DEPARTMENT OF ELECTRONICS & INFORMATION TECHNOLOGY

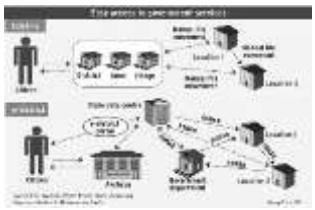
MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY

GOVERNMENT OF INDIA
NEW DELHI

सत्यमेव जयते

MODEL REQUEST FOR PROPOSAL
FOR
SELECTION OF SYSTEM INTEGRATOR
FOR
NATIONAL ROLL-OUT OF e-DISTRICT MMP
VOLUME II

Ref No: 3(41) /2011-EG – II

<State Designated Agency Name>

<Address>

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Terms and Legends used in this document

Symbol / Terms	Meaning
< >	**BLANKS**: The State/UT specific text and section has been left blank and shall be filled by the State/UT before releasing the RFP for Selection of SI
[ ]	**INSTRUCTIONS**: Model SI RFP has instructions at many places for helping the reader to understand the RFP and customize the sections as per the State/UT specific requirement. These are tips provided to the user of the template. These are to be deleted by the user from the final document being created.
Normal Font	**DESIRABLE**: DeitY recommends that State/UT should continue with existing clause. However, because of State/UT specific requirements, these clauses can be removed or edited by State/UT on approval from Apex Committee.
Text with Dark Blue Colour Font and Underlined	**ESSENTIAL:** These clauses have been carefully defined for ensuring the required minimum quality for implementation of state wide rollout of e-District project. These clauses shall not be removed or edited by the State/UT. (*State / UT may remove the underline formatting when releasing the final document to bidders).*
<< >>	Text to be filled in by the bidder in response to this document. This is not to be inputted / tinkered by the user.
Nodal Agency	The SDA which is responsible for executing the project and assists the Government Department /ministry in carrying out the tendering.
Department	The Department is the ultimate "owner" of the project. The e-Governance is carried out within the domain of the department.
Bidder	Supplier/Vendor of Software application development, Software products

GLOSSARY OF TERMS

The definitions of various terms that have been used in this RFP are as follows:

- "**Request for Proposal (RFP)**" means all three Volumes and its annexures and any other documents provided along with this RFP or issued during the course of the selection of bidder, seeking a set of solution(s), services(s), materials and/or any combination of them.

- "**Contract / Agreement / Contract Agreement / Master Service Agreement**" means the Agreement to be signed between the successful bidder and <<*SDA*>>, including all attachments, appendices, all documents incorporated by reference thereto together with any subsequent modifications, the RFP, the bid offer, the acceptance and all related correspondences, clarifications, presentations.

- "**Bidder**" means any firm offering the solution(s), service(s) and /or materials as required in the RFP. The word Bidder when used in the pre-award period shall be synonymous with parties bidding against this RFP, and when used after award of the Contract shall mean the successful party with whom the agreement is signed for rendering of services for implementation of this project.

- "**Proposal / Bid**" means the Pre-Qualification, Technical and Commercial bids submitted for this project against this RFP.

1 Request for Proposal Datasheet

S. No	Information	Details
1.	RFP reference No and Date	<<Enter RFP No.>>
2.	Non Refundable Tender Cost	<<Enter cost of RP>>
3.	Earnest Money Deposit (EMD/ Bid Security)	<<Enter EMD Value>>
4.	Last date and time for submission of queries for clarifications	<<Enter date and time>>
5.	Date, time and venue of pre-bid conference	<<Enter date, time & venue>>
6.	Release of response to pre bid queries	<<Enter date and time >>
7.	Last date, time (deadline) and venue for receipt of proposals in response to RFP notice	<<Enter date, time & venue >>
8.	Date, time and venue of opening of Technical Proposals received in response to the RFP notice	<<Enter date and time >>
9.	Place, time and date of Technical Presentations by the bidders	<<Enter date and time >>
10.	Place, time and date of opening of Financial Proposals received in response to the RFP notice	<<Enter date and time >>
11.	Contact person for queries	<<Enter details for contact person>>
12.	Addressee and address at which proposal in response to RFP notice is to be submitted	<<Enter address>>

2 Introduction

NeGP was approved by the Government of India in May 2006, with the following vision:

"Make all Government Services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realise the basic needs of the common man"

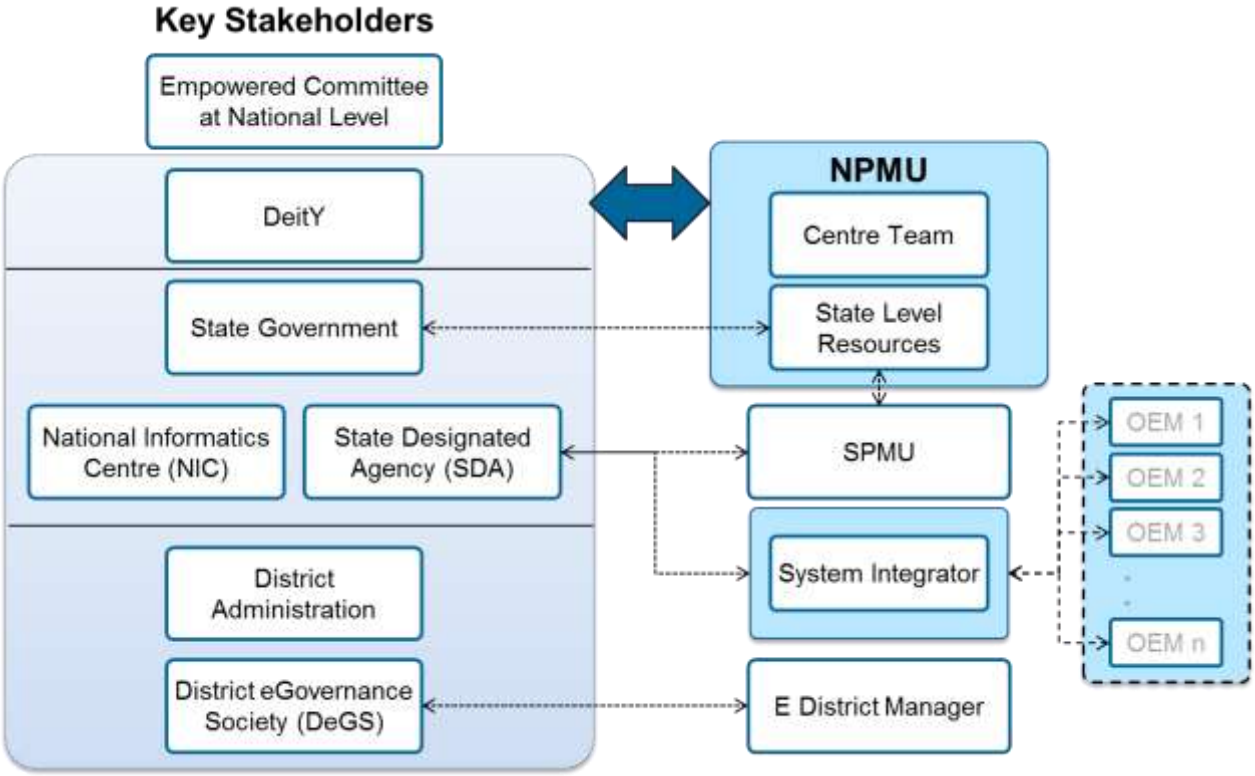
To realize this vision, 31 Central, State and Integrated Mission Mode projects (MMPs) along with 8 support components were identified and approved under NeGP. States have been given flexibility to identify up to 5 additional state-specific projects, which are particularly relevant for the economic development of the State. NeGP also envisages creation of the core IT infrastructure in the form of SWANs, SDCs and one lakh front ends namely CSCs in rural areas across the country to deliver public services electronically.

e-District is one of the 31 MMPs under NeGP, with the Department of Information Technology (DIT), Government of India (GoI) as the nodal department, to be implemented by State Government or their designated agencies. This MMP aims at electronic delivery of identified high volume citizen centric services, at district and sub-district level, those are not part of any other MMP. To achieve these objectives service levels and outcomes for each of these services will be clearly laid down by the State concerned, with a view to improving the efficiency and effectiveness of the service delivery. The MMP envisages leveraging and utilizing the four pillars of e-infrastructure namely, State Data Centres (SDCs), State Wide Area Network (SWANs), State Service Delivery Gateways (SSDGs) and Common Service Centres (CSCs), optimally to deliver public services electronically to citizens at their door steps. Initially only those high volume citizen-centric services will be taken up for implementation which have high priority for the State. New services will be added to the portfolio subsequently, once the demand for the initial set of e-enabled services increases.

3 Implementation Framework

I. e-District project shall be implemented in a way where the districts will play a major role. e-District shall be implemented in alignment with the NeGP principle of "centralized planning and decentralized implementation". State IT Department/ Nodal Agency shall play a key role in planning and implementation of the program in collaboration with the district.

