Chhattisgarh infotech & Biotech Promotion Society (CHiPS), State Data Centre Building, Near Police Control Room, Civil Lines, Raipur, Chhattisgarh–492001
Tel.: +91-771-4014158
Email: ceochips@nic.in,

Notice Inviting Tender

For "Empanelment for Development, Customization, Deployment and Management of State-wide Vehicle tracking software"

Websites:
https://eproc.cgstate.gov.in
www.chips.gov.in

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Department/CHiPS shall be the final authority with respect to qualifying a bidder through this RFP. The decision in selecting the System Integrator who qualifies through this RFP shall be final and Department/CHiPS reserves the right to reject any or all the bids without assigning any reason thereof. CHiPS further reserves the right to negotiate with the selected agency to enhance the value through this project and to create a more amicable environment for the smooth execution of the project.

Department/CHiPS may terminate the RFP process at any time without assigning any reason and upon such termination CHiPS shall not be responsible for any direct or indirect loss or damage arising out of such a termination.

Abbreviations and Acronyms

Abbreviation	Description
ACD	Automatic Call Distributor
ACR	Annual Confidential Report
AMC	Annual Maintenance Contract
ANI	Automatic number identification
API	Application Programming Interface
ATS	Annual Technical Support
BCP	Business Continuity Planning
BG	Bank Guarantee
BOM	Bill of Materials
BoQ	Bill of Quantity
BPEL	Business Process Execution Language
BPMN	Business Process Model and Notation
CA	Chartered Accountant
CAPEX	Capital Expenses
CCA	Controller of Certifying Authorities
CCTV	Closed-circuit television
CEO	Chief Executive Officer
CG	Chhattisgarh
CGSWAN	Chhattisgarh State Wide Area Network
CGTD	Chhattisgarh Department
CHiPS	Chhattisgarh Infotech Promotion Society
CLI	Caller Line Identity
CM	Chief Minister
CMMi	Capability Maturity Model Integration
CMVR	Central Motor Vehicles Rules
COTS	Commercial of the Shelf
CPU	Central Processing Unit
CRM	Customer Relationship Management
CSC	Common Service Centre
CSP	Cloud Service Provider
CSS	Cascading Style Sheets
CTI	Computer Telephone Integration
CV	Curriculum Vitae
CVC	Central Vigilance Commission
DC	Data Centre
DCR	District Control Rooms
DD	Demand Draft
DEPARTMENT	Government Department of Chhattisgarh
DMF	District Mineral Foundation
DMO	Direct Mode Operation

Abbreviation	Description
DNIS	Dialled number identification sequence
DR	Disaster Recovery
DRaaS	Disaster Recovery as a Service
ebXML	Electronic Business Extensible Mark-up Language
EMD	Earnest Money Deposit
EPBX	Electronic Private Automatic Branch Exchange
FPA	Functional Point Analysis Model
FRS	Functional Requirement Specification
GIGW	Guidelines for Indian Government Websites
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
GPRS	General Packet Radio Service
GPS	Global Positioning System
GSM	Global System for Mobile
GST	Goods & Service Tax
H/w	Hardware
HA	High Availability
HR	Human Resource
HTML	Hypertext mark-up Language
IA	Implementation Agency
ICCC	Integrated Command Control Centre
ICT	Information and Communication Technology
IE	Internet Explorer
IIS	Internet Information Services
INR	Indian Rupees
IP	Internet Protocol
ISO	International Organization for Standardization
IT	Information Technology
ITeS	Information Technology Enabled Services
ITIL	Information Technology Infrastructure Library
ITSM	IT service management
IVR	Interactive Voice Response
JSON	JavaScript Object Notation
JSR	Java Portlet Specifications
KT	Knowledge Transfer
LDAP	Lightweight Directory Access Protocol
LED	Light Emitting Diodes
LI	Lead Implementer
LLP	Limited liability partnership
LOI	Letter of Intent
MAF	Manufacturer Authorization File
MB	Mega Byte
MCDR	Mineral Conservation and Development Rules

Abbreviation	Description
MeitY	Ministry of Electronics and Information Technology
MIS	Management Information System
MMP	Mission Mode Project
MMRD	Mines and Minerals Development Regulation
MoRTH	Ministry of Road Transport and Highways
MoU	Memorandum of Understanding
MRD	Mineral Resource Department
MSA	Micro Service Architecture
MVA	Motor Vehicle Act
MVC	Model-View-Controller
NDA	Non-Disclosure Agreement
NeGP	National eGovernance Plan
NIT	Notice Inviting Tender
NOA	Notification of Award
O&M	Operation and maintenance
OEM	Original Equipment Manufacturer
OGP	Obvious Geologically Potential
OSU	Operational Support Unit
PAN	Permanent Account Number
PBG	Performance Bank Guarantee
PBTMS	Public Bus Tracking and Monitoring System
PIS	Passenger Information System
PMU	Project Monitoring Unit
POA	Power of Attorney
PSTN	Public Switched Telephone Network
PSU	Public Sector Undertaking
QA	Quality Analysis
QR	Quick Response
QCBS	Quality Cost Based Selection
RAM	Random Access Memory
RCA	Route Cause Analysis
RFC	Retro fitment Centre
RFP	Request for Proposal
RPO	Recovery Point Objective
RTO	Recovery Time Objective
S/w	Software
SAML	Security Assertion Mark-up Language
SAN	Storage Area Network
SDA	State Designated Agency
SDC	State Data Centre
SDK	Software Development Kit
SECL	South Eastern Coalfields Limited
SI	System Integrator

Abbreviation	Description
SLA	Service Level Agreement
SMS	Short Message Service
SOAP	Simple Object Access Protocol
SOP	Standard Operating Procedures
SPOCs	Single Point Of Contact
SQL	Structured Query Language
SRS	Software Requirement Specifications
SSDG	State e-Governance Service Delivery Gateway
SSL	Secure Sockets Layer
STQC	Standardisation Testing and Quality Certification
SWAN	Structured Wireless-Aware Network
TCS	Tax Collected at Source
TEC	Technical Evaluation Committee
TP	Transfer Protocol
UAT	User Acceptance Testing
UML	Unified Modelling Language
UNFC	United Nations Framework Classification for Resources
UPS	Uninterruptible Power Supply
URL	Uniform Resource Locator
VLT	Vehicle Location Tracking
VM	Virtual Machine
VPN	Virtual Private Network
VTS	Vehicle Tracking System
WB	Weigh Bridge
WCAG	Web Content Accessibility Guidelines
Wi-Fi	Wireless Fidelity
WRR	Weighted Round Robin Functionality
WSDL	Web Service Definition Language
XML	Extensible Mark-up Language
XSLT	Extensible Stylesheet Language Transformations

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1 NOTICE INVITING TENDER

Chhattisgarh infotech Promotion Society (CHiPS), working under Department of Information Technology, Government of Chhattisgarh in the state of Chhattisgarh invites technical and financial proposals from reputed Bidder/System Integrator firms for e-Governance Project implementation, for **Empanelment for "Development, Customization, Deployment and Management of State-wide Vehicle tracking software"**.

The document can be downloaded from the website www.chips.gov.in & www.cgstate.gov.in response to this tender shall be deemed to have been done after careful study and examination of this document with full understanding of its implications. This section provides general information about the Issuer, important dates and addresses and the overall eligibility criteria for the parties. The tender document cost of **Rs.10,000.00 (Rupees Ten Thousand only)** is to be paid online through eProcurement portal to Chhattisgarh infotech Promotional Society, Raipur.

Issuer

The CEO
Chhattisgarh infotech Promotional Society, Raipur
State Data Centre Building, Near Police Control Room,
Civil Lines, Raipur,
Chhattisgarh–492001
Tel: + 91 – 771 – 4014158
Fax: + 91 – 771 – 4014158
Email: ceochips@nic.in
Website: www.chips.gov.in & www.cgstate.gov.in

Address for Bid Submission and Correspondence

The CEO,
Chhattisgarh infotech Promotional Society, Raipur
State Data Centre Building, Near Police Control Room,
Civil Lines, Raipur,
Chhattisgarh–492001
Tel: + 91 – 771 – 4014158

2 Bid Fact Sheet

S.N.	Item	Description
1.	Tender No	71358/RFP/Empanelment VTS/2021 Dated 05/02/2021
2.	Name of the issuer of this tender	Chhattisgarh Infotech Promotion Society (CHiPS)
3.	Date of issue of Tender document	06/02/2021
4.	Last date for sending Pre-Bid Query	15/02/2021 till 3 P.M.
5.	Pre-Bid Meeting	Pre-Bid meeting will be held on 17/02/2021 at 12 P.M. at Chhattisgarh Infotech Promotion Society (CHiPS) office, Raipur
6.	Publishing of pre-bid queries Response	23/02/2021
7.	Last Date for Submission of Bids	02/03/2021 till 3 P.M. (Online Submission)
8.	Last Date for Submission of hard copy of Bid	02/03/2021 till 3.30 P.M.
9.	Date of Opening of Pre-Qualification Bid	02/03/2021 at 4 P.M. at Chhattisgarh Infotech Promotion Society (CHiPS) Office, Raipur
10.	Date of Opening of Technical Bids	02/03/2021 at 4 P.M. at Chhattisgarh Infotech Promotion Society (CHiPS) Office, Raipur
11.	Date of Commercial Bid opening	To be intimated
12.	Place of Opening of Bids	The CEO, CHiPS, State Data Center Building,Near Police Control Room, Civil Lines, Raipur,Chhattisgarh–492001
13.	Address of Communication	The CEO, CHiPS, State Data Center Building, Near Police Control Room, Civil Lines, Raipur,Chhattisgarh–492001
14.	Cost of Tender Document	Should have made online payment of Rs. **10,000/- (Rupees Ten Thousand only)** for the RFP document
15.	Earnest Money Deposit (EMD)	Rs. 10,00,000/- (Rupees Ten lakhs only)

S.N.	Item	Description
		EMD to be submitted online through e-procurement portal (https://eproc.cgstate.gov.in)
16.	Purchase of Tender Document	Download from www.chips.gov.in or https://eproc.cgstate.gov.in and the bidders are required to submit the tender fees online along with the proposal.
17.	Validity of Proposal	180 Days
18.	Method of Selection	L1 with minimum passing mark at least 70%
19.	Bid Submission	Bid submission will be online through https://eproc.cgstate.gov.in only. • Bidders are required to submit One Original Hard Copy of Pre-ualification & Technical Evaluation Documents, along with Power of Attorney in sealed cover separately up to 03:30 PM on last date of bid submission. Financial Proposal should not be submitted in hard copy. • Please note that only online bids will be considered for evaluation of offers. • Certification by the bidder that online and offline offer are identical in all respects as per Annexure X
20.	Consortium or JV	Not Permitted
21.	Contact person for sending queries	CEO, CHiPS Office of CHiPS, Civil Lines Opposite New Circuit House, Raipur- 492001 Phone: 0771- 4014158 Email:ceochips@nic.in, empl.chips@cgchips.in

Note

1. The date of opening of the commercial bids will be intimated to the qualified Bidders before the due date through Email or Telephone.

2. CHiPS reserve the right to change any schedule of bidding process. Please visit https://eproc.cgstate.gov.in regularly for the same.

3 INTRODUCTION

3.1 About Chhattisgarh

Chhattisgarh is the 10th largest state in India with an area of 135,190 sq. km. Chhattisgarh was carved out of Madhya Pradesh in 01 November 2000 with its 16 Chhattisgarhi speaking districts. Larger than Tamil Nadu, it is just the right size, and is also fortunate to have a low population density. Good Governance is the highest priority in this Fast Track State. There is both policy stability as well as political stability. Government has been kept small and the State is in excellent fiscal health.

Chhattisgarh is truly a land of opportunities. With all major minerals including diamonds in abundance, it is the richest State in mineral resources. There are mega industries in Steel, Aluminium and Cement. Chhattisgarh contributes substantially to the Human Resources of India. Several hundred students from the State qualify for admissions in prestigious academic institutions every year. Bhilai, the knowledge capital of the State, alone sends over 50 students to the elite Indian Institutes of Technology every year.

Its' large power surplus is attracting power-intensive industries, and the State is poised to become the power-hub of the nation. Its central location helps easy power transmission to any part of the country. 12% of India's forests are in Chhattisgarh, and 44% of the State's land is under forests. Identified as one of the richest bio-diversity habitats, the Green State of Chhattisgarh has the densest forests in India, rich wildlife, and above all, over 200 nontimber forest produces, with tremendous potential for value addition. One third of Chhattisgarh's population is of tribes, mostly in the thickly forested areas in the North and South. The central plains of Chhattisgarh are known as the "Rice Bowl" of Central India. Female literacy has doubled in the last decade, and male literacy is higher than India's average. Gender ratio is next only to Kerala. Bastar is known the world over for its unique and distinctive tribal heritage. The Bastar Dashera is the traditional celebration of the gaiety of tribal. Many virgin, unexplored tourism destinations are there is all the parts of Chhattisgarh.

3.2 About CHiPS

Chhattisgarh Infotech Promotion Society (CHiPS) is the nodal agency and prime mover for propelling IT growth & implementation of the IT & e-Governance projects in the State of Chhattisgarh. CHiPS is involved in the end-to-end implementation of the following major projects:

- State Wide Area Network - CG SWAN

- E-District (Online G2C Services)
- Common Service Centres (CSC) – Rural CHOiCE
- Khanij Online
- Geographical Information System (GIS)
- e-Procurement
- State Data Centre
- Crime and Criminal Tracking and Network System (CCTNS)
- Digital Secretariat
- 36-Inc
- BharatNet

Vision statement

"To empower the people of Chhattisgarh through universal access to information and Government services making effective use of information and communication technologies."

4 PROJECT OVERVIEW

A public transport in a State should always be a symbol of safe and efficient transportation for commuters to reduce use of personal transport. With this philosophy, Ministry of Transport, Government of Chhattisgarh has envisaged to enforce the Motor Vehicles Act and Rules in the State.

Enforcement of public road transport rules and its effective monitoring for the large number of vehicles is definitely a challenge. Vehicle Tracking & Monitoring System is a technology used by many countries, companies and individuals to track vehicles using Global Navigation Satellite System/RNSS. Apart from enforcement of public road transport rules, the system can also give other valuable services to department and to the general public. Ministry of Road Transport & Highways (MoRTH) earlier issued a notification vide S01663(E) dated 18/04/2018, wherein all public service vehicles registered on or after 1st January 2019 must be fitted with Vehicle Location Tracking Device and Emergency Buttons. Further MoRTH has issued another notification vide GSR 1081 (E) in which additional conditions for National Permit has been imposed that AIS 140 GPS device should also be complied/fitted in National permit vehicle. As a step forward, Chhattisgarh Government has envisaged to track all public service vehicle and National permit vehicle as desired by MoRTH. Hence it is planned to implement State-wide Vehicle tracking software for a period of 2 years which will integrate with the VLT devices and panic buttons in all public Buses/ Vehicles along with necessary sensors. The transporters / bus owners shall procure and install the VLT devices and panic buttons from approved empaneled manufacturers/franchisees only.

4.1 Key Objectives

i. All the specified vehicles shall be equipped with vehicle location tracking (VLT) device with multiple emergency button for requesting emergency response by Vehicle owners.

ii. State shall set up a Monitoring Centre for monitoring the alerts and health status of VLTD and emergency buttons fitted in the vehicles.

iii. The Monitoring Center will include a backend system for handling and processing the date, event, logs and alerts sent from the VLT devices or Panic button fitted in vehicles.

iv. Monitoring Centre shall be setup in State for the alerts and coordinating with State Emergency Response Support System (ERSS) as well as with Central Monitoring agencies like NIC, DIMTS, MoRTH etc for responding to distress calls monitoring.

4.2 System Overview

i. The proposed Vehicle Tracking System consists of a Vehicle Location Tracking (VLT) device, with Emergency buttons, meeting the specifications of AIS-140, mounted in the vehicle, which will send the vehicle location, heath status, alerts and other data to the Monitoring center at a specified periodicity. A Standard Operating Procedure (SoP) shall be defined by Transport Department for handling emergency alerts at the Monitoring Centre. The Department officials will be able to access the system and monitor the alerts at the Monitoring Centre. The actionable alerts will be filtered and handled as per the Standard Operating Procedure (SoP) formulated by State Department.

ii. The system will be a web-based and Mobile App based system so that the officials concerned will be able to use the system on their desktop computers. For states equipped with fully functional ERSS, the VLT device shall be configured to send data to Monitoring Centre and to the ERSS of the State. However, for states equipped with only partially functional ERSS, the VLT device will be configured to send emergency button press alert and related data to Monitoring Centre. The alert will be handled by the monitoring official and forwarded to the concerned aid agency or police manually.

4.3 Brief Scope of Work

The following outlines the broad areas of scope of work and the selected bidder will perform the following primary tasks for a period of 2 years -

i. Design, Development / Customization & Installation, configuration, Documentation of Software for vehicle tracking system. Conduct a pilot of identified vehicles to showcase basic functionality of the VTS and Accuracy of data for the different GPS devices.

ii. High resolution Digital Map-based based tracking of vehicles by the control centre operators to monitor, track and control the Route Navigation of vehicles, Alarm Management, Speed Management, Stoppage management, Route replays, vehicle tracking dashboard etc.

iii. Protocol integration of all type approved VLT Manufactures for the State

iv. M2m/ telecom service provider integration for SIM activation/validity support for the period as per MORTH guidelines

v. Design, Development of Mobile App for all stakeholders (Department and public) in both Android and iOS platform. Mobile application needs to work in online and offline mode both.

vi. Site Preparation, Procurement and establishment of IT infrastructure at Integrated Command Control Centre (ICCC) and development of geolocation specific monitoring module for seamless monitoring/incident – response management, collaboration and geo-spatial display. Provide connectivity to Monitoring Centre (ICCC).

vii. Design, Development of centralised management /user specific dashboards for easy visualization of data showing key performance indicators.

viii. Hosting of application and Map on NIC Cloud as per MoRTH guidelines in addition to local Cloud hosting. SI is also responsible for provision the necessary compute & storage infrastructure on the cloud including the underlying software licenses/certificates to host the Application. The SI shall be responsible for procuring, installation of all the software and licenses required for the successful hosting of the application and all ancillary in-scope software. Online storage for complete data for three months, online storage of alerts data for two years and archive storage of all data for minimum two years.

ix. SMS gateway/Packages

x. Maintaining all hardware's/infrastructure related to project during the contract period.

xi. Operations & Maintenance of entire system after “Go Live” till completion of the contract. The O&M shall include complete operational support for Application/ System Software/ other Infrastructure related to this project as per SLA for the contract period.

xii. Department/ CHiPS won't pay any extra cost for development/integration/change request during Operations and Maintenance. Any additional development in application software will be done by selected SI’s team.

xiii. Integration with other government applications or third-party application as per requirement

xiv. High Scalability & Reliability

xv. Real-time and uninterrupted access to information

xvi. Bugs / Issues fixing in the Application Software as well as operational problems. Tuning and code changes for optimal performance. Enhancement/modification in modules as per requirement. Data Validation/correction. Ticket resolution as per SLA

xvii. The Service Provider shall generate additional reports and modify existing reports as per requirement of Department

xviii. 24*7 Helpdesk will be setup at the location arranged by Department. The helpdesk will also have IVRS support to handle standard queries supporting telephone call, e-mails and web complaint for VLT manufacturer/Department/Permit Holders, etc

xix. Manpower resources for Monitoring Centre Operations & Help desk support

xx. Testing and certification as per AIS-140

xxi. SSL & Security (CERT - IN) Certificates/ STQC Certification (The STQC/CERT-IN audit is part of the selected bidder scope for closing the non-compliances as reported by STQC. The payment to be paid to STQC for quality certification will be borne by selected bidder only).

xxii. Data Sharing API/Integration with MORTH and other 16 agencies as per requirement of MoRTH and Department

xxiii. Automatic dispatching event alarm to respective enforcement agencies on real time basis

xxiv. Multiple training and Workshops for Stakeholders

xxv. Any other work assigned by Department / CHiPS related to the project

5 DETAILED PROJECT METHODOLOGY

The Selected Bidder will be implementing the entire project in phase wise manner. The project will be implemented in phases across the state

Phase I: Pre- Implementation

- Preparation & Submission of detailed Project Plan
- Submission of System Study Report (SRS) and sign-off from Department.

a) **Phase II: Implementation**

- Customization/Development of Application as per SRS
- Software Testing and customization as per requirement/feedback
- Integration with other department/applications as per requirement
- The System Integrator will provide proof of concept for vehicle tracking system, wherein Department will first-hand verify successful integration of various AIS 140 devices that are empaneled the authority of CG and are up and running with the designed system by the System Integrator. It is SI's responsibility to arrange for 100 devices from all empaneled agencies and vehicles for demonstration of POC.
- User Acceptance Testing and sign-off from Department

b) **Phase III: Go-live and Operation and Maintenance**

As part of the post implementation services after project is declared "Go-live", the Selected Bidder shall provide below support for the software, hardware, and other infrastructure provided as part of the project but not limited to two (2) years of comprehensive AMC that includes:

- Handholding Services
- Application functional support services
- Hardware and Software maintenance and support services.
- Warranty support
- Annual Technical Support (ATS)

The services shall be rendered onsite. To provide the support for all Project locations across the State where the Application software, hardware, and other infrastructure will be rolled out.

SI will provide qualified and trained person for Help Desk cum call centre support executive at the project location for complete contract period to attend the call from all stakeholders/public.The Selected Bidder will run this Help Desk call centre in 3 shifts with minimum 2 resources in each shift, 24x7x365 days. Department will provide required space, electricity, furniture and rental charges of telephone lines. All setup responsibility will be of SI to run the call center.

A. Solution Design and Preparation of Software Requirements Specifications (SRS)

The selected bidder shall perform the detailed assessment of the functional requirements and design solution using robust and proven software and hardware technologies like Service Oriented Architecture (SOA) and open industry standards. The solution architecture should be built on sound architectural principles enabling fault-tolerance, high performance, and scalability both on the software and infrastructure levels. Further, in addition to the enhancements specified in the RFP, the Selected Bidder is also responsible for implementing the additional modifications / enhancements suggested and approved by Department during the duration of the contract. The Selected bidder shall conduct a detailed requirement gathering exercise to elaborate the functional requirements prior the design and implementation.

As part of the preparation of SRS/Gap report the selected bidder shall be responsible for preparing and submitting detailed requirement specification documents as per IEEE or equivalent standards which meets all the Business, Functional and Technical requirements of the departments concerned. The SI shall prepare the SRS documents and have it reviewed and approved by Department.

The SI is required to update the FRS/SRS as and when any enhancements/ modifications are made to the application till the duration of the Contract.

B. Development of Application and User Acceptance Test (UAT)

The selected bidder shall perform the software development, configuration, customization, testing and implementation of the end-to-end application. The selected bidder shall design the testing strategy and plan including traceability matrix, test cases and conduct testing of various components of the software developed/customized duly incorporating scope for the VTS. The selected bidder shall ensure that the application system should have the ability to generate periodic reports for parameters required from time to time by Department.

The selected System Integrator will ensure local office in Raipur for ensuring development environment for selected team in ICCC setup.

C. Documentation

The SI shall create and maintain all project documents that shall be passed on to Department as deliverables as per the agreed project timelines. The System Integrator shall prepare all necessary documentation for the project and provide them to department/CHiPS or its designated Consultant for review, approval, record, reference etc. as required. Any other document(s) deemed necessary for implementation, operations and maintenance of the hardware and network equipment's and the overall system.

Project documents include but are not limited to the following:

i. Detailed Project Plan

ii. Detailed System Study Report

iii. Software Requirement Specification (SRS) study and the document containing detailed requirement capture and analysis including functional requirement, Interface Specifications, application security requirements (Functional Requirement Specification (FRS), Process Flow, Work Flow)

iv. ER diagrams and other data modelling documents

v. Data dictionary and data definitions

vi. Requirements Traceability Matrix

vii. Complete Source Code with documentation

viii. Test cases (including Unit Test and User Acceptance Test) and result testing documentation (including details of defects/bugs/errors and their resolution).

ix. User Training plan

x. Manuals – Systems Administration Manuals, User Manuals, Installation Manuals, Operational Manuals, Maintenance & Support Manuals, and Stake-holder reference Manuals.

xi. Periodic Status and Review Reports.

xii. Exit Plan

xiii. Application component design including component deployment views, control flows, etc.

xiv. LLD documents

xv. Application flows and logic.

xvi. GUI design (screen design, navigation, etc.).

xvii. Change Management and Capacity Building Plans.

xviii. Inspection and testing procedures manual including QA Policy, procedures for the software/hardware equipment's.

xix. Any other document(s) deemed necessary for implementation, operation and maintenance of the hardware and network equipment and the overall system.

xx. Backup Policy & Security Policy

xxi. SLA and Performance Monitoring Plan

xxii. Issue Logs

xxiii. Load Testing Report

xxiv. Security Testing and Certificate

xxv. Any Other document deemed necessary ore relevant

Competent Authority shall review the project documents developed by Selected Bidder. Any issues/gaps identified by the Competent Authority, in any of the above areas, shall be addressed to the complete satisfaction Department.

The System shall permit the latest versions of the application and source code to be deposited with the Department /CHiPS , with appropriate logs maintained for each change.

D. Hosting of Application on Meity empanelled Cloud Service Provider and ensuring connectivity to NIC Cloud

The system Integrator shall perform the detailed assessment, The solution shall have below high-level features, but not limited to:

i. There should be high availability

ii. Data backup and Disaster recovery at different location than Primary location

iii. Dedicated Firewall

iv. Dedicated Bandwidth considering the constant pings from all onboarded vehicles

v. Dedicated incremental storage space

vi. Auto up gradation of all license (if required)

vii. Cloud Infrastructure will be managed by SI for complete project period

viii. MIS and Reporting Services

Selected bidder shall be responsible for design, provisioning of IT infrastructure Meity empanelled Cloud Service Provider for hosting of application and connectivity with NIC Cloud and DIMT Dashboard. The SI shall also ensure that the application should be portable to another Cloud Service Provider (lift and shift) without any changes to application code.

i. The selected bidder shall be responsible for provisioning required compute infrastructure (server/virtual machines), storage, security and services.

ii. Provision of necessary compute and storage infrastructure on the cloud including the underlying software licenses to host the application suite

iii. The SI will be required to provide support for updates, upgrades, security patches etc. for software licenses. The SI shall ensure enterprise level support or equivalent for software licenses, covering updates, security patches, issue resolution at software level, bug fixing etc.

iv. The SI shall be responsible for ensuring security of overall solution and infrastructure from any threats and vulnerabilities. The SI shall address ongoing needs of security management including, but not limited to, monitoring of various devices / tools such as firewall, intrusion prevention/ detection, content filtering and blocking, virus protection, event logging & correlation and vulnerability protection through implementation of proper patches and rules.

v. Sharing Root Cause Analysis report for any downtime or unavailability.

vi. The SI will also be required to provide the following as services under the project: -

a. Routing, Web Application Firewall, Firewalls, Load Balancer, Bandwidth, Backup, Operations Management and Data Management

b. Security & Data Privacy (Data & Network Security including Anti-Virus, Virtual Firewall, VPN, SSL, Log Analyzer, IPS, DDOS Protection)

vii. Reports on security breach and security related incidents along with co-relation with events

E. Quality Certification (STQC)

The primary goal of Acceptance Testing, Audit & Certification is to ensure that the system meets

requirements, standards, and specifications as set out in this RFP and as needed to achieve the desired outcomes. The basic approach of this will be ensuring that the following are associated with clear and quantifiable metrics for accountability:

i. Application Functional Testing
ii. Security Testing including data security
iii. Performance Testing
iv. Vulnerability assessment including Network Architecture and Deployment review
v. Penetration Testing
vi. SLA Reporting System, Audit trails configuration and monitoring process

The select bidder will be responsible for engaging STQC and Cert-in empaneled agencies to conduct the assessment/review for the system of the entire application. Department/CHiPS shall have the right to audit and inspect all the procedures and systems relating to the provisioning of the services.

F. Resource Deployment

i. SI shall provision adequate number of personnel, each responsible for a specific role within the project in each of the phases. SI must provide clear definition of the role and responsibility of each key personnel.
ii. SI shall carry out own due diligence so as to deploy additional resources (onsite/offshore) to manage the timeline & Service levels.
iii. SI shall have a defined hierarchy and reporting structure for various teams that shall be part of the project.
iv. The names of the key personnel to be deployed on the project have to be proposed by the successful SI at the time of signing of the contract. Department/CHiPS reserves the right to accept / reject any of the profiles proposed by the SI and ask for a replacement profile, at any time during the execution of the contract.
v. The proposed Key Personnel can be replaced only under exceptional circumstances. The SI shall put forward the profiles of personnel being proposed as replacements, which will be either equivalent or better than the ones being replaced. However, whether these profiles are better or equivalent to the ones being replaced will be decided by Department/CHiPS. Department/CHiPS will have the right to accept or reject these substitute profiles.
vi. The SI has to ensure at least four weeks of overlap period in such replacements. Department/CHiPS will not be responsible for any knowledge transition to the replacement resource and any impact/escalation of cost because of replacement has to be incurred by the SI only.

vii. The SI to evaluate team size at the time of project planning. After evaluation the SI will inform Department/CHiPS and get an approval as to the actual size/profile of personnel/manpower planned, qualification and experience for design, development and implementation of application. For O&M team it is mentioned further in the RFP

G. Deployment of Integrated Command Control Centre

There will be an Integrated Command Control Centre and the selected bidder shall be responsible for Site setup, design, procurement and establishment of IT infrastructure for the Integrated Command Control Centre (ICCC) at facility provided by Department. The selected bidder will be responsible for providing control center infrastructure (Infrastructure ownership shall be of Department).

The Centralized Command Centre cum Help Desk will be setup in the project location and will be operational 24*7(or as per requirement). Minimum requirements for setting up ICCC should include Video wall with controller, Video Management software, Workstations / minimum Computers (2 Nos.), Printer/Scanner, Access Control System, EPBX/ IVR, UPS/Generator and related accessories including network equipment.

The vision of integrated Command Control Centre (ICCC) is to have an integrated view and monitor their operations remotely. ICCC would serve as the focal point to serve as a decision support engine for administrators in day to day operations as well as during exigency situations.

