainers will further train the respective users. Training will happen in decentralised manner. Trainer will visit the respective locations and will carry out training activity. Only the conference room/space for the training including one projector would be arranged by DGS. DGS along with the bidder shall identify key resources to impart skill based training to allow the "Train-the-Trainer" program.
  - a. Training will happen at Following Locations
    - i. DGS HQ
    - ii. 4 locations in 4 different zones(Final locations will be provided by DGS)
12. The training material prepared by bidder will be owned by DGS and cannot be used without prior approval of DGS.
13. The below table provides an indicative list of different types of training that the bidder needs to impart.

Training Area	Relevant stakeholder	Scope
Functional	End users, operators, office staff interacting with the system	<ul style="list-style-type: none"> <li>Carrying out user desired functions through system</li> <li>Additional training on handheld devices, cash registers, etc.</li> <li>Function-wise workflow, screen flow, user inputs required, checking status updates, etc.</li> <li>Working of each screen in order to carry out respective functions as per roles and responsibilities</li> <li>Deviation handling through system</li> <li>Accessing various systems available to the users</li> <li>Trainings should necessarily include: <ul style="list-style-type: none"> <li>Leadership access</li> <li>Customer groups</li> <li>Functional heads</li> <li>Process supervisors</li> <li>Process operators</li> <li>Shipping and seafarer operations</li> <li>ERP related functions</li> <li>Office workflows</li> </ul> </li> </ul>
Techno-functional	Only one power user which have special access of maintaining masters, , create new workflows, etc.	<ul style="list-style-type: none"> <li>Steps to carry out functions related to special privileges as defined</li> <li>Workflow definition and creation</li> <li>Second level roles &amp; responsibility assignment</li> <li>Trainings should necessarily include: <ul style="list-style-type: none"> <li>User access control</li> <li>Managing masters and controls</li> <li>Workflow advanced users</li> <li>Advanced users for other functions</li> <li>Future maintenance including configuration, Master Data maintenance and other administrative works of the system</li> <li>Address future functional queries of user</li> </ul> </li> </ul>

Training Area	Relevant stakeholder	Scope
Technical	DGS's IT users	<ul style="list-style-type: none"> <li>• System architecture design covering interactions / interfaces between various components</li> <li>• System operations and maintenance</li> <li>• Code structure, infrastructure details, configuration details, carrying out minor edits/changes, etc.</li> <li>• Administration training on specialized technology skills like <ul style="list-style-type: none"> <li>○ Database management</li> <li>○ Application management</li> <li>○ Troubleshooting</li> <li>○</li> </ul> </li> </ul>

14. Functional and techno-functional training needs to be carried out before Go-live of the solution. Technical training needs to be completed within 3 months from go-live. All training sessions will require sign-off from minimum 80% of attendees failing which DGS may ask that session to be carried out again at no extra cost.
15. Training schedule needs to be provided at least one week in advance to DGS along with pre-reading material and prerequisites for attendees
16. Feedback from each training session will have to be maintained by bidder and submitted along with invoices.
17. Refresher trainings needs to be provided on an annual basis for functional and techno-functional and quarterly basis for technical area
18. Given below are indicative number of trainings which shall be undertaken by the MSP. However, depending on specific needs, the number of trainings could increase. MSP is expected to factor for such increases considering the specific challenges and needs.

Type of Training	Relevant Stakeholder	Minimum No. of Trainings	Max. No. of Users in each Session	Frequency of Training
Executive leadership Workshop	Top Management (including HODs)	10	30	Once in 3 Months up to Go Live. During O&M phase

Type of Training	Relevant Stakeholder	Minimum No. of Trainings	Max. No. of Users in each Session	Frequency of Training
				two yearly refresher courses.
Functional Heads	Selected users per module for the envisaged solution	15	30	On-Going During the Project for a period of min. 5 working days for each session.  At least two yearly refresher courses during O&M phase.
Functional users	All other internal users	15	25	Hands on Training for a minimum of 7 working Days for each batch to be conducted before go-Live  At least two yearly refresher courses during O&M phase.
Administrators	Staff who will handle technical aspects, IT infrastructure required for working of the software application	15	30	Hands on Training for 5 days for each session during the project  At least two yearly refresher courses during O&M phase.

Type of Training	Relevant Stakeholder	Minimum No. of Trainings	Max. No. of Users in each Session	Frequency of Training
Employees of Support Functions	Identified Employees from each department	15	50	One Time before kick-off of O&M phase of the project for a period of 3 days.  At least two yearly refresher courses during O&M phase.

19. Functional and techno-functional training needs to be carried out before Go-live of the solution. Technical training needs to be completed within 3 months from go-live. All training sessions will require sign-off from minimum 80% of attendees failing which DGS may ask that session to be carried out again at no extra cost.
20. MSP shall design and implement a system for capturing feedback on training.
21. MSP shall design and develop a training environment with training data to enable DGS/Allied office users at all levels to have hands on training on some of the key modules like case viewer.
22. Training schedule needs to be provided at least one week in advance to DGS / respective port along with pre-reading material and prerequisites for attendees
23. Feedback from each training session will have to be maintained by MSP and submitted along with invoices.
24. Refresher trainings needs to be provided on an annual basis for functional and techno-functional and quarterly basis for technical area.
25. DGS may reduce the number of training sessions required depending on the number of officials to be trained. MSP is expected to provide a unit cost for training session. Payment to MSP shall be made on-actual basis for the training sessions carried out at DGS and each location.

#### **1.4.2.15 Implementation and adherence to IT policies as defined by DGS**

The bidder has to apply, obtain and maintain the STQC certification for the project. The cost incurred for obtaining and maintaining the certification shall be borne by the bidder. The bidder shall get the certificate as per timelines defined in volume I failing which the subsequent payments will be deferred till the certification is obtained.

#### **Adherence to Standards**

The selected SI should ensure that the system complies with defined industry and open standards.

1. Compliance with Open standards

The proposed system would be designed based on open standards and in line with overall system requirements, in order to provide for good interoperability with multiple platforms and avoid any technology or technology provider lock-in. The system may adhere to the all open standards guidelines and other guidelines relevant to the project as issued by GoI.

2. Compliance with Standards for State Portal, SSDG and forms Framework

The SI while developing the Application shall take cognizance of the technicalities of the State Portal, SSDG and e-forms framework and any other guidelines issued in this regard by the Government. The SI also has to ensure that all content of the Department's Portal are as per the State Portal Framework guidelines. The web portal must comply with all the Guidelines for Indian Government Websites as defined at the following websites: <http://web.guidelines.gov.in/> and <https://egovstandards.gov.in/guidelines>. It is a mandatory requirement that the developed application be Web1 compliant i.e., it should look good on all resolutions and platforms and be simple as well as user friendly. Also, the functionalities developed the application should be easily accessible to all intended users.

3. Compliance with Industry Standards – STQC and MeitY including GIGW

In addition to above, the proposed solution has to be based on and be compliant with industry standards (their latest versions as on date) wherever applicable. This will apply to all the aspects of solution including but not limited to its design, development, security, installation, and testing. The suggested architecture must be scalable and flexible for modular expansion. It should ensure ease of integration with software / applications developed using common industry standards since the solution may be linked and connected to other sources (websites, contents, portals, systems of other Tax administrations etc.) as well as there may be loose/tight integration with backend system of other departments depending on individual service processes. The solution architecture should thus have provision to cater to the evolving requirements of the Department.

Post go-live and stable operations, bidder is expected to provide operations and maintenance services for the entire solution for a period as defined. This includes

A. Provision, deployment and supervision of personnel required by DGS

B. Obtain relevant Certifications and adherence to respective Industry Standards as detailed later in this RFP



- C. Manage entire project from conceptualization to operationalization and maintenance as well as subsequent transfer of infrastructure/ applications and handholding for a period of six months from the end of this contract.
- D. Defining exit management program and knowledge transition to DGS officials
- E. Any additional overarching requirements of the solution for strengthening the services relating to DGS and this project.

#### **1.4.2.16 Other key requirements**

- A. Bidder should propose only one solution that is best suited for the needs of the DGS. Bidder should provide only one choice for each of the goods and services proposed as part of this tender.
- B. DGS will requisition additional resources as and when required by the Purchaser from time to time. Such request should be governed by the change order procedure as defined.
- C. Bidder should ensure that the components and sub-components required for the functionality and completeness of the solution, including but not limited to, software & DB licenses, migration, integration, development / testing kits, tools, etc. should also be provisioned according to the requirements of the solution.
- D. The system software licenses shall be genuine, perpetual, full use and should provide patches, fixes, security updates directly from the OEM at no additional cost to DGS for the entire period of contract
- E. All the software licenses that the Bidder proposes should be perpetual software licenses. The software licenses should not be restricted based on location and the Purchaser should have the flexibility to use the software licenses for other requirements if required.
- F. The Bidder shall be responsible for providing the perpetual licenses so as to maintain the IPR and source code (customized / extension) with DGS
- G. The bidder shall provide with a full use database license
- H. All the licenses and support should be in the name of DGS
- I. Bidder should ensure that the Annual Maintenance Support for the software components is provided for the period from date of deployment of the software component till the end of contract period. Annual Maintenance support should include patches, updates and upgrades of the software components. Bidder should ensure that there is a comprehensive onsite warranty / support arrangement for the aforementioned period with all the OEMs.
- J. Bidder should ensure that none of the components and sub-components is declared end-of-sale or end-of-support by the respective OEM at the time of submission of bid. If, the OEM declares any of the products / solutions end-of-sale subsequently, Bidder should ensure that the same is supported by the respective OEM from its date of deployment till the end of the contract period.
- K. Bidder is expected to design the solution considering the tender condition of no single point of failure with high level of redundancy and resilience to meet the uptime requirements

- L. Bidder is expected to carry out an independent exercise to size the solution and accordingly highlight the requirements. Bidder should ensure that all the components are sized adequately, and it should also be noted that Bidder would be responsible for meeting the performance requirements stipulated in the tender, contract and SLA for the entire solution at all times during the currency of the contract
- M. If a product is not supported by the OEM for any reason whatsoever, from the effective date of Contract till the end of the contract period, Bidder should replace the products/solutions with an alternate that is acceptable to the Purchaser at no additional cost to the Purchaser and without causing any performance degradation and/or project delays
- N. Sizing considerations and minimum ratings wherever provided in this document are indicative. Bidder is expected to carry out an independent exercise to size the solution and accordingly highlight the requirements. Bidder should ensure that all the components are sized adequately and it should also be noted that Bidder would be responsible for meeting the performance requirements stipulated in the tender, contract and SLA for the entire solution at all times during the currency of the contract.
- O. Bidder should meet all the defined acceptance and operations criteria for each phase of the project covering the proposed solutions.
- P. Any additional components, sub-components, assemblies, sub-assemblies that would be required to meet the desired performance requirements will have to be provisioned by Bidder at no additional cost to the Purchaser and without any project delays.
- Q. It is expected that Bidder will provide an integrated solution after due consideration to the compatibility issues between various components and existing internal systems. If there is a problem with compatibility between components, Bidder should replace the components with an equivalent or better component that is acceptable to the Purchaser at no additional costs to the Purchaser and without any project delays.
- R. Bidder should provide minimum Two hard and Two soft copies of all the reports, manuals, documentation, including but not limited to, detailed operations manual, maintenance manual, administration manual, etc. for each and every equipment / component proposed as part of this tender. The documentation should be supplied for Installation, Maintenance, Servicing and operations of equipment / components.
- S. Bidder should have to arrange for Incident Management tools for defect tracking, defect logging, application performance monitoring, automatic testing etc. to deliver the complete software development and maintenance services.
- T. Bidder should ensure the usage of configuration management and version control tool and own the necessary licenses for its team to deliver software development and maintenance services. Additionally, Bidder should provide single user license for the configuration management and version control tool for the Purchaser.
- U. Bidder should provide a single user development environment license in the name of the Purchaser for the various tools used by Bidder during the development phase of respective solutions. These tools would typically include Application Development Framework / Environment for custom built and COTS based products, XML Schema Designer, PDF Designer, etc.
- V. The Bidder will be responsible for providing the necessary development and testing environment and maintaining the related solution for the Contract period.

- W. The bidder shall transfer all the assets including all its components of software to the DGS at the end of contract period at no additional cost to the DGS.
2. During the Contract period, all project assets including data and intellectual property should be in safe custody and due reasonable care should be taken on the behalf of the DGS to prevent any unauthorized use.
  3. Any other overarching requirements of solution not covered above but required by bidder to ensure proper functioning of solution.

#### 1.4.2.17 Roles and Responsibilities

Kindly refer vol2 – Annexure 5.2 - ROLES AND RESPONSIBILITIES OF THE PARTIES for detailed roles and responsibilities.

## 2 Business Processes

The following section provides an overview of business processes which are expected to be covered by the envisaged system. Process flows of existing processes shall be made available to the bidder at the time of implementation. Bidder will be expected to create system TO-BE system processes on basis of this information and proceed with system design and implementation after necessary approvals. The system design is expected to be flexible to changing process needs.

### 2.1 Description of Key Processes

The following section gives indicative functionality expected to be supported through the envisaged system.

#### 2.1.1 Generic functions available to users

Seafarer Related Processes	Description
Individual Profile	Create a seafarer profile and customise the service offering on portal
CDC	A Continuous Discharge Certificate (CDC) certifies that the person holding it is a seaman as per The International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW). A seafarer may apply for the same after completing all aforementioned STCW courses from an approved MTI. The process is housed at the Shipping Master's Office (SMO). Application for New CDC, Renewal of CDC, Replacement of CDC, Duplication of CDC, Discontinuation of CDC are the processes related to CDC
CDC: New CDC	A CDC certifies that the person holding it is a seaman as per The International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW). A seafarer may apply for the same after completing all aforementioned STCW coursed from an approved MTI. The process is housed at the Shipping Master's Office (SMO)
CDC: Renewal of CDC	CDC's need to be renewed every 10 years.
CDC: Replacement of CDC	CDC's may be replaced in case the existing CDC is torn, filled up or needs a correction.
CDC: Duplication of CDC	Duplicate CDC's may be issued in case an existing CDC is misplaced.

CDC: Discontinuation of CDC	Discontinuation of CDC occurs when a seafarer intends to end his seafaring career. It is necessary for the said seafarers to cancel their registration in order to receive their PF and gratuity amounts. Cancellation is carried out under the following circumstances: a) Retirement on attaining the age of superannuation (60) years or voluntary retirement on attaining 50 years of age b) On being declared permanently unfit or seamen's own request c) Death d) Disciplinary grounds - as recommended by the Disciplinary Sub-Committee of the S.E.B
CDC: New COC as Cook	COC as Cook is issued to certified cooks in place of CDC's. This process is housed within the SMO.
CDC: Replacement of COC as Cook	COC as Cook may be replaced in case the existing COC as Cook is torn or needs a correction.
CDC: Duplication of COC as Cook	Duplicate COC as Cook may be issued in case an existing COC as Cook is misplaced.
<b>Examinations</b>	It is necessary for a seafarer to have a valid Certificate of Competency (COC) of some grade to work as an officer on a Merchant Navy ship. To get a particular grade COC, a seafarer is required to clear all functions, written and oral of that grade. There is hierarchy in grade of COCs and a seafarer needs to appear for examination at each level to get the next level COC. Online Eligibility Assessment, Examination Application (including eligibility verification), Question Paper setting, Conduct of written exam and update of results, Conduct of oral exam and update of results, Updating of marks by external parties, Review of results are the sub processes related to examination.
Examinations: Online Eligibility Assessment	Seafarer have to meet the minimum requirement in form of training, courses and sea-service for being eligible for any grade of examination. Seafarer shall have an option to check whether he is eligible for particular grade of examination on a single click
Examinations: Examination Application (including eligibility verification)	Seafarer need to get eligibility verification before applying for any Examination. This Assessment is usually a complete assessment of Seafarer starting from his basic education, Pre-sea training, Sea-service, Post sea training and other requirements which differ from one exam to another. If a seafarer gets the approval in eligibility verification then only he can apply for any examination.
Examinations: Question Paper setting	The respective departments at the directorate is responsible for setting question paper for the examination which will be conducted by them
Examinations: Conduct of written exam and update of results	Written Examination is conducted every month except the month of May. Except for MEO-Class IV examination, all examinations of Officer Grades of Foreign going ships exams are conducted in Exam centres of DGS. MEO-Class IV exams are managed by International Institute of Information Technology, Bangalore

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

	(IITB) and are conducted at an external institute Aptech Examination of Near Coastal Voyage examination are conducted by Indian Maritime University (IMU) in case of Nautical department and Institute of Marine Engineer (IME) in case of Engineering department.
Examinations: Conduct of oral exam and update of results	Oral examination in all the cases are conducted at exam centre of DGS
Examinations: Update marks from external parties	Results for examination conducted by external third parties like IITB, IME or IMU have to be updated on system. So they need to forward the list of results to assigned DGS staff to upload and update on system
Examinations: Review of results	Seafarer are eligible to apply for review of results until 30 days from issue of results. The SLA of the process shall be 3 working days.
<b>Certifications</b>	
Certifications: Issue of fresh COC	Seafarer on every Indian ship except home-trades ship of less than two hundred tons gross engaged in coasting trade of India, when going to sea from any port or place, need to have a number of Certificates of Compliance (COC) and Certificate of Proficiency (COP) as per MS ACT, 1958. A seafarer is eligible for a COC once he have cleared all the functions (written and oral) of that particular grade/rank.
Certifications: COC Revalidation	The Certificate of Competency issued by the Directorate is valid for a period of 5 years. They are required to be revalidated after every 5 years after the candidate meets the requirements
Certifications : COC Extension	There might be cases where a seafarer have to be on board of ship despite of his COC getting invalid during that tenure. In that case either seafarer or the shipping company get extension of validity of the COC
Certifications: COC Suspension	There might be cases where a seafarer might have been caught in malpractices by a shipping company or Recruitment and Placement Agency or Marine Training Institute. In such cases third party can make a complaint against that seafarer. Case can lead to suspension of certification if the seafarer is found guilty
Certifications: COC Debarment	Seafarer can be caught in any malpractices during examination. In such cases the examiner can complain against that seafarer and if the concerned seafarer is found guilty he may be debarred from appearing for examination for a specified duration
Certifications : COC Duplication	Seafarer can apply for a duplicate COC in case he have lost or damaged his current COC. He need to make a police complain and also publish it on two local newspaper and 30 days post making the both a seafarer can request for duplicate COC in case of loss.
Certifications: COP- Dangerous Cargo Endorsement	Dangerous cargo endorsement is a certificate of authorization for a seafarer, qualifying him/her for working on any vessel dealing with cargo that are categorized as maritime dangerous goods

Certifications: GOC-GMDSS	The Global Maritime Distress and Safety System (GMDSS) is an internationally agreed-upon set of safety procedures, types of equipment, and communication protocols used to increase safety and make it easier to rescue distressed ships, boats and aircraft. Ministry of Communication is responsible for conducting examination and providing certification to the seafarer and the directorate is responsible for endorsement of certificate.
Certifications : COE-UK	An endorsement allows officer holding STCW certifications issued by some non- Indian countries to work as officer on Indian registered merchant ship. Currently India have recognized UK whose certification would be considered for endorsement
Certifications : COS-Naval	Indian naval officer holding valid certificate of service can apply for certain COC to work on merchant ships
Certifications : Restricted COC	Restricted COC means that the seafarer holding that COC will have restricted in terms of GT of the vessel for making any sail
Certifications : Watch keeping Certificate	Watch ratings on merchant ships need a CoP if they're performing navigation or engine room duties.
<b>Sea Service</b>	Seafarer and sea services
<b>Sea Service : AOA</b>	Article of Agreement is a contract between the ship-owner and a crew member (seafarer) regarding stipulations of a voyage, signed prior to and upon termination of a voyage and is applicable only for Indian flagships. The shipping company is responsible for completing this process. The process is housed at SMO.
<b>Sea Service: AOA Sign Off</b>	Sign off on the AOA is a process undertaken by the shipping company to confirm the date the seafarer is off service and officially signs off.
<b>Sea Service : Form I</b>	Form I is a contract between the ship-owner and a crew member regarding stipulations of a voyage, signed prior to and upon termination of a voyage and is applicable only for foreign flagships. Recruitment and Placement agencies for Seafarers (RPS) are responsible for filling Form 1 on behalf of the foreign flagships and the process is housed with SMO.
<b>Sea Service: Form I Sign Off</b>	Sign off on the Form I is a process undertaken by the RPS to confirm the date the seafarer is off service and officially signs off.
<b>Placement details</b>	The seafarer shall have the provision to submit additional placement related details once the AOA/Form I has been submitted by the Shipping Entity/RPS. These details will be of use for calculation of sea-service. There is no approval required for this process, however, the details will be verified by the approving authority at the time of eligibility assessment.
<b>Provident fund</b>	The Seamen's Provident Fund Scheme framed under the Seamen's Provident Fund Act, 1966 (4 of 1966) was introduced retrospectively with effect from 1st July, 1964 to provide for the institution of a Provident Fund for all Seamen, in view of the obvious need to provide old age retirement benefit to the seamen members engaged in the Shipping industry (Merchant Navy) and their family members in the event of death. To administer the Provident Fund Scheme, the office of the Seamen's Provident Fund Commissioner i.e. Seamen's



	<p>Provident Fund Office (SPFO) was established on the 9th July, 1966. The sub-processes covered under this module are as follows:</p> <ul style="list-style-type: none"> <li>▶ Opening of SPFO Account</li> <li>▶ PF Balance Check</li> <li>▶ PF Interim Withdrawal</li> <li>▶ PF Final Withdrawal</li> </ul>
<b>Gratuity fund</b>	<p>The Seafarers' Welfare Fund Society (SWFS) is a Central Organization for Welfare of Indian seafarers and their families. It is registered under the societies Registration Act 1860 and as a Trust under the Bombay Public Trust Act 1950. Amongst other things, their main objective is to provide welfare facilities in general to seamen at ports in India and to seamen engaged as per provisions of section 101 of the Merchant Shipping Act, 1958, while at ports abroad. There is no application form for opening of Gratuity account. As &amp; when the seafarers' gratuity amount is deposited by the Shipping Company, the seafarers' Gratuity account is created in the system.</p> <p>The sub-processes covered under this module are as follows:</p> <ul style="list-style-type: none"> <li>▶ Gratuity Balance Check</li> <li>▶ Gratuity Final Withdrawal</li> <li>▶ Applying for Welfare Scheme</li> </ul>
<b>RPS</b>	<p>Recruitment and Placement of Seafarer's Licenses (RPSL's) are issued to manning agencies which are involved in recruitment and placement of seafarers. The processed under this module are housed both at SEO and SMO.</p> <p>Approval of RPSL, Renewal of RPSL, Correction of RPSL Details, Payment of PF Contribution, Payment of Gratuity Contribution, and Background Process Check are the sub processes related to RPS.</p>
RPS: Approval of RPS	All manning agencies or any other firms / agencies organization involved in recruitment and placement of seafarers have to obtain registration from the DG Shipping under the Merchant Shipping (Recruitment and Placement of Seafarers) Rules, 2005 as amended to carry out their respective functions. This process is housed with the Seaman Employment Office (SEO)
RPS: Renewal of RPS	RPS need to renew their license every 5 years. The process is housed with the SEO.
RPS: Correction of RPS Details	RPS may avail this service to correct any of the detail in their RPS profile.
RPS: Payment of PF contribution by RPS	RPS are liable to pay the PF amount on behalf of the seafarer's placed with them. This process is housed with SPFO.
RPS: Payment of Gratuity contribution by RPS	RPS are liable to pay the gratuity amount on behalf of the seafarer's placed with them. This process is housed with SWFS.
RPS: Annual Fee Payment by RPS	RPS is liable to pay a fee which is calculated on the basis of all the seafarer's they have signed on and signed off (Form I) in that year.



RPS: Payment of welfare fund contributions	RPS is liable to pay stipulated welfare fund contributions to the SWFS on a quarterly basis.
RPS: Report Mishap	In case of any mishap of Indian national on foreign waters, such as death, permanent injury, accident or missing of Seafarer, RPS Cell/Shipping Company informs the Directorate. Two types of mishaps can be reported <ul style="list-style-type: none"> <li>► Foreign waters-Indian National</li> <li>► Indian waters – Indian National</li> </ul> However, the crew branch of DG Shipping, initiates the official proceedings hence both housed under crew branch
RPS: Report Dissertation	After signing off from the ship, seafarer boards the flight back to his home. At the arrival airport, agents of shipping company receive the Seafarers. In case a Seafarer does not show up at the arrival airport, the Shipping Company or RPS Cell informs the Directorate about the Dissertation. Hence this process forms part of crew branch
Background process check	It will be auto-check if the amount due (PF, Gratuity, Welfare fund and Annual Fee Payment) is paid by the assigned deadline
<b>MTI</b>	Maritime Training Institutes (MTIs) are educational institutions imparting pre-sea or/and post-sea training as per DG approved curriculum. Approval of MTI, Approval of MTI courses, Annual Fee Payment Change in Batch, Change in Affiliation, Update Batch Details, Update Placement Details, Certification Details, Correction of Details, Background Processes are the sub processes related to MTIs.
MTI: Approval of MTI	This process allows the Maritime Training Institutes (MTI) to get recognized and approved by DG Shipping to impart pre-sea or/and post-sea training according to DG approved curriculum. This process is housed with the Training Department at DGS.
MTI: Approval of courses	This process allows the Maritime Training Institutes (MTI) to get recognized and approved additional courses as per DG approved curriculum. This process is housed with the Training Department at DGS.
MTI: Generation of INDOS Number for Applicant Seafarers	Once an applicant seafarer creates a profile on the DGS portal along with a Reference Number, they will approach the MTI where they are seeking admission along with the Reference Number. This process is applicable only for applicant seafarer who don't have an INDOS number yet. Using the Reference Number, the MTI will generate their respective INDOS numbers post physical verification of the documents and payment of the requisite fees.
MTI: Fee payment by MTI	MTI's are liable to pay 1% of the tuition fee earned throughout the year to DGS. This process is housed with the Training Department at DGS.
MTI: Change in Batch Details	This process allows the Maritime Training Institutes (MTI) to request for additional batches or increase in the frequency of batches for a particular DGS approved course. This process is housed with the Training Department at DGS.

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

MTI: Update Batch Details	MTI's are required to submit the details of all the enrolled seafarers batch-wise within a day of the start date of the batch. This process is housed with the Training Department at DGS.
MTI: Update Placement Details	MTI's are required to submit the placement details of all the enrolled seafarers within a specified time limit from the day of placement. This process is housed with the Training Department at DGS.
MTI: Certifications issued	MTI's are required to submit the certification details of all the enrolled seafarers as and when they complete a certain course. This process is housed with the Training Department at DGS.
MTI: Notify RO's for CIP	The MTI's will be able to notify the RO's for the CIP process to be initiated.
MTI: Upload monthly timetable	The MTI's are mandatorily required to upload monthly timetables before the commencement of the respective Month.
MTI: Change of premises	This process allows the Maritime Training Institutes (MTI) to request for change of premises. This process is housed with the Training Department at the directorate. As per the new recommendations, an MTI change in premise approval can be obtained by applying through the MTI profile. The application for the same will be forwarded to the training department at the directorate where it will undergo scrutiny for verification purposes. Post verification, an inspection will be done by the MMD. If an approval for the change in premise is granted, the details for the same would be auto-integrated with the MTI database.
MTI: Background Processes	These process will occur every time an MTI attempts to login to the portal using their credentials.
<b>SPFO</b>	The Seamen's Provident Fund Scheme framed under the Seamen's Provident Fund Act, 1966 (4 of 1966) was introduced retrospectively with effect from 1st July, 1964 to provide for the institution of a Provident Fund for all Seamen, in view of the obvious need to provide old age retirement benefit to the seamen members engaged in the Shipping industry (Merchant Navy) and their family members in the event of death.
SPFO: Opening of Account	This process allows seafarers, shipping companies and/or RPS to open a provident fund (PF) account for the seafarer. This process is housed at SPFO.
SPFO: Interim Withdrawal	A seafarer is allowed to carry out an interim withdrawal (non-refundable) for circumstances covering marriage, higher education, purchase of house/flat/house site etc. This process is housed at SPFO.
SPFO: Final Withdrawal	A seafarer is allowed to carry out the final withdrawal from their PF account once the CDC has been discontinued. This process is housed at SPFO.
<b>SWFS</b>	The Seafarer's Welfare Fund Society (SWFS) is a Central Organization for Welfare of Indian seafarers and their families. It

	is registered under the societies Registration Act 1960 and as a Trust under the Bombay Public Trust Act 1950. Amongst other things, their main objective is to provide welfare facilities in general to seamen at ports in India and to seamen engaged as per provisions of section 101 of the Merchant Shipping Act, 1958, while at ports abroad and to give pensions, gratuities or charitable aid to employees or ex-employees of the society & their next of kin.
SWFS: Opening of Account	This process allows seafarers, shipping companies and/or RPS to open a gratuity account for the seafarer. This process is housed at SWFS.
SWFS: Interim Withdrawal	A seafarer is allowed to carry out an interim withdrawal (non-refundable) for circumstances covering marriage, higher education, purchase of house/flat/house site etc. This process is housed at SWFS.
SWFS: Final Withdrawal	A seafarer is allowed to carry out the final withdrawal from their gratuity account once the CDC has been discontinued. This process is housed at SWFS.
SWFS: Welfare Scheme	Under this process, a seafarer is allowed to apply for various welfare schemes with SWFS.
<b>Other Processes</b>	<b>Description</b>
<b>Shipping Company</b>	Shipping Company is one of the Stakeholders at DGS .The sub-processes covered are Payment of PF Contribution, Payment of Gratuity Contribution, and Annual Fee Payment.
<b>Shipping Company : Payment of PF contribution by RPS</b>	Shipping Companies are liable to pay the PF amount on behalf of the seafarer's placed with them. This process is housed with SPFO.
<b>Shipping Company : Payment of Gratuity contribution by RPS</b>	Shipping Companies are liable to pay the gratuity amount on behalf of the seafarer's placed with them. This process is housed with SWFS.
<b>Shipping Company : Application for Tonnage taxation certificate by shipping company in beginning of the year</b>	Maritime training trust has been set up by government headed by a Chief Executive Officer and is responsible to provide facilities for training and employment and encourage Indians to opt for seafaring as career. Tonnage Taxation regime has been linked to mandatory training for Indian seafarers and MTT have been appointed to administer it. The Tonnage Taxation opted companies have to adhere to a three-pronged scheme under which they give an annual plan as basic training commitment
<b>Shipping Company : Payment of fees (Tonnage taxation)</b>	Shipping company need to make payment in lieu of administrative charges per seafarer for basic training commitment. They also need to make payment in lieu of penalties if they delay in submitting any required document
<b>Shipping Company : Annual Return-Tonnage taxation</b>	A shipping company can make an annual adjustment (a retrospective update of the training commitment in tune with net increase or decrease of vessels) in form of Annual return

<b>Shipping Company : Fee Payment (AOA)</b>	Shipping Companies are liable to pay a fee which is calculated on the basis of all the seafarers they have signed on and signed off (AOA) in that year.
<b>Shipping Company : Payment to Welfare Fund Contributions</b>	Shipping Companies are liable to pay stipulated welfare fund contributions to the SWFS on a quarterly basis.
<b>RO Sails</b>	The Regional Office (Sails) established at Mumbai, Jamnagar and Calicut assist be sailing vessel owners for standardization of trade by securing cargo and elimination of mal practices, registration of Sailing Vessels, issuance/renewal of identity cards to sailing vessels seamen, repatriation of stranded seamen in other countries due to sailing vessel casualties etc. This office is headed by the Regional Officer (Sails) and assisted by the supporting staff and functions under the administrative control of the respective MMD (HQ).
RO Sails: Issuance of ID Cards	This process allows Sailing Vessel Seaman to be issued an identity card by RO Sails.
RO Sails: Renewal of ID Cards	This process allows Sailing Vessel Seaman ID Card to be renewed every 5 years by RO Sails.
RO Sails: Duplicate ID Cards	This process allows Sailing Vessel Seaman ID Card to be duplicated in case it is misplaced/lost etc. This process is housed within RO Sails.
RO Sails: Tindal Certificate	A Sailing Vessel Seaman may be issued a Tindal Certificate if he/she has sailed for more than 5 years.
RO Sails: Sign on	Sign on is the process wherein the Tindal of the vessel applies to RO sails for approval on behalf of all the vessel seaman before the vessel sails out.
RO Sails: Sign off	Sign off is the process wherein the Tindal of the vessel applies to RO sails for approval on behalf of all the vessel seaman after the sailing is complete.
RO Sails: Cancellation	Seaman may apply to RO Sails to cancel his ID Card.
<b>MTO</b>	Multimodal Transport Operators or MTOs are those entities that use more than one modes of transport to facilitate the transportation of cargo from one place to another.  For example, an MTO can transport cargo by road in the first leg, by ship in the second leg and by rail in the final leg of the journey. DGS issues licenses for MTOs
<b>Approval of Service Provider</b>	A service provider can be any entity who provides ship related services. This includes: <ul style="list-style-type: none"> <li>▶ labs which conduct testing on cargo</li> <li>▶ Registration and survey of FFA/ LSA service stations</li> <li>▶ Approval and assessment of entities for 'Verified Gross Mass Method 2'</li> <li>▶ Dedicated secure website</li> <li>▶ Accreditation for bunker suppliers</li> <li>▶ insurance providers for ships</li> </ul>

	► service stations for fire-fighting equipment and life-saving equipment like life raft service station
<b>ISPS audit</b>	All ports that come under the purview of DG Shipping need to adhere to the ISPS code. Each ISPS compliant port has its own security plan that has been approved by MMDs.
<b>Ship Related Processes</b>	<b>Description</b>
<b>Ship Registration</b>	For a ship to be recognized as an Indian flag vessel, it has to be registered in India. Provisional certificate of registry, Technical clearance, Amendments to registry, registry Anew, Issuance of certificates from MMD, Generations of certificates by RO, Transfer of port of registry, Registration and discharge of mortgage, Change of command, NOC from SMO, SWFS and SPFO, closure of registry are related activities for a Ship registration.
<b>Ship Registration: Technical Clearance</b>	► Technical clearance is required for trading of vessel that is more than 25 years old to ensure that it is not harmful to the environment and is structurally sound.
Ship Registration: Name Allocation, MMSI, Call Sign, Official number, Carving & Marking Note	<p>► Each ship is assigned a name, an MMSI number (relating to radio equipment), Call Sign and Official Number.</p> <p>► All the aforementioned items are issued together at once. Once a ship has a name, its Name, Port of Registry and Official Number must be carved and marked on various locations of the ship's body</p> <p>► The specifications and fashion in which this carving and marking is done is based on the carving and marking note issued by the PO</p>
Ship Registration: Amendments to Registry (including change of ownership)	► There are certain fields in the ship's profile which can be edited without prior approval from DGS authorities. However, a few amendments require approval of DGS authorities
Ship Registration: Declaration of Ownership	► The ship owner needs to sign a declaration stating that he is, in fact, the owner of the ship. This is a requirement of the MS Act.
Ship Registration: Issuance of Certificates by MMD/ the directorate and RO (including survey)	<p>► Certificates are of 2 types: the statutory certificates are issued by MMD, while the class certificates are issued by the classification societies.</p> <p>► All certificates are issued through DGS' website</p>
Ship Registration: Certificate of Registry (including mechanised sailing vessel)	<p>► For a ship to be recognized as an Indian flag vessel, it has to be registered in India.</p> <p>► A ship can be bought at a foreign port/yard or at an Indian port/yard. If the ship is bought outside India, a provisional certificate of registry is issued to the ship by Recognized Organizations so that the ship can travel to India. This is valid for 6 months.</p> <p>► A provisional certificate of registry is issued when the ship is not currently at the intended port of permanent registration or if</p>

	the DGS authority finds that not all the documents of the ship are fulfilling the requirements.
Ship Registration: Registration and Discharge of Mortgage	A mortgage of a vessel will have to be registered as soon as the vessel has been registered (even for provisional registration). It is essential to inform the Directorate about <ul style="list-style-type: none"> <li>▶ The mortgage</li> <li>▶ The mortgagee (s)</li> <li>▶ Transfer of mortgage</li> <li>▶ Discharge of mortgage</li> </ul>
Ship Registration: Closure of Registry and Issuance of Deletion Certificate	An owner applies for closure of registry of his ship under the following circumstances: <ol style="list-style-type: none"> <li>1. Ship is being registered under a foreign flag</li> <li>2. Ship is being scrapped</li> <li>3. Ship is being converted into an Inland Vessel. (Exception: Vessels that are intended to be used as river-sea vessels)</li> </ol>
<b>Registry Anew</b>	Registry anew is opted when the vessel is rebuilt with material changes affecting the main dimensions such as length / type of ship etc. The old registry would be closed and the vessel would be registered as a new vessel once again. Mortgages, if any, would be carried over to the new registry. Tonnages for the ship have to be re-verified. The PO issues a new CM note with approved tonnages, following which a survey is done and new set of certificates are issued.
<b>Transfer of port of registry</b>	A shipping company has the option to transfer the registry of a ship from one port to another port. A fresh carving and marking note is issued by the registrar of the new port of registry. Post verification of the carving and marking, a fresh certificate of registry is issued to the vessel.
<b>Change of command</b>	When the master having command of registered ship is changed, the owner/ shipping company gives notice of the change to the registrar usually at the port of registry produce to him the certificate of registry for endorsing the change. The endorsement shall specify the name of the new master, the date when the change was made and the number of the certificate of competency or service of new master. System shall have provision for penalty, if the change of command is not notified and processed within the stipulated timeframe. Penalty may be levied if change of command is not informed within stipulated time
<b>NOC from SMO, SWFS and SFPO prior to closure of registry</b>	Prior to closure of registry of a ship, the shipping company needs a No-Objection Certificate from the Shipping Master, the Seafarer's Welfare Fund Society, and the Seamen's Provident Fund Commissioner. This is done to ensure the shipping company does not have any pending payments to be made to the ship's seafarers.
<b>Plan Approval</b>	A ship's architectural plans are approved by either the Directorate or an RO as per to the ISM code. Nearly all cargo ship plans are delegated to be approved by ROs., routed through the DGS portal



	However, all exception cases are handled by the Directorate. All passenger ship plans are approved by the Directorate. The shipping companies and ROs will upload plans.
<b>Exemptions, Dispensations and Extensions</b>	<p>This is one of the sub-processes related to ships. Exemptions might be required when a vessel that has been constructed or is being constructed does not adhere to rules and requirements as mandated by the MS Act or those mandated by international conventions such as SOLAS or MARPOL.</p> <p>All exemptions are handled by the Directorate. Exemptions have been classified into Maritime safety &amp; security, Environment pollution prevention, Licensing, Education &amp; training of seafarers.</p> <p>► All exemptions are granted only by DGS authorities</p>
<b>Tonnage Measurement Certificate</b>	<p>Every ship registered or to be registered in India of the following description, shall be required to avail Tonnage Measurement Certificate: -</p> <ul style="list-style-type: none"> <li>► New ship</li> <li>► Existing ships, which undergo alterations, or modifications, which the Chief Ship Surveyor deems to be of a substantial variation in their existing gross tonnage</li> <li>► Existing ships if the owner thereof so requires in writing</li> <li>► All other existing ships with effect from the 18th July, 199</li> </ul>
<b>FSI/ PSC inspection</b>	<ul style="list-style-type: none"> <li>► As the title suggests, inspections are of 2 types – flag state and port state</li> <li>► These inspections can be done on a surprise basis as well as on request from the ship owner.</li> <li>► In India, port state control inspections are those inspections that are carried out by Indian surveyors when a foreign flag vessel is docked at an Indian port.</li> <li>► Flag state inspections are carried out by Indian surveyors when an Indian flag vessel is docked at an Indian port. Surveyors from DGS are appointed by respective Principal Officers.</li> <li>► PSC reports are uploaded onto IOMOU's official website, while FSI reports are uploaded onto the FSICS website</li> </ul> <p><u>Note:</u> FSI inspections are a requirements regardless of whether or not a PSC inspection is done or not</p>
<b>ISM Audits and DSM Code Audits</b>	<p>The ISM code was created by IMO to ensure safety of life at sea, To prevent human injury or loss of life, To avoid damage to the environment and to the ship. The ISM code is implemented by DGS in India by performing DOC SMC and DDOC audits. The Directorate has a dedicated ISM cell that issues DOCs SMCs and DDOCs. ► Companies must first apply for an interim DOC which is valid for 12 months. Within these 12 months, they must obtain a ship and apply for its interim SMC, which is valid for 6 months. They must run the ship for a minimum of 3 months</p>

	<p>before they can apply for the full term DOC certificate and full term SMC certificate. An intermediate audit is done by DGS for SMC between 2nd and 3rd year after issuance of initial certificate.</p> <ul style="list-style-type: none"> <li>▶ The ISM Code requires companies to develop, implement and maintain a safety management system (SMS) which includes functional requirements in the ISM Code</li> <li>▶ The DOC is specific to the ship type(s) operated by the Company and for which the SMS is implemented at the time of the audit</li> <li>▶ A DOC is issued to those companies which are found to comply with the ISM code</li> <li>▶ Subsequent to a successful audit, an SMC will be issued to each individual ship provided that the company holds a valid</li> </ul>
<b>Annual Inspection – MSVs</b>	<p>RO (sails) are allied offices of DG Shipping. They assist sailing vessel owners in organizing themselves for better securing of cargo. Apart from looking at welfare and amenities of seafarers under sailing vessels industry, RO (sails) is also responsible to conduct annual inspection of mechanized sailing vessels (MSVs)</p>
<b>Charter Permissions &amp; Licenses</b>	<p>To traverse Indian waters, a ship requires permission from the Indian government. For ships owned by Indian entities and registered in India, a one-time 'General Trading License' is issued, usually as soon as registration is completed. A chartered foreign flag ship is not allowed to sail in Indian waters without a permission.</p> <ul style="list-style-type: none"> <li>▶ Charter permissions and licenses are given when an Indian entity charters a foreign ship to facilitate trading from one port to another within India, from India, to India</li> <li>▶ A chartered foreign flag ship is not allowed to sail in Indian waters without a permission. This includes even near coastal vessels</li> </ul>
<b>Charter permissions for foreign flag vessels</b>	<p>Shipping entities chartering foreign vessels for coastal trade require Charter Permission from DG Shipping. Indian flag vessels do not require such permission. Entities are first required to check the availability of Indian flag vessel for voyage. In case Indian vessel is not available with desired specifications, permission is granted for foreign vessel charter. Previously the availability of Indian vessel was routed through INSA (Indian National Ship Owner's Association) – a private entity with Indian ship owners as members. After that it was routed via NIC portal with link available on DG Shipping website. In the new module, the entire process of checking availability of Indian vessel as</p>

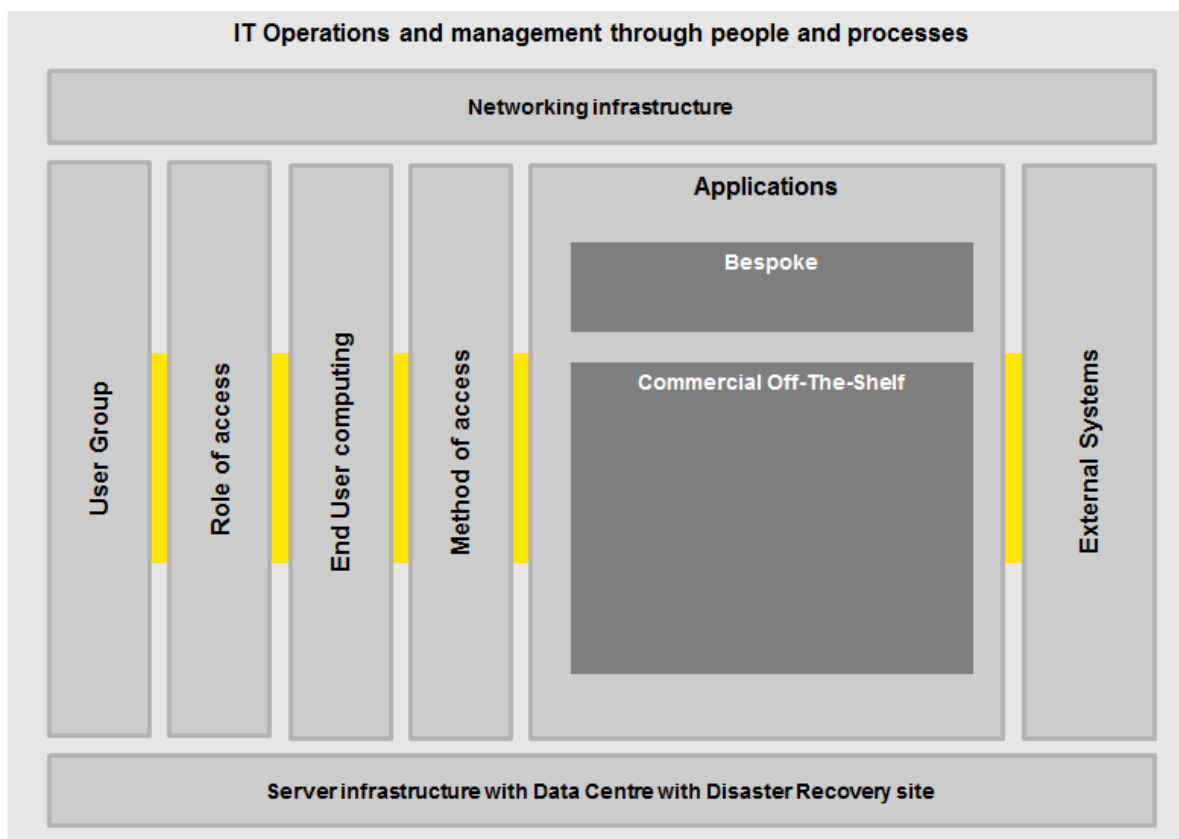


	well as issuance of charter permission will be routed through DG Shipping portal
Reporting of Piracy or Hijacking Incident	Description: Following any unfortunate event or suspicious activity, like piracy or hijacking, it is required to report such activity to DG Shipping.
Report Mishap	In case of any mishap of Indian national on foreign waters, such as death, permanent injury, accident or missing of Seafarer, RPS Cell/Shipping Company informs the Directorate. Two types of mishaps can be reported <ul style="list-style-type: none"> <li>► Foreign waters-Indian National</li> <li>► Indian waters – Indian National</li> </ul>
Report Dissertation	After signing off from the ship, seafarer boards the flight back to his home. At the arrival airport, agents of shipping company receive the Seafarers. In case a Seafarer does not show up at the arrival airport, the Shipping Company or RPS Cell informs the Directorate about the Dissertation.
Inspection of Vessels for petroleum license	<ul style="list-style-type: none"> <li>► The shipping entity can request for inspection for petroleum license online and can receive physical copy as well</li> <li>► The process will automatically assign surveyor for inspection through PO at DG Shipping</li> </ul>
Tonnage Taxation	Maritime training trust has been set up by government headed by a Chief Executive Officer and is responsible to provide facilities for training and employment and encourage Indians to opt for seafaring as career. Tonnage Taxation regime has been linked to mandatory training for Indian seafarers and MTT have been appointed to administer it. The Tonnage Taxation opted companies have to adhere to a three-pronged scheme under which they give an annual plan as basic training commitment. The sub-processes covered in the main Tonnage Taxation are as following: <ul style="list-style-type: none"> <li>► Application for Tonnage taxation certificate by shipping company in beginning of the year</li> <li>► Payment of fees (Tonnage taxation)</li> <li>► Annual Return- Tonnage taxation</li> </ul>
PF, Gratuity and Annual Fee Payment	Shipping Companies are liable to pay the PF amount on behalf of the seafarers placed with them. This process is housed with SPFO. This will be done by accessing the shipping company profile and availing the above mentioned service. The system will redirect the applicant to an electronic payment gateway through which the shipping company can pay the amount due. Shipping Companies are liable to pay the gratuity amount on behalf of the seafarers placed with them (as per the NMB agreement). This process is housed with SWFS. This will be done by accessing the shipping company profile and availing the above mentioned service. The system will redirect the applicant

	<p>to an electronic payment gateway through which the shipping company can pay the amount due.</p> <p>Shipping Companies are liable to pay a fee which is calculated on the basis of all the seafarers they have signed on and signed off (AOA) in that year. This will be done by accessing the shipping company profile and availing the above mentioned service. The system will redirect the applicant to an electronic payment gateway through which the shipping company can pay the amount due.</p>
Articles of agreement	<p>Article of Agreement is a contract between the ship-owner and a crew member (seafarer) regarding stipulations of a voyage, signed prior to and upon termination of a voyage and is applicable only for Indian flagships. The shipping company is responsible for completing this process. The process is housed at SMO. The AOA once filled is automatically submitted and notified to the respective seafarer. Only after this has been verified by the seafarer, does the sign on process successfully end and the sign on data gets integrated with the seafarer and shipping company database.</p>
<b>Recognised Organization related process</b>	<b>Description</b>
Creation of RO profile	<p>Once the DGS authorises an RO by signing a contract/agreement with them, the RO or DGS can create a profile for the RO by entering the relevant details.</p> <p>Once the profile is created, the RO can access the same using user ID and temporary password. This profile will allow the RO to perform their various authorised activities and for DGS to keep track of the same.</p>
Generation of certificates by RO from portal	<p>The concerned stakeholder will apply to the certificates that are authorised by the Directorate to be issued by RO on its behalf, through the medium and modalities as specified by the RO.</p> <p>Once the RO has reviewed documents and performed survey wherever necessary, the RO will update ship's metadata on the Directorate's portal. After updating the metadata, the system will auto-generate the certificate with the name of the RO as the issuing authority.</p>
Audit of RO	<p>Each Authorised RO is expected to mandatorily undergo an annual audit by DGS officials.</p>
Renewal of RO profile	<p>Once the contract with an Authorised RO expires, DGS may renew the contract. Accordingly, the profile of the Authorised RO will be renewed.</p>

Internal Processes	Description
<b>Vigilance</b>	Vigilance department looks after all the vigilance related matters of the Directorate. Complaint processing, Annual Property Returns, Issuance of VCC are the processes undertaken by Vigilance department. Apart from these process, Vigilance department also annually conducts the awareness week as instructed by the Ministry.
Vigilance: Complaint processing	Complaints made by various stakeholders are received by the Vigilance Department either through post or via e-mail. They are processed by officials of DGS and CVO.
Vigilance: Annual property returns	Annual Property Return is managed for all group A and B officers by the Vigilance Department.
Vigilance: Issuance of VCC	Vigilance Clearance Certificate (VCC) is provided by the vigilance department to the personnel branch when an employee goes for foreign training or gets a promotion or retires.
Inspections	Inspections are of 2 types – flag state and port state. These inspections can be done on a surprise basis as well as on request from the ship owner. In India, port state control inspections are those inspections that are carried out by Indian surveyors when a foreign flag vessel is docked at an Indian port. Flag state inspections are carried out by Indian surveyors when an Indian flag vessel is docked at an Indian port. Surveyors from the Directorate are appointed by respective Principal Officers.