II. The role of the DeitY, GoI focuses primarily in planning of national level roll out, issuing guidelines, funding support to the states, monitor and support the state in implementation of the project. States shall drive the implementation at the state/district level. The diagram illustrating the key stakeholders and their role in implementation and for managing the eDistrict MMP is shown below:



III. e-District MMP aims at electronic delivery of all public services at district / sub district level, progressively. Initially 10 categories (5 mandatory + 5 state specific) of identified high volume citizen centric public services at district and sub-district level will be taken up for implementation.

Services are classified into 3 basic categories:

- Type 1 services are typically those services for which an accurate digital database is available. For e.g. in the State of Andhra Pradesh, Land Records

have been digitized and several land-related services are now available across the counter. Similarly, once birth and death are registered, stored in secured database and digitally signed; birth and death certificate can be issued on demand across the counter.

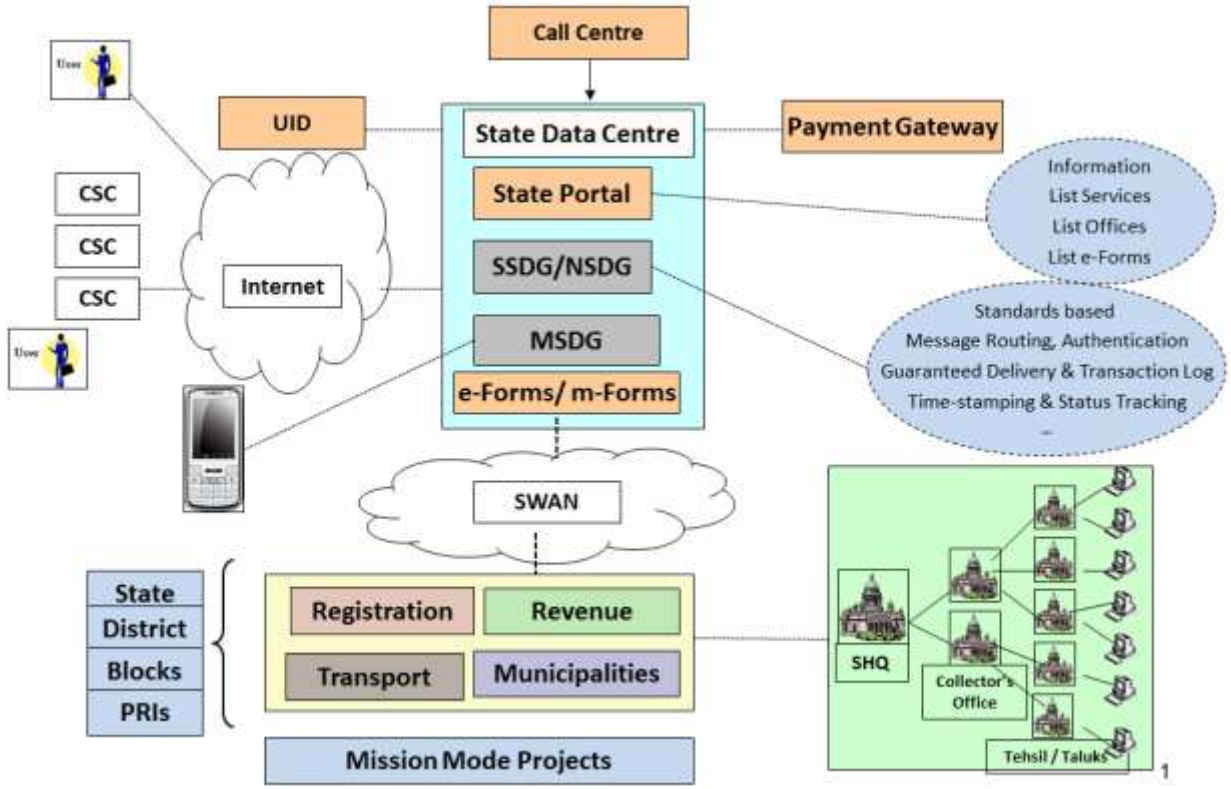
- Type 2 services are those services which can migrate to Type 1 services with due data digitization and onetime physical verification. For e.g. issue of Caste Certificate. Till such time as the centralized, digitally signed databases are created, Type 2 services are delivered within a pre-defined period, say 2 weeks.
- Type 3 services require physical presence / verification and cannot be delivered across counter, like issues of arm license.

Prioritization of Services shall be done on the basis of categories under which the Services shall fall.

IV. An Integrated Service Delivery Framework has been designed by DeitY in July 2012, and communicated to all the States. It can be accessed at (URL: **http://deity.gov.in/content/e-district-guidelines**). This framework envisages a centralized architecture for each major e-Governance application at the State level. The application software will be hosted in the State Data Centre. Integration across States shall be enabled, through mandatory adherence to technical specifications and e-Governance standards, besides use of the SSDG. The Integrated Framework shall be treated as part of this RFP and shall be followed with appropriate modifications, required by the State.

V. Two key aspects of the Scheme are Business Process Re-engineering (BPR) and creation of databases based on e-Governance standards for the purposes of ensuring interoperability. BPR is intended to enable process simplification and significant value addition to citizens.

VI. The solution architecture of the e-District project envisages a centralised application and database and will leverage the core e-infrastructure of State Wide Area Network, State Data Centre and State Service Delivery Gateway.



VII. Further e-District service will be integrated with a mobile service delivery gateway and Aadhaar numbers of the Unique Identification Authority of India. Localisation of the application will be carried out as per the requirement of the state in terms of local language and other needs. According to this, each States selects System Integrator (SI) who shall be responsible to implement the project in the state as per the DeitY, GoI guidelines.

VIII. The e-District MMP envisages centralised architecture at the state level with common application software for each of the identified services for all the districts of the state. The application software will be hosted in the SDC.

IX. Integration across states shall be enabled, through mandatory adherence to technical specifications and eGovernance standards. The detailed guidelines in this regard have been issued by Department of Electronics and Information Technology (DeitY) Government of India as stated in para IV above.

4 Scope of the Project

4.1 Introduction

I. The e-District MMP is to be implemented in all <<enter the total number of districts>> of the <<State/UT>> including 41 districts that have already taken up pilot implementation of the e-District Project. The implementation of the scheme will be completed in ONE year commencing from the date of award to the SI and will be followed by 3 years of Operation and Maintenance (O&M) phase

II. The implementation in the states is proposed to be carried out in 2 phases. In the first phase, districts in which at least 70 per cent of the CSCs are operational shall be targeted for the rollout and in the second phase, rest of the districts shall be selected for the e-District rollout. <If state wishes to increase the number of phases, priority shall be given to those districts where 70% CSC are rolled out.>

III. List of districts and CSC roll out status is enclosed herewith in <*reference*>.

<Insert a map, if possible>

<Provide the list of districts for phases with CSC coverage district wise, if possible in a map>

<*While specific scope of work shall be defined the SI RFP floated by each State separately, the indicative Scope of Work for SI is described in this volume of the RFP*>

The following will be the activities to be carried out by the selected Bidder:

1. Project Planning and Management
2. System Study and Design
3. Business Process Reengineering for the selected applications/ services
4. Development of eDistrict Application
5. Network Connectivity
6. Data Digitization
7. Site Preparation
8. Hardware Procurement & Commissioning
9. STQC Certification
10. UAT & Go live
11. Capacity Building
12. Operation & Maintenance (O&M)

4.1.1 *State Specific Requirements*

I. Key Customization Requirements

II. Key Configuration Requirements

III. Additional Application Development

IV. Integration & Interfacing Requirement

[If there are any specific set of requirements needed for state, it may be described here]

4.2 Solution & Technology Architecture

4.2.1 *Overview*

I. A centralized architecture (servers and processing at single and central location) has been proposed for the e-District project. All requests from internal and external users will be sent to this system, located in a central place for processing. All users will access the application through local or remote terminals using a browser (through internet for external users and through intranet or VPN for internal Departmental users).