SI to integrate and automate Standard Operating Procedures (SOPs) with the proposed solution. All SOPs should be maintained in knowledge repository and need to be updated by system integrator as per changing scenario or amendment in processes from time to time. Establishment of a Helpdesk with EPBX/IVR to provide technical, training and Informational support to all the users through Toll free number, email etc. Proper SLAs will be defined to so that tickets are resolved in timely and efficient manner

Key- Use cases:

i. **Multiple Application Integrations at ICCC platform:** Integrated Command Control Centre (ICCC) consist software platform that can integrate either existing or future departmental applications and push, pull pertinent data from these systems and provide it on ICCC's dashboard for analysis, correlations and drawing actionable intelligence.

ii. **Customizable Centralized information Dashboard at ICCC:** Integrated Command Control Centre (ICCC) consist software platform to provide user specific, personized centralized information dashboard for their respective needs and show various performance indicators on an easy to navigate configurable & customizable GUI. The dashboard can

show, push and pull key parameters and pertinent information on demand from all the other integrated IT applications, field devices and other applications.

iii. **Standard Operating Procedure (SOP) Management using ICCC:** ICCC software provides ability to write, configurable and customizable standard operating procedures through graphical, easy to use tooling interface. Standard Operating Procedures shall be defined by SI in consultation with Department to finalize approved sets of actions considered to be the best practices for responding to a situation or carrying out an operation

iv. **Collaboration and communication using ICCC:** The ICCC provides various tools for users to communicate & collaborate in real time. The ICCC provides ability to converse virtually through the exchange of text, audio, and/or video-based information in real time with one or more individuals within the emergency management community. The ICCC provides single web-based dashboard to send notifications to target audiences using multiple communication methods including voice-based notification on PSTN/Cellular, SMS & e-mail.

H. OPERATIONS AND MAINTENANCE

➢ Applications Support and Maintenance

Application support includes, but not limited to, monitoring, troubleshooting and addressing the functionality/enhancements, availability and performance issues. SI shall keep the application software in good working order and perform upgrades to applications as requested by the Department/CHiPS team. SI shall be responsible for managing applications through their entire lifecycle, including the design, testing, and improvement of applications that are part of the IT Services. The SI's responsibilities with respect to Department's Application Management function are described as under:

i. Helpdesk support service will serve as a single point of contact for all ICT related incidents and service requests. The service will provide a Single Point of Contact (SPOC).
ii. The service will be provided in both English/Hindi/local language.
iii. Onboarding of all empaneled manufactures of VLT devices for complete contract period and ensuring communication protocols are integrated with system
iv. For all the services of Department within the scope of this RFP, The Selected Bidder shall provide the following integrated customer support and help.
v. Establish 24x7 support facilities for reporting issues/ problems with the software, hardware and other infrastructure.
vi. The Selected Bidder shall provide functional support on the application components to the end users.
vii. The Selected Bidder shall also provide system administration, maintenance and management services, and IT security administration services.

viii. The Software Maintenance and Support Services shall be provided for all software procured and implemented by the Selected Bidder. The Selected Bidder shall render both on-site and offsite maintenance and support services to all the designated locations. The Maintenance and Support Services will cover, all product upgrades, modifications, and enhancements.

ix. Tuning of application, databases, third party software 's and any other components provided as part of the solution to optimize the performance.

x. Perform changes, bug fixes, error resolutions, tickets resolution and enhancements that are incidental to proper and complete working of the application.

xi. Any changes to the application code that may be required because of patches to licensed software being used (if any)

xii. Update and maintain all project documents

xiii. The Selected Bidder shall formulate a distribution plan prior to rollout and distribute/install the configured and tested software as per the plan.

xiv. The Application Functional Support Services shall be provided for all software procured and implemented by the Selected Bidder. The Selected Bidder shall render both on-site maintenance and support services to Department/ CHiPS from the development centre in the Department/ CHiPS.

xv. The Selected Bidder shall incorporate technological changes, and provide enhancements as per the requests made by Department/ CHiPS. The Selected Bidder shall perform minor changes, bug fixes, error resolutions and minor enhancements that are incidental to proper and complete working on the application.

xvi. Routine functional changes that include user and access management, creating new report formats, and configuration of reports.

xvii. The Selected Bidder shall provide user support in case of technical difficulties in the use of the software, answering procedural questions, providing recovery and backup information, and any other requirement that may be incidental/ancillary to the complete usage of the application.

xviii. The Selected Bidder shall maintain access controls to protect and limit access to the authorized users.

xix. User ID and group management services.

xx. Maintain access controls to protect and limit access to the authorized end users of the application

xxi. Release Management for the interim releases of the application

xxii. Facilitating ongoing integration with other external entities. SI should also make available to such agencies, all the data and industry-standard interfaces and integration touch points for integration with application.

xxiii. Manage all changes on portal including uploading of content as and when required by Department.

xxiv. Routine functional changes that include user and access management, generating reports and configuration of reports. Some of the indicative changes include:

xxv. Introduction of new forms, new workflows or modification in existing workflow for existing services

xxvi. Addition or modification of validations informs

xxvii. Modifications (addition of new fields, removal of fields, modification of levels of approval, processing logic, approval logic, addition of attachment requirement etc.) to forms

xxviii. Configuration changes to improve the performance & efficiency of the system

xxix. Addition of new roles for accessing existing services

xxx. The services shall include administrative support for user registration, creating and maintaining user profiles, granting user access and authorization, providing ongoing user password support, announcing and providing networking services for users and providing administrative support for print, file, directory and e-mail.

xxxi. The Selected Bidder will ensure proper audit law policy, user awareness policy, password policy, vulnerability scan, patch management policy, information security policy, antivirus policy, physical security policy, classification policy, backup policy, media handling policy, access control policy and other security policies and measures inconformity with provisions of IT act 2000 for successful completion of the project in consultation with Competent Authority

- **Warranty and AMC support requirements for client-side infrastructure:**

SI shall provide ICCC and Helpdesk support -

i. Where such a support for any component(s) is not available or ends during the contract period, the component(s) shall be replaced with latest available component(s) in the market with similar or better specifications at least 3 months before the end of support period. No components supplied should be end of life.

ii. No component supplied should have been introduced in the market more than 2 years back as on date of the replacement.

iii. SI shall submit the details to Department and Department's decision on the acceptability of the replacement will be binding on the SI.

iv. For the all the client-side infrastructure procured by the SI, the SI shall be responsible for:

- Configuration, installation and complete commissioning of the infrastructure and network
- Ensuring that the supplied equipment supports the intended system hardware, operating system and other software. Any problems encountered in the installation of the hardware/software because of hardware/software incompatibility shall be the responsibility of the SI.

v. Provide OEM warranty and comprehensive AMC support (after the expiry of warranty) for the entire contract period. The comprehensive AMC should include provision and replacement of all spares and parts, free of cost during the entire period.

vi. Warranty will be applicable from date of Installation to till selected bidder contract period. The Selected Bidder shall obtain product warranty and on-site free service warranty on all licensed software, computer hardware, peripherals and other equipment's supplied by selected bidder.

vii. The Selected Bidder shall provide the comprehensive manufacturer's warranty in respect of proper design, quality and workmanship of all hardware, equipment, accessories etc. covered by the RFP. The Selected Bidder must warrant all hardware, equipment, accessories, spare parts, software, etc. procured and implemented as per this RFP against any manufacturing defects during the warranty period.

viii. The Selected Bidder shall provide the performance warranty in respect of performance of the installed hardware and software to meet the performance requirements and service levels in the RFP.

ix. The Selected Bidder is responsible for sizing and procuring the necessary hardware and software licenses if any as per the performance requirements provided in the RFP. During the warranty period, the Selected Bidder shall replace or augment or procure higher-level new equipment or additional licenses at no additional cost in case the procured hardware or software is not adequate to meet the service levels.

x. Mean Time Between Failures (MTBF) - If during the contract period, any equipment has a hardware failure on four or more occasions in a period of less than three months or six times in a period of less than twelve months, it shall be replaced by equivalent or higher level new equipment by the Selected Bidder at no cost. However, if the new equipment supplied is priced lower than the price at which the original item was supplied, the differential cost would be refunded to the Department/ CHiPS. For any delay in making available the replacement and repaired equipment's for inspection, delivery of equipment's or for commissioning of the systems or for acceptance tests / checks on per site basis, Department/ CHiPS reserves the right to charge a penalty.

xi. During the warranty period the Selected Bidder shall maintain the systems and repair / replace at the installed site, at no charge to the Department, all defective components that are brought to the Selected Bidder notice.

xii. The Selected Bidder shall as far as possible repair the equipment at site. Unserviceable equipment will be property of Department and will not be returned to the Selected Bidder.

xiii. The warranty would not become void, if Department/ CHiPS buys, any other supplemental hardware from a third party and installs it within these machines under intimation to the Selected Bidder. However, the warranty will not apply to such supplemental hardware items installed.

xiv. The Selected Bidder shall carry out Preventive Maintenance (PM), including cleaning of interior and exterior, of all hardware and testing for virus, if any, and would maintain proper records at each site for such PM. Failure to carry out such PM will be a breach of warranty and the warranty period will be extended by the period of delay in PM.

xv. The Selected Bidder shall monitor warranties to check adherence to preventive and repair maintenance terms and conditions.

xvi. The Selected Bidder shall ensure that the warranty complies with the agreed Technical Standards, Security Requirements, Operating Procedures, and Recovery Procedures.

xvii. The Selected Bidder shall develop and maintain an inventory database to include the registered hardware warranties.

xviii. The Selected Bidder shall provide from time to time the Updates/Upgrades/New releases/New versions of the software and operating systems as required. The Selected Bidder would provide free upgrades, updates & patches of the software and tools Department/ CHiPS as and when released by the OEM.

xix. The Selected Bidder shall provide patches to the licensed software including the software, operating system, databases and other applications.

xx. Software License Management. The Selected Bidder shall provide for software license management and control. The Selected Bidder shall maintain data regarding entitlement for software upgrades, enhancements, refreshes, replacements, and maintenance.

- **Preventive Maintenance:**

i. The selected bidder should define and indicate the Preventive maintenance schedule and procedure. Any special tools/ instruments/ equipment's required for carrying out the preventive and break down maintenance of the system offered should be clearly indicated and offered to Department/ CHiPS by the selected bidder at no extra cost.

ii. This activity shall be carried out at least once in every quarter in addition to the normal maintenance required.

- **Corrective Maintenance Services:**

Troubleshooting of hardware problems for all the supplied equipment's and rectification of the same. Troubleshooting of OS and databases, etc. and provides solutions for the same. Documentation of problems, isolation, cause and rectification procedures for building a knowledge base for the known problems.

- **Configuration Management Services:**

i. The Selected Bidder shall maintain a record of hardware as well as software and all other items supplied in this tender including the details of policies implemented on the servers, network, databases, web servers, etc.

ii. The Selected Bidder shall keep soft copies of the configurations of each of the devices mentioned above.

iii. The Selected Bidder shall ensure define change management procedures to ensure that no unwarranted changes are carried out on the equipment's. All the changes carried out by the Selected Bidder must be formally approved by the Department and recorded.

iv. The Selected Bidder shall do proper version management of these configurations as the configurations may be changed from time to time. This is required to ascertain changes made to these configurations at different stages as well as having functional configurations.

v. These configurations shall not be accessible in general except to Department and must be kept confidential under the authority of project manager or a lead administrator/manager.

- **The Selected Bidder Management Services:**

i. The Selected Bidder shall coordinate with external SIs and OEM team of all the project locations for upkeep of equipment deployed to meet the SLA and shall liaison with various SIs/OEMS for related works, equipment & Services.

ii. The Selected Bidder would maintain a database of the various SIs and service providers, including SIs for hardware under warranty, service providers, etc. with details like contact person, telephone numbers, escalation matrix, response time and resolution time commitments etc.

iii. The Selected Bidder shall, if required escalate and log calls with SIs/OEM and service providers and coordinate with them to get the problems resolved.

- **Backup Management Services:**

i. The selected bidder shall provide backup management services to conduct regular backups and restoration as require/Guidelines as per Department's requirement, of critical data and systems to achieve the required service level.

ii. The activities shall include:

- Backup of application, database and uploaded documents as per best industry standards.
- Monitoring and enhancement of the performance of scheduled backups, schedule regular testing of backups and ensure adherence to related retention policies.
- Ensuring prompt execution of on-demand backups of volumes, application, documents and database whenever required by Department/ CHiPS or in case of upgrades and configuration changes to the system.
- Real-time monitoring, log maintenance and reporting of backup status on a regular basis. Prompt problem resolution in case of failures in the backup processes.

- **Asset Management Services**

i. The Selected Bidder shall be required to create a database of all IT assets like hardware, software, peripherals, etc., by recording information like configuration details, serial numbers, licensing agreements, warranty, and AMC details, etc.

ii. Record installation and removal of any equipment from the network and Department/ CHiPS even if it is temporary.

iii. Create Software inventory with information such as Licenses, Version Numbers and Registration Details.

iv. Register all software procured by the Department in this bid document with respective OEMs.

v. Perform software license management and notify the Department on licensing contract renewal. Renewal cost to be borne by the selected bidder.

6 DETAILED SCOPE OF WORK

6.1 Vehicle Tracking System

Vehicle equipped with Vehicle Tracking Device (VTD) shall be track and trace through the centralized platform throughout the route after Trip generation from the system. Permit Condition entries with route and time table will be shared with SI and SI team need to maintain Trip details and entry in the system. Real time location of the vehicle shall be positioned using VTD Information. The solution shall be scalable to integrate multiple OEM/Makes & Models of the VTDs.

Vehicle Tracking System should be scalable, compatible & allow for any types of standard AIS 140 device to integrate multiple OEM/Makes & Models of the VTDs empaneled with Chhattisgarh Government Department for the project. CGTD has currently empaneled 19 AIS 140 compliant VLT manufactures, which is subject to change as per the CGTD requirements. The software shall provide controls to integrate the new vehicle tracking device model by developing the interface for integrating the protocol of new device vendor.

System should allow authorized users to map the device with vehicle number online. After mapping and device activation, vehicle shall be on demand available for visualization. System integrator shall be responsible for VLT configuration for proper functioning of system, if required.

i. **Trip Creation:**

- VTS shall create trip immediately after generation of schedules. System shall identify the on-time trip creation or delayed trip creation through creation flag.

- VTS system shall check the geo-coordinates of vehicle and mark the vehicle in green flag, if vehicle is found in the geo-fence of trip source. Else it is marked as red flag.

ii. **Ongoing Trip:** VLT device shall continuously sent the location data to central server. Based on the live location data, system shall display the vehicle movement on the map. In case, non-availability of network in vehicle, VLT / GPS device shall store the vehicle coordinates and shall transmit the history packets after availability of network. If a vehicle location is not updated for a certain time period the vehicle will be marked in a different color and an alert shall be genertaed

iii. **Trip End:** System shall be configurable to end the trip based on one or more parameters like entering or exiting the geofence area of destination etc.

iv. **Vehicle breakdown**: In case of vehicle breakdown, transporter can apply for change in vehicle status. Change in vehicle number may needs approval from competent authority. System shall show the trip against breakdown vehicle in different color code.

Major features are as stated below. The detailed set of requirements and their functionality will be outlined in Requirement Gathering & Analysis phase by the Department during project execution -

a) General Requirement

i. The proposed route of the vehicle, as per the location details mentioned and the actual route followed by the vehicle shall be monitored and tracked using GPS navigation technology

ii. The proposed application platform shall be capable to scale up to 2,00,000 or more devices. Necessary software architecture shall be submitted as part of solution.

iii. System should be 99% false alarm proof.

iv. System will send alert signals to PHQ and District control rooms in case of emergency when panic button is pressed.

v. The solution shall be scalable to integrate different OEM / makes of the devices (AIS140 approved). Solution to be integrated with IRNSS compatible devices.

vi. System should be able to integrate and merge the data received from the existing system, ICCC and Mobile Apps like Nirbhaya App.

vii. The software shall enable control center management staff in quick decision-making capability, which shall be achieved by providing graphical tools for visualization.

viii. System shall have capability to create client specific and general business rules like unauthorized stoppage, deviation from routes, speed etc.

ix. The software shall enable authority to drill and analyze information and online data in a multi-dimensional manner.

x. Comprehensive analysis and reporting capabilities are expected to be part of the application delivery which matches the world standard capabilities of systems.

xi. The software should have capability to have a multi-screen-based tracking system, so as to enable tracking staff to quickly analyze activities and have a better insight into operational data of all activities within the system

xii. System shall have capability to manage and monitor the access to the system and its various modules

xiii. System shall have Automated event logging with time stamps (e.g. system logs, audit trails, error logging etc.).

xiv. System shall have Facility for users to manage database masters covering various entities such as states, cities, vehicle owners, users, stakeholders etc.

xv. System shall have Master Data Management of Route, vehicle Stoppages, POI Management etc.

xvi. Creation of Geo Fences and landmarks should be very simple, easy and editable

xvii. Installation, Registration, Activation and service process for VLT Device - The monitoring centre shall create the software will all facilities as mentioned in MORTH guidelines/AIS 140 and enable all requirements mentioned like SIM validity, Activation SMS, Health check, VAHAN integration for activation status update providing m2m/telecom service provider integration for SIM activation/validity/KYC support for the period as per MORTH guidelines.

xviii. Web interface to VLT vendors for tagging - Tagging is the process of installing the VLT device in a vehicle and association it with the software system. The monitoring centre shall follow the whole process as set-out in the MORTH guidelines and AIS 140. The initial tagging of the vehicle will be done by the vehicle manufacturer their registered agencies on VAHAN. The software will provide necessary interface to the above users for this operation in integration with VAHAN/state vehicle registration system. The VLT device after tagging will be activated as per process set out in AIS-140 and as per MORTH guidelines issued from time to time, on the backend system as part of monitoring centre. The tagged vehicle will be verified and approved by the concerned RTO at the time of fitness check or as decided by the department in VAHAN/state vehicles registration platform.

b) Geotagging & Geofencing

System integrator shall provide facility to capture / update the geo-coordinates / geofence of various location at time of location creation in the system which will be required for monitoring Permit Conditions.

System integrator shall be responsible for capturing the geo-location (geo tagging) of all, zones such as school zone, hospital zone, no parking zones etc.

SI shall be responsible for configuration of optimal routes (multiple). The configuration shall be dynamic in nature and will be changed based on the inputs from fields.

System shall provide at least following functionalities but not limited to:

i. The system shall provide real-time visibility of Vehicle density at Parking areas etc
ii. The Vehicle Tracking application will provide maps to support the functionality, comprised of a selection of individually selectable theme layers.
iii. The mapping platform should allow different mapping profiles. Different layers and details should be visible for different access level. For Example: General Users will be able to view consumer map. Internal users will be able to view other layers such as stations, streets names, water features, parks, major buildings etc.
iv. The map engine should support tiling catching to provide faster response. The layers and data details like forest, river, feature details should be available and selectable.
v. The VTS application software will allow users to view the map, including a selectable combination of the source map layers and different layers, at various user-defined zoom levels.
vi. System should be allowing geo-tagging of locations and display as a selectable layer.

c) Provision of Maps:

SI shall be responsible to provide map (along with all required licenses) with map data as selectable layers with their names superimposed (on selection) on a map of minimum 1:25000 scale (Adoption of high-resolution satellite image if required) or as per Departments requirement. SI shall deploy the higher resolution maps for smooth operations, if required. SI shall provide minimum following map layers

i. Geographical Boundaries

- State
- Region
- District
- Block / Tahsil
- City

ii. May have to update the boundaries if new administrative entities are created by the government;
iii. Roads / streets with their names on mouse over: Roads including National Highways, State Highways, major District roads, village roads and other roads need to be displayed on the map.
iv. Additional layers on prominent landmarks like schools, petrol pumps, hospitals, banks, ATMs, Stations, water features, parks and major buildings etc. should also be displayed on the map.
v. Different map-based tools tike Zoom and Pan will be integrated in the monitoring centre screens.

d) Live Vehicle/Real Time Tracking/On demand

i. System shall have Information like Device Id, Trip details, Source, Destination, Vehicle name, Model, Speed, Maximum Speed, Average Speed, Trip Time, Idle Time, Distance, Odometer and the time of Last Update On, Last Update etc.
ii. Search by Starting point, Destination, Vehicle Registration number, Types of Vehicles, Class of vehicles, Transporters etc
iii. It shall show the current position of the selected Vehicle on demand.
iv. The real-time tracking will enable users to track location of vehicles on the map, get status information about vehicle, and for a play back option on the map to view the path travelled by a vehicle earlier as per the requirements listed in AIS-140.
v. Track & Trip View: The tracking screen provides users with options to track online the location of vehicles on the map, display status view information about vehicle, and display Trip View information on the route travelled by a vehicle earlier on the map. The online option displays the current location of the vehicle and trip View displays the route taken by the vehicle earlier. Both online and Trip View can be viewed as Map View.
vi. Multi filter options: User will be given options to track vehicles by their category, speed, location, vehicle number, etc.
vii. This shall also show alerts like status of ignition, speed, Battery, Panic and Towing.
viii. Graphical Representation of the vehicle in distance Vs time chart and Speed Vs Time chart shall show in this module.
ix. The application should have a feature to search/ show a group of vehicles on the map and also should allow searching/ showing of geo-fences, landmarks, addresses on the map, allowing it to be searched from a search bar on the map window
x. The vehicle shall be tracked based on the route configured in the system for the origin destination pair.
xi. It should be able to show the tracking of vehicle while it is moving (movement) from one location to another.
xii. Maps shall have GIS Maps extension to allow plotting different mark-ups and indications on a map view using vehicle and spatial map layers and allow the user to zoom and pan freely through the map and be able to present heat map visualizations on GIS map data.
xiii. Whenever a vehicle crosses or enters a specified geo-fence e.g. a vehicle has entered / exited.
xiv. Route deviation alerts- if vehicle deviate from the route assigned to the vehicle.
xv. System should have the capability to raise alerts for vehicle movement.
xvi. Whenever the vehicle moves out of his designated boundaries, system should have capability to generate the alert while the vehicle will always be visible on the ICCC and geolocation specific display and alerts as well.
xvii. Emergency/incident Management shall be handled through the system. In general, the strategies for emergency/incident management shall be developed at a broader organizational level and shall involve many stakeholders.

e) Alerts and Messages

The system shall generate various alerts like over – speeding, restricted-area violation, lane changing, rash driving, route violation (if route details are available) and other behavioral analytics etc. as per the AIS – 140 standards. Based actions, the various alerts to be generated are

i. Emergency Alerts: This alert is raised when a passenger or crew in a vehicle presses the emergency button in need of immediate aid or assistance. This alert will be routed to the emergency response system directly as well to the monitoring centre. Alerts will be highlighted in the Monitoring Centre. This is the highest priority alert.

ii. Speed violation alerts: identifies the vehicle moving at a speed greater than the allowed speed limit and to passes the vehicle information to the nearest enforcement unit.

iii. Geo-fence alerts: The application provides facility to geo-fence an area on the map. Geo-fence can be either done based on an area or based on a specific point of interest. The route travelled by the vehicle can also be geo-fenced to receive alerts on any route violations from the actual route.

- Geo-fence Pol (Point)
- Geo-Fence Place (Area)
- Geo-Fence Route
- Geo-Fence Alerts can be configured to track vehicles entering the geo-fence area, going out of the geo-fence area or for both the instances.
- VLT device tampering alerts: VLT device will send information to the server if its power cable gets disconnected or if it gets tampered. Application will record an alert after verifying the information.

f) Dashboard Module:

i. The software should have capability give a quick and easy way to view to overall Fleet performance live(if required).

ii. Automatically update the parameters and filters of the displayed data when the user drills down through visual elements and update the other visual elements accordingly. Also, enable selection of filters through the visual elements and propagate selection to all visual elements in the dashboard.

iii. To provide the facility to device vendors for maintaining and managing the device inventory on vehicles and provide for complete history of device management.

iv. Provide capability to view a single vehicle or multiple vehicles on a map in real time. The multiple vehicles may be viewed based on category, type etc

v. The Dashboard forms a part of the UI which shows all key performances and tracking indicators enables Control Centre Staff and Management Team to take proactive decisions to manage operations in a highly efficient manner. The information can be viewed as a Table View or Map view option. Dashboard shall provide information about

all running and idle vehicles with their current Status, Route wise, Area wise and Land mark wise vehicle filtration etc.

vi. The route replay module should have capable to replay the total trip details of particular vehicles on the Map for a particular day and time period as required.

vii. The software shall provide controls to view the entire sequence of reported locations from the beginning of the time period or to step through the sequence incrementally forwards or backwards.

viii. The system shall allow replay for a single vehicle, selected set of vehicles on the selected map view for selected time period.

ix. The system shall allow selection of any time period for the historical data.

x. Application shall display end-to-end location of the Vehicle travelled on the Route Replay.

xi. The route replay should also show the instances of any violations of the vehicle along the concerned route.

g) Report Module:

i. The Application shall generate various reporting options for the organizations like Day wise, Time wise, vehicle History, Various vehicle Alerts etc. for all vehicles available for future strategic decisions. Also, the fleet summary report shall be generated for a complete analysis of the fleet.

ii. Reports on Permit Condition and any other reports as required by Transport Department.

iii. All reports shall be generated with configurable time parameters, including as a minimum annual, monthly, weekly, daily, hourly and with user defined start-end date and time ranges

iv. Reporting software shall include the ability to generate graphs and charts based on criteria and format defined by the user

v. The system shall have the ability to allow the user to generate reports based on predefined report templates or on adhoc basis

vi. The system shall have the ability to provide a GUI with drag-and-drop functionality for creating custom formatted reports that include visual elements, objects, and formulas.

vii. Reports should have the ability to print.

viii. System shall allow users to capture and export the current display through electronic reports and in different printer-friendly formats, including, at a minimum, MS-Excel, PDF, and Web formats.

ix. System shall have the ability to display dashboards and reports using different visual elements including charts, maps, calendars, gauges, images, tables, visual and textual lists, and alerts as follows

x. It should allow the user to drill down and search through the large amounts of data easily and quickly by time periods and other search criteria defined by the user. Also, provide user guidance for searching & filtering through data

xi. Reports will be also customized as well as a dashboard will be designed as per Departments's requirements like device installation report, device uptime report, number and type of alerts, route report, distance report, speed violation report, fleet summary report and alert reports.

xii. Black Spot Report - As per the Ministry's Protocol for identification of black spots, an accident black spot is a road corridor of about 500 m long on which either five road accidents, involving fatalities and grievous injuries, had been reported during the last year.

xiii. Reports related to Vehicle Violations, Trip curtailment, violation of contract carriage or stage carriage permit etc as required by Department in the format required by department

xiv. Any other report as and when required by department.

h) Fleet / Vehicle Information for transporters (Transporter Information System both Web and Mobile based):

Transporter shall have the provision for viewing following information but not limited to:

i. Vehicles Details
   - Total registered vehicles
   - Vehicles enabled with VLT/GPS
   - Vehicles with active/faulty VLT/GPS
   - Vehicles whether on trip, running and idle etc.
   - Vehicles Usage report, insurance expiry, permit expiry etc.

ii. Vehicle Route Map

iii. Trip details for the respective vehicles.

iv. Live and route replay of vehicles for the assigned trips

v. Live location tracking of unassigned trip vehicles

vi. Details of vehicle breakdown / incident reported for the vehicle

vii. System generated alerts and notifications

viii. Real-time Dashboard and MIS Reports applicable to transporters

ix. Real time Alerts in case of violations by any vehicle

x. Reminders for dues etc

xi. Any other functionality as required

i. Integration with VAHAN, ERSS and Legacy Systems

VAHAN software of Transport department is used for management of the services provided by Department. The system is integrated with VAHAN and can be integrated with other legacy systems running in the state for getting vehicle registration details. The states/UTs will ensure that the Monitoring Centre are mandatorily linked to states/UTs' ERSS/other emergency response systems.

j. Data Archival

The monitoring centre shall provision online storage for complete data for three months, online storage of alerts data for two years and archive storage of all data for a minimum period of two years. The emergency tagged data, which might be required for evidence purpose, shall not be deleted from the system. The data identified as old based on an archival policy can be moved to and stored in a separate storage device for long-term retention as per state/UT policy. The monitoring centre should provision the storage for the state/UT at the Monitoring Centre or any other place identified by state/UT for retention by the state.

k. Access to stakeholder of the system

The monitoring centre shall provide access to all the stakeholders as per AIS-140 and MORTH guidelines or as decided by the state/UT through a role – based access mechanism. The SI shall Design and Develop the hybrid mobile application to achieve project objectives for all stakeholders

l. Health Monitoring of VLT device and Emergency buttons

To ensure that the VLT device and Panic buttons serve in need are in proper working condition, the health monitoring of both VLT device and Emergency buttons are performed periodically. The system shall be so designed that the emergency button cannot be tampered with in any way, as any attempt to do so will alert the monitoring centre regarding the activity.

m. Web Interface to Vehicle Owners

Interface shall be provided to the vehicle owners, using which they can track their vehicles.

n. Data Exchange/Sharing with External System

The monitoring centre will need to share/exchange data in real time with external system such as interstate message exchange platform etc. The monitoring centre will provide AP is for sharing/exchange of data with external systems as defined in AIS – 140 or prescribed by MORTH from time to time.

o. Data Sharing with MORTH

APIs will be provided for sharing of data with MORTH as defined in AIS – 140 or notified by MORTH from time to time, for the purpose of monitoring of compliance of implementation of VLTD.

p. Operational Mechanism in case of Distress Call/Alert

Department responsible for proactive response in case of receiving distress alert to Command & Control Center. SOP to be defined for the same and needs to be incorporated in the system

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- Once a distress call is activated by the passenger either by pressing the panic button or through the hard press of the Mobile, the same is escalated to the Police Command and Control center and the location of the vehicle is furnished to the Police.

- The Police C&C center now alerts the nearest Patrol Vehicle based on its location and dispatches it to the location captured from the device and the system.

- Based on the gravity of the situation, the Police C&C Center may take an action to seize the Ignition system of the vehicle and arrest the movement of the vehicle.

Any other functionality/feature as required by the Department

q. Passenger Information System (PIS) – Web and Mobile

- Public App for Android and iOS Users to track the services.
- Public app to the passengers should be able to get the location of the Passenger using Mobile GPS and list the nearby Bus stops with upcoming buses to those bus stops.
- The user should be able to search for buses that are being currently operated between two bus stations.
- The Passenger should be able to track a Bus by vehicle registration number, Type of Vehicles, Class of vehicles, Transporters, Favorites saved, etc if required.
- The Passenger should be able to see the live bus location on the Map and should be able to track the bus as it moves.
- When searching for buses between two bus stops, the user should be able to filter the results based on the service types.
- When showing the list of buses, running between two bus stops, by default it should show the upcoming buses and if required the user should be able to see the entire scheduled list of buses.
- When showing the bus/service schedule, the ETA should be displayed along with the scheduled time for all the upcoming bus stops in that service. In addition to the service schedule with ETA, the details like Driver name, Route, Source and destination stops information should be displayed to the Passenger.
- The user should be able to add his favorite routes, trips, and service numbers for quick access.
- The user should be able to track a service with a service number.
- The user should be able to track a service with Route number.
- The user should be able to provide the feedback directly from the app on various pre-defined categories.