## 2.2 Core components in the solution



The above schematic depicts a high-level architecture of components envisaged under this project. Each component within the architecture has been explained below:

### 2.2.1 User group

This component refers to the various types of users that are expected to access the system. These have been further classified as:

- A. Employees: These are DGS employees / contracted employees or staff which will be considered as internal staff working for DGS as far as system is concerned.
- B. Customers: Customers: These are end users who will avail services from DGS. These include Shipping and Seafarers. Customers may or may not be required to pay for the services they receive
- C. Government agencies: It is expected that the system will be access via various government agencies as a part of regulatory compliance or otherwise.

### 2.2.2 Role of access

This component refers to the type of access that will be applicable to the different types of users. Roles of access talks about the privileges that the various users within groups may have within the system. These would include:

- A. External Users: These are all entities external to DGS. This role will be further divided on the type of interaction required by the external users. For customers, depending

on the type of registration, services offered will be different, access to reports, etc. will change. For government agencies, type of reports will differ. For suppliers, access roles types will change. Some partners may fall under this role category. System will provide for role based access for each user group and this role may be further divided in the specific user group as per business requirement. Overall access control needs to be highly configurable feature of the system

- B. Customer Service Centre: This refers to a central customer service centre which will be manned by DGS officials. This will be front office for DGS operations. It is expected that users interact with DGS over internal through portal however for certain category of users who are not net savvy, option of interaction through customer service centre will be available.
- C. Sub-Customer Service Centre: this refers to any touch point which will be spread across DGS estate for cash collection, enrolment of visitors to DGS premises or any other ancillary functions. It will be manned by DGS staff.
- D. Call Centre: In addition to having a customer service centre a dedicated toll free number for resolving grievances of customer and helping them operate on DGS website will be setup. This call centre will be manned by DGS staff.
- E. Employee Service Centre: This is an internal service centre which will be setup for DGS employees who do not have a computer to access personnel and administration services
- F. Dispatch Centre: This will be a department wise single checkpoint for physical correspondences
- G. Service Desk Support: This will be a logical group formed within DGS consisting of service providing departments to manage services/tasks/activities required to be accomplished for internal consumption. Groups will be formed within each DGS department to resolve service requests raised, TAT for completion will be monitored and pendency will be tracked. It is expected that bidder will be one of the entities resolving requests related to grievances raised by DGS during the course of the contract.
- H. Operational Support Group: This will be central team within DGS which will assist core operations group in carrying out the task. It will provide necessary support for verification of documents, help in billing, track recovery of payments, and other administration related work required as a part of operations.
- I. Core Operations Group: This is the core operations team which carries out task for shipping/seafarers
- J. Approving Authority: Authorities which will approve actions to be taken, carry out planning, assignment, etc. It is expected that approving authority may be part of operation support group or core operations group, but will have different roles in different workflows.
- K. Establishment & Administration: This will be department-wise team which supports and administers personnel and administration activities within DGS.

### 2.2.3 End user computing

DGS is responsible to provide end user computing devices. This component refers to the end point devices which are expected to interact with the system. These will include:

- A. Computers / laptops / thin clients: refers to all PCs, laptops being used by internal or external users interacting with the system
- B. Handheld devices: refers to handheld devices which are envisaged as a part of the solution, which will be used by operators for access data and providing inputs to the system in case of shipping and seafarer operations
- C. Mobile computing: system is expected to interact with multiple mobile computing devices such as cell phones, tablets, etc.
- D. Printers and scanners

#### 2.2.4 Method of access

This component refers to the various channels of access to DGS system. These will include:

- A. External portal: access channel for external users, all interactions will be made available through this portal
- B. Internal portal: access channel for internal users, interactions related to shipping and seafarer operations will be carried out through this portal. Also, access to all internal systems for HR, Administration etc. will be provided through one portal. Single-sign on facility will be available to eliminate requirement of logging on to different systems
- C. E-Tendering portal: Users will be interacting with central government e-Tendering portal.
- D. SMS and Emails will be another channel for access

#### 2.2.5 Applications

This component refers to all applications, Modules, system software, supporting components and subcomponents of e-Governance modules etc. which will be a part of the solution. These can be broadly classified as application / software with following capabilities:

##### 2.2.5.1 Capabilities

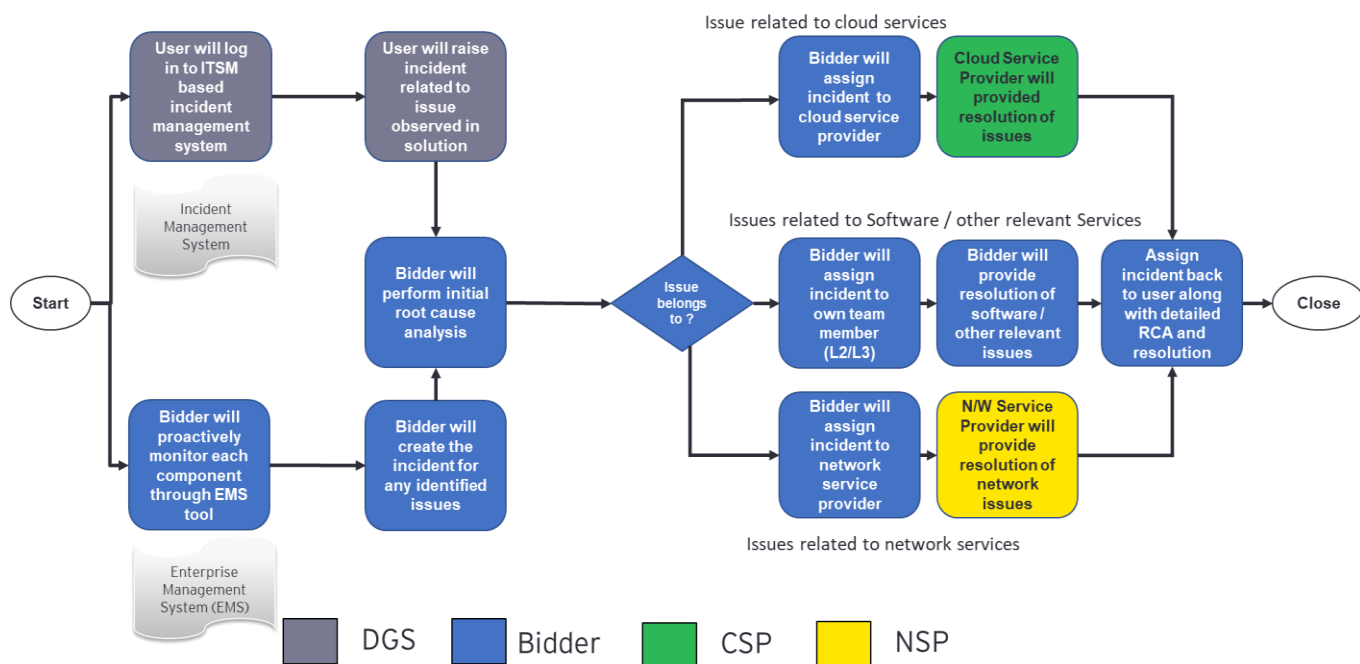
##### **A. Incident management and Enterprise Management system**

It is the responsibility of bidder to develop and configure Incident Management System and Enterprise Management System as per requirement of RFP. The incident management module should have provision to log any incident during operations like accident, emergency situation, security/ safety issue and breakdown. The incident categories should be well-defined and subsequent workflow should be mapped in the system. Enterprise Management system should be configured in such a way that entire e-Governance solution will be monitored from single application with automated alerting and notifications. Email & SMS services should embed for notifications for stakeholders.

- Bidder to configure Enterprise Management System for entire e-Gov solution.
- Bidder to configure incident management system as per requirement of RFP, such that service levels can be monitored correctly.

- Bidder is responsible for proactive monitoring of entire e-Gov solution 24X7 during the contract period.
- Bidder will be responsible for any configuration of incident management system and Enterprise Management System.
- Bidder to maintain all users for incident management system and enterprise management system.
- Bidder to configure email & SMS interfaces to notify respective stakeholders for assigning / updates of incidents. All configuration related to notification should be approved by DGS.
- Bidder to develop monitoring dashboard for all important services across the solution.
- Bidder to develop dashboards for summary of tickets raised, resolved and pending for actions. This dashboard will be self-explanatory to provide status of incidents & service requests raised by users.
- Bidder to create different groups, roles and access for different stakeholders within the ecosystem (including DGS, cloud service provider, network provider, etc.).
- End user from DGS will raise all issues related to e-Governance solution on incident management system.
- While monitoring EMS system, bidder should identify early issues in solution (i.e. issues related to cloud services, network services or application related) and raise with respective teams.
- Bidder will be primary support (L1 support) for all incidents raised on incident management tool and for all issues related to solution.
- Bidder will analyse each and every incident / service request raised on incident management tool and alerts generated at EMS tool.
- After analysing each request bidder to decide on ownership of issues and route incident / service request to respective teams / groups.
- Bidder will assign each ticket to respective team, if not belongs to scope of bidder.
- It is responsibility of bidder to follow-up and co-ordinate with different stakeholders to resolve each and every issue within defined timelines.
- Bidder will periodically review newly raised incidents in common pool and assign it to respective teams for further actions.
- Following is indicative flow of incidents / service requests.





## B. Alerts and notifications

There would be provision to send SMS / E-mail alerts to the users and authorized signatories as configured in the system. These alerts would be generated at various stages and hence would interact with all the modules of the core software. Alerts such as application status change, payment received, validity, due date, etc. would be sent by SMS / E-mail to users.

## C. General Application and Portal Requirements

- Should have the ability to have multilingual portal with regional & localization and Unicode support.
- Should support multiple browsers like IE, Mozilla, Google Chrome, etc.
- Should support virtualization
- Should support customization of Look and feel of the portal
- Should support a broad range of standards, for example: DOM 1.0, HTML 5, HTTP, HTTPS, MathML, ODBC, ODF (IS26300), Open XML (IS29500), OpenSearch, OpenType, PDF 1.7, PDF/A, RTF, RSS, ATOM, SOAP, SVG, REST, UDDI, Unicode, URI/URN, W3C XML Schema, WCAG 2.0, WebDAV, WSDL, WSRP, XHTML, XML, XML Web Services, XMLDsig, XPATH, XPS, XSLT, XBRL
- Should be able to connect to mobile devices.
- Should support presence information on the portal. It means Portal should have a visual indicator to show who is logged into portal.
- Should integrate with any other portal products through open standards such as HTML, XML, XBRL, RSS, web services, and WSRP.
- Should provide Cross Platform, Zero Footprint Client Access
- Role Based Access (Admin, General User, Power User, Backup User etc.)
- Should support encryption and compression features



- Should support multiple roles (e.g. editor, facilitator, community manager, and moderator) with associated access controls.
- Should support upload, store, organize and share documents
- Should support Template builder for reusing successful activity/project/team/community spaces or for building new ones - for developers/administrators (The functionality is expected to support generic Web Page-Template creation for the portal.).
- System needs to provide functions like community building, activities, ad-hoc document sharing, etc.
- Should support web traffic reports for administrators and community managers
- Should be XHTML 1.0/WCAG 2.0 A COMPLIANT?
- Should be authoring capabilities
- Should have workflow capabilities with regard to the content approval/publishing process
- Should support Publishing content in web viewable formats
- Should provide multi-channel output capabilities
- Should support editions (versions/rollback) of the web site managed
- Users should be able to upload documents in multiple formats
- Users should be able to upload multiple files at the same time
- Should support end-user control of access restrictions to shared repositories
- Should support check in/check out capabilities
- Should support version Control Capabilities (the number of major versions supported, minor versions, and branching)
- Should support document linking capabilities (static, dynamic, and/or other)
- Should supports the import of content into the repository
- Should support document and text indexing capabilities
- Should support an offline capability
- Should be able to store images in the repository
- Should support features for caching and prefetching of images
- Should be able to support to store and manage documents in the same repository
- Should Support Managed Metadata
- Should support Records Management
- Should support content archiving capabilities
- Should Support Digital Asset Management
- Availability of document metadata when offline
- E-Forms should support standards based W3C's XML DSIG digital signatures.
- Should support creation of ad hoc query by users
- User should be able to roll up and drill down the ad hoc query results
- Should support drill through reporting
- Should provide DHTML, Excel, PDF, MHTML, CVS, XML, XBRL, Null, and Image rendering extensions

#### **D. Mobile Application / Integration with Mobile Devices**

- i. Certain functions of the portal application will be available through an App-version of the Portal for Android and iOS devices. SMS - The SMS service will

be used to send alerts and reminders. It is proposed that from the day of Go-Live, the new application should be available as Mobile applications / Handheld devices to make the system widely reachable and accessible, especially from remote locations where connectivity is an issue, or from locations where the PC penetration is limited impacting the application accessibility.

- ii. The Mobile app will provide access to features such as decided by DGS. In addition to External users, the Mobile application will be accessed by internal users.
- iii. Please Note: The SI needs to develop the necessary app/interface as per directions and requirements of the DGS. SI has to select the proper architecture / platform for application. The selected application architecture / platform will support all Smart phone platforms. DGS is looking forward for Mini App Store from where DGS staff & end users can easily download the apps.

#### **E. Workflow management**

Workflow management module shall enable the workflows for various business processes. This shall include process tasks and routing. Workflow shall allow configuring various users such as officers from various locations of DGS, seafarers, other users, different roles etc. into the business processes for various kinds of approvals / rejections.

#### **2.2.5.2 Key operational and performance dashboards**

These dashboards would be linked with appropriate detail reports to do further analysis on the below mentioned indicative KPIs. There would be certain number of canned reports for the timely consumption by various DGS officials. The report should be presented in appropriate graphs, charts, tables etc.

In addition to above, standard canned reports will be required by various departments within DGS. The system should also provide capability to carry out ad hoc queries. This would enable DGS users with the capability to query and create customized analysis according to user requirement. The system should provide the flexibility to share this analysis with other users.

Indicative KPIs for dashboards:

Below KPIs should be showcased on dashboards as well as documented and maintained through MIS reports.

<b>Seafarer Processes</b>	<b>KPI</b>
Seafarer profile	No. of Indian seafarers registered
	No. of foreign seafarers registered
	Average time taken for profile creation

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

Application / Renewal / Replacement / Duplication / discontinuation of CDC	No. of applications received / rejected / approved / pending, sorted by day, date, week, month, quarter as well as relevant metadata like birth state, nationality, age, gender etc.
	Average time for overall process
Application / Renewal / Replacement / Duplication / discontinuation of CoC as Cook	No. of applications received / rejected / approved / pending, sorted by day, date, week, month, quarter as well as relevant metadata like birth state, nationality, age, gender etc.
	Average time for overall process
Examinations	No. of applications received / rejected / approved / pending
	Average time for eligibility verification
	No. of applications received for review of results
Certificate of Competency and other certifications	No. of certificates issued
Seamen's Provident Fund	No. of PF accounts opened
	No. of interim and final withdrawals requested
Seamen's Welfare Fund	No. of gratuity withdrawals sorted by day, date, week, month, quarter

Shipping processes	entity	KPI
Profile for shipping entities		Percentage of existing profiles verified for Shipping Company / Co-operatives (for all vessels including sailing vessels), Individual / Joint Holders (for all vessels including sailing vessels), Foreign flag shipping Entities applying for Chartering Permissions and Licenses, Recognised Organisations (RO), Indian Shipyards, Ports, MTO, Service Providers, etc.
		New profiles created as percentage of applications received for new ship, existing ship, foreign ship, Indian ship

Approval of plans	No. of plans approved by RO for cargo ships
	No. of plans approved by DGS for passenger ships
	Percentage of plans approved for passenger ships and cargo ships
	No. of plans verified / reviewed by IRS
Tonnage measurement	Average gross tonnage
	Average net tonnage
	No. of International Tonnage Certificates issued
	No. of Indian Tonnage Certificates issued
	Percentage of applications processed for tonnage certificate
Ship Registration	No. of applications processed for new ship and 2 <sup>nd</sup> hand ship
	No. / percentage of ships availing carving and marking notes
	No. / percentage of ships requesting for certificate of survey
	Percentage of ships requiring technical clearance
	Percentage of ships receiving technical clearance
	Percentage of ships under various categories – bulk carrier, passenger, foreign going, coastal operating, river, etc
	Ship-wise and Port-wise Deadweight, Lightweight, Displacement, Summer draught and other dimensions
	No. of applications received and processed for COR / PCOR
	No. of applications received and sorted for Amendment of registry sorted by change of ownership, name of vessel, name / address of owner, command.
	Type and number of statutory certificates issued by MMD / DGS and RO

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

	No. of different type of ships availing statutory certificates – passenger vessel, RO-RO passenger vessel, oil tanker, cargo high speed craft, etc.
	Percentage of ships with mortgage
Registry anew	No. of applications received / sorted for registry anew
	No. / percentage of ships undergoing material changes
NOC from SMO, SWFS and SPFO	No. of NOCs cleared from SMO, SWFS and SFPO
	No. of applications received and processed for closure of registry
Closure of registry	No. / percentage of ships transferred to foreign flag, scrapped/ sunk/ missing or converted to inland vessel
ISM and DSM audits	No. of ISM audits conducted
	No. and type of ISM certifications issued
FSI and PSC inspections	No. of FSI and PSC inspections undertaken
Charter permissions and licenses	No. of charter permissions issued for various categories
	No. of foreign flag vessels used by entities for voyage
	Percentage of foreign flag vessels and Indian flag vessels used for voyage by shipping entities.
	No. of charter permissions received and granted for foreign flag vessels
Exemptions, Dispensations, and Extensions	No. of exemptions sought and granted for each of the following: - <ul style="list-style-type: none"> <li>• Maritime safety &amp; security</li> <li>• Environment pollution prevention</li> <li>• Licensing</li> <li>• Education &amp; training of seafarers</li> </ul>
	Percentage of temporary and permanent exemptions granted

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

Annual inspection of MSVs	Percentage of annual inspections conducted for MSVs
Reporting of Piracy or Hijacking Incident or Mishap	No. and frequency of piracy/ hijacking incidents reported
	Break up of these incidents reported in terms of – Foreign waters/ Indian waters, type of incident, etc.
	No. and frequency of dissertation incidents recorded
Tonnage taxation	No. of seafarers receiving tonnage taxation training
PF, Gratuity & Annual Fee Payment	No. of seafarers employed with shipping companies
	No. of seafarers receiving the PF contribution and welfare fund contribution
AoA	No. of seafarers on voyage
	Average rate of seafarers on voyage
	Average duration of voyage

RPS	KPI
RPS related services	No. of manning agencies involved in recruitment and placement of seafarers
	Payment of PF contribution to seafarers by RPS
	Payment of welfare contribution to seafarers by RPS
	No. of seafarers on voyage with foreign flag ships
	No. of seafarers signed for voyage by RPS

MTI	KPI
MTI related services	No. of MTIs registered
	No. of training courses offered by each MTI for different batches

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

	No. of seafarers enrolled/ trained by MTIs
	Percentage of seafarers passing the courses
	Percentage of seafarers placed/ employed

<b>Sailing seamen</b>	<b>vessel</b>	<b>KPI</b>
Sailing seamen services	vessel related	No. of sailing vessel seamen registered with RO
		No. of sailing vessel seamen sailed more than 5 years
		Percentage of sailing vessel seamen with tindal certificate who have sailed for more than 5 years
		No. of seamen currently on the sailing vessel

<b>Ports</b>	<b>KPI</b>
Ports services	No. of ports awarded NSPC clearance
	No. of days taken to avail the NSPC clearance
	No. of ISPS compliant ports
	Shore power supplied to the ships at the port for Indian vessels, foreign vessels, across various tonnages, etc.
	No. of ports inspected and compliant with waste handling requirements
	No. of berths added by the port and their frequency

<b>MTO</b>	<b>KPI</b>
MTO services	No. of MTOs registered with DGS

<b>Service providers</b>	<b>KPI</b>
Service providers related services	No. of service providers such as labs which conduct testing on cargo, service stations for FFA and LSA, entities for measuring verified gross mass, bunker suppliers, etc. registered and audited by DGS

<b>Examiner</b>	<b>KPI</b>
Examiner related services	No. of internal and external examiners fulfilling minimum eligibility
	No. of evaluations carried out by the examiner

<b>Auditor for ISM audits</b>	<b>KPI</b>
Auditor related services	No. of auditors registered with DGS
	No. of audits conducted by the auditor

<b>Medical practitioners</b>	<b>KPI</b>
Medical practitioners related services	No. of approved medical practitioners
	No. of medical certificates issued for sea service and eyesight

<b>Recognized Organization</b>	<b>KPI</b>
RO related services	No. of ROs registered with DGS
	No. and type of certificates issued by RO
	No. of ROs audited by DGS



#### 2.2.5.3 MIS

1. Internal Shipping and seafarer Operations Reports
  - A. Department-wise, function-wise report on
    - i. Status of service requests received from external customers, and internal users.
    - ii. List of activities carried out towards that service fulfilment
  - B. Financial reports (should support XBRL)

#### 2.2.5.4 Analytics and Forecasting

As maturity of users on reporting platform increases, DGS is interested in using statistical analysis to derive deeper insights into the data. For the effective monitoring and expenditure planning, it is imperative to forecast the revenue collection / expenditure taking into account historic trends across locations/functions/cargo at micro level. Solution is expected to help DGS to:

- A. Baseline revenue forecast & conduct sensitivity analysis
- B. Forecasting the revenue across various dimensions such as operational area, storage, open space, assets, investments, other financial instruments, etc.
- C. Revenue estimates of proposed changes to policies, distributional and incidence analysis
- D. Forecasting aided by causal modelling like the impact of particular policy introduced within a year on DGS revenues
- E. Policy Implication Modelling – This will help department in analysing whether there are differential outcomes of applying any specific changes in DGS policies

#### 2.2.5.5 CMS solution

Content management system (CMS) is required to maintain the content on the web-portal. It should be possible to add content in form of Text, HTML, videos or Images on the port website. Along with the facility to easily publish content on the website, CMS would also have facility to maintain access logs for security and accountability purpose.

#### 2.2.5.6 Email solution

DGS users would be provided with provision for official mail to interact with each other at all the locations envisaged in the project or with external users. It is envisaged that mailing solution would be integrated with the application layer for exchange of information and it would be possible to move emails to Document Management System.

#### 2.2.5.7 SMS solution

The application shall utilize an SMS gateway to send SMS notifications such as confirmations to user upon pass application receipt or approval or rejection, reminder to

employer, user, etc. about submission of documents. SMS gateway will also be used to send notices / alerts / reminders etc. to internal DGS officers or other port users as and when required. SMS gateway will be developed by the bidder, however annual charges for the SMS would be taken care by DGS. Bidder to support DGS for the process.

#### **2.2.5.8 DSC**

PKI should be used for the purpose of integrity (digital signing) and confidentiality (encryption). The solution should support digital certificates issued in India and should accept digital certificates based on criteria (Issuer, Class, Policy Identifiers). Procurement of DSC will be done by DGS however installation and other technical implementation along with the maintenance will be done by SI.

#### **2.2.5.9 Backup and Archival**

Bidder should evolve a backup and archival strategy for Regular backups of project related data, on backup and restoration, Generation of monthly report on the backup/restoration performance, etc. The solution shall help carry out backup and archival as per DGS's policy.

#### **2.2.5.10 Identity Management**

System shall be able to identify and authorize the users and would allow access to the integrated applications and database. Identity and access management system would be able to identify the rights available with the user in terms of viewing, addition, deletion, modification of the data and generation of various reports through MIS.

#### **2.2.5.11 Configuration management**

Bidder shall manage identification of configuration items, responsibilities of configuration controller, access restrictions, directory structure needed for configuration management, procedure for change control, method of tracking the status of configuration items, backup procedure, configuration audits, release management, archival procedure, procedure for version / revision numbering

#### **2.2.5.12 SLA management system (Part of Enterprise Management System)**

The bidder should configure all service levels in Enterprise Management System, which contains customized reports as per the SLA requirements derived from the system modules and EMS. The bidder would be required to establish a dashboard customized as per the DGS's requirements facilitating real time monitoring of all the SLA monitoring parameters. Periodic SLA reports are also required to be generated by the bidder and submitted to DGS. Indicative SLA modules which are to be made available by the bidder for the DGS includes but is not limited to:

A. Quality of Service

- B. Audit observations and the action taken
- C. Training modules – Feedback, Number of sessions. Trainees
- D. Incidents report and Ticketing dashboard

#### 2.2.5.13 CAPTCHA

Considering a wide number of e-forms available in the system, the system should be capable to allow genuine human users to make requests by having CAPTCHA and similar functionalities at the time of taking inputs from users

#### 2.2.5.14 System Interfaces

- A. Applications interface: This refers to all interfaces which will have to be built with all the sub-components within the solutions as mentioned in the core and enabling capabilities. Single-sign on, identity management, task tracking, unique transaction number generation. End to end traceability of transactions across systems are certain expectations from application interface. It is expected that user will be accessing one portal always to interact with systems behind.
- B. External system interfaces: This refers to interfaces which will have to be built to interact with systems not directly part of this solution but are required for supporting operations. Detail of the systems is provided subsequently. The interfacing with certain may be manual however seamless integration with systems is expected. Bidder is expected to suggest suitable interfacing and get DGS's agreement on the type of interface for these systems.

#### 2.2.6 External Systems

This component provides details of various systems central system is expected to interact with. It is assumed that all systems under this assignment will have seamless integration. Interfaces for integration for these systems will have to be looked at by the bidder and integration with these systems as possible after mutual discussion with DGS will have to be arrived at. It is possible that this integration will take place over time and after system goes live. Given below is a minimum indicative list of interfaces which are expected to be designed / built into the proposed system. Bidder may add to the list at the time of requirements gathering phase.

Sr. No	Application Name	Integration (Tentative)
1	ePariksha	2 way
2	LRIT	1 way
3	eLearning	2 way

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

Sr. No	Application Name	Integration (Tentative)
4	Payment Gateway	2 way
5	Provident Fund	Web service based
6	Aadhar	2 way
7	SPFO	To be provided by DGS later
8	Facial Recognition	To be provided by DGS later
9	Exit Examination	To be provided by DGS later
10	Competency Examinations	To be provided by DGS later
11	E-Migrate	To be provided by DGS later
12	E-Bharat Kosh	To be provided by DGS later
13	Swachha Sagar	To be provided by DGS later
14	SBI / Banks (To be decided)	To be provided by DGS later
15	Ministry Dashboards (Sagar Unnati Dashboard, etc.)	To be provided by DGS later
16	Public Financial Management System (PFMS)	To be provided by DGS later
17	Shipbuilding Financial Assistance scheme (SBFA)	To be provided by DGS later
18	Seafarer Identity Document (SID / BSID)	To be provided by DGS later
18	<p>There will be provision to integrate with any external interfaces as required by DGS later.</p> <p>Ex:</p> <ul style="list-style-type: none"> <li>• e-Immigration,</li> <li>• Tab based examination</li> <li>• Video conferencing based oral examination</li> </ul>	To be provided by DGS later

There will be provision to integrate with any external interfaces (As required by DGS later)

### 2.2.7 Network Infrastructure

DGS will provide the network infrastructure components at different offices of DGS to access e-Governance Solution.

## 3 Acceptance and certification requirements

1. The primary goal of Acceptance Testing and Certification is to ensure that the Project (including all the project components as discussed in the scope of work) meets the requirements, standards, specifications and performance detailed in the RFP, by ensuring that the following are associated with clear, quantifiable metrics for accountability:
  - A. Functional and system requirements
  - B. Availability of the project services within the defined locations
  - C. Performance
  - D. Security
  - E. Manageability
  - F. System adoption
  - G. SLA Reporting System
  - H. Project Documentation (Requirements, design, development, configuration, training and administration manuals etc.)
  - I. Data Quality Review
2. As part of Acceptance testing, performed through a third party agency, DGS shall review all aspects of project development and implementation covering the solution including the processes relating to the design of solution architecture, design of systems and sub-systems, coding, testing, business process description, documentation, version control, change management, security, service oriented architecture, performance in relation to defined requirements, interoperability, scalability, availability and compliance with all the technical and functional requirements of the RFP and the agreement.
3. The procedures and parameters for testing will be laid down by the Third Party Agency after approval from DGS. The solution deployed by the vendor has to satisfy third party acceptance testing upon which the system shall provisionally go-live, subject to DGS approval.
4. DGS will establish appropriate processes for notifying the selected vendor of any shortcomings from defined requirements at the earliest instance after noticing the same so as to enable the selected vendor to take corrective action. All gaps identified shall be addressed by the vendor immediately prior to provisional “Go-live” of the solution. It is the responsibility of the bidder to take any corrective action required to remove all shortcomings, before the roll out of the project.
5. It is to be noted that the involvement of the third party for acceptance testing and certification, does not absolve the vendor of his bidder to meet all SLAs as laid out in this RFP document.
6. DGS may get the solution audited through a Third Party before provisional and final “Go-Live” and periodically thereafter in order to ensure the success of the project. Such third-party agency for carrying out the acceptance testing and certification of the entire solution will be nominated by DGS.

7. Following subsections discuss the acceptance criteria to be adopted for the project as mentioned above. The list below is indicative, and the activities will include but not be limited to the following:
8. The below described 'Two Committee governance structure' shall be setup at DGS for successful management of project.  
The two committees shall be as described below:

**Working Committee** - comprising of members from Management, operations, accounts, audit and e-Governance departments. Each deliverable will be approved by working group, after which it will be submitted to Steering committee for its approval.

**Steering Committee** – comprising of senior officials. Committee shall be headed by DG / Addl. DG.

Bidder is responsible for delivering all the Project Deliverables to DGS as defined. All the project deliverables shall be submitted to DGS for approval through Project Management Information system (PMIS) only. This system will be developed by the bidder as a part of system development.

#	Sequence of Activities	Medium	Actor
1	Deliverable acceptance	PMIS	
1.1	BIDDER shall upload the deliverables in the system for approval by respective authorities at DGS. And also send an email to designated email addresses along with the deliverable.  Soft copy (by e-mail) and ONE printed draft of all deliverables shall be submitted to SGS. Source code however need not be submitted in hard-copy		Bidder
1.2	DGS shall review the deliverables and either accept the deliverable or provide feedback on changes to be done in writing within a reasonable period of time  The BIDDER shall make the appropriate revisions and shall resubmit the updated final version to DGS for verification and feedback/acceptance  The BIDDER should strive to submit the deliverables in parts for getting continuous feedback on the deliverables. The BIDDER should also engage with DGS on a continuous basis through meetings (minimum of once every week, till 3 months after Go-live and fortnightly after this period) and periodic workshops to ensure that progress may be reviewed, and feedback provided from time-to-time.		Bidder / DGS

	Please note that the timelines indicated above are timelines for submission of final deliverables. BIDDER should plan to submit the draft versions of deliverables before the timelines indicated above to allow reasonable time for review and acceptance by the time indicated above.		
1.3	Based on a mutually agreed workflow enabled through PMIS, DGS user will approve the deliverables		DGS
2	Payment authorization	PMIS	
2.1	Only when the deliverables are approved within the PMIS, BIDDER shall raise payment request		BIDDER
2.2	DGS shall authorize the payment request within PMIS		DGS
2.3	Once the payment request is authorized, DGS shall release the payment and shall intimate the vendor		DGS
3	Status update of payment	PMIS	
3.1	Payment status within system will be updated once same is release		DGS

**i. Functional and Systems Requirements Review**

The solution developed/customized by the bidder shall be reviewed and verified by the agency against the Functional and System Requirements signed-off between the DGS and the bidder. All gaps identified shall be addressed by the bidder immediately prior to provisional “Go-live” of the solution. One of the key inputs for this testing shall be the traceability matrix to be developed by the bidder for the solution. Apart from Traceability Matrix, agency may develop its own testing plans for validation of compliance of system against the defined requirements. The acceptance testing w.r.t. the functional requirements shall be performed by the select internal department users (User Acceptance Testing) and the system has to satisfy internal user acceptance testing, upon which the system shall provisionally go-live.

For conducting the User Acceptance Testing, DGS shall identify the employees from respective divisions, who shall be responsible for day-to-day operations of the functions automated through the project. The system, during the functional requirements review, shall necessarily satisfy the user acceptance testing process.

**ii. Security Review**

The software developed/customized shall be audited by the third party agency from a security and controls perspective. Following are the broad activities to be performed by the Agency as part of Security Review. The security review shall subject the solution, but not be limited, to the following activities.

- Audit of Application security mechanisms

- Assessment of authentication mechanism provided in the application /components/modules
- Assessment of data encryption mechanisms implemented for the solution
- Assessment of data access privileges, retention periods and archival mechanisms
- Application security features incorporated etc.
- Application Security mechanisms should be in compliance with the IT Act 2000, 2008 Amendment and IT rules 2011 (and any other amendments thereto), such that it maintains data/information Integrity, Confidentiality, Non-repudiation etc.
- Audit of Security mechanisms so that they are in compliance with the latest Guidelines by Controller of Certifying authority (CCA), IT Act.

iii. **Performance**

Performance is another key requirement for the project and the agency shall review the performance of the deployed solution against certain key parameters defined in SLA. Such parameters include request-response time, work-flow processing time, concurrent sessions supported by the system etc

iv. **SLA Reporting System**

The Acceptance Testing and Certification agency shall verify the accuracy and completeness of the information captured by the SLA monitoring system implemented by the bidder and shall certify the same. SLAs shall be configured by the bidder to calculate the payment to be paid by DGS after deducting the necessary penalties.

v. **Project Documentation**

The Agency shall review the project documents developed by the DGS including requirements, design, source code, installation, training and administration manuals, version control etc.

Any issues/gaps identified by the Agency, in any of the above areas, shall be addressed by the bidder to the complete satisfaction of DGS.

vi. **Data Quality**

The Agency shall perform the Data Quality Assessment for the data migrated by the bidder to the new system. The errors/gaps identified during the Data Quality Assessment shall be addressed by the bidder before moving the data into production environment, which is a key milestone for provisional Go-live of the solution.



## **4 Detailed requirements and specifications**

### **4.1 Functional requirement specifications**

Refer to annexure\_consolidated

### **4.2 Technical requirements specifications**

Refer to annexure\_consolidated

### **4.3 Unpriced Bill of Material**

Refer to annexure\_consolidated

## 5 Annexures

### 5.1 DGS HQ and its allied offices list

Sr. No.	Various locations where DGS operates from
1.	D.G Shipping (HQ), Mumbai
2.	PO, MMD, Mumbai
3.	PO, MMD, Kolkata
4.	PO, MMD, Chennai
5.	PO, MMD, Kochi
6.	PO, MMD, Kandla
7.	SIC, MMD, Jamnagar
8.	SIC, MMD, Tuticorin
9.	SIC, MMD, Vizag.
10.	SIC, MMD, Mangalore
11.	SIC, MMD, Port Blair
12.	SIC, MMD, Haldia
13.	SIC, MMD, Paradeep
14.	SIC, MMD, Goa
15.	SIC, MMD, Noida
16.	SM, Mumbai
17.	SM, Kolkata
18.	SM, Chennai
19.	SEO, Mumbai
20.	SEO, Kolkata
21.	SEO, Chennai
22.	RO(S), Mumbai
23.	RO(S), Jamnagar
24.	RO(S), Tuticorin
25.	SPFO, Mumbai
26.	SWFS, Mumbai

## 5.2 Roles & Responsibilities of the Parties

Sr. No.	Roles and Responsibilities of	DGS	Bidder	Cloud Service Provider	Network Service Provider
1	Set up project governance throughout the contract period.		✓		
2	Form a steering & working committee for monitoring project progress and project deliverables review.	✓			
3	Prepare project plan using PMIS Solution.		✓		
4	Mobilization of resources as per requirements.		✓		
5	Provide adequate space at designated DGS location for setting up basic office infrastructure on FOC basis.	✓			
6	Perform AS IS Study, design workshops, TO BE design, Testing of solutions, rollout of solution, maintenance of solution.		✓		
7	Migration of existing Data and other relevant components.		✓		
8	Facilitate existing data migration within cloud infrastructure.			✓	
9	Finalize & prepare FRS, TRS, integration & interfaces requirements, Mobile APP design and requirements, High Level & Low Level design diagrams, Conference Room Pilots, API designing, external integrations, DB design.		✓		
10	e-Governance Solution Design, Development, Integration, and related activities.		✓		
11	Implementation of APIs and Gateway solutions (i.e. SMS, email, payment, etc.)		✓		

Sr. No.	Roles and Responsibilities of	DGS	Bidder	Cloud Service Provider	Network Service Provider
12	Coordination between all the DGS internal departments for providing necessary information for the study and development / customization of the necessary solution.	✓			
13	Procurement / development / configuration / integration of different software components & subcomponents as a single integrated e-Governance System.		✓		
14	Review and provide acceptance for submitted deliverables.	✓			
15	Provide Cloud Services (DC – DR), , IT Infrastructure, Networking Components, end user components.	✓			
16	Set up of Cloud Services for DC and DR systems as per requirements			✓	
17	Set up of Networking infrastructure and components as per requirements				✓
18	Deploy required software components in DGS cloud.		✓	✓	
19	Implement software security components as per requirement of RFP.		✓		
20	Periodic status updates to working and steering committee.		✓		
21	Coordinate within internal departments for conducting workshops with Bidder	✓			
22	Provide connectivity and LAN within DGS premises as per the requirement of the project				✓
23	Conduct UAT sessions and provide tools for testing such as integration testing, performance testing, VAPT testing, etc. as per scope.		✓		
24	Arrange end users for conducting UAT	✓			

Sr. No.	Roles and Responsibilities of	DGS	Bidder	Cloud Service Provider	Network Service Provider
25	Conduct A/B testing for Mobile Application		✓		
26	Documentation of all activities during the contract period.		✓		
27	Maintenance of software & related solution under scope.		✓		
28	ITIL based Incident Management System with SLA monitoring and Enterprise Management system– implementation, configuration and support		✓		
29	Monitoring and Maintenance of software application, security software components, integration & interfaces, API, database, any other implemented software / application.		✓		
30	Ensure the implementation is as per defined scope of work in RFP.	✓			
31	Configuration of Enterprise management and Incident Management systems for other stakeholders (e.g. DC DR vendors, Network infra. Vendors, etc.)		✓	✓	✓
32	Implementation of PMIS system and upload the deliverables in PMIS system as per RFP requirements.		✓		
33	Meet the defined SLAs for the performance of the system.		✓		
34	Monitoring of overall timelines, SLAs and calculation of penalties accordingly.	✓			
35	Monitoring the overall e-Governance Solution through Enterprise Management System. Maintenance of Software and related components / sub-components including mobile application releases.		✓		

Sr. No.	Roles and Responsibilities of	DGS	Bidder	Cloud Service Provider	Network Service Provider
36	Provide necessary support for the resolution of bugs, patches & upgrades of the software solution.		✓		
37	Provide necessary manpower for managing the Change Requests and overall operations.		✓		
38	Design various manuals like User manual, Trouble Shooting manual etc. for the system.		✓		
39	Provide requisite training and advanced training on application modules to the staff members and stakeholders of DGS.		✓		
40	Ensuring the staff members and other stakeholders attend the training programs as per the schedule defined by the bidder and agreed upon by DGS.	✓			
41	Maintain the business continuity with minimum / zero downtime		✓		
42	Maintenance of Cloud Services including resolution of issues.			✓	
43	Maintenance of network infrastructure services including resolution of issues.				✓
44	Management and quality control of all software and deployed security services		✓		
45	Generation of MIS reports as per the requirements of DGS.		✓		
46	Generation of the automated report for the monitoring of SLAs.		✓		
47	Obtaining relevant Certifications and adherence to respective Industry Standards as detailed in the RFP.		✓		

Sr. No.	Roles and Responsibilities of	DGS	Bidder	Cloud Service Provider	Network Service Provider
48	Any other services related to scope of project, that would be required for the successful execution of the project.		✓		
49	Adhere to e-Governance standards defined by Government of India.		✓		
50	Create internal capacity for execution of the project after takeover from the bidder.	✓			

### 5.3 Existing e-Governance solution at DGS:

1. The Existing e-governance solution is;
  - Monolithic
  - No Middleware
  - Load Balancer used for workload distribution

#### 2. Service Details

Data Centre (DC)

Approximately, size of available data is ~150 GB

Sr. No.	Server / Device Name (Host Name)	Service / Device Role	Server Type (Virtual / Physical)	Operating System	HDD in GB	No. of Processors	Processor Speed in GHz	Memory in GB
1.	DB Server 1	Database Server	Virtual	RHEL 5	800	12	2.40 GHz	64
2.	DB Server 2	Database Server	Physical Server	RHEL 5	600	12	2.40 GHz	16
3.	App server 01	Application Server	Virtual	RHEL 3	600	4	2.0 GHz	8
4	App server 02	Application Server	Virtual	RHEL 3	600	4	2.0 GHz	8
5	App server 03	Application Server	Virtual	RHEL 4	600	2	2.4 GHz	8
6	App server 04	Application Server	Virtual	RHEL 4	600	8	2.4 GHz	8
7	Backup Server	Backup Server	Virtual	RHEL 4	600	4	2.4 GHz	8
8	Reports Server	Reports Server	Virtual	Windows Server 2003	600	2	2.4 GHz	4
9	File Server	File Server	Virtual	--	8000	-	-	-
10	Face Recognition server 1	Application server	Virtual	--	100	4	-	8
11	Face Recognition server 2	Application server	Virtual	Centos 7.8	1000	16	2.5 GHz	32
12	E-certificate Server (temporary)	Application server	Virtual	Windows Server 2012 R2	1000	16	2.4 GHz	32



SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF  
DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

	deployment)							
13	Centralized Attendance Server 3	Application server	Virtual	Ubuntu 18	256	8	2.4 GHz	32
14	Face Recognition server 3	Application server	Virtual	Ubuntu 18	256	8	2.4 GHz	64

Disaster Recovery (DR)

Sr. No.	Server / Device Name (Host Name)	Service / Device Role	Server Type (Virtual / Physical)	Operating System	HDD in GB	No. of Processors	Processor Speed in GHz	Memory in GB
1.	Server for Infra & Forms	Application Server	Virtual	Windows Server 2012 R2	600	8	2.40 GHz	16
2.	Application Server	Application Server	Virtual	Windows Server 2012 R2 Standard	600	8	2.0 GHz	16
3.	Server for FTP & Reports	FTP & Reports	Virtual	RHEL 5	8500	4	2.40 GHz	8
4.	Database Server	Database Server	Virtual	RHEL 5	600	12	2.40 GHz	16
5	Face Recognition server 1	Not yet on DR	-	-	-	-	-	-
6	Face Recognition server 2	Not yet on DR	-	-	-	-	-	-
7	E-certificate Server	Not yet on DR	-	-	-	-	-	-
8	Centralized Attendance Server	Not yet on DR	-	-	-	-	-	-
9	Face Recognition server 3	Not yet on DR	-	-	-	-	-	-

### 3. Software Stake Details

Module Name	Programming Language with version	Application framework architecture details	Database version details	External integration (if any)	App Server details (with OS details)	DB server details (with OS details)
Internal Application (10.226.2.110 & 109)	PL / SQL	Oracle D2K , Oracle 9i	Oracle 11g version 11.2.0.1.0 & schema name=dgs		Red Hat Enterprise Linux AS release 3	Red Hat Enterprise Linux Server release 6.7
External Application (10.226.2.112 & 115)	JAVA 1.4	STRUTS 1.0	Oracle 11g version 11.2.0.1.0 & schema name=dgs		Red Hat Enterprise Linux AS release 4	Red Hat Enterprise Linux Server release 6.7
Reports (10.226.2.111)	Jasper	Oracle report 10g	Oracle 11g version 11.2.0.1.0 & schema name=dgs		Windows Server 2003(Enterprise Edition)	Red Hat Enterprise Linux Server release 6.7

### 4. Details of users

Module Name	Total No. of users
INDoS	461837 (Registered INDoS users )
Examination	50728 ( Seafarer who booked their seats for exam)
MTO	2072
Crew	224478 (Active Seafarers in 2020 )
Ship Registration	993
CDC	478748
Licensing & Chartering	569
Training	193
RPSL	665
Sailing vessel Identity card	3198
Medical Fitness (Doctors)	375
Liferaft Service Station	49
ePass – Seafarer & non seafarer	43995
Stranded Seafarer	10331
Crew Manifest	21266
MTI digital eCert Module	199898
Total Users	1499395

Note: Same user may use different applications.

- Anticipated Concurrent Users: Estimated 15000
- Total number of Employees using the application software (PAN INDIA) – 287
- Total number of concurrent employees(permanent/outsources/contract) will be using the application software at a time. – on an average 18 thousand concurrent users (not just employees)
- Size of DGS PAN India – 287 (No. of posts filled excluding MTS and SC Drivers)
- Type of documents to be uploaded on regular basis on server (Pdf/Video/audio/doc.) and frequency of uploading (Daily/weekly/monthly). – PDF and Word documents on a daily basis.
- Approximately, 5 Lakh 62 Thousand login IDs.