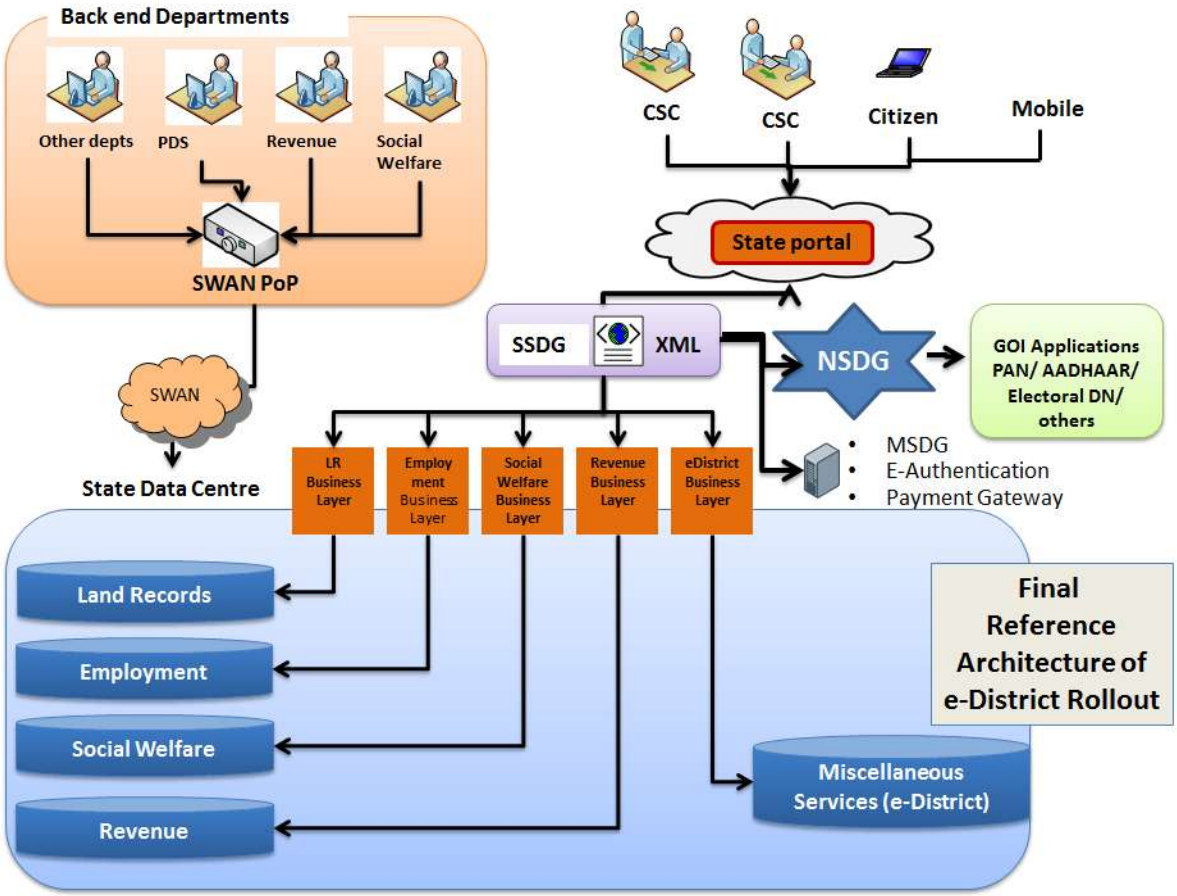
II. The overall technology solution shall be based upon most relevant and suitable architecture standards including standards for Service Oriented Architecture (SOA), XML services & necessary protocols for internet applications, Data Centre standards etc.

III. The design should include integration with existing IT infrastructure created under SDC, SWAN, CSC, State Portal, SSDG and any other MMP for the implementation of eDistrict Project. eDistrict Application developed should be integrated with existing State Portals and Gateways. Requirement for these should be included in the FRS, SRS and Design.

IV. If the SDC is currently not available then provisional solution should be proposed. Once the SDC is operational then appropriate migration strategy should be planned to migrate the application and all related data on to the SDC.

V. The indicative structure is as below *[This needs to be made specific for the State]*:

4.2.2 *e-District Application Structure*



<The above diagram needs to be updated by the SPMU as per the State's requirement>

VI. In States where State Portal / SSDG are operational, the existing eDistrict Application should get integrated with SSDG as a middleware. In States where State Portal / SSDG is under development, the eDistrict architecture should be compatible with it and should get integrated when the SSDG is operational.

VII. Centralized architecture is suggested for states so that in case the central servers or storage or link or due to any reason go down despite building redundancy/high availability capabilities at SDC, the services may not get hampered for the entire state.

VIII. Bidders should clearly understand that the desire of the department is not to create a mere IT Solution but an information infrastructure that will expand, integrate and enhance the functional needs of the department concerned, citizens and other stakeholders. It is in this spirit that the core design and functional requirements are elaborated in the forthcoming sections.

IX. The reference architectures provided in the Integrated Framework for Delivery of e-Services (URL: http://deity.gov.in/content/e-district-guidelines) shall be necessarily followed and adopted with appropriate modifications required for the State.

4.3 Scope of Services – Project Implementation Phase

[The State Government/UT administration may decide the best way to implement the project by "bundling" the entire scope of work to one System Integrator or allow multiple vendors to take responsibility for various components of the Scope of Work. For example, the State Government/UT administration may decide that the Data entry or Training should be "unbundled" from the main scope of work and be awarded through separate tenders. While doing this, the State Government/UT administration should ensure that there is no dilution of responsibility towards completion of the scope of work and delivery of services.

Unbundling should be used sparingly, either because portions of the scope defined in this Model RFP has already been done or is in progress OR for fair competition amongst vendors so that they have fair chance to participate in the project. But precaution should be taken by the State/UT to see that engagement of too many vendors working at the same time should not become an administrative overhead thus putting pressure on the project aspects of cost, quality and time. The unbundling of work should not result in inability to establish the agency responsible for the failure. Accordingly it is suggested that the following guidance be followed for the "unbundling" of the responsibilities of the System Integrator as indicated below:

Sl. No	*Cost head*	*Guidelines*
1	*Systems at SDC*	*These items should necessarily be a part of the responsibility of a single System Integrator to ensure that a single agency is responsible for the uptime of the entire solution*
2	*Systems Support*	
3	*Hardware*	
4	*LAN Networking and Horizontal Connectivity*	
5	*Technical Support for 3 years*	
6	*Software for Pilot*	*This responsibility unbundled from the SI's responsibility only when the NIC/State agency is to develop the application.*
7	*Application Support*	*It should be the same agency, which has developed the application*
8	*Data digitization*	*Given the profile of agencies undertaking the data entry work, the State Government/UT may decide to "unbundle" it from the SI's responsibility and undertake a tender at a District / Division level. However in such cases, the State Government/UT would have to undertake the responsibility for*

Sl. No	*Cost head*	*Guidelines*
		developing the data entry front end application, the database formats and technical compatibility with the SI's solution etc. *The State/UT may also leverage the CSCs for data entry at the price determined through market discovery as case may be.*
9	*Training*	*Two type of trainings are envisaged for the e-District application. The "General Awareness" training can be unbundled from the SI's scope of work. However "application training" has to be the responsibility of the agency who has developed the application.*
10	*Site Preparation*	*Can be unbundled; as it is not a part of the technical solution*

The unbundling the RFP should not lead to changes in the General terms & conditions of the model RFP. The State/UT should exercise complete precaution while drafting different RFP(s) for the unbundled scopes so that exclusivity of works and services are preserved without compromising the objective of the project.

The State/UT should use this flexibility to prioritize the works and services depending upon State/UT specific situations and dynamics. For example, a State/UT may decide to execute data digitization first while some of the CSCs become operational in some districts or the SWAN is commissioned. It is recommended that while unbundling the scope for application development related to implementation of services, applications developed by different vendors do not give rise to integration issues. It is strongly recommended that similar open technology and platform be used for development and deployment.

Any proposal to unbundle/bundle the components included in the SI scope of work must be submitted to the State Apex Committee stating clearly the reasons for the proposal and outlining the methodologies to ensure the coordination and dispute resolution in the implementation process. The unbundling/bundling must be proceeded with only after the approval of the State Apex Committee.]

4.3.1 Solution Design

4.3.1.1 System Study and Design

I. The FRS has been developed by the SPMU (Consultant) and is available along with this RFP. The SI shall carry out a detailed systems study to prepare/ refine the Functional Requirements Specifications and formulate the System and Software Requirements Specifications documents incorporating the functional specifications and standards provided by the DeitY, GoI and the State nodal Agency requirements. *[In case of Pilot States or cases where the State Government is procuring application from another State, the technical design documents including SRS, HDD, LDD, User Manual etc. can be shared with the SI. The Pilot States with less than 10 category of services may take the advice of SPMU for developing the FRS for the balance services]*

II. The SI should prepare *[or update]* a detailed document on the implementation of e-District Application with respect to configuration, customization, extension and integration as per the requirement of State. The SI shall also prepare a change/reference document based on changes or deviations from the base version of the e-District Application with appropriate references to all the artefacts /documents provided by DeitY, GoI / State Nodal Agency.

III. As part of the System Study, the SI shall be responsible for Preparation of a comprehensive System Study document by studying the legislation, business processes and organization design of the <<<State/UT>>.

IV. The selected Bidder shall perform the detailed assessment of the functional requirements and MIS requirements and prepare a new FRS report, as part of the System Study document incorporating list of additional features that shall result in further improvement in the overall application performance for consideration of the <<State Designated Agency>>.

V. In case an existing pilot application is being customized / configured to meet the needs of the state, the SI will provide a comparative report as part of System Study document, on the extent of functionality currently available in the pilot application and the final FRS.
[Please use the template in Annexure 6.6 for preparing the FRS and the Process Diagrams of As-Is and To-Be Processes]

A. Requirements Traceability Matrix: The SI shall ensure that developed e-District application is fully compliant with the requirements and specifications provided in the RFP such as functional, non-functional and technical

requirements. For ensuring this, the SI shall prepare a Requirements Traceability Matrix on the basis of Functional Requirements Specifications (FRS), Non Functional Requirements Specification, and Technical Requirements provided by State (updated, expanded and fine-tuned by the SI). Refer to Annexure 6.8 for more details on the non-functional requirements.

B. Project Documentation: The SI shall create and maintain all project documents that shall be passed on to the State as deliverables as per the agreed project timelines. The documents created by the SI will be reviewed and approved by the SPMU & State Nodal Agency.