- The user should be able to send SOS signals to the Emergency Center/ Dial 112/Transport Command Centre when there is an accident, breakdown or when women needs some help on real time basis.
- The user should be able to set an alarm to alert the user on reaching his destination while travelling in the bus linking with ETA just like in Indian Railways.
- The user should be able to send an emergency message with location data to any two user's choice mobiles numbers which are pre-saved in mobile app.
- Provision to send banners to the public app about discounts and other important information should be provided.
- There should be an option to show messages at the service level, when there are deviations to the route.
- Any other functionality as required by the department

r. Departmental Information System (DIS) including Permit Condition

- All the Department officials/user should be able to access the portal /App (both Android and iOS) using their logins and role assigned to them via access control
- There should be a way to ask for OTPs for the authentication
- All Permit Conditions to be entered and maintained by SI as provided by the department and Track reports should be available
- The staff should be able to create new/edit the master data for
    - Service class
    - Routes
    - Services
    - Buses/ Trucks
    - Crew details
    - Service schedule
    - Depots
    - Regions
    - Zones when applicable
    - Accident Types
    - Road types
    - Bus stops
- The MIS reports need to be displayed with required filters
    - Departure Punctuality
    - Arrival Punctuality
    - Un authorized stoppage report
    - Tracking status report
    - VMU Status report
    - Route deviation report
    - Cancellation report

    - Service Schedule report
    - Headway chart displaying all the services between two bus stops
    - Waybill and vehicle assignment report
    - Report on wrong assignments
    - Feedback report
    - Emergency report from SOS
- The admin users should be able to edit the schedules whenever required based on the depot.
- The admin staff should be able to activate or deactivate a service at anytime.
- Reports related to Vehicle Violations, Trip curtailment, violation of contract carriage or stage carriage permit etc as required by Department in the format required by department
- The admin users should be able to edit the schedules whenever required based on the depot.
- The admin staff should be able to activate or deactivate a service at anytime.
- The staff should be able to track a service using service number, service code and trip id.
- Vehicle status like online, repair, accident, cut off, offline, battery removed, in company etc with date should be shown dynamically State/District/Block/Depot wise
- The admin app should provide options to create special services that run only for a specific period of time.
- Status filter for selecting State/District/Block/Depot wise /Vehicle-class etc should be provided.
- Users should be able track any vehicle live on map using the vehicle number, Transporters fleet etc.
- Users should be able to record the accidents information directly from the app with upload options to store pictures of the buses and other vehicles in the app.
- The live tracking application should be displayed the assets on a map.
- By clicking on the vehicles on the map, the trip related information along with the driver/Transporter phone number need to be displayed.
- In playback as well as in live, schedule route and actual route to be displayed in different color
- Track by route (From - To) provision to be given.
- Search by vehicle number provision to be given.
- Need to provide speed of the bus in specific interval of time.
- Track by service number should be provided based on the selected Date & Time.
- Track by Service code should be provided based on the selected Date & Time.
- Status filters for selecting On-time/Delayed/Early vehicles/Services
- Scrap vehicle details should be shown with effected date.
- Data analytics of the key parameters like resource performance (Driver/Transporters grouped by fleet), Ticket Analysis (revenue and numbers based, Bus Type Based, Service & Route Based, fleet based etc), Operational Analytics (Peak Hour Trends, Cancellation Report), Comparative Analysis (Inter Depot Comparisons, Inter Route Comparison

Reports, Inter City corridor Reports, Shift wise Service and Trip Analysis) in charts and other formats should be shown at micro level of each trip.

- These are only sample reports. The original requirement for reports might be more and will change over time. The new reports are to be added from time to time as per requirement within the scope of the project without any extra cost.
- The dashboards need to be with depot level filters to display the summary of the entire fleet.
- Any other functionality as required by the department

6.2 Integrated Command Control Centre

A. Overall Scope of Work

i. It is proposed to have an Integrated Command Control Centre for effective monitoring of public vehicle movement across the state.

ii. The necessary civil infrastructure, interior, furniture will be taken care by the bidder.

iii. The SI will have to plan for the establishment of the control room with all required Civil work, Interior, electrical, mechanical, Furniture (Table, Chair, Cupboard, white board etc.), Uninterrupted Power provisioning, IT Infrastructure components including monitoring, Network & Security components and any other required accessories / equipment. Entire site will be maintained by the SI throughout the contract period.

iv. SI shall deploy the adequate number of items as per the proper functioning of ICCC site. This entire set-up shall part of the central control room established by the SI at Department's premises. Electricity charges shall be paid by the Department.

v. The SI shall ensure functioning of all deployed components smoothly & collaboratively to run 24*7 basis. ICCC would serve as the focal point to serve as a decision support engine for administrators in day to day operations as well as during exigency situations.

B. ICCC Requirement- IT Components

- **Centralized Monitoring:** Centralized monitoring will be done at the control room; a Video Wall shall be installed in the control room for effective monitoring. The video wall will be a collection of multiple screens showing site videos and GIS monitors having alerts and facilities displayed at specific time intervals. The wall will be connected through Application / VTS Software It should be of professional grade, suitable for 24 X 7 X 365 operation and not the temporary arrangement of various screens joined through software systems.
- **Control Platform:** The ICCC software should allow the users to view live or recorded video from resizable and movable windows (matrix) and perform video controls for video systems from workstations. Shall allow taking still image from live or recoded video, play, fast-forwarding, rewinding, pausing, exporting (for a specified time) and specifying time to play recorded video. The ICCC software shall

have the capability to view video in matrix and multiple video formats. The ICCC software should further enable operator to specify video windows to be displayed in matrix and have matrix settings to be saved per user. The software shall enable video snapshot to be taken and saved from any window pane in the matrix view. The software should allow alarms to be generated from any video pane and shall user to only view and control video for which they have been assigned permissions by the administrator. ICCC will be the nodal point of availability of all online data and information related to various current and future elements/applications and will be connected to other departmental network of services.

- **ICCC / Helpdesk Agent Equipment:** The System Integrator is responsible for providing all infrastructure elements for providing Helpdesk.
- **Desktops:** SI shall provide laptops / desktops, Telephone lines for Inbound and Outbound calls, Telephone number and communications equipment's (Telephone / Head phone) etc. for the helpdesk agents
- **Call logger and Reporting system:** The system should store all conversations between call Centre and caller along with the call logs. The voice calls should be stored with proper sequencing and nomenclature so that in future voice calls can be retrieved. The voice calls should be stored for a period of 6 months, after which the voice calls should be archived by the system and only the details of call shall be maintained.
- **Reporting Capabilities:**
    - Queue analysis reports such as total number of calls, total talk time, average call time, Average speed of answer, abandoned call rate, average delay before abandon, average hold time, Call Chronology
    - Agent reports such as Login, Logout time, Idle time, Average speed of answer, average handling time, Number of Dropped Calls
- **Standard Operating Procedures (SOPs):** SI to ensure adoption of Standard Operating Procedures (SOPs) with the proposed solution. All SOPs should be maintained in knowledge repository and need to be updated by system integrator as per changing scenario or amendment in processes from time to time. The Standard operating procedures include the installation & commissioning standards, operational standards & guidelines, security standards and details of all components associated.
- **Multiple Application Integrations at ICCC platform**: Integrated Command Control Centre (ICCC) consist software platform that can integrate either existing or future departmental applications and push, pull pertinent data from these systems and provide it on ICCC's dashboard for analysis, correlations and drawing actionable intelligence.
- **Customizable Centralized information Dashboard at ICCC:** Integrated Command Control Centre (ICCC) consist software platform to provide user specific, personized centralized information dashboard for their respective needs and show various performance indicators on an easy to navigate configurable & customizable

GUI. The dashboard can show, push and pull key parameters and pertinent information on demand from all the other integrated IT applications, field devices and other applications.

- **Standard Operating Procedure (SOP) Management using ICCC:** ICCC software provides ability to write, configurable and customizable standard operating procedures through graphical, easy to use tooling interface. Standard Operating Procedures shall be defined by SI in consultation with DEPARTMENT to finalize approved sets of actions considered to be the best practices for responding to a situation or carrying out an operation. The users will be able to edit SOP's including add, edit, delete activities and will be able to add comments or stop SOP prior completing.
- **Collaboration and communication using ICCC:** The ICCC provides various tools for users to communicate & collaborate in real time. The ICCC provides ability to converse virtually through the exchange of text, audio, and/or video-based information in real time with one or more individuals within the emergency management community. The ICCC provides single web-based dashboard to send notifications to target audiences using multiple communication methods including voice-based notification on PSTN/Cellular, SMS & email.

C. Indicative Bill of Quantity of the IT Infrastructure Components

SN	Component	UoM	Quantity
1	ICCC Software/Platform and Integration with proposed VTS application Application (with required Hardware if any)	Set	1
2	Video Wall Cubes, Full HD (1920 × 1080) Minimum 55" cube	Nos.	4(2*2)
3	Video Controller/ Management System (Wall Management Software & other Accessories)	Set	1
4	Network Router	Nos.	1
5	Layer 3 Switch	Nos.	1
6	Layer 2 Switch	Nos.	1
7	Call Control System (IP PBX)	Set	1

SN	Component	UoM	Quantity
8	Contact Centre	Set	1
9	IP Phone	Nos.	2
10	UTP Components for LAN Connection with Smart Rack	Lot	1
11	Online UPS 10 KVA with battery bank for 1-hour backup	Nos.	1
12	Desktop Workstation	Nos.	2
13	Additional LED Screens for desktops with accessories	Nos.	2
14	Technical Helpdesk equipment (Headphone, Microphone etc.)	Set	2
15	Multi-Function Printer (Colour with Scanner)	Nos.	1
		Lot	1 Lot

Note :

- Any other Hardware or Software required to meet the requirement for the establishment of ICCC
- Any bidder/OEM from such countries sharing a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder/OEM is registered with the Competent Authority. The Competent Authority for registration will be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). Political and security clearance from the Ministries of External and Home Affairs respectively will be mandatory.

A. Functional Requirement - ICCC Platform

Bidder should submit compliance sheet along with technical proposal

Functional & Technical Requirements – Command & Control Centre

Proposed Solution must have the following functional and technical capabilities

Functional/Technical Parameters	Description	**Compliance (Yes/No)**
Command & Control	The solution must use the latest application architecture models of Service-oriented Architecture and Microservices architecture for better interoperability and performance	
	The platform must be able to normalize the data from various data sources such as IOT, OT, IT	
	The platform must be a low-code platform and should have no-code capabilities	
	The platform must have stream processing capability to analyze the incoming data in real-time	
	The platform must be able to integrate data from different sub-systems and provide a unified view of the sub-system data over visualization dashboards	
	The platform must have the capability to perform actuations of the devices or sensors through the APIs provided by the sub-systems	
	The platform must have self-service capability to perform changes to the visualization	
	The platform must be compatible to work on web browsers only	
	The platform must be flexible enough to create multiple domains and multiple entity types for those domains	
	The platform must have the ability to ingest data into time-series or document-oriented databases	
Events	The platform must have capability to create event definitions that would raise from any domain without any coding efforts	

	The platform must be able to create automation rules, and the events can be raised by these automation rules basis the streamed data	
	The platform must be able to create automation rule wherein the event can be raised basis the data that is streamed for an Entity which can be either sensor or non-sensor	
	The platform must be able to create Automation Rules that can raise events at regular interval basis and that would be able to perform actuations on a device using the outbound adapters	
	The platform must be able to create Automation Rules that can raise different events basis the incoming event	
	The platform must be able to create Automation Rules to raise a complex event that is derived from the two or more Events basis the time and distance window	
Data Connectors	Platform must have the ability to connect to different source systems using varied connection protocols and consume the data that can be either used for ingestion into the platform database or be directly pushed for the visualization layer to be consumed by visualization layer or be exposed as an API to be consumed by 3rd party	
	Platform must have the ability to create connection templates that holds the security configuration of a source system and this template can be used by different connectors to connect to the source system and receive or consume the data	
	Platform must have the ability to perform both persistent and non-persistent connections	
	Platform must have the ability to perform exponential back off for persistent connections	

	Platform must have the ability to connect to source systems using protocols like MQTT, FTP and TCP/IP Socket, Webservices that confirms to REST style architecture, RBDMS database that include Oracle, MySQL and Postgres, and flat file that of CSV, TSV and JSON formats	
	Platform must have the ability to provide Interactive query builder and additionally provide raw query capability while connecting to the RDBMS database	
	Platform must provide a view to see all the connectors in a single consolidated place with the contextual search capability to easily identify the different connectors that are created and perform necessary modifications	
	Platform must provide the ability to preview the data before the connectors are created	
	Platform must provide the ability to pre-script and post-script	
	Platform must be able to consume the data from REST API and CSV files in the form of streams, so that the data is sent in the form of blocks and each block at a time	
	Platform must have the ability to run pre- and post- before and after the connection is being established with the source system	
	Platform must be able to import a CURL to create the connectors with ease	
	Platform connectors must have the ability to cache the data and that can be re-utilized without hitting the source system un-necessarily	
Adapters	Platform must have the capability to normalize the data using various in-built functions and custom functions that using scripting to change the data from	

	any incoming data schema to the schema that the platform understands, and ingest the data	
	Platform must have the ability to pull the data from the non-persistent source system with certain time-intervals and ingest the data	
	Platform must have the ability to listen to the data from the persistent source system and ingest the data whenever the data is received	
	Platform must have the ability to receive the data that is pushed from the source system and ingest the data	
	Platform must have the ability to consume both the event data and entity data	
Outbound Adapters	Platform must have the ability to push the data to the external source system and the external source system should be able to listen to the data sent and process the data accordingly	
	Platform must have the ability to push the data to the external source system by scheduling	
	Platform must have the ability to perform actuations on external devices either directly or through the vendor cloud	
	Platform must be able to use the outbound adapters in SOPs to trigger external source systems	
Datasets	Platform must have an intuitive data flow-based drag and drop studio, where the data can be pulled from different connectors and the transformed using pre-build functions or using custom functions	
	Platform must provide a rich set of built-in functions to transform the data from one format to another.	
	Platform must support creation of nested steps of applying multiple functions as part of the overall transformation of the data.	

	Platform must allow creation of new datasets by applying more functions on existing datasets.	
	Platform must have the ability to transform the data using custom functions where scripting language are used directly	
	Platform must also have an ability to use the 3rd party scripting libraries to easily transform the data	
	Platform must provide custom libraries that help in invoking other functions, connectors and datasets within the custom functions and hence provide powerful data transformation ability	
	Platform must provide an ability to open the dataset data as APIs that can be consume by the 3rd Party ecosystem partners	
	Platform must provide the ability to call another dataset into the existing dataset, so that nested datasets can be created which can bring in modularity while transforming data and sets reusability of datasets	
	Platform must provide the ability to stream the data from the dataset to the virtualization layer in real-time or near real-time	
	Platform must provide the ability to cache the data from the datasets so that the un-wanted API calls are reduced and the computational power is also reduced	
	Platform must provide the ability to preview the data in the dataset in table or tree or map format depending on the type of data format	
	Platform must provide the capability to support CSV, TSV, JSON, GEOJSON data types	
	Platform must have the ability to broadcast the dataset data to persistent connectors that can be consumed by the 3rd party ecosystem partners	

	Platform must support creation of nested steps of applying multiple functions as part of the overall transformation of the data	
Standard Operating Procedures (SOPs)	Platform must be able to create SOPs and SOP templates through intuitive drag and drop based editor	
	Platform must provide capability to drag and drop different tasks to create SOPs and SOP templates	
	Platform must provide the ability to use the outbound adapters as outbound tasks that can be to trigger actions or send data or invoke the 3rd party devices or 3rd party application	
	Platform must provide the ability to assign SOP templates to an event that is raised	
	Platform must provide the ability to approve or reject an SOP from getting executed for an event that is raised	
	Platform must provide an ability to trigger multiple tasks at the same time	
	Platform must provide an ability to trigger tasks to Field Responder mobile application through SOP and SOP templates	
	Platform must provide ability to trigger actions on other IoT devices like turning on light or sending message to digital display board as part of SOP steps.	
	Platform must provide ability to trigger external APIs as part of SOP steps.	
Escalation Rules	Platform must provide the Escalation capability if the SOP is not completed within the stipulated time that is set	
	Platform must provide the capability to create Escalation levels so that escalation hierarchy can be	

	established when the SOPs are not executed with the stipulated time	
	Escalation rules must be region based and can be assigned to an SOP if escalation is required for that SOP	
	Escalation rules must trigger both notification and email to the users for which the escalation level is assigned so that appropriate action can be taken by the user on the SOP instance that is escalated	
Distribution Groups	Platform must provide an ability to create groups that consists of users from same or different departments and the groups can be used in tasks	
	Platform must have the capability to create distribution rule where the region-based routing can be performed	
	Platform must have the capability to assign the distribution rules to user tasks and email tasks	
Visualization	Platform must have capability to create grid-based widget system to create different visualization elements and compose it over dashboards	
	Platform must be capable of providing different widgets like charts, datagrids, KPI, map, videowall, timeline and word cloud	
	Platform must allow multiple configuration options for each widget including but not limited to the Title, colors, style, widget specific configuration options like different types of charts for chart widget, different map settings for map widget etc.	
	Platform must be able to save the widgets with the data pre-filled so that it can be reused across the dashboards and these pre-filled application widgets must be categorized appropriately and accessed with ease according to the category	

	Platform must provide the ability to create personalized dashboards to all the platform users	
	Platform must provide the ability to share the dashboards with a single user or default role or derived role with the read and write permissions and additional ability to transfer ownership when to a single user	
	Platform must provide the capability to select the favorite dashboards that can be accessed easily	
	Platform user must be able to perform slide show of the selected dashboards and can loop continuously with the appropriate loop interval set	
	Platform user must be able to set default dashboard that should open when the user logins-in	
	Platform user must be able to change the theme that are allocated by the admin user for the tenant	
	Platform user must be able to change the default language that are allocated by the admin user for the tenant	
	Platform visualization must be intuitive that the two or more widgets should be able to communicate with each other wherein the change in one or more widgets should affect the other widgets in the dashboard	
	Platform should allow map widget to drilldown from one level to next level and also allow other related widgets data to be automatically updated based on the selected drilldown level.	
	Platform must be able to embed other websites/portals/standalone pages into the dashboard using iframes	
	Platform must be able to support web components where custom widgets can be created using 3rd party frameworks and embedded in the dashboard, and the	

	data communication between the custom widget and the dashboard should be possible	
Video-Wall	Platform must provide video-wall guarded tour capability where the camera can be grouped together and looped with certain time-intervals basis the settings provided by the user	
	Platform must be capable of stream live video by using webrtc and HLS protocols	
	Platform must be able to consume RTSP stream and show the live video stream over video wall	
	Platform must be able to show the live video from the cameras in a grid-based system in the video wall widget and the user should be able to configure how many row and columns can be set in a grid with a max of 6x6 grid	
	Video-wall must be able the record the live videos and save the video at the client side	
	Video-wall must be able to take screen shots from the live videos and save the image at the client side	
	Platform user must be able to search for the camera in the video-wall widget and see the live stream of that camera that has been searched	
	Video-wall must be able to maximize one camera video out of the grid to visualize the live stream in the maximized mode	
	Video-wall must be able to create camera groups with different cameras associated to different groups, with the ability to re-order the cameras in the group	
BI Analytics	BI Analytics capability must be in-built in the platform without usage of additional COTS product or additional integrations	

	Platform must be capable of providing slice and dicing capability using the visual representations and actions available in the dashboard widget system	
	Platform must be capable of analyzing the data coming from different domains and the different sub-systems	
	Platform must be capable of mashing the data from different domains and different sub-systems, and thus provide cross-domain analysis capability	
Dashboard settings	Dashboard layout must be customizable that the number of row and columns in the dashboard, and the margin between each grid can be set by the dashboard creator before the widgets are placed in the dashboard	
	Dashboard lock feature must be present to prevent other users with write permission or ownership to change the dashboard and thus prevent unwanted edits	
	Platform must have the ability to trace the major actions that are performed over the dashboard so that the audit can be performed	
	Widgets in the dashboard must be customizable that the title background color, title color, widget background, show control, border, Font size and weight, corner radius can be changed by the users who has the dashboard edit permission	
	Platform must have an ability to export the dashboard where the dashboard setting, the widget setting and underlying data settings are exported in the form of a JSON file and the same can be imported later	
Notifications	Platform must be able to source the events from the sub-systems and be able to show in the form of notification so that the platform user can take necessary action on the events	

	Platform must be able to show the escalation on an SOP Instance to an escalated user in the notification section	
	Platform users must be able to navigate from the notification section to the event management section by perform click action on the event	
	Platform must have an ability to unmute or mute notification sound for the high critical events	
	Notification section must have the ability to represent graphically from which domain/sub-system the event is received	
	Platform users must receive the notification based on the Data Access Control restriction that is set for the domain for the derived roles	
Public Dashboard	Platform must be able to expose the dashboards to the public, so that the dashboards can be consumed without login into the platform	
	Public dashboards usage must be rate limited to avoid unscrupulous usage of the dashboard, and the rate limits can be controlled by the backend settings	
Reports	Platform must have an ability to schedule reports from the existing dashboards that represents the snapshot of the underlying data in visual format in PDF format or other format as required	
	Platform must have the ability to schedule tabular report from the existing dataset that does not accept any request parameters in PDF format or other format as required	
	Platform must have the ability to schedule reports for the existing platform users and any other external users	
	Platform must be able to preview the report before scheduling the report	

	Platform must be able to schedule the report Daily, Weekly and Monthly	
	Platform must have the ability to pause the report schedule and resume it when required	
	Platform must have the necessary audit trail if the schedule got executed or failed, with appropriate transaction ids to trace in case of failures	
Event/Incident Management	Platform must have differentiated color cues for different criticalities of the event that are sourced from the sub-systems or generated in the platform	
	Platform must have the ability to show the events over the map view so that there is a sense of awareness amongst the platform users where the event has occurred	
	Platform must have capability to simulate events in different domains.	
	Platform must have the ability to change the criticality of an event and the ability to capture the comments when change in critically is performed by platform users	
	Platform users must have the capability to create manual events from the Event Management module by providing appropriate domain, event type, description, location details and image/video for proof of event	
	Platform users must have the ability to download the event details in the form of a PDF file the contains the Event details, SOP and Task Details, Media information, and over all comments and audit trail	
	Platform users must have the ability to comment and collaborate on any event that is visible and provide more evidence if necessary, in the form of image or video	

	Event comments must also receive the image and video evidences submitted by the field responder, if field responder task is created for the event	
	Platform must have the ability to associate an event to SOP template and get the SOPs executed manually	
	Platform must have the ability to auto-assign an SOP to an Event and so that the events can executed once it has it has been raised	
	Event Management module must have the ability to Events based on Domain, Event Source, Event Type, Criticality, Status, Region, and the Date Range	
Data APIs	Platform must allow the data APIs to be exposed to the 3rd party consumers who can consume the normalized data	
	Platform must allow the data APIs to be exposed basis the RBAC (Role based Access Control) data access restriction provided for the 3rd party	
	3rd party consumers must be able to consume the data APIs through the API Key provided by the platform admin	
	Data API must have the Discovery API that lets the 3rd party consumers to identify the domains and the entities for which is the data is available to consumed	
	Platform must have the ability to open the datasets to be consumed by the 3rd party consumers through webhooks	
	Platform must have the ability to revoke the webhooks availability to the 3rd party consumers	
Role based Access Control (RBAC)	Default Roles should be available in the Platform pre-built	
	Admin must have the ability to derive new roles from the default roles	

	Default roles must have the default features access capabilities predefined and can't be changed at any time	
	Platform must have the ability to assign appropriate features access levels to the roles that are derived from the default roles	
	Platform must have the ability to assign appropriate domains access to the roles that are derived from the default roles	
	Platform must have the ability to assign appropriate region access to the roles that are derived from the default roles	
	Platform must have the ability to assign appropriate roles to the Users, and the users created would be able to see the data and access the features basis the role that has been assigned	
Attribute based Access Control (ABAC)	Platform must have the ability to provide fine-grained restriction of the data basis the attribute and the attribute values assigned to users	
	Platform must be able to assign dynamic attributes to the users so that the user can be created with the attributes assigned	
	User Attributes can be programmatically used in the entire platform	
Department Admin Capability	Admin user must be able to draw region polygons, draw lines and set points	
	Platform Admin must be able to create more than one org-admin per tenant	
	Admin must be able to create user with any role that is available as part of the RBAC definition	
	Admin must be able to create users in bulk so that the time taken to create multiple users are reduced	

	Admin must be able to create derived roles by provisioning feature level access, and region and domain restrictions	
	Admin must be able to create Domains that are necessary in the platform, and provide the necessary graphical representation for those domains that can be used in event notifications	
	Admin must be able to create multiple Entity types for a domain and must be able to define if the metric ingestions are needed	
	Admin must be able to create attributes for the entity types by provide the data type and the attributes can be created by form based and json schema-based input editors	
	Admin must be able to decide which database can be used for the ingestion i.e., if either document based or time-series based databases	
	Admin must be able to decide what are branding schemes that should be placed that includes login background, application logo, customer logo, header and footer logo, favicon, and optional logos	
	Admin must be to decide time-zone and time format that is to be used across the platform	
	Admin must be able to decide the email banner, customer logo, and application logo for the email templates to be used across all emails sent from platform	
	Admin must be able to customize the toolbar size and radius of the platform	
	Admin must be able to define the default themes, default language, visible themes for the tenant	
	Admin must be able to define if the Consent can be enabled or disabled for the tenant	

	Admin must be able to define if google analytics can be enabled or disabled and the ability to provide the tracking code for the google analytics	
	Admin must be able to add or remove different map provider in the platforms that can be used in the map widgets	
	Admin must be able to define the VMS integration or streaming plugins that can prover the video in the videowalls and map	
Multi-tenant	Platform must have a multi-tenant architecture	
	Platform must be capable to be deployed on-premises and on cloud	
Single Sign On	Platform must be capable to participate in a federated SSO using SAML 2.0 protocol	
Active Directory Support	Platform must be capable to provide the Active Directory integration	
Security	Platform must be compliant to OAUTH 2.0 authorization framework where the client obtains access tokens provided from the authorization server with the approval of the resource owner	
	Platform must be able to provide 2FA (Two factor authentication) capability, so that there is additional level of security that is added to the platform and stop the compromised users from logging into the platform.	
	Platform must provide multi factor authentication support with the user able to decide what would be the additional factor of authentication	
	Platform must be able to set different multi factor authentication support that includes email, SMS and TOTP authentication	

	Platform users must be able to set primary second factor authentication mechanism when logging into the platform	
	Platform users must be able to switch between different second factor authentication mechanism while login and not just use the primary second factor	
	Platform must provide reCAPTCHA to prevent SPAM and platform abuse	
	Platform must provide additional layer of security by providing account lock feature if consecutive login fails for more than 5 times	
	Platform must provide RBAC and ABAC security features	
Field Responder App	A Field Responder mobile app must be available and tightly integrated with the ICCC platform for last mile activities such as assign & manage tasks, report incidents, and collaborate back with the ICCC.	
Field Responder App	Field Responder app must support both iOS and Android operating systems for the latest versions.	
Field Responder App	Field Responder app must provide content in context to the user role & domain such as forms, tasks, and escalations.	
Field Responder: Event Management	Field Responder app must be able to receive & display events and tasks assigned based on pre-configurable access rules from the ICCC platform.	
	Responder must display task list with ability to filter based on priority, status, and escalation.	
	Field Responder must notify users for tasks assigned based on SOPs configured on the ICCC platform.	
	Field Responder must allow users to see the task details assigned such as ticket id, sla, and location of	

	the event triggered based on pre-configured rules from the ICCC platform.	
	Field Responder app must integrate with native map capability to allow users to navigate to the task location.	
	Field Responder app must provide collaboration with the app for field officers and users back to the ICCC.	
	Field Responder app must allow users to share media (images/videos) and text as part of task collaboration for proof of work, such as bin pickup photo or video.	
	Field Responder app must allow to select an image/video from mobile gallery or click and select from camera.	
	Field Responder app must allow users to crop the video to be shared for a task.	
	Field Responder app must have capability to update status for tasks and the update must be available to the ICCC users.	
	Field Responder app must provide a quick dashboard on sign in for quick stats on the tasks w.r.t to their statuses as and when updated.	
Field Responder: Escalation	Field Responder app should support escalation hierarchy of the tasks or events that are not readdressed within the defined sla as configured in the platform.	
	Field Responder app must restrict changes to the escalated task for the assigned responder.	
	ICCC platform should notify users in the escalation matrix via Email and notification on the field responder app.	
	Field Responder app should indicate escalated tasks within the list.	

Field Responder: User Management	ICCC platform should control user management of field responders and allow creating responders group with admin for task re-assignment purposes.	
	Field Responder app must allow group admins to re-assign task to any other responder within the group.	
Field Responder: General Notifications	ICCC platform must provide ability to send general notifications to the field responder app based on their department and region.	
Field Responder: Tracking	Field Responder app must allow users to share their locations.	
	Field Responder app must have the ability to track field officers and provide offline/online status of the responders.	
Field Responder: Manual Incidents	Field Responder app must let responders to manually report incidents.	
	Incidents reported by responder app must be integrated with the ICCC platform.	
	ICCC platform must display incident details reported by the responder with location and media uploads.	
Field Responder – Content Management System	ICCC platform must be enabled with CMS capabilities to create dynamic forms with role-based access to the field responders.	
	The content management system must be able to categorize the forms over field responder app.	
	The content management system must be able to define the order of appearances of forms over field responder app.	
	The content management system must allow to dynamically create forms on the fly to specific departments, such as display testing labs for a region.	

	The content management system must allow to add/change fields dynamically and must reflect in the field responder app.	
	The content management system must be able to configure pre-validations for the content to be pushed and allow regex capabilities to define complex validations.	
	The content management system must have ability to define mandatory and optional form fields and define hint texts over the field responder app.	
	The content management system must be integrated with the ICCC data pipeline capabilities to ingest data.	
	Field Responder app must be able to add content to CMS forms for data gathering purposes, such as citizen health or population assessment.	
	The data entered in the forms via field responder app must display in the ICCC platform.	
Field Responder: Security	Field Responder app must allow users to enable 2-step verification using email, SMS or TOTP to avoid unauthorized sign in attempts.	
Crisis Management	Platform must have event planning capability to be prepared for a crisis or disaster events.	
	Platform must have drag and drop capabilities for area and operational planning.	
	Platform must allow to handle a crisis or a pre-planned public event which can have mass gatherings and would require a technology assistance for surveillance, reports, resources, and planning.	
	Platform must allow to create an event plan along with a category and type of crisis or event.	