## 5. Monthly Transaction Details

### Transaction Count 2019

Transaction Type	Jan-19		Feb-19		Mar-19		Apr-19		May-19		Jun-19		Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19	
	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document
Cookery Certificate	165	983	186	1,131	187	1,083	141	874	174	1,048	161	1,011	182	1,132	162	1,008	182	1,095	132	776	169	1,072	170	1,094
Duplicate Cookery Certificate	51	184	48	180	36	128	28	104	32	116	29	112	32	124	23	88	19	76	20	76	23	88	22	88
Duplicate Of CDC	52	294	48	264	64	384	62	354	78	450	62	360	72	414	59	348	68	378	63	360	53	300	61	360
Renewal of CDC	586	2,240	578	2,228	608	2,336	695	2,624	709	2,748	644	2,516	764	2,984	689	2,688	768	2,981	759	2,908	805	3,144	833	3,276
Replacement of CDC	946	5,566	824	4,848	858	5,070	814	4,794	837	4,932	791	4,680	849	5,004	754	4,421	767	4,476	774	4,440	823	4,812	810	4,788
CDC New Application	6,275	43,540	6,501	45,276	6,343	44,163	6,245	43,442	6,177	42,959	4,754	33,082	4,940	34,456	4,658	32,552	4,451	31,139	4,909	34,365	5,072	35,454	4,718	32,902
MTO Registration	22	198	19	198	13	143	16	165	22	209	10	99	11	121	7	77	7	77	19	165	20	220	19	187
MTO Renewal	34	210	31	210	28	182	17	112	34	217	23	147	37	252	21	140	29	196	30	189	28	175	24	119
Change of Ship Owner Address	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	1	0	1	1	0	0
Change of Ship Name	1	0	2	0	0	0	6	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0
Change of Ownership of Ship	3	1	0	0	2	1	0	0	1	1	3	3	2	1	3	2	0	0	0	0	0	0	0	0
Change of Tonnage Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Closure of Registry	1	1	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	1	1	1	1	4	0
Creation of Mortgage	1	8	3	16	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	16	0	0
Change of Command	33	77	30	55	40	143	35	143	43	88	41	66	32	66	35	121	41	77	38	33	38	88	38	55
Non-Encumbrance Certificate	1	0	0	0	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Change of Command	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Non-Encumbrance Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Regn. OF Name, CS, ON, MMSI	11	24	7	22	7	22	12	20	14	44	7	32	3	14	5	24	11	64	5	20	7	26	12	12
Permanent Regn of Ship	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	2	1
Provisional Registry of ship	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regn. Rvld. OF Name,CS,ON,MMSI	2	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0
Application for tonnage	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	3	0	0	2	6	1	3
FORM15 ASSESSMENT ENGINEERING	343	4,567	279	3,682	358	4,740	237	3,130	379	5,118	455	6,057	402	5,319	395	5,248	414	5,470	295	3,897	416	5,491	370	4,928
FORM15 ASSESSMENT NAUTICAL	10	70	5	35	6	42	4	28	1	7	7	49	13	91	0	0	13	91	3	21	4	28	2	14
QSS ASSESSMENT(ENGINEERING)	23	290	20	264	23	321	14	184	24	318	34	459	21	279	16	212	18	238	20	271	22	286	24	318
DC ENDORSEMENT ENGG ADVANCED	134	938	124	868	110	770	128	896	176	1,232	227	1,589	261	1,827	242	1,694	267	1,869	242	1,694	251	1,757	339	2,373
DC ENDORSEMENT NAUT ADVANCED	259	1,813	293	2,051	302	2,114	256	1,792	295	2,065	250	1,750	248	1,736	268	1,876	277	1,939	228	1,596	261	1,827	281	1,967
DC ENDORSEMENT ENGG BASIC	165	713	127	538	187	785	184	804	171	768	218	960	297	1,282	415	1,779	24	168	262	1,834	237	1,659	221	1,547
DC ENDORSEMENT NAUT BASIC	133	568	158	653	181	788	154	638	159	693	366	1,578	540	2,281	754	3,207	30	210	523	3,661	421	2,947	379	2,653
CoC Application Engineering	127	635	142	710	107	535	90	450	159	795	81	405	135	675	91	455	120	600	117	585	124	620	137	685
CoC Application Nautical	276	1,932	259	1,813	254	1,778	271	1,897	240	1,680	239	1,673	279	1,953	240	1,680	240	1,680	226	1,582	221	1,547	284	1,988
COC Revalidation Nautical	150	1,198	142	1,130	183	1,464	201	1,605	187	1,492	171	1,365	235	1,881	223	1,785	245	1,959	225	1,803	279	2,232	280	2,232
COC Revalidation Engineering	160	1,441	147	1,318	197	1,771	181	1,624	196	1,761	174	1,567	218	1,964	211	1,900	238	2,140	265	2,384	299	2,684	309	2,780
GMDSS	432	3,444	370	2,951	393	3,134	438	3,499	500	3,998	446	3,566	584	4,663	508	4,060	549	4,386	574	4,587	598	4,779	555	4,437
Course Approval Application	10	80	10	80	7	56	18	144	13	104	19	152	15	120	9	72	7	56	6	48	10	99	22	286
In-Principle Application	0	0	0	0	2	14	4	32	3	24	1	7	2	17	2	14	4	33	4	36	2	15	6	45
New Indos	0	0	1	4	0	0	137	548	1,431	5,724	2,736	10,944	4,319	17,276	3,854	15,416	3,280	13,120	2,931	11,724	3,363	13,452	4,139	16,556
Email update	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	82	574	574	458	458	887	887	578	578
Passport Update	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,450	3,450	2,463	2,463	13,170	13,170	7,825	7,825

Total transactions for the year 2019 : 175662

# SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

## Transaction Count 2020

Transaction Type	Jan-20		Feb-20		Mar-20		Apr-20		May-20		Jun-20		Jul-20		Aug-20		Sep-20		Oct-20		Nov-20		Dec-20		
	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	
Cookery Certificate	162	940	163	991	69	435	3	19	4	28	27	123	28	147	101	581	214	1,116	306	1,738	246	1,492	247	1,433	
Duplicate Cookery Certificate	13	52	21	76	15	56	2	8	1	0	5	16	4	8	7	24	13	40	18	72	17	64	8	28	
Duplicate Of CDC	57	330	68	384	51	300	3	12	10	60	21	126	28	156	28	156	47	270	64	372	81	468	64	348	
Renewal of CDC	875	3,432	812	3,140	621	2,412	201	796	494	1,928	806	3,116	795	3,120	1,109	4,296	1,254	4,940	1,217	4,764	1,122	4,372	1,156	4,508	
Replacement of CDC	804	4,716	789	4,626	501	2,898	20	102	45	228	131	750	198	1,164	265	1,542	390	2,298	386	2,256	371	2,172	451	2,580	
CDC New Application	4,504	31,477	4,980	34,723	2,943	20,334	165	1,110	598	4,147	1,047	7,262	1,536	10,862	1,790	12,614	1,613	11,348	1,529	10,626	1,135	7,902	1,427	9,893	
MTO Registration	21	220	13	110	15	143	1	11	2	22	5	44	11	121	16	176	16	154	21	176	16	176	19	198	
MTO Renewal	38	266	27	175	13	70	5	28	19	126	35	238	54	343	26	182	36	238	31	203	52	350	29	203	
Change of Ship Owner Address	0	0	1	1	1	0	0	0	0	0	3	3	0	0	0	0	4	0	2	0	2	0	0	0	
Change of Ship Name	4	2	1	1	0	0	0	0	0	0	1	0	0	0	0	0	4	1	0	0	0	0	1	1	
Change of Ownership of Ship	0	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	3	2	0	0	0	0	0	0	
Change of Tonnage Certificate	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
Closure of Registry	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
Creation of Mortgage	0	0	2	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	
Change of Command	46	88	22	44	26	44	6	11	10	33	16	66	27	88	18	0	25	22	34	77	25	55	27	33	
Non-Encumbrance Certificate	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	
Regn. OF Name, CS, ON, MMSI	3	14	6	18	22	24	1	6	7	24	10	38	1	4	0	0	0	0	0	0	0	0	0	0	
Provisional Registry of ship	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Regn. Rvld. OF Name,CS,ON,MMSI	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Application for tonnage	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FORM15 ASSESSMENT ENGINEERING	375	4,984	309	4,128	278	3,666	2	26	5	65	16	210	33	429	27	354	81	1,059	96	1,261	63	828	215	2,829	
FORM15 ASSESSMENT NAUTICAL	3	21	0	0	2	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	
QSS ASSESSMENT(ENGINEERING)	16	220	7	97	14	188	0	0	0	0	3	41	2	26	0	0	4	52	4	54	3	39	27	353	
QSS ASSESSMENT(NAUTICAL)	1	7	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	
DC ENDORSEMENT ENGG ADVANCED	363	2,541	328	2,296	249	1,743	44	308	113	791	160	1,120	168	1,176	281	1,967	478	3,346	471	3,297	491	3,437	629	4,403	
DC ENDORSEMENT NAUT ADVANCED	339	2,373	299	2,093	241	1,687	44	308	105	735	151	1,057	130	910	175	1,225	397	2,779	402	2,814	376	2,632	523	3,661	
DC ENDORSEMENT ENGG BASIC	285	1,995	233	1,631	168	1,176	23	161	99	693	173	1,211	148	1,036	222	1,554	500	3,500	556	3,892	526	3,682	700	4,900	
DC ENDORSEMENT NAUT BASIC	399	2,793	373	2,611	197	1,379	33	231	129	903	286	2,000	225	1,575	273	1,911	736	5,152	778	5,446	714	4,998	1,009	7,063	
Coc Application Engineering	147	735	130	650	107	535	6	30	37	185	28	140	34	170	54	270	107	535	80	400	71	355	103	515	
Coc Application Nautical	236	1,652	246	1,722	188	1,316	20	140	31	217	28	196	43	301	121	847	217	1,519	147	1,029	191	1,337	172	1,204	
COC Revalidation Nautical	295	2,356	286	2,289	212	1,696	22	176	41	328	48	384	30	240	77	615	423	3,384	486	3,895	506	4,041	616	4,931	
COC Revalidation Engineering	352	3,166	340	3,064	286	2,572	65	584	136	1,224	178	1,606	114	1,026	210	1,892	477	4,294	516	4,648	501	4,512	604	5,435	
GMSSS	667	5,329	647	5,167	475	3,796	94	752	228	1,824	358	2,859	334	2,671	459	3,670	727	5,808	690	5,512	694	5,549	956	7,644	
Course Approval Application	5	65	4	52	6	78	0	0	3	39	6	78	3	39	1	13	1	13	1	13	3	39	3	39	
In-Principle Application	3	25	0	0	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0	1	10	0	0	
New Indos	4,865	19,460	3,278	13,112	1,637	6,548	83	332	138	552	286	1,144	348	1,392	356	1,424	835	3,340	1,480	5,920	2,696	10,784	3,598	14,392	
Email update	567	567	513	513	336	336	218	218	428	428	251	251	351	351	423	423	557	557	537	537	491	491	567	567	
Passport Update	14,119	14,119	11,945	11,945	7,610	7,610	3,449	3,449	11,566	11,566	6,317	6,317	7,552	7,552	6,784	6,784	7,340	7,340	6,883	6,883	6,091	6,091	6,267	6,267	
Liferaft Service Station	0	0	0	0	0	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0	1	11	1	11	
Declaration for Permanent Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
Declaration for Temporary Pass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
Name,Call Sign,Official No & MMSI No. 4 above 25 Years Ship	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	1	4	0	0	0	0	0	
Name,Call Sign,Official No and MMSI No.	0	0	0	0	0	0	0	0	0	0	0	0	8	28	24	92	17	64	41	124	21	84	15	56	
Survey Request for Permanent Certificate	0	0	0	0	0	0	0	0	0	0	0	0	2	20	0	0	0	0	0	0	0	2	0	20	
Survey Request for Provisional Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	1	10	0	0	0	
Survey Request for Temporary Pass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	30	0	0	0	0	1	10	10	
	29,570		25,847		16,285		4,510		14,249		10,396		12,210		12,850		16,524		16,783		16,510		19,438		10

Total transactions for the year 2020 : 195172

## 6. Payment Transaction Details

## Payment Transaction Count 2019

Transaction Type	Jan-19		Feb-19		Mar-19		Apr-19		May-19		Jun-19		Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19	
	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document	Transaction	Document
Cookery Certificate	165	983	186	1,131	187	1,083	141	874	174	1,048	161	1,011	182	1,132	162	1,008	182	1,095	132	776	169	1,072	170	1,094
Duplicate Cookery Certificate	51	184	48	180	36	128	28	104	32	116	29	112	32	124	23	88	19	76	20	76	23	88	22	88
Duplicate Of CDC	52	294	48	264	64	384	62	354	78	450	62	360	72	414	59	348	68	378	63	360	53	300	61	360
Renew al of CDC	586	2,240	578	2,228	608	2,336	695	2,624	709	2,748	644	2,516	764	2,984	689	2,688	768	2,981	759	2,908	805	3,144	833	3,276
Replacement of CDC	946	5,556	824	4,848	858	5,070	814	4,794	837	4,932	791	4,680	849	5,004	754	4,421	767	4,476	774	4,440	823	4,812	810	4,788
CDC New Application	6,275	43,540	6,501	45,276	6,343	44,163	6,245	43,442	6,177	42,959	4,754	33,082	4,940	34,456	4,658	32,552	4,451	31,139	4,909	34,365	5,072	35,454	4,718	32,902
MTO Registration	22	198	19	198	13	143	16	165	22	209	10	99	11	121	7	77	7	77	19	165	20	220	19	187
MTO Renew al	34	210	31	210	28	182	17	112	34	217	23	147	37	252	21	140	29	196	30	189	28	175	24	119
Change of Ship Owner Address	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	1	0	1	1	0	0
Change of Ship Name	1	0	2	0	0	0	6	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0
Change of Ownership of Ship	3	1	0	0	2	1	0	0	1	1	3	3	2	1	3	2	0	0	0	0	0	0	0	0
Change of Tonnage Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Closure of Registry	1	1	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	1	1	1	1	4	0
Creation of Mortgage	1	8	3	16	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	16	0	0
Change of Command	33	77	30	55	40	143	35	143	43	88	41	66	32	66	35	121	41	77	38	33	38	88	38	55
Non-Encumbrance Certificate	1	0	0	0	1	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Change of Command	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Non-Encumbrance Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Regn. OF Name, CS, ON, MMSI	11	24	7	22	7	22	12	20	14	44	7	32	3	14	5	24	11	64	5	20	7	26	12	12
Permanent Regn of Ship	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	1	1	1	1	1	1	2	1
Provisional Registry of ship	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regn. Rvld. OF Name,CS,ON,MMSI	2	0	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0
Application for tonnage	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	3	0	0	2	6	1	3
FORM15 ASSESSMENT ENGINEERING	343	4,567	279	3,682	358	4,740	237	3,130	379	5,118	455	6,057	402	5,319	395	5,248	414	5,470	295	3,897	416	5,491	370	4,928
FORM15 ASSESSMENT NAUTICAL	10	70	5	35	6	42	4	28	1	7	7	49	13	91	0	0	13	91	3	21	4	28	2	14
QSS ASSESSMENT(ENGINEERING)	23	290	20	264	23	321	14	184	24	318	34	459	21	279	16	212	18	238	20	271	22	286	24	318
DC ENDORSEMENT ENGG ADVANCED	134	938	124	868	110	770	128	896	176	1,232	227	1,589	261	1,827	242	1,694	267	1,869	242	1,694	251	1,757	339	2,373
DC ENDORSEMENT NAUT ADVANCED	259	1,813	293	2,051	302	2,114	256	1,792	295	2,065	250	1,750	248	1,736	268	1,876	277	1,939	228	1,596	261	1,827	281	1,967
DC ENDORSEMENT ENGG BASIC	165	713	127	538	187	785	184	804	171	768	218	960	297	1,282	415	1,779	24	168	262	1,834	237	1,659	221	1,547
DC ENDORSEMENT NAUT BASIC	133	568	158	653	181	788	154	638	159	693	366	1,578	540	2,281	754	3,207	30	210	523	3,661	421	2,947	379	2,653
CoC Application Engineering	127	635	142	710	107	535	90	450	159	795	81	405	135	675	91	455	120	600	117	585	124	620	137	685
CoC Application Nautical	276	1,932	259	1,813	254	1,778	271	1,897	240	1,680	239	1,673	279	1,953	240	1,680	240	1,680	226	1,582	221	1,547	284	1,988
COC Revalidation Nautical	150	1,198	142	1,130	183	1,464	201	1,605	187	1,492	171	1,365	235	1,881	223	1,785	245	1,959	225	1,803	279	2,232	280	2,232
COC Revalidation Engineering	160	1,441	147	1,318	197	1,771	181	1,624	196	1,761	174	1,567	218	1,964	211	1,900	238	2,140	265	2,384	299	2,684	309	2,780
GMDSS	432	3,444	370	2,951	393	3,134	438	3,499	500	3,998	446	3,566	584	4,663	508	4,060	549	4,386	574	4,587	598	4,779	555	4,437
Course Approval Application	10	80	10	80	7	56	18	144	13	104	19	152	15	120	9	72	7	56	6	48	10	99	22	286
In-Principle Application	0	0	0	0	2	14	4	32	3	24	1	7	2	17	2	14	4	33	4	36	2	15	6	45
New Indos	0	0	1	4	0	0	137	548	1,431	5,724	2,736	10,944	4,319	17,276	3,854	15,416	3,280	13,120	2,931	11,724	3,363	13,452	4,139	16,556
Email update	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	82	574	574	458	458	887	887	578	578
Passport Update	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,450	3,450	2,463	2,463	13,170	13,170	7,825	7,825

# SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND TRANSFORMATION OF DIRECTORATE OF GENERAL SHIPPING, GOVT OF INDIA

## Payment Transaction Count 2020

Transaction Type	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction	ePayment transaction
Cookery Certificate	162	165	69	3	4	27	28	101	214	306	246	247
Duplicate Cookery Certificate	13	21	14	2	1	5	4	7	13	18	17	8
Duplicate Of CDC	57	68	51	3	10	21	28	28	47	64	81	64
Renewal of CDC	875	812	621	201	494	806	795	1,109	1,254	1,217	1,122	1,156
Replacement of CDC	804	789	501	20	45	131	198	265	390	386	371	451
CDC New Application	4,504	4,980	2,943	165	598	1,047	1,536	1,790	1,613	1,529	1,135	1,427
MTO Registration	21	13	15	1	2	5	11	16	16	21	16	19
MTO Renewal	38	27	13	5	19	35	54	26	36	31	52	29
Change of Ship Owner Address	0	1	1	0	0	3	0	0	4	2	2	0
Change of Ship Name	4	1	0	0	0	1	0	0	4	0	0	1
Change of Ownership of Ship	0	1	1	0	0	0	1	0	3	0	0	0
Change of Tonnage Certificate	0	1	0	0	0	0	1	0	0	0	0	0
Closure of Registry	0	0	1	0	0	0	0	0	0	1	0	1
Creation of Mortgage	0	2	0	0	0	0	0	0	0	0	0	0
Change of Command	46	22	26	6	10	16	27	18	25	34	25	27
Non-Encumbrance Certificate	1	0	0	0	0	0	0	0	3	0	0	0
Regn. OF Name, CS, ON, MMSI	3	6	22	1	7	10	1	0	0	0	0	0
Provisional Registry of ship	1	0	0	0	0	0	0	0	0	0	0	0
Regn. Rvid. OF Name,CS,ON,MMSI	2	0	0	0	0	0	0	0	0	0	0	0
Application for tonnage	2	0	0	0	0	0	0	0	0	0	0	0
FORM15 ASSESSMENT ENGINEERING	375	309	278	2	5	16	33	27	81	96	63	215
FORM15 ASSESSMENT NAUTICAL	3	0	2	0	0	0	0	0	0	0	1	0
QSS ASSESSMENT(ENGINEERING)	16	7	14	0	0	3	2	0	4	4	3	27
QSS ASSESSMENT(NAUTICAL)	1	0	0	0	0	0	0	1	0	0	0	0
DC ENDORSEMENT ENGG ADVANCED	363	328	249	44	113	160	168	281	478	471	491	629
DC ENDORSEMENT NAUT ADVANCED	339	299	241	44	105	151	130	175	397	402	376	523
DC ENDORSEMENT ENGG BASIC	285	233	168	23	99	173	148	222	500	556	526	700
DC ENDORSEMENT NAUT BASIC	399	373	197	33	129	286	225	273	736	778	714	1,009
CoC Application Engineering	147	130	107	6	37	28	34	54	107	80	71	103
CoC Application Nautical	236	246	188	20	31	28	43	121	217	147	191	172
COC Revalidation Nautical	295	286	212	22	41	48	30	77	423	486	506	616
COC Revalidation Engineering	352	340	286	65	136	178	114	210	477	516	501	604
GMDSS	667	647	475	94	228	358	334	459	727	690	694	956
Course Approval Application	5	4	6	0	3	6	3	1	1	1	3	3
In-Principle Application	3	0	0	0	0	0	0	1	0	0	1	0
New Indos	4,865	3,278	1,637	83	138	286	348	356	835	1,480	2,696	3,598
Total	14,884	13,389	8,339	843	2,255	3,828	4,296	5,618	8,605	9,319	9,905	12,585

## 7. Reports

Oracle Reports		
Sr. No.	Module	Count
1	INDoS	9
2	Registration	147
3	Seafarer	190

Jasper Reports		
Sr. No.	Module	Count
1	Training	60
2	Articles of Agreement	31
3	CDC	27
4	Checkers	5
5	COC	82
6	Cookery	18
7	RPSL	32
8	RPSL - Old	24
9	Grievance	4
10	IDCard	8
11	INDOS	8
12	L & C	3
13	Life Raft	14
14	MTO	9
15	New L & C	7
16	RENE	13
17	Seafarer	11
18	Exam	92
19	ePass – Seafarer (Temporary Deployment)	7
20	ePass – Non Seafarer (Temporary Deployment)	7
21	Standard Seafarer (Temporary Deployment)	11
22	Ship Regn - Old	3
23	Ship Regn – New (Temporary Deployment)	11

## 8. List of existing modules

INDoS
Examination
MTO
Crew
Ship Registration



CDC
Cookery certificate
Licensing & Chartering
Training
RPSL
Sailing vessel Identity card
Medical Fitness (Doctors)
Liferaft Service Station
ePass – Seafarer & non seafarer
Stranded Seafarer
Crew Manifest
MTI digital eCert Module
FIN
Hindi
CoC / CoC Revalidation
CoP (Basic Wk , DC , Able Seafarer, IGF )
Advanced DC & GMDSS
Grievance Redressal
Sign On vaccination module

----XX End Of Document XX---



REQUEST FOR PROPOSAL (RFP)  
FOR  
SELECTION OF SYSTEM INTEGRATOR FOR  
EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE  
GENERAL OF SHIPPING, GOVT OF INDIA

VOLUME 3 OF 3

**Tender Reference: DGS/E-Gov./21.12.2021**

## **Disclaimer**

This Request for Proposal ("RFP") is issued by the Directorate General of Shipping (DGS).

1. Whilst the information in this RFP has been prepared in good faith, it is not and does not purport to be comprehensive or to have been independently verified. Neither DGS, nor any of its officers or employees, nor any of their advisers nor consultants accept any liability or responsibility for the accuracy, reasonableness or completeness of, or for any errors, omissions or misstatements, negligent or otherwise, relating to the proposed project - eGovernance Solution and IT Transformation of DGS or makes any representation or warranty, express or implied, with respect to the information contained in this RFP or on which this RFP is based or with respect to any written or oral information made or to be made available to any of the recipients or their professional advisers and, so far as permitted by law and except in the case of fraudulent misrepresentation by the party concerned, and liability therefore is hereby expressly disclaimed.
2. The information contained in this RFP is selective and is subject to updation, expansion, revision and amendment at the sole discretion of DGS. It does not purport to, contain all the information that a recipient may require for the purposes for making a decision for participation in this process. Neither DGS nor any of its officers, employees nor any of its advisers nor consultants undertakes to provide any Party with access to any additional information or to update the information in this RFP or to correct any inaccuracies therein which may become apparent. Each Party must conduct its own analysis of the information contained in this RFP, to correct any inaccuracies therein and is advised to carry out its own investigation into the proposed project - eGovernance Solution and IT Transformation of DGS, the regulatory regime which applies thereto and by and all matters pertinent to the project - eGovernance Solution and IT Transformation of DGS and to seek its own professional advice on the legal, financial and regulatory consequences of entering into any agreement or arrangement relating to the project - eGovernance Solution and IT Transformation of DGS.
3. This RFP includes certain statements, estimates, projections, targets and forecasts with respect to the project - eGovernance Solution and IT Transformation of DGS. Such statements estimates, projections, targets and forecasts reflect various assumptions made by the management, officers and employees of DGS, which assumptions (and the base information on which they are made) may or may not prove to be correct. No representation or warranty is given as to the reasonableness of forecasts or the assumptions on which they may be based and nothing in this RFP is, or should be relied on as, a promise, representation or warranty.

## Contents

MASTER SERVICES AGREEMENT.....	5
1 DEFINITIONS AND INTERPRETATIONS.....	6
2 SCOPE OF THE PROJECT .....	8
3 TERM AND DURATION OF THE AGREEMENT .....	8
4 CONDITIONS PRECEDENT & EFFECTIVE DATE .....	9
5 OBLIGATIONS UNDER THE SLA .....	10
6 REPRESENTATIONS AND WARRANTIES .....	12
7 OBLIGATIONS OF DGS .....	14
8 OBLIGATIONS OF THE BIDDER .....	14
9 APPROVALS AND REQUIRED CONSENTS .....	15
10 USE OF ASSETS BY THE IMPLEMENTATION AGENCY .....	16
11 ACCESS TO DGS LOCATIONS.....	17
12 MANAGEMENT PHASE.....	18
13 FINANCIAL MATTERS.....	20
14 TERMINATION.....	23
15 INDEMNIFICATION & LIMITATION OF LIABILITY.....	25
16 FORCE MAJEURE.....	28
17 CONFIDENTIALITY.....	32
18 AUDIT, ACCESS AND REPORTING .....	33
19 INTELLECTUAL PROPERTY RIGHTS .....	33
20 WARRANTY.....	35
21 LIQUIDATED DAMAGES .....	36
22 INSURANCE COVER.....	36
23 ESCROW AGREEMENT.....	36
24 MISCELLANEOUS.....	38
25 GOVERNING LAW AND DISPUTE RESOLUTION .....	43
SCHEDULE I – DEFINITIONS .....	46
SCHEDULE II – CHANGE CONTROL SCHEDULE .....	52
SCHEDULE – III - EXIT MANAGEMENT SCHEDULE .....	54
1 PURPOSE .....	54
2 TRANSFER OF ASSETS.....	54
3 COOPERATION AND PROVISION OF INFORMATION.....	55

4	CONFIDENTIAL INFORMATION, SECURITY AND DATA .....	56
5	EMPLOYEES.....	56
6	TRANSFER OF CERTAIN AGREEMENTS .....	57
7	RIGHTS OF ACCESS TO PREMISES.....	57
8	GENERAL OBLIGATIONS OF THE SERVICE PROVIDER .....	57
9	EXIT MANAGEMENT PLAN .....	58
	SCHEDULE – IV - AUDIT, ACCESS AND REPORTING .....	59
1	PURPOSE .....	59
2	AUDIT NOTICE AND TIMING .....	59
3	ACCESS .....	59
4	AUDIT RIGHTS.....	59
5	AUDIT RIGHTS OF SUB-CONTRACTORS, SUPPLIERS AND AGENTS .....	60
6	ACTION AND REVIEW .....	61
7	TERMS OF PAYMENT .....	61
8	RECORDS AND INFORMATION.....	61
	SCHEDULE – V - GOVERNANCE SCHEDULE.....	61
1	PURPOSE .....	61
2	GOVERNANCE STRUCTURE.....	61
3	GOVERNANCE PROCEDURES .....	62
	SCHEDULE – VI - TERMS OF PAYMENT SCHEDULE .....	63
	ANNEXURES .....	64
	NON-DISCLOSURE AGREEMENT .....	69
	SERVICE LEVEL AGREEMENT.....	71
1.	Definitions & Interpretation .....	73
2.	Structure .....	74
3.	Objectives of SLA .....	74
4.	Scope of SLA .....	75
5.	Agreement Owners .....	75
6.	Contact List.....	76
7.	Principal Contacts .....	76
8.	Commencement and Duration of this Agreement.....	76
9.	Exclusions to this Agreement.....	76

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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10.	Terms of Payments and Penalties .....	77
10.1.	Details of SLA Penalty Mechanism and Calculations .....	77
10.2.	SLA Measurement and Monitoring .....	78
11.	SLA Categories .....	92
12.	Non-Adherence to SLA.....	93
13.	Breach of SLA .....	93
14.	Monitoring and Auditing .....	93
15.	SLA Change Control.....	94
16.	Management Escalation Procedures .....	95
17.	Updating of this Agreement .....	95
18.	Document History .....	96
19.	Scope of Services .....	96
20.	Performance Review .....	96
21.	Indemnities .....	97
22.	Dispute Resolution .....	97
23.	Miscellaneous.....	97

## MASTER SERVICES AGREEMENT

**THIS MASTER SERVICE AGREEMENT (“Agreement”)** is made on this the <\*\*\*> day of <\*\*\*> 2022 at Mumbai, India.

### BETWEEN

----- having its office at -----  
----- India hereinafter referred to as ‘**Directorate General of Shipping**’/‘**DGS**’ or ‘-----’, which expression shall, unless the context otherwise requires, include its permitted successors and assigns);

### AND

<\*\*\*>, a Company incorporated under the Companies Act, 1956, having its registered office at <\*\*\*> (hereinafter referred to as ‘**System Integrator / Implementation Agency**’ which expression shall, unless the context otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the ‘**Parties**’ and individually as a ‘**Party**’.

### WHEREAS:

DGS is desirous of undertaking ‘eGovernance of DGS’

In furtherance of the same, DGS undertook the selection of a System Integrator through a competitive bidding process for implementing the Project and in this behalf issued Request for Proposal (RFP) dated <\*\*\*> .

The successful bidder has been selected as the System Integrator on the basis of the bid response set out as Annexure D of this Agreement, to undertake the Project of the development and implementation of the solution, its roll out and sustained operations.

Parties now wish to enter into this Agreement to govern their mutual rights and obligations with respect to provision of goods and services and implementation of the Project.

**NOW THEREFORE**, in consideration of the mutual covenants, promises, assurances, representations and provisions set forth herein, the Parties hereto agree as follows:

## 1 DEFINITIONS AND INTERPRETATIONS

### 1.1 Definitions

Terms and expressions used in this Agreement (including the Introduction) shall have the meanings set out in Schedule I. Other terms used in this Agreement are defined where they are used and have the meanings there indicated. Unless otherwise specifically defined, those terms, acronyms and phrases in this Agreement that are utilized in the information technology services industry or other pertinent business context shall be interpreted in accordance with their generally understood meaning in such industry or business context.

### 1.2 Interpretation

In this Agreement, unless otherwise specified:

- (a) references to Clauses, Sub-Clauses, Paragraphs, Schedules and Annexures are to clauses, sub-clauses, paragraphs, schedules and Annexures to this Agreement;
- (b) use of any gender includes the other gender;
- (c) references to a '**company**' shall be construed so as to include any company, corporation or other body corporate, wherever and however incorporated or established;
- (d) references to a '**person**' shall be construed so as to include any individual, firm, company, government, state or agency of a state, local or municipal authority or government body or any joint venture, association or partnership (whether or not having separate legal personality);
- (e) a reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted;
- (f) any reference to a '**day**' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight;
- (g) references to a '**Business day**' shall be construed as a reference to a day (other than Saturday, Sunday and other gazette holidays) on which DGS is generally open for business.
- (h) references to times are to Indian Standard Time;
- (i) a reference to any other document referred to in this Agreement is a reference to that other document as amended, varied, novated or supplemented at any time; and all headings and titles are inserted for convenience only. They are to be ignored in the interpretation of this Agreement.
- (j) System Integrator (SI) or Implementation Agency (IA) has been used for the same entity i.e. bidder selected for the project.

### 1.3 Measurements and Arithmetic Conventions

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down except in money calculations where such amounts shall be rounded off to the nearest INR.



#### **1.4 Ambiguities within Agreement**

In case of ambiguities or discrepancies within this Agreement, the following principles shall apply:

- (a) as between two Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in a general Clause;
- (b) as between the provisions of this Agreement and the Schedules/Annexures, the Agreement shall prevail, save and except as expressly provided otherwise in the Agreement or the Schedules/Annexures; and
- (c) as between any value written in numerals and that in words, the value in words shall prevail.

#### **1.5 Priority of documents**

This Agreement, including its Schedules and Annexures, represents the entire agreement between the Parties as noted in this Clause. If in the event of a dispute as to the interpretation or meaning of this Agreement it should be necessary for the Parties to refer to documents forming part of the bidding process leading to this Agreement, then such documents shall be relied upon and interpreted in the following descending order of priority:

- (a) This Agreement along with the SLA agreement, NDA agreement, Schedules and Annexures;
- (b) Request for Proposal and Addendum / Corrigendum to the Request for Proposal (if any).

For the avoidance of doubt, it is expressly clarified that in the event of a conflict between this Agreement, Annexures / Schedules or the contents of the RFP, the terms of this Agreement shall prevail over the Annexures / Schedules and Annexures / Schedules shall prevail over the contents and specifications of the RFP.

## **2 SCOPE OF THE PROJECT**

The Bidder should offer a high level of scalability and the system should be robust and configurable at admin console to adapt to any new process changes acceptable to the business process with ease and without hassle at DGS for the period of 3 years from the Go-Live date of the Project.

The roles and responsibilities of the Parties under this Agreement have been set out in RFP Volume II of this Agreement.

For the avoidance of doubt, it is expressly clarified that this Agreement shall govern the provision of the contracted professional services under the SLA to DGS and its nominated agencies. It is anticipated that new or renewal agreements may be undertaken by creating a separate SLA, with schedules and annexures as required, under this Agreement for each additional engagement.

Detailed scope of work for the selected bidder is defined in Volume II of the RFP.

## **3 TERM AND DURATION OF THE AGREEMENT**

This Agreement shall come into effect on <\*\*\*> (hereinafter the “Effective Date”) and shall continue till operation and maintenance completion date which shall be the date of the completion of the operation and maintenance to the DGS or its nominated agencies. The project shall continue for a period of 3 years from the date of Go-Live (‘Term’) extendable at the option of DGS for a period of up to two years (or part thereof) on mutually agreed terms and conditions. The Term, for the purposes of any payments to bidder, does not include (a) any extension arising out of breach of any obligations by bidder, (b) unless otherwise agreed, time duration for implementation of exit management plan. In the case of such extension of contract beyond the stipulated period, the warranties, Performance Bank Guarantee, Exit management protocol, insurance etc. shall be extended for equivalent period.

## **4 CONDITIONS PRECEDENT & EFFECTIVE DATE**

### **4.1 Provisions to take effect upon fulfillment of Conditions Precedent**

Subject to express terms to the contrary, the rights and obligations under this Agreement shall take effect only upon fulfillment of all the Conditions Precedent set out below. However, DGS may at any time at its sole discretion waive fully or partially any of the Conditions Precedent for the System Integrator.

### **4.2 Conditions Precedent of the Bidder**

The Bidder shall be required to fulfill the Conditions Precedent which are as follows:

- (a) to provide a Performance Security/Guarantee and other guarantees/ payments as and when required to DGS or its nominated agencies; and
- (b) to provide DGS or its nominated agencies certified true copies of its constitutional documents and board resolutions authorizing the execution, delivery and performance of this Agreement by the System Integrator.
- (c) For the avoidance of doubt, it is expressly clarified that the obligations of the Parties except the financial obligations of DGS under this Agreement shall commence from the fulfilment of the Conditions Precedent as set forth above.

### **4.3 Extension of time for fulfillment of Conditions Precedent**

The Parties may, by mutual agreement extend the time for fulfilling the Conditions Precedent and the Term of this Agreement.

For the avoidance of doubt, it is expressly clarified that any such extension of time shall be subject to imposition of penalties on the System Integrator linked to the delay in fulfilling the Conditions Precedent.

### **4.4 Non-fulfilment of the Bidder's Conditions Precedent**

- (a) In the event that any of the Conditions Precedent of the System Integrator have not been fulfilled within 15 days of signing of this Agreement and the same have not been waived fully or partially by DGS or its nominated agencies, this Agreement shall cease to exist;
- (b) In the event that the Agreement fails to come into effect on account of non fulfilment of the Bidder's Conditions Precedent, DGS or its nominated agencies shall not be liable in any manner whatsoever to the Bidder and DGS shall forthwith forfeit the Performance Guarantee.
- (c) In the event that possession of any of DGS or its nominated agencies facilities has been delivered to the Bidder prior to the fulfillment of the Conditions Precedent, upon the termination of this Agreement such shall immediately revert to DGS or its nominated agencies, free and clear from any encumbrances or claims.

## **5 OBLIGATIONS UNDER THE SLA**

The SLA shall be a separate contract in respect of this Agreement and shall be entered into concurrently with this Agreement between DGS and Bidder;

In relation to any future SLA entered into between the Parties; each of the Parties shall observe and perform the obligations set out herein.

### **5.1 Change of Control**

- (a) In the event of a change of control of the Bidder during the Term, the Bidder shall promptly notify DGS of the same in the format set out as Annexure A of this Agreement.
- (b) In the event that the net worth of the surviving entity is less than that of Bidder prior to the change of control, DGS may within 30 days of becoming aware of such change in control, require a replacement of existing Performance Guarantee furnished by the Bidder from a guarantor acceptable to DGS (which shall not be Bidder or any of its associated entities).
- (c) If such a guarantee is not furnished within 30 days of DGS requiring the replacement, DGS may exercise its right to terminate the SLA and/ or this Agreement within a further 30 days by written notice, to become effective as specified in such notice.
- (d) Pursuant to termination, the effects of termination as set out in Clause 14.2 of this Agreement shall follow.

For the avoidance of doubt, it is expressly clarified that the internal reorganization of the Bidder shall not be deemed an event of a change of control for purposes of this Clause unless the surviving entity is of less net worth than the predecessor entity.

## 5.2 Final testing and certification

The Project shall be governed by the mechanism of final acceptance testing and certification to be put into place by DGS and Bidder as under:

- (a) Final testing and certification criteria will lay down a set of guidelines following internationally accepted norms and standards for testing and certification for all aspects of project development and implementation covering software, hardware and networking including the processes relating to the design of solution architecture, design of systems and sub- systems, coding, testing, business process description, documentation, version control, change management, security, service oriented architecture, performance in relation to compliance with SLA metrics, interoperability, scalability, availability and compliance with all the technical and functional requirements of the RFP and this Agreement;
- (b) Final testing and certification criteria will be finalized from the development stage to ensure that the guidelines are being followed and to avoid large scale modifications pursuant to testing done after the application is fully developed;
- (c) Final testing and certification criteria will consider conducting specific tests on the software, hardware, networking, security and all other aspects;
- (d) Final testing and certification criteria will establish appropriate processes for notifying the Bidder of any deviations from the norms, standards or guidelines at the earliest instance after taking cognizance of the same to enable Bidder to take corrective action; etc.

The Parties shall each ensure that the range of the Services under the SLA shall not be varied, reduced or increased except with the prior written agreement between DGS and Bidder in accordance with the Change Control Schedule set out in Schedule II of this Agreement. Save for the express terms of the Terms of Payment Schedule set out as Schedule VI of this Agreement, DGS and its users may purchase any particular category of Services that may become necessary as per the Change Control Schedule set out in Schedule II of this Agreement, without the need to go for a separate procurement process.

## **6 REPRESENTATIONS AND WARRANTIES**

### **6.1 Representations and warranties of the Bidder**

The Bidder represents and warrants to DGS and its allied offices that:

- (a) it is an organization under the Government of India, and has full power and authority to execute and perform its obligations on behalf of the Government of India under this Agreement and other agreements and to carry out the transactions contemplated hereby;
- (b) it is a competent provider of a variety of information technology and business process management services;
- (c) it has taken all necessary corporate and other actions under laws applicable to its business to authorize the execution and delivery of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- (d) from the Effective Date, it will have the financial standing and capacity to undertake the Project in accordance with the terms of this Agreement;
- (e) in providing the Services, it shall use reasonable endeavors not to cause any unnecessary disruption to DGS's normal business operations
- (f) this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation, enforceable against it in accordance with the terms hereof, and its obligations under this Agreement shall be legally valid, binding and enforceable against it in accordance with the terms hereof;
- (g) the information furnished in the tender documents and as updated on or before the date of this Agreement is to the best of its knowledge and belief true and accurate in all material respects as at the date of this Agreement;
- (h) the execution, delivery and performance of this Agreement shall not conflict with, result in the breach of, constitute a default by any of the terms of its Memorandum and Articles of Association or any Applicable Laws or any covenant, contract, agreement, arrangement, understanding, decree or order to which it is a party or by which it or any of its properties or assets is bound or affected;
- (i) there are no material actions, suits, proceedings, or investigations pending or, to its knowledge, threatened against it at law or in equity before any court or before any other judicial, quasi-judicial or other authority, the outcome of which may result in the breach of this Agreement or which individually or in the aggregate may result in any material impairment of its ability to perform any of its material obligations under this Agreement;

- (j) it has no knowledge of any violation or default with respect to any order, writ, injunction or decree of any court or any legally binding order of any Government Instrumentality which may result in any adverse effect on its ability to perform its obligations under this Agreement and no fact or circumstance exists which may give rise to such proceedings that would adversely affect the performance of its obligations under this Agreement;
- (k) it has complied with Applicable Laws in all material respects and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities which in the aggregate have or may have an Adverse Effect on its ability to perform its obligations under this Agreement;
- (l) no representation or warranty by it contained herein or in any other document furnished by it to DGS in relation to the Required Consents contains or shall contain any untrue or misleading statement of material fact or omits or shall omit to state a material fact necessary to make such representation or warranty not misleading; and
- (m) no sums, in cash or kind, have been paid or shall be paid, by it or on its behalf, to any person by way of fees, commission or otherwise for entering into this Agreement or for influencing or attempting to influence any officer or employee of DGS in connection therewith. For this purpose DGS will sign integrity pact separately with Bidder enclosed with this agreement.

## **6.2 Representations and warranties of DGS**

DGS represent and warrant to the System Integrator that:

- (a) it is duly organized and validly existing under laws of India and has full power and authority to execute, deliver and perform its obligations under this Agreement and to carry out the transactions contemplated herein and that it has taken all actions necessary to execute this Agreement, exercise its rights and perform its obligations, under this Agreement and carry out the transactions contemplated hereby;
- (b) it has taken all necessary actions under Applicable Laws to authorize the execution, delivery and performance of this Agreement and to validly exercise its rights and perform its obligations under this Agreement;
- (c) it is subject to the laws of India, and hereby expressly and irrevocably waives any immunity in any jurisdiction in respect of this Agreement or matters arising thereunder including any obligation, liability or responsibility hereunder;
- (d) this Agreement has been duly executed by it and constitutes a legal, valid and binding obligation enforceable against it in accordance with the terms hereof and its obligations under this Agreement shall be legally valid, binding and enforceable against it in accordance with the terms thereof;
- (e) it has complied with Applicable Laws in all material respects;
- (f) all information provided by it in the RFP in connection with the Project is, to the best of its knowledge and belief, true and accurate in all material respects; and

- (g) upon the Bidder performing the covenants herein, it shall not at any time during the term hereof, interfere with peaceful exercise of the rights and discharge of the obligations by the Bidder, in accordance with this Agreement.

## **7 OBLIGATIONS OF DGS**

Without prejudice to any other undertakings or obligations of DGS under this Agreement, DGS shall perform the following:

- (a) To provide any support through personnel to test the system during the Term;
- (b) To provide any support through personnel and/or test data during development, rollout, steady state operation, as well as, for any changes/enhancements in the system whenever required due to scope change that may arise due to business, delivery or statutory/regulatory reasons;
- (c) DGS shall provide the data (both physically stored documents and electronic wherever applicable/available) to be migrated and validated by SI.
- (d) To authorize the Bidder to interact for implementation of the Project with external entities such as the authorized banks, trademark database etc.

## **8 OBLIGATIONS OF THE BIDDER**

- 8.1 It shall provide to DGS, the Deliverables as set out in Annexure C of this Agreement.
- 8.2 It shall perform the Services as set out in Volume II of this Agreement and in a good and workmanlike manner commensurate with industry and technical standards which are generally in effect for international projects and innovations pursuant thereon similar to those contemplated by this Agreement, and so as to comply with the applicable Service Levels set out with this Agreement.
- 8.3 It shall ensure that the Services are being provided as per the Project Timelines set out as Annexure C to this Agreement.



## **9 APPROVALS AND REQUIRED CONSENTS**

- 9.1 The Parties shall cooperate to procure, maintain and observe all relevant and regulatory and governmental licenses, clearances and applicable approvals (hereinafter the “Required Consents”) necessary for the Bidder to provide the Services. The costs of such Approvals shall be borne by the Party normally responsible for such costs according to local custom and practice in the locations where the Services are to be provided.
- 9.2 DGS shall use reasonable endeavors to assist Bidder to obtain the Required Consents. In the event that any Required Consent is not obtained, the Bidder and DGS will co-operate with each other in achieving a reasonable alternative arrangement as soon as reasonably practicable for DGS to continue to process its work with as minimal interruption to its business operations as is commercially reasonable until such Required Consent is obtained, provided that the Bidder shall not be relieved of its obligations to provide the Services and to achieve the Service Levels until the Required Consents are obtained if and to the extent that the Bidder’s obligations are not dependent upon such Required Consents.

## 10 USE OF ASSETS BY THE IMPLEMENTATION AGENCY

### 10.1 During the Term the Bidder shall:

- (a) take all reasonable and proper care of the entire hardware and software, network or any other information technology infrastructure components used for the Project and other facilities leased / owned / operated by the Bidder exclusively in terms of ensuring their usability for the delivery of the Services as per this Agreement (hereinafter the “**Assets**”) in proportion to their use and control of such Assets; and keep all the tangible Assets in as good and serviceable condition (reasonable wear and tear excepted) as at the date the Bidder takes control of and/or first uses the Assets and during the entire Term of the Agreement.
- (b) ensure that any instructions or manuals supplied by the manufacturer of the Assets for use of the Assets and which are provided to the Bidder will be followed by the Bidder and any person who will be responsible for the use of the Assets;
- (c) take such steps as may be properly recommended by the manufacturer of the Assets and notified to the Bidder or as may, in the reasonable opinion of the Bidder, be necessary to use the Assets in a safe manner;
- (d) ensure that the Assets that are under the control of the Bidder, are kept suitably housed and in conformity with Applicable Law;
- (e) procure permission from DGS and any persons duly authorized by them to enter any land or premises on which the Assets are for the time being sited so as to inspect the same, subject to any reasonable third party requirements;
- (f) not, knowingly or negligently use or permit any of the Assets to be used in contravention of any statutory provisions or regulation or in any way contrary to Applicable Law.
- (g) use best efforts to ensure that no lien, mortgage, hypothecation or any other charge is created over the Assets, Bidder agrees that they will inform DGS immediately if bidder feels or comes to know that a charge may be/ has been created over any Asset(s). In the event a charge is created over any of the Assets/Goods which are owned by DGS , DGS shall have the right to get the charge removed at the risk, cost, expense of the Bidder and bidder shall make good all losses, damages, costs, fees, cess, duties, etc. borne or suffered by DGS due to creation of such charge and/or in removal of such charge and/or in discharging the obligations for removal of such charge

## **11 ACCESS TO DGS LOCATIONS**

- 11.1 For so long as the Bidder provides services to DGS location, as the case may be, on a non-permanent basis and to the extent necessary, DGS as the case may be shall, subject to compliance by the Bidder with any safety and security guidelines which may be provided by DGS as the case may be and notified to the Bidder in writing, provide the Bidder with:
- (a) reasonable access with prior approval of DGS, in the same manner granted to DGS employees, to DGS as the case may be location twenty-four hours a day, seven days a week;
  - (b) reasonable work space, access to office equipment as mutually agreed and other related support services in such location and at such other DGS as the case may be location, if any, as may be reasonably necessary for the Bidder to perform its obligations hereunder and under the SLA.
- 11.2 Access to locations, office equipment and services shall be made available to the Bidder on an “as is, where is” basis by DGS as the case may be. The Bidder agrees to ensure that its employees, agents and contractors shall not use the location, services and equipment referred to in RFP for the following purposes:
- (a) for the transmission of any material which is defamatory, offensive or abusive or of an obscene or menacing character; or
  - (b) in a manner which constitutes a violation or infringement of the rights of any person, firm or company (including but not limited to rights of copyright or confidentiality).