Project documents include but are not limited to the following:

1. Detailed Project Plan
    a. Detailed System Study Report
    b. List of services, Service Definitions, Service Levels
    c. Updated/vetted FRS
    d. SRS document
    e. HLD documents
2. E-District Application architecture documents.
3. ER diagrams and other data modelling documents.
4. Logical and physical database design.
5. Data dictionary and data definitions.
6. Application component design including component deployment views, control flows, etc.
    a. LLD documents
7. Application flows and logic.
8. GUI design (screen design, navigation, etc.).
    a. All Test Plans
9. Requirements Traceability Matrix
10. Change Management and Capacity Building Plans.
11. SLA and Performance Monitoring Plan.
12. Design of realtime tools for monitoring e-Transaction volumes and for generating realtime MIS
13. Training and Knowledge Transfer Plans.
14. Issue Logs.

The SI shall submit a list of deliverables that they shall submit based on the methodology they propose. The SI shall prepare the formats/templates for each

of the deliverables upfront based upon industry standards and the same will be approved by <<<State Designated Agency>>> prior to its use for deliverables.

All project documents are to be kept up-to-date during the course of the project. The SI shall maintain a log of the internal review of all the deliverables submitted. Soft copy of logs shall be submitted to State Nodal Officer on regular basis.

4.3.2.1.1 Preparation of Software Requirements Specifications (SRS)

As part of the preparation of SRS the selected SI 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 the <<<State Designated Agency>>>. The State Nodal Agency will sign off on the SRS documents on the advice of SPMU.

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

4.3.2.1.2 Preparation of e-District Project Plan

The SI shall prepare a comprehensive e-District implementation and deployment plan in consultation with < State Designated Agency>. This implementation document shall also comprise of

I. Trainings to be provided to the departmental officials at different stages of the project, procurement
II. Deployment and commissioning of required hardware and software
III. Provisioning of network connectivity
IV. Site preparation, etc.

[It is imperative that scope and coverage of the project in the state is as close to ground reality as possible. To ensure this latest and actual information should be provided to SI preferably in a tabular format. Sample tables are provided in Annexure 6 and state can update / modify these as per their requirements.]

For more details on these refer to Tables in Annexure 6.

Further, SI will also prepare detailed work plan and estimate the timelines and resources required for configuration, customization, extension, integration, and commissioning of the e-District software as per the DeitY GoI / State requirements. All the plans and frameworks prepared by SI during the duration of the Contract shall be required to seek approval from <<<State Designated Agency>>>.

4.3.2.1.3 Preparation of e-District Application Design

Detailed Design documents shall include:

I. Technical Architecture Document (Application, Network, and Security)
II. The available IT infrastructure available at state shall be a part of the document.
III. Gap infrastructure
IV. High Level and Low Level Design.
V. Database architecture, including defining data structure, data dictionary as per standards defined by DeitY, GoI/ <<<State/UT>> Government.

4.3.2.1.4 Sign off Deliverable/ Exit Criteria

I. Detailed Project Plan
II. Detailed System Study Report
III. List of Services, Service Definitions, Service Levels
IV. Updated/vetted FRS
V. SRS document
VI. HLD documents
VII. E-District Application architecture documents.
VIII. ER diagrams and other data modelling documents.
IX. Logical and physical database design.
X. Data dictionary and data definitions.
XI. Application component design including component deployment views, control flows, etc.
    a) LLD documents (including but not limited to)
XII. Application flows and logic.
XIII. GUI design (screen design, navigation, etc.).
    a) All Test Plans
XIV. Requirements Traceability Matrix
XV. Change Management and Capacity Building Plans.
XVI. Design of realtime tools for monitoring e-Transaction volumes and for generating realtime MIS

XVII. SLA and Performance Monitoring Plan.
XVIII. Training and Knowledge Transfer Plans.
XIX. Issue Logs.

4.3.2 Software Development/Customization

4.3.2.1 eDistrict Application

[This section details out generic requirement for e-District Application. State shall add State specific requirements. State is also encouraged to do further detailing if required.]

[The different strategies for pilot and non-pilot states are mentioned below.

- ***Pilot States:** The SI of Pilot project need to comply with the following points and in case the SI for the Pilot project fails in any of the below mandatory requirements, it will not be eligible to participate in the bidding process for any of the States / UTs for the National Rollout of the Scheme:*
    - *Application software as developed for the pilot implementation should be tested by STQC.*
    - *The STQC testing shall include both functional and non-functional tests which may also include the performance load test for State Wide Rollout and also the necessary documentation and source code as required by STQC.*
    - *Preparation of the complete handover documents including Bill of Materials of Inventory, AMC arrangements etc of the pilot project by the SI of the pilot scheme.*
    - *Completion and closure of the pilot project by launching all services as mandated under the pilot project by the State in all the pilot districts.*
    - ***Pilot State with NIC as SI**: State may decide to continue with NIC as SI for state-wide roll out of e-District project. This section can be taken out from this RFP and can be shared with NIC directly for ensuring the compliance to standards and functionality as defined in this section.*
    - ***Pilot State with Non NIC agency as SI:** State should include this section in the RFP for State-wide rollout of e-District project. The functional and technical details of existing application shall become part of this section.*
    - ***Pilot State with Non NIC agency as SI but wishes to appoint NIC as SI for State Wide rollout:** State may decide to select NIC application form other state state-wide roll out of e-District project. This section can be taken out from this RFP and can be shared with their State's NIC directly for ensuring the compliance to standards and functionality as defined in this section.*
- ***Non-pilot States:** This section shall be customized as per the State requirement as per the various options available with the State, such as*
    - *Applications developed in the e-District Pilot of different state (for this purpose, DeitY has made available to all the States, a master list of all applications developed in the Pilot States, along with the definition of services they provide)*
    - *Applications developed and implemented in their own State, either by NIC or by the line department with or without an external agency*
    - *Legacy Applications (identical to the e-District Applications) developed and implemented by other States and running successfully (for this purpose, DeitY will*

make available to all the States, a master list of all such applications developed in the States, along with the definition of services provided);

- *Develop afresh or use customisable/configurable Service Plus application developed by NIC. NIC will extend full support in its implementation.*
- *Conduct 'due diligence' on the identified applications as to whether each of them can be integrated with the e-District project, with or without appropriate modifications/ customization. The following factors are needed to be considered in this regard:*
  - *The application should have been developed on a web-based architecture, preferably SOA, with centralized databases*
  - *The application is certified from security and functionality perspective*
  - *The development environment used by the application is compatible with the target environment of e-District.*
- *Create an application architecture that clearly defines the manner of integrating the shortlisted applications with e-District. The integration can be effected adopting any of the following methods:*
  - *Copy, customize and redeploy in the e-District suite*
  - *Use web-services to integrate with e-District suite in the short run*
  - *Integrate with e-District using the **SSDG**, if already launched/ about to be launched in the State in the long run*
  - *Integrate with e-District using the **NSDG***
  - *Hyperlink to e-District Portal*
- *The following points may be noted while designing the Application Architecture*
  - *It is absolutely essential to take the appropriate decision in consultation with the concerned line department of the State and Central Govt as the case may be.*
  - *Despite the facility of borrowing the application, the spadework relating to creation of master data and of data digitization, training etc. rests with State, before the services can be launched.*
- *The IPR of the application developed rests with the State Government concerned. Hence there may be no legal issues in adopting/adapting the applications developed by different Govt agencies. The Application Architecture needs to be finalized by the State/UT as soon as possible, so that the SPMUs can be directed to develop the RFP accordingly.]*

Further, the State is encouraged to integrate existing G2C service delivery application/s with e-District project. State should list down all the applications which shall be integrated with e-District in RFP. It is important to note that the front end for G2C service delivery shall be the State portal in the long run. The financial quote for taking various G2C service delivery applications to State portal other than e-District may be asked separately. State may take decision to integrate other applications based on the availability of budget. Alternatively, state may decide to take services of

existing respective SIs. However, state may decide to do integration with other services at later stage.]

4.3.2.2 e-District Functional Modules

e-District MMP aims at electronic delivery of all public services at district / sub district level, progressively. Initially 10 categories (5 mandatory + 5 state specific) of identified high volume citizen centric public services at district and sub-district level will be taken up for implementation. While doing so, the four pillars of e-infrastructure i.e. SWANs, SDCs, SSDGs and CSCs will be leveraged and no new infrastructure would be created. Later on, new services could be added depending on the requirements and the felt needs.

S.No.	e-District Modules	Description
1	Certificates	Includes services: Birth, Death, Domicile, Nationality, Caste, Marriage, Income, Employment, etc
2	Social Welfare Schemes	Includes services – Social welfare Pensions (Old age, Widow, Handicap, Destitute), Scholarships
3	Revenue Court	Services – including Case listing, Case adjournment, Stay orders, Final orders, Status of execution of orders: information, tracking, filing of miscellaneous applications. Also, Government dues and recovery, as part of Land Revenue – including issue of notices, record payments, track default processes, updation of treasury receipts, etc
4	Ration Card	Services including services change of address, additions, deletions of members, application for issue of duplicates, etc
5	RTI Services	Includes redressal of Grievances – application, tracking, monitoring, redressal, appeals, etc at district level. RTI services will be applicable to all departments/offices which have been provided with ICT infrastructure and connectivity for delivery

		of services under e District Scheme
6	<5 State specific Service Categories may be added in separate rows>	<State specific Service may be added in separate rows>

The application for e-District is the most critical component for e-District project. Pilot States have already developed e-District applications. This application should be enhanced for state wide rollout of e-District project. The non-pilot state may use applications developed by any of the pilot states. The Integrated Service Delivery Framework released by DeitY shall be leveraged for developing the application architecture for the State. The details on final reference architecture for the state have been provided in this section in addition to generic requirements.