	Platform must allow to define shift duration for an event as 8, 12 or 24 hours.	
	Platform must allow draw & group regions supporting hierarchy and apply to any created plan.	
	Platform must allow changes to the region group created and re-apply these groups to the event plans.	
	Platform must provide an interface to drill down into region hierarchies.	
	Platform must provide an operational view of an event and allow drag and drop capabilities to assign assets and resources to regions for deployment purposes.	
	Platform must be tightly integrated with the resource management of ICCC to add or remove resources for an event plan.	
	Platform must be integrated with field responder mobile app to provide operational support for a crisis or disaster.	
	Platform must allow drag and drop capabilities to assign shifts to the resources added to an event plan.	
	Platform must facilitate adding / removing assets needed for a crisis or pre-planned event	
	Platform must allow to tag a resource along with an asset.	
	Platform must allow changes in allocations or assignments of all the assets and resources.	
Intelligent Video Analytics	Video Analytics layer must be tightly coupled with the ICCC platform	
	VA solution must have highly scalable micro services distributed architecture	

	VA solution must provide a web-based interface which is supported for Windows Supported operating system and Unix based systems	
	The platform must provide container-based deployment capability which will help in better management of platform infrastructure	
	VA system must be easily integrated with all VMS systems	
	VA solution must provide web interface allowing easy integration with third party API access applications	
	VA solution must be able to process any format of images, video and video stream for analyses	
	VA solution must support real time streaming protocol which enables an easy way to access and manipulate a media stream	
	VA solution must support both server-based and edge-based analytics	
	VA solution must provide REST API's which includes processed information in the form of metadata text in JSON, image crop, video clip, processed video clip with annotations/markup.	
	VA solution must have capability to aggregate processed data and provide end results to the user	
	VA solution must be able to merge data from multiple cameras, process, pack and send via API or visualize in the platform dashboards	
	VA solution must combine deep image recognition capabilities with ultra-quick image processing to power its Smart Surveillance solutions portfolio	

	VA Solution Admin must be able to configure the cameras and analytics required for each camera based on their subscription	
	VA Solution must track multiple cameras simultaneously, detect and raise alerts when a threat is detected, round the clock, with little or no dependency on human monitoring.	
	VA Solution must monitor multiple camera feeds simultaneously and trigger alerts when exceptions are detected. These exceptions must be displayed as alerts on the ICCC platform. The system can be configured to deliver these notifications as mobile and/or email alerts to designated users.	
	VA Platform must provide improved visualization of ambient or emergency in the city and facilitation of data driven decision making	
	All the CCTV cameras must be constantly monitored 24X7 simultaneously for logic configured in individual cameras including monitoring rates, and subscriptions allocated to cameras	
	All metadata collected must be pushed to the ICCC platform where all the information is processed and represented in an orderly manner using different visual graphics to show various heatmaps and dwell time patterns.	
	VA solution must provide powerful graffiti detection and vandalism detection analytics to secure the premises under 24hour CCTV surveillance. Solution must include real time alerts to ensure instant security of property.	
	VA solution must provide Debris and Garbage detection including monitoring whether the garbage bins are full or empty. It must also include features to detect debris and garbage lying on the streets. Real-	

	time alerts must be generated for the same to ensure a sanitary and clean city.	
	VA solution must provide powerful facial recognition for attendance management systems. The CCTV feeds must detect the persons face to directly mark attendance which can be represented in the form of dashboards and graphical representation.	
	VA solution must provide powerful activity detection analytics such as detection of sweeping and cleaning of streets/bins before and after. Such activities must be represented in the form of dashboards.	
	VA solution must provide vehicle analytics when a vehicle is entering or moving in a user-defined area of interest the system can detect o when vehicle enters a zone (Intrusion) o if vehicle stops for a specific time in the zone (Lingering) o when a vehicle leaves the zone (Exit) o the track of the vehicle in the zone	
	VA solution must provide extensive people analytics and crowd analytics to extract subtle data from the video feeds including • Entry, Exit, Dwell and Track in a zone: When a person is entering or moving in a user-defined area of interest the system can detect o when person enters a zone (Intrusion) o if person dwells for a specific time in the zone (Lingering) o when a person leaves the zone (Exit) o the track of the person in the zone	

	VA solution must provide extensive people analytics and crowd analytics to extract subtle data from the video feeds including Crossing a line: When a person crosses a line, the system can detect it o Id of the person who crossed the line o Time when the person crossed the line o Direction of crossing	
	VA solution must provide extensive people analytics and crowd analytics to extract subtle data from the video feeds including Crowding: When there are many people in a scene, the system should detect o if crowd size reaches a user-defined threshold for a user-defined length of time	
	VA solution must provide analytics features to classify vehicles and humans in a very detailed manner. Vehicle classification must include car, truck, two-wheeler classification as well as specific car makes and model detection to provide detailed data. Human and animal classification must also be provided to differentiate detected objects among human, animal and vehicle	
	VA solution must provide safety analytics such as: a. Behavioral Biometry: Identification through multiple behavior b. Parking violation c. Speeding vehicle d. Accident detection e. Loitering detection f. Person climbing barricade	

	g. Person collapsing h. Person/Face recognition i. Gesture recognition: Identification through gesture change	
	VA solution must provide detailed vehicle analytics including car color, make and model detection, ANPR and speed detection. It must also provide features to blacklist or whitelist vehicles and identify/detect a particular "vehicle of interest" based on car, make, model and license plate number.	
	VA solution must provide smart analytics provide granular details from CCTV video feeds including detecting whether a person is wearing a helmet or not on a 2-wheeler.	
	VA solution must provide detailed vehicle analytics including vehicle tracking to detect wrong way or illegal turns.	
Deployment Automation	Platform microservices and the common infrastructure installation must be completely automated	
	Any platform microservices upgrades must be automated and in case of exigencies manual upgrades can be entertained	
	Platform microservices must be deployable both in on-prem and as well as cloud	
High Availability	Platform must be fault tolerant and have redundancy baked into the architecture, and thus be resilient and have fast error reduction	
	DC-DR must be available both for on-prem and cloud deployments	
Monitoring and Alerting	Infrastructure level monitoring must be performed, and any abnormality must be alerted through Email	

	and integration with enterprise grade collaboration tools	
	Platform microservices monitoring must be performed get status and health of the services, and alert in case of any issues through Email and enterprise grade collaboration tools	
	Common Infrastructure monitoring must be performed, and any abnormality must be alerted through Email and enterprise grade collaboration tools	
	Data stream monitoring must be performed to identify any lags in data and alerted through Email and enterprise grade collaboration tools	
Logging	Centralized log monitoring must be available that consolidates the logs from all the different microservices and represented in one single are	
	Centralized log monitoring must have powerful filter and visualization capability to slice and dice the logs coming from different microservices and perform better diagnosis in case of any platform microservices related issues	
Scaling	Platform must be able to manually scale both horizontally and vertically at both on-prem and cloud deployments	
	Platform must be able to auto-scale horizontally over cloud deployments	

B. Technical Specifications of IT Components

2. Technical Specifications – Video Wall with Controller

SN	Parameters	Features	Compliance (Yes/No)	Pg. No. of Tech. specs attached
2. Video Wall Cubes (Minimum 55" each) with controller (2*2)				
Make Offered				

SN	Parameters	Features	Compliance (Yes/No)	Pg. No. of Tech. specs attached
2. Video Wall Cubes (Minimum 55" each) with controller (2*2)				
Model Offered				
2.1	Screen Size	55" or above		
2.2	Panel Technology	IPS		
2.3	Back Light Type	Back Lit LED Direct		
2.4	Aspect Ratio	16:09		
2.5	Native Resolution	1,920 X 1,080 (FHD)		
2.6	Brightness	700nit or Higher		
2.7	Contrast Ratio (DY/N/S)	100,000:1		
2.8	Uniformity	91% or more		
2.9	Viewing Angle (H x V)	178 X 178		
2.10	Color Depth	1.07Billion (10 bit) or better		
2.11	Response Time	8ms (G to G) or lesser		
2.12	Lifetime (Typ.)	Min 60,000Hrs (Typ.) or high		
2.13	Operation Hours	24Hrs		
2.14	Orientation	Portrait & Landscape		
2.15	Minimum Inputs ports	HDMI -1, DP-1,DVI-D-1,USB-1,RJ45(LAN-1),IR in-1		
2.16	Minimum Output ports	DP -1, RJ45(LAN-1)-1		
2.17	Bezel to Bezel (Gap)	0.88 mm or less (Even Bezel from all side)		
2.19	Operation Humidity	10 % to 80 %		
2.20	Power Supply	100-240V~, 50/60Hz		
2.21	Power Consumption (Typ).	170 Watts or less		
2.22	CERTIFICATION's	Safety-UL, EMC-FCC Class A, Energy Star 7.0, BIS		
2.23	Installation	SITC installation with Push Pull Bracket for Easy Maintenance		

3. Technical Specifications – Video Management System

SN	Parameters	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
3. Video Wall Cubes controller (3*2)				
Make Offered				
Model Offered				
3.1	Controller OEM	The OEM should be local office in India for support. Manufacturer's authorization is mandatory.		
3.2	Display controller	Video wall controller to Drive 12 displays in matrix combination		
3.3	Chassis	19" industrial Rack mount with Max 4U size		
3.4	Operating System Platform	Windows 10 Professional 64 bit OR Server 19		
3.5	Processor options	Min Xeon Octacore		
3.6	RAM	Std. 32 GB DDR3, higher on request		
3.7	Hard Disk	Std.: 500 GB, can be upgraded on request		
3.8	Networking	Dual-port Gigabit Ethernet Controller inbuilt		
3.9		Supports Add on copper/ optical fibre adapters		
3.10	Output supported	Display Port or HDMI outputs or DVI for min 10 displays		
3.11	Inputs Supported	HDMI/DVI/DP - 4 Nos or through Encoders		
3.12	Decoding format	H.264, MPEG2-TS, MPEG2- Part2		
3.13	RAID	RAID 1 support		
3.14	Power Supply	(1+1) Redundant hot swappable min 700W		
3.15	Switches	Power On/Off and System Reset		

SN	Parameters	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
3.16	Monitoring options	CPU, FAN, Temperature		
3.17	Voltage	100-240V @ 50/60 Hz		
3.18	Scalability	Display multiple source windows in any size, anywhere on the wall		
Wall management Software				
3.19	Client & Server based Architecture	Should supports Multi client/Console control the Wall layouts		
3.20	Scaling and display	Software enable user to display, multiple sources up to any size and anywhere on the display wall.		
3.21	Remote Control	Wall can be control from Remote PC through LAN		
3.22	Layout Management	Should support for Video, RGB, DVI,, Internet Explorer, Desktop Application and Remote Desktop Monitoring Layouts		
3.23	Scenarios	Software should able to Save and Load desktop layouts from Local or remote machines		
3.24	Layout Scheduler	All the Layouts can be scheduled as per user convenience		
		Software should support auto launch of Layouts according to specified time event by user		
3.25	Multi View	Supports multiple view of portions or regions of Desktop, Multiple Application Can view from single desktop		

SN	Parameters	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
		simultaneously		
3.26	Short cut Keys	Support		
3.27	Control operator workstations	Software should able to Support		
3.28	Multiple concurrent client users	Software should able to Support		
3.29	Control functions	The system should have the capabilities of interacting (Monitoring & Control) with various applications on different network through the single Operator Workstation. It shall be possible to launch layouts, change layouts in real time using physical hot keys on smart multifunctional operator keyboard with touch Screen.		
3.30	Controller Interface Type	Multifunctional keyboard with an integrated touch LCD screen provides virtually unlimited functionality and an intuitive user interface		
3.31	Interface Main Function	With just a single multifunctional keyboard and mouse, it is possible to access multiple workstations, other sources and/or large screens, all without loss of performance.		
3.32	Display Unit	Integrated, touch-sensitive 10.1” LCD		
3.33	Resolution	1280 x 800 pixels at 60 Hz		
3.34	Colour depth	24 bit (RGB888) or better		

SN	Parameters	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
3.35	Contrast ratio	500:01:00		
3.36	Brightness:	320 cd/m2		
3.37	Visible angle	170°(Horizontal& vertical)		
	Keyboard Switches			
3.38	Type	Industrial Grade		
3.39	Contacts	High-quality alloy for rugged operation		
3.40	Action	Pressure point click		
3.41	Pressure force	50 ± 20 cN		
3.42	Lifetime	minimum 20 million actuations		
3.43	Speakers	2 x 8-watt RMS at 8 Ω		
3.44	Network connections	1 x RJ45 1000 BASE-T Ethernet with PoE+.		
3.45	Audio	2 x 3.5" jack line stereo 48 KHz 16 bit and		
		microphone stereo		

4. Technical Specifications – Network Router

SN	Specification	Compliance (Yes/ No)	Pg. No. of Tech. specs attached
4. Router			
Make Offered			
Model Offered			
4.1	The Router should support modular architecture, multi-core Processor, internal redundant field replaceable power supply (from Day1). The Router Should have capabilities of seamless field upgrade/replacement (without interrupting running processes and services) for all modular interfaces.		
4.2	Router have a physical separation between control and data planes.		
4.3	Router should have 4 x 1G SFP/Base-T (combo or dedicated) port and additional 2*10G SFP+ Port		

SN	Specification	Compliance (Yes/ No)	Pg. No. of Tech. specs attached
4. Router			
	loaded with SR module from day 1.		
4.4	The Router should have at least 3 or more empty slot for interfaces like Channelized E1/T1, Serial V.35, G.703, LTE, Gigabit and 10G Ethernet modules.		
4.5	Router should have minimum 8 GB of on-board/inbuilt DRAM/RAM for data plane + control plane processes and 8 GB Flash from Day 1. Should support expandability up to 16 GB DRAM and 16 GB Flash.		
4.6	IKEv1, L2TP, IKEv2, GRE and IPSEC from day 1. The proposed solution should serve the GRE encryption for traffic from any location to other location on demand (dynamically established) and should able to create GRE tunnel.		
4.7	The router should support 1.6 Gbps of IPSEC Bandwidth		
4.8	Router should support IGMP v1/v2/v3 and PIM multicast routing		
4.9	Router should support static Routes, OSPFv2, OSPFv3, BGP4, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunneling from Day 1		
4.10	The Router should support Zone Based Firewall feature or an external appliance for the same functionality can be provided.		
4.11	Router should Support Traffic Optimization feature built in the router operating system or an external appliance for the same functionality can be provided.		
4.12	Shall have 802.1p class of service and marking, classification, policing and shaping.		
4.13	Router should support AAA using RADIUS, TACACS+, SSHv2, SNMPv2c, SNMPv3 and NTP		
4.14	Should have extensive support for IP SLA and best path selection for metrics like delay, latency, jitter, packet loss to assure business-critical IP applications from Day1.		
4.15	Router should support monitoring of network traffic with application level insight with deep packet		

SN	Specification	Compliance (Yes/ No)	Pg. No. of Tech. specs attached
4. Router			
	visibility into web traffic, RTP-Based VoIP traffic.		
4.16	Router should have traffic load balancing capability on dual WAN Links based on based on advanced criteria, such as reachability, delay, loss, jitter and bandwidth utilization.		
4.17	Router shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 Standards for Safety requirements of Information Technology Equipment.		
4.18	Router shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B Standards for EMC (Electro Magnetic Compatibility) requirements.		
4.19	Router/Router's Operating System should be tested and certified for EAL 3/NDPP or above under Common Criteria Certification		
4.20	Router should be IPv6 Certified/IPv6 logo ready		

5. Technical Specifications – Network Switch (L3)

SN	Specification	Compliance (Yes/No)	Pg No. of Specs attached
5.	**L3 Switch**		
Make Offered			
Model Offered			
5.1.	- Switch architecture should be Fixed Form factor & should work in redundancy (1+1)		
5.2.	- Support in line hot insertion and removal of different parts like modules/power supplies/fan tray etc.		
5.3.	- Static routing, RIP, PIM, OSPF, VXLAN, VRF, VRRP, PBR, BGP, MP-BGP, MPLS, VXLAN, VRF, QoS, 802.1x, IPv4v6 ACLs and MACsec-256		
5.4.	- Should have support for hot swappable internal redundant power supply and hot swappable redundant FAN		

SN	Specification	Compliance (Yes/No)	Pg No. of Specs attached
5.	**L3 Switch**		
5.5.	- Switch should have wire-speed, non-blocking and distributed forwarding on all the ports.		
5.6.	- Switch should have minimum of 48 x 1/10 SFP28 interface populated with 12 SR optics and 4 x 40 G QSFP populated with required DAC cables		
5.7.	- Switch should have 8 GB ram and 8 GB Flash with 24 MB buffer		
5.8.	- Switch should support min 32K MAC addresses and min 500 active VLANs.		
5.9.	- EAL3 or NDPP certified		
5.10.	- Switch and optics should be from the same OEM		

6. Technical Specifications – L2 Access Switch 48 Port

SN	Specification	Compliance (Yes/No)	Pg. No. of Specs attached
6.	**L2 Access Switch 48 Port**		
Make Offered			
Model Offered			
6.1.	- Switch architecture should be Fixed Form factor& stackable based		
6.2.	- 19" Rack Mountable stackable switch with support for stacking minimum 4 switches into a single stack		
6.3.	- Static routing, RIP, PIM, OSPF, VXLAN, VRF, VRRP, PBR, QoS, 802.1x, IPv4v6 ACLs and MACsec-128		
6.4.	- Should have support for internal redundant power supply		
6.5.	- Switch should have wire-speed, non-blocking and distributed forwarding on all the ports.		

SN	Specification	Compliance (Yes/No)	Pg. No. of Specs attached
6.	**L2 Access Switch 48 Port**		
6.6.	- Switch should have minimum of 48 x 10/100/1000 POE+ RJ45 interface and 4 x 1G SFP+ populated with 4x SR optics from day 1		
6.7.	- Should have minimum stacking bandwidth of 56 Gbps or more		
6.8.	- Switch should have 2 GB ram and 2 GB Flash with 6 MB buffer		
6.9.	- Switch should support min 16K MAC addresses and min 500active VLANs.		
6.10.	- EAL3 or NDPP certified		

7. Technical Specifications – Call Control System

SN	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
7. Call Control System			
Make Offered			
Model Offered			
9.1	The IP telephony system should be a converged communication System with ability to run analog and IP on the same platform using same software load based on server and Gateway architecture		
9.2	The single IP PBX system should be scalable to support up to 200 stations (any mix/percentage of Analog/IP) to achieve the future capacity		
9.3	The system should be based on server gateway architecture with external server running on Linux OS. No card based processor systems should be quoted		
9.4	The voice network architecture and call control functionality should be based on SIP		
9.5	The call control system should be fully redundant solution with no single point of failure & should provide 1:1 redundancy.		

SN	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
9.6	The communication server and gateway should support IP V6 from day one so as to be future proof		
9.7	The entire solution (IP PBX, its hardware, IP Phones, Voice Gateway) should be from a single OEM		
9.8	Support for call-processing and call-control		
9.9	Should support signaling standards/Protocols – SIP, MGCP, H.323, Q.Sig		
9.10	Voice Codec support - G.711, G.729, G.729ab, g.722, ILBC		
9.11	The System should have GUI support web based management console		
9.12	Security		
9.13	The protection of signaling connections over IP by means of authentication, Integrity and encryption should be carried out using TLS		
9.14	System should support MLPP feature		
9.15	Proposed system should support SRTP for media encryption and signaling encryption by TLS		
9.16	Secure HTTP support for Call Server Administration, Serviceability, User Pages, and Call Detail Record Analysis and Reporting Tool. Should support Secure Sockets Layer (SSL) for directory		
9.17	The administrator logging on to the call control server needs to authenticate by suitable mechanism such as User Login Information and Passwords/ Radius Server		
9.18	Voice gateway to be provided with 1 PRI card scalable to 3 PRI in future for PSTN (PRI) line termination.		

8. Technical Specifications – Contact Centre

SN	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
10. Contact Centre			
Make			
Model			
Functional Requirement			
10.1	For up to 10 agents		
10.2	Automatic call distribution		
10.3	Automatic identification of incoming number based on landline and mobile number mapping		
10.4	Call recording mapped to incident tickets		
10.5	Customizable agent and supervisor desktop layout		
10.6	Inbound and outbound capability		
10.7	Call control		
10.8	Multisession web chat		
10.9	Email		
10.10	Live data reporting gadgets		
10.11	Phonebook		
10.12	Multiline support		
10.13	Speed dial in IP phones		
	Automatic Call Distribution (ACD):		
10.13	Should be highly available with hot standby and seamless failover in case of main server failure. There should not be any downtime of Contact Center in case of single server failure.		
10.14	Should support skill based routing and it should be possible to put all the agents in to a single skill group and different skill groups		
10.15	ACD support routing of incoming calls based upon caller input to menus, real-time queue statistics, time of day, day of week, ANI, dialed number etc.		
10.16	ACD should support call routing based on longest available agent, circular agent selection algorithms.		
10.17	ACD should support the playing of customizable queuing announcements based upon the skill group that the call is being queued to, including		

SN	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
10. Contact Centre			
	announcements related to position in queue and expected delay.		
10.18	Agents should be able to chat with other Agents or supervisor from the Agent desktop software		
10.19	Supervisor should be able to see the real-time status of agents, supervisors should be able to make agent ready or logout from the supervisor desktop		
10.20	Should support Queuing of calls and playing different prompts depending on the type of call and time in the queue.		
10.21	In future if required, the ACD should support active and standby server mode, where the server can be put in DC and DR. In case of Main server in the Data center fail the standby server in DR should take over seamlessly. ACD solution should support placing of Main and Stand by server in DC and DR respectively.		
	Interactive Voice Response (IVR):		
10.22	IVR should play welcome messages to callers Prompts to press and collect DTMF digits		
10.23	IVR should be able to integrate with backend database for self-service, as and when required.		
10.24	GUI based tool to be provided for designing the IVR and ACD call flow.		
10.25	IVR should support Voice XML for ASR, TTS, and DTMF call flows		
10.26	IVR should be able to Read data from HTTP and XML Pages		
10.27	IVR should be able to run outbound campaigns.		
	Reporting:		
10.28	System to provide report of IVR Application Performance Analysis, Call by Call details for all		

SN	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
10. Contact Centre			
	the calls, Traffic analysis reports etc		
10.29	Reporting platform to support Agent level reports, Agent login, logout report, report on agent state changes		
10.30	Queue reports, Abandon call reports all the reports should be summary, tabular and detailed report format to be available for the agents.		
10.31	Reporting platform to support custom reports using a combination of the Crystal Reports Developer's Toolkit and SQL stored procedures.		
10.32	Users of the Historical Reports should be able to perform the following functions View, print, and save reports. Sort and filter reports, Send scheduled reports to a file or to a printer. Export reports in a variety of formats, including PDF, RTF, XML, and CSV.		
	E-mail:		
10.33	Administrator should be able to assign one or more email addresses to a single Queue.		
10.34	Email routing support integration with Microsoft Exchange 2003 or Microsoft Exchange e2007 or 2010.		
10.35	Agents should be able to automatically resume of e-mail processing on voice disconnect.		
10.36	Agent should be able to save email draft response and resume at a later time.		

9. Technical Specifications – IP Phone

SN	Specifications		Compliance (Yes/No)	Pg. No. of Tech. specs attached
11. IP Phone				
Make				
Model				
11.1	Display	2 line or more, Monochrome display for viewing features like messages, directory		
11.2	Integral switch	10/100 mbps for a direct connection to a 10/100BASE-T Ethernet network through an RJ-45 interface		
11.3	Speaker Phone	Yes		
11.4	Headset	Wired, Cushion Padded Dual Ear-Speaker, Noise Cancelling headset with mouthpiece microphone, port compatibility with IP Phone		
11.5	VoIP Protocol	SIP V2		
11.6	POE	IEEE 802.3af or better and AC Power Adapter (Option)		
11.7	Supported Protocols	SNMP, DHCP, DNS		
11.8	Codecs	G.711, G.722, G.729 including handset and speakerphone		
11.9	Speaker Phone	Full duplex speaker phone with echo cancellation, Speaker on/off button, microphone mute		
11.10	Volume control	Easy decibel level adjustment for speaker phone, handset and ringer		
11.11	Phonebook/ address book	Minimum 100 contacts		

SN	Specifications		Compliance (Yes/No)	Pg. No. of Tech. specs attached
11. IP Phone				
11.12	Call Logs	Access to missed, received, and placed calls. (Minimum 20 overall)		
11.13	Clock	Time and Date on display		
11.14	Ringer	Selectable Ringer tone		
11.15	Directory Access	LDAP standard directory		
11.16	QoS	QoS mechanism through 802.1p/q		

10. Technical Specifications – UTP Components for LAN Connection

SN	Specification	Compliance (Yes/No)	Pg.No. of Tech. Specs attached
12	**UTP Components for LAN Connection**		
Make Offered			
Model Offered			
	- All UTP Components should be from the same OEM		
12.1	**UTP CAT6 Cable**		
	Features		
	- Four pair Unshielded Twisted Pair Category 6, TIA/EIA 568-C.2 (1 Gigabit)		
	- Cable should be CM rated		
	- Performance Characteristics should be tested with 600MHz.		
	- 23 AWG copper cable with integral cross member pair separator and LSZH (Low smoke zero halogen) sheath		
	- Shall support network line speed up to 1Gbps		
	- ETL verified to TIA/EIA 568- C.2 (1Gigabit) Cat 6 or physical & Electrical specifications/standards		
	- Length printed on the outer jacket of the cable after every meter		

SN	Specification	Compliance (Yes/No)	Pg.No. of Tech. Specs attached
12	**UTP Components for LAN Connection**		
	- Fire Rating: IEC 60332-1		
12.2	**Information/Outlets (I/O)**		
	- TIA/EIA-568-C.2 Component Compliant (1Gigabit) standard or higher		
	- Surface mount box with single RJ45 socket to terminate UTP CAT 6 Cable		
	- Gold plated contact surface		
	- I/O Should have integrated Spring-Loaded Shutter for dust protection.		
	- Provision of labelling icons and strips		
12.3	**24 Port Patch Panel**		
	- Should Be made of cold rolled steel, in 24 port configurations.		
	- Have port identification numbers on the front of the panel.		
	- Each port / jack on the panel should be individually removable on field from the panel with spring loaded shutter for dust protection		
	- The Cat-6 transmission performance follows the ANSI/TIA/EIA 568C.2 standard		
12.4	**Patch Cord (1Mtr & 3Mtr)**		
	- Length: 1 Meter and 3 Meter		
	- Four pair 24 AWG Copper Cable with integral cross member pair, and factory moulded RJ-45 plugs at both ends, LSZH sheath		
	- ISO/IEC 11801:2002, TIA568-C.2 Cat 6 for physical & Electrical specifications /standards or higher		
12.5	**Network Rack- 42 U**		
	- Should be with increased depth of minimum 800 mm for effective network and power cable management		
	- The rack should have Floor mount provisions		

SN	Specification	Compliance (Yes/No)	Pg.No. of Tech. Specs attached
12	**UTP Components for LAN Connection**		
	- Cabinet built should be of Aluminum extruded profile metal finish.		
	- Rack should have horizontal cable/wire manager with accessories		
	- Should have front glass door with proper lock system		

11. Technical Specifications – 10KVA Online UPS

SN	Specifications	Requirement	Compliance (Yes/ No)	Pg.No. of Tech. Specs attached
15	**10 KVA Online UPS**			
Make Offered				
Model Offered				
15.1	Capacity (in kVA / kW)	10kVA/10kW 1-Phase Input / 1-Phase Output		
	Technology and Capability			
15.2	Online Double Conversion	True Online configuration with double conversion UPS & Zero transfer time.		
15.3	DSP Based System **(Mandatory)**	DSP based control with advanced technology.		
15.4	Wide Input voltage Range	Wide Input voltage range from (100 ~ 280VAC)		
15.5	Auto Restart & Battery Independent	Auto restart capability with the Independent battery bank operation of the UPS.		
15.6	Designed Power Factor 1 **(Mandatory)**	UPS should be designed at Rated PF of 1 i.e. 10kVA/10kW UPS		

SN	Specifications	Requirement	Compliance (Yes/ No)	Pg.No. of Tech. Specs attached
		rating.		
15.7	Generator & Cold start compatibility	Generator compatibility with cold start and AC start features.		
15.8	Fully Rated Power (kVA=kW) **(Mandatory)**	Fully rated power (kVA=kW) for maximum power availability.		
15.9	N+X Upto 4 Systems **(Mandatory)**	Possibility of enhancing UPS capacity / redundancy by operating UPS in N+X Parallel. Redundant Configuration up to 4 units.		
15.10	PFC & Inverter Based Technology	UPS should have topology for both PFC (power factor correction) &inverter based technology.		
	Input			
15.11	Input facility - Phases / Wires	Single-Phase / 2-Wire &Gnd (1Phase & Neutral + Ground)		
15.12	Nominal Voltage	200/208/220/230/240 VAC		
15.13	Nominal Voltage Range	200/208 (de-rating to 90%) : 100VAC~280 VAC 220/230/240 : 100Vac~280 VAC		
15.14	Nominal Input Frequency	50/60Hz ± 10Hz (Auto Selectable)		
15.15	Input Frequency Range	40 to 70 Hz		
15.16	Input Power Factor	> 0.99(full load)		
15.17	Generator	Compatibility to genset		

SN	Specifications	Requirement	Compliance (Yes/ No)	Pg.No. of Tech. Specs attached
	Compatibility	supply required		
15.18	Input Protection	Should be provided at the input of the UPS suitable for the full rated capacity of the UPS.		
	Output			
15.19	Nominal Output voltage	200/208/220/230/240 VAC		
15.20	Output Voltage Regulation	± 1% for linear load		
15.21	Nominal Output Frequency	50/60Hz ±0.05 Hz		
15.22	Output Frequency Regulation	± 0.1Hz		
15.23	Output Wave Form	Pure sine wave		
15.24	Output Voltage Distortion (THD)	< 3% for linear load.		
15.25	Crest Factor	3:1 On Full Load (Minimum)		
15.26	Output Short circuit Protection	Electronic Protection		
	Efficiency (At Nominal Voltage & Resistive Load up to kW rating of UPS)			
15.27	Overall Efficiency (AC to AC) - Online (Double Conversion)	Up to 95% (on 100% load)		
15.28	ECO Mode Efficiency	98%		
	Overload			
15.29	Inverter Overload capacity	<105%for Continuous,<105~<125f or 2Min,<125~<150for 30Sec		
	Display Panel (In-build LC Display &LED)			

SN	Specifications	Requirement	Compliance (Yes/ No)	Pg.No. of Tech. Specs attached
15.31	**Measurements** (On LCD)	Input: Voltage &Frequency, Bypass: Voltage &Frequency, Output: Voltage, frequency, Kilowatt &kVA, Battery: Remaining time & Battery Level Indicator, Load Percentage & Load Level Indicator, Ambient temperature.		
15.32	**Indications** (LED)	Green & Red (For output & Fault)		
	Alarms			
15.33	Audible Alarms	Replace Battery, Overload warning & shutdown, HighTemp, Low Battery, High Temp warning & shutdown		
	Battery Backup / Battery Bank & Charger			
15.34	Backup Required	60 Minutes		
15.35	Battery Bank Voltage	240 VDC **Setable from (192-264 VDC)**		
15.36	Batteries Type	Sealed Maintenance Free (SMF) - 12V Cells, VRLA, AGM		
15.37	Battery Makes	Amara Raja / Exide / HBL / Amco / Rocket		
15.38	Number of Battery Banks	Single Bank system.		
15.39	Battery recharge time (After complete discharge) to 90% capacity	8 -10 hour to 90%		
15.40	Battery Housing (Vendor to provide the GA drawings of the offered Battery	Should be compact and space saving **MS steel open racks** complete with interconnectors		

SN	Specifications	Requirement	Compliance (Yes/ No)	Pg.No. of Tech. Specs attached
	Rack)			
15.41	Battery End Cell Voltage	1.75 V/cell		
	Interfaces			
15.42	Serial Communication RS232 Port **(Mandatory)**	RS232 Port should be provided as standard in the UPS.		
15.43	USB port available **(Mandatory)**	However there should be provision for USB port also in the UPS.		
15.44	REPO port available **(Mandatory)**	However there should be provision for REPO port also in the UPS.		
15.45	**Restart / Testing Capability**			
15.46	Automatic Restart	UPS should start up automatically on mains resumption after battery low shutdown		
15.47	Self-Diagnosis	UPS should be capable to carry out self test of Rectifier / Charger /Battery & Inverter module during start-up		
	Physical			
15.48	Normal Operating Temperature	0 to 40 deg C		
15.49	Storage Temperature	-15 to 50 deg C		
15.50	Operating Humidity	5% ~ 95%RH (No Condensing)		
15.51	Operating Altitude	0-1000m		
15.52	Type of Cooling	Forced Air		
15.53	Noise Level should reduce with Load **(Mandatory)**	< 50 dbA at 1 meter distance		
15.54	Form Factor	Tower mountable		

SN	Specifications	Requirement	Compliance (Yes/ No)	Pg.No. of Tech. Specs attached
15.55	Dimension (w x d x h) in mm	190x390x325mm		
15.56	Reliability	MTBF greater than 100000 hours		
	Certifications			
15.57	Manufacturer	**QMS:** As per ISO 9001: 2008 **EMS:** As per ISO 14001: 2004		

12. Technical Specifications – Desktop

SN	Component	Description	Compliance (Yes/No)	Pg. No. of Tech. specs attached
16	**Desktop**			
Make Offered				
Model Offered				
16.1	Processor	9th Generation Intel Core i5 9500 or better, with 6 core, 9MB cache 3.0GHz		
16.2	Chipset	Latest Generation business class Chipset (B360/H370/Q370/B365) compatible with the above processor.		
16.3	Motherboard	Motherboard make from the same Desktop OEM (OEM logo must be embossed in the motherboard)		
16.4	Memory	Minimum 8 GB with support for expansion up to 32 GB or higher.		
16.5	RAM Type	DDR4 with 2666 MHz or higher.		
16.6	DIMMs & Expansion Slots	2 DIMM slots or higher, minimum 2 PCIe series expansion slots and 2 x M.2 slots.		