## **12 MANAGEMENT PHASE**

### **12.1 Governance**

The review and management process of this Agreement shall be carried out in accordance with the Governance Schedule set out in Schedule V of this Agreement and shall cover all the management aspects of the Project.

### **12.2 Use of Services**

DGS as the case may be, will undertake and use the Services in accordance with any instructions or procedures as per the acceptance criteria as set out in the SLA or this Agreement or any agreement that may be entered into between the Parties from time to time;

DGS as the case may be shall be responsible for the operation and use of the Deliverables resulting from the Services.

### **12.3 Changes**

Unless expressly dealt with elsewhere in this Agreement, any changes under or to this Agreement or under or to the SLA shall be dealt with in accordance with the Change Control Schedule set out in Schedule II of this Agreement.

### **12.4 Security and Safety**

- (a) The Bidder shall comply with the technical requirements of the relevant security, safety and other requirements specified in the Information Technology Act or Telegraph Act including the regulations issued by dept. of telecom (wherever applicable), IT Security Manual of DGS as specifically stated in the RFP and follow the industry standards related to safety and security (including those as stated in the RFP), insofar as it applies to the provision of the Services.
- (b) Each Party to the SLA/Agreement shall also comply with DGS or the Government of India's security standards and policies in force from time to time at each location of which DGS make the Bidder aware in writing insofar as the same apply to the provision of the Services.
- (c) The Parties to the SLA/Agreement shall use reasonable endeavours to report forthwith in writing to each other all identified attempts (whether successful or not) by unauthorized persons (including unauthorized persons who are employees of any Party) either to gain access to or interfere with DGS as the case may be or any of their nominees data, facilities or Confidential Information.
- (d) The Bidder shall upon reasonable request by DGS as the case may be or their nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.

- (e) As per the provisions of the SLA or this Agreement, the Bidder shall promptly report in writing to DGS, any act or omission which they are aware that could have an adverse effect on the proper conduct of safety and information technology security at the facilities of DGS as the case may be.

## 12.5 Cooperation

Except as otherwise provided elsewhere in this Agreement or the SLA, each Party (***“Providing Party”***) to this Agreement or to the SLA undertakes promptly to provide the other Party (***“Receiving Party”***) with all such information and co-operation which the Receiving Party reasonably requests, provided that such information and co-operation:

- (a) does not require material expenditure by the Providing Party to provide the same;
- (b) is reasonably required by the Receiving Party in order for it to comply with its obligations under this Agreement or the SLA;
- (c) cannot be construed to be Confidential Information; and
- (d) is capable of being provided by the Providing Party.

Further, each Party agrees to co-operate with the contractors and subcontractors of the other Party as reasonably requested in order to accomplish the purposes of this Agreement.

## **13 FINANCIAL MATTERS**

### **13.1 Terms of Payment and Service Credits and Debits**

- (a) In consideration of the Services and subject to the provisions of this Agreement and of the SLA, DGS shall pay the Bidder for the Services rendered in pursuance of this Agreement, in accordance with the Terms of Payment Schedule set out as Schedule VI of this RFP.
- (b) All payments are subject to the application of service credits and debits as may be provided for in the SLA. For the avoidance of doubt, it is expressly clarified that DGS will pay the service credits as stated in accordance with the Schedule VI of this Agreement and DGS may also calculate a financial sum and debit the same against the terms of payment as set out in Schedule VI of this Agreement as a result of the failure of the Bidder to meet the Service Level as defined in SLA.
- (c) Save and except as otherwise provided for herein or as agreed between the Parties in writing, DGS shall not be required to make any payments in respect of the Services (or, without limitation to the foregoing, in respect of the Bidder performance of any obligations under this Agreement or the SLA) other than those covered in Schedule VI of this Agreement. For the avoidance of doubt, it is expressly clarified that the payments shall be deemed to include all ancillary and incidental costs and charges arising in the course of delivery of the Services including consultancy charges, infrastructure costs, project costs, implementation and management charges and all other related costs including taxes which are addressed in this Clause.

### **13.2 Invoicing and Settlement**

- (a) Subject to the specific terms of the SLA, the Bidder shall submit its invoices in accordance with the following principles:
  - (i) DGS shall be invoiced by the Bidder for the Services. Generally, and unless otherwise agreed in writing between the Parties or expressly set out in the SLA, the Bidder shall raise an invoice as per Schedule VI of this Agreement; and
  - (ii) Any invoice presented in accordance with this Article shall be in a form agreed with DGS.
- (b) The Bidder alone shall invoice all payments after receiving due approval from the competent authority. Such invoices shall be accurate and all adjustments to or changes in the terms of payment as stated in Schedule VI of this Agreement. The Bidder shall waive any charge for a Service that is not invoiced within six months after the end of the month in which the charge relating to such Service is (i) authorized or (ii) incurred, whichever is later.

- (c) Payment shall be made within 90 working days of the receipt of invoice along with supporting documents by DGS subject to penalties. The penalties are imposed on the Bidder as per the penalty criteria specified in the SLA.
- (d) DGS shall be entitled to delay or withhold payment of any invoice or part of it delivered by the Bidder under Schedule VI of this Agreement where DGS disputes/withholds such invoice or part of it provided that such dispute is bona fide. The withheld amount shall be limited to that which is in dispute. The disputed / withheld amount shall be settled in accordance with the escalation procedure as set out in Schedule V of this Agreement. Any exercise by DGS under this Clause shall not entitle the Bidder to delay or withhold provision of the Services.
- (e) DGS shall be entitled to delay or withhold part of the payment of any invoice which is under a dispute. The withheld amount shall be limited to that which is the disputed amount. The disputed amount shall be referred to the escalation procedure as set out in Schedule V of this Agreement. Any exercise by DGS under this Clause shall not entitle the Bidder to delay or withhold provision of the Services.
- (f) The Bidder shall be solely responsible to make payment to its sub-contractors.

### **13.3 Tax**

- (a) DGS shall be responsible for withholding taxes from the amounts due and payable to the Bidder wherever applicable. The Bidder shall pay for all other taxes in connection with this Agreement, SLA, scope of work and any other engagement required to be undertaken as a part of this Agreement, including, but not limited to, property, sales, use, excise, value-added, goods and services, consumption and other similar taxes or duties.
- (b) DGS shall provide Bidder with the original tax receipt of any withholding taxes paid by DGS on payments under this Agreement. The Bidder agrees to reimburse and hold DGS harmless from any deficiency including penalties and interest relating to taxes that are its responsibility under this paragraph. For purposes of this Agreement, taxes shall include taxes incurred on transactions between and among DGS, the Bidder and third party subcontractors.
- (c) In the event of any increase or decrease of the rate of taxes, duties or levies, etc. due to any statutory notification/s during the Term of the Contract the consequential effect shall be to the account of the Bidder. However, in case of any increase or decrease in the rate of service tax or imposition of new or fresh tax or levy on the invoice raised to DGS after submission of the proposal, the consequential effect after determination of the nature of the new tax or levy by DGS shall be to the account of DGS on submission of proof by SI.
- (d) The Parties shall cooperate to enable each Party to accurately determine its own tax liability and to minimize such liability to the extent legally permissible. In connection therewith, the Parties shall provide each other with the following:

- (i) any resale certificates;
- (ii) any relevant information regarding out-of-state or use of materials, equipment or services; and
- (iii) any direct pay permits, exemption certificates or information reasonably requested by the other Party.



## 14 TERMINATION

### 14.1 Material Breach

- (a) In the event that either Party believes that the other Party is in Material Breach of its obligations under this Agreement, such aggrieved Party may terminate this Agreement upon giving a one month's notice for curing the Material Breach to the other Party. In case the Material Breach continues, after the notice period, DGS or Bidder, as the case may be will have the option to terminate the Agreement. Any notice served pursuant to this Clause shall give reasonable details of the Material Breach, which could include the following events and the termination will become effective:
  - (i) If the Bidder is not able to deliver the services as per the SLAs defined in RFP which translates into Material Breach, then DGS may serve a 30 days written notice for curing this Material Breach. In case the Material Breach continues, after the expiry of such notice period, DGS will have the option to terminate this Agreement. Further, DGS may after affording a reasonable opportunity to the Bidder to explain the circumstances leading to such a breach.
  - (ii) If there is a Material Breach by DGS or its nominated agencies which results in not providing support for effecting data migration or not providing the certification of User Acceptance, not keeping the site ready for the work as agreed, not providing the required approvals/sign-offs due from DGS and / or failing to make payment of undisputed amount within 90 working days from date of submission of invoice, then the Bidder will give a one month's notice for curing the Material Breach to DGS. After the expiry of such notice period, the Bidder will have the option to terminate the Agreement.
- (b) DGS may by giving a one month's written notice, terminate this Agreement if a change of control of the Bidder has taken place. For the purposes of this Clause, in the case of Bidder, change of control shall mean the events stated in Clause 5.3, and such notice shall become effective at the end of the notice period as set out in Clause 5.3 (c).
- (c) In the event that Bidder undergoes such a change of control, DGS may, as an alternative to termination, require a full Performance Guarantee for the obligations of Bidder by a guarantor acceptable to DGS. If such a guarantee is not furnished within 30 days of DGS's demand, DGS may exercise its right to terminate this Agreement in accordance with this Clause by giving 15 days further written notice to the Bidder.
- (d) The termination provisions set out in this Clause shall apply mutatis mutandis to the SLA.

#### **14.2 Effects of termination**

- (a) In the event that DGS terminates this Agreement pursuant to failure on the part of the Bidder to comply with the conditions as contained in this Clause and depending on the event of default, Performance Guarantee furnished by Bidder may be forfeited.
- (b) Upon termination of this Agreement, the Parties will comply with the Exit Management Schedule set out as Schedule III of this Agreement.
- (c) In the event that DGS or the Bidder terminates this Agreement, the compensation will be decided in accordance with the Exit Management Schedule set out as Schedule III of this Agreement.
- (d) DGS agrees to pay Bidder for
  - i. all charges for Services Bidder provides and any Deliverables and/or system (or part thereof) Bidder delivers through termination till the date of termination, and
  - ii. reimbursable expenses Bidder incurs through termination
- (e) Bidder incurs as a result of such termination (which Bidder will take reasonable steps to mitigate).

#### **14.3 Termination of this Agreement due to bankruptcy of Bidder**

DGS may serve written notice on Bidder at any time to terminate this Agreement with immediate effect in the event that the Bidder reporting an apprehension of bankruptcy to DGS or its allied offices.

## 15 INDEMNIFICATION & LIMITATION OF LIABILITY

15.1 Subject to Clause 15.2 below, Bidder (the "Indemnifying Party") undertakes to indemnify DGS (the "Indemnified Party") from and against all Losses on account of bodily injury, death or damage to tangible personal property arising in favour of any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party's negligence or willful default in performance or non-performance under this Agreement. If the Indemnified Party promptly notifies Indemnifying Party in writing of a third party claim against Indemnified Party that any Service provided by the Indemnifying Party infringes a copyright, trade secret or patents incorporated in India of any third party, Indemnifying Party will defend such claim at its expense and will pay any costs or damages that may be finally awarded against Indemnified Party. Indemnifying Party will not indemnify the Indemnified Party, however, if the claim of infringement is caused by

- (a) Indemnified Party's misuse or modification of the Service;
- (b) Indemnified Party's failure to use corrections or enhancements made available by the Indemnifying Party;
- (c) Indemnified Party's use of the Service in combination with any product or information not owned or developed by Indemnifying Party;
- (d) Indemnified Party's distribution, marketing or use for the benefit of third parties of the Service; or information, direction, specification or materials provided by Indemnified Party or any third party contracted to it. If any Service is or likely to be held to be infringing, Indemnifying Party shall at its expense and option either
  - i. procure the right for Indemnified Party to continue using it,
  - ii. replace it with a non-infringing equivalent,
  - iii. modify it to make it non-infringing. The foregoing remedies constitute Indemnified Party's sole and exclusive remedies and Indemnifying Party's entire liability with respect to infringement

15.2 The indemnities set out in Clause 15.1 shall be subject to the following conditions:

- (i) the Indemnified Party as promptly as practicable informs the Indemnifying Party in writing of the claim or proceedings and provides all relevant evidence, documentary or otherwise;
- (ii) the Indemnified Party shall, at the cost of the Indemnifying Party, give the Indemnifying Party all reasonable assistance in the Defense of such claim including reasonable access to all relevant information, documentation and personnel provided that the Indemnified Party may, at its sole cost and expense, reasonably participate, through its attorneys or otherwise, in such Defense;

- (iii) if the Indemnifying Party does not assume full control over the Defense of a claim as provided in this Article, the Indemnifying Party may participate in such Defense at its sole cost and expense, and the Indemnified Party will have the right to defend the claim in such manner as it may deem appropriate, and the cost and expense of the Indemnified Party will be included in Losses;
- (iv) the Indemnified Party shall not prejudice, pay or accept any proceedings or claim, or compromise any proceedings or claim, without the written consent of the Indemnifying Party;
- (v) all settlements of claims subject to indemnification under this Clause will:
  - a. be entered into only with the consent of the Indemnified Party, which consent will not be unreasonably withheld and include an unconditional release to the Indemnified Party from the claimant or plaintiff for all liability in respect of such claim; and
  - b. include any appropriate confidentiality agreement prohibiting disclosure of the terms of such settlement;
- (vi) the Indemnified Party shall account to the Indemnifying Party for all awards, settlements, damages and costs (if any) finally awarded in favor of the Indemnified Party which are to be paid to it in connection with any such claim or proceedings;
- (vii) the Indemnified Party shall take steps that the Indemnifying Party may reasonably require to mitigate or reduce its loss as a result of such a claim or proceedings;
- (viii) in the event that the Indemnifying Party is obligated to indemnify an Indemnified Party pursuant to this Article, the Indemnifying Party will, upon payment of such indemnity in full, be subrogated to all rights and defenses of the Indemnified Party with respect to the claims to which such indemnification relates; and
- (ix) if a Party makes a claim under the indemnity set out under Clause 15.1 above in respect of any particular Loss or Losses, then that Party shall not be entitled to make any further claim in respect of that Loss or Losses (including any claim for damages).

15.3 The liability of Bidder (whether in contract, tort, negligence, strict liability in tort, by statute or otherwise) for any claim in any manner related to this Agreement, including the work, deliverables or Services covered by this Agreement, shall be the payment of direct damages only which shall in no event in the aggregate exceed one time average annual fees payable under this Agreement calculated over a reasonable period of months before the cause of action arose with respect to the work involved under the applicable Schedule/Annexure. The liability cap given under this Clause 15.3 shall not be applicable to the indemnification obligations set out in Clause 15.1 and breach of Clause 12.4 and 17.

- 15.4 In no event shall either party be liable for any consequential, incidental, indirect, special or punitive damage, loss or expenses (including but not limited to business interruption, lost business, lost profits, or lost savings) nor for any third party claims (other than those set-forth in Clause 15.1) even if it has been advised of their possible existence.
- 15.5 The allocations of liability in this Section 15 represent the agreed and bargained-for understanding of the parties and compensation for the Services reflects such allocations. Each Party has a duty to mitigate the damages and any amounts payable under an indemnity that would otherwise be recoverable from the other Party pursuant to this Agreement by taking appropriate and commercially reasonable actions to reduce or limit the amount of such damages or amounts.

## **16 FORCE MAJEURE**

### **16.1 Definition of Force Majeure**

The Bidder or DGS as the case may be, shall be entitled to suspend or excuse performance of its respective obligations under this Agreement to the extent that such performance is impeded by an event of force majeure ("Force Majeure").

### **16.2 Force Majeure events**

A Force Majeure event means any event or circumstance or a combination of events and circumstances referred to in this Clause, which:

- (a) is beyond the reasonable control of the affected Party;
- (b) such Party could not have prevented or reasonably overcome with the exercise of reasonable skill and care;
- (c) does not result from the negligence of such Party or the failure of such Party to perform its obligations under this Agreement;
- (d) is of an incapacitating nature and prevents or causes a delay or impediment in performance; and
- (e) may be classified as all or any of the following events:

Such events include:

#### **Non-Political Events**

- a) act of God, including earthquake, flood, inundation, landslide, exceptionally adverse weather conditions, storm, tempest, hurricane, cyclone, lightning, thunder, volcanic eruption, fire or other extreme atmospheric conditions;
- b) radioactive contamination or ionizing radiation or biological contamination except as may be attributable to the Service provider's use of radiation or radio-activity or biologically contaminating material;
- c) strikes, lockouts, boycotts, labor disruptions or any other industrial disturbances as the case may be not arising on account of the acts or omissions of the Bidder and which affect the timely implementation and continued operation of the Project; or
- d) any event or circumstances of a nature analogous to any of the foregoing.

#### **Political Events**

- a) Change in Law, other than any Change in Law for which relief is provided under this Agreement;
- b) expropriation or compulsory acquisition by DGS or any of their nominated agencies of any material assets or rights of the Bidder;

- c) unlawful or unauthorized revocation of, or refusal by DGS or any of their nominated agencies, Government of India or any of its agencies to renew or grant any clearance or Required Consents required by the Bidder to perform its obligations without valid cause, provided that such delay, modification, denial, refusal or revocation did not result from the Bidder's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Required Consents applied on a non-discriminatory basis;
- d) any judgment or order of any court of competent jurisdiction or statutory authority in India made against the Bidder in any proceedings for reasons other than failure of the Bidder to comply with Applicable Laws or Required Consents or on account of breach thereof, or of any contract, or enforcement of this Agreement or exercise of any of its rights under this Agreement;
- e) expropriation or compulsory acquisition by DGS or any of their nominated agencies of any material assets or rights of the Bidder;
- f) unlawful or unauthorized revocation of, or refusal by any authority other than DGS or any of their nominated agencies to renew or grant any Required Consents required by the Bidder to perform its obligations without valid cause, provided that such delay, modification, denial, refusal or revocation did not result from the Service provider's inability or failure to comply with any condition relating to grant, maintenance or renewal of such Required Consents applied on a non-discriminatory basis;
- g) any requisition of the Project by any other authority; or
- h) any requisition of the Project by DGS or any of their nominated agencies.
- i) For the avoidance of doubt, suspension of the Project in accordance with the provisions of this Agreement shall not be considered a requisition for the purposes of Force Majeure event.

**Other Events**

- j) an act of war (whether declared or undeclared), hostilities, invasion, armed conflict or act of foreign enemy, blockade, embargo, prolonged riot, insurrection, terrorist or military action, civil commotion or politically motivated sabotage, for a continuous period exceeding seven (7) days.

For the avoidance of doubt, it is expressly clarified that the failure on the part of the Bidder under this Agreement or the SLA to implement any disaster contingency planning and back-up and other data safeguards in accordance with the terms of this Agreement or the SLA against natural disaster, fire, sabotage or other similar occurrence shall not be deemed to be a Force Majeure event. For the avoidance of doubt, it is further clarified that any negligence in performance of Services which directly causes any breach of security like hacking aren't the forces of nature and hence wouldn't be qualified under the definition of "Force Majeure". *In so far as applicable to the performance of Services, Bidder will be solely responsible to complete the risk assessment and ensure implementation of adequate security hygiene, best practices, processes and technology to prevent any breach of security and any resulting liability there from (wherever applicable).*

### 16.3 Notification procedure for Force Majeure

- (a) The affected Party shall notify the other Party of a Force Majeure event within seven (7) days of occurrence of such event. If the other Party disputes the claim for relief under Force Majeure it shall give the claiming Party written notice of such dispute within thirty (30) days of such notice. Such dispute shall be dealt with in accordance with the dispute resolution mechanism in accordance with Clause
- (b) Upon cessation of the situation which led the Party claiming Force Majeure, the claiming Party shall within seven (7) days hereof notify the other Party in writing of the cessation and the Parties shall as soon as practicable thereafter continue performance of all obligations under this Agreement.

### 16.4 Allocation of costs arising out of Force Majeure

- (a) Upon the occurrence of any Force Majeure Event prior to the Effective Date, the Parties shall bear their respective costs and no Party shall be required to pay to the other Party any costs thereof.
- (b) Upon occurrence of a Force Majeure Event after the Effective Date, the costs incurred and attributable to such event and directly relating to the Project ("**Force Majeure Costs**") shall be allocated and paid as follows:
  - upon occurrence of a Non-Political Event, the Parties shall bear their respective Force Majeure Costs and neither Party shall be required to pay to the other Party any costs thereof.
  - upon occurrence of an Other Event of Force Majeure, all Force Majeure Costs attributable to such Other Event, and not exceeding the Insurance Cover for such Other Event, shall be borne by the Implementation Agency and to the extent Force Majeure costs exceed such Insurance Cover, one half of such excess amount shall be reimbursed by Nodal Agency to the Implementation Agency (optional clause – to be used, if relevant).



- upon occurrence of a Political Event, all Force Majeure Costs attributable to such Political Event shall be reimbursed by DGS to the Implementation Agency.
- For the avoidance of doubt, Force Majeure Costs may include interest payments on debt, operation and maintenance expenses, any increase in the cost of the Services on account of inflation and all other costs directly attributable to the Force Majeure Event.
- Save and except as expressly provided in this Clause, neither Party shall be liable in any manner whatsoever to the other Party in respect of any loss, damage, costs, expense, claims, demands and proceedings relating to or arising out of occurrence or existence of any Force Majeure Event or exercise of any right pursuant hereof.

#### **16.5 Consultation and duty to mitigate**

Except as otherwise provided in this Clause, the affected Party shall, at its own cost, take all steps reasonably required to remedy and mitigate the effects of the Force Majeure event and restore its ability to perform its obligations under this Agreement as soon as reasonably practicable. The Parties shall consult with each other to determine the reasonable measures to be implemented to minimize the losses of each Party resulting from the Force Majeure event. The affected Party shall keep the other Parties informed of its efforts to remedy the effect of the Force Majeure event and shall make reasonable efforts to mitigate such event on a continuous basis and shall provide written notice of the resumption of performance

hereunder a continuous basis and shall provide written notice of the resumption of performance hereunder

## **17 CONFIDENTIALITY**

- 17.1 DGS shall allow the Bidder to review and utilize highly confidential public records and the Bidder shall maintain the highest level of secrecy, confidentiality and privacy with regard thereto.
- 17.2 Additionally, the Bidder shall keep confidential all the details and information with regard to the Project, including systems, facilities, operations, management and maintenance of the systems/facilities.
- 17.3 DGS shall retain all rights to prevent, stop and if required take the necessary punitive action against the Bidder regarding any forbidden disclosure.
- 17.4 The Bidder shall ensure that all its employees, agents and sub-contractors execute individual non-disclosure agreements, which have been duly approved by DGS with respect to this Project.

For the avoidance of doubt, it is expressly clarified that the aforesaid provisions shall not apply to the following information:

- (a) information already available in the public domain;
  - (b) information which has been developed independently by the Bidder;
  - (c) information which has been received from a third party who had the right to disclose the aforesaid information;
  - (d) Information which has been disclosed to the public pursuant to a court order.
- 17.5 To the extent the Bidder shares its confidential or proprietary information with DGS for effective performance of the Services, the provisions of the Clause 17.1 to 17.3 shall apply mutatis mutandis on DGS.

## 18 AUDIT, ACCESS AND REPORTING

The Bidder shall allow access to DGS to all information which is in the possession or control of the Bidder and which relates to the provision of the Services as set out in the System Audit, Access and Reporting Schedule and which is reasonably required by DGS to comply with the terms of the Audit, Access and Reporting Schedule set out as Schedule IV of this Agreement.

## 19 INTELLECTUAL PROPERTY RIGHTS

- 19.1 Products and fixes: All products and related solutions and fixes provided pursuant to this work order shall be licensed according to the terms of the license agreement packaged with or otherwise applicable to such product. Bidder would be responsible for arranging any licenses associated with products. "Product" means any computer code, web-based services, or materials comprising commercially released, pre-release or beta products (whether licensed for a fee or no charge) and any derivatives of the foregoing which are made available to DGS for license which is published by product owner or its affiliates, or a third party. "Fixes" means product fixes that are either released generally (such as commercial product service packs) or that are provided to you when performing services (such as workarounds, patches, bug fixes, beta fixes and beta builds) and any derivatives of the foregoing.
- 19.2 Bespoke development: Subject to the provisions of Clause 19.3 and 19.4 below, upon payment, the IPR rights for any bespoke development done during the implementation of the project will lie with DGS. The bidder shall provide source code, object code and all other relevant materials, artefacts etc of all bespoke development to DGS and DGS shall own all the IPR's in them. All material related to such bespoke development shall be treated as confidential information by the bidder.
- 19.3 Pre-existing work: For the purpose of this Agreement, 'pre-existing work' shall mean such pre-existing work of bidder and that of its subcontractors, agents, representatives:
- i. that were identified by the bidder in its Proposal
  - ii. for which bidder had provided sufficient documentary proof to establish that such work belongs solely to bidder (or its subcontractors, agents, representatives)
  - iii. which were accepted by DGS (based on the documentary proof) as pre-existing work of bidder.

All IPR including the source code and materials developed or otherwise obtained independently of the efforts of a Party under this Agreement ("pre-existing work") including any enhancement or modification thereto shall remain the sole property of that Party. During the performance of the services for this agreement, each party grants to the other party (and their subcontractors as necessary) a non-exclusive license to use, reproduce and modify any of its pre-existing work provided to the other party solely for the performance of such services for duration of the Term of this Agreement. Except as may be otherwise explicitly agreed to in a statement of services, upon payment in full, the Implementation Agency should grant Purchaser a non-exclusive,

perpetual, fully paid-up license to use the pre-existing work in the form delivered to Purchaser as part of the service or deliverables only for its internal business operations. Under such license, either of parties will have no right to sell the pre-existing work of the other party to a Third Party. Purchaser's license to pre-existing work is conditioned upon its compliance with the terms of this Agreement and the perpetual license applies solely to the pre-existing work that bidder leaves with Purchaser at the conclusion of performance of the services

- 19.4 Residuals: In no event shall Bidder be precluded from independently developing for itself, or for others, anything, whether in tangible or non-tangible form, which is competitive with, or similar to, the deliverables, set-out in this Agreement or Annexure. In addition, subject to the confidentiality obligations, Bidder shall be free to use its general knowledge, skills and experience, and any ideas, concepts, know-how, and techniques that are acquired or used in the course of providing the Services.
- 19.5 Training and other material: The ownership of all IPR rights in any and all documents, artefacts, etc. (including all training material) made during the Term for implementation of the Project under this Agreement will lie with DGS.

## 20 WARRANTY

- 20.1 Standard: The Bidder warrants that the Project, including all the system(s) and other Services provided, shall be free from any defect or deficiency in the material, design, engineering, and performance/workmanship that prevent the Project and/or any of its systems(s) from fulfilling the technical requirements or that limit in a material fashion the performance, reliability, or extensibility of the Project and/or any of its system(s) as per the performance guarantee / warranty period defined in the Schedule. If during the warranty period any defect or deficiency is found in the material, design and performance/workmanship of the Project and other Services provided by the Bidder, the Bidder shall promptly, in consultation and agreement with DGS, and at the Service provider's sole cost repair, replace, or otherwise make good (as the Implementation Agency shall, at its discretion, determine) such default, defect or deficiency as well as any damage to the Project caused by such default, defect or deficiency. Any defective system that has been replaced by the Bidder shall remain the property of the Bidder. However, damaged hard disks and storage media shall be retained by the department and the data on the damaged disk shall be made non recoverable. If the Project or any of its System cannot be used by reason of such default, defect or deficiency and/or making good of such default, defect or deficiency, the warranty period for the Project shall be extended by a period equal to the period during which the Project or any of its system could not be used by DGS because of such defect and/or making good of such default, defect or deficiency.
- 20.2 Implied Warranty: The warranties provided herein are in lieu of all other warranties, both express and implied, and all other warranties, including without limitation that of merchantability or fitness for intended purpose is specifically disclaimed. The Bidder shall have no liability in the case of breach of this warranty due to :
- (i) use of the deliverables on any environment (hardware or software) other than the environment recommended or approved by the Bidder,
  - (ii) the combination, operation, or use of some or all of the deliverables with information, software, specifications, instructions, data, or materials not approved by the Bidder;
  - (iii) the deliverables having been tampered with, altered or modified by DGS without the written permission of the Bidder, or
  - (iv) use of the deliverables otherwise than in terms of the relevant documentation.

## **21 LIQUIDATED DAMAGES**

Time is the essence of the Agreement and the delivery dates are binding on the Bidder. In the event of delay or any gross negligence, for causes attributable to the Bidder, in meeting the implementation phase timelines, DGS shall be entitled at its option to recover from the Bidder as agreed, liquidated damages, a sum of 0.5% of the Gross Quarterly Payout for each completed week or part thereof subject to a limit of 10% of the Total Contract value.

## **22 INSURANCE COVER**

### **22.1 Obligation to maintain insurance**

In connection with the provision of the Services, the Bidder must have and maintain

- (a) for the Agreement Period, valid and enforceable insurance coverage for
  - (i) public liability;
  - (ii) either professional indemnity or errors and omissions;
  - (iii) product liability;
  - (iv) workers compensation as required by law; and

### **22.2 Certificates of currency**

The Bidder must, on request by DGS, provide current relevant confirmation of insurance documentation from its insurance brokers certifying that it has insurance as required by this Clause 22. The Bidder agrees to replace any coverage prior to the date of expiry/cancellation.

### **22.3 Non-compliance**

DGS may, at its election, terminate this Agreement upon the failure of Bidder, or notification of such failure, to maintain the required insurance coverage. Inadequate insurance coverage for any reason shall not relieve Bidder of its obligations under this Agreement.

## **23 ESCROW AGREEMENT**

23.1 Bidder shall comply with the escrow provisions below for all Public Material and Proprietary Vendor Material (including subcontractor-owned materials and other Third Party Material incorporated in bidder's Proprietary Material), except to the extent Bidder demonstrates to the satisfaction of DGS that compliance is not permitted by the nature of Bidder's limited rights in such material.

- 23.2 Within ninety (90) days after the DGS' s acceptance of the Solution, the Parties shall enter into a software escrow agreement ("Escrow Agreement") with a reputable, independent, third party that provides software escrow services among its principal business offerings ("Escrow Agent"). The Escrow Agreement shall provide for the regular deposit into escrow of all source code (including without limitation all make files, configurationally files, data tables upon which execution is Code, and (b) a list of all non- deposited third party software used in conjunction with the Source Code to provide the full functionality of the deposited materials. In the event of the termination or expiration of the initial Escrow Agreement or any successor agreement, with minimal delay the Parties shall enter into a substantially equivalent agreement with a successor provider of software escrow services (who shall then be known as the "Escrow Agent")
- 23.3 Bidder will make its initial deposit of Source Code within fifteen (15) days after the effective date of the Escrow Agreement.
- 23.4 Bidder shall periodically update the escrow deposit as the Parties shall agree in the Escrow Agreement. In addition to other usual and customary terms, the Escrow Agreement shall provide that the DGS shall be entitled to obtain the deposited materials from escrow upon the DGS's making a proper (what is proper)claim for release from a and b is not defined escrow in the event that (c) proper written notice is given to the Escrow Agent that release of the copy of the deposited materials is pursuant to applicable Central or Not clear, DGS bankruptcy, insolvency, reorganization, or liquidation statute; (d) Bidder files articles of dissolution (but not if Bidder is consolidated or merged into another entity); (e) the Contract expires or terminates for Material Breach of Bidder.
- 23.5 The release of deposited materials from escrow shall not confer upon the DGS any right of ownership in the deposited materials or the underlying intellectual property embodied therein. In the event of the release of deposited materials to the DGS from escrow, the DGS shall use the deposited materials solely for the benefit of the DGS and its constituents.
- 23.6 The release of materials from escrow, without more, shall not cause any further amounts to accrue as payable to Bidder by DGS and the term of the DGS's possessory and usage rights with respect to the released materials shall be perpetual.
- 23.7 The Escrow Agreement shall provide for its automatic termination upon the earlier of five (5) years after the expiration or termination of this Contract, or, release of all Source Code to DGS and DGS's subsequent confirmation of compliance with the terms of the Escrow Agreement. B shall pay the escrow costs, as well as all costs associated with causing its subcontractors and other third parties to abide by the Escrow Agreement.

## **24 MISCELLANEOUS**

### **24.1 Personnel**

- (a) The personnel assigned by Bidder to perform the Services shall be employees of Bidder or its subcontractor(s), and under no circumstances shall such personnel be considered employees of DGS. The Bidder shall have the sole responsibility for the supervision and control of the personnel deployed in the Project and for payment of such personnel's compensation, including salary, withholding of income taxes and social security taxes, worker's compensation, employee and disability benefits and the like and shall be responsible for all obligations of an employer subject to Applicable Law.
- (b) The Bidder shall use its best efforts to ensure that sufficient Bidder personnel are assigned to perform the Services and those personnel have appropriate qualifications to perform the Services. After discussion with Bidder, DGS shall have the right to require the removal or replacement of any Bidder personnel performing work under this Agreement based on bonafide reasons. In the event that DGS requests that any Bidder personnel be replaced, the substitution of such personnel shall be accomplished pursuant to a mutually agreed upon schedule.
- (c) In the event that DGS and Bidder identify any personnel of Bidder as "Key Personnel", then the Bidder shall not remove such personnel from the Project without the prior written consent of DGS unless such removal is the result of an unavoidable circumstance including but not limited to resignation, termination, medical leave, etc.
- (d) Except as stated in this Clause, nothing in this Agreement or the SLA will limit the ability of Bidder to freely assign or reassign its employees; provided that Bidder shall be responsible, at its expense, for transferring all appropriate knowledge from personnel being replaced to their replacements. DGS shall have the right to review and approve Bidder's plan for any such knowledge transfer. Bidder shall maintain the same or higher standards for skills and professionalism among replacement personnel as in personnel being replaced.
- (e) Each Party shall be responsible for the performance of all its obligations under this Agreement or the SLA as the case may be and shall be liable for the acts and omissions of its employees and agents in connection therewith.
- (f) Neither Party will solicit for employment or knowingly hire an employee of the other Party with whom such Party has contact pursuant to project engagements under this Agreement. This restriction shall not apply to employees of either Party responding to advertisements in job fairs or news media circulated to the general public.

### **24.2 Independent Contractor**



Nothing in this Agreement or the SLA shall be construed as establishing or implying any partnership or joint venture between the Parties to this Agreement or the SLA and, except as expressly stated in this Agreement or the SLA, nothing in this Agreement or the SLA shall be deemed to constitute any Parties as the agent of any other Party or authorizes either Party to:

- (a) incur any expenses on behalf of the other Party;
- (b) enter into any engagement or make any representation or warranty on behalf of the other Party;
- (c) pledge the credit of or otherwise bind or oblige the other Party; or
- (d) Commit the other Party in any way whatsoever without in each case obtaining the other Party's prior written consent.

#### **24.3 Sub-contractors**

Bidder shall not subcontract any work without DGS's prior written consent. However the Bidder shall provide the list of all the other services planned to be sub contracted, within 30 days of signing the Agreement. It is clarified that the Bidder shall be the principal employer for all claims arising from the liabilities statutory or otherwise, concerning the sub-contractors. The Service provider undertakes to indemnify DGS from any claims on the grounds stated hereinabove.

#### **24.4 Assignment**

- (a) All terms and provisions of this Agreement shall be binding on and shall inure to the benefit of DGS and their respective successors and permitted assigns.
- (b) Subject to Clause 5.3, the Bidder shall not be permitted to assign its rights and obligations under this Agreement to any third party.
- (c) DGS may assign or novate all or any part of this Agreement and Schedules/Annexures, and the Bidder shall be a party to such novation, to any third party contracted to provide outsourced services to DGS or any of its nominees.

#### **24.5 Trademarks, Publicity**

Neither Party may use the trademarks of the other Party without the prior written consent of the other Party except that Bidder may, upon completion, use the Project as a reference for credential purpose. Except as required by law or the rules and regulations of each stock exchange upon which the securities of one of the Parties is listed, neither Party shall publish or permit to be published either along or in conjunction with any other person any press release, information, article, photograph, illustration or any other material of whatever kind relating to this Agreement, the SLA or the business of the Parties without prior reference to and approval in writing from the other Party, such approval not to be unreasonably withheld or delayed provided however that Bidder may include DGS or its client lists for reference to third parties subject to the prior written consent of DGS not to be unreasonably withheld or delayed. Such approval shall apply to each specific case and relate only to that case.

#### 24.6 Notices

- (a) Any notice or other document which may be given by either Party under this Agreement or under the SLA shall be given in writing in person or by pre-paid recorded delivery post, email or by facsimile transmission.
- (b) In relation to a notice given under this Agreement, any such notice or other document shall be addressed to the other Party's principal or registered office address as set out below:

Name: XXXXX

<< ADDRESS>>

Email:

Tel:

Fax:

With a copy to:

Bidder

Tel:

Fax:

Email:

Contact:

- (c) In relation to a notice given under the MSA / SLA, a Party shall specify the Parties' address for service of notices, any such notice to be copied to the Parties at the addresses set out in this Clause.
- (d) Any such notice or other document shall be deemed to have been given to the other Party (or, if relevant, its relevant associated company) when delivered (if delivered in person) if delivered between the hours of 9.30 am and 6.00 pm at the address of the other Party set forth above or if sent by fax, provided the copy fax is accompanied by a confirmation of transmission, or on the next working day thereafter if delivered outside such hours, and 7 days from the date of posting (if by letter).
- (e) Either Party to this Agreement or to the SLA may change its address, telephone number, facsimile number and nominated contact for notification purposes by giving the other reasonable prior written notice of the new information and its effective date.

#### **24.7 Variations and Further Assurance**

- (a) No amendment, variation or other change to this Agreement or the SLA shall be valid unless authorized in accordance with the change control procedure as set out in the Change Control Schedule set out in Schedule II of this Agreement. Such amendment shall be made in writing and signed by the duly authorized representatives of the Parties to this Agreement or the SLA.
- (b) Each Party to this Agreement or the SLA agrees to enter into or execute, without limitation, whatever other agreement, document, consent and waiver and to do all other things which shall or may be reasonably required to complete and deliver the obligations set out in this Agreement or the SLA.

#### **24.8 Severability and Waiver**

- (a) If any provision of this Agreement or the SLA, or any part thereof, shall be found by any court or administrative body of competent jurisdiction to be illegal, invalid or unenforceable the illegality, invalidity or unenforceability of such provision or part provision shall not affect the other provisions of this Agreement or the SLA or the remainder of the provisions in question which shall remain in full force and effect. The relevant Parties shall negotiate in good faith in order to agree to substitute for any illegal, invalid or unenforceable provision a valid and enforceable provision which achieves to the greatest extent possible the economic, legal and commercial objectives of the illegal, invalid or unenforceable provision or part provision.
- (b) No failure to exercise or enforce and no delay in exercising or enforcing on the part of either Party to this Agreement or the SLA of any right, remedy or provision of this Agreement or the SLA shall operate as a waiver of such right, remedy or provision in any future application nor shall any single or partial exercise or enforcement of any right, remedy or provision preclude any other or further exercise or enforcement of such right, remedy or provision or the exercise or enforcement of any other right, remedy or provision.

#### **24.9 Compliance with Applicable Law**

Each Party to this Agreement accepts that its individual conduct shall (to the extent applicable to its business like the Bidder as an information technology service provider) at all times comply with all laws, rules and regulations of government and other bodies having jurisdiction over the area in which the Services are undertaken provided that changes in such laws, rules and regulations which result in a change to the Services shall be dealt with in accordance with the Change Control Schedule set out in Schedule II of this Agreement.

#### **24.10 Professional Fees**

All expenses incurred by or on behalf of each Party to this Agreement and the SLA, including all fees of agents, legal advisors, accountants and actuaries employed by either of the Parties in connection with the negotiation, preparation and execution of this Agreement or the SLA shall be borne solely by the Party which incurred them.

#### **24.11 Ethics**

The Bidder represents, warrants and covenants that it has given no commitments, payments, gifts, kickbacks, lavish or expensive entertainment, or other things of value to any employee or agent of DGS in connection with this agreement and acknowledges that the giving of any such payment, gifts, entertainment, or other things of value is strictly in violation of DGS standard policies and may result in cancellation of this Agreement, or the SLA.

#### **24.12 Entire Agreement**

This Agreement and the SLA with all schedules & annexures appended thereto and the contents and specifications of the RFP constitute the entire agreement between the Parties with respect to their subject matter, and as to all other representations, understandings or agreements which are not fully expressed herein, provided that nothing in this Clause shall be interpreted so as to exclude any liability in respect of fraudulent misrepresentation.

#### **24.13 Amendment**

Any amendment to this Agreement shall be made in accordance with the Change Control Schedule set out in Schedule II of this Agreement by mutual written consent of all the Parties.

### **25 GOVERNING LAW AND DISPUTE RESOLUTION**

25.1 This Agreement shall be governed by and construed in accordance with the laws of India, without giving effect to conflict of law rules.

25.2 Any dispute arising out of or in connection with this Agreement or the SLA shall in the first instance be dealt with in accordance with the escalation procedure as set out in the Governance Schedule set out as Schedule V of this Agreement.

25.3 In case the escalations do not help in resolution of the problem within 3 weeks of escalation, both the parties should agree on a mediator for communication between the two parties. The process of the mediation would be as follows:

- Aggrieved party should refer the dispute to the identified mediator in writing, with a copy to the other party. Such a reference should contain a description of the nature of the dispute, the quantum in dispute (if any) and the relief or remedy sought suitable.
- The mediator shall use his best endeavors to conclude the mediation within a certain number of days of his appointment.
- If no resolution can be reached through mutual discussion or mediation within 30 days then the matter should be referred to Experts for advising on the issue.

25.4 In case the mediation does not help in resolution and it requires expertise to understand an issue, a neutral panel of 3 experts, agreeable to both parties should be constituted. The process of the expert advisory would be as follows:

- Aggrieved party should write to the other party on the failure of previous alternate dispute resolution processes within the timeframe and requesting for expert advisory. This is to be sent with a copy to the mediator.
- Both parties should thereafter agree on the panel of experts who are well conversant with the issue under dispute
- The expert panel shall use his best endeavors to provide a neutral position on the issue.
- If no resolution can be reached through the above means within 30 days then the matter should be referred to Arbitration.

- 25.5 Any dispute or difference whatsoever arising between the parties to this Contract out of or relating to the construction, meaning, scope, operation or effect of this Contract or the validity of the breach thereof shall be referred to a sole Arbitrator to be appointed by mutual consent of both the parties herein. If the parties cannot agree on the appointment of the Arbitrator within a period of one month from the notification by one party to the other of existence of such dispute, then the Arbitrator shall be appointed by the High Court of Bombay, India. The provisions of the Arbitration and Conciliation Act, 1996 will be applicable and the award made there under shall be final and binding upon the parties hereto, subject to legal remedies available under the law. Such differences shall be deemed to be a submission to arbitration under the Indian Arbitration and Conciliation Act, 1996, or of any modifications, Rules or re-enactments thereof. The Arbitration proceedings will be held at Bombay, India. Any legal dispute will come under the sole jurisdiction of Bombay, India / State jurisdiction of Maharashtra, India
- 25.6 Compliance with laws: Each party will comply with all applicable export and import laws and regulations.
- 25.7 Risk of Loss: For each hardware item, Bidder bears the risk of loss or damage up to the time it is delivered to the Bidder/DGS-designated carrier for shipment to DGS or DGS's designated location.
- 25.8 Third party components: Bidder will provide all third party components solely on a pass-through basis in accordance with the relevant third party terms and conditions.

IN WITNESS WHEREOF the Parties have by duly authorized

Representatives set their respective hands and seal on the date first above

Written in the presence of:

WITNESSES:

Signed by:

(Name and designation) For and on behalf of DGS

(FIRST PARTY)

Signed by:

(Name and designation)

BIDDER

(SECOND PARTY)

(Name and designation) For and on behalf of Bidder

Signed by:

<b>SCHEDULE I – DEFINITIONS</b>	
<b>Adverse Effect</b>	means material adverse effect on  (a) the ability of the Bidder to exercise <b>any</b> of its rights or perform/discharge any of its duties/obligations under and in accordance with the provisions of this Agreement and/or  (b) the legal validity, binding nature or enforceability of this Agreement;
<b>Agreement</b>	means this Master Services Agreement, Service Level Agreement and Non-Disclosure Agreement together with all Articles, Annexures, Schedules and the contents and specifications of the RFP;
<b>Applicable Law(s)</b>	means any statute, law, ordinance, notification, rule, regulation, judgment, order, decree, bye-law, approval, directive, guideline, policy, requirement or other governmental restriction or any similar form of decision applicable to the relevant party and as may be in effect on the date of the execution of this Agreement and during the subsistence thereof, applicable to the Project;
<b>Assets</b>	shall have the same meaning ascribed to it in Clause 10.1 (a)
<b>Software</b>	means the software designed, developed / customized, tested and deployed by the Bidder for the purposes of the Project and includes the source code (in case of Bespoke development) along with associated documentation, which is the work product of the development efforts involved in the Project and the improvements and enhancements effected during the term of the Project, but does not include the third party software products (including the COTS products used for the product), proprietary software components and tools deployed by the Bidder;
<b>Business Hours</b>	shall mean the working time for DGS users which is 9:30 AM to 6:00 PM. Again for Web Server and other components which enable successful usage of web portals of DGS the working time should be considered as 24 hours for all the days of the week. It is desired that IT maintenance, other batch processes (like backup) etc. should be planned so that such backend activities have minimum effect on the performance;
<b>Certificate(s) of Compliance</b>	Shall have the same meaning ascribed to it in Clause 5.4;



SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

<b>Confidential Information</b>	means all information including DGS Data (whether in written, oral, electronic or other format) which relates to the technical, financial and business affairs, dealers, suppliers, products, developments, operations, processes, data, trade secrets, design rights, know-how, plans, budgets and personnel of each Party and its affiliates which is disclosed to or otherwise learned by the other Party in the course of or in connection with this Agreement (including without limitation such information received during negotiations, location visits and meetings in connection with this Agreement);
<b>Control</b>	means, in relation to any business entity, the power of a person to secure (i) by means of the holding of shares or the possession of voting power in or in relation to that or any other business entity, or (ii) by virtue of any powers conferred by the articles of association or other document regulating that or any other business entity, that the affairs of the first mentioned business entity are conducted in accordance with that person's wishes and in relation to a partnership, means the right to a share of more than one half of the assets, or of more than one half of the income, of the partnership;
<b>Deliverables</b>	means the products, infrastructure and services agreed to be delivered by the Bidder in pursuance of the agreement as defined more elaborately in the RFP, Implementation and the Maintenance phases and includes all documents related to the user manual, technical manual, design, process and operating manuals, service mechanisms, policies and guidelines (such as security related, data migration related), inter alia payment and/or process related etc., source code and all its modifications;
<b>Proprietary Information</b>	shall have the same meaning ascribed to it in Clause 19.1
<b>Effective Date</b>	shall have the same meaning ascribed to it in Clause 3.1;
<b>DGS Data</b>	means all proprietary data of the department or its nominated agencies generated out of operations and transactions, documents all taxpayers data and related information including but not restricted to user data which the Bidder obtains, possesses or processes in the context of providing the Services to the users pursuant to this Agreement;
<b>Final Acceptance Test</b>	shall be conducted on completion of the following: 1) UAT of the overall integrated solution and portal.