I. Design and development of the eDistrict Application as per the FRS and SRS finalized by all stakeholders (SDA, State DIT, SPMU, etc).
II. For pilot states, the SI needs to use the existing eDistrict Application, FRS and SRS that may be updated as per the State's requirement for state wide roll out of eDistrict.
III. eDistrict Application should ensure availability of all services, mandatory and optional, in accordance with the BPR done by the SPMU and shall have the following components
    A. Front end on the State's portal; if State portal is not operational, front end may be designed with migration strategy to State portal after operationalization of State portal.
    B. Back end for the printing, status update and centralized MIS application.
    C. Providing automatic acknowledgement with automated date and time stamping.
    D. Enabling tracking of the status of the application from any authorized office through a unique application ID
IV. Development of Role based, workflow driven Web based Content Management System (CMS) for contribution of any type of Content to the eDistrict Application including the metadata as specified in SRS.
V. The user should be given a choice to interact with the system in local language in addition to English. The application should provision for uniform user experience across the multi lingual functionality covering following aspects:
    A. Front end web portal in local language
    B. E-forms (Labels & Data entry in local languages)
    C. Storage of entered data in local language

D. Retrieval & display in local language
E. Facility to printout having support for local language
F. "Sakal Bharti" font may be used

[Localisation of application as per the state requirements in terms of local language and other needs. The eDistrict Application should be provisioned for uniform user experience across the multi-lingual functionality as per the state requirements]

VI. Application should have a generic workflow engine. This generic workflow engine will allow easy creation of workflow for new services with minimum technical programming support and thus enable the State government to create new services as and when required by the various Departments without creating a change request. At the minimum, the workflow engine should have the following features :
    a. Feature to use the master data for the auto-populating the forms and dropdowns specifically with reference to :
        i. Name of District, Tehsils, Blocks & Villages
        ii. Designation of officials involved in the processing of the application
    b. Creation of application form, by "drag & drop" feature using meta data standards
    c. Defining the workflow for the approval of the form, by providing various options like :
        i. First in First out
        ii. Defining a citizen charter/delivery of service in a timebound manner
    d. Creation of the "output" of the service, i.e. Certificate, Order etc.
    e. Automatic reports
        i. of compliance to citizen charter on delivery of services
        ii. delay reports

VII. The application should have a module for management of digital signature including issuance, renewal and suspension of digital signatures based on the administrative decisions taken by the State. In case of any change (transfer, promotion, leave, suspension, termination, superannuation etc.) of the officials under e-District Project, a copy of order should be marked to the State Level digital signature management team for assigning and revoking of the access rights.

[This section details the generic requirement for Digital Signatures in the e-District Application. The State shall add State specific requirements. The State is also encouraged to do further detailing if required.

- ***Using Digital signatures to authenticate existing databases:*** *The eDistrict project plans to use digitally signed databases and verification reports*

based upon field visits. Hence, there needs to be a clearly defined mechanism to undertake cleaning of existing databases and digitally signing the entire database to enable delivery of across the counter services. It is also possible that the data in such digitally signed databases would undergo periodic revision and updation. Hence, the State must provision for designing an appropriate set of tools for:

- *digitally signing different databases used in different applications by appropriate authorities,*
- *effecting changes in digitally signed documents*
- *tracking of database records which are digitally signed and which are not so signed*
- *posting of appropriate notifications to the users in case of demand for service in respect of which the relevant data record has not been digitally signed by the competent authority*
- *verification of digital certificates (e.g. a website to authenticate a particular certificate on the basis of certificate details or barcode)*

- ***Integration of Digital Signatures with e-District Application:*** *The eDistrict portal should be made accessible to government official users / registered users over internet and to CSC users through secure user id and password. The biometric/digital signatures need to be integrated for enabling authenticity of the approving authority.*
- ***Capacity Building and Institutional strengthening to manage Digital Signature:*** *As it is envisaged that the users of digital signatures will be significant in numbers, the State should plan the process and the agency for institutionalizing the management (issuance/ renewal/ revocation) of digital certificates. The State should also identify the funding arrangement for the same.*
  - *Identification of Officials authorized for delivering services/ authenticating the electronic records.*
  - *Designing policies and procedures for management of digital signatures.*
  - *Procurement of Digital Certificates for the authorized officials from NIC*
- ***Training on use of Digital Signatures:*** *As the eDistrict project would entail significant amount of field verification and relevant updating of records, digital signatures have to be used by various levels of officials. These officials may also keep on changing due to transfers/ superannuation, etc. , hence the RFP should entail:*
  - *A one-time training to all the concerned officials in the usage of digital signatures,*
  - *As and when required training / on-demand web based training for the new officials taking charge of eDistrict service provisioning.*
- ***Preparatory steps for digital signing of databases***

  a. Identification & planning

- *Identifying registers and data to be digitized*
- *Fixing cut-off date for data digitization*
- *Determining logistics of data digitization (whether at office level, district level or State level)*
- *Selecting database to be used for data digitization*
- *Assessment of volume of data to be digitized for delivering the services*
- *Codifying process for continuous verification and correction of the digitized data*

b. Plan to establishing ownership of digitized data with State Government

- *Fixing the ownership of the department and timeline for completion of digitization*
- *Instituting logical checks for checking the accuracy of data*

c. Selection of Agencies for data digitization

- *Identification of appropriate organization for data digitization*

d. Digitization of data (Data entry of existing records) and digitally signing

- *Digitization of data*
- *Defining process for quality check of data and ownership transfer of data*
- *Verifying and correcting the digitized data*
- *Porting of the digitized data to State Data Centre (SDC) and making it available for e-District and other MMPs.*
- *Application for bulk data signing*
- *Digitally signing of the digitized data by the authorized official*

e. Ensuring dynamic updation of data during processing of each service request

- *Process for continuous addition, verification and correction of the digitized data - Service / Solution workflow should ensure dynamic updation of data.]*

VIII. Asset Management: As mentioned in Section 4.5 (II), there is a requirement to have an asset management module procured under e-District project, to monitor the assets used for e-District project at various offices and procured under various Schemes.

IX. Transaction Report & accounting module: *[The e-District services are being provided through the CSCs in the State. The payments to the CSCs are being made to the CSCs on the number of transactions made by the CSCs. The CSCs are aligned to*

various organizations (SCAs). For e-District project to succeed it is important to ensure that there is a streamlined method to calculate the fee payable to the SCA and the CSC operator. There are various ways in which this is being addressed separately. It is advised that in case there is a gap noticed in calculation of such fees to SCA/CSC operator, a separate module for calculation of such fee (and payments, if necessary) should be developed]

X. e-Transaction & SLA Monitoring Tools

(1) The <<<State Designated Agency>>> should be able to measure and monitor the performance of the deployed infrastructure at SDC and at Department offices and all SLAs set out in this RFP. More importantly, the SDA should be able to monitor in REALTIME, the number of citizens touched through e-Services each day, month and year, through appropriate tools and MIS reports.

(2) The Enterprise Monitoring System available at SDC may be used by the selected Bidder to monitor the infrastructure hosted at the SDC. *[State / UT should provide the details of the Enterprise Monitoring System available at SDC that can be used by the selected bidder.]*

(3) For monitoring of uptime and performance of infrastructure deployed at Department Offices, the selected Bidder shall have to provision for monitoring and measurement tools, licenses, etc. required for this purpose. *[In case, the State / UT has such monitoring and measurement tools which can be made available to the selected Bidder, then the details of these tools should be provided. the Enterprise Monitoring System available at SDC that can be used by the selected bidder.].*

XI. It is also further envisaged that the e-District application to be deployed in all States and UTs should have roadmap to integrate with key initiatives of DeitY namely Portal Services, Citizen Contact Centre, Mobile Platform/ Gateway Services / National Service Delivery Gateway (NSDG) / State Service Delivery Gateway (SSDG), National Service Directory, Payment Gateway, Language Switch, Open Data, E-authentication including Aadhaar, Geographical Information System/ Global Positioning System, E-Gov Application Store, Document Repository, Certifying Authority etc.

a. The details for integration with other initiatives are given below.