SN	Component	Description	Compliance (Yes/No)	Pg. No. of Tech. specs attached
16.7	Monitor / Display	Minimum 21.5" FHD TFT monitor with minimum 1 x VGA & 1 x HDMI port		
16.8	Hard Disk Capacity	At least one single disk of Min 1 TB with 7200 rpm or higher.		
16.9	Graphics	Integrated Graphics (UHD / 4K).		
16.10	Network	10/100/1000 on-board integrated Network Port.		
16.11	USB / HDMI / VGA Ports	Integrated USB Port : Minimum 8 nos. (Min 4 nos. of 3.1 Gen-1), out of 8 Nos minimum 4 in front, 4 in back and should be easily accessible.		
		Integrated HDMI Port : Minimum 1 no; Should be easily accessible.		
		Integrated VGA & Display Port : Minimum 1 no each ; Should be easily accessible.		
16.12	Audio	Integrated Audio controller with Internal speaker		
16.13	Cabinet	Tool less chassis with 10 litters or lesser in volume		
16.14	SMPS	Minimum 200 W or above. Should be capable of supporting fully configured PC.		
16.15	Production Unit, Certification and Compliance	FCC , UL , TCO and EPEAT certification for both monitor and desktop , Microsoft Windows 10		

SN	Component	Description	Compliance (Yes/No)	Pg. No. of Tech. specs attached
		Professional and Ubuntu Certification for the quoted desktop model		
16.16	Operating system	Microsoft Windows 10 Professional 64 Bit , with latest Service Pack Preloaded License, . Systems Hardware driver should be available in OEM website against the offered model		
16.17	**Security**	Hardware based TPM 2.0 , chassis Intrusion switch / Intrusion Sensor with chassis physical security cable lock slot.		

13. Technical Specifications – FHD LED Monitor for Desktop (Additional for Same OEM)

SN	Description	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
17. Additional FHD TFT Monitor for desktops				
17.1	**Panel size**	21.5”		
17.2	**Brief Description**	21.5" IPS FHD Borderless VGA + HDMI + DP + USB Hub (4+1) + Audio Out + LTPS		

14. Technical Specifications – Multi Function Printer

SN	Item Name	Features	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
19	**Multifunction Printer**				
Make Offered					
Model Offered					
19.1	Printer Type		Print ,Scan, Copy , Fax With ADF		
19.2	Printing	Printing	Precision Core Heat -		

SN	Item Name	Features	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
		Technology	Free Technology		
19.3		Print Direction	Bi-directional Printing , Uni -directional Printing		
19.4		Print Speed	Up to 24 ipm /24ipm Simplex (Black/ Colour)		
19.5			Up to 15 ipm/15 ipm Duplex (Black/Colour)		
19.6		Automatic 2 sided Printing	Yes (Up to A4)		
19.7	Copying	Copy Speed (A4)	Up to 22 ipm/22ipm Simplex (Black/Colour)		
19.8		Copy Quality	Text , Text & Image , Text & Image (Best),Photo		
19.9		Maximum Copy Resolution	600X1200dpi		
19.10		Maximum Copy Size	A4, Letter		
19.11	Scanning	Scanner type	Flatbed Colour Image Scanner		
19.12		Optical Resolution	1200X2400dpi		
19.13		Scan Speed Flatbed/ADF (Simplex)/ ADF Duplex	5.0sec/30ppm/ 60ipm (Monochrome) 5.0sec/30ppm/60ipm		
19.14		Paper Capacity	50 Pages		
19.15	Card Slot/USB Host	USB Host	USB Host (Scan to Memory Device/Storage Function)		
19.16		Type of Direct Printing	USB Memory		

SN	Item Name	Features	Specifications	Compliance (Yes/No)	Pg. No. of Tech. specs attached
19.17	Interface	USB	USB 2.0		
19.18		Network	Ethernet ,Wi-Fi , IEEE 802.11g/n ,Wi-Fi Direct		
19.19		Security Function	Limit Access Function, Pin No. Certification LDAP Address Book , IP Address ,Panel Admin Mode		
19.20	Mobile &Cloud Printing		Mobile Printing and other feature required		
19.21	Control Panel	LCD Screen	4.3" TFT Colour Touch LCD		
19.22	Printer Software	Operating System compatibility	Windows XP /Vista /7 /8/8.1/10, Windows Server 2003 /2008 /2012 /2016 ,Mac OS		

i. **Internet Connectivity:** The ICCC shall have dedicated connectivity for display/monitoring of real time vehicle data at centralized command Centre, call logging and any other operational requirements of ICCC. The SI should size the internet connectivity considering overall load, integration points and number of vehicles to be tracked. The SI should also provision for redundant internet connectivity for failover situations.

6.3 Non-Functional Requirement

The non-functional requirements relating to performance, availability, deployment, implementation, operations and others are listed in the subsequent subsection. Based on the assessment of the requirements listed below,

SN	Parameter	Requirement
1	Performance	Application should comply with defined SLAs.
2	Scalability	System should be able to handle the increase load as the user base is expected to increase. The system provides for horizontal scalability in such a manner that a new server can be added (or removed) dynamically, as and when required in future, without disturbing the normal functioning of production system
3	Availability	The system shall provide 24 X 7 availability and comply with SLA
4	Reliability	Application must be a reliable system with consistent behaviour in terms of quality, availability, scalability, and performance. System should be able to handle the unavailability of any service. If the service is "core" to the use case an outage message can be displayed. If the service is "non-core" then the transaction should be able to be completed. Exception handling needs to be built into all components so that all exceptions and errors are trapped and handled properly. Error information should include enough details to accurately describe and debug the problem. All data that is accepted from the end-user or sent in via HTTPS request will be validated on the server before it is used in processing to ensure that the data type and ranges are appropriate.
5	Manageability	Application is required to cater to stakeholders across the state accessing it from multiple points and through multiple channels. Hence the manageability of this system is essential to ensure effective monitoring and timely resolution of any issues surrounding performance, availability and security.

SN	Parameter	Requirement
6	Usability	The application and user interface should be user friendly and any new user who is not tech-savy must be able to easily use functionalities offered by the system. Error messages or pop ups must be helpful to an extent that user can take next action and does not experience too much of discomfort. User interface must be simple yet user-friendly, and the workflow should be intuitive so that user can complete their work with least time and effort.
7	Acceptance Testing, Audit & Certification	The primary goal of acceptance testing, audit and certification is to ensure that the VTS application system meets requirements, standards, and specifications as set out in this document and as needed to achieve desired outcomes. This assessment shall be done by STQC / Cert-in as per the scope of work and selected bidder will bear the third-party auditing charges.
8	Technical Solution Architecture Requirements	Solution needs to be architected using robust and proven software and technology. Minimum requirement is Service - Oriented Architecture (SOA) and open industry standards. The solution architecture should be built on sound architectural principles enabling fault-tolerance, high performance, and scalability both on the software and infrastructure levels.
9	Software Architecture Requirements	Software architecture must support web services standards including XML, SOAP, UDDI and WSDL Software architecture must support appropriate load balancing for scalability and performance Software architecture must support flexibility in adding functionalities or applications. Software architecture components should utilize the high availability, clustering, and load balancing features available in the proposed infrastructure architecture to increase system performance and scalability features. Software architecture must support trace logging, error notification, issue resolution and exception handling.
10	Infrastructure Architecture Requirements	Infrastructure architecture at cloud must provide high availability redundancy and high availability

SN	Parameter	Requirement
		capabilities as well as disaster recovery at the hardware level. All servers and systems must be configured with no single point of failure. Hardware architecture should be capable of consolidating several applications / workloads in a number of servers as required. Servers must be placed within proper security infrastructure for the Solution. The technical solution architecture for VTS application should be sound and complete with high performance, redundancy, and scalability.
11	Development, Testing, Staging, and Production Requirements	Appropriate development, test, and staging environments should be provided and explained how they are related to production environment. This must be supported by explanations on how the development, test, and staging environment . Development and test environment should include configuration management capabilities and tools for system configuration, versioning scheme, documentation, change control processes and procedures to manage deployment of solution deployment. The test, development, and staging environment should include required workstations, desktops/laptops, and tools appropriate to support development, testing, and staging, and deployment tasks. The development, test, and staging hardware environments must include similar operating systems, software components, products, and tools to those of production environment. The development, test, and staging environments should be independent logically and physically from the production environment and of each other. The development environment should be used for development and should be configured to allow access for developer's workstations. The staging environment should be used for functional and user acceptance testing, stress testing, and performance benchmarking.

SN	Parameter	Requirement
12	Security	A secure solution should be provided at the hardware infrastructure level, software level, and access level. Authentication, Authorization & Access Control (User ID & Password and Digital Signature at all user level) security mechanisms should be implemented to enable secure login and authorized access to portal information and services. Confidentiality of sensitive information and data of users and portal information should be ensured. Appropriate mechanisms, protocols, and algorithms necessary to protect sensitive and confirmation data and information both during communication and storage should be implemented. SI is responsible for SSL certificate.
13	Monitoring and Management Requirements	Solution should provide monitoring and management of the entire Solution including all software components and application. The monitoring and management should monitor health of software and hardware infrastructure running the operating system, database, software components, applications, servers, and other related software and hardware components. It should provide proactive monitoring, alerting and reporting.
14	Performance and Scalability Requirements	The design of the solution should be scalable to handle increasing number of users. The solution should provide measurable and acceptable performance requirements for users, for different connectivity bandwidths. The solution should provide optimal and high-performance Portal Solution satisfying response time for slow Internet connections and different browsers.
15	Implementation Requirements	The selected bidder will be required to deploy manpower and other project resources as per the terms & conditions of the Contract. The selected bidder will be required to work closely with the Department and perform detailed functional requirements and analysis of VTS solution to confirm and document functional / system requirement

SN	Parameter	Requirement
		specifications for the portal and its applications to fulfil its objectives. The selected bidder will be expected to carry the complete implementation and deployment of the VTS within the timelines specified in the RFP. The selected bidder is expected to develop, test, stage, and deploy all functional modules of the VTS software and any hardware components of technical & functional requirements.
16	Operations Requirements	The selected bidder is expected to provide the following in support of VTS 2.0 operations: Selected bidder shall provide procedure documentation for all operations procedures, and SLA‟s (based on ITIL best practices) for all the hardware and applications provided including backup procedures, system update procedures, security procedures, failure recovery procedures, upgrade procedures, remote access procedures, user manual, SOP‟s, etc. All such procedures and documents must be submitted for review and approval by the Department/CHIPS prior to adoption. Such documentation shall be updated by the during the project term by the bidder as and when required along with the necessary approval. Selected bidder will be required to provide Department/CHIPS with weekly statistics reports on the various services provided to users a mechanism as well as track and log all related statistical reports on the various delivery channels and access patterns. Selected bidder will be required to provide Department/CHIPS with weekly portal performance reports showing health of system operations. Selected bidder will be required to provide Department /CHIPS with Helpdesk for recording all day to day problems and other technical incidents occur during the O&M phase. This shall also record the resolution of such incidents & problems. Selected bidder will be required to commit to Service Level Agreements (SLAs) that show, among other metrics, appropriate escalation procedures and guarantee corrective actions within a pre-determined

SN	Parameter	Requirement
		time. Selected bidder is required to respond to required levels of accuracy, quality, completeness, timeliness, responsiveness, cost-effectiveness, productivity and user satisfaction that are equal to or higher than the SLA system requirements.
17	Quality Assurance & Acceptance Requirements	Selected bidder is required to develop and implement quality assurance processes and procedures to ensure that the VTS development and operations are performed to meet the quality standards that are relevant to each area in all project phases. Selected bidder is required to use various tools and techniques that can make tests run easily and the results are automatically measured. In this way, testing tools provide a more cost- effective and efficient solution than their manual counterparts. Plus, they minimize the risk of human error during testing. In order to ensure that such a QA mechanism is effective and acceptance of VTS, the following tests are required for acceptance: Unit Testing: Basic validation of developed components by developers. Functional / Internal Integration Testing: Validation of developed components against functional requirements and design specifications. System Testing: Validation of both functional and technical requirements for the integrated Solution. This could include external integration if required or it can be separated into testing phases. UAT: User Acceptance Testing (UAT) validation of the Portal Solution and assurance that it meets both functional and technical requirements Stress and Performance Testing: Load testing enabling understanding of performance and behaviour of Portal Solution under large number of users and high-load conditions. Selected bidder is required to describe their QA and testing approaches and procedures as well as testing tools for conducting various tests in support of the acceptance of the Portal Solution. Selected bidder is expected to follow CMMi level 3 or above processes. Selected bidder is required to describe their QA and testing approaches and procedures as well as testing

SN	Parameter	Requirement
		tools for conducting various tests in support of the acceptance of the Portal Solution.
18	Mobile Application Platform Capability	VTS applications and services including all appropriate channels and development of corresponding mobile applications to the VTS applications and services leveraging the Mobile Service Delivery Gateway (MSDG) and Mobile App Store. Application platform should support the following smart phone mobile OS (Android & iOS) Support the target packaging components like (Mobile Website, Native App, Web App and Application Development, Eclipse tooling platforms) Support the ability to write code once and deploy on multiple mobile operating systems Support integration with native device API Support utilization of all native device features Support development of applications in a common programming language Support integration with mobile vendor SDKs for app development and testing Support HTML5, CSS3, JS features for smartphone devices Support common protocol adapters for connection to back office systems (i.e. HTTP, HTTPS, SOAP, XML for format) Support JSON to XML or provide XHTML message transformations Support multi-lingual and language internalization Support encrypted messaging between server and client components SI will be responsible for SSL certificate as well as hosting and maintenance charges for mobile App in Android and iOS platform
19	General Requirements	Modularity

SN	Parameter	Requirement
		The system should be modular in design New application components can be integrated with the system to accommodate a phased implementation and take advantage of new technological advances Once implemented, the system must be able to easily expand to include new capabilities without negatively impacting previously implemented functionality Proposed software should not disturb the customization done specifically for Department during upgrade to higher release or implementation of additional packs. <u>Administration</u> Includes administrative feature to monitor utilization, trace database access chains, optimize schema and sub-schema definitions, and optimize file placement and layout Permits system audits to determine who has used the system recently and what changes have been made Keeps a daily transaction journal for recovery purposes should that become necessary Statistics should be available on database access rates (both update and query) by program, terminal, ID, and by time of day etc. <u>Documentation</u> Specific elements of documentation that must be available with the system including User Manuals/ handouts (both soft and hard copy) <u>User Interface</u> Application should have consistent look and feel across family of software applications Consistent and logical navigation flow and tool-tip information wherever relevant Uses standard GUI features (e.g., drop-down menus, dialog boxes, toolbar buttons) Data formats are consistent throughout application windows Controls on page must respond properly to Tab order Interface recovers gracefully from anticipated user errors (e.g., invalid input)

SN	Parameter	Requirement
		Information and error messages are useful, accurate, and correctly spelled Unnecessary warnings do not appear <u>Reporting</u> All modules of the solution comprise of comprehensive reporting facilities with standard Reports that confirm to the best practices and benchmarks of related functional area Dynamic and interactive reporting using prompts to allow end users to select filter conditions to be used at run-time Able to run the reports in a browser-based environment Able to seamlessly export data into Microsoft Excel or MS word for further analysis and extended reporting Able carry out multiple sorting and apply extensive selection criteria Able to provide details/summarized reports and cross analysis of each module and sub module of the solution Each report offers category totals and grand total figure wherever applicable/specified Reporting software shall include the ability to generate graphs and charts based on criteria and format defined by Department /CHiPS System shall allow users to capture and export the current display through electronic reports and in different printer-friendly formats, including, at a minimum, MS-Excel, PDF, and Web formats.

Selected bidder shall prepare System Requirement Specifications (SRS) and obtain a formal sign-off before proceeding development of the solution.

6.4 Design Principles and Guidelines

Adherence to guidelines and standards:

Open Standards - system must be designed open standards, to the extent feasible and in line with overall system requirements set out in this RFP, in order to provide for good interoperability with multiple platforms and avoid any technology or technology provider lock-in.

Industry standards - The proposed solution/ components must be based on and compliant with latest industry standards (wherever applicable). This will apply to all the aspects of

solution including but not limited to design, development, security, installation, and testing. There are many standards that are indicated throughout this volume as well as summarized below. However, the list below is just for reference and is not to be treated as exhaustive.

Solution Component/ application/ System	Standards
Accessibility	Accessibility - Web Content Accessibility Guidelines (WCAG) 2.0
HTML	HTML5.0 CSS 3.0
Mobile	W3C
Web portal	GIGW W3C JSR
Email	Multipurpose Internet Mail Extension (MIME)
Business processes Management	BPEL BPMN 2.0
Data exchange and interoperability	SOAP WSDL 2.0 ebXML XSLT 2.0 SAML SSL 3.0
Data modelling and management	UML, XML, JSON

- The Solution/Product proposed by the selected bidder should be integrated solution covering all the modules and features mentioned in scope or as finalized by Department/CHiPS using same database platform.
- Application should be IPV6 Compliant.
- Application should be responsive.
- Capacity to work in distributed environment and auto data sharing facility in timely manner, which to be available for monitoring purpose.
- Compatible to operate in any location and provide real time transactional data on mineral dispatch and transportation.
- The user presentation layer of the solution should be very simple to operate at the end user level.

- The system should have compatible for further customization.
- The system should be scalable, so that addition of upcoming locations and users should not be a constraint.
- The system should have provision for seamless integration.
- System should provide a dashboard for department heads and senior officials.
- All the proposed solutions components must be seamless integrated real-time on the same platform to allow interoperability.

Guidelines - The selected bidder should adhere to relevant guidelines issued by MeitY, CERT-IN and Government of India including but not limited to:

i. Information Technology Act 2000 (revised 2008) (http://www.meity.gov.in/content/information-technology-act)

ii. CERT-In security guidelines for Indian Government websites (http://www.cert-in.org.in/)

iii. E-SAFE Guidelines for Information Security (http://egovstandards.gov.in/)

iv. e-Governance Standards for Preservation Information Documentation of e-Records (http://egovstandards.gov.in/)

v. Guidelines for Indian Government Websites (http://egovstandards.gov.in/)

vi. Guidelines for architecture (https://negd.gov.in/india-enterprise-architecture)

vii. Any other standards deemed necessary

6.5 Security

Provide and Implement additional Security Elements at the Database and access levels such as:

a) Role based data access.

b) Support for centralized identity and access control and policies that will be managed and monitored by Department to prevent ad-hoc access to the production data by-passing the application

c) Audit trials to provide comprehensive auditing for inserts/ deletes / updates / selects. The solution should provide for alerts and/or customizable reports to quickly spot and respond to security breaches.

d) The proposed solution should include design and implementation of a comprehensive security policy in line with ISO 27001 standards to comply with the security requirements mentioned in this section. All the necessary procedures / infrastructure / technology

required to ensure compliance with security policy should be established by the selected bidder and should be approved by the Department /CHiPS before they are implemented. The Policy shall include all aspects such as physical and environmental security, human resources security, backup and recovery, access control, incident management, business continuity management etc.

e) The proposed solution should ensure proper logical access security of all the information Assets

f) The proposed solution should be able to classify information assets according to criticality of the information asset.

g) The proposed solution should provide security including identification, authentication, authorization, access control, administration and audit and support for industry standard protocols

h) The proposed solution should have a security architecture which adheres to the security standards and guidelines such as

- ISO 27001
- Information security standards framework and guidelines standards under e-Governance standards (http://egovstandards.gov.in)
- Information security guidelines as published by Data Security Council of India (DSCI)
- Guidelines for Web Server Security, Security IIS 6.00 Web-Server, Auditing and Logging as recommended by CERT-In (www.cert-in.org.in)
- System shall comply with IT (Amendment) Acts.
- Any other standards deemed necessary

i) The proposed solution should support the below Integration security standards:

- Authentication
- Authorization
- Encryption
- Secure Conversation
- Non-repudiation
- SOAP/ XML Firewalls
- Security standards support

- WS-Security 1.0
- WS-Trust 1.2
- WS-Secure Conversations 1.2
- WS-Basic Security Profile

j) The proposed solution should a multi-layered detailed security system covering the overall solution needs having the following features:

- Layers of firewall
- Network IPs
- Enterprise-wide Antivirus solution
- Information and incident management solution for complete Department /CHiPS landscape
- Two factor authentications for all administrators i.e. system administrators, network administrators, database administrators.

k) Audit Log Analysis

l) Selected Bidder must ensure that the security solution provided must integrate with the overall system architecture proposed

m) The proposed solution should be monitored by periodic information security audits /assessments performed by or on behalf of the Department /CHiPS. The scope of these audits / assessments may include, but are not limited to, a review of access and authorization procedures, physical security controls, backup and recovery procedures, and program change controls.

n) To the extent that the Department /CHiPS deems it necessary to carry out a program of inspection and audit / assessment to safeguard against threats and hazards to the confidentiality, integrity, and availability of data, the selected bidder shall provide the DEPARTMENT/CHiPS's representatives access to its facilities, installations, technical resources, operations, documentation, records, databases and personnel. The selected bidder must provide DEPARTMENT/CHiPS access to various monitoring and performance measurement systems (both manual and automated). DEPARTMENT/ CHiPS has the right to get the monitoring and performance measurement systems (both manual and automated) audited / assessed without prior approval / notice to the selected bidder.

o) The proposed solution should facilitate system audit for all the information assets to establish detective controls. The selected bidder is required to facilitate this by producing and maintaining system audit logs for a period agreed to with DEPARTMENT/CHiPS.

p) The proposed solution should provide database security mechanism at core level of the database, so that the options and additions to the database confirm the security policy of the DEPARTMENT/CHiPS without changing the application code.

q) The proposed solution should support native optional database level encryption on the table columns, table spaces or backups.

r) The database of the proposed solution should provide option for secured data storage for historic data changes for compliance and tracking the changes.

s) The proposed solution should be able to ensure the integrity of the system from accidental or malicious damage to data

t) The proposed solution should be able to check the authenticity of the data entering the system

u) The proposed solution should be able to monitor the IP and MAC ID address of the system from where a request is received.

v) Retention periods, archival policies and read-only restrictions must be strictly enforceable on all logs maintained in the system

w) The proposed solution should provide ability to monitor, proactively identify and shutdown the following types of incidents through different modes of communication (email, SMS, phone call, dashboard etc.):

- Pharming
- Trojan
- Domains (old/new) etc.

x) The proposed solution should be able to monitor security and intrusions into the system and take necessary preventive and corrective actions.

y) The proposed solution should have the option to be configured to generate audit- trails in and detailed auditing reports

z) The proposed solution should be designed to provide for a well-designed security of physical and digital assets, data and network security, backup and recovery and disaster recovery system.

aa) The proposed solution should have tamper proof data storage to prevent unauthorized data tampering

bb) The proposed solution should have a Business Continuity Plan and a Disaster Recovery Plan prepared and implemented by the selected bidder before commencement of the operations. Robust backup procedures to be established for the same.

cc) The proposed solution should be able to automatically check the passwords with the Govt. of India IT password policy, which can be customized by DEPARTMENT/CHiPS.

dd) The proposed solution should enforce changing of the default password set by the system (at the time of creation of user ID) when the user first logs on to the system. The proposed solution should enforce all password policies as defined at the time of first change and thereafter.

ee) The proposed solution should store passwords in an encrypted format.

ff) Passwords must be encrypted using MD5 hash algorithm or equivalent (selected bidder must provide details).

gg) The proposed solution should be capable of encrypting the password / other sensitive data during data transmission.

hh) The proposed solution should ensure that the user web access shall be through SSL (https) only for all level of communication for providing higher level of security.

6.6 Project Management

Project needs to be well managed. The management of time, cost, scope, risk, communication, human resources, quality and integrations are important factors in a project. The SI shall deploy adequate project management skills to effectively manage the project.

The System Integrator shall address at the minimum the following:

- Construct a project plan schedule, activities, including milestones.
- Establish and measure resource assignments and responsibilities.
- Scope Management
- Time Management
- Quality Management
- Human Resource Management
- Communications Management
- Risk Management
- Coordinate and collaborate with various stakeholders including the DEPARTMENT / CHiPS concerned, Lessee, Licensee, End Users etc.
- Measure project deadlines and performance objectives.
- Communicate the project plan to stakeholders with meaningful reports.
- Provide facility for detecting problems and inconsistencies in the plan.

Selected bidder is required to specify and describe the different phases and activities of the project. It is very important for the DEPARTMENT/CHiPS that the selected bidder provide a quality implementation plan covering all aspects of the project. The plan shall clearly specify the start and end dates (relative to contract signing) of each of the project phases specifying key milestones allowing visibility of project progress. During the project implementation the System Integrator shall report DEPARTMENT / CHiPS, on the following items

a. Weekly status reports and statistics. These reports would be required to be shared with either the DEPARTMENT / CHiPS.
b. Results accomplished during the period.
c. Cumulative deviations to date from schedule of progress on milestones as specified in this RFP / with the agreed and finalized Project Plan
d. Corrective actions to be taken to return to planned schedule of progress

e. Proposed revision to planned schedule provided such revision is necessitated by reasons beyond the control of the SI

f. Other issues and outstanding problems, and actions proposed to be taken

g. Interventions which the SI expects to be made by the DEPARTMENT / CHiPS and / or actions to be taken by the DEPARTMENT / CHiPS before the next reporting period.

h. Scope Management to manage the scope and changes through a formal management and approval process.

i. Risk Management to identify and manage the risks that can hinder the project progress.

j. Selected bidder shall provide a comprehensive warranty that covers all components during entire contract period VTS application. The warranty should cover all materials, licenses, services, and support for both infrastructure and software. Selected bidder shall administer warranties with serial number and warranty period. During exit process and final acceptance by DEPARTMENT, all OEM warranties will be transferred to the DEPARTMENT at no additional charge. All warranty documentation (whether expired or not) will be delivered to Department based on which final acceptance and project closure certificate will be issued to bidder.

k. Selected bidder is required to provide Premium Level warranty and support through the vendor for all infrastructure and software used for VTS application which should be adhere to the SLA requirement of the RFP. Selected bidder‟ warranty must cover all equipment and work activities contained in the contract against all design, manufacturing, and environment faults during the contract period.

l. The date of manufacture or assembly of any equipment, parts or consumables, shall not be more than six months before delivery.

m. CHIPS/DEPARTMENT has the right to require a replacement if the repair is deemed to be impractical.

n. Selected bidder ensures that replacement components shall be available for any failed component during the warranty period.

o. Selected bidder shall guarantee the availability of spare parts and technical assistance for all components (or appropriate alternatives) to ensure the equipment would run for at least two (2) years, without major changes, at the completion of final acceptance. Six months advance notice is required on any discontinued part(s) with a suggestion for alternatives.

p. Selected bidder is required to provide additional training if the satisfaction levels/ learning does not reach 80% in evaluation/feedback from trainees

q. The application & infrastructure being provisioned by the bidder shall be insured. The Goods supplied under the Contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery for the entire project term.

r. Selected bidder is required to explain their warranty, maintenance procedures, and support to meet the terms and requirements outlined above.

s. Define IT Change Management process, Incident Management process – covering identification, response, escalation mechanisms.

t. The SI shall work closely with the DEPARTMENT / CHiPS to update and maintain the Project Plan throughout the duration of the engagement. The project plan update should take into account the experience of earlier implementation phases. All changes are to be reviewed and approved by the DEPARTMENT or appointed representatives.

6.7 Exit Management

Under the SI Exit Management Plan, SI shall provide following minimum activities to incoming new SI or any other authorized person:

a) Provide control of all IT assets including hardware, software, licenses, warranty, source code, credentials and knowledge base

b) SI to ensure availability of all the documents/files/knowledgebase prior to exit in an updated complete manner with no lacuna or delay in maintaining such records

c) Transfer the knowledge to new SI or authorized representative with documents sharing, application demo, joint code review, credential sharing and explaining the prevailing IT policies and processes followed

d) Allowing new SI or authorized representative to shadow for specified period while continue to deal with reported issues directly

e) Support new SI or authorized representative in tackling reported issues during transition period as specified by DEPARTMENT

f) Support new SI or authorized representative for a period as directed by DEPARTMENT

Following is the summary of key tasks that the SI need to perform during transition period -

i. **Exit Management Plan:** The exit management plan may be suitably modified by the SI to cover all the aspects during the transition period and upon acceptance by DEPARTMENT and CHiPS, will be implemented by the SI.

ii. **Transfer of Assets:** Transfer both IT and non-IT Assets acquired for the VTS application project to the new SI or authorized representative. The list of assets shall cover those under the purview of SI as well as its subcontractors

iii. **Testing:** The SI shall ensure that the system being handed over is tested rigorously before being handed over to the new SI or authorized representative.

iv. **Close critical issues:** The SI shall close all critical open issues as on date of exit. All other open issues as on date of Exit shall be listed and provided to DEPARTMENT / CHiPS.

v. **Risks:** All the risks during transition stage shall be properly documented by the SI and mitigation measures be planned in advance along with the new SI or authorized representative and recorded in the Exit Management Plan so as to ensure smooth transition without any service disruption.

vi. **Transfer of Agreements:** Arrange or provide support for Assignment / Transfer / Novation of Agreements with all the OEMs / contractors / sub-contractors who are being used by the SI in the execution of the VTS application project.

vii. **Provision of Information:** Provide access to information reasonably required to define the current mode of operation associated with the provision of services and also access and copies of all information / data / documentation, prepared or maintained, pertaining to DEPARTMENT, services rendered including but not limited to applications, Business and IT Operations, and other performance data.

viii. **Access Rights:** Provide reasonable rights of access to VTS application, Project Location and premises where assets are located. Provide access to its employees and facilities as reasonably required to understand the methods of delivery of the services employed by the SI and to assist appropriate knowledge transfer.

ix. **Personnel:** Provide a list of all employees (with job titles) of the SI dedicated to providing the services. To the extent that any Transfer Regulation does not apply to any employee of the SI, the SI shall not enforce or impose any contractual provision that would prevent any such employee from being hired by DEPARTMENT or new SI or authorized representative in case an offer of employment or contract for services is made to such employee.