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

<b>Final Testing and Certification Agency</b>	shall have the same meaning ascribed to it in Clause 5.4;
<b>Force Majeure</b>	shall have the same meaning ascribed to it in Clause 16.1;
<b>Force Majeure Costs</b>	shall have the same meaning ascribed to it in Clause 16.4 (b);
<b>Gol</b>	means the Government of India;
<b>Indemnifying Party</b>	shall have the same meaning ascribed to it in Clause 15.1;
<b>Indemnified Party</b>	shall have the same meaning ascribed to it in Clause 15.1;
<b>Intellectual Property Rights</b>	means all rights in written designs and copyrights, moral rights, rights in databases and Bespoke Software / Pre-existing work including its up-gradation systems and compilation rights (whether or not any of these are registered and including application for registration);
<b>Escrow Agreement</b>	An agreement that pursuant to Clause 23 provides for the regular deposit into escrow of all source code, object code, and documentation with respect to all public material and Service Provider's proprietary material (and cumulative updates thereof), together with (a) continually updated instructions as to the compilation, installation, configuration, deployment and use of the Source Code, and (b) a list of all non-deposited third party software used in conjunction with the Source Code to provide the full functionality of the deposited materials.
<b>Insurance Cover</b>	<p>Public liability insurance for an insured amount of [INR 1 lakh] per occurrence and not less than [INR 1 crore] in aggregate</p> <ul style="list-style-type: none"> <li>- Either professional indemnity or errors and omissions insurance for an insured amount of [INR 1 lakh] per occurrence and not less than [INR 1 crore] in aggregate.</li> <li>- Product liability for an insured amount of [INR 1 lakh] per occurrence and not less than [INR 1 crore] in aggregate.</li> <li>- Workers compensation as required by law</li> </ul>
<b>Additional Insurance</b>	Not Applicable

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

<b>Material Breach</b>	means a breach by either Party (DGS or Bidder) of any of its obligations under this Agreement which has or is likely to have an Adverse Effect on the Project which such Party shall have failed to cure;
<b>Required Deliverables</b>	shall have the same meaning ascribed to it in Volume I of the RFP;
<b>Parties</b>	means DGS and Bidder for the purposes of this Agreement and “ <b>Party</b> ” shall be interpreted accordingly;
<b>Performance Bank Guarantee</b>	Means the guarantee provided by a Nationalized / Scheduled Bank in favour of the Bidder. The amount of Performance Bank Guarantee shall be 10% of the total contract value. This Performance Bank Guarantee shall be valid from the date of execution of contract or an earlier date and shall continue till sixty days after the completion of all contractual liabilities including warranty obligations and defect liability period as per CVC guidelines;
<b>Planned Application Downtime</b>	means the unavailability of the application services due to maintenance activities such as configuration changes, upgradation or changes to any supporting infrastructure wherein prior intimation (at least two working days in advance) of such planned outage shall be given and approval sought from DGS as applicable;
<b>Planned network outage</b>	means the unavailability of the network services due to infrastructure maintenance activities such as configuration changes, upgradation or changes to any supporting infrastructure. Prior intimation of such planned outage shall be given and approval sought from DGS as applicable and shall be notified at least two working days;
<b>Project</b>	means Project Implementation (roll out) and Maintenance in terms of the Agreement;
<b>Project Implementation</b>	means Project Implementation as per the testing standards and acceptance criteria prescribed by DGS or its nominated agencies;
<b>Project Implementation Phase</b>	shall be from the Effective Date of the Agreement to the date of final acceptance testing & certification as set out in Clause 5.4 of this Agreement;
<b>Project Implementation Unit (PIU)</b>	shall be constituted by DGS to monitor the activities, deliverables and progress of the Project.;

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

<b>Project Timelines</b>	shall have the same meaning ascribed to in Annexure C;
<b>Providing Party</b>	shall have the same meaning ascribed to it in Clause 12.5;
<b>Receiving Party</b>	shall have the same meaning ascribed to it in Clause 12.5;
<b>Replacement Bidder</b>	means any third party that DGS or its allied offices appoint to replace Bidder upon expiry of the Term or termination of this Agreement to undertake the Services or part thereof;
<b>Required Consents</b>	means the consents, waivers, clearances and licenses to use DGS's Intellectual Property Rights, rights and other authorizations as may be required to be obtained for the software and other items that DGS or their allied offices are required to make available to Bidder pursuant to this Agreement;
<b>Services</b>	means the services delivered to the Stakeholders of DGS or its allied offices, employees of DGS or its allied offices, and to professionals, using the tangible and intangible assets created, procured, installed, managed and operated by the Bidder including the tools of information and communications technology and includes but is not limited to the list of services specified in Annexure B;
<b>Service Level</b>	means the level of service and other performance criteria which will apply to the Services delivered by the Service provider
<b>SLA</b>	means the Performance and Maintenance SLA executed as part of this Master Service (MSA) Agreement;
<b>Term</b>	shall have the same meaning ascribed to it in Clause 3.1;
<b>Third Party Systems</b>	means systems (or any part thereof) in which the Intellectual Property Rights are not owned by DGS or Bidder and to which Bidder has been granted a license to use and which are used in the provision of Services;
<b>Unplanned Application Downtime</b>	means the total time for all the instances where services in the software requirement specification document prepared by the Implementation Agency are not available for more than 5 consecutive minutes;
<b>Application</b>	means the software application developed as a part of scope of work set out in Clause 2.1

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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<b>Application Downtime</b>	means the time for which user/s is not able to access the application. However, in calculating downtime, scheduled downtime (for example, backup time, batch processing time, routine maintenance time) would not be considered;
<b>Warranty / AMC Period</b>	The warranty shall be at least one year beyond the service period of the project for all hardware, software and other components comprising of the solution and any extended period notified by DGS.
<b>Safety and Security</b>	Shall, in addition to those specified in 12.4, include the requirements specified in Volume – II of the RFP.
<b>Value of the Project / Cost of the Project / Project Cost</b>	shall have the same meaning ascribed to it in Volume – I of the RFP

## **SCHEDULE II – CHANGE CONTROL SCHEDULE**

This Schedule describes the procedure to be followed in the event of any proposed change to the Master Service Agreement (“**MSA**”), Project Implementation Phase, SLA and Scope of Work and Functional Requirement Specifications. Such change shall include, but shall not be limited to, changes in the scope of services provided by the Bidder and changes to the terms of payment as stated in the Terms of Payment Schedule.

DGS and Bidder recognize that frequent change is an inevitable part of delivering services and that a significant element of this change can be accomplished by re-organizing processes and responsibilities without a material effect on the cost. The Bidder will endeavor, wherever reasonably practicable, to effect change without an increase in the terms of payment as stated in the Terms of Payment Schedule and DGS will work with the Bidder to ensure that all changes are discussed and managed in a constructive manner. This Change Control Schedule sets out the provisions which will apply to all the changes to this agreement and other documents except for the changes in SLAs for which a separate process has been laid out in Clause 12 of the SLA Agreement.

### **CHANGE MANAGEMENT PROCESS**

#### **CHANGE CONTROL NOTE ("CCN")**

- (i) Change requests in respect of the MSA, the Project Implementation, the operation, the SLA or Scope of work and Functional Requirement specifications will emanate from the Parties' respective Project Manager who will be responsible for obtaining approval for the change and who will act as its sponsor throughout the Change Control Process and will complete Part A of the CCN attached as Annexure A hereto. CCNs will be presented to the other Party's Project Manager who will acknowledge receipt by signature of the CCN.
- (ii) The Bidder and DGS, during the Project Implementation Phase and DGS during the Operations and Management Phase and while preparing the CCN, shall consider the change in the context of the following parameter, namely whether the change is beyond the scope of services including ancillary and concomitant services required and as detailed in the RFP and is suggested and applicable only after the testing, commissioning and certification of the Pilot Phase and the Project Implementation Phase as set out in this Agreement.
- (iii) It is hereby also clarified here that any change of control suggested beyond 20 % of the value of this Project will be beyond the scope of the change control process and will be considered as the subject matter for a separate bid process and a separate contract. It is hereby clarified that the 20% of the value of the Project as stated in herein above is calculated on the basis of bid value submitted by the Bidder and accepted by DGS or its nominated agencies or as decided and approved by DGS or its Nominated Agencies. For arriving at the cost / rate for change upto 20% of the project value, the payment terms and relevant rates as specified in Annexure D shall apply.

- (iv) The SLAs defined in this contract are subject to modifications/amendments in view of the annual review or to meet any other project requirements. Any such change in SLA will not be considered as a change request.

**a. Quotation**

- (i) The Implementing Agency shall assess the CCN and complete Part B of the CCN, in completing the Part B of the CCN the MSP shall provide as a minimum:
  - 1. a description of the change
  - 2. a list of deliverables required for implementing the change;
  - 3. a time table for implementation;
  - 4. an estimate of any proposed change
  - 5. any relevant acceptance criteria
  - 6. an assessment of the value of the proposed change;
  - 7. Material evidence to prove that the proposed change is not already covered within the Agreement and the scope of work
- (ii) Prior to submission of the completed CCN to DGS, the Bidder will undertake its own internal review of the proposal and obtain all necessary internal approvals. As a part of this internal review process, the MSP shall consider the materiality of the proposed change in the context of the MSA and the Project Implementation affected by the change and the total effect that may arise from implementation of the change.

**b. Costs**

Each Party shall be responsible for its own costs incurred in the quotation, preparation of CCNs and in the completion of its obligations described in this process provided the MSP meets the obligations as set in the CCN. In the event the MSP is unable to meet the obligations as defined in the CCN then the cost of getting it done by third party will be borne by the MSP.

**c. Obligations**

The MSP shall be obliged to implement any proposed changes once approval in accordance with above provisions has been given, with effect from the date agreed for implementation and within an agreed timeframe. MSP will not be obligated to work on a change until the parties agree in writing upon its scope, price and/or schedule impact.

## **SCHEDULE – III - EXIT MANAGEMENT SCHEDULE**

### **1 PURPOSE**

- 1.1 This Schedule sets out the provisions, which will apply on expiry or termination of the MSA, the Project Implementation, Operation and Management SLA.
- 1.2 In the case of termination of the Project Implementation and/or Operation and Management, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.
- 1.3 The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

### **2 TRANSFER OF ASSETS**

- 2.1 DGS shall be entitled to serve notice in writing on the Bidder at any time during the exit management period as detailed hereinabove requiring the Bidder and/or its subcontractors to provide DGS with a complete and up to date list of the Assets within 30 days of such notice. DGS shall then be entitled to serve notice in writing on the Bidder at any time prior to the date that is 30 days prior to the end of the exit management period requiring the Bidder to sell the Assets, if any, to be transferred to DGS or its nominated agencies at book value as determined as of the date of such notice in accordance with the provisions of relevant laws.
- 2.2 In case of contract being terminated by DGS, DGS reserves the right to ask Bidder to continue running the project operations for a period of 6 months after termination orders are issued.
- 2.3 Upon service of a notice under this Article the following provisions shall apply:
  - (i) In the event, if the Assets to be transferred are mortgaged to any financial institutions by the Bidder, the bidder shall ensure that all such liens and liabilities have been cleared beyond doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to DGS.
  - (ii) All risk in and title to the Assets to be transferred / to be purchased by DGS pursuant to this Article shall be transferred to DGS, on the last day of the exit management period.
  - (iii) Bidder shall be paid the depreciated book value of the infrastructure cost and other assets. The depreciation rates and method followed will be as per Income Tax Rules.
  - (iv) Payment to the outgoing Bidder shall be made to the tune of last set of completed services / deliverables, subject to SLA requirements.
  - (v) The outgoing Bidder will pass on to DGS and/or to the Replacement Bidder, the subsisting rights in any leased properties/ licensed products on terms not less favorable to DGS/ Replacement Bidder, than that enjoyed by the outgoing Bidder.



### **3 COOPERATION AND PROVISION OF INFORMATION**

During the exit management period:

- (i) The Bidder will allow DGS or its allied offices access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable DGS to assess the existing services being delivered;
- (ii) promptly on reasonable request by DGS, the Bidder shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with this agreement relating to any material aspect of the services (whether provided by the Bidder or sub-contractors appointed by the Bidder). DGS shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The Bidder shall permit DGS to have reasonable access to its employees and facilities as reasonably required by the Chairman, Project Implementation Unit (PIU) to understand the methods of delivery of the services employed by the Bidder and to assist appropriate knowledge transfer.

## **4 CONFIDENTIAL INFORMATION, SECURITY AND DATA**

- 4.1 The Bidder will promptly on the commencement of the exit management period supply to DGS or its nominated agency the following:
- (i) information relating to the current services rendered and customer and performance data relating to the performance of consortium partners in relation to the services;
  - (ii) documentation relating to Project's Intellectual Property Rights;
  - (iii) documentation relating to sub-contractors;
  - (iv) all current and updated data as is reasonably required for purposes of DGS transitioning the services to its Replacement Bidder in a readily available format nominated by DGS, its nominated agency;
  - (v) all other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable DGS, or its Replacement Bidder to carry out due diligence in order to transition the provision of the Services to DGS, or its Replacement Bidder (as case may be).
- 4.2 Before the expiry of the exit management period, the Bidder shall deliver to DGS or its nominated agency all new or up-dated materials from the categories set out in Schedule above and shall not retain any copies thereof, except that the Bidder shall be permitted to retain one copy of such materials for archival purposes only.
- 4.3 Before the expiry of the exit management period, unless otherwise provided under the MSA, DGS or its nominated agency shall deliver to the Bidder all forms of Bidder confidential information, which is in the possession or control of DGS or its users.

## **5 EMPLOYEES**

- 5.1 Promptly on reasonable request at any time during the exit management period, the Bidder shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide to DGS or its nominated agency a list of all employees (with job titles) of the Bidder dedicated to providing the services at the commencement of the exit management period.
- 5.2 Where any national, regional law or regulation relating to the mandatory or automatic transfer of the contracts of employment from the Bidder to DGS or its nominated agency, or a Replacement Bidder ("Transfer Regulation") applies to any or all of the employees of the Bidder, then the Parties shall comply with their respective obligations under such Transfer Regulations.
- 5.3 To the extent that any Transfer Regulation does not apply to any employee of the Bidder, department, or its Replacement Bidder may make an offer of employment or contract for services to such employee of the Bidder and the Bidder shall not enforce or impose any contractual provision that would prevent any such employee from being hired by the Chairperson, PIU or any Replacement Bidder.

## **6 TRANSFER OF CERTAIN AGREEMENTS**

- 6.1 On request by DGS or its nominated agency the Bidder shall effect such assignments, transfers, licenses and sub-licenses as the Chairperson, PIU may require in favour of the Chairperson, PIU, or its Replacement Bidder in relation to any equipment lease, maintenance or service provision agreement between Bidder and third party lessors, vendors, and which are related to the services and reasonably necessary for the carrying out of replacement services by DGS or its nominated agency or its Replacement Bidder.

## **7 RIGHTS OF ACCESS TO PREMISES**

- 7.1 At any time during the exit management period, where Assets are located at the Bidder's premises, the Bidder will be obliged to give reasonable rights of access to (or, in the case of Assets located on a third party's premises, procure reasonable rights of access to) DGS or its nominated agency and/or any Replacement Bidder in order to make an inventory of the Assets.
- 7.2 The Bidder shall also give DGS or its nominated agency, or any Replacement Bidder right of reasonable access to the Implementation Partner's premises and shall procure DGS or its nominated agency and any Replacement Bidder rights of access to relevant third party premises during the exit management period and for such period of time following termination or expiry of the MSA as is reasonably necessary to migrate the services to DGS or its nominated agency, or a Replacement Bidder.

## **8 GENERAL OBLIGATIONS OF THE SERVICE PROVIDER**

- 8.1 The Bidder shall provide all such information as may reasonably be necessary to effect as seamless a handover as practicable in the circumstances to DGS or its nominated agency or its Replacement Bidder and which the Bidder has in its possession or control at any time during the exit management period.
- 8.2 For the purposes of this Schedule, anything in the possession or control of any Bidder, associated entity, or sub contractor is deemed to be in the possession or control of the Bidder.
- 8.3 The Bidder shall commit adequate resources to comply with its obligations under this Exit Management Schedule.

## 9 EXIT MANAGEMENT PLAN

- 9.1 The Bidder shall provide DGS or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.
- (i) A detailed program of the transfer process that could be used in conjunction with a Replacement Bidder including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;
  - (ii) plans for the communication with such of the Bidder's sub-contractors, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on DGS's operations as a result of undertaking the transfer;
  - (iii) (if applicable) proposed arrangements for the segregation of the Bidder's networks from the networks employed by DGS and identification of specific security tasks necessary at termination;
  - (iv) Plans for provision of OEM support for the hardware and software components and any other contingent support for a period of 9 months after the expiry or termination of the contract period as the case may be.
- 9.2 The Bidder shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.
- 9.3 Each Exit Management Plan shall be presented by the Bidder to and approved by DGS.
- 9.4 The terms of payment as stated in the Terms of Payment Schedule include the costs of the Bidder complying with its obligations under this Schedule.
- 9.5 In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan.
- 9.6 During the exit management period, the Bidder shall use its best efforts to deliver the services.
- 9.7 Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.
- 9.8 This Exit Management plan shall be furnished in writing to DGS within 90 days from the Effective Date of this Agreement.

## **SCHEDULE – IV - AUDIT, ACCESS AND REPORTING**

### **1 PURPOSE**

This Schedule details the audit, access and reporting rights and obligations of DGS or its nominated agency and the Bidder.

### **2 AUDIT NOTICE AND TIMING**

- 2.1 As soon as reasonably practicable after the Effective Date, the Parties shall use their best endeavors to agree to a timetable for routine audits during the Project Implementation Phase and the Operation and Management Phase. Such timetable during the Implementation Phase, DGS or its nominated agency and thereafter during the operation Phase, DGS or its nominated agency shall conduct routine audits in accordance with such agreed timetable and shall not be required to give the Bidder any further notice of carrying out such audits.
- 2.2 DGS or its nominated agency may conduct non-timetabled audits at his/ her own discretion if it reasonably believes that such non-timetabled audits are necessary as a result of an act of fraud by the Bidder, a security violation, or breach of confidentiality obligations by the Bidder, provided that the requirement for such an audit is notified in writing to the Bidder a reasonable period time prior to the audit (taking into account the circumstances giving rise to the reasonable belief) stating in a reasonable level of detail the reasons for the requirement and the alleged facts on which the requirement is based. If the Bidder considers that the non-timetabled audit was not appropriate, the matter shall be referred to the escalation procedure as set out in the Governance Schedule.
- 2.3 The frequency of audits shall be a (maximum) half yearly, provided always that DGS or its nominated agency shall endeavor to conduct such audits with the lowest levels of inconvenience and disturbance practicable being caused to the Bidder. Any such audit shall be conducted by with adequate notice of 2 weeks to the Bidder.
- 2.4 DGS will ensure that any 3rd party agencies (except CAG) appointed to conduct the audit will not be the competitor of Bidder and will be bound by confidentiality obligations.

### **3 ACCESS**

The Bidder shall provide to DGS or its nominated agency reasonable access to employees, subcontractors, suppliers, agents and third party facilities as detailed in the RFP, documents, records and systems reasonably required for audit and shall provide all such persons with routine assistance in connection with the audits and inspections. The Chairperson, PIU / Steering Committee shall have the right to copy and retain copies of any relevant records. The Bidder shall make every reasonable effort to co-operate with them.

### **4 AUDIT RIGHTS**

- 4.1 DGS or its nominated agency shall have the right to audit and inspect suppliers, agents and third party facilities (as detailed in the RFP), data centres, documents, records, procedures and systems relating to the provision of the services, but only to the extent that they relate to the provision of the services, as shall be reasonably necessary to verify:

- (i) The security, integrity and availability of all data processed, held or conveyed by the Partner on behalf of DGS and documentation related thereto;
- (ii) That the actual level of performance of the services is the same as specified in the SLA;
- (iii) That the Bidder has complied with the relevant technical standards, and has adequate internal controls in place; and
- (iv) The compliance of the Bidder with any other obligation under the MSA and SLA.
- (v) Security audit and implementation audit of the system shall be done once each year, the cost of which shall be borne by the Bidder.
- (vi) For the avoidance of doubt the audit rights under this Schedule shall not include access to the Bidder's profit margins or overheads, any confidential information relating to the Bidder's employees, or (iii) minutes of its internal Board or Board committee meetings including internal audit, or (iv) such other information of commercial-in-confidence nature which are not relevant to the Services associated with any obligation under the MSA.

## **5 AUDIT RIGHTS OF SUB-CONTRACTORS, SUPPLIERS AND AGENTS**

- 5.1 The Bidder shall use reasonable endeavors to achieve the same audit and access provisions as defined in this Schedule with sub-contractors, suppliers and agents who supply labor, services, equipment or materials in respect of the services. The Bidder shall inform DGS or its nominated agency prior to concluding any sub-contract or supply agreement of any failure to achieve the same rights of audit or access.
- 5.2 REPORTING: The Bidder will provide quarterly reports to the Chairperson, PIU / Steering committee regarding any specific aspects of the Project and in context of the audit and access information as required by DGS or its nominated agency.

## **6 ACTION AND REVIEW**

- 6.1 Any change or amendment to the systems and procedures of the Bidder, or sub-contractors, where applicable arising from the audit report shall be agreed within thirty (30) calendar days from the submission of the said report.
- 6.2 Any discrepancies identified by any audit pursuant to this Schedule shall be immediately notified to DGS or its nominated agency and the Bidder Project Manager who shall determine what action should be taken in respect of such discrepancies in accordance with the terms of the MSA.

## **7 TERMS OF PAYMENT**

The MSP shall bear the cost of any audits and inspections as per the scope of work defined in Volume – II of the RFP. The terms of payment are exclusive of any costs of the Bidder and the sub-contractor, for all reasonable assistance and information provided under the MSA, the Project Implementation, Operation and Management SLA by the Bidder pursuant to this Schedule.

## **8 RECORDS AND INFORMATION**

For the purposes of audit in accordance with this Schedule, the Bidder shall maintain true and accurate records in connection with the provision of the services and the Bidder shall handover all the relevant records and documents upon the termination or expiry of the MSA.

## **SCHEDULE – V - GOVERNANCE SCHEDULE**

### **1 PURPOSE**

The purpose of this Schedule is to:

- (i) establish and maintain the formal and informal processes for managing the relationship between DGS and the Bidder including the outputs from other Schedules to this Agreement;
- (ii) define the principles that both Parties wish to follow to ensure the delivery of the Services;
- (iii) ensure the continued alignment of the interests of the Parties;
- (iv) ensure that the relationship is maintained at the correct level within each Party;
- (v) create the flexibility to revise and maintain the relationship and this Agreement during the Term;
- (vi) set out the procedure for escalating disagreements; and
- (vii) enable contract administration and performance management.

### **2 GOVERNANCE STRUCTURE**

- 2.1 Project Managers: The relationship under this Agreement will be managed by the Project Managers appointed by each Party, who will provide the interface between the executive management of the respective Parties.
- 2.2 Project Implementation Unit (PIU): Within 7 days following the Effective Date, DGS, Project Consultant and the Bidder shall each appoint a Project Manager. In the event that either Party wishes to substitute its Project Manager it will do so in manner in which the original appointment is made and notify the other Party of such substitution as soon as reasonably practicable but at the latest within 7 days of the substitution.
- 2.3 The Project Managers shall have responsibility for maintaining the interface and communication between the Parties.
- 2.4 The PIU will meet formally on a fortnightly / monthly / quarterly, as required, basis at a time and location to be agreed between them. These meetings will cover, as a minimum, the following agenda items: (i) consideration of Quarterly Performance Reports; (ii) consideration of matters arising out of the Change Control Schedule; (iii) issues escalated in accordance with the escalation procedure as set out in the Governance Schedule; (iv) matters to be brought before the PIU in accordance with the MSA and the Schedules; (v) any matter brought before the PIU by the Bidder under this Article; and (vi) any other issue which either Party wishes to add to the agenda.
- 2.5 In the event that there is any material factor which affects the delivery of the Services or the terms of payment as stated in the Terms of Payment Schedule, the Parties agree to discuss in the PIU any appropriate amendment to the Agreement or any Service Level Agreements or Statement of Works including any variation to the terms of payment as stated in the Terms of Payment Schedule. Any variation so agreed shall be implemented through the change control procedure as set out in the Change Control Schedule.

### **3 GOVERNANCE PROCEDURES**

- 3.1 The Bidder shall document the agreed structures in a procedures manual.
- 3.2 The agenda for each meeting of the PIU shall be set to reflect the discussion items referred to above and extraordinary items may be added either with the agreement of the Parties or at the request of either Party. Copies of the agenda for meetings of the PIU, along with relevant pre-reading material, shall be distributed at least one week in advance of the relevant meeting.
- 3.3 All meetings and proceedings will be documented such documents to be distributed to the Parties and copies shall be kept as a record. All actions, responsibilities and accountabilities arising out of any meeting shall be tracked and managed.
- 3.4 The Parties shall ensure as far as reasonably practicable that the PIU shall resolve the issues and resolve the objectives placed before them and that members representing that Party are empowered to make relevant decisions or have easy access to empowered individuals for decisions to be made to achieve this.



- 3.5 In order formally to submit a Disputed Matter to the aforesaid for a, one Party ("Claimant") shall give a written notice ("Dispute Notice") to the other Party. The Dispute Notice shall be accompanied by (a) a statement by the Claimant describing the Disputed Matter in reasonable detail and (b) documentation, if any, supporting the Claimant's position on the Disputed Matter.
- 3.6 The other Party ("Respondent") shall have the right to respond to the Dispute Notice within 7 days after receipt of the Dispute Notice. In the event that the parties are unable to resolve the Disputed Matter within a further period of 7 days, it shall refer the Disputed Matter to next level of the dispute resolution for action as per the process mentioned in article 9.1.
- 3.7 All negotiations, statements and / or documentation pursuant to these Articles shall be without prejudice and confidential (unless mutually agreed otherwise).
- 3.8 If the Disputed Matter is having a material effect on the operation of the Services (or any of them or part of them) the Parties will use all their respective reasonable endeavours to reduce the elapsed time in reaching a resolution of the Disputed Matter.

## **SCHEDULE – VI - TERMS OF PAYMENT SCHEDULE**

As per the payment terms defined in Volume I of RFP.

## ANNEXURES

### ANNEXURE A – FORMAT FOR CHANGE CONTROL NOTICE

<b>Change Control Note</b>	<b>CCN Number:</b>
<b>Part A: Initiation</b>	
Title:	
Originator:	
Sponsor:	
Date of Initiation:	
<b>Details of Proposed Change</b>	
(To include reason for change and appropriate details/specifications. Identify any attachments as A1, A2, and A3 etc.)	
Authorised by DGS	Date:
Name:	
Signature:	Date:
Received by the SI	
Name:	
<b>Signature:</b>	
<b>Change Control Note</b>	<b>CCN Number:</b>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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<b>Part B : Evaluation</b>	
(Identify any attachments as B1, B2, and B3 etc.) Changes to Services, charging structure, payment profile, documentation, training, service levels and component working arrangements and any other contractual issue.	
<b>Brief Description of Solution:</b>	
<b>Impact:</b>	
<b>Deliverables:</b>	
<b>Timetable:</b>	
<b>Charges for Implementation:</b>	
(including a schedule of payments)	
<b>Other Relevant Information:</b> (including value-added and acceptance criteria)	
<b>Authorised by the Bidder</b>	<b>Date:</b>
<b>Name:</b>	
<b>Signature:</b>	
<b>Change Control Note</b>	<b>CCN Number :</b>

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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<b>Part C : Authority to Proceed</b>	
Implementation of this CCN as submitted in Part A, in accordance with Part B is: (tick as appropriate)	
<b>Approved</b>	
<b>Rejected</b> <b>Requires Further Information</b> (as follows, or as Attachment 1 etc.)	
<b>For DGS and its allied offices</b>	<b>For the Bidder</b>
Signature	Signature
Name	Name
Title	Title
Date	Date

**ANNEXURE B - LIST OF SERVICES PROVIDED BY THE BIDDER**

As per the scope of work defined in Volume II of RFP.

**ANNEXURE C – REQUIRED DELIVERABLE AND ASSOCIATED TIMELINES**

As per deliverables and timelines defined in Volume I of RFP.

**ANNEXURE D - BID**

Bid Response

## **ANNEXURE F – ROLES AND RESPONSIBILITIES OF THE PARTIES**

### **Roles and Responsibilities of Bidder**

- a) Preparation of Detailed Project Plan in line with the overall plan provided in the RFP. The same should be prepared in consultation with DGS.
- b) Procure, install, commission, operate and maintain for softwares and related components.
- c) Meet the defined SLAs for the performance of the system.
- d) Rectification of system software problems due to crashing or malfunctioning of the OS, RDBMS or front end within the time limits to meet the SLAs as defined in RFP.
- e) Develop / customize, deploy and maintain the requisite Software Solution as per the requirements of DGS at appropriate locations.
- f) Provide necessary support for the resolution of bugs, patches & upgrades of the software solution.
- g) Provide necessary manpower for managing the Change Requests.
- h) Design various manuals like User manual, Trouble Shooting manual etc. for the system.
- i) Provide computer basic skills training and advanced training on application modules to the staff members and stakeholders of DGS.
- j) Maintain the business continuity.
- k) Deploy the required manpower to manage the operations.
- l) Ensuring the SLAs for downtime of system, software development / customization, , errors in data entry are met.
- m) Management and quality control of all software and deployed security services .
- n) Generation of MIS reports as per the requirements of DGS.
- o) Generation of the report for the monitoring of SLAs.
- p) Obtaining relevant Certifications and adherence to respective Industry Standards as detailed in the RFP.
- q) Any other services which is required for the successful execution of the project.

### **Roles and Responsibilities of DGS**

- a) Provide adequate space at DGS for setting up of infrastructure, software development and other activities to be carried out by the Bidder.

- b) Coordination between all the divisions for providing necessary information for the study and development / customization of the necessary solution.
- c) Coordinate with Bidder for conducting workshops for the Stakeholder departments.
- d) Provide the data available in the form of physical files or existing databases to the selected bidder for digitization purposes.
- e) Requisite hardware and system software at DGS HQ, MMD offices and DC DR as per the requirement of Bidder
- f) Availability of network equipment's, connectivity and LAN as per the requirement of Bidder
- g) Keep all system software i.e. OS, Antivirus, Office applications etc., for Servers, PCs etc. at Data Centre and various locations, up to date by installing regular updates / patches.
- h) Ensure that Data Backups are being taken regularly by bidder as per the schedule agreed upon.
- i) Ensure that the hardware and other infrastructure deployed at HQ, DC etc. meets the specifications as per Bidder solution requirements and is maintained properly to meet the SLAs as defined in RFP.
- j) Monitoring of overall timelines, SLAs and calculation of penalties accordingly.
- k) Conducting UAT for the application solution deployed.
- l) Issuing the Acceptance Certificate on successful deployment of the software application, hardware deployed, digitized data and for other components of the Scope of Work (wherever required).
- m) To create internal capacity now for execution of the project after takeover from the bidder.
- n) Ensuring the staff members and other stakeholders attend the training programs as per the schedule defined by the bidder and agreed upon by DGS.
- o) Provide sign off on the deliverables of the project including SRS, design documents etc.
- p) Any other requirements that could arise during operations for effective governance and to meet any administrative requirement.

## NON-DISCLOSURE AGREEMENT

THIS AGREEMENT is made on this the <\*\*\*> day of <\*\*\*> 20--- at <\*\*\*>, India.

### BETWEEN

----- having its office at -----  
----- India hereinafter referred to as '**DGS**' or '-----', which  
expression shall, unless the context otherwise requires, include its permitted successors and  
assigns);

### AND

<\*\*\*>, a Company incorporated under the Companies Act, 1956, having its registered office at  
<\*\*\*> (hereinafter referred to as '**the Bidder/MSP**' which expression shall, unless the context  
otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the 'Parties' and individually  
as a 'Party'.

### WHEREAS:

1. DGS is desirous to implement the project of -----.
2. DGS and Bidder have entered into a Master Services Agreement dated <\*\*\*> (the  
"MSA") as well as a Service Level Agreement dated <\*\*\*> (the "SLA") in furtherance of the  
Project.
3. Whereas in pursuing the Project (the "**Business Purpose**"), a Party ("Disclosing Party")  
recognizes that they will disclose certain Confidential Information (as defined hereinafter) to the  
other Party ("Receiving Party").
4. Whereas such Confidential Information (as defined hereinafter) belongs to Receiving  
Party as the case may be and is being transferred to the Disclosing Party to be used only for the  
Business Purpose and hence there is a need to protect such information from unauthorized use  
and disclosure.

**NOW THEREFORE**, in consideration of the mutual covenants, promises, assurances,  
representations and provisions set forth herein, the Parties hereto agree as follows:

**IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS  
AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.**

SIGNED, SEALED AND DELIVERED

For and on behalf of the Implementation

Agency by: DGS

SIGNED, SEALED AND DELIVERED

For and on behalf of the Nodal

Agency by:

(Signature)

(Signature)

(Name): Shri.

(Name)

(Designation):

(Designation)

(Address)

(Address)

(Fax No.)

(Fax No.)

In the presence of:

1.

2.



## SERVICE LEVEL AGREEMENT

THIS AGREEMENT is made on this the <\*\*\*> day of <\*\*\*> 20---- at <\*\*\*>, India.

BETWEEN

----- having its office at -----  
----- India hereinafter referred to as 'DGS' or 'Buyer', which  
expression shall, unless the context otherwise requires, include its permitted successors and  
assigns);

AND

<\*\*\*>, a Company incorporated under the *Companies Act, 1956*, having its registered office at  
<\*\*\*> (hereinafter referred to as '*the Bidder/MSP*' which expression shall, unless the context  
otherwise requires, include its permitted successors and assigns).

Each of the parties mentioned above are collectively referred to as the '*Parties*' and individually  
as a '*Party*'.

WHEREAS:

DGS is desirous for Implementation and Operations Management of New eGovernance Project.

2. DGS and Bidder have entered into a Master Services Agreement dated <\*\*\*> (the "*MSA*").

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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NOW THEREFORE, in consideration of the mutual covenants, promises, assurances, representations and provisions set forth herein, the Parties hereto agree as follows:

The following parties are obligated to follow the procedures as specified by this Agreement:

- (a) DGS
- (b) Bidder

**IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN**

SIGNED, SEALED AND DELIVERED For and on behalf of the Bidder by:	SIGNED, SEALED AND DELIVERED For and on behalf of DGS by:
(Signature) (Name) XXX (Designation) XXXX (Address) XXXX (Fax No.)	(Signature) (Name) (Designation) (Address) (Fax No.)

In the presence of:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

## **1. Definitions & Interpretation**

### **a) Definitions**

Terms and expressions used in this Agreement (including the Introduction) shall have the meanings set out in Annexure below

### **b) Interpretation**

In this Agreement, unless otherwise specified:

- References to Clauses, Sub-Clauses, Paragraphs and Schedules are to clauses, sub-clauses, paragraphs of and schedules to this Agreement;
- Use of any gender includes the other genders;
- References to a 'company' shall be construed so as to include any company, corporation or other body corporate, wherever and however incorporated or established;
- references to a 'person' shall be construed so as to include any individual, firm, company, government, state or agency of a state, local or municipal authority or government body or any joint venture, association or partnership (whether or not having separate legal personality);
- a reference to any statute or statutory provision shall be construed as a reference to the same as it may have been, or may from time to time be, amended, modified or re-enacted;
- any reference to a 'day' (including within the phrase 'business day') shall mean a period of 24 hours running from midnight to midnight;
- references to a 'business day' shall be construed as a reference to a day on which DGS is generally open for business;
- references to times are to Indian Standard Time;
- a reference to any other document referred to in this Agreement is a reference to that other document as amended, varied, novated or supplemented at any time; and
- all headings and titles are inserted for convenience only. They are to be ignored in the interpretation of this Agreement.

### **c) Measurements & Arithmetic Conventions**

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down except in money calculations where such amounts shall be rounded off to the nearest INR.

#### **d) Ambiguities within Agreement**

In case of ambiguities or discrepancies within this Agreement, the following principles shall apply:

- as between two Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in a general Clause;
- as between the provisions of this Agreement and the Schedules, the Agreement shall prevail, save and except as expressly provided otherwise in the Agreement or the Schedules; and
- as between any value written in numerals and that in words, the value in words shall prevail.

#### **e) Priority of Agreements**

The Parties hereby expressly agree that for the purpose of giving full and proper effect to this Agreement, the MSA and this Agreement shall be read together and construed harmoniously. In the event of any conflict between the MSA and this Agreement, the provisions contained in the MSA shall prevail over this Agreement.

## **2. Structure**

This SLA shall operate as a legally binding services agreement specifying terms which apply to the Parties in relation to the provision of the Services by the Bidder to DGA and its nominated agencies under this Agreement and the MSA

## **3. Objectives of SLA**

The objective of SLA is to clearly define the expected level of the services being offered by the Bidder (Successful Bidder) to the Purchaser (DGS) for the period of the contract or until the SLA has been amended. SLA defines the responsibility of the successful bidder in ensuring adequate delivery of the deliverables and the services coupled with correctness of the same based on the performance indicators detailed out in this document.

The Bidder shall be required to ensure that the Service Levels which shall ensure the following:

- Improving the efficiency of operations for the departments.
- Leveraging the benefits in new system in order to:
  - Reduce of manual records and replace with computerized standardized documents.
  - Infuse transparency in operations by enabling the stakeholders to have easy access to the records and provision of login ids and biometrics to infuse accountability in operations

- Enable faster request processing in delivery of services with better turnaround time.
- Facilitate automated data transfer with state-wide connectivity to prevent unnecessary duplication & simplify preparation of registers and reports.
- Generate meaningful MIS from the system.
- Provide inbuilt mechanism of security and quality control for crucial dealer data.

To meet the aforementioned objectives the Bidder will provide the Service Levels in accordance with the performance metrics as set out in detail in this Agreement. Bidder shall provide services as defined in Section I which details out the scope of work in accordance with the conditions mentioned in Section to ensure adherence to project timelines and error free availability of the services.

#### **4. Scope of SLA**

This Agreement has been executed in relation to the outsourcing portion of the Project between the Parties. The detailed Service Levels have been set out below in this Agreement. This Agreement shall ensure the following:

- Establishment of mutual responsibilities and accountability of the Parties;
- Definition each Party's expectations in terms of services provided;
- Establishment of the relevant performance measurement criteria;
- Definition of the availability expectations;
- Definition of the escalation process;
- Establishment of trouble reporting single point of contact; and
- Establishment of the framework for SLA change management

The following parties are obligated to follow the procedures as specified by this Agreement:

- DGS (Buyer/ Purchaser)
- Bidder / Service Provider

#### **5. Agreement Owners**

The following personnel shall be notified to discuss the Agreement and take into consideration any proposed SLA change requests:

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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	Title	Telephone	e-Mail
<b>DGS or its Nominated Agencies/ Partners/ Purchaser/ Buyer</b>	Authorized Representative	<***>	<***>
<b>SI</b>	<***>	<***>	<***>

## 6. Contact List

In the event that there is any change in the listed contacts, the same shall be communicated and updated prior to such change occurring. The Single Point of Contact ("POC") for the MSP shall be <\*\*\*> and will be available 24X7.

	Title	Telephone	e-Mail
<b>DGS or its Nominated Agencies/ Partners/ Purchaser/ Buyer</b>	Authorized Representative	<***>	<***>
<b>SI</b>	<***>	<***>	<***>

## 7. Principal Contacts

DGS or its nominated agencies/ partners and MSP will nominate a senior staff member to be the principal contact regarding operation of this Agreement. At the date of signing of this Agreement, the nominated principal contacts are:

**DGS/ Purchaser/ Buyer principal contact:** \_\_\_\_\_

**Bidder principal contact:** \_\_\_\_\_

## 8. Commencement and Duration of this Agreement

Agreement shall commence on the date of Go-Live (hereinafter the "SLA Effective Date") and shall, unless terminated earlier in accordance with its terms or unless otherwise agreed by the Parties, expire on the date on which this Agreement expires or terminates, which shall be a period of THREE years starting from <the date of the start of PHASE II>

## 9. Exclusions to this Agreement

This Agreement shall not govern the following services:

- Consulting services;

- Bidder's business processes not related to the Project.

## **10. Terms of Payments and Penalties**

In consideration of the Services and subject to the provisions of the MSA and this Agreement, the Buyer shall pay the amounts in accordance with the Terms of Payment Schedule of the MSA.

For the avoidance of doubt, it is expressly clarified that DGS and / or its nominated agencies may also calculate a financial sum and debit the same against the terms of payment as defined in the Terms of Payment Schedule of the MSA as a result of the failure of the Bidder to meet the Service Levels set out in this Agreement.

### **10.1. Details of SLA Penalty Mechanism and Calculations**

The MSP will get 100% of Quarterly Payout for the concerned quarter if the performance metrics are complied with for all the parameters and the total SLA score in a quarter is 50 or above. The Bidder will get lesser payment in case of a lower performance exhibited by a SLA score of less than 50. The maximum penalty to be levied is 10% of Quarterly Payout. The payments will be as per terms defined under Schedule VI of this tender.

The payment will be made by DGS to the bidder on quarterly basis. The quarterly invoice will be submitted by the Bidder to the DGS, who will in turn release the 80% of the payment if there is no dispute and after verification/audit of the invoices and necessary documents, release balance 20% payment. The payments will be released subject to acceptance procedure as detailed in Schedule VI of this volume in the tender

The Bidder will be eligible for an SLA holiday period wherein the SLAs shall not be applicable. This SLA holiday period will not be more than a quarter from the date of GO-Live of the project, until and unless decided or agreed with DGS. The SLA holiday period is for streamlining the SLA measurement and monitoring process of the project.

The payment and SLA penalty applicability will be against the specific SERVICE LEVEL PARAMETERS depending on the impact. The values will be calculated separately, and payment will be made against invoices raised for the port.

DGS reserves the right to modify the SLAs in terms of addition, alteration or deletion of certain parameters, based on mutual consent of all the parties i.e. DGS and BIDDER.

The Penalties will be calculated based on the following table:

S. No.	SLA Score Range	Deductions (Penalties)
<b>Deductions</b>		
1	=50	No Penalty
2	<50 & >=45	0.25% penalty for every point < 50
3	<45 & >=40	0.5% penalty for every point < 50
4	<40	0.75% for every point < 50
Note: The percentage penalty would be calculated on the bill raised by the Bidder for the concerned quarter.		
<i>Example:</i> <ul style="list-style-type: none"> <li>SLA Score of 48 will lead to a Penalty of 0.5% (i.e. <math>2 \times 0.25 = 0.5\%</math>)</li> <li>SLA Score of 43 will lead to a Penalty of 3.5% (i.e. <math>7 \times 0.5 = 3.5\%</math>)</li> <li>SLA Score of 38 will lead to a Penalty of 9% (i.e. <math>12 \times 0.75 = 9\%</math>)</li> </ul>		

#### **Note**

- 1 Annual review SLA shall be done by DGS and appropriate modifications/amendments to the SLAs may be carried out.
- 2 Cascading effect (effect on multiple SLA criterions) of failure or non-performance of a particular project component on SLAs shall be avoided.
- 3 Web-based Incident and SLA monitoring tool providing reports against the parameters mentioned below will be used for measurement. DGS may request for supporting documents in certain cases if required. Such tool needs to be deployed after certification from a Third-Party CERT-IN agency such as STQC before Go-live of the project.
- 4 Data other than EMS or modification to EMS data for SLA monitoring has to be preapproved.
- 5 Implementation of a Web-based Project Management Information System (PMIS) for Project progress and ITIL based SLA monitoring and Incident Management (EMS) has to be carried out by before Go-live in order to receive any payment for the project

## **10.2. SLA Measurement and Monitoring**

### **a) SLA applicable during Implementation Phase**

Implementation of a Web-based Project Management Information System (PMIS) for Project progress and SLA monitoring has to be carried out by before Go-live in order to receive any payment for the project.



#	Services	Parameter	Validation	Penalty
1	Adherence to project timelines	Up to 4 calendar weeks delay from the timelines as mentioned in the project timelines Volume	<b>Measurement Tool:</b> Project Management Information System (PMIS) Periodic Project Progress Reports	No Penalty
		Delay beyond 4 weeks		Rs. 1,00,000 per week of delay  If the delay exceeds more than 12 weeks, DGS may decide to invoke breach clause

#### b) SLA parameters during Operations and Maintenance Period

The key Service Level Agreement required for the e-Governance softwares availability, which need to be ensured by the Bidder during the operations and maintenance support period. All complaints shall be lodged with the service desk managed by the BIDDER, which will allot ticket number for each complaint indicating location, function, time of registration and severity of the complaint. Centrally managed web-based ticketing tool for lodging the complaints will be provided by Bidder, as a part of the facilities.

SLA shall become the part of contract between DGS and the Bidder. The Bidder has to comply with Service Levels requirements to ensure adherence to quality and availability of services, throughout the period of this contract - for a period of 3 (three) years. The performance of the support shall be tracked on a monthly basis as per the SLA service levels detailed in this section.

Please note that the Bidder shall be responsible for overall monitoring and management of eGov solution as mention in RFP Vol.2. The Bidder shall monitor the uptime of all associated infrastructure components for eGov solutions such as DC DR, Network infrastructure but not limited to:

- Virtual Machine availability as per CSP contract with DGS
- Virtual Machine CPU threshold limit as CSP contract with DGS
- Cloud Storage availability as per CSP contract with DGS
- Network infrastructure (Routers, L2/L3 Switches, Load Balancers etc.) availability at DC DR as per CSP contract with DGS
- Bandwidth availability as per ISP / CSP contract with DGS

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

In case of any breach on above stated associated infrastructure uptime, Bidder has to submit an auto generated report from automated measurement tool (EMS) of all the SLA requirements wherever applicable in this section.