Name of the initiative	**Purpose for integration**	**Contact Agency**	**Agency Person details**	**Deity Nodal Person Details**
SSDG	Integration with existing application	CDAC	Mr. Zia Zakib, Executive Director,	Ms. Kavita Bhatia, Additional

			CDAC, Mumbai. Telephone:+91-22-26201606	Director, DeitY. Telephone: +91-11-24364729
Payment Gateway	e-payment	NDML	Mr. Sameer Gupte, Vice-President, NDML. Telephone: +91-9820039921	Ms. Kavita Bhatia, Additional Director, DeitY. Telephone: +91-11-24364729
MSDG	Services over mobile phone	CDAC	Mr. Zia Zakib, Executive Director, CDAC, Mumbai. Telephone:+91-22-26201606	Ms. Kavita Bhatia, Additional Director, DeitY. Telephone: +91-11-24364729
e-Authentication	Validation of beneficiary- using biometric	CDAC	Mr. Zia Zakib, Executive Director, CDAC, Mumbai. Telephone:+91-22-26201606	Ms. Kavita Bhatia, Additional Director, DeitY. Telephone: +91-11-24364729
AADHAR	Applicant authentication	UIDAI	Mr. Tejpal Singh, ADG, UIDAI, New Delhi. Telephone: +91-11-23462611	Mr. Gaurav Dwivedi, Director, DeitY. Telephone:+91-11-24301218
Localisation	Localisation of the application as per the requirement of the State / UT in terms of local language and other needs.	CDAC	Mr. Mahesh Kulkarni, Associate Director, CDAC, Pune. Telephone: +91-20-25883261/25503402	Ms. Swaran Lata, Director, DeitY. Telephone: +91-11-24301272
<Others>		<TBD>		

XII. Complete mobile enablement of the e-District applications and services including all appropriate channels such as SMS / USSD / IVRS and development of corresponding mobile applications to the eDistrict applications and services leveraging the Mobile Service Delivery Gateway (MSDG) and the Mobile App Store developed by DeitY

XIII. Operation and Maintenance of eDistrict Application including the suggested changes as indicated by the states for 3 years from the date of Go-Live.

XIV. Implement / add any additional forms of State Departments as and when the departments are ready for delivering.

XV. The IPR and the Source Code of the eDistrict Application shall be with the State Government.

XVI. The SI shall indicate the type of services to be made available using IVRS, SMS, and Helpdesk.

XVII. Detailed User and Operational Manual to be provided to each department, whose services will be hosted on eDistrict Application.

XVIII. The application should have a web interface and should publish online transaction volume data for each service for each district & CSC.

Offline Service Capabilities:

[The Offline capability should be developed only for those locations where there is acute shortage of electricity or connectivity. It is important to note that there is significant risk of loss of data in offline mode. Hence, the offline capability should be additional feature of application which can be utilized in specific conditions]

XIX. It is suggested that offline server capabilities on one Counter at each Block/Tehsil should be built and used judiciously so that during failures, the services can be provided to citizens from here.

XX. When the services at SDC get resumed, the work done at offline server machine should be synchronized with central servers immediately and the offline server machines start functioning under the control of central server.

XXI. As long as the services are running from state data centre, the offline server machine will not function independently; these will run under control of state servers like any other browser based client.

SI shall develop following modules for delivery of identified service under e-District project. The detailed FRS for all the modules has been provided at Annexure 6.6.

[The State shall list down all the modules to be developed under e-District project based on the services selected by State under e-District project. The FRS for all the services shall be placed at ***Annexure 6.6.*** *The introduction to all the modules shall be provided here.]*

4.3.2.2.1 Module 1

4.3.2.2.2 Module 2

4.3.2.2.3 Module 3

<State may add further modules as per requirement>

[

4.3.2.3 Guidelines for Reusing eDistrict Pilot Applications

4.3.2.3.1 Using e-District Pilot Applications for Pilot State

I. *Existing applications developed during pilot phase need to complete mandated STQC tests and compliance need to be evaluated by the SPMU/ SI for scaling up as well as for improvement in the system usability, design and maintainability*

II. *While achieving these objectives, if it stems out that application needs design tuning and IT infrastructure up gradation in respect of servers, etc, the same should be ensured by the State before deploying it for the state wide rollout. For example, response time requirements of the application should be assessed on the basis of the entire transaction load of all the concurrent users of all the districts of a State.*

4.3.2.4 Reusing e-District Pilot Applications for Non Pilot State

I. *In e-District MMP Project, the aim is to reuse the current applications which are developed as pilot and subsequently planned to be rolled out as full-fledged applications in both pilot and non-pilot states.*

II. *Non pilot states will have to select and use one of the existing e-district applications developed in pilot states.*

III. *However, manpower efforts to tune the pilot application for Sate wide rollout and development of any alternative optional service have been provisioned in the scheme and these should be clearly highlighted by SI.]*

*[**Using Service Plus as an option:** State may also explore the possibilities to use Service Plus application developed by NIC. In such a scenario, necessary support from development team and DeitY shall be provided to state/SI. For rapid roll out of the project, apart from using an existing application of the pilot application for non-pilot states, State can also request the SI to customize the Service Plus application. However, State and SI will have to review the existing application and check for suitability based on the state's requirements and adherence of the DeitY guidelines]*

4.2.2.2 Single-Sign On

The application should enable single-sign-on so that any user once authenticated and authorized by system is not required to be re-authorized for completing any of the services in the same session. For employees of the department concerned, the browser based application accessed on the intranet, through single-sign-on mechanism, will provide access to all the services of the departments concerned (based on their roles and responsibilities), Help module, basic and advanced reporting etc. Similarly, for external users (citizens, etc), based on their profile and registration, the system shall enable single-sign on facility to apply for various services, make payments, submit queries /complaints and check status of their applications.

4.2.2.3 Support for PKI based Authentication and Authorization

The solution shall support PKI based Authentication and Authorization, in accordance with IT Act 2000, using the Digital Certificates issued by the Certifying Authorities (CA) such as MTNL or NIC. In particular, 3 factor authentication (login id & password, biometric and digital signature) shall be implemented by the selected Bidder for officials/employees involved in processing citizen services as per the Functional requirement specification of the e-District services specified in Section < >.

4.2.2.4 Interoperability Standards

Keeping in view the evolving needs of interoperability, especially the possibility that the solution shall become the focal point of delivery of services, and may also involve cross-functionality with the e-Government projects of other departments / businesses in future, the solution should be built on Open Standards. Some of the states already have other applications deployed and running for delivering services to citizens. The SI shall ensure that the application developed is easily integrated with the existing applications.
Every care shall be taken to ensure that the code does not build a dependency on any proprietary software, particularly, through the use of proprietary 'stored procedures' belonging to a specific database product.

4.2.2.5 Scalability

One of the fundamental requirements of the proposed application is its scalability. The architecture should be proven to be scalable (cater to increasing load of internal and external users and their transactions) and capable of delivering high performance for at-least four years from the date of deployment. In this context, it is required that the application and deployment architecture should provide for Scale-Up and Scale out on the Application and Web Servers, Database Servers and all other solution components. For pilot states, the scalability is very important and this aspect should be thoroughly tested before state wide roll out.

4.2.2.6 Security

The systems implemented for project should be highly secure, considering that it is intended to handle sensitive data relating to the citizens of the state. The overarching security considerations are described below.

I. The security services used to protect the solution shall include: Identification, Authentication, Access Control, Administration and Audit and support for industry standard protocols.
II. The solution shall support advanced user authentication mechanisms including digital certificates and biometric authentication.

III. Security design should provide for a well-designed identity management system, security of physical and digital assets, data and network security, backup and recovery and disaster recovery system.

IV. The solution should provide for maintaining an audit trail of all the transactions and should also ensure the non-repudiation of audit trail without impacting the overall performance of the system.

V. The overarching requirement is the need to comply with ISO 27001 standards of security.

VI. The application design and development should comply with OWASP top 10 principles

4.2.2.7 Application Architecture

I. It has been proposed that the applications designed and developed for the departments concerned must follow some best practice and industry standards. In order to achieve the high level of stability and robustness of the application, the system development life cycle must be carried out using the industry standard best practices and adopting the security constraints for access and control rights. The various modules / application should have a common Exception Manager to handle any kind of exception arising due to internal/ external factors.

II. Similarly the modules of the application are to be supported by the Session and Transaction Manager for the completeness of the request and response of the client request. The system should have a module exclusively to record the activities/ create the log of activities happening within the system / application to avoid any kind of irregularities within the system by any User / Application.

4.2.2.8 Proposed Application Architecture

An indicative 3-tier architecture (also referred to as multi-tier or N-tier architecture) has been proposed for the Application Solution.

The entire processing should take place in n-tier architecture:

I. Front-end software (client tier) - responsible for the presentation of information. *[In the short run it may be a separate web portal, but eventually it has to be on the State Portal. Based on the strategy of the State Government, this section should articulate whether the Scope of work of the SI includes the transition from the e-District Portal to State Portal hosting all the services with integration to SSDG. For further details, the Integrated Framework for delivery of Services for the e-District MMP may be referred to articulate the detailed scope of work for the SI]*

II. Business Process / Service Layer – *[In the long SSDG may be used, as specified in the Integrated Framework for delivery of Services for the e-District MMP]*

III. Application Layer – *[The Business logic for all the application as per the FRS document]*

IV. Database Layer - *[responsible for the manipulation and storage of data. As per the the Integrated Framework for delivery of Services for the e-District MMP, the databases may be separated as per the ownership of the line department]*.