List of Deliverables For Exit Management

SI shall prepare the exit plan with timelines as per the requirements of the DEPARTMENT / CHiPS. Indicative list of deliverables for exit management is mentioned below :

SN	Deliverable
1	System / Network credentials
2	IT Assets IT Asset list with OEM, location and access details Hardware Software Licenses Warranty
3	Up to date Knowledge base: Process Maps Functional Requirement Specification System Requirement Specifications (SRS) High Level Design Document Low Level Design Document ER Diagram Database Schema Logical and Physical Design of database Enhancement log Issues Log User Manuals Test cases SLA reports Risk Assessment Report Onsite project manpower details
4	Working and up to date Source Code
5	Back up data
6	Weekly Report on critical issues fixed during transition period

7	Modified code after fixing critical issue

6.8 Deliverables Sign-Off

Selected bidder, where requested, shall present, explain and provide detailed walkthrough of the deliverables to DEPARTMENT/CHiPS or its nominated agencies and provide clarifications to their queries. The selected bidder may have to revise or enhance the documents listed as deliverable, signed off / approved by DEPARTMENT, without any extra cost, provided that is required to bridge the information gap critical for the projects. The Enhancement Features signed off after successful UAT will be further changed as per Change Control Management module as given in the RFP.

All the responsibilities with respect to operations and maintenance of VTS application processes will be the responsibility of the selected bidder. Any gap that is found in a deliverable with respect to the above, even after the sign-off, will have to be addressed by the selected bidder without any additional cost to DEPARTMENT/CHiPS.

Payments will be released only on satisfactory acceptance of the deliverables for each Task as per Milestones in this RFP.

6.9 Project Timelines

For this purpose, the following implementation plan is envisaged:

T0 - Date of acceptance of Work Order/Agreement

T1 – Date of Site Handover

SN	Milestones	Timeline
1.	Resource Deployment	T0+ 7 days
2.	Requirement Gathering, Preparation & Submission of SRS of VTS application, ICCC setup project plan	T0 + 15 days
3.	Initiation of User Acceptance Testing for VTS application including Mobile Application	T0 + 2 Months
4.	Supply of Equipment (ICCC)	T1 + 2 months
5.	Successful Installation And Commissioning Of ICCC Equipment and Site setup with Interiors	T1 + 3 months

SN	Milestones	Timeline
6.	Configuration, pilot testing of VTS with all empaneled GPS devices (POC) and UAT sign off	T0 + 4 Months
7.	Go live of Application with minimum 100 vehicles successfully onboarded	T0 + 4 Months
8.	Launch of Mobile App for all stakeholders in Android and iOS platform	T0 + 4 Months
9.	STQC / Cert-in certification for complete VTS application	T0 + 5 Months
10.	Operation & Maintenance of VTS application after application is successfully declared Go-Live	2 (Two) Years after VTS application is declared Go Live

7 STAFFING REQUIREMENT for O&M of application

a) Team constitution of O& M

Project Manager – 1 Nos.

- Operational Support Unit (OSU) - 2 Nos
- Helpdesk (24*7, 3 shifts) – 8 Nos

b) Qualification and experience

Minimum qualification and experience required for manpower is listed below

SN	Type of Manpower	Nos	Qualification	Minimum Work Experience
1	Project Manager - Technical	1	B.E. / B.Tech (in relevant stream) / MCA	Shall have at least 8 years of experience of handling similar large projects in VTS Sector
2	Technical Developers	2	B.E. / B.Tech (in relevant stream) / MCA	Minimum 5 year experience in similar IT projects
3	OSU/Technical Helpdesk for ICCC - 24*7, 3 shifts	8	B.E. / B.Tech (in relevant stream) / MCA	Minimum 3 year experience (2 in each shift, additional 2 for roaster management)

Qualification for all the positions will be accepted only from an accredited college / university. Degree through distance learning shall not be considered.

For Development of application, ICCC setup, monitoring and AMC – SI to size and provision accordingly to meet timelines and SLA. For smooth functioning of the system during Operations & Maintenance phase, SI shall carry out own due diligence so as to deploy additional resources (onsite/offshore) to manage the timeline, Service levels or as per .project requirement for eg: Cloud/Infra expert, DBA, Testers, QA etc .

8 SERVICE LEVEL AGREEMENTS

The purpose of this Service Level Agreement (hereinafter referred to as SLA) is to clearly define the levels of service which shall be provided by the System Integrator to DEPARTMENT / CHiPS for the duration of this contract.

a) **Penalty for delay in execution of project:** If SI fails to fulfil the project timelines as per milestones defined in RFP Vol 1, the Purchaser without prejudice to its other rights and remedies under the Contract, penalty at the rate of 0.5% per week of the contract value will be levied for a maximum period of Ten weeks. If the services are not completed even within this Ten-week period, then the contract will be liable for termination, in part or whole, at the discretion of Department/CHiPS and at the risk and cost of the selected Bidder.

b) **Design and User Acceptance Test:** If any variation found in the designing document (SRS) approved by Department/ CHiPS at the time of User Acceptance Test (UAT), a penalty at the rate of 2% of the total value of that contract will be levied and the contract will be liable for termination, in part or whole, at the discretion of CHiPS and at the risk and cost of the successful bidder. CHiPS will pay the actual amount of work after deduction of penalty.

c) **Onsite Maintenance Support:** The successful bidder will provide two Years on-site/ off site maintenance support for the Application and System installed by the bidder. If any issues arrived during the contract period, the successful Bidder shall update/repair within 24 hours of complaint received from the Department/CHiPS office. A penalty of Rs. 2000/- per call beyond 24 hours on Quarterly payment/ Performance Security Deposit will be levied and the contract will be liable for termination in part or whole at the discretion of Department/CHiPS and at the risk and cost of the successful bidder.

d) **Severity Levels & Penalty for support during the contract period:** The Successful Bidder should provide post implementation support for two years. The Selected Bidder shall provide a Help Desk support soft software for logging of complaints by the Department/CHiPS. The system should be able to acknowledge a receipt as a proof of having lodged a complaint by the end user of system. The Selected Bidder shall provide a Call Centre Help Desk Supports at which complaints can be lodged.

   The Selected Bidder should ensure uptime of 99%.The tools to monitor the SLA should be supplied by the System Integrator. The penalties would be levied on the Selected Bidder in the event of downtime attributable to the Selected Bidder exceeds 1%. The Selected Bidder should submit the downtime reports for every quarter clearly indicating the reasons for the downtime.

   SLA for Uptime: For every 1% drop in uptime in each quarter over the required Uptime of 99% a penalty up to 1% of the Quarterly Payment would be liable to be deducted. If the uptime in any quarter is 75% or less due to conditions which are wholly attributable to the Bidder then the purchaser may terminate the contract. A penalty up to 0.5% of the Quarterly

Payment would be liable to be deducted for every day delay in response time or resolution time for any problem logged by the Department /CHiPS. The Selected Bidder will provide Help Desk call logged report every quarter.

* – The time taken by the Selected Bidder to trouble - shoot and fix the problem from the time the call has been logged at the Helpdesk till the time the problem has been fixed.

e) Penalty on Deployment of staff(O&M Team of Section 5):

i) If the successful bidder is unable to deploy any of the resources of the project, a penalty at the rate of 0.5% per week of the corresponding contract value will be levied for a maximum period of eight weeks. If the deployment of personnel is not completed even within this eight-week period, then the contract will be liable for termination, in part or whole, at the discretion of Department/ CHiPS and at the risk and cost of the selected Bidder.

ii) If any of the proposed resources in the bid is not deployed by the successful bidder (except for the reason that resource leaves the organization by submitting resignation with the present employer or physically unfit) a penalty of Rs. 20,000 (Twenty Thousand) per resource will be levied.

Note:

a) Replacement of resources shall generally not be allowed. The replacement of the resource by the bidder will be allowed (with penalty) only in case, the resource leaves the organization by submitting resignation with the present employer or physically unfit or completion of One Year Initial period and requested by Selected Bidder.

b) In case of failure to meet the standards of the Department/CHiPS, (which includes efficiency, cooperation, discipline and performance) bidder may be asked to replace the resource without any penalty for the replacement / exit.

c) The replaced resource will be accepted by the Department/CHiPS only if he/she qualification / experience is same or more mentioned in this RFP and is found suitable to the satisfaction of the Department/CHiPS. The outgoing resource should complete the knowledge transfer with the replaced resource as per the satisfaction of the Department. The Selected Bidder shall be Maximum allowed 15 days to replace the resource.

iii) The penalty per resource would be imposed in case of exit/replacement of resource from the project within below mentioned period starting from the date of deployment of respective resource:

A step-down penalty should be kept for exit/replacement, for e.g.

1. Within 6 Months: Rs. 20,000 (Rupees Twenty Thousand) per resource

2. From 6 months to 1 Year- Rs. 10,000 (Rupees Ten Thousand) per resource

iv)After expiry of 15 calendar days of exit, a penalty of Rs. 1500 per working day per resource will also be imposed till suitable replacement is not being provided by the bidder.

v) However Department/ CHiPS is free to relieve any resource at any time (beyond the minimum committed period) during the contract period without any penalty by serving 15 days advance notice.

Penalty for absence:

a. In the case of absence (apart from allowed leaves) of a resource during project period, no payment will be made for the days a resource is absent (Per day payment will be calculated by dividing man month rate by number of working days in that month). In addition a penalty of Rs 1000 per working day per resource will be levied on such absence.

b. Fraction of a day in the reckoning period in supplies shall be eliminated if it is less than half a day.

c. The penalty would be deducted from the applicable payments

d. Maximum 15 Days Leave is allowed for a person in a calendar year after approval from the appropriate authority.

f) Limitation of Penalties

After Starting of the work and services the maximum penalty should be levied as described below:

i. The total deduction should not exceed 25% of the total applicable fee for the total Project Cost.

ii. If bidder fails to deliver the services in stipulated time-frame on account of any reasons will be deemed to be an event of default and termination. This shall be governed by the terms & conditions defined in subsequent sections in General Conditions of the Contract.

g) **Exclusions**

The SI will be exempted from any non-compliance/delays/slippages on SLA parameters arising out of following reasons:

i. Delays not attributable to the SI

ii. Force Majeure

9 ELIGIBILITY CRITERIA

9.1 Pre-Qualification Criteria

The bidder must possess the requisite experience, strength and capabilities in providing the products and services necessary to meet the requirements as described in the RFP document. The invitation to bid is open to all bidders who qualify the following criteria:

S. No.	Basic Requirement	Specific Requirements Tier-I	Documents Required
1	Bidder Company	The bidder company should be a - registered in India under companies Act 1956 OR 2013 OR LLP Act 2008 - registered with the Tax Authorities - operating in India for the last five years as on date of RFP issuance	Copy of Certificate of incorporation GST registration certificate PAN Card
2	Bidder Turnover	The bidder's average annual turnover should be more than 50 crore in the last three Financial years (FY 2017-18, 2018-19 and 2019-20)	Extracts from the audited Balance sheet and Profit & Loss Account OR Certificate from the statutory auditor OR Certificate from CA
3	Bidder Positive Net Worth	The bidder should have positive Net Worth in each of the last three Financial Years	Extracts from the audited Balance sheet and Profit & Loss Account; OR Certificate from the statutory auditor OR Certificate from CA
4	Bidder Experience and Technical Capability	I) The bidder should have experience of at least one large scale Government vehicle tracking project covering min 35,000 vehicles per month in India AND II) The Bidder must have either Designed/Developed any Vehicle Tracking Application software for any Central/ State Govt./ PSU or Government Organizations in	Copy of work order / contract agreement with client certificate.

S. No.	Basic Requirement	Specific Requirements Tier-I	Documents Required
		India; The project value should be - a) One project of similar nature not less than the amount **8 Crores** OR b) Two projects of similar nature not less than the amount 6 **Crores** each OR c) Three projects of similar nature not less than the amount 4 **Crores** each	
5	Blacklisting	The bidder should not have been black listed by Central Government/ any State Government/ PSU for breach of Contractual Conditions at the time of bid submission date	Self-Declaration Certificate on Stamp paper duly notarized that the Bidder is not black listed. (Certificate to be enclosed in the bid duly signed by the authorized signatory on its letter head).
6	Authorized Representative from Bidder	A power of attorney / Board resolution in the name of the person signing the bid.	Power of attorney/ Board resolution copy
7	Insolvency / Bankruptcy	Bidder must not have been declared insolvent/ bankrupt or should not have filed for insolvency/ bankruptcy or in the process of being declared bankrupt before any designated authority.	Self-Declaration regarding company not being bankrupt shall be submitted.

Note: - Only those bidders who meet the pre-qualification criteria specified above will be eligible to respond to this TENDER. The bidder's pre-qualification proposal shall contain the relevant information & supporting documents to substantiate the eligibility of the bidder vis-à-vis the pre-

qualification criteria

10 INSTRUCTIONS TO THE BIDDERS

10.1 General

a) 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 consulting services required. Bidders and recipients of this TENDER May wish to consult their own legal advisers in relation to this TENDER.

b) All information supplied by Bidders may be treated as contractually binding on the Bidders, on successful award of the assignment by the CHiPS on the basis of this TENDER.

c) 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 CHiPS. Any notification of preferred bidder status by the CHiPS shall not give rise to any enforceable rights by the Bidder. The CHiPS may cancel this public procurement at any time prior to a formal written contract being executed by or on behalf of the CHiPS.

d) This TENDER supersedes and replaces any previous public documentation &Communications, and Bidders should place no reliance on such communications.

e) Please refer "Guidelines_to_Bidders_EPS_v1.1" PDF document download along with this tender for bidding process (Annexure - XI).

Compliant Tenders / Completeness of Response

a) Bidders are advised to study all instructions, forms, terms, requirements and other bidders are advised to study all instructions, forms, requirements, appendices and other information in the TENDER documents carefully. Online submission of the bid / proposal shall be deemed to have been done after careful study and examination of the TENDER document with full understanding of its implications

b) Failure to comply with the requirements of this paragraph may render the Proposal non-compliant and the Proposal may be rejected. Bidders must:

   i. Comply with all requirements as set out within this TENDER.

   ii. Include all supporting documentations specified in this TENDER

10.3 Pre-Bid Meeting & Clarifications

10.3.1 Bidders Queries

a) CHiPS shall hold a pre-bid meeting with the prospective bidders on Date & time and Address mentioned in Fact Sheet of this document.
b) The two (2) authorized representative of interested organization may attend pre-bid conference at their own cost after giving prior intimation to CEO, CHiPS.
c) Pre-bid queries of only those bidders will be responded who have registered themselves on or before response of pre-bid queries is released.
d) Bidders are requested to submit the e-mail address and mobile no. of one authorized person for all communications along with the registration.
e) The Bidders will have to ensure that their queries for Pre-Bid meeting should reach to CHiPS by email (Excel File only) on or before last date for sending pre-bid queries mentioned in Fact Sheet of this document through the e-mail of only authorized representative of the bidder.
f) The queries should necessarily be submitted in the following format:

Name of the Company/Firm: _____

_____

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

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

Company/Firm Contacts:

Contact Person (s)	Address for Correspondence	Email-Id(s)	Tel. Nos. & Fax Nos.

Query/Clarification Sought:
(MS-Excel Sheet Format)

Sr. No.	Section No.	Page No.	Tender Clause	Query	Remarks
1					
2					
3					
.					
N					

g) CHiPS shall not be responsible for ensuring that the bidder's queries have been received by them. Any requests for clarifications post the indicated date and time may not be entertained by the CHiPS.

h) Bidders must confirm their participation in advance.

The purpose of the meeting is to provide Bidders information regarding the TENDER, project requirements, and opportunity to seek clarification regarding any aspect of the TENDER and the project. However, the 'CHiPS' reserves the right to hold or re-schedule the Pre-Bid meeting.

10.3.2 Responses to Pre-Bid Queries and Issue of Corrigendum

a) The Officer notified by the CEO, CHiPS will endeavour to provide timely response to the queries. However, CHiPS makes no representation or warranty as to the completeness or accuracy of any response made in good faith, nor does CHiPS undertake to answer all the queries that have been posed by the bidders.

b) At any time prior to the last date for receipt of bids, CHiPS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the TENDER Document by a corrigendum.

c) The Corrigendum (if any) & clarifications to the queries from all bidders will be posted on the CHiPS website www.chips.gov.in and https://eproc.cgstate.gov.in.

d) Any such corrigendum shall be deemed to be incorporated into this TENDER.

e) In order to provide prospective Bidders reasonable time for taking the corrigendum into account, CHiPS may, at its discretion, extend the last date for the receipt of Proposals.

Key Requirements of the Bid

10.3.1 Right to Terminate the Process

a) CHiPS may terminate the TENDER process at any time and without assigning any reason. CHiPS makes no commitments, express or implied, that this process will result in a business transaction with anyone.

b) This TENDER does not constitute an offer by CHiPS. The bidder's participation in this process may result CHiPS selecting the bidder to engage towards execution of the contract.

10.3.2 TENDER processing Fees

Bidder needs to pay INR 10,000 to for document processing through https://eproc.cgstate.gov.in during bid submission.

10.3.3 Earnest Money Deposit (EMD)

a) The agency has to submit EMD online through e-procurement portal as per details mentioned in Fact sheet.

b) EMD of all unsuccessful bidders would be refunded by CHiPS within 60 Days of the bidder being notified as being unsuccessful.

c) EMD amount is interest free and will be refundable to the unsuccessful bidders without any accrued interest on it.

The EMD may be forfeited:

- If a bidder withdraws its bid during the period of bid validity.
- In case of a successful bidder, if the bidder fails to sign the contract in accordance with this TENDER.

d) The EMD of successful bidders will be returned after submission of security deposit in the form of Bank Guarantee (as per Annexure-VII) valid for the period of 5years, effective from the date of empanelment agreement.

10.3.4 Submission of Responses

a) Please refer "Guidelines_to_Bidders_EPS_v1.1" PDF document download along with this tender for bidding submission process.

10.3.5 Authentication of Bids

A Proposal should be accompanied by a power-of-attorney in the name of the signatory of the Proposal as per Annexure mentioned in this TENDER.

10.4 Preparation and Submission of Proposal

10.4.1 Proposal Preparation Costs

The bidder shall be responsible for all costs incurred in connection with participation in

the TENDER 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 CHiPS to facilitate the evaluation process, and in negotiating a definitive contract or all such activities related to the bid process. CHiPS will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

10.4.2 Language

The Proposal should be filled by the bidders in English language only. If any supporting documents submitted are in any language other than English, translation of the same in English language is to be duly attested by the Bidders. For purposes of interpretation of the documents, the English translation shall govern.

10.5 Evaluation process

a) CHiPS will constitute a Tender Evaluation Committee to evaluate the responses of the bidders.

b) The Proposal Evaluation Committee constituted by the CHiPS shall evaluate the responses to the TENDER and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection of the bid.

c) The decision of the Tender Evaluation Committee in the evaluation of responses to the TENDER shall be final. No correspondence will be entertained outside the process of evaluation with the Committee.

d) The Tender Evaluation Committee may ask for meetings with the Bidders to seek clarifications on their proposals.

e) The Tender Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations.

f) Each of the responses shall be evaluated as per the criterions and requirements specified in his TENDER.

10.5.1 Tender Opening

Received bids will be opened online. Participated bidders can be present online through portal (https://eproc.cgstate.gov.in). Physical presence may not be required however participating bidders' authorized representatives can mark attendance online during bid opening.

10.5.2 Tender Validity

The offer submitted by the Bidders should be valid for minimum period of 180 days from the date of opening of Tender.

10.5.3 Tender Evaluation

a) Initial Bid scrutiny will be held and incomplete details as given below will be treated as non-responsive. If Proposals;

i. Are not submitted in as specified in the TENDER document.

ii. Received without the Letter of Authorization (Power of Attorney).

iii. Are found with suppression of details

iv. With incomplete information, subjective, conditional offers and partial offers submitted

v. Submitted without the documents requested in the checklist

vi. Have non-compliance of any of the clauses stipulated in the TENDER

vii. With lesser validity period.

b) All responsive Bids will be considered for further processing as below.

Tender evaluation Committee will prepare a list of responsive bidders, who comply with all the Terms and Conditions of the Tender. All eligible bids will be considered for further evaluation by a Committee according to the Evaluation process define in this TENDER document. The decision of the Committee will be final in this regard.

i. Evaluation committee will examine the bids to determine whether they are complete, whether any computational errors have been made, and whether the bids are generally in order.

ii. The CHiPS may conduct clarification meetings with each or any bidder to discuss any matters, technical or otherwise.

iii. Further, the scope of the evaluation committee also covers taking any decision with regard to the Tender Document, execution/ implementation of the project including management period.

iv. Proposal shall be opened in the presence of bidders representatives who intend to attend at their cost. The bidders' representatives who are present shall sign a register giving evidence of their attendance

v. Proposal document shall be evaluated as per the following steps.

c) Preliminary Examination of Pre-qualification/Eligibility Criteria documents:

The Pre-qualification document will be examined to determine whether the bidder meets the eligibility criteria, whether the proposal is complete in all respects, whether the documents

have been properly signed and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or eligibility criteria specified in various sections of this Tender Document will be rejected and will not be considered further.

d) Evaluation of document:

A detailed evaluation of the bids shall be carried out in order to determine whether the bidders are competent enough and whether the technical aspects are substantially responsive to the requirements set forth in the Tender Document. Bids received would be assigned scores based on the parameters defined in the table below.

All supporting document submitted in support of Eligibility and Technical Evaluation matrix should comply the following: -

i. Soft copies of supporting documents to be submitted on online portal however CHiPS may request for hard copies in quality print as and when required.
ii. Supporting document should clearly indicate value of the completed project and scope of work/ services should be clearly highlighted.
iii. Completion certificate should clearly indicate the value and duration of the project.
iv. Incomplete order copy submitted by the bidder will not be considered for evaluation.
v. In case of projects where order for recurring /Extension and subsequent order has been placed on the Bidder only the mentioned order value will be considered for evaluation.

Bidders failing to comply any of the above then the Bid will be summarily rejected.

e) Technical Evaluation:

Proposals will be evaluated as per the technical evaluation criteria given below. Bidders securing 70 marks or above will only be considered technically qualified The technically qualified bidders will be ranked T_1 to T_n based on the scores obtained as per technical evaluation criteria. T_1 shall be the bidder, which gets the highest marks and similarly bidders would be arranged in descending order of technical scores obtained. Financial bids of T_1 to T_n shall be opened for further processing.

10.5.4 Technical Evaluation Criteria

Tender Evaluation Committee (TEC) will evaluate the Technical Proposals of the Pre-Qualified bidders as per the Eligibility Criteria.

SN	Parameter	Marks	Supporting Document(s)
. 1	**Bidder Turnover :** Average Annual Turnover from IT/ITeS Services/ System Integrator (SI) related activities including design, development, implementation, maintenance, integration of IT hardware /Cloud with application in last three financial years (FY 2017-18, 2018-19 and 2019-20).	**Maximum Marks = 10** **i.** > INR 70 Crore = **10 Marks** **ii.** > 60 Crore to 70 Crore = 8 **Marks** **iii.** > 50 Crore to 60 Crore = 5 **Marks**	Extracts from the audited Balance sheet and Profit & Loss Account OR Certificate from the statutory auditor OR Certificate from CA
. 2.	During the last Five years (till the date of bid submission), the bidder must have experience in Design/ Development and Implemented any Application software project related to Vehicle Tracking System (VTS) with Integrated Command Control Centre for any Central/ State Govt./ PSU or Government Organizations in India	**Maximum Marks = 20** i. At least 3 projects = 2**0 Marks** ii. At least 2 projects = 12 **Marks** iii. At least 1 project **= 8 Marks**	Work order + Client Completion certificates; OR Work Order + Phase Completion Certificate from the ient
. 3.	During the last Five years (till the date of bid submission), the bidder must have experience in monitoring of Vehicles in a single platform with number of vehicles for any Application software project related to Vehicle	**Maximum Marks = 20** i. At least 50,000 Vehicles = 20 **Marks** ii. At least 35,000 but less than 50,000 Vehicles = 10 **Marks**	Work order + Client Completion certificates; OR Work Order + Phase Completion Certificate from the client

SN	Parameter	Marks	Supporting Document(s)
	Tracking System (VTS) for any Central/ State Govt./ PSU or Government Organizations in India		
4.	During the last Five years (till the last date of bid submission), the bidder must have experience of deployment and management of VTS application on Meity empaneled Cloud/Govt Cloud for any project of any Central/ State Govt./ PSU or Government body/institution in India;	**Maximum Marks = 10** **i.** At least 3 projects = 10 **Marks** **ii.** At least 2 projects = **8 Marks** **iii.** At least 1 project = **5 Marks**	Work Order + Client Completion Certificates; OR Work Order + Phase Completion Certificate from the client
5	**Proposed Solution:** Bidders must demonstrate their understanding of the Transport Department's requirements by providing:	**Maximum Marks = 20** **i.** Bidders understanding of the project, Approach, Methodology and Solution proposed and its components – 10 **Marks** **ii.** Proposed Technical Architecture covering Integration approach, security, cloud architecture **– 10 Marks**	Bidder needs to give the Technical presentation mentioning the components and needs to provide all the detailed description in the technical Bid Response
5	**Project Team Composition**	**Maximum Marks = 10** **i.** Project Manager - B.E. / B.Tech (in relevant stream) / MCA) with at least 8 years of experience of handling similar large projects in VTS Sector = **5 Marks** **ii.** VTS Expert - B.E. / B.Tech (in relevant	The bidder needs to submit the detailed CV and consolidated Manpower sheet as per of RFP

SN	Parameter	Marks	Supporting Document(s)
		stream) / MCA) with at least 5 years of experience of handling similar large projects in VTS Sector = **5 Marks**	
6.	Every bidder will be given a time slot of 90 minutes to demonstrate understanding of the project, architecture, tools, components, Approach and methodology, timelines and resources proposed for the project. Company profile should be limited to 3 slides only; Presentation should include - • Broad Design of the Application required by DEPARTMENT • Demonstration	Live Demonstration of Vehicle Tracking System **(10 Marks)** - Software support system compatible with different tracking devices - Data Handling - Integration of various communication protocols from tracking devices at one single platform - Auto dispatching for event and call logs to relevant platforms - Geofencing and real time tracking of vehicles	Bidder needs to give the Technical presentation and Live Demonstration at a suitable date notified by DEPARTMENT/CHiPS Copy of Technical Presentation, Technical Solution with Proposed components

10.5.5 Evaluation of Financial Bid:

i. The Financial Bids of only those bidders will be opened who score equal to or more than 70% in Technical Evaluation.

ii. Of the financial bids opened, lowest financial quote (Total Project Cost) will be considered as L1. All the other technically qualified bidders (T1 to Tn) will have to match their financials with the lowest rate (L1) for empanelment. It shall be obligatory on the part of the empanelled bidders to match the lowest rate L1.

iii. Mere empanelment with CHiPS/Govt. of Chhattisgarh does not guarantee allocation of work

iv. CHiPS reserves the right to ask for a technical elaboration/clarification in the form of a technical presentation from the Bidder on the already submitted Technical Proposal at any point of time before opening the Commercial Proposal. The Bidder shall furnish the required information to CHiPS and its appointed representative on the date asked for, at no cost to

the CHiPS. The CHiPS may at its discretion, visit the office of the Bidder any-time before the signing of Agreement.

v. CHiPS shall inform those Bidders whose proposals did not meet the eligibility criteria or were considered non-responsive, informing that their Commercial Proposals will be returned unopened after completing the selection process. CHiPS shall simultaneously notify those Bidders who qualify for the Evaluation process as described in this Tender Document, informing the date and time set for opening of Commercial Proposals. The notification may be sent by E-mail , fax or letter.

vi. The bidder's name, the Financial Quotes, the total amount of each proposal and other such details as the Tendering Authority may consider appropriate, will be announced and recorded by the CHiPS at the opening of bid.

vii. CHiPS shall inform those Bidders whose proposals are accepted via issuance of Letter of Intent (LoI) in duplicate copy. Bidder shall acknowledge the LoI and return the duplicate copy duly sealed and signed, within seven days from the issue of LoI by CHiPS.

viii. After acceptance of LoI Performance Security shall be deposited as specified in this document for signing an Agreement with CHiPS.

ix. CHiPS will sign the Agreement with Successful Bidder for a period of 5 years.

10.6 Allocation of Work

i. Based on department requirement, the Expression of Interest (EoI) will be floated to the all empanelled firms by CHiPS.

ii. Firms who wish to participate in the EoI, need to submit the proposal within given time frame as per EOI & L1 discovered rates in this RFP.

iii. CHiPS will constitute an Evaluation Committee whose decision will be final in the evaluation of the responses to the Expression of Interest.

iv. A presentation will be made by the bidding company about their understanding of the proposed area of work and their past experience. if any, in similar area of expertise.

v. The marking for presentation and Interview will be done as follows

	Bidder Presentation and technical Solution	**Resource Interview**
	60 Marks	**40 Marks**
Key Evaluation Criteria (As applicable)	• Approach and Methodology • Understanding of the Project Framework • Quality of proposed methodology for such specific kind of a project	• Suitability of profile • Years of relevant experience • Good understanding ofproject managementbest practices framework

	Bidder Presentation and technical Solution	Resource Interview
	60 Marks	**40 Marks**
	• Prior experience in project interaction with senior • government officials • Prior exposure to implementing government projects in process re-engineering • Resource deployment at multiple government offices in multiple locations • Understanding of key SLAs for the project management • Technical Solustion along with time line as per EOI	• Ability to Negotiate/Persuade/Influence • Strong ability to understand and deliberate and report monitor the key SLAs • Excellent communication abilities

10.7 Prequalification and Technical Proposal

- **Prequalification/ Eligibility Criteria**

  Pre-qualification document as per eligibility criteria specified under Section -3 above along with the following documentations:

  a) The profile of the bidder along with required certifications that the period of validity of bids is 180 days from the last date of submission of proposal.

  b) Audited annual financial results (balance sheet and profit & loss statement showing business in India) of the bidder for the last three financial years.

  c) Reference list of major clients

  d) Power-of-attorney granting the person signing the proposal the right to bind the bidder as the 'Constituted attorney of the Directorate'.

  e) A copy of the Tender Document, all pages duly-signed by the authorized signatory towards acceptance of the terms and conditions of the Tender Document.