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
Application							
Availability for eGov application functionality							
Availability (uptime) of applications for doing business activities, except during scheduled down time as agreed with the department  Uptime = {1 - [(Application downtime – maintenance Downtime) / (Total Time – Maintenance Downtime)]}	>=99%	5	<99% to >= 95%	2.5	<95%	-3	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values against this parameter. End-to-end loop back mechanism must be established for checking the availability of services.
Time for on-line submission of the electronic forms.  Average must be achieved with maximum time till success for 90% or more of the total submissions	<=5 seconds	2	>5 seconds and <=7 seconds	1	>7 seconds	-1	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
within the stipulated time  Web-to-web response time							against this parameter.
Time for uploading data file including xml, txt, etc. (other than images and pdf) on various portals. Average must be achieved with maximum time till success for 90% or more of the total uploads within the stipulated time  Web-to-web response time	<=20 seconds	2	> 20 seconds and <=30 seconds	1	> 30 seconds	-1	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values against this parameter.
<i>API service availability</i>							
Availability of API services for mobile, portal and other third-party applications	>=99%	5	<99% and >=95%	2	<95%	-2	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values against this

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
							parameter. End-to-end loop back mechanism must be established for checking the availability of services.
<i>Response time for API Service requests</i>							
Time for providing response to the request received	<=5 seconds	2	> 5 seconds and < =7 seconds	1	> 7 seconds	-1	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values against this parameter. End-to-end loop back mechanism must be established for checking the availability of services.
<i>Application Maintenance</i>							

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
Time to deliver the application changes as per desired functionality.	Within Agreed timeline	2	NA	NA	Beyond Agreed timeline	-1	Reports regarding the same to be captured through PMIS tool. All requests will be entered in PMIS by the bidder team as per records and provide status against the same
<i>Documentation Management</i>							
Maintaining document versioning (SRS, User Training Manual etc.), application version control,	at the end of every quarter	1	Up to one week beyond the quarter end date	0.5	more than a week beyond the quarter end date	-1	Reports to be displayed through PMIS tool (and if requested by DGS) and emails to provide these details
<i>Integration and interfacing</i>							
Time to post information to External system in form of messages after the transaction	<=10 seconds	2	>10 seconds and <=15 seconds	1	> 15 seconds	-1	Automated measurement tool to be developed as part of SLA monitoring tool

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
carried out within eGov system							to provide metric values against this parameter.
Time to receive and update information in eGov system after receipt of same from External system	<=5 seconds	2	>5 seconds and <=7 seconds	1	> 7 seconds	-1	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values against this parameter.
<i>Data exchange with external systems</i>							
Time to post information to external system after the transaction carried out within eGov system	as agreed at the time of design	2	NA	NA	Beyond agreed timelines	-1	Automated measurement tool to be developed as part of SLA monitoring tool to provide metric values against this parameter.
Time to receive and update information in external system after receipt of	as agreed at the time of design	2	NA	NA	Beyond agreed timelines	-1	Automated measurement tool to be developed as part of SLA monitoring tool to provide

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
same from eGov system							metric values against this parameter.
eGov solution monitoring and management							
<i>IT Infrastructure monitoring solution availability (EMS, SIEM)</i>							
Availability of IT Infrastructure Monitoring Tools at the active site.	>99%	5	< 99% to >= 95%	1	<95%	-1	Automated measurement tool (EMS) to be developed as part of SLA monitoring tool to provide metric values against this parameter. End-to-end loop back mechanism must be established for checking the availability of services.
<i>Ticket assignments to external service providers</i>							

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
<p>Time taken for incident assignment to respective Service Providers from the time of incident registered (Manually / Automatically) in incident management system.</p> <p>Must be achieved within agreed timeline for resolution for at least 95% of the cases in a month.</p>	<=1 hrs	2	>1 hrs and <=4 hrs	1	> 4 hrs	-1	Automated measurement tool (EMS) to be developed as part of SLA monitoring tool to provide metric values against this parameter.
eGov applications Operations Infrastructure							
<i>Tickets / Incident Response time *</i>							
<p>Time taken for sending email response &amp; ticket assignment from the time of registering of request.</p> <p>Must be achieved within agreed timeline for</p>	<=1 hrs	2	>1 hrs and <=4 hrs	1	> 4 hrs	-1	Automated measurement tool (reports from ticket management system) to be developed as part of SLA monitoring tool to provide



SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
resolution for at least 95% of the cases in a month.							metric values against this parameter.
Resolution for Critical incident	<=2 hours	2	> 2 hours to <= 4 hrs	1	> 4 Hours	-1	Automated measurement tool (reports from ticket management system) to be developed as part of SLA monitoring tool to provide metric values against this parameter.
Resolution for medium level incident	<=4 hours	2	> 4 hours to <= 8 hrs	1	> 8 Hours	-1	Automated measurement tool (reports from ticket management system) to be developed as part of SLA monitoring tool to provide metric values against this parameter.
Resolution for Low level incident	<= 1 day	2		1	> 3 Days	-1	Automated measurement tool (reports from ticket

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
			>1 day to < = 3 days				management system) to be developed as part of SLA monitoring tool to provide metric values against this parameter.
Training and capacity building							
<i>Training Rating</i>							
The training and capacity building satisfaction will be measured by feedback rating given by the trainees during online and face to face training. Average rating must be achieved above the specified rating score for more than 80% of the feedback ratings received	Rating >= 80%	2	Rating <80% and Rating >= 70%	1	Rating < 70%	-1	Feedback rating given by the trainees during online and face to face training and uploaded on PMIS
<i>Training material</i>							

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
Update of training materials on all portals within 1 week from date of release of modification to software into production environment	Within 1 Week	2	up to 2 weeks	1	more than 2 weeks	-1	Automated measurement tool (reports from PMIS) to be developed as part of SLA monitoring tool to provide metric values against this parameter.
Human Resource availability							
Human Resource availability measures the availability of the required skill sets as proposed by the Bidder in its proposal. This parameter shall also take into account the quality of resources in terms of skill set, experience and ability to perform in similar environment besides deployment on the project. In	No Deviation	2	NA	NA	In case of deviations	-1	All deviations would be recorded, and MIS report shall be made available to the DGS and ports via PMIS  Occurrences such as national / public holidays, force majeure, labor laws, etc. shall not be considered as an occurrence for deduction

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
<p>case of replacements, the new resource should be of similar or higher skill set. The skill sets to be taken into account for measuring this parameter includes the following at a minimum:</p> <ul style="list-style-type: none"> <li>• Resource requirements as per Volume I of RFP</li> <li>• Team members for various skills required for carrying out the activities of the project</li> </ul>							
<i>Monthly Project Progress Report</i>							
<p>Submission of monthly progress report including the following:</p> <ul style="list-style-type: none"> <li>- Progress against project plan</li> </ul>	Within 2 days from month end	2	NA	NA	Greater than 2 days	-1	Automated measurement tool (reports from PMIS) to be developed as part of SLA monitoring tool to provide

SLA Parameters during Operations and Maintenance Period							
Parameter	Baseline		Lower Performance		Breach		Measurement
	Metric	Score	Metric	Score	Metric	Score	
<ul style="list-style-type: none"> <li>- Key dependencies</li> <li>- Details of non-compliances if any</li> <li>- Issues list</li> <li>- Activities completed within the reporting period</li> <li>- Activities to be completed in the next reporting period</li> </ul>							metric values against this parameter.

### c) Severity definition chart

Severity definition chart is tabulated below for reference

Severity level	Severity Particulars	Service window
Critical	Outage that impacts $\geq 1$ eGov Services & Higher Management call	24*7
Medium	Outage that does not impact eGov Services but affects department services	24*7
Low	Upgrade, shifting and preventive maintenance	7am to 7pm (Monday to Friday)

## 11. SLA Categories

The SLA has been classified into two broad categories as given under.

- Category I: These are system delivery level targets which shall be adhered to during the implementation of the system, these services may be considered as pre-requisites to the service level targets mentioned in the post implementation phase.
- Category II: These are business critical level targets which shall be adhered to post implementation/commissioning of the system. Default on any of the service levels mentioned under this will incur penalties as defined in this section.

The Service level agreement would be valid for the complete period of contract. This SLA may be reviewed and revised according the procedure detailed in SLA Change Control Mechanism.

### a) Uptime calculation for the month

- The DGS would provide a maximum of 04 hours of planned downtime for the preventive maintenance (as part of scheduled downtime) per month per service.
- The downtime for scheduled maintenance (patch application, upgrades – OS, Database, etc.) would need to be mutually agreed between DGS and the Bidder. To reduce this time, various maintenance activities can be clubbed together with proper planning.

### b) Cumulative Downtime

- The recording of downtime shall commence at the time of registering the call with bidder for any downtime situation for the equipment.
- Downtime shall end when the problem is rectified, and the application/ service is available to the user.
- Down time will not be considered for following:
  - Pre-scheduled preventive maintenance and health checks (Scheduled Downtime).
  - Failover time (30 minutes) in case of cluster environment. Beyond which the service would be considered to be not available and appropriate penalty shall be imposed on the SI.
  - If the DGS elects to continue the operation of the machine / equipment, when a part of the machine is giving problem and leading to downtime, the commencement of downtime shall be deferred until the DGS releases the machine / equipment to the Bidder for remedial action.

### c) Exclusions

The bidder shall be exempted from any delays on SLA parameters arising from the delay in approvals, reviews, suggestions etc from the DGS's side. Any such delays shall be notified in written by the DGS

## 12. Non-Adherence to SLA

- In case the bidder is unable to adhere to the target levels mentioned in the SLA and the percentage of penalty due to defaults exceeds 5 percent for four consecutive months, then the penalty would be doubled in the fourth month and subsequently till the same is rectified for two consecutive months.
- In case the bidder defaults in the same category for four consecutive months, then the penalty would be doubled in the fourth month and subsequently for that category till the same is rectified for two consecutive months.
- The cap of 10% as mentioned above will be applicable in both cases 10.2(a) and 10.2(b).
- These breach clauses 10.2(a) and 10.2(b). will be relaxed for the two quarters after go-live.

## 13. Breach of SLA

- If the penalty continues for 6 consecutive months for the same category or over 10% across all categories, DGS may invoke breach and terminate the contract. The decision of DGS in this regard shall be final and binding on the bidder, the DGS will treat it as a case of breach of Service Level Agreement. The following steps will be taken in such a case: -
  - *DGS issues a show cause notice to the SI.*
  - *bidder should reply to the notice within three working days.*
  - *If the DGS authorities are not satisfied with the reply, the DGS will initiate termination process as described in clause 41 of Section III, GCC.*

## 14. Monitoring and Auditing

DGS will review the performance of bidder against the SLA parameters each month, or at any periodicity defined in the contract document. The review / audit report will form basis of any action relating to imposing penalty or breach of contract. Any such review / audit can be scheduled or unscheduled. The results will be shared with the bidder as soon as possible. DGS reserves the right to appoint a third-party auditor to validate the SLA.

### a) Reporting Mechanism

The bidder's representative will submit SLA performance reports from centrally managed web-based SLA monitoring tool in an agreed upon format by the 5th working day of subsequent month of the reporting period. The reports will include "actual versus target" SLA performance, a variance analysis and discussion of appropriate issues or significant events.

## **b) Issue Management Procedures**

### *General*

This process provides an appropriate management structure for the orderly consideration and resolution of business and operational issues in the event that quick consensus is not reached between DGS and bidder. It is expected that this pre-defined process will only be used on an exception basis if issues are not resolved at lower management levels.

### *Issue Management Process*

- i. Either DGS or Bidder may raise an issue by documenting the business or technical problem, which presents a reasonably objective summary of both points of view and identifies specific points of disagreement with possible solutions.
- ii. DGS and the SI's representative will determine which committee or executive level should logically be involved in resolution.
- iii. A meeting or conference call will be conducted to resolve the issue in a timely manner. The documented issues will be distributed to the participants at least 24 hours prior to the discussion if the issue is not an emergency requiring immediate attention.
- iv. The DGS and the Bidder shall develop an interim solution, if required, and subsequently the permanent solution for the problem at hand. The Bidder will then communicate the resolution to all interested parties.
- v. In the event a significant business issue is still unresolved, the arbitration procedures described in the Contract will be used.

## **15. SLA Change Control**

### **a) General**

It is acknowledged that this SLA may change as DGS's business needs evolve over the course of the contract period. As such, this document also defines the following management procedures:

- A process for negotiating changes to the SLA.
- An issue management process for documenting and resolving particularly difficult issues.
- DGS and Bidder management escalation process to be used in the event that an issue is not being resolved in a timely manner.
- Any changes to the levels of service provided during the term of this agreement will be requested, documented and negotiated in good faith by both parties. Either party can request a change. Changes will be documented as an addendum to this document and consequently the contract.

### **b) SLA Change Process**

Both the parties may amend this SLA by mutual agreement in accordance. Changes can be proposed by either party. Normally the forum for negotiating SLA changes will be DGS's monthly review meetings.



### **c) Version Control**

All negotiated SLA changes will require changing the version control number. As appropriate, minor changes may be accumulated for periodic release (e.g. every quarter) or for release when a critical threshold of change has occurred.

## **16. Management Escalation Procedures**

The purpose of this escalation process is to provide a quick and orderly method of notifying both parties that an issue is not being successfully resolved at the lowest possible management level. Implementing this procedure ensures that DGS and Bidder management are communicating at the appropriate levels. Escalation should take place on an exception basis and only if successful issue resolution cannot be achieved in a reasonable time frame.

- All issues would be raised to the project management team, which is completely responsible for the day to day aspects of the implementation. The project management team shall classify the issues based on their severity level and resolve them within appropriate timelines.
- If project management team is unable to resolve an issue, the issue would be escalated to the top management with options/ risks detailed for decision. Top management will make decisions based on the options/ risks presented.
- In case one or both the parties are unsatisfied with the decision of the top management of the DGS, the dispute will be resolved as specified in this RFP

## **17. Updating of this Agreement**

- a) The Parties anticipate that this Agreement shall need to be re-evaluated and modified to account for changes in work environment and technology from time to time. Hence, they hereby agree to revise the terms of the Agreement on an annual basis.
- b) The Parties hereby agree upon the following procedure for revising this Agreement:
  - i. Any and all changes to this Agreement will be initiated in writing between the Buyer and the Implementation Agency, The service levels in this Agreement shall be considered to be standard for the Buyer and shall only be modified if both Parties agree to an appended set of terms and conditions;
  - ii. Only the Buyer or the Bidder may initiate a revision to this Agreement;
  - iii. A notice of the proposed revision ("SLA Change Request") shall be served to the Buyer or the Bidder as the case may be;
  - iv. The SLA Change request would be deemed to be denied in case it is not approved within a period of 45 days;
  - v. In the event that Buyer/Bidder approves of the suggested change the change shall be communicated to all the Parties and the SLA

- vi. Change request would be appended to the Agreement;

The Buyer shall update and republish the text of Agreement annually to include all the SLA Change Requests that have been appended to the Agreement during the course of the year. Such republished Agreement shall be circulated to all the Parties within <\*\*\*> days of such change taking place

## 18. Document History

All revisions made to this Agreement shall be listed in chronological order as per the format set out below and a copy of the same shall be provided to the Parties:

Version	Date	Description of Changes
<***>	<***>	<***>

## 19. Scope of Services

- Bidder shall ensure that Services are available as per the requirements of the project;
- Bidder shall provide support services for addressing problems related to the provision of services through the POC. Such POC shall be available over telephone on <\*\*\*> number / email 24 hours a day, 7 days a week
- Bidder guarantees that he shall achieve the Service Levels for the Project;
- Bidder shall be liable to Service Credits in case of failure to comply with the Service Levels. However, any delay not attributable to the Implementation Agency shall not be taken into account while computing adherence to the Service Levels.

## 20. Performance Review

The POC's of both the Buyer and the Implementation Agency shall meet on a quarterly basis to discuss priorities, service levels and system performance. Additional meetings may be held at the request of either the Bidder or the Buyer. The agenda for these meetings shall be as follows:

- Service performance;
- Review of specific problems/exceptions and priorities; and
- Review of the operation of this Agreement and determine corrective action to overcome deficiencies.

## **21. Indemnities**

The Parties agree to indemnify each other under this Agreement in accordance with the terms and principles set out in the MSA.

## **22. Dispute Resolution**

Any dispute, difference or claim arising out of or in connection with the Agreement which is not resolved amicably shall be decided in accordance with the dispute resolution procedure as set out in the MSA.

## **23. Miscellaneous**

### **a) Assignment and Charges**

This Agreement shall be binding on and ensure for the benefit of each Party's successors in title. No Party shall assign or declare any trust in favour of a third party over, all or any part of the benefit of, or its rights or benefits under, this Agreement.

### **b) Governing Law and jurisdiction**

This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at the State of Maharashtra shall have jurisdiction over matters arising out of or relating to this Agreement.

### **c) Waiver of sovereign immunity**

The Parties unconditionally and irrevocably:

- i. agree that the execution, delivery and performance by them of the Agreement constitute commercial acts done and performed for commercial purpose;
- ii. agree that, should any proceedings be brought against a Party or its assets, property or revenues in any jurisdiction in relation to the Agreement or any transaction contemplated by the Agreement, no immunity (whether by reason of sovereignty or otherwise) from such proceedings shall be claimed by or on behalf of such Party with respect to its assets;
- iii. waive any right of immunity which it or its assets, property or revenues now has, may acquire in the future or which may be attributed to it in any jurisdiction; and
- iv. consent generally to the enforcement of any judgment or award against it in any such proceedings to the giving of any relief or the issue of any process in any jurisdiction in connection with such proceedings (including the making, enforcement or execution against it or in respect of any assets, property or revenues whatsoever irrespective of their use or intended use of any order or judgment that may be made or given in connection therewith).

### **d) Variation**

This Agreement may only be varied in writing and signed by both Parties

**e) Waiver**

Waiver including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement: -

- i. Shall be in writing
- ii. Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;
- iii. Shall not be effective unless it is in writing and executed by a duly authorized representative of the Party; and
- iv. Shall not affect the validity or enforceability of this Agreement in any manner.

**f) Exclusion of implied warranties**

This Agreement expressly excludes any warranty, condition or other undertaking implied at law or by custom or otherwise arising out of any other agreement between the Parties or any representation by either Party not contained in a binding legal agreement executed by both Parties.

**g) Survival**

a) Termination or expiration of the Term shall:

- not relieve the Bidder or the Buyer, as the case may be, of any obligations hereunder which expressly or by implication survive hereof; and
- except as otherwise provided in any provision of this Agreement expressly limiting the liability of either Party, not relieve either Party of any obligations or liabilities for loss or damage to the other Party arising out of, or caused by, acts or omissions of such Party prior to the effectiveness of such termination or expiration or arising out of such termination or expiration.

b) All obligations surviving termination or expiration of the Term shall cease on termination or expiration of the Term.

**h) Entire Agreement**

This Agreement and the Annexure together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn.

**IN WITNESS WHEREOF THE PARTIES HAVE EXECUTED AND DELIVERED THIS AGREEMENT AS OF THE DATE FIRST ABOVE WRITTEN.**

SELECTION OF SYSTEM INTEGRATOR FOR EGOVERNANCE SOLUTION AND IT  
TRANSFORMATION OF DIRECTORATE GENERAL OF SHIPPING, GOVT OF INDIA

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SIGNED, SEALED AND DELIVERED  
For and on behalf of the Implementation  
Agency by DGS

(Signature)

(Name): Shri.  
(Designation):

(Address)

(Fax No.)

In the presence of:

- 1.
- 2.

SIGNED, SEALED AND DELIVERED  
For and on behalf of the Nodal  
Agency by:

(Signature)

(Name)  
(Designation)

(Address)

(Fax No.)



## **ANNEXURE 1: FUNCTIONAL REQUIREMENT SPECIFICATIONS (FRS)**

The Functional Requirement Specifications (FRS) mentioned in this document are prepared based on the approved BPR Report and to be read in conjugation with the same.

## 1.1 To-Be-Common Processes

Common Functional Requirements	
1	Profile Creation
a)	System to create profiles for all stakeholders - internal and external. <b>1. External:</b> Seafarer, Shipping Entities, MTI, MTO, RPS, RO, Ports, Auditors for ISM Audits, Shipyards, Examiners, Medical Practitioners and Service Providers including Labs, LSA/ FFA - Service Stations, Insurance providers etc. <b>2. Internal:</b> Individual profiles of the Directorate staff based on their appointment and designation across Wings: Administrative wing, Engineering wing, Nautical wing, Naval architecture, Sections: Personnel Branch, Administration, Crew, Vigilance, Coastal, Coordination, Hindi Vibhag, MSL & International Coordination, Finance & Accounts and Field offices: MMD, Shipping Master's Office, Seamen Employment Offices, Regional Office (SAILS), SEO, SPFO, SWFS
b)	System will have the provision to redirect the new user to their respective application form for creating a profile on the DGS portal.
c)	The system should have provision for capturing fields as per checklist for each stakeholder (explained separately in each process) creating new user log-in account in the portal
d)	The system should not proceed further in case any of the mandatory fields in the checklists are missing. In such cases, a pop-up message should be displayed by the system highlighting the missing fields
e)	Any request/application made to the Directorate shall be made only through the stakeholder profile - available to stakeholder on a single click
f)	System will auto-generate a reference number for any application that is submitted on the system for subsequent process and tracking
g)	The system should assign email address of user (mandatory) as their user name/ID. Email ID and telephone number should be valid and unique and should not exist within the existing database
h)	The system shall have provision for the user to change username/ID and temporary password after first login
i)	The system should have a provision to upload relevant documents (including scanned copies) as per checklist required for concerned stakeholder for registration to the portal
j)	The system should not proceed to next step in case documents are not uploaded or documents are not in required size or format. It should also provide pop-up messages and highlight the missing document in such cases.
k)	System should have the provision for the applicant to agree to a "self-declaration" citing that all info being provided by the user is true and if found false, necessary action may be taken by DGS.
l)	System will have the provision to save form in draft form before exiting or proceeding to next page of the profile creation process
m)	The system shall allow the concerned the Directorate department to accept/reject an application after verification and send auto-generated mail containing account activation link to the user's registered email in approved cases
n)	The system should have a provision for concerned the Directorate department to send a mail to user's registered email in case of discrepancy in uploaded documents



Common Functional Requirements	
o)	The system shall be capable of enabling user online account only after user fulfilling the verification mail activities successfully
p)	The system should have a mechanism for resetting and emailing the new password to the users registered email ID, in case a user forgets his password or intends to change it
q)	The system must prompt the user to change the password on the first login on the portal
r)	The system should have de-duplication provision before creating a profile
s)	The system must lock the account for 12 hours in case login not successful for 3 consecutive attempts
t)	The system should have separate landing pages with respective services for different entities
u)	If no services are availed for 6 months post profile creation, profile will be deactivated. User will have to activate the deactivated profile via portal request to the Directorate.
v)	System will have provision for correction of profile. While some field may be changes real time, key fields will have to go through a verification process with the Directorate
w)	System to have provision to upload signed documents to the profile database
x)	System will have the provision for all data relevant to each of the stakeholders to be migrated to the new e-gov platform from the existing platform.
y)	System will have the provision to ensure that in case the data of the existing stakeholders is not available on the existing e-gov platform, the necessary information will be digitised and integrated with the new e-gov platform after a two-step verification with both DGS as well as the stakeholder.
2	General Features of Profile
a)	All profiles will have links for the services/request that are applicable to that particular stakeholder. For e.g. a seafarer profile will have direct links to CDC, COC etc. while ships will have links to registration of ships, technical clearance etc.)
b)	System will have the provision for an application status tracker which will allow the stakeholder to view the current status of the application submitted
c)	Edit rights in each stakeholder profile will vary and depending on the same, the stakeholder can either correct the profile fields themselves or apply to DGS for correction
d)	System will have the provision to send and receive notifications to any of the relevant stakeholders related to pending applications, fee payments, and queries from DGS etc.
e)	System will have the provision to receive all recent DGS related updates
f)	System will have the provision to provide Feedback/Grievance Mechanism
g)	System will have the provision for rating to be asked for (from the user) after service is provided. Ratings to be in the order v good, good, poor, v poor
h)	System to have provision to enter grievance in 200 words limit
i)	System shall auto generate pop ups to assigned authorities if query not resolved within stipulated time
3	Service Request (Services provided by DG Shipping)
a)	The system should have specified template for application forms with all required fields as per checklists (for each process as mandated by the

Common Functional Requirements	
	Directorate) along with provision to upload relevant documents (including scanned copies).
b)	System will not allow user to proceed unless all mandatory fields and documents are uploaded in required size and format
c)	System will have the provision for saving the data entered on a form/ format before exiting or proceeding to next page
d)	System shall provide the user with an option to review the form prior to submission and if required to go back
e)	System will auto-generate the request number, once request has been submitted successfully. The request number can be used for tracking purposes in the status tracker
f)	In case of internal Directorate processes only, System will auto-generate a unique file number, once a new process is initiated. This unique file number shall be used to open the file and continue further in the same file.
g)	When the user clicks on the respective service icon to avail a service, the form/ format opens up with auto-populated fields and data input fields
h)	System shall provide the user with an option to save draft & review the form/ format prior to submission and if required to go back
i)	Provision for contacting SPOC for each process/the Directorate nodal authority for e-gov system
j)	System to have provision to direct the request to the concerned person in the concerned department
k)	System shall have provision for bilingual forms and checklists
l)	System will have a provision for all submitted forms to be downloaded in PDF format along with a direct print option for the applicant/ concerned officer at DG Shipping
m)	System shall provide a link for Concurrent Feedback Mechanism after submission and closing of all service requests
n)	System shall have provision for tracking application
o)	The system should have the capability of exporting various reports in multiple format like DOCX, XLS, PDF etc. or as desired by the user.
p)	System should be able to allow searching and retrieving information related to any of the stakeholders basis relevant filters
4	<b>Audit Trail</b>
a)	System shall maintain audit trail
b)	the Directorate entities will be able to look at the audit trail for all stakeholder profiles as well as internal the Directorate action
5	<b>Fees &amp; Payment</b>
a)	System shall have provision for payment through an electronic payment gateway with multiple modes of payment including credit card, debit card and net banking. Applicant will be redirected to the payment gateway on successful submission of application and the respective fee to be paid will be built into the system.
b)	All online fee payment should be linked to 'Bharatkosh' NTRP portal for linking the payments to the proper account head of each office i.e. DGS/All MMDs/ Shipping offices/ Seamen Employment office/RO Sails etc. Account heads have already been mapped in NTRP Portal.
6	<b>Internal processing -at the Directorate</b>

Common Functional Requirements	
a)	<p>After any service request is received internally (the Directorate), the system shall allow the Directorate personnel at all levels to:</p> <ul style="list-style-type: none"> <li>- view complete profile of the user</li> <li>- view all information and documents uploaded</li> <li>- provide comments and send it to next higher/lower level</li> <li>- send query back to applicant</li> </ul>
b)	<p>For all approval processes, system will allow the following:</p> <ul style="list-style-type: none"> <li>a. The system will follow the Directorate approval hierarchy and within the Directorate approval hierarchy, system will allow the nodal officer to approve or reject the application</li> <li>b. The system will have provision for a senior officer to delegate power to approve or reject an application to a junior officer</li> <li>c. System will have provision to allow senior officers to delegate internal processing of service requests to a concerned officer</li> <li>d. System will have provision for a senior officer to delegate internal processing of a junior concerned officer to other junior officer (in cases of leave)</li> </ul>
c)	System shall have provision to assign or refer or assign and refer a particular case to other officer of same or different departments.
d)	System shall have provision to post internal notes
e)	System will have the provision of digital signature for the Approving Authority
f)	System to generate MIS for tracking internal performance. List of respective service request status and its details (all metadata) for specified time-period. This list should allow sorting to generate further MIS with refined search parameters.
g)	System will have provision to auto-escalate the file to the immediate senior officer if it is unattended by a particular officer
h)	System will allow DGS internal stakeholders with the requisite powers, to deactivate a certain account manually, based on pre-clarified conditions of use.
i)	System will allow DGS to generate MIS of all stakeholders, across different categories
<b>7</b>	<b>Notifications</b>
a)	<p>System will automatically send notification once service request is</p> <ul style="list-style-type: none"> <li>- Submitted successfully</li> <li>- Pending application is about to default</li> <li>- Query has been replied to</li> <li>- Approved or rejected.</li> <li>- Dispatch by post along with tracking number.</li> </ul> <p>All notifications will be sent through portal, registered email, as well as the registered mobile number Moreover, notifications will be automatically sent once any process step is completed for the subsequent process step to take place. As part of any business process requirements receipt of electronic submissions, including the date and time of submission, shall be acknowledged immediately, and shall also be sent electronically to the user (internal/external)</p>
b)	All notifications will be sent through portal, registered email, as well as the registered mobile number (SMS). Notifications will also be received on the mobile apps (to be designed and developed by SI).
c)	The system shall have provision for alerts to be automatically raised, as defined by the process requirement and sent to the concerned recipients by email/SMS. These alerts can be of confirmation, status update or escalation
d)	System will have the provision to ensure TAT for all externals users to respond to queries (tentatively 5 days ) and the TAT for DGS to respond (tentatively 48

Common Functional Requirements	
	hours). In case of failure to respond to DGS queries within the prescribed time limit, the respective application/ process will be nullified and the user will have to re-initiate the process from start
8	<b>Certification/ Approval/ Licenses</b>
a)	System shall have provision to auto-generate letters and certificates by auto-populating fields post approval by authority
b)	System shall have templates for approval letters and certificates
c)	All certificates issued by DG Shipping - for ships & Seafarer will be generated by the system
d)	The system will have provision to assign unique alpha-numeric code for all the Certification/ Approval/ License issued.
e)	The system shall provide optional service for hard copy dispatch of certificates/ approvals/ licenses to the users via post. In which the case the system will notify the respective officer and provide print option. Dispatch number as provided by postal department will have to be reflected in the system
f)	The system shall provide users to print certificates issued by DG Shipping and allied offices online.
g)	System shall have provision for all third-party agencies to input metadata and generate certificates, approvals, licenses or survey letters (mandatory). Although, third party agencies will be liable to issue all certificates and system will have no role in its issuance.
h)	The system will have provision to assign unique alpha-numeric code for all the Certification/ Approval/ License issued.
i)	Hard copies of all Certification/ Approval/ License/ Survey Letters issued by authorised third party agencies will have to be availed through the third-party agencies. The system shall not be liable to issue such certificates in hard/ soft copy
j)	The system shall have provision of a link to check authenticity of all certificates issued by DG Shipping or authorised third parties via the alpha-numeric code issued. Such a link will confirm the authenticity of the document, name against whom it is issued along with general details of the certificate to whomsoever although will not reveal crucial data
k)	System shall check validity related clauses of all certificates. In cases where the validity of certificates/ documents have expired, the system will generate pop-up of validity expiry for internal and external stakeholder
l)	System shall notify the stakeholder of certificate/ document expiry 10 days before expiry
9	<b>MIS</b>
a)	The system should have the capability of exporting various reports in multiple format like DOCX, XLS, PDF etc. or as desired by the user.
b)	System should be able to allow searching and retrieving information related to any of the stakeholder's basis relevant filters
10	<b>Form Initiation and Submission</b>
a)	System shall have provision for user to initiate and fill form. System shall have provision for user to submit the filled form
b)	If any application form is being filled by any user, then system should always check if all the mandatory fields (as defined in the annexure) is being filled by the user or not. The user should not be able to submit the form if any mandatory field is not filled

Common Functional Requirements	
c)	System will have a provision for all submitted forms to be downloaded in PDF format along with a direct print option for the applicant/ concerned officer at DGS
d)	System shall have provision for tracking application
e)	System shall have the provision of generation a unique reference number for the submitted form

## 1.2 Seafarer related FRS

Seafarer Processes	
1	Creation of Applicant Seafarer Profile
a)	If applicant is an Indian seafarer, System will have the provision for the applicant to select only one course from pre-decided list.
b)	If applicant is an Indian seafarer, System will have the provision to select one MTI from pre-decided list.
c)	System will have the provision to send verification link with User ID and temporary password to the individual seafarer for whom the profile is being created, once application is approved.
d)	If applicant is an Indian seafarer, System will have the provision for MTI to generate the INDOS for the seafarer using the application reference number
e)	If applicant is an Indian seafarer, System will have provision to deactivate the profile in case seafarer has not enrolled for an MTI course i.e. 5 basic STCW courses (PSSR, PST, FPFF, EFA, STSDSD/SSO) or any DG approved pre-sea or post-sea courses from an Indian MTI within 3 months of making the profile
f)	In case of a foreign seafarer applicant, once the application has been submitted and approved, a User ID, temporary password and INDOS number will be generated and sent to the aspiring seafarer's email ID.
g)	System will have the provision to generate an MIS Report with list of individual profile applications with status and other details (all metadata) for specified time period.
2	CDC- Application for new CDC
a)	System will have the provision to auto check if the nationality of the seafarer is Indian and the seafarer holds a valid INDOS number
b)	System will allow for CDC number to be auto-generated after approval of application according to inbuilt system logic. The same shall be auto-forwarded to the Printing Section, SMO for further process.
c)	System will have the provision for uploading the scan and other details of the CDC from the back-end interface. This will then be integrated with the seafarer database.
d)	System will allow insertion of tracking number for the dispatch sent out with the CDC (Indian Postal Service dispatch). The same will be notified to the applicant.
e)	MIS Reports: List of new CDC applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
3	CDC- Renewal of CDC
a)	System check for request: Check time left from expiry date <1 yr
b)	System will allow for expiry date to be automatically revised after approval of application. Parallely, a request for renewal sticker shall be auto-forwarded to the Printing Section, SMO.

<b>Seafarer Processes</b>	
c)	System will have the provision for uploading the scan and other details of the renewal sticker from the back-end interface. This will then be integrated with the seafarer database.
d)	System will allow insertion of tracking number for the dispatch sent out with the CDC renewal sticker (Indian Postal Service dispatch). The same will be notified to the applicant.
e)	MIS Reports: List of CDC renewal applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
<b>4</b>	<b>CDC- Replacement of CDC</b>
a)	System will allow for replacement CDC book printing request to be automatically sent to the Printing Section, SMO after approval of request. In parallel, the old CDC booklet no. will be deactivated on the database.
b)	System will have the provision for uploading the scan and other details of the replaced CDC book from the back-end interface. This will then be integrated with the seafarer database.
c)	System will allow insertion of tracking number for the dispatch sent out with the replaced CDC(Indian Postal Service dispatch). The same will be notified to the applicant.
d)	MIS Reports: List of CDC replacement applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
<b>5</b>	<b>CDC- Duplication of CDC</b>
a)	System will allow for duplicate book printing request to be sent to the Printing Section, SMO after approval of request. In parallel, old CDC booklet no. will be deactivated on the database.
b)	System will have the provision for uploading the scan and other details of the duplicate CDC book from the back-end interface. This will then be integrated with the seafarer database.
c)	System will allow insertion of tracking number for the dispatch sent out with the duplicate CDC (Indian Postal Service dispatch). The same will be notified to the applicant.
d)	System will have cut-off date for seafarers to request for a replacement of old CDCs (without booklet numbers). Cut-off date will be notified on the old and new e-gov system. However, even after the cut-off date, whenever the old CDC comes for renewal/ replacement/ duplication, a new booklet will be issued with a new booklet number.
e)	MIS Reports: List of CDC duplication applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
<b>6</b>	<b>CDC- Discontinuation of CDC</b>
a)	System will deactivate CDC Number on the database after approval of request.
b)	MIS Reports: List of CDC discontinuation applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
<b>7</b>	<b>COC as Cook- Application for COC as Cook</b>
a)	System will allow for COC as Cook number and the certificate to be auto-generated after approval of application according to inbuilt system logic. The same may be forwarded to the Printing Section, SMO.



Seafarer Processes	
b)	System will have the provision for uploading the scan of the signed COC as Cook certificate from the back-end interface. This will then be integrated with the applicant database.
c)	System will allow insertion of tracking number for the dispatch sent out with the COC as Cook (Indian Postal Service dispatch). The same will be notified to the applicant.
d)	MIS Reports: List of COC as Cook applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
8	COC as Cook- Replacement of COC as Cook
e)	System will allow for replaced certificate to be auto-generated after approval of application. The same may be forwarded to the Printing Section, SMO.
f)	System will have the provision for uploading the scan of the signed replaced COC as Cook certificate from the back-end interface. This will then be integrated with the applicant database.
g)	System will allow insertion of tracking number for the dispatch sent out with the replaced COC as Cook (Indian Postal Service dispatch). The same will be notified to the applicant.
h)	MIS Reports: List of COC as Cook replacement applications with status and other details (all metadata) for specified time-period. This list should allow sorting to generate further MIS with refined search parameters.
9	COC as Cook- Duplication of COC as Cook
a)	System will allow for duplicate certificate to be auto-generated after approval of application. The same may be forwarded to the Printing Section, SMO.
b)	System will have the provision for uploading the scan of the signed duplicate COC as Cook certificate from the back-end interface. This will then be integrated with the applicant database.
c)	System will allow insertion of tracking number for the dispatch sent out with the duplicate COC as Cook (Indian Postal Service dispatch). The same will be notified to the applicant.
d)	MIS Reports: List of COC as Cook duplication applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
10	Examinations- Online Eligibility Self-Assessment
a)	System shall allow seafarer to check the eligibility online on single click
b)	System shall allow the seafarer to choose the grade he/she intends to check eligibility
c)	System shall be configured to check eligibility as per grade and position which seafarer aims to apply for - to be developed in accordance with the Training, Examination and Assessment Programme (TEAP) for Merchant Shipping (Standards of Training, certifications and watchkeeping for seafarers) Rules, 2014. A sample assessment logic for one grade assessment (MEO Class IV Exam, Part-B) is attached ( <b>Section 1.26</b> ). There are ~200 combinations possible.
d)	System shall pick the basic information (trainings, certifications, sea service etc) from Seafarer's profile to perform the assessment
e)	System shall prompt the seafarer with provision to fill the additional information (like additional sea-service, training or courses) which are not updated on the system
f)	System shall consider the additional information provided along with information from the seafarer's profile to check eligibility
g)	System shall have the provision to pop up the results of online eligibility assessment immediately with following status (illustrative) - Eligibility for that particular grade (with link to eligibility verification)

Seafarer Processes	
	- Not Eligible (with the head/field which did not match as per the eligibility criteria configured in system)- highlighting the additional requirements
11	Examination- Examination Application
a)	System shall allow seafarer to request for eligibility verification and exam application on single click. In case system shows ineligibility for seafarer, it will have provision to apply for exam separately after due approvals.
b)	System shall pick up all the information required for eligibility verification from the seafarer's profile database maintained.
c)	System shall prompt the seafarer with provision to fill the additional information (like additional sea-service, training or courses) and attach documents for each added field for a particular grade eligibility verification
d)	System shall route the seafarer to payment gateway once all the required fields are filled. After making the payment the request for eligibility verification shall be considered as submitted
e)	The eligibility verification application will be sent to 'Assessment centre' based on work load at each centre
f)	System shall show the results of eligibility assessment as per the logic configured in system along with eligibility verification request
g)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In case called for physical verification of paper, system will prompt user via SMS and e-mail
h)	On logging into the profile, system will allow seafarer to choose the nearest centre for physical verification of certificates
i)	Assessing officer would be able to accept/reject the application or call for physical verification of papers-with an intimation being sent to the candidate on mail.
j)	System should have provision to have fixed dates in a month where candidates can come for physical verification.
k)	System shall have provision to transfer the eligibility verification from the one assessment centre to the assigned DGS staff at another assessment centre
l)	System shall allot time for visit at the selected centre to the applicant
m)	System shall notify the respective centre - one day in advance for 'List of candidates visiting for verification' and the time for each visit
n)	System shall allow seafarer to select between Oral or Written exam, and then select the function they want to appear for within that particular grade
o)	System shall have provision to built-in logic for availability of seat for each function of examination at exam centre on respective exam dates
p)	Once eligibility is verified for a particular grade, system will allow user to apply for any function of that grade directly
q)	System shall allow the seafarer to choose the seat (course, exam centre, time slot) for written examination as per the seat availability
r)	System shall allow the seafarer to choose the month and exam centre on application for Oral examination
s)	System shall not allow the seafarer to make examination booking if he had been absent for last 3 consecutive exam (written or oral). Notification will be sent to seafarer by SMS and e-mail asking him to take special permission from assigned DGS staff for appearing for that examination
t)	System shall allow the assigned DGS staff to allow the seafarer to appear for a examination in case the seafarer have been blocked by system as mentioned above
u)	System shall allow assigned DGS staff to allot time slot for Oral examination, and notification regarding this should be sent to seafarer by SMS and e-mail



<b>Seafarer Processes</b>	
v)	System shall prompt user if seat is not available at selected exam centre and provide options for other centres and alternate dates
w)	System shall route the seafarer to payment gateway once the seafarer has selected the required field in exam application form
x)	System shall generate Admit card on successful payment for written exam application. System shall allow the seafarer to print the admit card and to download it in PDF format
y)	System shall generate Admit card for Oral examination on allotment of slot details by assigned DGS staff
z)	System shall generate consolidated list of seafarers appearing for an exam a week before to assigned DGS staff of respective exam centre
aa)	MIS Report: List of Assessment application for a specified period (daily, monthly, from-to) with status, date applied, date approved, grade, List of Examination application for a specified period (daily, monthly, from-to) with status, date applied, date approved, grade, course, discipline, exam centre, no of attempts, written/oral
<b>12</b>	<b>Examination- Review of Results</b>
a)	System shall generate the list of examination paper eligible for seafarer to apply for review
b)	System check: Seafarer can request for review of a paper with 30 days from issue of results of that particular paper as per Merchant Shipping (Standards of Training, Certification and Watch-keeping for Seafarers) Rules 2014, Miscellaneous Provisions, Chapter IX, point 77
c)	System shall have provision to route the review request to assigned DGS staff of a particular MMD where initial assessment of that particular answer sheet was conducted
d)	System shall have provision for assigned DGS staff to check the previous examiner who corrected the paper and fill in new allotted examiner details
e)	System shall have provision for assigned DGS staff to fill in the re-evaluated results
f)	System shall have provision to generate a new mark sheet in place of the original mark sheet in a particular format on final approval of results on system
g)	MIS Reports: List of review application with application date, status, MMD, evaluator for a specific period
<b>13</b>	<b>COC- Issuance of Fresh COC</b>
a)	System shall automatically generate a request to assigned DGS staff for issue of Certificate of competency if that seafarer have cleared all the functions (written and oral) for that particular grade
b)	Logic will be built in the system specifying the list of written functions and oral functions under each grade of examination
c)	System shall have provision to generate a soft copy of the certification after final approval
d)	System shall have a provision for an assigned DGS staff to fill in the Certificate of competency booklet number which shall be updated on system
e)	MIS Report: List of seafarers eligible for issue of Certificate of Competency grade wise with status
<b>14</b>	<b>COC- COC Revalidation</b>
a)	System will allow a seafarer to request for revalidation/renewal of certificate of competency already issued to the seafarer
b)	System shall have provision for application form to be generated with all required fields
c)	System shall have provision for seafarer to add additional information for application for revalidation and also provision to attach document in specified format

Seafarer Processes	
d)	System will have a built-in logic in the system to check the eligibility for revalidation as per information already stored on profile and additional information filled by the seafarer. Example of logic attached
e)	System shall route the seafarer to payment gateway on a successful completion of application form
f)	The application will be sent to 'MMD' based on work load at each department
g)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In case called for physical verification of paper, system will prompt user via sms and e-mail
h)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
i)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
j)	System shall provide a option to assigned DGS staff to fill in the validity of Revalidation certificate with few default options (illustrative): - 5 years from date of expiry of previous certificate - 5 years from date of revalidation/ refresher courses - 5 years from date of revalidation application
k)	MIS Report: List of Revalidation application form with status, date applied, date approved, MMD due to verify for a specified period
l)	At least one of the following requirements to be met for revalidation of COC in case of Nautical Department: <ul style="list-style-type: none"> <li>Record of sea service in the relevant capacity for a period of at least one year in the preceding five years; OR</li> <li>Original experience certificate from the employer for equivalent services performed ashore (e.g. officers working in marine related jobs, such as: maritime surveyors, faculty, superintendents, cargo superintendents, port officers, port engineers, officers serving on offshore rigs and platforms, FPSO, FSO, Chartering, Brokering or Commercial operations, vetting inspectors, ISM auditors, Port State and Flag State inspectors, Shipboard Training Officers, pilots, etc. ) for a period of at least two years in the preceding five years. OR</li> <li>Record of approved seagoing service, performing functions appropriate to the certificate held, for a period of at least 3 (three) months in total during the preceding 6 (six) months immediately prior to expiry of the certificate OR</li> <li>Successfully completing an approved training course or courses, such as: competency course for the grade of CoC concerned or one grade higher OR</li> <li>Record of seagoing service, performing functions appropriate to the certificate held, for a period of not less than three months in a supernumerary capacity, or in a lower officer rank than that for which the certificate held is valid immediately prior to taking up the rank for which it is valid</li> </ul>
15	COC- COC Extension
a)	System shall have provision for seafarer or shipping company to make a request for extension of validity for certificate of competency
b)	System shall allow the applicant to fill in the reason for application of extension and attach all the required documents in specific format
c)	System shall route the seafarer to payment gateway on a successful completion of application form

Seafarer Processes	
d)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In case called for physical verification of paper, system will prompt user via SMS and e-mail
e)	System shall provide option to assigned DGS staff to fill in the validity of extension certificate
f)	MIS Report: List of Extension application form with status, date applied, date approved, MMD due to verify for a specified period
16	<b>COC- COC Duplication</b>
a)	System shall have provision for seafarer to request for duplicate certificate of competency in case the COC have been damaged or lost
b)	System shall have provision for application form to be generated with all required fields with option to upload document in specific format
c)	System shall route the seafarer to payment gateway on a successful completion of application form
d)	The application will be sent to 'MMD' based on work load at each department
e)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In case called for physical verification of paper, system will prompt user via SMS and e-mail
f)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
g)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
h)	System shall have provision to generate a soft copy of the certification after final approval
i)	System shall have a provision for an assigned DGS staff to fill in the Certificate of competency booklet number which shall be updated on system
j)	MIS Report: List of Duplicate application form with type of duplication, status, date applied, date approved, MMD due to verify for a specified period
17	<b>COC- Dangerous Cargo Endorsement</b>
a)	System shall allow a seafarer to request for Type of Dangerous Cargo Endorsement: 1. Basic training for oil tanker cargo operations 2. Basic training for chemical tanker cargo operations 3. Basic training for liquefied gas tanker cargo operations 4. Advanced training for oil tanker cargo operations 5. Advanced training for chemical tanker cargo operations 6. Advanced training for liquefied gas tanker cargo operations
b)	System should provide following provisions for application: 1. Apply for new certificate 2. Renewal of certificate
c)	System shall have provision for application form to be generated with all required fields and option to upload required documents in specific format
d)	System shall route the seafarer to payment gateway on a successful completion of application form
e)	The application will be sent to 'MMD' based on work load at each department
f)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. Incase called for physical verification of paper, system will prompt user via SMS and e-mail

Seafarer Processes	
g)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
h)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
i)	System shall have provision to generate certificate on final approval by assigned DGS staff
j)	MIS Report: List of application form seafarer wise with type of application, status, date applied, date approved, MMD due to verify for a specified period
18	COC- GMDSS
a)	Examination for GMDSS is conducted by Ministry of Communication and Information technology. Certificates are also issued by them. Seafarer have to get endorsement on that certificate to make it valid
b)	System shall have provision for application form to be generated with all required fields
c)	System should provide following provisions for application: 1. Apply for new certificate 2. Renewal of certificate
d)	System shall have provision for seafarer to make a choice of location for endorsement of certificate
e)	System shall route the seafarer to payment gateway on a successful completion of application form
f)	System shall assign the request for GMDSS endorsement to assigned DGS staff of the location selected by the seafarer
g)	System to give provision to assigned DGS staff to provide the date to seafarer for endorsement of certificate
h)	System shall have provision to scan and upload the endorsed GMDSS certificate
i)	System shall have provision for assigned DGS staff to upload the file/document forwarded by Ministry of communication with list of seafarers eligible for GMDSS Endorsement
j)	System shall allow assigned DGS staff to fill in the eligible list and map it with profile using the INDoS number
k)	MIS Report: List of application seafarer wise with type of application, status, date applied, date approved, MMD due to verify for a specified period
19	COC- Certificate of Equivalence
a)	DGS has recognized UK seafarers whose COC will be considered as equivalent Indian COC. For that he need to complete certain courses from approved MTIs and request for endorsement on system. In future DGS can recognize any other country also
b)	System shall have provision for application form to be generated with all required fields and option to attach required documents in specific format
c)	System shall route the seafarer to payment gateway on a successful completion of application form
d)	System should provide following provisions for application: 1. Apply for new certificate 2. Renewal of certificate
e)	System shall route the seafarer to payment gateway on a successful completion of application form
f)	System will have the provision for the application will be sent to 'MMD' based on work load at each department
g)	System will have the provision for the application to be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical

Seafarer Processes	
	verification of papers. In case called for physical verification of paper, system will prompt user via SMS and e-mail
h)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
i)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
j)	System shall have provision to generate certificate after the final approval by assigned DGS staff
k)	MIS Report: List of application seafarer wise with type of application, status, date applied, date approved, MMD due to verify for a specified period
20	<b>COC- Certificate of Service- Naval Officers</b>
a)	After retiring from Navy any officer can request for working as a seafarer. For that he need to complete certain courses from MTIs and then request for Certificate of service on system
b)	System shall have provision for application form to be generated with all required fields
c)	System shall route the seafarer to payment gateway on a successful completion of application form
d)	System should provide following provisions for application: 1. Apply for new certificate 2. Renewal of certificate
e)	System shall route the seafarer to payment gateway on a successful completion of application form
f)	The application will be sent to 'MMD' based on work load at each department
g)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In case called for physical verification of paper, system will prompt user via SMS and e-mail
h)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
i)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
j)	System shall have provision to generate certificate after the final approval by assigned DGS staff
k)	MIS Report: List of application seafarer wise with type of application, status, date applied, date approved, MMD due to verify for a specified period
21	<b>COC- Restricted COC renewal</b>
a)	System shall have provision for application form to be generated with all required fields
b)	System shall route the seafarer to payment gateway on a successful completion of application form
c)	System should provide following provisions for application: 1. Apply for new certificate 2. Renewal of certificate
d)	System shall route the seafarer to payment gateway on a successful completion of application form
e)	The application will be sent to 'MMD' based on work load at each department
f)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In

Seafarer Processes	
	case called for physical verification of paper, system will prompt user via SMS and e-mail
g)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
h)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
i)	System shall have provision to generate certificate after the final approval by assigned DGS staff
22	COC- Watchkeeping Certificate
a)	System shall have provision for application form to be generated with all required fields
b)	System shall route the seafarer to payment gateway on a successful completion of application form
c)	System shall route the seafarer to payment gateway on a successful completion of application form
d)	The application will be sent to 'MMD' based on work load at each department
e)	The application will be assessed by assessing officer and the officer shall have facility to accept/reject the application or call for physical verification of papers. In case called for physical verification of paper, system will prompt user via SMS and e-mail
f)	On logging into the profile, system will allow seafarer to choose the nearest MMD for physical verification of certificates
g)	System shall have provision to transfer the particular application from the one MMD to the assigned DGS staff at another MMD
h)	System shall have provision to generate certificate after the final approval by assigned DGS staff
i)	MIS Report: List of application seafarer wise with type of application, status, date applied, date approved, MMD due to verify for a specified period
23	Notify for pending certificates
a)	System will have provision for the seafarer to notify external stakeholders (Shipping Entity/RPS/MTI/Medical Practitioner) for updating the following: <ul style="list-style-type: none"> <li>▶ Articles of Agreement (AOA) (Shipping Entity)</li> <li>▶ AOA Sign Off (Shipping Entity)</li> <li>▶ PF (Shipping Entity/RPS)</li> <li>▶ Gratuity Fund (Shipping Entity/RPS)</li> <li>▶ Form I (RPS)</li> <li>▶ Form I Sign Off (RPS)</li> <li>▶ Batch Details (MTI)</li> <li>▶ Certificate Details (MTI)</li> <li>▶ Placement Details (MTI)</li> <li>▶ Medical Certificate (Medical Practitioner)</li> </ul>
b)	System will maintain a track of all notifications sent from the seafarer to other stakeholders.
c)	DGS will be able to view the notifications being sent for pending documents/certifications etc. in case there is a need for DGS to act upon the same
24	COC Suspension
a)	System shall have provision for Shipping company, RPS, MTI or assigned DGS staffs (Assessing officers) to make a complaint against any seafarer
b)	System shall allow applicant to fill in the required details (INDoS No, Nature of complain etc.) and attached required documents in specific format



<b>Seafarer Processes</b>	
c)	System shall have provision for assigned DGS staff to assign a officer for inspection
d)	System shall have provision to assign a DGS officer to conduct inspection. System shall provide the assigned staff to upload inspection report/ fill in inspection report
e)	System shall have provision for officer to call concerned seafarer. In that case, system will prompt the concerned seafarer via SMS and e-mail
f)	System shall have provision for concerned DGS staff to fill in the final decision
g)	System shall have provision to generate suspension letter with an option with assigned DGS staff to edit it
h)	MIS Report: List of cases seafarer wise for a specified period with status, date, decision, who have made the complain
<b>25</b>	<b>COC Debarment</b>
a)	System shall have provision for assigned DGS staff (Examiners) to request for debarment in case the seafarer is guilty of misconduct during any examination
b)	System shall have provision to assigned DGS staff to upload the Misconduct letter on system and fill in INDoS number and other required fields. System shall automatically map the case to the INDoS number provided
c)	System shall have provision for concerned DGS staff to fill in the final decision
d)	System shall have provision to generate debarment letter with an option with assigned DGS staff to edit it
e)	MIS Report: List of cases seafarer wise for a specified period with status, date, decision, Exam Centre
<b>26</b>	<b>Placement Details</b>
a)	System will have the provision for the seafarer shall have the provision to submit additional placement related details once the AOA/Form I has been submitted by the Shipping Entity/RPS.
b)	System will have the provision details will be of use for calculation of sea-service
<b>27</b>	<b>Provident Fund- Opening of PF Account</b>
a)	System will allow for opening of new account in the linked database, after approval of application.
b)	System will have provision for all seafarers to be able to see the record of payments made towards them
c)	System will have provision for all seafarers to be able to notify the respective RPS/Shipping Company in case of delayed payments.
d)	MIS Reports: List of PF account applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
<b>28</b>	<b>Provident Fund- PF Balance Check</b>
a)	System will have the provision for the PF balance on to be uploaded on a real time basis
b)	The balance in the PF account will be auto-calculated and displayed in a specified format
<b>29</b>	<b>Provident Fund- PF Interim Withdrawal</b>
a)	System will have provision for seafarer to be allowed to carry out an interim withdrawal (non-refundable) for circumstances covering marriage, higher education, purchase of house/flat/house site etc
b)	The amount from the PF account may be transferred to applicant's account in the linked database, after approval of application.