4.2.2.9 High Level Design (HLD)

Once the SRS are approved, the SI shall complete the High Level Designing and all HLD documents of all the functionalities, integration with existing application and external application. The SI shall prepare the HLD and have it reviewed and approved by the <State Nodal Office>. State Nodal Office will sign off on the HLD documents based on the advice of SPMU.

4.2.2.10Detailed (Low Level) Design (LLD)

The LLD shall interpret the approved HLD to help application development and shall include detailed service descriptions and specifications, application logic (including "pseudo code") and UI design (screen design and navigation). The preparation of test cases will also be completed during this stage. The SI shall have the design documents reviewed and approved by the state Nodal Agency. State Nodal Agency will sign off on the LLD documents based on the advice of SPMU.

4.2.2.11 Test Plan

Once the SRS is approved and design is started, the SI shall prepare all necessary Test Plans (including test cases), i.e., plans for Acceptance Testing. Test cases for Initial and Final User Acceptance Testing shall be developed in collaboration with domain experts identified at the state nodal agency. Initial and Final User Acceptance Testing shall involve Test Case development, Unit Testing, Integration and System Testing, Functional testing of Application, Performance testing of the Application including measurement of all Service Levels as mentioned in this RFP and finally SI shall also carryout Load/ Stress testing. The SI will submit the test plans and test result reports to the state nodal agency for comprehensive verification and approval.

4.2.2.12 Requirement on Adherence to Standards

e-District application must be designed following open standards, to the extent feasible and in line with overall system requirements set out in this RFP, in order to provide for good inter-operability with multiple platforms and avoid any technology or technology provider lock-in.

4.2.2.13 Compliance with Industry Standards

In addition to above, the proposed solution has to be based on and compliant with industry standards (their latest versions as on date) wherever applicable. This will apply to all the aspects of solution including but not limited to design, development, security, installation, and testing. There are many standards that are summarised below. However the list below is just for reference and is not to be treated as exhaustive.

I. Portal development W3C specifications
II. Information access/transfer protocols SOAP, HTTP/HTTPS
III. e-District DeitY, GoI guidelines.
IV. Photograph JPEG (minimum resolution of 640 x 480 pixels)
V. Scanned documents TIFF (Resolution of 600 X 600 dpi)
VI. Biometric framework BioAPI 2.0 (ISO/IEC 19784-1:2005)
VII. Latest HTML standards

4.2.2.14 Specification

I. Finger print scanning IAFIS specifications
II. Digital signature RSA standards
III. Document encryption PKCS specifications
IV. Information Security to be ISO 27001 compliant
V. Operational integrity & security management to be ISO 17799 compliant
VI. IT Infrastructure management ITIL / EITM specifications
VII. Service Management ISO 20000 specifications
VIII. Project Documentation IEEE/ISO specifications for documentation
IX. The SI shall adhere to all the standards published by the Department of Electronics and Information Technology, Government of India.

4.2.2.15 State Specific Requirements

SI shall be completely responsible for successful implementation of end to end e-District project in the State <<State/UT>> as per the requirement of <Nodal Agency/ Department name> and in lines of DeitY, GoI and DIT, <<State/UT>> guidelines.

An indicative list of specific requirements of <<State/UT>> is detailed below; however, final specific requirements shall emerge from the Detailed System Study to be conducted by Selected Bidder.

[Please indicate state specific technological requirements]

4.3.3.1.6 Sign-off Deliverables / Exit Criteria

I. System Requirement Specification (SRS)
II. Functional Requirement Specification (FRS) (if, updated)
III. High Level and Low Level Design

IV. Functional and non-functional testing
V. Fully functional eDistrict Application
VI. User and Operational Manual for eDistrict Application

4.3.2.5 Obtain STQC Certification for eDistrict Application

The SI will be responsible for engaging STQC to conduct the assessment / review for the system before "Go Live". The SPMU shall have the right to audit and inspect all the procedures and systems relating to the provisioning of the services. If there is any change / addition in the application's functionality then the SI will have to obtain the STQC Certification for the changes / additions.

SI shall ensure the following points are duly addressed for successful completion of STQC Certification:

I. Successful completion of Application Audit. Application audit will include:
   A. Functionality audit that will map the functionality delivered to the FRS agreed upon during development phase.
   B. Identify the nature and type of transactions being processed by the application systems.
   C. Determine systematic measures implemented to control and secure access to the application programs and data including password controls, user authentications, roles and responsibilities, audit trails and reporting, configuration and interface controls, etc.
   D. Review of database structure including:
      1. Classification of data in terms of sensitivity & levels of access
      2. Security measures over database installation, password policies and user roles and privileges
      3. Access control on database objects – tables, views, triggers, synonyms, etc.
      4. Database restoration and recoverability
      5. Audit trails configuration and monitoring process
      6. Network connections to database
   E. Review of Network and Website will include:
      1. Penetration and vulnerability testing
      2. Security exposures to internal and external stakeholders
   F. Definition and Implementation of Security Policies and Controls will include:
      1. Define and implement backup process, including schedule, storage, archival and decommissioning of media
      2. Define physical access controls review (over DC and other critical area)

3. Define IT Change Management process, Incident Management process – covering identification, response, escalation mechanisms
4. Define and implement Anti-virus (malware) controls – patching, virus definition file update

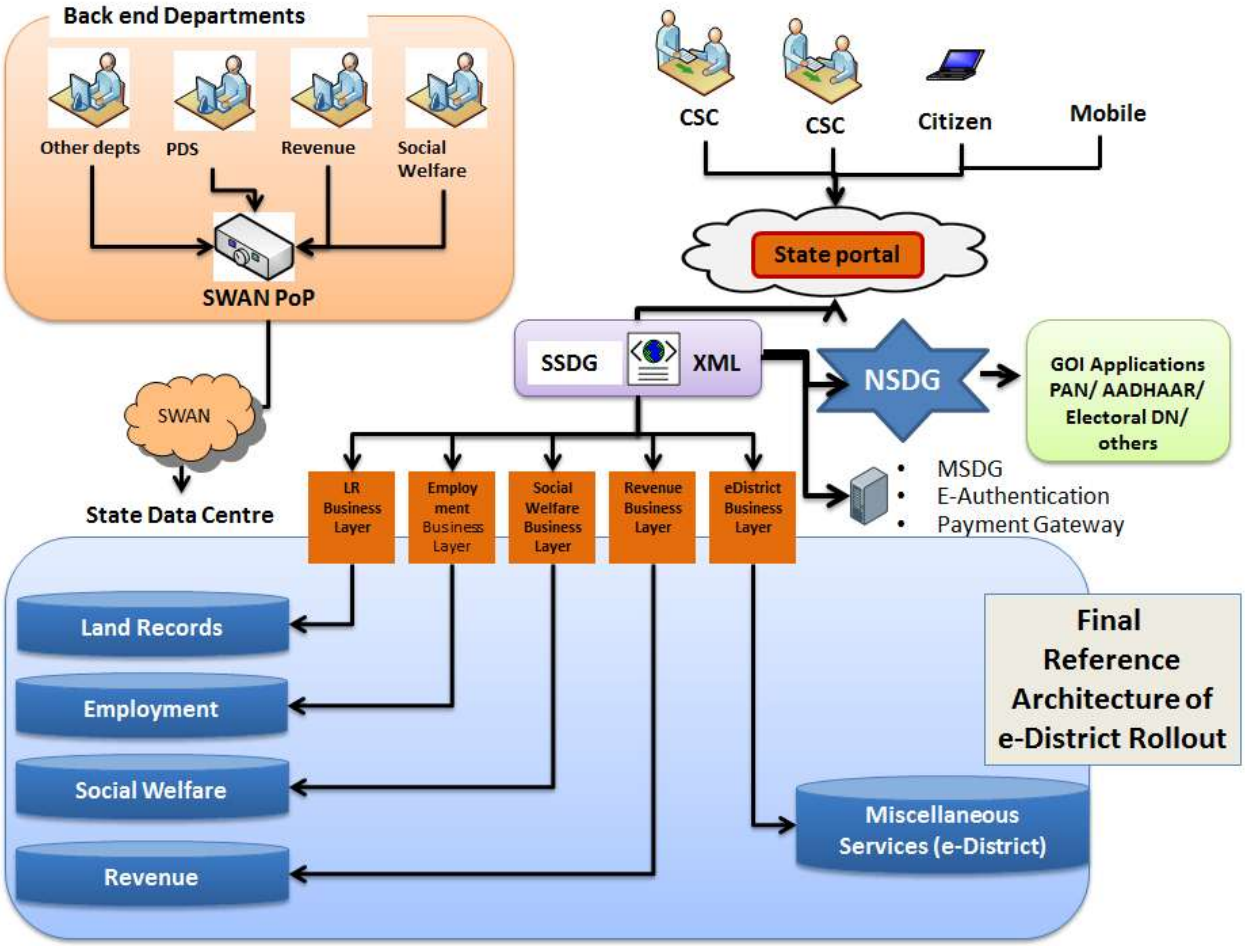
4.3.3.2.1 Sign-off Deliverables / Exit Criteria

I. Sign off from SDA
II. STQC Certification

4.3.2.6 Alignment with Integrated Framework

The eDistrict application should integrate with SSDG and provide access to citizens for eDistrict services through State Portal. It is envisaged that over a period of time all the existing state applications which have their own independent database and workflow and are identical to e-District should be made available on State Portal through the SSDG. The application may be States' own applications or adopted applications.