- **Technical proposal**

  a. Proposal particulars

  b. Proposal letter

  c. Proposed approach and methodology and services offered

  f. All relevant document for Technical Evaluation

  g. Annexure for Technical Qualification

- **Commercial proposal**

    a. Proposal letter

    b. Commercial Quote

10.8 Modification and withdrawal of Bids

i. The Bidder is allowed to modify or withdraw its submitted proposal online any time prior to the last date and time prescribed for receipt of bids, by giving a written notice to the CHiPS.

ii. Subsequent to the last date for receipt of bids, no modification of bids shall be allowed online.

10.9 Proposal Forms

i. Wherever a specific form is prescribed in the Proposal document, the Bidder shall use the form to provide relevant information. If the form does not provide space for any required information, space at the end of the form or additional sheets shall be used to convey the required information.

ii. For all other cases, the Bidder shall design a form to hold the required information.

iii. CHiPS shall not be bound by any printed conditions or provisions in the Bidder's Proposal.

10.10 Local Conditions

i. Each Bidder is expected to become fully acquainted with the local conditions and factors, which may affect the performance of the contract and /or the cost.

ii. The Bidder is expected to know all conditions and factors, which may have any effect on the execution of the contract after issue of letter of Award as described in the bidding document. The CHiPS shall not entertain any request for clarification from the Bidder regarding such local conditions.

iii. It is the Bidder's responsibility that such factors have been properly investigated and considered before submitting the proposal. No claim, what-so-ever, including that for financial adjustment to the contract awarded under the bidding document will be entertained by the CHiPS. Neither any change in the time schedule of the contract nor any financial adjustments arising there-of shall be permitted by the CHiPS on account of failure of the Bidder to know the local laws / conditions.

iv. The Bidder is expected to visit and examine and study the location of Govt. offices in CG and its surroundings and obtain all information that may be necessary for preparing the proposal at its own interest and cost.

10.11 Contacting the Chhattisgarh infotech & Biotech Promotion Society, Raipur

- Any effort by a Bidder to influence the proposal evaluation, proposal comparison or contract award decisions may result in the rejection of the proposal.

- Bidder shall not approach CHiPS officers after office hours and/or outside CHiPS office premises, from the time of the proposal opening till the time the Contract is awarded.

10.12 Tentative Schedule of Events

Tentative schedule of events regarding this tender shall be as per the dates and time given in the Section-1: Fact Sheet.

10.13 Opening of Proposal

First, the envelope containing Earnest Money Deposit (EMD) will be opened online, and if found, that the bidder has furnished all the documents in the prescribed manner, then the second envelope containing Technical Proposal will be opened online.

The commercial proposal would be opened in presence of technically short-listed bidders. The Evaluation Committee or its authorized representative will open the tenders.

Sequence of online Bid is as follows:

a. EMD

b. Technical

c. Commercial

10.14 Confidentiality

- As used herein, the term "Confidential Information" means any information, including information created by or for the other party, whether written or oral, which relates to internal controls, computer or data processing programs, algorithms, electronic data processing applications, routines, subroutines, techniques or systems, or information concerning the business or financial affairs and methods of operation or proposed methods of operation, accounts, transactions, proposed transactions or security procedures of either party or any of its affiliates, or any client of either party, except such information which is in the public domain at the time of its disclosure or thereafter enters the public domain other than as a result of a breach of duty on the part of the party receiving such information. It is the express intent of the parties that all the business process and methods used by the Bidder in rendering the services hereunder are the Confidential Information of the Bidder.

- The Bidder shall keep confidential, any information related to this tender, with the same degree of care as it would treat its own confidential information. The Bidders shall note that the confidential information will be used only for the purposes of this tender and shall not be disclosed to any third party for any reason what-so-ever.

- At all time of the performance of the services, the Bidder shall abide by all applicable

security rules, policies, standards, guidelines and procedures. The Bidder should note that before any of its employees or assignees is given access to the Confidential Information, each such employee and assignees shall agree to be bound by the term of this tender and such rules, policies, standards, guidelines and procedures by its employees or agents.

- The Bidder should not disclose to any other party and keep confidential the terms and conditions of this Contract agreement, any amendment hereof, and any Attachment or Annexure hereof.
- The obligations of confidentiality under this section shall survive for three (3) years post rejection of the contract.
- The successful bidder must maintain absolute confidentiality of the documents/ maps/ tools collected in any form including electronic media and any other data/information provided to him for the execution of the work.
- The bidder should not use the Project data for any purpose other than the scope of work specified in the document and added/ amended before signing the contract.
- If at any stage it is found that the bidder is using the data provided by the client any time during the contract execution or after completion of the contract for any other purposes, stringent legal action will be initiated as per applicable law of land and the contract will be terminated without assigning any reasons.
- Bidder shall not disclose to any one, any information marked as confidential and communicated or made available or accessible by the firm during execution of the work.

10.15 Execution of Agreement

After acknowledgement of the LoI by the empanelled bidders, empanelled bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) to CHiPS operable at Raipur of any nationalized /Scheduled Bank in the name of The CEO, Chhattisgarh Infotech & Biotech Promotion Society (CHiPS), Raipur, till the term of the Agreement and shall sign the Agreement with in 15 days from the issue of LoI.

The Performance Bank Guarantee (PBG) shall be for Rs 10,00,000 (Rs. 10 lakh) for the period equivalent to that of duration of empamenel plus two months.

Performance Bank Guarantee (PBG) for individual work allocation - When an empaneled firm is awarded any work order, a PBG equivalent to 10% of total contract value will be submitted by the empanelled firm within 7 days of work order. This PBG shall be for the period equivalent to that of duration of work order plus two months.The individual work order PBG shall be returned within 30 days post successful completion of work by the firm, as defined within this tender.

The entire PBG shall be forfeited by CHiPS, in the event the Bidder:

a) fails to meet the overall condition as mentioned in RFP or any changes agreed between the

parties,

b) fails to perform the responsibilities and obligations as set out in the RFP to complete satisfaction of CHiPS,

c) Misrepresents facts/information submitted to CHiPS.

The performance bank guarantee shall be valid till Ninety (90) days beyond the Contract Period. The performance bank guarantee shall be discharged/returned by CHiPS upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the performance bank guarantee.

In the event of the Bidder being unable to service the contract for whatever reason(s), CHiPS shall have the right to forfeit the PBG. Notwithstanding and without prejudice to any rights whatsoever of CHiPS under the contract in the matter, the proceeds of the PBG shall be payable to CHiPS as compensation for any loss resulting from the bidder's failure to perform/comply its obligations under the contract.

10.16 Duration of the contract:

The Empanelment shall initially be valid for a period of 5 years from the date of signing of Agreement. CHiPS may extend the Agreement for up to One (1) year period with an incremental rate as mutually agreed by CHiPS & successful bidder.

The Consumer Price Index (CPI) and Cost Inflation Index (CII) of India for the last 3 years will be taken as a base for the increment for the extension year with a maximum capping of 10%.

10.17 Terms and Conditions: Applicable Post Award of Contract

10.17.1 Termination Clause

i) Right to Terminate the Process

CHiPS reserves the right to cancel the contract placed on the selected bidder and recover expenditure incurred by CHiPS under the following circumstances: -

- The selected bidder commits a breach of any of the terms and conditions of the bid.
- The bidder goes into liquidation, voluntarily or otherwise.
- If the selected bidder fails to complete the assignment as per the time lines prescribed in the Agreement provided a cure period of atleast thirty (30) days is provided to the bidder to complete the assignment/rectify any defect.
- If deductions of account of liquidated damages /Penalty exceeds more than 10% of the total contract price.
- In case the selected bidder fails to deliver the services as stipulated in the delivery schedule, CHiPS reserves the right to procure the same or similar services from alternate sources at

the risk, cost and responsibility of the selected bidder. However, all such recoveries shall be subject to a maximum of 5% of the value of the difference in cost of procurement of undelivered services.

- CHiPS reserves the right to recover any dues payable by the selected Bidder from any amount outstanding to the credit of the selected bidder, including the pending bills and/or invoking the bank guarantee under this contract.

II) Consequences of Termination

- In the event of termination of the Contract due to any cause whatsoever, [whether consequent to the stipulated term of the Contract or otherwise], CHiPS shall be entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective business continuity of the Service(s) which the Vendor shall be obliged to comply with and take all available steps to minimize loss resulting from the termination/breach, and further allow the next successor Vendor to take over the obligations of the erstwhile Vendor in relation to the execution/continued execution of the scope of the Contract.

- Nothing herein shall restrict the right of CHiPS to invoke the CHiPS Guarantee and other guarantees, securities furnished, enforce the Deed of Indemnity and pursue such other rights and/or remedies that may be available CHiPS under law or otherwise

- The termination hereof shall not affect any accrued right or liability of either Party nor affect the operation of the provisions of the Contract that are expressly or by implication intended to come into or continue in force on or after such termination.

10.17.2 Dispute Resolution Mechanism

The Bidder and the CHiPS shall endeavour their best to amicably settle all disputes arising out of or in connection with the Contract in the following manner:

a) The Party raising a dispute shall address to the other Party a notice requesting an amicable settlement of the dispute within seven (7) days of receipt of the notice.

b) Matter will be referred for negotiation between Officer nominated by CHiPS and the Authorized Official of the Bidder. The matter shall then be resolved between them and the agreed course of action documented within a further period of 15days.

In case any dispute between the Parties, does not settle by negotiation in the manner as mentioned above, the same may be resolved exclusively by arbitration and such dispute may be submitted by either party for arbitration within 20 days of the failure of negotiations. Arbitration shall be held in Raipur and conducted in accordance with the provisions of Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof. Each Party to the dispute shall appoint one arbitrator each and the two arbitrators shall jointly appoint the third or the presiding arbitrator.

The “Arbitration Notice” should accurately set out the disputes between the parties, the intention

of the aggrieved party to refer such disputes to arbitration as provided herein, the name of the person it seeks to appoint as an arbitrator with a request to the other party to appoint its arbitrator within 45 days from receipt of the notice. All notices by one party to the other in connection with the arbitration shall be in writing and be made as provided in this tender document.

Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the Parties unless the award otherwise provides. The Bidder shall not be entitled to suspend the Service/s or the completion of the job, pending resolution of any dispute between the Parties and shall continue to render the Service/s in accordance with the provisions of the Contract/Agreement notwithstanding the existence of any dispute between the Parties or the subsistence of any arbitration or other proceedings.

10.17.3 Notices

Any notice given by one party to the other pursuant to this contract shall be sent to the other party in writing, e-mail or Facsimile.

A notice shall be effective when delivered or tendered to other party whichever is earlier.

10.17.4 Force Majeure

Force Majeure is herein defined as any cause, which is beyond the control of the selected bidder or CHiPS as the case may be which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as:

- Natural phenomenon, including but not limited to floods, droughts, earthquakes and epidemics.
- Acts of any government, including but not limited to war, declared or undeclared priorities, quarantines and embargos.
- Terrorist attack, public unrest in work area provided either party shall within 10 days from occurrence of such a cause, notifies the other in writing of such causes. The bidder or CHiPS shall not be liable for delay in performing his/her obligations resulting from any force majeure cause as referred to and/or defined above. Any delay beyond 30 days shall lead to termination of contract by parties and all obligations expressed quantitatively shall be calculated as on date of termination. Notwithstanding this, provisions relating to indemnity, confidentiality survive termination of the contract.

10.17.5 Failure to agree with Terms and Conditions of the TENDER

Failure of the successful bidder to agree with the Terms & Conditions of the TENDER shall constitute sufficient grounds for the annulment of the award, in which event CHiPS may award the contract to the next best value bidder or call for new proposals from the interested bidders or invoke the PBG of the most responsive bidder.

10.18 Limitation of Liability

The aggregate liability of the supplier/ selected bidder to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the Contract.

10.19 Right of Monitoring, Inspection and Periodic Audit

The CHiPS reserves the right to inspect and monitor / assess the progress / performance at any time during the course of the Contract, after providing due notice to the Selected Bidder. The CHiPS may demand, and upon such demand being made, the selected bidder shall provide with any document, data, material or any other information required to assess the progress of the project.

The CHiPS shall also have the right to conduct, on giving a prior notice of at least thirty (30) days, either itself or through any another agency as it may deem fit, an audit to monitor the performance by the Selected Bidder of its obligations/functions in accordance with the standards committed to or required by the CHiPS and the Selected Bidder undertakes to cooperate with and provide to the CHiPS / any other Consultant/ Agency appointed by the CHiPS, all documents and other details as may be required by them for this purpose. Any deviations or contravention identified as a result of such audit/assessment would need to be rectified by the Selected Bidder failing which the CHiPS may, without prejudice to any other rights that it may have, issue a notice of default. Chhattisgarh *i*nfotech & Biotech Promotion Society's Obligations

The CHiPS representative shall interface with the Selected Bidder, to provide the required information, clarifications, and to resolve any issues as may arise during the execution of the Contract.

CHiPS shall ensure that timely approval is provided to the selected Bidder, where deemed necessary, which should include diagram / plans and all specifications related to services required to be provided as part of the Scope of Work.

10.20 Information Security

The Selected Bidder shall not carry and/or transmit any material, information, layouts, diagrams, storage media or any other goods/material in physical or electronic form, which are proprietary to or owned by the CHiPS, out of premises, without prior written permission from the CHiPS.

The Selected Bidder shall, upon termination of this agreement for any reason, or upon demand by CHiPS, whichever is earliest, return any and all information provided to the Selected Bidder by CHiPS, including any copies or reproductions, both hard copy and electronic.

10.21 Indemnity

The Selected Bidder shall execute and furnish to the CHiPS, a Deed of Indemnity in favour of the CHiPS, in a form and manner acceptable to CHiPS, indemnifying CHiPS from and against any third party costs, losses, damages, expenses, claims including those from third parties owing infringement or misappropriation of a patent, copyright, trademark and trade secret, arising or incurred inter- alia during and after the Contract period arising out of:
Negligence or wrongful act or omission in connection with or incidental to this Contract; or

Any breach of any of the terms the Selected Bidder's Proposal as agreed, the Tender and this Contract by the Selected Bidder or its team.
The indemnity shall be to the extent of 100% of project cost in favor of the CHiPS.

10.22 Payment Schedule

10.22.1 Total Cost of Services

The total cost of the Services payable is set forth as per the successful bidder proposal to Government of Chhattisgarh (CHiPS)/ CHiPS and as negotiated thereafter.

Payments under this Contract shall not exceed the amount specified in Commercial Form.

10.23 Payment Milestones

Sl. No.	Milestones	Payment (%)	Supporting Documentation required with invoice
1	Resource Deployment/ Project Mobilization	10 % of the Total Project Cost [TPC]	1. Signed copy of Kick Off meeting Minutes 2. Detailed Project Plan 3. Resource Deployment details 4. Approved Milestone completion Certificate from Department
2	Supply of ICCC Equipment including Site Set up of Civil Infrastructure	25 % of the Total Project Cost [TPC]	Department approved Site plan / Layouts Goods Receipt Note for all items
3	Approval of SRS	5% of the Total Project Cost [TPC]	Approved SRS by Department
4	Configuration, pilot testing of VTS with all empanelled GPS devices (POC) and UAT sign off	8% of the Total Project Cost [TPC]	1.Test Cases and Test Results 2.Source code and signed UAT 3.Acceptance report signed by competent authority of Department
5	STQC certification for complete application	5% of the Total Project Cost [TPC]	STQC Certificate as per requirement
6	Go-live Declaration	10% of the Total Project Cost [TPC]	Go-Live certificate from department
7	AMC and Operation & Maintenance 2.0 (8 QGR)	4% of the Total Project	Quarterly Certified copy from the Department

Sl. No.	Milestones	Payment (%)	Supporting Documentation required with invoice
		Cost [TPC] per QGR	
8	EXIT of SI (end of contract)	5% of the Total Project Cost [TPC]	Acceptance report signed by appropriate authority of Department

- No payment shall become eligible for the next stage till the SI completes to the satisfaction of the Purchaser the work pertaining to the preceding stage.
- Payment due shall be computed after deducting applicable penalties.
- Payment due shall be made after deducting applicable taxes.
- GST shall be paid at actuals / as per prevailing rates.
- The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the SI and approved as satisfactory by the Purchaser.
- The successful bidder shall submit invoices fortnigtly as per the actual work completed along with all the supporting documents and it should be verified by concerned department.
- The Purchaser shall release the requisite payment within 15 days of receipt of valid invoice.

10.24 Events of Default by the Selected Bidder

The failure on the part of the Selected Bidder to perform any of its obligations or comply with any of the terms of this contract shall constitute an Event of Default on the part of the Selected Bidder. The events of default as mentioned above may include inter-alia the following:

- The Selected Bidder has failed to perform any instructions or directives issued by the CHiPS which it deems proper and necessary to execute the scope of work under the Contract, or
- The Selected Bidder has failed to adhere to any of the key performance indicators as laid down in the Key Performance Measures / Contract, or if the Selected Bidder has fallen short of matching such standards/targets as CHiPS may have designated with respect to any task necessary for the execution of the scope of work under this Contract. The above mentioned failure on the part of the Selected Bidder may be in terms of failure to adhere to timelines, specifications, requirements or any other criteria as defined by CHiPS;
- The Selected Bidder has failed to remedy a failure to perform its obligations in accordance with the specifications issued by the CHiPS, despite being served with a default notice which laid down the specific deviance on the part of the selected Bidder to comply with any stipulations or standards as laid down by the CHiPS; or

- The Selected Bidder / Bidder's Team has failed to conform to any of the Service/Facility Specifications/standards as set out in the scope of work of this Tender document or has failed to adhere to any amended direction, modification or clarification as issued by the CHiPS during the term of this Contract and which the CHiPS deems proper and necessary for the execution of the scope of work under this Contract;

- The Selected Bidder has failed to demonstrate or sustain any representation or warranty made by it in this Contract, with respect to any of the terms of its Proposal, the Tender and this Contract

- There is a proceeding for bankruptcy, insolvency, winding up or there is an appointment of receiver, liquidator, assignee, or similar official against or in relation to the Selected Bidder.

- The Selected Bidder / Bidder's Team has failed to comply with or is in breach or contravention of any applicable laws.

- Where there has been an occurrence of such defaults inter alia as stated above, the CHiPS shall issue a notice of default to the Selected Bidder, setting out specific defaults / deviances / omissions and providing a notice of Sixty days to enable such defaulting party to remedy the default committed.

- Where despite the issuance of a default notice to the Selected Bidder by the CHiPS and the Selected Bidder fails to remedy the default to the satisfaction of the CHiPS, the CHiPS may, where it deems fit, issue to the defaulting party another default notice or proceed to adopt such remedies as may be available to the CHiPS.

10.25 Liquidated Damages

Subject to clause for Force Majeure, if the bidder fails to complete the services under Project scope of work before the scheduled completion date or the extended date or if the Selected Bidder repudiates the contract before completion of the work, the CHiPS, at its discretion, may without prejudice to any other right or remedy available to it under the contract, recover a maximum of 10 percent of the project cost from the Selected Bidder, as Liquidated Damages (LD).

In case it leads to termination, CHiPS shall give thirty days' notice to the Selected Bidder of its intention to terminate the contract and shall so terminate the contract unless during the thirty days' notice period, the Selected Bidder initiates remedial action acceptable to the CHiPS.

The CHiPS may without prejudice to its right to affect recovery by any other method, deduct the amount of liquidated damages from any money belonging to the Selected Bidder in its hands (which includes the CHiPS right to claim such amount against Selected Bidder's Bank Guarantee) or which may become due to the Selected Bidder. Any such recovery or liquidated damages shall not in any way relieve the Selected Bidder from any of its obligations to complete the work or from any other obligations and liabilities under the Contract.

10.26 Continuance of the Contract:

Notwithstanding the fact that settlement of dispute(s) (if any) under arbitration may be pending, the parties hereto shall continue to be governed by and perform the work in accordance with the provisions under the Scope of Work to ensure continuity of operations.

10.27 Conflict of interest

The Bidder shall disclose to CHiPS in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the Vendor the Bidder s team) in the course of performing the Service(s) as soon as practical after it becomes aware of that conflict.

10.28 Consortium

a) The Bidder can enter into a Consortium Agreement with another entity in order to present the bid as a single bid.

b) The Lead Bidder shall procure the tender document, and finally sign and submit the Bid on behalf of the Consortium.

c) The Lead Bidder shall be authorized to incur the liabilities and receive instructions for and on behalf of any and all partners of the consortium.

d) In case of a successful bidder which is a consortium, the consortium shall be responsible for the successful implementation of the project and provision of services.

e) CHiPS shall communicate with the lead bidder of the consortium on all matters relating to this project and it shall be the responsibility of the lead bidder to share such communication to all members of the consortium.

f) CHiPS shall not be responsible for any lack of communication between members of the consortium.

g) The Consortium member should authorize the Lead Bidder to participate in this bid on its behalf.

h) The Authorization should also be accompanied by a Consortium agreement mentioning key roles and responsibilities and scope of work of each member in the project

10.29 Sub-Contracting

Even if any of the work is sub-contracted, the sole responsibility of the work shall lie with the Selected Bidder. The Selected Bidder shall be held responsible for any delay/error/non-compliance etc. For cloud services, if subcontracted by the bidder will have to submit a CSP authorization form.

10.30 Severance

In the event any provision of the Contract is held to be invalid or unenforceable under the applicable law, the remaining provisions of this Contract shall remain in full force and effect.

10.31 Governing Language

The Agreement shall be written in English language. Subject to below Clause, such language versions of the Agreement shall govern its interpretation. All correspondence and other documents pertaining to the Contract that are exchanged by parties shall be written in English language only.

10.32 "No Claim" Certificate

The Selected Bidder shall not be entitled to make any claim, whatsoever against CHiPS, under or by virtue of or arising out of, the contract, nor shall CHiPS entertain or consider any such claim, if made by the Selected Bidder after it has signed a "No claim" certificate in favour of CHiPS in such form as shall be required by it after the work is finally accepted.

10.33 Publicity

The Selected Bidder shall not make or permit to be made a public announcement or media release about any aspect of this Contract unless the CHiPS first gives its written consent to the selected bidder.

10.34 Intellectual Property Rights (IPR)

Use of documents and Information.

- The bidder shall not, without prior written consent from Government of Chhattisgarh (CHiPS), disclose/share/use the bid document, contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Government of Chhattisgarh (CHiPS), in connection therewith, to any person other than a person employed by the bidder in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- The bidder shall not, without prior written consent of Government of Chhattisgarh (CHiPS), make use of any document or information made available for the project, except for purposes of performing the Contract.

10.35 General

- Relationship between the Parties
    - Nothing in the Contract constitutes any fiduciary relationship between the CHiPS and Selected Bidder/ Bidder's Team or any relationship of employer employee, principal and agent, or partnership, between the CHiPS and Selected Bidder.
    - No Party has any authority to bind the other Party in any manner whatsoever except as agreed under the terms of the Contract.

- CHiPS will not be under any obligation to the Implementation Agency's Team except as agreed under the terms of the Contract.

➢ No Assignment

- The Selected Bidder shall not transfer any interest, right, benefit or obligation under the contract without the prior written consent of CHiPS.

➢ Survival

- The provisions of the clauses of the Contract in relation to documents, data, processes, property, Intellectual Property Rights, indemnity, publicity and confidentiality and ownership survive the expiry or termination of this Contract and in relation to confidentiality, the obligations continue to apply unless CHiPS notifies the Selected Bidder of its release from those obligations.

➢ Entire Contract

- The terms and conditions laid down in the Tender and all annexures thereto as also the Proposal and any attachments/annexes thereto shall be read in consonance with and form an integral part of the Contract. The Contract supersedes any prior contract, understanding or representation of the Parties on the subject matter.

➢ Governing Law

- This contract shall be governed in accordance with the laws of India.

➢ Jurisdiction of Courts

- The High Court of India at Bilaspur, Chhattisgarh has exclusive jurisdiction to determine any proceeding in relation to the Contract.

➢ Compliance with Laws

1. The Selected Bidder shall comply with the laws in force in India in the course of performing the Contract.

➢ Notices

A "notice" means:

- a notice; or

- A consent, approval or other communication required to be in writing under the Contract. All notices, requests or consent provided for or permitted to be given under this Contract shall be in writing and shall be deemed effectively given when personally delivered or mailed by pre-paid certified/registered mail, return receipt requested, addressed as follows and shall be deemed received two days after mailing or on the date

of delivery if personally delivered:

To

The CEO,

Chhattisgarh *i*nfotech& Biotech Promotion Society, Raipur

SDC Building, Near Police Control Room,

Civil Lines Raipur- 492 001 (Chhattisgarh)

Tel: + 91 – 771 – 4014158

Fax: + 91 – 771 – 4014158

Email: ceochips@nic.in

To Selected Bidder at:

Attn:

Address:

[Phone:]

[Fax:]

Any Party may change the address to which notices are to be directed, by giving a notice to the other party in the manner specified above. A notice served on a Representative is taken to be notice to that Representative's Party.

- **Waiver**
  - Any waiver of any provision of this Contract is ineffective unless it is in writing and signed by the Party waiving its rights.
  - A waiver by either Party in respect of a breach of a provision of this Contract by the other Party is not a waiver in respect of any other breach of that or any other provision.
  - The failure of either Party to enforce at any time any of the provisions of this Contract shall not be interpreted as a waiver of such provision.
- **Modification**
  - Any modification of the Contract shall be in writing and signed by an authorized representative of each Party.

- **TAXES**
  - Bidders are required to quote the charges inclusive of all Taxes. The same would be shown as a separate line item in the commercial form in e-procurement portal.
  - Any upward/downward revision of taxes or applicability of new tax shall be permissible at the time of invoicing. However, to arrive at the bid value of the respective bidder, bidder has to quote the charges inclusive of all taxes mentioning the prevailing tax rates.
- **Application**
  - These General Conditions shall apply to the extent that provisions in other parts of the Contract do not supersede them.

10.36 Fraud and Corrupt Practices

- The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this TENDER, the CHiPS shall reject a Proposal without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the "Prohibited Practices") in the Selection Process. In such an event, the CHiPS shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, in regard to the TENDER, including consideration and evaluation of such Bidder s Proposal.
- Without prejudice to the rights of the CHiPS under Clause above and the rights and remedies which the CHiPS may have under the LoI or the Agreement, if an Bidder or Systems Implementation Agency, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the issue of the LoI or the execution of the Agreement, such Bidder shall not be eligible to participate in any tender or TENDER issued by the CHiPS during a period of < period, suggested 2 (two) > years from the date such Bidder, as the case may be, is found by the CHiPS to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.
- For the purposes of this Section, the following terms shall have the meaning hereinafter respectively assigned to them.
  - **"corrupt practice" means**

(i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of the CHiPS who is or has been associated in any manner, directly or indirectly with the Selection Process or the LoI or has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the CHiPS, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or

(ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the issue of the LoI or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the LoI or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of the CHiPS in relation to any matter concerning the Project;

- **"fraudulent practice" means** a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;
- "**Coercive practice**" **means** impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person participation or action in the Selection Process;
- **"undesirable practice" means**

  (i) establishing contact with any person connected with or employed or engaged by CHiPS with the objective of canvassing,

  (ii) lobbying or in any manner influencing or attempting to influence the Selection Process; or

  (iii) having a Conflict of Interest; and

- **"restrictive practice"** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

10.37 Terms of Payment

The Successful Bidder shall bear their own costs of any Site Survey that may be needed. The terms of payment are inclusive of any costs of the solution.

10.38 Obligations

The Successful Bidder shall be obliged to implement any proposed changes once approval in accordance with Article above has been given, with effect from the date agreed for implementation.

10.39 Award of Contract

The proposals will be ranked in terms of the Overall Scores obtained from Highest to Lowest . The technically qualified bidder will be considered for award of contract.

10.40 Notification of Award

Prior to expiration of the period of bid validity, Purchaser will notify the successful bidder(s) in writing, that their bid has been accepted.

10.41 Contract Period

The Successful bidder shall sign contract agreement for the said project services with the Government of Chhattisgarh / CHiPS for a period of 36 months.

10.42 Deemed Acceptance

Services and/or deliverables shall be deemed to be fully and finally accepted by CHIPS in the event when CHIPS has not submitted its acceptance or rejection response in writing to Bidder within 15 days from the date of installation/commissioning or when CHIPS uses the Deliverable in its business, whichever occurs earlier. Parties agree that Bidder shall have 15 days' time to correct in case of any rejection by Client.

10.43 Changes to Services

Either Party may request a change order ("Change Order") in the event of actual or anticipated change(s) to the agreed scope of Services, Deliverables, project schedule, fee, or any other aspect of the Agreement. CHiPS will prepare a Change Order reflecting the proposed changes, including but not limited to the impact on the Deliverables, project schedule, and fee. Absent a Change Order signed by the Parties, Bidder shall not be bound to perform any additional or out-of-scope services beyond what is stated in the Agreement.

11 ANNEXURES

ANNEXURE I: FORMAT FOR POWER OF ATTORNEY

(To be provided scanned copy of original as part of **Technical Proposal (Envelope – B online)** on stamp paper of value required under law duly signed by bidder for the tender)

Dated: _____

POWER OF ATTORNEY

To Whomsoever It May Concern

Know all men by these presents, we _____ (name and registered office address of the Bidder) do hereby constitute, appoint and authorize Mr. _____ (Name of the Person(s)), domiciled at _____ (Address), acting as _____ (Designation and the name of the firm), as Authorized Signatory and whose signature is attested below, as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Proposal for, **Empanelment for Development, Customization, Deployment and Management of State-wide Vehicle tracking software .** vide Invitation for Tender (Tender Document) Document dated ____ , issued by The CEO, Chhattisgarh *i*nfotech & Biotech Promotion Society Raipur, including signing and submission of all documents and providing information and responses to clarifications / enquiries etc. as may be required by Chhattisgarh *i*nfotech & Biotech Promotion Society Raipur or any governmental authority, representing us in all matters before Chhattisgarh infotech & Biotech Promotion Society Raipur, and generally dealing with CHiPS in all matters in connection with our Proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For ----------

(Signature)

(Name, Title and Address)

Accept

(Attested signature of Mr._____)

(Name, Title and Address of the Attorney)

Notes:

To be executed by the Bidder

The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution / power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the executants(s).

ANNEXURE II- DECLARATION FOR NOT BLACK LISTED

(Scanned copy of original to be uploaded online as part of the techno-commercial proposal (Envelop B Online))

Date.....