<b>Seafarer Processes</b>	
c)	System will have the provision for the PF balance on to be uploaded on a real time basis
<b>30</b>	<b>Provident Fund- Final Withdrawal</b>
a)	System will have the provision for the seafarer to be allowed to carry out the final withdrawal from their PF account once the CDC has been discontinued
b)	System will have the provision for the amount from the PF account to be transferred to applicant's account in the linked database, after approval of application.
c)	System will have the provision to avail this service on the e-gov website for the benefit of the nominee's, in case of death of the seafarer.
d)	System will have the provision for the PF balance on to be uploaded on a real time basis
<b>31</b>	<b>Gratuity Fund- Balance Check</b>
a)	System will have the provision for the gratuity balance on to be uploaded on a real time basis
b)	System will auto-calculate and display the balance in the Gratuity account
<b>32</b>	<b>Gratuity Fund- Final Withdrawal</b>
a)	System will have the provision for the seafarer to be allowed to carry out the final withdrawal from their Gratuity account after approval of application
b)	System will have the provision to avail this service on the e-gov website for the benefit of the nominee's, in case of death of the seafarer.
c)	System will have the provision for the Gratuity balance on to be uploaded on a real time basis
<b>33</b>	<b>Applying for Welfare Scheme</b>
a)	System will have the provision for the Welfare Fund to be transferred to the applicant's account after approval of application
b)	System will have the provision to avail this service on the e-gov website for the benefit of the nominee's, in case of death of the seafarer.
c)	MIS Reports: List of welfare scheme applications with status and other details (all metadata) for specified time-period. This list should allow sorting to generate further MIS with refined search parameters.

### 1.3 Shipping Entity related FRS

<b>Shipping Entity Processes</b>	
<b>1</b>	<b>Creation of Shipping Entity Profile</b>
a)	The system should have provision for 3 separate login ids for 1 shipping company
b)	The system shall provide shipping companies option to render access to managers/ agents for selected ships only
c)	System will have the provision to shall provide Shipping Agents access of only those ships which the shipping company assigns
d)	System will have the provision for the Shipping Entity to access the portal with multiple session
e)	System will have the provision for the Shipping Entities will be allotted an Alpha-numeric number for their identification once profile is created
f)	System will have the provision for DGS officials to examine the documents and details in the application and approve/reject the application
<b>2</b>	<b>Plan Approval</b>



Shipping Entity Processes	
a)	System shall have provision for ship owner/ ship manager/ RO to share plans of ships.
b)	System shall have provision for DGS to grant approval to ship owner/ manager/ RO in case of alternate arrangement of plans where RO needs to seek special permission from the directorate
c)	System shall have provision for users (internal and external) to share files compatible with the specific ship design software (which has been discussed earlier)
d)	System shall have provision to view and comment the all plans as uploaded by ship owner/ ship manager/ RO.
e)	System will create a ship profile based on all the data entered by the user. Certain fields (as per checklists) are NOT EDITABLE directly by the user in the ship profile. Such fields shall be editable through a separate process called "Amendments to Registry". Other fields can be directly edited by the user. This will form the basis for auto-population when generating letters and certificates from templates.
f)	System will make provisions for RO to enter metadata and required fields in the system for issuance of plan approval letter. All plan approval letters issued by RO will be routed through the system.
3	Tonnage Measurement
a)	System will have the provision for Shups for apply for a Tonnage Measurement Certificate
4	Ship/Sailing Vessel Registration- Certificate of Registry
a)	System should have provision to check in case ship has already been registered on Indian Flag
b)	The system will provide option for the user to choose the port of registry/ the registrar. Adhering to IMO rules, a ship can have only one port of registry. Shipping companies can select their desired port of registry even if the ship is not currently at the port
c)	System will have the provision for the declaration of ownership can only be uploaded if it is digitally signed by the authorized person from the shipping company
d)	Registration for the particular vessel will not be allowed if digitally signed declaration of ownership has not been uploaded
e)	The system will check if mandatory requirements for Certificate of Registry (CoR) have been filled/ uploaded. If not, the system will check if mandatory requirements for Provisional Certificate of Registry have been satisfied. Accordingly, the system will allow/ direct the concerned officer to choose issuance of CoR or PCoR.
f)	Registrar while registering the ship updates the ship classification status (ship type) from the drop-down menu
g)	The system shall provide users to print COR/ PCOR certificates online.
h)	The system shall provide optional service for hard copy dispatch of COR/ PCOR to the users via post. In which the case the system will notify the respective officer and provide print option.
i)	System shall allow MMD authority to issue digitally signed certificate of registry or PCOR, thus marking the ship as an Indian flag vessel in the database
j)	The ship's profile shall be updated with the declaration of ownership document only when the PO digitally signs the same.
6	Ship Registration- Technical Clearance
a)	System will check for following conditions and generate pop-up/ notification for requirement of technical clearance: <ul style="list-style-type: none"> <li>- Ship is older than 25 years</li> <li>- Foreign ship being bought by an Indian owner</li> <li>- Technical Clearance does not exist in database</li> </ul>

Shipping Entity Processes	
b)	System shall have provision for payment through an electronic payment gateway with multiple options for mode of payment. Applicant will be redirected to the payment gateway on successful submission of application and the respective fee to be paid will be built into the system.
c)	System will automatically send notification once application is submitted successfully and subsequently, approved or rejected. Alternatively, in case of queries, notifications will be sent. All notifications will be sent through portal, registered email, as well as the registered mobile number
d)	System will allow for all previously approved data (in preceding processes) to be stored in the profile and these will be auto populated in the future whenever required. Data has to be entered by the stakeholder carrying out the process, if data is not auto-populated.
e)	System will have a provision to create profiles of each ship owned by a shipping company. These ship profiles will be housed within the shipping company's profile. - Each ship profile will be based on its 1. IMO number if tonnage > 100 GT, ship yard number if tonnage < 100 GT - all requests regarding a ship will be made through the profile of ship - the company will have to fill in ship profile details immediately after purchase/ charter, and before the first service request if submitted *IMO number is 7 digits long and is assigned to the ship by IMO *Ship-yard number is 5-7 digits long, and is assigned sequentially by the shipyard where ship was built
7	Ship Registration- Name Allocation, MMSI, Call Sign etc.
a)	System will proceed with the process only if the following conditions are met: -If ship is new or ship is 2nd hand, and younger than 25 years -If ship not registered -In case ship has been purchased from foreign entity and if such a ship is older than 25 years, then technical clearance is required prior to name allocation
b)	System should have provision to direct user to 'Amendments to Registry' in case ship has already been registered
c)	The system should have provision to check for availability of name by searching for the desired name against 1. List of ship names registered in Indian Ship Registry 2. Blacklisted words
d)	The system should have provision for application form to be generated with all required fields as per age and type of ship
e)	System should have provision for ship owner to input name in Hindi, post name availability check
f)	System should have provision to auto generate Official No, MMSI No., Call Sign *Official Number is allotted by DGS. It is sequential and is currently 4 digits long *Call Sign consists of 4 alpha-numeric characters. The MMSI number consists of 9 digits. Both are assigned by DGS
g)	System should have provision for user to apply for C/M note if all documents are in place. The C/M note shall contain required information made as per guidelines. The C/M note shall be generated and auto-populated accordingly if approved by DGS/ MMD authority
h)	System should have provision for ship owner to apply for Certificate of Survey from any pre-approved Indian port, apart from its Port of Registry

Shipping Entity Processes	
i)	System will finalise creation of ship profile based on all the data entered by the user. Certain fields (as per checklists) are NOT EDITABLE directly by the user in the ship profile. Such fields shall be editable through a separate process called "Amendments to Registry". Other fields can be directly edited by the user. This will form the basis for auto-population when generating letters and certificates from templates.
8	Ship Registration- Amendment to Registry
a)	System shall have provision for ship owner/ ship manager to apply for amendments to fields which cannot be directly editable by the user
b)	System will have provision for DGS officials to amend certain fields of Ship Profile
c)	These amendments will be reflected in the history of registry of ship
d)	Once an amendment is approved new certificate is issued by the system
e)	System will have the provision for the old Certificates to be deleted from the system
9	Ship Registration- Issuance of Certificate by MMD/DGS
a)	System shall have provision for all shipping companies/ ship managers/ ship agents to request ship related certificates from any RO only through DG Shipping. The payment will be directly made to the respective RO
b)	System shall have provision for Recognised Organisations (RO) to input metadata for a ship and generate all RO issued certificates (mandatory). All certificates/ plan approvals/ survey letters will have to be issued only after entering meta data into the system
c)	The system will have provision to assign unique alpha-numeric code for all the certificates issued by RO
d)	System shall have provision for payment through an electronic payment gateway with multiple options for mode of payment. Applicant will be redirected to the payment gateway on successful submission of application and the respective fee to be paid will be built into the system.
e)	The system shall have provision of a link to check authenticity of all certificates issued by DG Shipping or authorised third parties via the alpha-numeric code issued. Such a link will confirm the authenticity of the document, name against whom it is issued along with general details of the certificate to whomsoever although will not reveal crucial data
f)	The system shall provide users to print certificates issued by DG Shipping and allied offices online. Certificates generated by the system for RO will have to be obtained from the RO.
g)	The system shall provide optional service for hard copy dispatch of certificates to the users via post. In which the case the system will notify the respective officer and provide print option.
11	Ship Registration- Registration and discharge of Mortgage
a)	System will have the provision to ensure that the shipping company will not be allowed to close the registry of the vessel without having the ship's mortgage discharged in its registry
b)	System will have the provision to maintain history of mortgages that can be accessed whenever a new request for mortgage is applied by the stakeholder.
c)	System will have the provision for the shipping company to inform the Directorate about <ul style="list-style-type: none"> <li>▶ The mortgage</li> <li>▶ The mortgagee (s)</li> <li>▶ Transfer of mortgage</li> <li>▶ Discharge of mortgage</li> </ul>

Shipping Entity Processes	
12	Registry Anew
a)	System will have the provision for the shipping entity to opt for 'Registry anew' is when the vessel is rebuilt with material changes affecting the main dimensions such as length / type of ship etc.
b)	System will have the provision for the old registry to be closed and the vessel would be registered as a new vessel once again.
c)	System will have the provision for the mortgages, if any, would be carried over to the new registry.
d)	System will have the provision for the tonnages for the ship have to be re-verified. The PO issues a new CM note with approved tonnages, following which a survey is done and new set of certificates are issued.
13	Transfer of Port of Registration
a)	System will have the provision for the shipping company has the option to transfer the registry of a ship from one port to another port.
b)	System will have the provision for a fresh carving and marking note to be issued by the registrar of the new port of registry. Post verification of the carving and marking, a fresh certificate of registry is issued to the vessel
c)	System will have the provision for cancellation of all existing certificates and their respective certificate number, once the transfer of port of registry approval. Additionally, new certificates (with new certificate numbers) with changed port of registry will be generated.
14	Change of Command
a)	System will have the provision for the owner/ shipping company to give notice of the change to the registrar at the port of registry.
b)	System will have the provision to produce the certificate of registry for endorsing the change.
c)	System shall have provision for penalty, if the change of command is not notified and processed within the stipulated timeframe.
d)	System shall have the provision for the endorsement to specify the name of the new master, the date when the change was made and the number of the certificate of competency or service of new master.
15	NOC from SMO, SWFS and SPF prior to closure of registry
a)	System will have the provision for the shipping company to obtain a No-Objection Certificate from the Shipping Master, the Seafarer's Welfare Fund Society, and the Seamen's Provident Fund Commissioner Prior to closure of registry of a ship.
b)	System will not allow for closure of registry of a ship without NOC from SWO, SWFS and SPF
16	Closure of Registry
a)	System will have the provision for the owner to apply for closure of registry of his ship under the following circumstances: <ul style="list-style-type: none"> <li>▶ Ship is being registered under a foreign flag</li> <li>▶ Ship is being scrapped or has sunk, is missing or ordered by relevant court order for closure of registry</li> <li>▶ Ship is being converted into an Inland Vessel. (Exception: Vessels that are intended to be used as river-sea vessels)</li> </ul>
b)	System will have the provision for all digital signatures issued on all certificates for the vessel to be invalidated once the PO cancels the registry of the vessel.
c)	System will have the provision for issuance of 'deletion of registry' with a valid digital signature provided that NOC from SWO, SWFS and SPF is issues

Shipping Entity Processes	
d)	System will have the provision to retain the details of the vessel even after deletion of registry
17	ISM and DSM code audits
a)	System shall provide a list of surveyors for the concerned lead authority to assign a survey
b)	System will have a dashboard that will show the tasks assigned to each auditor such that the CD can assign surveyor
c)	System will allow concerned lead authority of respective ports to assign surveyor or delegate the survey to RO
d)	In cases where the survey is conducted by MMD/ DGS official, System shall have provision for surveyor to digitally fill forms while performing inspection while on-board the ship. These forms will be auto-saved at regular intervals to prevent loss of critical data and uploaded as soon as internet connectivity is available.
e)	System shall have provision for surveyor to access the shipping company's details (and ship's details) and certificates through his mobile/ tab/ laptop while conducting the audit on-site
f)	All the data entered by the auditor into the device will be auto- saved, thus ensuring prevention of data loss
g)	Basis the timelines, the system should have the provision to automatically recommend the concerned ship owner of upcoming DOC/ SMC requirements
18	Flag State and Port State Control Inspections
a)	System shall have provision for shipping agent/ shipping company to apply voluntarily for FSI/ PSC inspection. System shall have provision for shipping agent to select which port he wishes to voluntarily apply for FSI/ PSC inspection
b)	System shall have provision for port authority to inform PO about potential FSI/ PSC violations by a ship
c)	System will allow concerned lead authority of respective ports to assign surveyor or delegate the survey to RO
d)	System shall provide a list of surveyors for the concerned lead authority to assign a survey
e)	In cases where the survey has been delegated to an RO, the system will notify the concerned RO
f)	System will have provision to mandatorily capture the metadata of Surveys conducted by RO.
g)	In cases where the survey is conducted by MMD/ DGS official, System shall have provision for surveyor to digitally fill forms while performing inspection while on-board the ship. These forms will be auto-saved at regular intervals to prevent loss of critical data and uploaded as soon as internet connectivity is available.
h)	Alternatively, the surveyor will be required to file the survey report, fill all the forms after the inspection.
i)	System shall have provision for surveyor to access the ship's details and certificates through his mobile/ tab/ laptop while conducting the inspection on board the ship
j)	System shall allow generation of survey reports and forms
k)	System shall have provision to communicate various codes to various concerned agencies regarding the status of the ship especially in cases where a ship has been detained
l)	System shall allow generation of survey reports and forms for a second survey (whenever required)
m)	System shall have provision to communicate revision in codes to various concerned agencies after a second survey has been conducted of a detained ship



Shipping Entity Processes	
n)	System shall have provision for PO to send a mail from his portal to multiple entities for their reference
o)	The system will capture all data of ship surveys conducted by global ports
19	Charter Permissions and Licenses
a)	System to have provision to apply for the various types of Charter permissions and licenses
b)	System will have the provision for shipping agents, ship managers or shipping companies Charter permissions for foreign ship can be applied through.
c)	For cases where technical clarifications are required from one of the 3 branches, the application can be forwarded across departments to the relevant HODs for inputs
19	Charter Permissions for foreign flag vessels
a)	System will have the provision for the vessel requirement demand to be floated across all Indian shipping entities and not just INSA member entities
b)	Charter permission will be accessed by all the officers and will be routed via online portal for internal verification and suggestions
c)	The applicant will be able to see the progress status of his/ her application and also communicate the reasons/ clarifications to shortfalls via online portal
d)	System will have provision for different forms with autofill, dropdown and manual filling options for different types of charter permissions
20	Exemption, Dispensation and Extensions
a)	System should have provision for users to apply for exemptions, based on categories and sub-categories
b)	System should map each type of exemption to its concerned department heads
c)	System will have the provision for allow for temporary or permanent exemptions: <ul style="list-style-type: none"> <li>▶ Permanent exemptions are provided only to NCVs</li> <li>▶ Temporary exemptions maybe provided to both NCVs and FGVs</li> </ul>
21	Annual Inspection of MSVs
a)	System should have provision for MSV owner to apply for inspection at any pre-approved port
b)	System should have provision for DGS personnel to write comments on pdf versions of uploaded documents
c)	System should have provision for DGS personnel to print uploaded documents
d)	System should provide a list of surveyors employed by DGS along with their names, phone numbers, emails and geographical locations. The DGS authority should have provision to directly send a dashboard message to any of these surveyors
e)	The system should provide the current list of tasks assigned to the particular surveyor AND the current status of the surveyor (i.e., whether on leave or whether available, etc.)
22	Reporting of Piracy/Hijacking
a)	System will have the provision for the captain or ship master to report suspicious event to DG Shipping
b)	System will have the provision for reporting to be linked to Ship ID
23	Inspection of vessels for Petroleum License
a)	System will have the provision for a shipping entity to request for inspection for petroleum license online and can receive physical copy as well
b)	System will have the provision for assigning surveyor for inspection through PO at DG Shipping

Shipping Entity Processes	
24	Tonnage Taxation Certificate
a)	System shall have provision for shipping company to apply for tonnage taxation certificate
b)	System shall have provision for application form to be generated with all required fields (as per Tonnage Tax Cell Circular No. 2 of 2005)
c)	System to have provision to print out all the application by assigned MTT officer in PDF format for further approval
d)	System will have the provision for auto-calculation of the fees.
e)	MIS Report -List of all the seafarer on board on a specific ship for a specific period along with their CDC details
f)	MIS Report -List of safe manning requirement of list of ship provided by the application
g)	MIS Report -List of application ship company wise with status
25	Tonnage Taxation- Payment of Fees
a)	System to be able to calculate the admin fees for each shipping company as per the logic which will be built in the system as per Tonnage Tax Cell Circular No. 1 of 2005
b)	System to be able to calculate the penalty fees of 10000 INR per week of delay in submission of application on 30th April of the year and submission of Annual return on 15th May of next year (as per Tonnage Tax Cell Circular No. 1 of 2005)
c)	System shall route the shipping company to payment gateway on a successful completion of application form
d)	MIS Report - List of shipping company who comes under Tonnage taxation with liability of fees payment and actual fees paid with dates for each payment
26	Tonnage Taxation-Annual Return
a)	System shall have provision for application form to be generated with all required fields (as per Tonnage Tax Cell Circular No. 2 of 2005)
b)	System to have provision to print out all the application by assigned MTT officer in PDF format for further approval
c)	MIS Report- List of all the seafarer on board on a specific ship for a specific period along with their CDC details
d)	MIS Report- List of safe manning requirement of list of ship provided by the application
e)	MIS Report- List of application ship company wise with status
27	Payment of PF Contribution
a)	System will have the provision for payment of PF contribution by the Shipping Company
b)	System will have the provision to auto-calculate the due amount.
c)	System will have the provision for the amount to be auto revised once the payment is processed.
28	Payment of Gratuity Contribution
a)	System will have the provision for payment of Gratuity contribution by the Shipping Company
b)	System will have the provision to auto-calculate the due amount.
c)	System will have the provision for the amount to be auto revised once the payment is processed.
29	Payment of Welfare Fund Contribution
a)	System will have the provision for payment of Welfare Fund contribution by the Shipping Company

Shipping Entity Processes	
b)	System will have the provision to auto-calculate the due amount.
c)	System will have the provision for the amount to be auto revised once the payment is processed.
30	Annual Fee Payment/Welfare Levy Fee
a)	System will have the provision for payment of Annual Fee contribution by the Shipping Company
b)	System will auto-calculate the amount due
c)	System will revise the amount due once the payment is processed
d)	MIS Reports- List of annual fee payments with relevant details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
31	AOA Sign On
a)	System will have the provision for AOA to be filled by the ship-owner.
b)	System will have the provision for the filled AOA to be sent to the seafarer for verification
c)	System will have the provision for the AOA sign on process to be completed once the verification
32	AOA Sign Off
a)	System will have the provision for AOA sign off to be filled by the ship-owner.
b)	System will have the provision to auto-check if the sign off date is greater than or equal to the sign on date
c)	System will have the provision for the filled AOA sign off details to be sent to the seafarer for verification
d)	

#### 1.4 RPS related FRS

RPS related Processes	
1	Creation of RPS Profile
a)	System will allow inspection request to be sent to IRS. Thereafter, IRS will intimate the applicant of the inspection time and date through a notification.
b)	System will allow IRS to upload the inspection report
c)	System will allow for RPSL number and the RPS license (RPSL) to be auto-generated after approval of application according to inbuilt system logic. The license may be auto-forwarded to the Printing Section, SEO for further process.
d)	System will have the provision for uploading the scan of the signed RPSL from the back-end interface. This will then be integrated with the seafarer database.
e)	System will allow insertion of tracking number for the dispatch sent out with the RPSL (Indian Postal Service dispatch). The same will be notified to the applicant.
f)	MIS Reports: List of RPS applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
2	Renewal of RPSL



RPS related Processes	
a)	The system will ensure that the following are true at the time of renewal: a. All PF payments processed b. All gratuity payments processed c. All welfare fund payments processed d. No defaults/complaints in the system
b)	System will allow inspection request to be sent to IRS. Thereafter, IRS will intimate the applicant of the inspection time and date through a notification.
c)	System will allow IRS to upload the inspection report
d)	System will allow for the RPS renewal license (RPSL) to be auto-generated after approval of application. The license may be auto-forwarded to the Printing Section, SEO for further process.
e)	System will have the provision for uploading the scan of the signed renewed RPSL from the back-end interface. This will then be integrated with the seafarer database.
f)	System will allow insertion of tracking number for the dispatch sent out with the RPSL(Indian Postal Service dispatch). The same will be notified to the applicant.
g)	MIS Reports: List of RPS renewal applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
27	Payment of PF Contribution
a)	System will have the provision for payment of PF contribution by the RPS
b)	System will have the provision to auto-calculate the due amount.
c)	System will have the provision for the amount to be auto revised once the payment is processed.
28	Payment of Gratuity Contribution
d)	System will have the provision for payment of Gratuity contribution by the RPS
e)	System will have the provision to auto-calculate the due amount.
f)	System will have the provision for the amount to be auto revised once the payment is processed.
29	Payment of Welfare Fund Contribution
a)	System will have the provision for payment of WF contribution by the RPS
b)	System will have the provision to auto-calculate the due amount.
c)	System will have the provision for the amount to be auto revised once the payment is processed.
30	Annual Fee payment
a)	System will have the provision for payment of Annual fee by the RPS
b)	System will have the provision to auto-calculate the due amount.
c)	System will have the provision for the amount to be auto revised once the payment is processed.
d)	MIS Reports: List of annual fee payments with relevant details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
30	Form I
a)	System will have the provision to check that the sign off date should be greater than or equal to the sign on date. This will be auto checked by the system.
b)	System will have the provision to ensure that Form I to be submitted within 15 days from date of placement.

RPS related Processes	
c)	System will have the provision for the Seafarer to verify the details of the Form 1 before submission
31	Form I Sign Off
a)	The sign off date should be greater than or equal to the sign on date. This will be auto checked by the system.
b)	RPS may carry out extensions multiple times, up to a maximum limit of 11 months (total), with the consent of the seafarer. For the same, the RPS will need to login every time and update the sign off date post which the seafarer can record his consent on the system.
c)	System will have the provision for the Seafarer to verify the details of the Form 1 sign off before submission
32	Background Process Check
a)	It will be auto-check if the amount due (PF, Gratuity, Welfare fund and Annual Fee Payment) is paid by the assigned deadline
b)	System will check if Form I and Form I sign off process have been completed by the assigned deadline
c)	System will have the provision to notify the applicant and DGS authorized personnel in case of default
d)	System will have the provision to block the User ID in case of repeat defaults
e)	System will have the provision to redirect RPS to a payment gateway to pay the penalty in order to re-activate User ID
f)	MIS Reports: Defaults in fee payment and Form I sign on and off for a specified time period. This list should allow sorting to generate further MIS with refined search parameters.

### 1.5 MTI related FRS

MTI Processes	
1	Creation of MTI Profile
a)	MTI approval certificate along with MTI Number will be auto-generated after approval of application. The certificate may be auto-forwarded to the Training Branch, Directorate for further process.
b)	MTI will have a unique system generated alpha numeric 8 digit number starting with year, followed with M( for MTI), 2 alphabets for state and a serial number. MTI number is not the INDOS number (currently issued for MTI's) and will be applicable only for newly approved MTI's.
c)	System will have the provision for uploading the scan of the signed approval certificate from the back-end interface. This will then be integrated with the applicant database.
d)	System will allow insertion of tracking number for the dispatch sent out with the Approval Certificate (Indian Postal Service dispatch). The same will be notified to the applicant.
e)	MIS Reports -List of MTI approval applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
2	Approval of Course
a)	The system will check for pending payments/defaults and will subsequently not allow the MTI to apply for approval of new course.

MTI Processes	
b)	System will allow inspection request to be sent to MMD. Thereafter, MMD will intimate the applicant of the inspection time and date through a notification.
c)	System will allow MMD to upload the inspection report
d)	System will allow for MTI approval certificate to be auto-generated after approval of application. The certificate may be auto-forwarded to the Training Branch, DGS for further process.
e)	System will have the provision for uploading the scan of the signed course approval certificate from the back-end interface. This will then be integrated with the applicant database.
f)	System will allow insertion of tracking number for the dispatch sent out with the Approval Certificate (Indian Postal Service dispatch). The same will be notified to the applicant.
g)	MIS Reports - List of MTI course approval applications with status and other details (all metadata) for specified time-period. This list should allow sorting to generate further MIS with refined search parameters.
3	Generation of Seafarer INDOS
a)	As soon as the Reference Number (seafarer application) is entered, the system will auto-populate all the relevant details from the database for verification by the MTI
b)	System will have the provision for the due amount will be auto-calculated.
c)	INDOS numbers will be unique and can only be generated once using one Reference Number.
d)	INDOS number can only be generated within 3 months from the generation of the Reference Number. If not done, the applicant Seafarer profile will be deactivated, and he/she will have to re-create another profile with another Reference Number.
e)	System will allow for INDOS number to be auto-generated and integrated with the database after approval of application according to inbuilt system logic
f)	System will allow for correction to database to be made automatically once application is approved (upon payment of fees)
g)	MIS Reports: List of correction applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
4	Annual Fee Payment
a)	System will auto-calculate the amount due
b)	System will revise the amount due once the payment is processed
c)	MIS Reports - List of annual fee payments with relevant details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
5	Change in Batch
a)	System will allow for change in batch details to be made in the database, after approval of application. This change will also reflect in the approval certificate on the system.
b)	MIS Reports- List of change in batch applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
c)	System will allow inspection request to be sent to MMD. Thereafter, MMD will intimate the applicant of the inspection time and date through a notification.
d)	System will allow MMD to upload the inspection report

MTI Processes	
e)	System will allow for MTI approval certificate to be auto-generated after approval of application. The certificate may be auto-forwarded to the Training Branch, DGS for further process.
6	Update Batch Details
a)	As soon as the Batch ID is entered (generated at the time of approval of course), the start and end date will be fetched from the uploaded monthly timetable
b)	System will be able to fetch the seafarer details to update batch details using INDOS number
f)	If the batch strength is <25% of the stipulated batch size, the batch is dismissed.
7	Update Certification Details
a)	System will have provision to generate certificate once the enrolled seafarers (updated as part of batch detail) have completed a course
b)	System will have the provision for the seafarer to verify the certificate details before process completion
8	View Placement Details
a)	System will have the provision to fetch the placement details from the AOA/Form I databases that are filled by Shipping Entities/RPS's.
b)	System will have the provision for the MTIs to view the placement record of all students who have completed any course from that MTI.
9	Notify Ros for CIP
a)	System will have the provision for the MTI to notify RO for any of the 3 types of CIPs: <ul style="list-style-type: none"> <li>o Pre-Sea</li> <li>o Post-Sea</li> <li>o Modular Course</li> </ul>
c)	System will have the provision for the MTI to fill a pre-assessment form which will be sent to the RO for further process.
d)	In case MTI does notify the RO as per the stipulated time, system will auto-check for default.
10	Upload Monthly Timetable
a)	If timetable is not uploaded by the assigned deadline, the MTI will not be able to conduct the batch/course in the respective month.
b)	While uploading the timetable, the MTI will select dates against the approved Course and Batch IDs respectively.
11	Change of Premises
c)	Change of Premises can only be applied for provided the following conditions are met <ul style="list-style-type: none"> <li>o &gt;3 yrs have elapsed since approval of post-sea course</li> <li>o &gt;10 yrs have elapsed since approval of pre-sea course</li> </ul>
12	Background Processes
d)	System will check is amount due is paid by the assigned deadline
e)	System will check if updation of batch details, placement details and certification details have been completed by the assigned deadline
f)	System will have the provision to notify the applicant and DGS authorized personnel in case of default
g)	System will have the provision to block the User ID in case of repeat defaults
h)	System will have the provision to redirect MTI to a payment gateway to pay the penalty in order to re-activate User ID

MTI Processes	
i)	MIS Reports: Defaults in fee payment and process due for completion default for a specified time period. This list should allow sorting to generate further MIS with refined search parameters.
j)	MIS Reports: List of details updated along with other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
k)	MIS Reports: List of details updated along with other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.

## 1.6 Sailing Vessel Seamen related FRS

Sailing Vessel Seamen Processes	
1	Creation of Profile
a)	System will allow for ID number to be auto-generated after approval of application according to inbuilt system logic. The same shall be auto-forwarded to the Printing Section, RO Sails for further process.
b)	System will have the provision for uploading the scan and other details of the ID Card from the back-end interface. This will then be integrated with the applicant database.
c)	System will allow insertion of tracking number for the dispatch sent out with the ID Number (Indian Postal Service dispatch). The same will be notified to the applicant.
d)	MIS Reports: List of ID Card applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
2	Renewal of ID cards
a)	System eligibility check for request: a) Check time left from expiry date <1 yr
b)	System will allow for expiry date to be automatically revised after approval of application. In parallel, a request for renewal sticker shall be auto-forwarded to the RO Sails.
c)	System will have the provision for uploading the scan and other details of the renewal sticker from the back-end interface. This will then be integrated with the applicant database.
d)	System will allow insertion of tracking number for the dispatch sent out with the ID Card renewal sticker (Indian Postal Service dispatch). The same will be notified to the applicant.
e)	MIS Reports: List of ID card renewal applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
3	Duplicate ID Cards
a)	System will allow for duplicate ID Card printing request to be sent to the RO Sails after approval of request. In parallel, old ID Card will be deactivated on the database.
b)	System will have the provision for uploading the scan and other details of the duplicate ID card from the back-end interface. This will then be integrated with the applicant database.
c)	System will allow insertion of tracking number for the dispatch sent out with the duplicate ID Card (Indian Postal Service dispatch). The same will be notified to the applicant.

Sailing Vessel Seamen Processes	
d)	MIS Reports: List of ID card duplication applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
4	<b>Tindal Certificate</b>
a)	System will have the following provisions: <ul style="list-style-type: none"> <li>It will be auto checked that the nationality of the applicant is Indian</li> <li>It will be auto checked that the sea time &gt; 5 years</li> </ul>
b)	System will allow for Tindal number to be auto-generated after approval of application according to inbuilt system logic. The same shall be auto-forwarded to the Printing Section, RO Sails for printing of Tindal Sticker for further process.
c)	System will have the provision for uploading the scan and other details of the Tindal Sticker from the back-end interface. This will then be integrated with the seafarer database.
d)	System will allow insertion of tracking number for the dispatch sent out with the Tindal sticker (Indian Postal Service dispatch). The same will be notified to the applicant.
e)	MIS Reports: List of Tindal applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
5	<b>Sign On</b>
a)	System will have the provision for the Tindal to apply for the Sign On on behalf of the Sailing Vessel Seaman
b)	System will have the provision for the Sailing Vessel Seaman to verify the sign on details for process completion
c)	MIS Reports: List of Sign on applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
6	<b>Sign Off</b>
a)	System will have the provision for the Tindal to apply for the Sign Off on behalf of the Sailing Vessel Seaman
b)	System will have the provision for the Sailing Vessel Seaman to verify the sign off details for process completion
c)	MIS Reports: List of sign-off requests and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.
7	<b>Cancellation of ID cards</b>
a)	System will deactivate profile (and ID card number) on the database after approval of request.
b)	MIS Reports: List of cancellations applications with status and other details (all metadata) for specified time period. This list should allow sorting to generate further MIS with refined search parameters.

## 1.7 Ports related FRS

Ports Processes	
1	<b>Creation of Profile (NSPC)</b>
a)	System shall have provision for application form (NSPC- Form 1) to be generated with all required fields



Ports Processes	
b)	System shall route the user to payment gateway on a successful completion of application form
c)	System shall have provision for assigned DGS staff to forward the application details in specific format to external E-Mail IDs
d)	System shall have provision for assigned DGS staff to assign a time slot for presentation in each case
e)	System shall have provision for assigned DGS staff to upload the inspection report/ fill in inspection report field
f)	System will have the provision for the Certificate of Compliance to be valid for a maximum period of 5 years subject to annual inspection within 3 months before or after the anniversary date and renewal within 6 months.
g)	Once Certificate of Compliance is granted, the profile for the Port will be created with User ID and temporary password being sent to the registered email ID of the Port.
h)	MIS Report: List of application port wise with status, dates (application, approvals, inspection, presentation etc.)
2	Renewal of NSPC
c)	System shall have provision for renewal application form to be generated with all required fields
d)	System shall route the user to payment gateway on a successful completion of application form
e)	System shall have provision for assigned DGS staff to forward the application details in specific format to external E-Mail IDs
f)	System shall have provision for assigned DGS staff to assign a time slot for presentation in each case
g)	System shall have provision for assigned DGS staff to upload the inspection report/ fill in inspection report field
h)	System will have the provision for the Certificate of Compliance to be valid for a maximum period of 5 years subject to annual inspection within 3 months before or after the anniversary date and renewal within 6 months.
i)	MIS Report: List of application port wise with status, dates (application, approvals, inspection, presentation etc.)
3	International Ship & Port Facility Security Audits
a)	System will have the provision for the PO to appoint an auditor from the MMD based on his availability to conduct audit
b)	System will have the provision for a dashboard for the PO wherein they can look at tasks assigned to each auditor to assess his workload and assign the audit accordingly.
c)	System will have the provision for the auditor to input data directly into his device in digital form. They can also click pictures and attach it then and there, thus preventing double work
d)	All the data entered by the auditor into the device will be auto- saved, thus ensuring prevention of data loss
e)	The auditor may also upload his data online on the fly. As soon as an internet connection is available, data will be uploaded onto the central database and the port's profile will be updated with the latest information

Ports Processes	
f)	System would send notification for pending audits (background process for ports)The window period for carrying out the audits are as follows: a) +/- 3 months from due date in case of annual inspection (port) b) +/- 6 months from due date in case of intermediate audit (2.5 years)- (ship and port)
4	Port reception facilities
a)	DG Shipping will be able to file complaint against the port authority. This complaint will be highlighted to the surveyor during inspection
b)	Notification will be sent to the port authority highlighting pending inspection
c)	System will have the provision for the detailed inspection report available to MMD as well as DG Shipping for future reference
d)	System will have the provision for the updation in the database registry after complete survey
5	Shore Electricity/Power
a)	System will have the provision to generate reports with record of electricity provided to various vessel and shipping entity
6	Berth addition
a)	System will allow ports to apply for terminal and additional berths with regard to increasing demand.
b)	System will automatically calculate fees payment basis type and requirement of application
c)	System will automatically update profile of ports upon approval of request

## 1.8 MTO related FRS

MTO Processes	
1	Creation of MTO Profile
a)	System will have the provision for the MTO to apply for MTO license
b)	Basis the approval of MTO license, a separate login account for Multimodal transport operators will created and the User ID and temporary password will be sent to the user
2	Renewal of MTO License
d)	System will have the provision for the MTO to apply for renewal MTO license after lapse of stipulated time

## 1.9 Service Providers related FRS

Service Providers Processes	
a)	The system will have login provision for service providers such as Bunker suppliers, labs, FFA/ LSA service stations, lift raft service stations, ports, etc.
b)	The system will have a common landing page for all service providers, wherein the service provider can opt for DG Shipping services such as audits, approvals, etc.
c)	System will have provision for MMDs to upload inspection reports
d)	System will have the provision for the automatic updating of purchase against relevant service provider, calculation of inventory, opening and closing balances of each purchase made



### 1.10 Examiner FRS

Examiner Processes	
a)	External examiner will be able to apply through a link on the directorate portal
b)	External examiner upon fulfilling the minimum eligibility will be empanelled and profile will be created
c)	While evaluating answer sheets, a reporting form will be given to external examiner wherein he can enter the answer sheet number and allotted marks for each question. This data can be linked to the internal examiner Form 37 BC where he approves the result.
d)	In case of existing profile, same process will be followed with the old profile information linked to the new one
e)	System will have the provision for the marks and evaluation report to be directly linked to seafarer's profile

### 1.11 Medical Practitioner FRS

Medical Practitioner Processes	
a)	System will have the provision for the MTI to upload all relevant document of the doctor which will get verified at the Directorate.
b)	Once approved, a digital certificate will be generated acknowledging the doctor's approval and validity period.
c)	Once approved, the system will auto notify details of doctors whose MCI license is expiring in next 6 months or are becoming 65 years in next 6 months.
d)	System auto notifies both the doctor and the DGS officials about expiry of license, 6 months prior to the expiry date.
e)	System will have the provision for the Medical Practitioner to renew their licence within the stipulated time period
f)	System will have the provision for the doctors to issue the certificate from DGS's portal. The meta data will get updated on the seafarer's profile and medical certificate checker. The doctor will have to upload the signed copy of the certificate for the record. Medical certificates are of two types 1. Medical certificate for sea service 2. Medical certificate for eye sight.

### 1.12 Recognised Organization FRS

RO Processes	
1	Creation of Profile
a)	System will have the provision for the RO to create a profile by entering the relevant details. Once the profile is created, the RO can access the same using user ID and temporary password.
b)	Creation of Profile may be done by either the Authorised RO or the DGS HQ.
c)	The system should have provision for 3 separate login ids for 1 Recognised Organization
2	Generation of Certificates
a)	System will have the provision for the RO to generate certificates for which it has authorization. It will not be able to generate certificates for which it does not have authorization. The authorization data will be part of the RO profile data.

RO Processes	
b)	Certificates that are issued will each have a unique alphanumeric code. This code can be used by an external entity to check the authenticity of the certificate on the Directorate's website.
3	Audit of RO
a)	The RO is expected to notify DGS and request for audit
b)	In case RO fails to notify, the system will prompt the DGS officials who will then initiate the yearly audit proceedings.
c)	RO can only initiate audit request if all fees due is paid by the RO.
d)	System will have provision to authorize Auditor for RO basis list of available auditors and their tasking
4	Renewal of RO Profile
a)	Renewal of Profile may be done by either the Authorised RO or the DGS HQ.
b)	If the previous profile has expired, the system will prompt if there is a renewal of an expired profile. If clicked as yes, the system will fetch the details of the expired profile and sync with the renewed profile for ease of reference.

### 1.13 Internal- Common FRS

Internal- Common	
a)	System will have the provision to create profiles for all internal stakeholders (as covered under Common Functional Requirements) as per their designation and appointment. The profiles will enable its authorities to avail designated privileges.
b)	Officers will be able to view all other officers of their department throughout DGS/MMD and will be able to communicate through the portal.
c)	System will have the provision to delegate tasks to other DGS employees or stakeholders

### 1.14 Internal- Personnel Branch FRS

Internal- Personnel Branch	
12	Auto-Service Verifications
a)	System will have provision for all notifications to be sent through the portal & registered email.
b)	MIS Reports: List of employees which did not receive service verification.

### 1.15 Internal- Crew Branch FRS

Internal- Crew Branch	
7	RTI
a)	System will have provision for RTI's to be filed by the general public
b)	System will have the provision to route the RTIs to the relevant departments for receipt of responses
c)	System will have the provision to publish and send the finalised responses to the raised RTIs

### 1.16 Internal- Coordination Branch FRS

Internal- Coordination Branch	
1	Quarterly Report of RTI
a)	System will have the provision for the coordination branch makes a consolidated report of the work done by all the departments related to RTI and submits it to the Ministry of Shipping.
b)	System shall allow to send link with format of quarterly report which when filled and approved by competent authority, gets auto updated in system
c)	System shall have provision to consolidate all the reports and provide the final report which will be editable
2	Response to questions
a)	Various questions are asked to DGS by the ministry, parliament or other offices, some of which need to be responded on an urgent basis. Coordination branch coordinates with different departments to get responses to all the questions.
b)	System shall have functional requirements as mentioned in A3.1-A3.11, A4 and A6
c)	System shall allow to send link to all branches, in which questions shall be entered by the coordination branch. Concerned branches should have the provision to respond in the link. Once the response in the link is entered and approved, it gets auto updated in system
d)	System shall have provision to consolidate all the reports and provide the final report which will be editable

### 1.17 Internal- Vigilance Branch FRS

Internal- Vigilance Branch	
1	Complaint Processing
a)	System will have the provision to accept vigilance complaints against DGS employees
b)	System will have the provision for the complainant to submit evidence along with the complaint
c)	System will have the provision to examine the complaint and take a decision on the complaint submitted
d)	System shall quarterly auto consolidate list of complaint cases and status to DDG and CVO
e)	System shall quarterly auto consolidate list of complaint cases to send to ministry
2	Annual Property Returns
d)	System will have the provision for each officer to fill the property declaration form whenever new property is bought and annual property returns form annually.
e)	System shall suggest suspected defaulters using the logic
3	Issuance of VCC
f)	System shall notify everyone in the PB-hierarchy till DDG when VCC is issued by Vigilance branch to PB branch
g)	System will have the provision for the vigilance branch to conduct the vigilance checks and CVO finally approves/rejects the case

## 1.18 Exam Logic

1.3 Exam Logic						
S.No	Grade of Exam	Basic Experience	Training required	Courses	Requirement to Pass any other exam	Sea-Service
1	MEO Class IV Exam Part B	Sea going Engine driver	-9 months training in approved marine workshop -completion of 4 basic safety training (personal survival techniques, fire prevention and firefighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced firefighting, proficiency in survival craft and rescue boat, Medical first aid)	-STCW course A-III/1-6 months -3 months course including simulator course	MEO Class IV Part A examination	6 months as assistant engineer Officer
2	MEO Class IV Exam Part B	Naval dockyard apprentice or approved Indian naval/ coast guard service as MECH:3	-completion of 4 basic safety training (personal survival techniques, fire prevention and firefighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced firefighting, proficiency in	-STCW course A-III/1-6 months -3 months course including simulator course	MEO Class IV Part A examination	6 months as assistant engineer Officer

1.3 Exam Logic						
S.No	Grade of Exam	Basic Experience	Training required	Courses	Requirement to Pass any other exam	Sea-Service
			survival craft and rescue boat, Medical first aid)			
3	MEO Class IV Exam Part B	Diploma in Mechanical Engineering or Ship building engineering	-2 years training in approved marine workshops -completion of 4 basic safety training (personal survival techniques, fire prevention and firefighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced firefighting, proficiency in survival craft and rescue boat, Medical first aid)	-3 months course including simulator course	MEO Class IV Part A examination	6 months as assistant engineer Officer
4	MEO Class IV Exam Part B	Graduate in Electrical or elect. & electronic engineering	-18 months training in approved marine -completion of 4 basic safety training (personal survival techniques, fire prevention and firefighting, elementary first	-3 months course including simulator course	MEO Class IV Part A examination	6 months as assistant engineer Officer

### 1.3 Exam Logic

S.No	Grade of Exam	Basic Experience	Training required	Courses	Requirement to Pass any other exam	Sea-Service
			aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced fire fighting, proficiency in survival craft and rescue boat, Medical first aid)			
5	MEO Class IV Exam Part B	Graduate in mechanical engineering or in naval architecture	-12 months training in approved marine workshop -completion of 3 advanced safety training course (advanced firefighting, proficiency in survival craft and rescue boat, Medical first aid)	-3 months course including simulator course	NA	6 months as assistant engineer Officer
6	MEO Class IV Exam Part B	Graduate in mechanical engineering or in naval architecture	-completion of 4 basic safety training (personal survival techniques, fire prevention and firefighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced fire fighting,	-6 months course at Cochin Ship Yard Ltd., Cochin -3 months course including simulator course	NA	-Onboard training at sea for 6 months -6 months as assistant engineer Officer

### 1.3 Exam Logic

S.No	Grade of Exam	Basic Experience	Training required	Courses	Requirement to Pass any other exam	Sea-Service
			proficiency in survival craft and rescue boat, Medical first aid)			
7	MEO Class IV Exam Part B	Graduate in mechanical engineering or in naval architecture	-completion of 4 basic safety training (personal survival techniques, fire prevention and fire fighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced fire fighting, proficiency in survival craft and rescue boat, Medical first aid)	-6 months course at MERI Mumbai including Simulator course -3 months course including simulator course	NA	-Onboard training at sea for 6 months -6 months as assistant engineer Officer
8	MEO Class IV Exam Part B	Senior School Secondary certificate examination (10+2) Apprentices	-completion of 4 basic safety training (personal survival techniques, fire prevention and fire fighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced fire	-4 years course at MERI Calcutta including simulator course -3 months course including simulator course	NA	-6 months as assistant engineer Officer

### 1.3 Exam Logic

S.No	Grade of Exam	Basic Experience	Training required	Courses	Requirement to Pass any other exam	Sea-Service
			fighting, proficiency in survival craft and rescue boat, Medical first aid)			
9	MEO Class IV Exam Part B	-Senior School Secondary certificate examination (10+2) Apprentices -obtain pass in 60% subjects of section "A" exam of institution of engineers (India)	-4 years apprenticeship at approved workshop -completion of 4 basic safety training (personal survival techniques, fire prevention and fire fighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced fire fighting, proficiency in survival craft and rescue boat, Medical first aid)	-3 months course including simulator course	MEO Class IV Part A examination	-6 months as assistant engineer Officer
10	MEO Class IV Exam Part B	-Senior School Secondary certificate examination (10+2) Apprentices -obtain approved certificate/ diploma in marine engineering	-4 years apprenticeship at approved marine institute -completion of 4 basic safety training (personal survival techniques, fire prevention and fire fighting, elementary first aid, personal	-3 months course including simulator course	MEO Class IV Part A examination	-6 months as assistant engineer Officer



1.3 Exam Logic						
S.No	Grade of Exam	Basic Experience	Training required	Courses	Requirement to Pass any other exam	Sea-Service
			safety and social responsibility) -completion of 3 advanced safety training course (advanced fire fighting, proficiency in survival craft and rescue boat, Medical first aid)			
11	MEO Class IV Exam Part B	Senior School Secondary certificate examination (10+2) Apprentices	-completion of 4 basic safety training (personal survival techniques, fire prevention and fire fighting, elementary first aid, personal safety and social responsibility) -completion of 3 advanced safety training course (advanced fire fighting, proficiency in survival craft and rescue boat, Medical first aid)	-1 year pre-sea course at approved institute as per the IMO Model course 7.04 Phase I -3 months course including simulator course	MEO Class IV Part A examination	-9 months on-board training as engineer cadet -6 months as assistant engineer Officer

#### 1.19 Website / Portal

Website / Portal				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of deviation (If any)	Details
1	The portal should not allow concurrent sessions for same user. The system should automatically log out a customer in case of			

Website / Portal				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of deviation (If any)	Details
	session breakdowns (e.g., communication failure, high inactivity period - these should be parameterized)			
2	The system should provide a web-based interface accessible through HTTPS protocol on Secure Socket Layer (SSL) using a web browser.			
3	The system should support various popular browsers like Internet Explorer, Mozilla, Chrome, etc.			
4	The system should allow users to verify the authenticity of the site hosting the application.			
5	The system should ensure that only authorized users or entities are allowed to log in, upload/download files, or initiate transmission of files			
6	The system should follow a 2-factor authentication process (like OTP) using a username/password and a registered digital certificate/token/Aadhaar e-sign to log into Portal for certain reporting entities.			
7	The system should be able to authenticate users against existing user repositories such as LDAP and Active Directory.			
8	The system should provide audit logging of users. The system should record and maintain up to a pre-defined time, the access history of every successful and unsuccessful login by the			

Website / Portal				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of deviation (If any)	Details
	user. The system should display the access history to the user on request when the user is logged into the application.			
9	The system should provide an online help with instructions, tips, visual learning aids on the application.			
10	The portal should support workflows			
11	The portal should implement security features, such as password complexity, automatic blocking (temporary/permanent) of user logins after given number of unsuccessful login attempts (should be parameterized), controlled access to content stored on the portal and logging of security incidents. It should by its own or through an integrated Identity Management solution and should be capable of managing security rights and privileges by individual, group and role.			
12	Portal should be compatible to popular mobile devices Operating systems			
13	Portal should be interoperable with industry standard databases			
14	Should have multilingual capabilities with regional, localization and Unicode support.			
15	Should be able to integrate with common office application			

Website / Portal				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of deviation (If any)	Details
16	Should support web services APIs, SOAP, REST, WSRP			
17	Should support virtualization			
18	Should support customization of look and feel of the portal			
19	All appropriate field on the system screen should be populated and contextual information is displayed where necessary (e.g., payment information will display on the payment screen).			
20	Should integrate with standard email and instant messaging services			
21	Should integrate with any other portal products through open standards such as HTML, XML, RSS, web services, and WSRP.			
22	The system should be capable of displaying the previous interaction histories on email / SMS, and the same should be available to voice-based users.			
23	Should support multiple roles with associated access controls.			
24	Should support upload, store, organize and share documents			
25	Should provide multi-channel output capabilities			
26	Users should be able to upload documents in multiple formats			
27	Users should be able to upload multiple files at the same time			

Website / Portal				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of deviation (If any)	Details
28	Should support version control, change tracking, indexing, and comments			
29	Should support offline support and caching of forms			
30	Should support creation of ad hoc query by users			

## 1.20 Mobile Application

Mobile Application				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
1	The Mobile Application should provide an intuitive and user-friendly GUI that enables users to navigate and apply actions with ease. The GUI should be responsive with very little or no delays or time lag at launch or whilst navigating through screens.			
2	It should enable ease of configuration and changes to existing GUIs and support the introduction of new screens.			
3	It should provide on screen tips and online help to aid users while interacting with it.			
4	Should make use of data available in the existing database and reduce duplicate data entry			
5	Incorporate analytics into mobile app, to track and identify users experience and actions.			
6	Should support real time information subject to internet availability			
7	Application should ensure Compatibility with all platforms such as Google Android, & Apple iOS etc.			
8	Solution should develop resolution independent design structure i.e. Mobile Application			

Mobile Application				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
	should adjust itself automatically as per the screen resolution of the Mobile			
9	Mobile Apps should work flawlessly across different platforms			
10	There should be limited or zero use of flash contents so that home page should be loaded quickly			
11	It should not occupy excess client's Mobile RAM.			
12	Should be able to capture and track all events at device and console.			
13	Should support authentication using digital signatures / OTP / native biometric or user authentication feature of mobile			
14	Should have facility to download and upload files, including eForms			
15	Mobile applications should be designed and developed in a way that it ensures security of the application and data on the device.			
16	All appropriate field on the system screen should be populated and contextual information is displayed where necessary (e.g., payment information will display on the payment screen).			
17	The system should be capable of displaying the previous interaction histories on email / SMS, and the same should be available to voice-based users.			

SMS Gateway				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
1	System should allow SMS text messages to be sent and/or received by email, from web pages or from software applications.			
2	Gateway should connect directly to a Mobile Operator's SMSC via the Internet			
3	System should use HTTP API protocol which allows to send messages using simple HTTP requests			
4	System should be able to handle high volume of bulk SMS at the same time (of the order of 500 messages / second)			
5	System should support dual core and multiprocessor system			
6	System should be independent of platform, operating system and programming language			
7	System should support Unicode format			
8	System should show the status of SMS as pending, sent, time out, scheduled, not sent etc			
9	System should be able to send customized SMS to users as Applicable			

### 1.21 Incident and SLA Monitoring

Incident and SLA Monitoring				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
1	System should be integrated with the application software component of portal software that measures performance of system against the following SLA parameters: (i) Response times of Portal. (ii) Transaction handling capacity of application server in terms of number of concurrent connects. (iii) Uptime of Data Repository at DC;			

Incident and SLA Monitoring				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
	(iv) Meantime for restoration of Data Repository at DC, etc			
2	System should generate log of all incoming / out-going complaints			
3	Summary of calls / emails responded, issues resolved, average time of response etc should be visible on the SLA dashboard			
4	System should create consolidated data and analysis of data as specified by Port for monitoring performance of overall operations and business processes. The same shall be presented on the Dashboard as per Port's requirement.			
5	Dashboard should be user friendly with ability to design graphs / charts as desired by the user			
6	System should be able to highlight the activities as desired by user in various color based on their service levels and alerts			
7	User should be able to generate reports for any of the SLAs in the desired format			
9	User should be able to send the reports over email through the dashboard itself			
10	System should have ability to download the consolidated reports in formats such as PDF / Word-processing / spreadsheets etc as required			
11	System should compute the weighted average score of the SLA metrics and arrive at the service charges for a specified period payable to the Agency,			



Incident and SLA Monitoring				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
	after applying the system of penalties and rewards			
12	Dashboard should alert any critical event defined by the user and also send SMS / email to the concerned process owner			
13	Access to the Dashboard should be provided only to identified officers of Ports			
14	System should be able to provide details of the trainings planned and conducted including details of the training, schedule, venue, trainees, trainers etc			
15	System should be able to capture training feedback collated at the end of training			
16	System should generate MIS reports on training as per users' requirements			
17	System should be able to capture details of the audits (security audit /infrastructure audit etc) planned and conducted including details of audit, personnel responsible, date and time etc			
19	All appropriate field on the system screen should be populated and contextual information is displayed where necessary (e.g., payment information will display on the payment screen).			
20	System should generate MIS reports on Audit as per users' requirements			
21	General: The solution must support Service Level Agreements Lifecycle Management including Version Control, Status Control, Effectively and audit Trail.			
22	The system should be capable of displaying the previous interaction histories on email / SMS			

Incident and SLA Monitoring				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
23	Service Delivery: The solution must have the ability to define and calculate key performance indicators from an End to End Business Service delivery perspective.			
24	Contract Management: The solution must support dependencies between supplier contracts and internal or external contracts.			
25	Bonus & Penalty: Support for Defining and Calculating service Credit and Penalty based on clauses in SLAs. Support for Defining and Calculating service Bonuses based on clauses in SLAs			
26	Alerts: The solution must support delivery mechanisms to indicate/notify whether SLA targets are being achieved or violated.			
27	Business Impact Analysis: The solution must make it possible to find the underlying events that cause the service level contract to fail.			
28	Dynamic Calculations: The solution supports dynamic service level targets to reflect obligations importance and priority over time.			
29	Audit Trails: Full electronic audit trails available for both system and user transactions.			
30	Reporting: Report module and SLA Management module must be integrated to provide ease-of reports configuration and execution.			
31	ITIL: The solution supports ITIL standards.			

## 1.22 Payment gateway

Payment Gateway				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons of Deviation (If any)	Details
1	System should secure the stakeholder payment details using standard encryption such as SSL			
2	System should use HTTPS and 3-D secure protocol for safe transaction			
3	System should generate a unique transaction number for all the transactions			
4	Gateway should enable multiple Payment Service Providers			
5	System should maintain log of e-payments transactions made by the stakeholder			
6	System should show the status of the transaction such as pending payment, completed etc			
7	System should have a form in which all payment details can be entered by the applicant			
8	System should provide option of Credit card, Debit card or Net Banking to the stakeholder			
9	System should provide a printable version of the payment made by the stakeholder			
10	System should support a unified interface to integrate with all Payment Service Providers			
11	System should manage messages exchange between UI and payment service providers			
12	System should provide fraud screening features, alert mechanism			
13	System should support real time integration with SMS and emails			
14	Should support multicurrency processing and settlement			
15	All appropriate field on the system screen should be populated and contextual information is displayed where necessary (e.g., payment information will display on the payment screen).			

## **ANNEXURE 2: TECHNICAL REQUIREMENT SPECIFICATIONS (TRS)**

## 1.1 Security Information and Event Management (SIEM)

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
1	Solution/offering would be a cloud based SIEM service			
2	The SIEM platform should be based on a Hardened Operating System as an Appliance or solution with a clear physical separation of the collection engine, the logging engine and the co-relation engine and must support High Availability at Manager and Collector level.			
3	The solution should be able to handle EPS / devices as required in the project. The bidder to do the sizing			
4	The solution should be scalable by adding additional receivers and still be managed through a single, unified security control panel.			
5	The solution should be capable of real time analysis and reporting.			
6	The solution should support risk analysis in the network infrastructure. It should perform risk analysis by correlating threat data with identified vulnerability and counter measure information to determine what is at risk.			
7	The solution should support risk-based correlation in addition to rule based correlation.			
8	The solution should be able to assign risk scores to your most valuable asset. The risk value could be assigned to a service, application, specific servers, a user or a group. The solution should be able to assign and consider the asset criticality score before assigning the risk score.			
9	The solution should be able to assign a risk score to a combination of fields. For e.g. risk correlation can be defined for a pairing like user and destination or an application and database. A user may have a higher weight assigned since they are a privileged user or high value target, critical to business operations.			
10	The relative risk of each activity should be calculated based on			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
	values assigned by the Asset Administrator.			
11	The activities should be separated by levels of risk for the company: very high, high, medium, low and very low.			
12	The SIEM receiver/log collection appliance must be an appliance/cloud-based solution and not a software-based solution to store the data locally, if communication with centralized correlator is unavailable.			
13	The solution should be able to collect logs via the following ways as inbuilt into the solution: Syslog, OPSec, agent-less WMI, RDEP, SDEE, FTP, SCP, External Agents such as Adiscon.			
14	The solution should provide a data aggregation technique to summarize and reduce the number of events stored in the master database.			
15	The solution should provide a data store which is compressed via flexible aggregation logic.			
16	The data collected from the receiver should be forwarded in an encrypted manner to SIEM log storage.			
17	The solution should provide pre-defined report templates. The reports should also provide reports out of the box such as ISO 27001.			
18	The solution should provide reports that should be customizable to meet the regulatory, legal, audit, standards and management requirements.			
19	The solution should also provide Audit and Operations based report, Native support for Incident management workflow.			
20	The solution should have single integrated facility for log investigation, incident management etc. with a search facility to search the collected raw log data for specific events or data.			
21	A well-defined architecture along with pre and post installation document need to be shared by the bidder.			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
22	The solution should have a scalable architecture, catering multi-tier support and distributed deployment.			
23	The solution should support collection of events/logs and network flows from distributed environment(s).			
24	The solution should correlate security/network events to enable the SOC to quickly prioritize it's response to help ensure effective incident handling.			
25	The solution should integrate asset information in SIEM such as categorization, criticality and business profiling and use the same attributes for correlation and incident management.			
26	The solution should provide remediation guidance for identified security incident:			
	a) Solution should be able to specify the response procedure (by choosing from the SOPs) to be used in incident analysis/remediation.			
	b) The solution should have provision for workflow based multiple levels of escalations. The solution should offer a means of escalating alerts between various users of the solution, such that if alerts are not acknowledged in a pre- determined timeframe, that alert is escalated to ensure it is investigated.			
27	The solution should facilitate best practices configuration to be effectively managed in a multi-vendor and heterogeneous information systems environment.			
28	The solution should provide capability to discover similar patterns of access, communication etc. occurring from time to time, for example, slow and low attack.			
29	The solution should have an exhaustive incident tracking system that can track, investigate and resolve events in workflow like environment			
30	The solution should perform regular (at least twice a year) health check			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
	and fine tuning of SIEM solution and should submit a report to customer			
31	The solution should share the list of out of the box supported devices/log types.			
32	The solution should support hierarchical structures for distributed environments. The solution should have capability for correlation of events generated from multiple SIEM(s) at different location in single management console.			
33	The event correlation on SIEM should be in real time and any delay in the receiving of the events by SIEM is not acceptable.			
34	The solution should support internal communication across SIEM-components via well-defined secured channel. UDP or similar ports should not be used.			
35	Event dropping/caching by SIEM solution is not acceptable and same should be reported and corrected immediately.			
36	The solution should be able to import the vulnerability information from scanning and assessment tools on real time basis and correlate them / provide contextual information on vulnerability data to incidents for all possible implications.			
37	The solution should be able to facilitate customized dashboard creation, supporting dynamic display of events graphically.			
38	The solution should be able to capture all the fields of the information in the raw logs.			
39	The solution should support storage of raw logs for forensic analysis.			
40	The solution should be able to integrate logs from new devices into existing collectors without affecting the existing SIEM processes.			
41	The solution should have capability of displaying of filtered events based on event priority, event start time, end time, attacker address, target address etc.			



SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
42	The solution should support configurable data retention policy based on organization requirement.			
43	The solution should provide tiered storage strategy comprising of online data, online archival, offline archival and restoration of data. Please elaborate on log management methodology proposed.			
44	The solution should compress the logs by at least 70% or more at the time of archiving.			
45	The solution should have capability for log purging and retrieval of logs from offline storage.			
46	The solution should support networked and scalable storage using SAN, NAS, DAS etc.			
47	The solution should provide capability for configuration backup.			
48	Solution should be capable of replicating logs in Synchronous as well as Asynchronous mode for replication from Primary site to DR site.			
49	The solution should provide proactive alerting on log collection failures so that any potential loss of events and audit data can be minimized or mitigated.			
50	The solution should provide a mechanism (in both graphic and table format) to show which devices and applications are being monitored and determine if a continuous set of collected logs exist for those devices and applications.			
51	The solution should support automated scheduled archiving functionality into file system.			
52	The solution should support normalization of real time events.			
53	The solution should provide a facility for logging events with category information to enable device independent analysis.			
54	The solution should support aggregation techniques that consolidate multiple identical raw events into one processed event.			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
55	By default, at the time of storage, solution should not filter any events. However, solution should have the capability of filtering events during the course of correlation and report generation.			
56	The solution should ensure the integrity of logs. Compliance to regulations should be there with tamper-proof log archival.			
57	Solution should have inbuilt query analysis capability without requiring any third-party solution.			
58	The solution should be able to continue to collect logs during backup, de-fragmentation and other management scenarios.			
59	The solution should support collection of logs from all the devices quoted in RFP.			
60	The collection devices should support collection of logs via the following but not limited methods:			
	1. Syslog over UDP / TCP			
	2. SNMP			
	3. ODBC (to pull events from a remote database)			
	4. FTP (to pull a flat file of events from a remote device that can't directly write to the network)			
	5. Windows Event Logging Protocol			
	6. XML			
	7. NetBIOS			
61	The solution should have native audit capability for end to end incident management. Complete audit trail of incident life cycle (like incident alerting, action taken by each user, final outcome of incident, closing of incident) should be maintained.			
62	The solution should allow a wizard / GUI based interface for rules (including correlation rules) creation as per the customized requirements. The rules should support logical operators for specifying various conditions in rules.			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
63	The solution should support all standard IT infrastructure including Networking & Security systems, OS, RDBMS, Middleware, Web servers, Enterprise Management System, LDAP, Internet Gateway, Antivirus, and Enterprise Messaging System, Data loss prevention (DLP) etc.			
64	The solution should have provision for integration of the following:			
	a) Inclusion of "user context" (through systems such as LDAP).			
	b) The solution should enable the correlation of identity and session information to assist in responding to incidents that are user centric.			
	c) Inclusion of "Data context". : The solution should provide the ability to display the country of origin based on IP address.			
	d) Inclusion of "Application context".			
65	Solution should have license for minimum 10 users for SIEM administration.			
66	The solution should have the ability to define various roles for SIEM administration, including but not limited to: Operator, Analyst, SOC Manager etc. for all SIEM components.			
67	The solution should support SIEM management process using a web-based solution.			
68	The solution should support the following co- relation:			
	Statistical Threat Analysis - To detect anomalies.			
	Susceptibility Correlation - Raises visibility of threats against susceptible hosts.			
	Vulnerability Correlation - Mapping of specific detected threats to specific / known vulnerabilities			
	Rules based Correlation - The solution should allow creating rules that can take multiple scenarios like and create alert based on scenarios.			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
	The solution should also support historical correlation and have capability to analyse historical data using a new correlation rule and carry out trend analysis on collected data.			
	Solution should have capability to correlate based on the threat intelligence for malicious domains, proxy networks, known bad IP's and hosts.			
69	The solution should provide ready to use rules for alerting on threats e.g., failed login attempts, account changes and expirations, port scans, suspicious file names, default usernames and passwords, High bandwidth usage by IP, privilege escalations, configuration changes, traffic to non-standard ports, URL blocked, accounts deleted and disabled, intrusions detected etc.			
70	The solution should support the following types of correlation conditions on log data:			
	a) One event followed by another event			
	b) Grouping, aggregating, sorting, filtering, and merging of events.			
	c) Average, count, minimum, maximum threshold etc.			
71	The solution should prioritize & enrich events based on existing threats / alerts / incidents on the asset. E.g. If there is a known vulnerability detected by vulnerability scanner on an asset, solution should categorize the risk higher since the vulnerability was already known so that action may be taken pro-actively.			
72	The solution should offer a user interface that is capable of providing the Information Security team an intuitive way of using recognized network tools e.g. whois, nslookup, ping etc. to assist in analysis and response work.			
73	Solution should provide threat scoring based on:			
	a) Host, network, priority for both source & destination			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
	b) Real-time threat, event frequency, attack level etc.			
74	The solution should correlate and provide statistical anomaly detection with visual drill down data mining capabilities.			
75	The solution should have the capability to send notification messages and alerts through email, SMS, etc.			
76	Solution should support Real-time reporting as well as scheduled reporting			
77	Reporting feature should be inherent in the solution and not provided by a third party. The solution should have flexibility to design custom made reports as required by IPA from time to time. Bidder should design customized reports as desired by customer from time to time.			
78	Customized reports should be configurable / designable via GUI and not CLI			
79	The tool should provide facility for separate alerting and reporting console for different asset groups.			
80	The solution should support RADIUS and LDAP / Active Directory for Authentication.			
81	The solution should provide highest level of enterprise support directly from OEM.			
82	The solution should provide a single point of contact directly from OEM for all support reported OEM.			
83	The solution should mention the response time for customized parsers writing for out of box unsupported device log types or in case of version upgrade(s) which lead to a new log type.			
84	The solution should provide the report generation progress status in the console.			
85	Solution should support log integration for IPv4 as well as for IPv6.			
86	Solution should provide inbuilt dashboard for monitoring the health status of all the SIEM components,			

SIEM				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Details of Reference Document for verifying compliance	Reference Page No
	data insert/retrieval time, resource utilization details etc.			
87	Solution should support default correlation rules for detection of network threats and attacks. The performance of the solution should not be affected with all rules enabled.			
88	The central management console/ Enterprise Security managers/receivers should be in high availability.			
<b>Cloud Security Specifications for Monitoring and Security Incident Management</b>				
89	24/7 extensive monitoring of the cloud services and prompt responses to attacks and security incidents			
90	Recording and analysing data sources (e.g. system status, failed authentication attempts, etc.)			
91	24/7 contactable security incident handling and troubleshooting team with the authority to act			
92	Obligations to notify the customer about security incidents or provide information about security incidents potentially affecting the customer			
93	Provision of relevant log data in a suitable form			
94	Logging and monitoring of administrator activities			

## 1.2 Enterprise Management System (EMS)

Enterprise Management System (EMS)				
Sr. No.	Description of Requirement	Compliance (Yes/No)	Reasons for Deviation (if any)	Details
<b>General</b>				
1	EMS architecture should be object oriented, open and extensible set of common services. These common services should offer a rich and comprehensive set of robust management functions such as event management, application / Network			

Enterprise Management System (EMS)				
	monitoring, communications and administrative functions			
2	Should be modular and should not be framework dependent so that required modules can be added in future to meet the growing / changing needs			
3	Ability to support 3rd party integration and have open API/interfaces for integration			
4	Ability to have an object repository based on RDBMS			
5	Ability to correlate events across the spectrum of infrastructure components and should support events from components including Network, hardware, multiple-platform servers, database, etc			
6	Ability to provide reports on service levels for stated infrastructure			
7	Ability to determine performance information of critical link-interfaces of routers for bandwidth utilization so as to determine whether it is required to upgrade link bandwidth or existing bandwidth will suffice the future growing demand.			
8	Ability to provide web-based management consoles for managing the infrastructure and should use secured protocols for management of servers, desktops, etc			
9	Ability to support multiple levels of administrative delegation. It should be able to define multiple levels of administrative domains so that each administrator is assigned certain resources for which they are responsible. It should provide for database scoping to protect management database data from unauthorized access			
10	Communication between managed server and the target managed system across the network should be secured, reliable and using widely accepted standards.			
11	Ability of quickly identifying the impact of infrastructure failures, identify the root cause of the problem and manage IT infrastructure. It should prevent flooding of non-relevant console messages			

Enterprise Management System (EMS)				
12	Should provide management through intelligent agent or agentless technology e.g. agents for monitoring servers & databases etc.			
13	Should have a very lightweight agent component that consumes very less system resources like memory, disk space, etc.			
14	The agent component should be supported on proposed OS			
15	Ability to provide an event console for the entire environment for event monitoring. Events should be colour coded on the GUI based on severity			
16	Ability to provide an event correlation engine, which should be automated with in-built algorithm based on discovered topology (topology base root cause) and work in conjunction with event management			
17	Ability to act on events either in an automatic mode or operator-initiated response mode			
18	All appropriate field on the system screen should be populated and contextual information is displayed where necessary (e.g., payment information will display on the payment screen).			
19	Ability to generate web based real-time reporting and historical reporting of elements in the infrastructure, providing the ability to format and present data in a graphical and tabular display			
20	Ability of integrating events to automatically create trouble tickets in helpdesk system for in-time problem resolution.			
21	The system should be capable of displaying the previous interaction histories on email / SMS, and the same should be available to voice based users.			
22	The tool should provide an exceptions list displaying the various health and threshold exceptions that are occurring in the managed infrastructure. Tool should provide ability to diagnose performance problems using real time and historical data and help in taking corrective measures.			
	The solution should have the native capability to deliver Business Intelligence (BI) reports; using an in-built industry-standard BI reporting tool.			
Network Management				



Enterprise Management System (EMS)				
1	The proposed Network Management System must provide performance management across key parts of the infrastructure. The event management solution must integrate network, server & database alarms in a single console and provide a unified event reporting interface for network, server & database components.			
2	Ability to integrate with eMS (Element management systems) and be able to provide monitoring of the available network.			
3	Should be based on SNMP, ICMP and TCP/IP standard and permit network layer level management. Should utilize management standards like SNMP etc. to monitor and manage the network. The tool should model layer 2 and layer 3 network technologies including: Internet Protocol (IP), Ethernet, BGP, OSPF, VPN, VLAN, ATM and frame relay, MPLS, Layer 2 Ethernet VPNs (including virtual private LAN services and virtual private wire services), Protocol Independent Multicast, and Carrier Ethernet			
4	Ability to monitor network devices of various vendors and should be easily accessible through a common interface. The Network Monitoring tool should include Web-based network topology visualization tool. The network visualization GUI should use the network topology and event information from the tool to generate graphical maps of the network topology around particular devices and send these maps to Web clients on demand.			
5	Ability to provide utilization, error statistics, etc. through various reports based on the environment monitored.			
6	The system must be able to identify the root cause of the problem and must visually pinpoint single impacting device, as well as other dependent impacted devices preferably in different colours in topology. Proposed fault management should display connecting link between two devices and port labels in same web GUI once clicked on a particular link. If there are multiple links between two devices all the links between two devices and their connected port labels must be visible in same web GUI.			

Enterprise Management System (EMS)				
7	Ability to 'filter-out' symptom alarms thereby reducing the alarm clutter and identify the root cause of any network failure in the network automatically			
8	The system should have capability to inform by SMS/Email/Voice calls that the grievance has been redressed.			
9	System should be able to auto-calculate resource utilization baselines for the entire managed systems and networks and allow user to set corresponding upper and lower threshold limits.			
10	System should use intelligent alarm de-duplication algorithms to learn the behaviour of the network infrastructure components over a period of time.			
	The Network Management System should provide intelligent automation of device configuration and change management and should support or Network infrastructure and needed Network technologies. Key features should include the following:			
	A) Provide real-time and accurate validation of configuration changes including out of band detection and management of changes and non-disruptive rollback.			
	B) Enables accurate and rapid configuration changes. Enable configuration comparisons across versions & devices.			
	C) Offer direct command-line access to the device that is logged and auditable. Also permission setup should be possible, for example who can execute this function and which part of the network they can access.			
	D) Enforce change control process based on role and user access including comprehensive change management capabilities with multi-level approvals			
	E) Provide ability to define and reuse common configuration tasks (templates)			
	F) Provide out-of-the-box and customizable reports			
	G) Provide back-up and restore (with maintenance) of device configurations.			
	H) Maintain complete historical audit trail of all network changes. So as to detect who did do what and when.			

Enterprise Management System (EMS)				
	l) Protect end user for configuration errors (for errors like syntax, boundary and command order errors) and now parent and child relation within a device configuration."			
<b>Server Management</b>				
1	Ability to monitor various OS parameters such as processors, memory, files, processes, file systems, etc., using agents on the servers to be monitored.			
2	Ability to configure the OS monitoring agents to monitor based on user-defined thresholds for warning / critical states and escalate events to event console of EMS			
3	The solution should support OS monitoring for various platforms - various flavours of Unix, Linux, Windows, etc			
4	Ability to monitor various OS parameters depending on the OS being monitored yet offer a similar interface for viewing the agents and setting thresholds			
5	Ability to provide performance scoping and trending to provide real time as well as historical reporting			
6	Ability to provide performance configuration to enable agent configuration to be done from a central point of control using intuitive GUIs that provide a common look and feel across various platforms. Performance profiles could be defined in this GUI and delivered to the various specified machines in the enterprise running performance agents. These agents could then dynamically reconfigure them to use the profiles they receive			
7	Historical performance agent would be responsible for long term data collection and data management. It should collect historical performance data for a wide range of resources on supported platforms such as Windows, Linux, Unix, etc. The collected data should be available for the purpose of detailed trend analysis and capacity planning if required			
8	Ability to support management of following parameters			
9	Processors - Each processor in the system should be monitored for CPU utilization. It should compare current utilization against user-specified warning and critical thresholds			

Enterprise Management System (EMS)				
10	File Systems - Each file system should be monitored for the amount of file system space used			
11	Files - File attributes such as overall file size, time-stamp change and file growth between intervals should be monitored (Preferable)			
12	Log Files - Logs should be monitored to detect faults in the OS, the communication subsystem, and in applications. System agents should also analyze log files residing on the host for specified string patterns			
13	System Processes - System agents should provide real-time collection of data from all system processes. Using this it should help identify whether or not an important process has stopped unexpectedly. It should provide an ability to automatically restart critical processes			
14	Memory - System agents should monitor memory utilization and available swap space and should raise an alarm in event of threshold violation			
15	Event Log - User-defined events in the security, system and application event logs should be monitored. E.g. an event-log watcher can be configured to identify the occurrence of failed logon attempts, indicating that someone may be attempting to violate a sensitive system			
16	System agents for Windows should provide functionality to monitor logical volumes, mounts, distributed file systems, quotas, directories, services, jobs, sessions and network interfaces			
17	System agents for Unix and Linux should provide functionality to monitor swap space, load averages, network interfaces, inter-process communication, physical disks, message queues, semaphores, shared memory segments and other kernel parameters			
18	The event generated as a part of server management should go to a common enterprise event console where a set of automated tasks can be defined based on the policy			
Helpdesk				

Enterprise Management System (EMS)				
1	Ability to provide flexible logging of incidents / queries manually via GUI and web interface. Should provide various ways to create incidents / queries and not limited to email			
2	System should support ITIL processes such as:			
	- Incident Management			
	- Problem Management			
	- Release and Deployment Management			
	- Knowledge Management			
	- Service Level Management			
	- Availability Management			
	- Capacity Management			
	- IT Service Continuity Management			
	- Event Management			
	- Service Asset and Configuration Management			
3	Ability to provide flexible logging of tickets manually via GUI and web interface. Should provide various ways to create tickets and not limited to email. Must have following built in ITIL process Incident Management, Problem Management, Change & Configuration Management, Release Management, Knowledge Management and SLA Management.			
4	The web interface console of the incident / query tracking system should allow viewing, updating and closing of tickets			
5	Facility to link calls/ incidents / queries in case the same is reported more than once			
6	Ability of the web interface console to offer tips to the users.			
7	Ability to define multiple levels / tiers of categorization on the type of incidents / queries being logged			
8	Facility for classification to differentiate the criticality of the incident / query via the priority levels, severity levels and impact levels			
9	Ability to provide audit logs and reports to track the updating of each ticket			
10	Ability to allow easy definition of multiple escalation levels and notification to different personnel for escalation policy.			
11	The escalation policy should allow flexibility of associating with different criteria like device / asset / system, category of incident, priority level etc			

Enterprise Management System (EMS)				
12	Ability to have an updateable knowledge base for technical analysis and further help end-users to search solutions for previously solved issues			
13	Ability to support tracking of SLA for call requests within the help desk through service types			
14	Ability to provide status of registered queries to end-users over email and other means			
15	Ability of assigning query requests to technical staff manually as well as automatically based on predefined rules and should support notification and escalation over email, web, etc.			
16	It should help automate and improve resolution of tickets through an integrated run book capability the spans all functional areas, with the power and flexibility to effect change throughout the complete process.			
	It should provide embedded remote diagnostics capability to enable service desk agent to remotely take over workstations for problem resolution.			
Asset Management				
1	The solution must provide comprehensive software and asset lifecycle management solution including requisition, procurement, inventory, deployment, and contract management.			
2	It should track and control all hardware assets installations, moves, additions and changes (IMAC). It should provide deep visibility into assets owned, where they are located, maintenance details, compliance etc.			
3	Ability to provide inventory of hardware and software applications on Servers / desktops including information on processor, memory, OS, mouse, keyboard, etc. through agents installed on them. The technology must be support inventory collection and Software deployment across DMZ			
4	Ability to have reporting capabilities; provide predefined reports and ability to create customized reports on data in the inventory database. Report results could be displayed as lists or graphs			
5	Ability to provide the facility for use defined templates to collect custom information from desktops			
6	Ability to provide facility to recognize custom applications on servers / desktops			

Enterprise Management System (EMS)				
7	Facility for the administrator to register a new application to the detectable application list using certain identification criteria. Should enable the new application to be detected automatically next time the inventory is scanned			
8	Should provide catalog for user self service to install registered software			
9	Ability to store detail asset information on hardware and software inventory			
10	Ability to support configuration management functionality using which standardization of configuration can be achieved of all the desktops			
11	Ability to provide unified Asset , Change and Configuration management , with automated updates of related assets and CI data. It should include:-			
	a. Automatically link an asset to CI or vice versa			
	b. Easily create CI from an Asset or Asset from CI			
	c. Automatically update an asset when CI gets updated and vice versa			
12	Software metering should be supported to audit and control software usage. Should support offline and online metering.			
13	Ability to support dynamic grouping of enabling assets to be grouped dynamically based on some pre-defined criteria e.g. a group should be able to display how many and which computers has a specific application installed. As and when a new computer gets the new application installed it should dynamically add to the group			
14	Ability to use the query tool to identify specific instances of concern like policy violation (presence of prohibited programs / games and old versions,etc.), inventory changes (memory change, etc) and accordingly it could perform several actions as reply.			
	Indicative actions could be (a) sending a mail, (b) writing to files, sound an alarm (c) message to scroll on monitor screen if the administrator, etc			
15	Facility to track changes by maintaining history of an asset			
16	Ability to have web enabled console.			
17	Facility to support event policies such that predefined actions can be triggered , such as sending an email notification,			

Enterprise Management System (EMS)				
	when key events occur such as software license violations, etc			
18	Ability to send queries to an engine (to pump the inventory information to the console) to be executed at predefined days and time			
19	Ability to offer remote control capabilities for various Windows environment			
20	Ability to support multiple connection protocols for remote control, including TCP/IP, HTTP, etc.			
21	Ability to offer several levels of security for remote control ranging from defining users with specific rights and local confirmation			
22	Allow administrators to centrally manage remote control users' and their access rights.			
23	Ability to support centralized policy management, centralized session management			
24	Ability to have web enabled console.			
25	Ability to support remote reboot functions			
26	Ability to provide secure communication between the server and agent			
27	Ability to allow multiple remote management sessions to be opened concurrently with easy switching between the sessions			
Database Management				
1	Should provide integrated server and database performance solution that can coexist on same server sharing common database, common visualization, navigation and security.			
2	Ability to proactively monitor various critical RDBMS parameters such as database tables, tablespaces, logs, file store space, system resource utilization, locking system,etc. using agents on the servers to be monitored			
3	Ability to integrate with EMS and support monitoring of various RDBMS like Oracle, MS-SQL, DB2, Sybase, etc			
4	Ability to configure the database monitoring agents to monitor based on thresholds. When thresholds are exceeded, the agents should be able to send alerts to event console of EMS			



Enterprise Management System (EMS)				
5	Facility for Database Administrators such that they should be able to set thresholds for key performance indicators based upon their observations of declining performance. The database management function should be able to enforce sophisticated policies that monitor and correlate multiple events			
6	Ability to monitor various database parameters depending on the database being monitored yet offer a similar interface for viewing the agents and setting thresholds			
7	Ability to monitor all server databases and store it in the object repository			
8	Ability to monitor the status of database server processes. In conjunction with EMS, it should be able to restart critical processes when they shut down			
9	Ability to monitor short-term and long-term CPU utilization to ensure database server does not place unacceptable loads on the host. To avoid unnecessary warning when CPU utilization momentarily exceeds thresholds, the function should send an alert only when the database server is placing a sustained load on the machine.			
10	Ability to monitor the caching system to assess the effectiveness of the cache size			
11	Ability to continuously monitor the number of available locks to avoid a situation where the locking system blocks transactions.			
12	Ability to automate day-to-day DBA tasks while enabling control across multiple environments			
13	Server & Database monitoring solution should integrate with common management portal			
14	Ability to provide full-fledged service level monitoring and reporting capability using which administrator should be able to define metrics to be measured, measure on such metrics and do comprehensive service monitoring and web-based reporting based on service availability, downtime and response			
15	Ability to integrate with other modules of EMS to provide service level reporting and be able to generate service level reports based on customized business process views if required.			
16	Ability to generate and publish service level reports. Should allow users to access or generate reports via web as per their roles & responsibilities.			

Enterprise Management System (EMS)				
17	Alerts should be available when SLA is violated			
18	The system should provide an outage summary that gives a high level health indication for each service as well as the details and root cause of any outage.			
19	Ability to monitor and report on availability, utilization and also provide reports on historical utilization of CPU, memory of monitored servers running EMS agents			
20	Ability to automatically generate service level performance reports and should have capability to email reports automatically as per schedule defined or upload the reports to the remote web servers			
21	Facility for Users such that they should be able to monitor service level incidents to indicate what factors affect non-compliance. It should also highlight periods when the external factors such as power outages are responsible for non-compliance with SLA			
22	Should be scalable and support data collectors distributed across locations, should be able to gather and measure statistics from the IT infrastructure.			
23	Ability to support creation of users which provides dynamic personalization and allows administrators to set up a web console that suits their needs and individual preferences			
24	Ability to allow definition of user roles and provide filtered management information to have a personalized view depending on the area			
<b>Business Service Management</b>				
1	Ability to provide scheduled report capabilities for automated report generation			
2	Ability to offer a bundle of various predefined reports in multiple formats, such as HTML, text, CSV, XML, web and graphs that are customizable to the needs			
3	Ability to provide comprehensive logging facilities record event data from a variety of sources to support consolidation for the purposes of correlation and root-cause analysis			
4	Ability of managing IT resources in terms of the business services they support, specify and monitor service obligations			

Enterprise Management System (EMS)				
5	The Services definition facility must include business transaction processes supported by IT resources and allow for specification of rules-based monitoring policies that infers the health of the Service based on the collective values of resource attributes			
6	Ability to monitor/control/log connections of various devices including USB and other storage devices			
7	Ability to automatically detect and integrate with compatible anti-virus scanners. Anti-Virus scanners can be used to enforce that all removable storage devices are virus-free before access should be granted as part of the authorization process.			
8	Ability to generate reports on daily/ weekly / monthly or schedule time			
Application Performance Monitoring				
1	Application Performance Management System must enable operators to identify, prioritize and resolve defective transactions —before they impact end-users — through real-time visibility into transactions and should be able to track end user response time			
2	Solution should proactively monitor all user transactions for any web-application hosted in the application server; detect failed transactions; gather evidence necessary for triage and diagnosis of problems that affect user experience			
3	The proposed solution should determine if the cause of performance issues is inside the application, in connected back-end systems or at the network layer.			
4	The proposed solution should see response times based on different call parameters			
5	The proposed Solution must be able to correlate Application changes (code and configuration files) with change in Application performance			
6	The proposed solution must provide real-time monitoring of memory usage, servlets, caches, and DB connection pools.			
7	The proposed solution should support dynamic instrumentation of applications eliminating the need to restart the application server after every change.			
8	The proposed solution should allow data to be seen only by those with a need to know and limit access by user roles			

Enterprise Management System (EMS)				
9	Should Measure the end users' experiences based on real transactions			
10	Should Provide visibility into user experience without the need to install agents on end user desktops.			
11	Should be deployable as an appliance-based system acting as a passive listener on the network or agent based on the web server			
12	Should have Ability to detect user impacting defects and anomalies and reports them in real-time for Slow Response Time, Fast Response time, Low Throughput, Partial Response, Missing component within transaction			
13	Should have ability to pro-actively determine exactly which real users were impacted by transaction defects, their location and status.			
14	Should have ability to provide user usage analysis and show how user's success rate, average time and transaction count has changed over a specific period of time such as current week versus pervious week.			
15	It should automatically determine transaction topology layouts and performance baselines and enables instance based end-to-end transaction tracking across heterogeneous environments.			
16	It should provide broad coverage to monitor multiple Operating Systems & Virtual Environment, Databases, Web Servers and App Servers , but not restricted to :-			
	a. Operating System: Windows, Unix, Linux			
	b. Web Server : Apache, IHS, Sun Java Web Server, Microsoft IIS			
	c. Application Server: WebSphere Process Server, WebSphere Portal Server, WebSphere Extended deployment, eWAS, BPM, Operational monitoring of app servers; WebSphere Application Server (Base, ND, VE), Microsoft. Net, JBoss, WebLogic, SAP NetWeaver, Oracle Application Server, Sun Java System App Server, Apache Tomcat			
	d. ESB/SOA: (not deep dive) WESB (WebSphere Enterprise Service Bus), WebSphere Message Broker, WebSphere Service Registry and Repository, DataPower Appliances			

Enterprise Management System (EMS)				
	e. Messaging: WebSphere MQ, WebSphere MQ File transfer, WebSphere Message Broker, Tuxedo Server, Tuxedo MQI			
	f. Virtual Servers : linux Kernel- based, NetApp Storage, VMWare, Citrix XenApp, Citrix XenServer, Citrix Xen Desktop, Cisco UCS			
	g. Microsoft support : .NET framework, Lotus Domino, Microsoft Active Directory, Microsoft BizTalk Server, Microsoft Cluster server, Microsoft Exchange server, Microsoft Host Integration server, Microsoft Hyper-V Server, Server (Forefront Threat mgmt Gateway), Microsoft Office Communication Server (Microsoft Lync Server), Microsoft SharePoint Serve.			

### **ANNEXURE 3: UNPRICED BILL OF MATERIAL**

The figures provided within the Bill of material are indicative for estimation purpose only. MSP has to perform an independent assessment of the requirements for the proposed system and provide a detailed BOM for the proposed solution in line with the requirements of the project and performance on service level agreements. DGS / DGS designated authority shall review and approve the BOM of the successful bidder at the time of implementation / deployment / commissioning. Software and services will be billed on actuals, subject to the ceiling as per commercial bid submitted by MSP

### 1.1 Software Development

Sr. No.	Description	Indicative Quantity
1	Exemptions and Plan Approvals	1
2	Ship Registration	1
3	Charter Permissions and licensing	1
4	ISM Audits	1
5	Inspections	1
6	Annual Inspection of MSVs	1
7	Individual's profile	1
8	INDOS Application	1
9	CDC	1
10	Examinations	1
11	Certifications	1
12	Sea Service	1
13	RPS	1
14	Shipping Company	1
15	MTI	1
16	SPFO	1
17	SWFS	1
18	RO Sails	1
19	Development of CMS portal for website	1
20	Data Migration module	1
21	MTO	1
22	Approval of Service providers	1
23	ISPS Audits	1

Sr. No.	Description	Indicative Quantity
24	Mobile App	1
25	Application Programming interfaces and gateways (SMS, email, payment, third party system, external systems, etc.)	1
26	PMIS	1
27	MIS Reporting, Analytics & Forecasting	1
28	SLA Monitoring and Incident Management system (EMS)	1
29	SIEM (Security Information and event management)	2
30	Vigilance Modules	1
31	Website	1
32	<Any other modules....>	

## 1.2 Transitioning and change management

S. No.	Training	Minimum number of Trainings
1.	Executive leadership Workshop	10
2.	Functional Heads	15
3.	Functional users	15
4.	Administrators	15
5.	Employees of Support Functions	15



### 1.3 IT Certification

Sr. No.	Certification	Unit
1.	STQC (Relevant to Mgmt. System, Product Certification (IT & E-Gov))	1
2.	Security Audit Certificate from CERT-IN / CERT-IN empanelled agencies	1

### 1.4 System Integrator Manpower

Sr. No.	Description	Number of resources
1.	Project Manager	1
2.	Business Analyst	3
3.	Subject Matter Expert	1
4.	Database Administrator	1
5.	Change Management Specialist / Trainer	2
6.	Mobile app specialist	1
7.	Solution Architect	1
8.	Application Support	2

Please refer the table in Volume I Section 9 Constitution of team