To,

CEO, CHiPS

SDC Building, Near Police Control Room

Opp. to New Circuit House, Civil Lines

Raipur, Chhattisgarh– 492001

Dear Sir,

Ref.: Tender No.

I / We ..... hereby confirm that our firm has not been banned or blacklisted by any government organization/Financial institution/Court /Public sector Unit/Central Government.

Signature of Bidder.....

Name.....

Designation.....

Seal

Place:

Date:

ANNEXURE III -DRAFT PERFORMANCE GUARANTEE

(To be issued by a Bank _____)

This Deed of Guarantee executed at ———————— by ———————— (Name of the

Bank) having its Head/Registered office at ———————————— (hereinafter referred to as "the Guarantor") which expression shall unless it be repugnant to the subject or context thereof include its heirs, executors, administrators, successors and assigns;

In favour of The CEO of Chhattisgarh *i*nfotech& Biotech Promotion Society, Raipur, having its office at SDC Building, Near Police Control Room, Civil Lines, Raipur (CG) (hereinafter called "CEO, CHiPS Raipur" which expression shall unless it be repugnant to the subject or context thereof include its heirs, executors, administrators, successors and assigns);

Whereas M/s _____. a company formed under _____ (specify the applicable law) and having its registered office at _____ has been, consequent to conduct and completion of a competitive bidding process in accordance with the letter of requirements document No._____ dated __/__/2020 issued by CEO, CHiPS Raipur, and selected M/s _____ (hereinafter referred to as the Bidder) for the Agreement by CEO, CHiPS Raipur as more specifically defined in the aforementioned Document including statement of work and the Agreement executed between the CEO, CHiPS Raipur and Bidder. The Agreement requires the Bidder to furnish an unconditional and irrevocable Bank Guarantee for an amount of Rs._____ /- (Rupees _____only) by way of security for guaranteeing the due and faithful compliance of its obligations under the Agreement.

Whereas, the Bidder approached the Guarantor and the Guarantor has agreed to provide a Guarantee being these presents:

Now this Deed witnessed that in consideration of the premises, we, ———— Bank hereby Guarantee as follows:

The Bidder shall implement the Project, in accordance with the terms and subject to the conditions of the Agreement, and fulfil its obligations there under

We, the Guarantor, shall, without demur, pay to CEO, CHiPS Raipur an amount not exceeding Rs. _____ (Rupees _____ only) within 7 (seven) days of receipt of a written demand therefore from CEO, CHiPS Raipur stating that the Bidder has failed to fulfil its obligations as stated in Clause 1 above.

The above payment shall be made by us without any reference to the Bidder or any other person and irrespective of whether the claim of the CEO, CHiPS Raipur is disputed by the Bidder or not.

The Guarantee shall come into effect from_____ (Start Date) and shall continue to be in full force and effect till the earlier of its expiry at 1700 hours Indian Standard Time on _____ (Expiry Date) (both dates inclusive) or till the receipt of a claim, from the Chhattisgarh infotech & Biotech Promotion Society, Raipur, Government of Chhattisgarh under this Guarantee, which is one month after the expiry of performance guarantee, whichever is earlier. Any demand received by the Guarantor from CEO, CHiPS Raipur pri or to the Expiry Date shall survive the expiry of this Guarantee till such time that all the moneys payable under this Guarantee by the Guarantor to CEO, CHiPS Raipur

In order to give effect to this Guarantee, CEO, CHiPS Raipur shall be entitled to treat the Guarantor as the principal debtor and the obligations of the Guarantor shall not be affected by any variations in the terms and conditions of the Agreement or other documents by CEO, CHiPS Raipur or by the extension of time of performance granted to the Bidder or any postponement for any time of the power exercisable by CEO, CHiPS Raipur against the Bidder or forebear or enforce any of the terms and conditions of the Agreement and we shall not be relieved from our obligations under this Guarantee on account of any such variation, extension, forbearance or omission on the part of CEO, CHiPS Raipur or any indulgence by CEO, CHiPS Raipur to the Bidder to give such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

This Guarantee shall be irrevocable and shall remain in full force and effect until all our Obligations under this guarantee are duly discharged.

The Guarantor has power to issue this guarantee and the undersigned is duly authorized to execute this Guarantee pursuant to the power granted under _____.

In witness, whereof the Guarantor has set its hands hereunto on the day, month and year first here-in-above written.

Signed and Delivered by _____ Bank by the hand of Shri_____ its _____and authorised office.

Authorised Signatory _____Bank

ANNEXURE IV: PARTICULARS OF THE BIDDERS

Scanned copy of original as (duly signed by bidder) as part of Technical Proposal to be uploaded online-**(Envelope –B online)**

SI No.	**Information Sought**	**Details to be Furnished**	**Document if any Page No.**
1	Name and address of the bidding Company		
2	Incorporation status of the firm (public limited / private limited, etc.)		
3	Year of Establishment		
4	Date of registration		
5	ROC Reference No.		
6	Details of company registration		
7	Details of registration with appropriate authorities for Tax		
8	Name, Address, email, Phone nos. and Mobile Number of Contact Person		

ANNEXURE V: FORMAT OF SENDING PRE-BID QUERIES

Ref: Tender Notification no <xxx> dated <dd/mm/yy>

Name of the Bidder <<…….>>

Contact Number and Address of the Bidder- <<……>>

Sr. No.	Section No.	Page No.	Tender Clause	Query	Remarks
1					
2					
3					
.					
N					

ANNEXURE VI: PRE-CONTRACT INTEGRITY PACT

1. **GENERAL**

1.1. This pre-bid contract Agreement (hereinafter called the Integrity Pact) is made on ....the day of the month..... of 2020 between, the Government of Chhattisgarh acting through CEO, Chhattisgarh infotech Promotion Society (CHiPS), a autonomous society under Department of Electronics and Information Technology, Government of Chhattisgarh (hereinafter called the "TENDERING AUTHORITY", which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) as the First Party, proposes to empanel Consultancy Firms for a period of three years for providing consultancy services to the Government of Chhattisgarh and M/s .....represented by Shri ..... (hereinafter called the "BIDDER ", which expression shall mean and include, unless the context otherwise requires, his successors an permitted assigns) and the Second Party, is willing to offer/ has offered.

1.2. WHEREAS the BIDDER is a …… (Private-Company / Public Company/ Government Undertaking / Partnership firm) constituted in accordance with the relevant law in the matter and the TENDERING AUTHORITY is performing its function on behalf of the Government of Chhattisgarh.

2. **OBJECTIVES**

NOW, THEREFORE, the TENDERING AUTHORITY and the BIDDER agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the Contract to be entered into with a view to:

2.1. Enabling the TENDERING AUTHORITY to obtain the desired Service at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

2.2. Enabling BIDDERs to abstain from bribing or indulging in any corrupt practices in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing any corrupt practices and the TENDERING AUTHORITY will commit to prevent corruption, in any form, by its official by following transparent procedures.

3. **COMMITMENTS OF THE TENDERING AUTHORITY**

The TENDERING AUTHORITY commits itself to the following:

3.1. The TENDERING AUTHORITY undertakes that no official of the TENDERING AUTHORITY, connected directly or indirectly with the contract, will demand, take promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward,

favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

3.2. The TENDERING AUTHORITY will, during the pre-contract stage, treat BIDDERs alike, and will provide to all BIDDERs the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to the other BIDDERs.

3.3. All the officials of the TENDERING AUTHORITY will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the TENDERING AUTHORITY with the full and verifiable facts and the same prima fade found to be correct by the TENDERING AUTHORITY, necessary disciplinary proceedings, or any other action as deemed, fit, including criminal proceedings may be initiated by the TENDERING AUTHORITY and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the TENDERING AUTHORITY the proceedings under the contract would not be stalled.

4. COMMITMENTS OF BIDDERS

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means an illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:

4.1. The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the TENDERING AUTHORITY, connected directly or indirectly with the biding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting an implementation of the contract.

4.2. The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the TENDERIN AUTHORITY or otherwise in procuring the Contract of forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or dis-favour to any person in relation to the contract or any other contract with the Government.

4.3. The BIDDER further confirms and declares to the TENDERING AUTHORITY that the

BIDDER in the original Manufacture/Integrator/Authorized government sponsored export entity of the stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the TENDERING AUTHORITY or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

4.4. The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payment he has made, is committed to or intends to make to officials of the TENDERING AUTHORITY or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

4.5. The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

4.6. The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

4.7. The BIDDER shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the TENDERING AUTHORITY as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

4.8. The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

4.9. The BIDDER shall not instigate or cause to instigate any third person to commit any of the acts mentioned above.

5. **PREVIOUS TRANSGRESSION**

5.1. The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact with any other government body in India in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in any state or in India that could justify BIDDER's exclusion from the tender process.

5.2. If the BIDDER makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

6. EARNEST MONEY (SECURITY DEPOSIT)

6.1. Every BIDDER while submitting commercial bid, shall deposit an amount as specified in TENDER as Earnest Money/Security Deposit, with the TENDERING AUTHORITY

6.2. No interest shall be payable by the TENDERING AUTHORITY to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

7. SANCTIONS FOR VIOLATIONS

7.1. Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the TENDERING AUTHORITY to take all or any one of the following actions, wherever required:

7.1.1. To immediately call off the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

7.1.2. To forfeit fully or partially the Earnest Money Deposit (in pre-contract stage), as decided by the TENDERING AUTHORITY and the TENDERING AUTHORITY shall not be required to assign any reason therefore.

7.1.3. To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

7.1.4. To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the TENDERING AUTHORITY, along with interest.

7.1.5. To cancel all or any other contracts with the BIDDER and the BIDDER shall be liable to pay compensation for any loss or damage to the TENDERING AUTHORITY resulting from such cancellation/rescission and the TENDERING AUTHORITY shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

7.1.6. To debar the BIDDER from participating in future bidding processes of the Government of Chhattisgarh for a minimum period of five years, which may be further extended at the discretion of the TENDERING AUTHORITY.

7.1.7. To recover all sums paid in violation of this Pact by BIDDER(s) to any middlemen or agent or broken with a view to securing the contract.

7.1.8. In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the TENDERING AUTHORITY with the BIDDER, the same shall not be opened.

7.1.9. If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is closely related to any of the officers of the TENDERING AUTHORITY, or alternatively, if any close relative of an officer of the TENDERING AUTHORITY has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender. Any failure to disclose the interest involved shall entitle the TENDERING AUTHORITY to rescind the contract without payment of any compensation to the BIDDER.

7.1.10. The term 'close relative' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependent upon Government servant.

7.1.11. The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the TENDERING AUTHORITY , and if he does so, the TENDERING AUTHORITY shall be entitled forthwith to rescind the contract and all other contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the TENDERING AUTHORITY resulting from such rescission and the TENDERING AUTHORITY shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

7.2. The decision of the TENDERING AUTHORITY to the effect that a breach of the provisions of this pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Monitor(s) appointed for the purposes of this Pact.

8. FALL CLAUSE

The BIDDER undertakes that he has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Department of the Government of Chhattisgarh or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Department of the Government of Chhattisgarh or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the TENDERING AUTHORITY,. if the contract has already been concluded.

9. INDEPENDENT MONITORS

9.1. The TENDERING AUTHORITY will appoint Independent Monitors (hereinafter referred to as Monitors) for this Pact.

9.2. The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

9.3. The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

9.4. Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

9.5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the TENDERING AUTHORITY.

9.6. The Monitor will submit a written report to the designated Authority of TENDERING AUTHORITY/Secretary in the Department/within 8 to 10 weeks from the date of reference or intimation to him by the TENDERING AUTHORITY/BIDDER and, should the occasion arise, submit proposals for correcting problematic situations

10. **FACILITATION OF INVESTIGATION**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the TENDERING AUTHORITY or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information of the relevant documents and shall extend all possible help for the purpose of such examination.

11. **LAW AND PLACE OF JURISDICTION**

This Pact is subject to Indian Law, the place of performance and jurisdiction shall be the seat of the TENDERING AUTHORITY.

12. **OTHER LEGAL ACTIONS**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the any other law in force relating to any civil or criminal proceedings.

13. **VALIDITY**

13.1. The validity of this Integrity Pact shall be from the date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the TENDERING AUTHORITY and the BIDDER/Seller whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

13.2. If one or several provisions of this Pact turn out to be invalid; the remainder of this Pact

shall remain valid. In such case, the parties will strive to come to an agreement to their original intentions.

14. The parties hereby sign this Integrity Pact at.....on.....

TENDERING AUTHORITY **BIDDER**

Name of the Officer

Designation

Witness **Witness**

1)..... 1).....

2)..... 2).....

ANNEXURE VII: PROPOSAL COVERING LETTER

Scanned copy of original (duly signed by bidder) as part of Technical Proposal to uploaded Online - (**Envelope B –Online)**

[Date]

To,

CEO, CHiPS

Address: SDC Building, IInd Floor, Near Police Control Room, Civil Lines, Raipur-492001

E-Mail: ***ceochips@nic.in***

Ph: 0771-4014158

Dear Sir,

Dear Sir,

We …….. (Name of the bidder) hereby submit our proposal in response to notice inviting tender date …….. and tender document no. …… for and confirm that :

1. All information provided in this proposal and in the attachments is true and correct to the best of our knowledge and belief.
2. We shall make available any additional information if required to verify the correctness of the above statement.
3. Certified that the period of validity of bids is 180 days from the last date of submission of proposal, and
4. We are quoting for all resources under all categories mentioned in the tender.
5. We the Bidders are not under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted by any of the Government agencies as on the date of submission of Bid. Chhattisgarh infotech & Biotech Promotional Society, Raipur may contact the following person for further Information regarding this tender:
   a. Name and full address of office, Contact No., Email ID, Company Name
   b. Name and full address of office, Contact No., Email ID, Company Name
6. We are submitting our Eligibility Criteria proposal bid documents and technical bid documents
   a. In soft format in e-Procurement portal.

Dated this Day of **2021**

(Signature) (In the capacity of)

Duly authorized to sign the Tender Response for and on behalf of:

(Name and Address of Company) Seal/Stamp of bidder

Witness Signature:

Witness Name:

Witness Address:

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am …… of the ……., and that …… who signed the above Bid is authorized to bind the corporation by authority of its governing body.

Date

(Seal here)

ANNEXURE VIII: FINANCIAL PROPOSAL FORMAT

(To be filled online in e-Procurement portal only. If any bidder will upload the financial proposal in Envelope A or B then the bid will be rejected)

Tender Document No.

To

The Chief Executive Officer

SDC Building, Near Police Control Room

Civil Lines, Raipur- 492001

Sir,

I/We hereby submit our Proposal for the **Empanelment for Development, Customization, Deployment and Management of State-wide Vehicle tracking software .** in accordance with the special Terms and Conditions as well as Scope of work.

S. no	Domain/Category	Unit Of Measurement (UOM)	QTY (A)	Price per Unit (B)	TAX Per Unit (C)	Price with Tax(D=B+C)	Total price inclusive of Taxes (E=D*A)
1.	Conceptualization, Design, Development of system with all third party integrations	lumpsum	1				
2.	Supply, Installation and Establishment of tracking mechanism command centre (iCCC) including construction of any infrastructure that may be required.	lumpsum	1				
3	STQC / Cert-in certification.	lumpsum	1				
4	Yearly Cloud DC &DR Charges including VMs, Storage, Storage, Bandwidth, Security, Software licenses	Year	2				
5	Yearly Operation & Maintenance Charges along with other	Year	2				

S. no	Domain/Category	Unit Of Measurement (UOM)	QTY (A)	Price per Unit (B)	TAX Per Unit (C)	Price with Tax(D=B+C)	Total price inclusive of Taxes (E =D*A)
	associated applications.						
6	Project Manager under Section Staffing Requirement	Year	1				
7	Technical Developers under Section Staffing Requirement	Year	2				
8	OSU/Technical Helpdesk for ICCC - 24*7, 3 shifts (under Section Staffing Requirement)	Year	8				

Additional Charges for Extension Period AMC in case of extension in Contract Period (Cost quoted by bidder in the below table will not be considered for financial bid evaluation and should be uploaded separately in Envelope C. No other document is to be uploaded in Envelope C)

S.no	Domain/Category	Unit Of Measurement (UOM)	QTY (A)	Price per Unit (B)	TAX Per Unit (C)	Price with Tax(D=B+C)	Total price inclusive of Taxes (E =D*A)
1.	AMC cost per year after completion of contract period of 2 years	Year	1				

Please note the following:

1. The above rates are inclusive of all expenses required for successful implementation per project basis in Chhattisgarh as well as outside of state.
2. Since the price proposal is in INR, CHiPS shall not consider any upward variation/ fluctuation on account of any foreign exchange at any time during the currency of the contract.
3. Prices are valid for a period of 180 Days from date of submission of Bid.

Signature of Bidder..... Place:
Name..... Date:
Designation.....

Seal

ANNEXURE IX: GUIDELINE FOR E-PROCUREMENT

Guidelines for bidders on using Integrated e-Procurement System Govt. of Chhattisgarh. https://eproc.cgstate.gov.in

Note: These conditions will over-rule the conditions stated in the tender document(s), wherever relevant and applicable.

1. Vendor / Bidder Registration on the e-Procurement System:

.

All the Users / Bidders (Manufacturers / Contractors / Suppliers / Vendors / Distributors etc.) registered with and intending to participate in the Tenders of various Govt. Departments / Agencies / Corporations / Boards / Undertakings under Govt. of Chhattisgarh processed using the Integrated e-Procurement System are required to get registered on the centralized portal https://eproc.cgstate.gov.in and get approval on specific class (e.g. A, B, C, D, UGE, UDE, Others/Open) from Public Works Department (in case to participate in tenders restricted to vendors / bidders in a particular class).

The non – registered users / bidders who are also eligible to participate in the tenders floated using the e-Procurement system are also required to be registered online on the e-Procurement system.

Vendors are advised to complete their online enrolment / registration process on the portal well in advance to avoid last minute hassle, it is suggested to complete enrolment at least four days before the last date of bid submission date, failing which may result in non-submission of bids on time for which vendor/end user shall be solely responsible.

For more details, please get in touch with e-Procurement system integrator, M/s. Mjunction Services Limited, Raipur – 492 001 on Toll free 1800 258 2502 or email helpdesk.eproc@cgswan.gov.in.

2. Digital Certificates:

The bids submitted online must be signed digitally with a valid Class II / Class – III Digital Signature Certificate to establish the identity of the bidders submitting the bids online. The bidders may obtain pair of Encryption & Signing Class – II / Class – III Digital Certificate issued by an approved Certifying Authority (CA) authorized by the Controller of Certifying Authorities (CCA), Government of India.

Note: It may take upto 7 to 10 working days for issuance of Class-II / Class-III Digital Certificate, Therefore the bidders are advised to obtain it at the earliest. It is compulsory to possess a valid Class-II / Class-III Digital Certificate while registering online on the above mentioned e-Procurement portal. A Digital Certificate once mapped to an account / registration cannot be remapped with any other account / registration however it may be inactivated / deactivated.

Important Note: bid under preparation / creation for a particular tender may only be submitted using the same digital certificate that is used for encryption to encrypt the bid data during the bid preparation / creation / responding stage. However bidder may prepare / create and submit a fresh bid using his/her another / reissued / renewed Digital Certificate only within the stipulated date and time as specified in the tender.
In case, during the process of a particular bid preparation / responding for a tender, the bidder loses his/her Digital Certificate because of any reason they may not be able to submit the same bid under preparation online, Hence the bidders are advised to keep their Digital Certificates secure to be used whenever required and comply with IT Act 2000 & its amendments and CVC guidelines.

The digital certificate issued to the authorized user of an individual / partnership firm / private limited company / public limited company / joint venture and used for online bidding will be considered as equivalent to a no-objection certificate / power of attorney to the user.

Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the organization / firm for online tenders as per Information Technology Act 2000. This authorized user will be required to obtain a valid Class-II / Class-III Digital Certificate. The Digital Signature executed through the use of Digital Certificate of this authorized user will be binding on the organization / firm. It shall be the responsibility of management / partners of the concerned organization / firm to inform the Certifying Authority, if the authorized user changes, and apply for a fresh digital certificate for the new authorized user.

3. Online Payment: As the bid is to be submitted only online, bidders are required to make online payment(s) of the Registration fee / Transaction or Service fees / EMD using the online payments gateway services integrated into the e-Procurement system using various payment modes like Credit Card / Debit Card / Internet Banking / Cash Card / NEFT / RTGS etc.

For the list of available online modes of electronic payments that are presently accepted on the online payments gateway services, please refer the link '**Payments accepted online**' on the eProcurement portal https://eproc.cgstate.gov.in**.**

4. Setup of User's Computer System: In order to operate on the e-Procurement system for a bidder / user, the computer system / desktop / laptop of the bidder is required to have Java ver. 765 , Internet explorer 9 / 11, latest Mozila firefox with IE Tab V2 (Enhanced IE Tab) or any other latest browser. A detailed step by step document on the same is available on the home page. Also internet connectivity should be minimum one MBPS.

5. Publishing of N.I.T.: For the tenders processed using the e-Procurement system, only a brief advertisement notice related to the tender shall be published in the newspapers and the detailed notice shall be published only on the e-Procurement system. Bidders can view the detailed notice, tender document and the activity time schedule for all the tenders processed using the e-Procurement system on the portal https://eproc.cgstate.gov.in**.**

6. Tender Time Schedule: The bidders are strictly advised to follow the tender time for their side for tasks / activities and responsibilities to participate in the tender, as all the activities / tasks of each tender are locked before the start time & date and after the end time & date for the relevant activity of the tender as set by the concerned department official.

7. Download Tender Document(s): The tender document and supporting document(s) if any can be downloaded only online. The tender document(s) will be available for download to concerned bidders after online publishing of the tender and up to the stipulated date & time as set in the tender.

8. Submit Online Bids: bidders have to submit their bid online after successful filling of forms within the specified date and time as set in the tender.

The encrypted bid data of only those bidders who have submitted their bids within the stipulated date & time will be accepted by the e-Procurement system. It is expected that the bidder complete his bid ad submit within timeline, a bidder who has not submitted his bid within the stipulated date & time will not be available during opening.

Bid documents uploading during bid preparation should be less than five MB (for individual document) and over all bid documents should be less than fifty MB.

9. Submission of Earnest Money Deposit: The bidders shall submit their Earnest Money Deposit Either as usual in a physically sealed Earnest Money Deposit envelope and the same should reach the concerned office OR Online using payment gateway as stated in the Notice Inviting Tender. Bidders also have to upload scanned copy of Earnest Money Deposit instrument.

10. Opening of Tenders: The concerned department official receiving the tenders or his duly authorized officer shall first open the online Earnest Money Deposit envelope of all the bidders and verify the same uploaded by the bidders. He / She shall check for the validity of Earnest Money Deposit as required. He / She shall also verify the scanned documents uploaded by the bidders, if any, as required. In case, the requirements are incomplete, the next i.e. technical and commercial envelopes of the concerned bidders received online shall not be opened.

The concerned official shall then open the other subsequent envelopes submitted online by the bidders in the presence of the bidders or their authorized representatives who choose to be present in the bid opening process or may view opened details online.

10. Briefcase: Bidders are privileged to have an online briefcase to keep their documents online and the same can be attached to multiple tenders while responding, this will facilitate bidders to upload their documents once in the briefcase and attach the same document to multiple bids submitting.

For any further queries / assistance, bidders may contact:

1. The Service Integrator of e-Procurement system, M/s. Mjunction Service Ltd. on Help Desk Toll free No. 1800 258 2502 or email helpdesk.eproc@cgswan.gov.in.

2. Mr. Shailesh Kumar Soni, Sr. Manager, Chhattisgarh Infotech & Biotech Promotion Society (CHiPS) on Tel. No. 0771 - 4014158 or email: pro-chips@nic.in.

ANNEXURE-X Format for Certifying that Online & Offline Documents are identical

(To be provided in original as part of online Envelope-B: Technical Proposal by all consortium partners)

Date.....

To,

CEO, CHiPS
SDC Building, Near Police Control Room
Opp. to New Circuit House, Civil Lines
Raipur, Chhattisgarh– 492001

Dear Sir,

Ref.: Tender No.

We …….. (Name of the bidder) hereby submit one set of original documents of our proposal (except the financial proposal) in response to notice inviting tender date …….. and tender document no. …… …….. and confirm that :

1. Online and Offline documents are identical.

2. In case of discrepancies in online & offline documents, Online Documents would be considered valid.

3. Offline Documents does not include Financial Proposal. In case, it contains the Financial Proposal, our bid will be summarily rejected.

Signature of Bidder..... Place:
Name..... Date:
Designation.....

Seal

ANNEXURE-XI Elegibility Criteria

S. No.	Basic Requirement	Specific Requirements Tier-I	Documents Required	Document Submitted	Page No
1	Bidder Company	The bidder company should be a - registered in India under companies Act 1956 OR 2013 OR LLP Act 2008 - registered with the Tax Authorities - operating in India for the last five years as on date of RFP issuance	Copy of Certificate of incorporation GST registration certificate PAN Card		
2	Bidder Turnover	The bidder's average annual turnover should be more than 50 crore in the last three Financial years (FY 2017-18, 2018-19 and 2019-20)	Extracts from the audited Balance sheet and Profit & Loss Account OR Certificate from the statutory auditor OR Certificate from CA		
3	Bidder Positive Net Worth	The bidder should have positive Net Worth in each of the last three Financial Years	Extracts from the audited Balance sheet and Profit & Loss Account; OR Certificate from the statutory auditor OR Certificate from CA		
4	Bidder Experience and Technical Capability	The bidder should have experience of at least one large scale Government vehicle tracking project covering min 35,000 vehicles in India OR The Bidder must have either Designed/Developed any Vehicle Tracking Application software for any Central/ State Govt./ PSU or Government Organizations in India; The project value should be -	Copy of work order / contract agreement with client certificate.		

S. No.	Basic Requirement	Specific Requirements Tier-I	Documents Required	Document Submitted	Page No
		a) One project of similar nature not less than the amount **8 Crores** OR b) Two projects of similar nature not less than the amount 6 **Crores** each OR c) Three projects of similar nature not less than the amount 4 **Crores** each			
5	Blacklisting	The bidder should not have been black listed by Central Government/ any State Government/ PSU for breach of Contractual Conditions at the time of bid submission date	Self-Declaration Certificate on Stamp paper duly notarized that the Bidder is not black listed. (Certificate to be enclosed in the bid duly signed by the authorized signatory on its letter head).		
6	Authorized Representative from Bidder	A power of attorney / Board resolution in the name of the person signing the bid.	Power of attorney/ Board resolution copy		
7	Insolvency / Bankruptcy	Bidder must not have been declared insolvent/ bankrupt or should not have filed for insolvency/ bankruptcy or in the process of being declared bankrupt before any designated authority.	Self-Declaration regarding company not being bankrupt shall be submitted.		

ANNEXURE-XI Technical Evaluation Criteria

SN	Parameter	Marks	Supporting Document(s)	Document Submitted	Page No	Obtained Mark
. 1	**Bidder Turnover :** Average Annual Turnover from IT/ITeS Services/ System Integrator (SI) related activities including design, development, implementation, maintenance, integration of IT hardware /Cloud with application in last three financial years (FY 2017-18, 2018-19 and 2019-20).	**Maximum Marks = 10** **iv.** > INR 70 Crore = **10 Marks** **v.** > 60 Crore to 70 Crore = 8 **Marks** **vi.** > 50 Crore to 60 Crore = 5 **Marks**	Extracts from the audited Balance sheet and Profit & Loss Account OR Certificate from the statutory auditor OR Certificate from CA			
. 2.	During the last Five years (till the date of bid submission), the bidder must have experience in Design/ Development and Implemented any Application software project related to Vehicle Tracking System (VTS) with Integrated Command Control Centre for any Central/ State Govt./ PSU or Government Organizations in India	**Maximum Marks = 20** iv. At least 3 projects = 2**0 Marks** v. At least 2 projects = 12 **Marks** vi. At least 1 project **= 8 Marks**	Work order + Client Completion certificates; OR Work Order + Phase Completion Certificate from the ient			
. 3.	During the last Five years (till the date of bid submission), the bidder must have experience in monitoring of Vehicles in a single platform with number of vehicles for any Application software project related	**Maximum Marks = 20** iii. At least 50,000 Vehicles = 20 **Marks** iv. At least 35,000 but	Work order + Client Completion certificates; OR Work Order + Phase			

SN	Parameter	Marks	Supporting Document(s)	Document Submitted	Page No	Obtained Mark
	to Vehicle Tracking System (VTS) for any Central/ State Govt./ PSU or Government Organizations in India	less than 50,000 Vehicles = 10 **Marks**	Completion Certificate from the client			
4.	During the last Five years (till the last date of bid submission), the bidder must have experience of deployment and management of VTS application on Meity empaneled Cloud/Govt Cloud for any project of any Central/ State Govt./ PSU or Government body/institution in India;	**Maximum Marks = 10** **iv.** At least 3 projects = 10 **Marks** **v.** At least 2 projects = **8 Marks** **vi.** At least 1 project = **5 Marks**	Work Order + Client Completion Certificates; OR Work Order + Phase Completion Certificate from the client			
5	**Proposed Solution:** Bidders must demonstrate their understanding of the Transport Department's requirements by providing:	**Maximum Marks = 20** **iii.** Bidders understanding of the project, Approach, Methodology and Solution proposed and its components – 10 **Marks** **iv.** Proposed Technical Architecture covering Integration approach,	Bidder needs to give the Technical presentation mentioning the components and needs to provide all the detailed description in the technical Bid Response			

SN	Parameter	Marks	Supporting Document(s)	Document Submitted	Page No	Obtained Mark
		security, cloud architecture – **10 Marks**				
5	**Project Team Composition**	**Maximum Marks = 10** **iii.** Project Manager - B.E. / B.Tech (in relevant stream) / MCA) with at least 8 years of experience of handling similar large projects in VTS Sector = **5 Marks** **iv.** VTS Expert - B.E. / B.Tech (in relevant stream) / MCA) with at least 5 years of experience of handling similar large projects in VTS Sector = **5 Marks**	The bidder needs to submit the detailed CV and consolidated Manpower sheet as per of RFP			
6.	Every bidder will be given a time slot of 90 minutes to demonstrate understanding of the project, architecture, tools, components, Approach and	Live Demonstration of Vehicle Tracking System **(10 Marks)** – Software support system compatible with	Bidder needs to give the Technical presentation and Live Demonstration at a suitable date			

SN	Parameter	Marks	Supporting Document(s)	Document Submitted	Page No	Obtained Mark
	methodology, timelines and resources proposed for the project. Company profile should be limited to 3 slides only; Presentation should include - • Broad Design of the Application required by DEPARTMENT • Demonstration	different tracking devices - Data Handling - Integration of various communication protocols from tracking devices at one single platform - Auto dispatching for event and call logs to relevant platforms - Geofencing and real time tracking of vehicles	notified by DEPARTMENT/CHiPS Copy of Technical Presentation, Technical Solution with Proposed components			