It is envisaged that gradually most of the services of e-District will move to their independent departmental application / MMPs. Hence the e-District is a "self – limiting" project offering services to the citizens as an interim measure. Thus e-District application plays a limited role for "miscellaneous services" which have been taken under e-District scheme as they do not have their own workflow and database. This reference architecture which should be achieved over a period of time is depicted below.



<<State may update the above diagram befitting the state's requirements>>

The key functionalities required are as follows.

- The SAP and SP Connectors will need to connect the e-district Business Layer. This would help in routing requests and responses to back-end departments within a stipulated time period.
- Design and implement an accounting module to keep track of all the transactions service category wise, department wise and break down of transactions SCA, VLE, DeGS wise.
- MIS of number of transactions including name of service and category of service on time and geographical scale should be published on e-District portal.
- Use e-authentication (including Aadhaar for citizens), e-payment, Digital signature and Mobile gateway.
- As and when required, migrate the data available in eDistrict database to newly created respective department database in case of Pilot states

4.3.3.3.1 SSDG

I. The Integrated Service Delivery Framework envisages centralized architecture for each MMP at the State level. The application software will be hosted in the State Data Centre. Integration across States shall be enabled, through mandatory adherence to technical specifications and e Governance standards.

II. The solution architecture of the e-District project envisages a centralised application and database and will leverage the core e-infrastructure of State Wide Area Network, State Data Centre and State Service Delivery Gateway.

III. The e-District MMP envisages centralised architecture at the state level with common application software for each of the identified services for all the districts of the state. The application software will be hosted in the SDC.

IV. Integration across states shall be enabled, through mandatory adherence to technical specifications and e Governance standards. The detailed guidelines in this regard will be issued by Department of Electronics and Information Technology (DeitY) Government of India separately.

4.3.3.3.2 Payment and SMS Gateway

I. Provisioning of a payment gateway, SMS gateway and any other components required to meet the functional and Quality-of-Service requirements of the RFP is also within the scope of work of the SI.

II. Payment Gateway should allow net banking and debit card payments through atleast 20 banks in the country (including all leading banks), besides payments through credit cards (VISA, Mastercard).

III. Any one-time charges such as those for tie-ups, development of interfaces, registration, commissioning etc of the gateway and any fixed recurring charges such as monthly rentals, etc will have to be borne by the SI for the Contract period and may be budgeted for in the Total Contract Value of this Project.

IV. Any applicable transaction charges for making electronic payments or using SMS based services shall however be payable by the citizen and SDA respectively and need not be accounted for in the Total Contract value of this Project. Any transaction charges should be payable in Indian Rupees only.

V. The contracts that the SI does with the Payment Gateway provider and SMS gateway provider should be structured in a manner to allow the transaction charges to be paid directly by the citizen / SDA. However if the contract with payment gateway / SMS gateway provider require any transactional charges to be paid by the SI, the same will be reimbursed to the SI by the SDA every month on an actual basis. The systems deployed by the SI should be able to provide logs of the transactions done and charges paid. The SDA will however reserve the right to negotiate and examine the rate contracts of the SI with the gateway providers.

VI. Payment gateway should enable receipt of all payments such as Tax, interest, penalty, arrear and fee etc and crediting the same to the SDA/ Department account. The payment gateway should also allow credit of any refund amount to Kiosk/CSC's account. It should be possible to make electronic payments through a 3G / GPRS enabled mobile phone as well.

4.3.3.4 Application Support for Existing Services

The SI is expected to provide technical and operational support till the new system goes live. The SI is required to provide minimum <XX> resource persons as mentioned below for the same <Indicative>:

S #	Position	Number of Resources
1	Project Manager	1
2	System Administrator	1
3	Network Administrator	1
4	Database Administrator	1
5	Programmers	XX
6	District Manager	XX
7	District Technical Support	XX
8	Helpdesk Executive	XX

An indicative list of activities to be performed by the deployed resources for existing system support is:

I. Project Manager shall be the SPoC to the SDA/SPMU/ Department for the implementation of the project.

II. The other staff shall function based on the scope of work of the RFP and contract signed between SI and SDA.

III. If required SI shall provide additional manpower to complete the work/task within timelines. While during the tenure of the project the SDA can instruct SI to change the manpower at any location as per the requirements of SDA/Department.

IV. SI will provide the list of actual deployed manpower on monthly basis.

V. The qualification and experience requirements of these resource persons are mentioned in Form 7 and 8 of Volume 1 of the RFP.

VI. SI will ensure that all the resources deployed at any location are easily approachable over mobile phones. SI will provide the contact details of the manpower at the time of commencement of operations. SI will also ensure that the proposed resources will not be changed during project implementation without explicit approval of the SDA.

VII. The SDA reserves the right to evaluate the performance of the resource persons deployed on the project by SI and ask for a suitable replacement in case of unsatisfactory performance by any of the resource persons deployed to support the project.

4.3.2.5 UAT and Go-Live Report

I. SI will assist in successful completion of User Acceptance Testing (UAT) and audit of the system on the completion of the roll out of eDistrict pilot for each phase and will submit a Go-Live Report for each phase.

II. For non-pilot States / UTs, the State IT Department may decide to carry out the pilot in 1 – 2 districts before carrying out the state wide roll-out. In such a case, the SPMU and SI has to co-ordinate the phasing of training, data digitisation, hardware procurement, site preparation, etc. in such a manner which synchronises with such a plan.

4.3.3.5.1 Sign-off Deliverables / Exit Criteria

I. Go-Live report for state and district level

II. UAT Report signed off from SDA and SPMU

4.3.3 Network Connectivity

[Connectivity infrastructure will connect the horizontal field offices (i.e. Department Offices) where applications are processed. Note - The bandwidth from the telecom service provider would be made available by State as per existing provisions of SWAN.

State should provide the list of offices, exact office location, Distance from the nearest SWAN PoP, Does the office already have horizontal connectivity from the SWAN PoP? – If yes, then provide type of connectivity – Leased Lines, OFC, etc.

State should provide the SWAN Hardware Details – routers / switches, etc. so that the bidders propose compatible hardware.]

For the <<<State/UT>>, the selected Bidder will undertake the following:

I. With implementation of State Wide Area Network (SWAN) across all the States with 2 Mbps vertical connectivity up to block level, once PoPs (Point of Presence) are operational, the district administration would be connected to the nearest SWAN PoPs. The selected Bidder shall ensure last mile connectivity from the nearest SWAN PoP to the Department offices processing the services requests.

II. In cases where SWAN is not available, the <<<State/UT>> shall procure the connectivity from a service provider and the selected Bidder is expected to

setup the last mile connectivity to the Department offices processing the services requests.

III. LAN within all department offices including but not limited to IP addressing scheme, physical cabling, router/switch configuration, V-LAN configuration, load balancing configuration, and fail over mechanism. The selected Bidder should coordinate with the local department offices while designing and installing the LAN.

IV. All networking equipment required to provide the LAN / WAN connectivity to meet the requirements of the Project is also to be provided by the selected Bidder as part of this RFP

*[A template for scope of work for site preparation is provided at **Annexure: 6.2** of this Document.]*

4.3.3.1 Sign-off Deliverables / Exit Criteria

Network Connectivity report signed off by <<SPMU / SDA>> stating SDC, Departmental offices and all CSCs have been connected and SWAN, wherever applicable, has been leveraged to provide connectivity.

4.3.4 Data Digitisation

[Since correctness of information and data quality is of prime importance for any public service, data entry should be viewed as a very critical activity at the district level for providing Type 1 services.

Data entry requires a significant commitment from the State Government specifically for undertaking the Quality Check on the data entered. Hence it is recommended that States constitute a Data Quality Assurance team who ensure that data entered into the database for a service is as per the data quality framework for that particular service.

There is a need for the State Government to review the scope of the data entry in line with the resources available for the Quality Check. Accordingly the details provided below may be customized as per the requirement.]

[The provision of statutory services across the counter, like a variety of certificates, requires that the database is digitally signed by the competent authority in bulk in advance, so that when any citizen makes a request the relevant record is downloaded and a certificate can be issued by the CSC agent. It is thus recommended that the State should make necessary arrangement for trainings to CSC agents on process of ensuring data quality right at the data collection source so that future issues can be averted]

I. SI shall digitise all historical data at the implementation sites of States (covering the last 3/5 years).

II. SI shall formulate the Data Digitisation Strategy which will also include internal quality assurance mechanism. This will be reviewed and signed–off by SDA and SPMU prior to commencement of data digitisation.

III. SI shall include the learning from pilot project digitization and update the necessary changes in the strategy document for implementation. <For non-pilot state SI shall coordinate with pilot states for getting the learnings with the help from SPMU and Nodal Officer>.

IV. SI shall incorporate all comments and suggestions of SDA and SPMU in the Data Digitisation Strategy.

V. SI shall perform pilot data digitisation exercise to validate the conversion programs.

VI. SI shall ensure complete data cleaning and validation for all data digitised and loaded on to eDistrict Application.

VII. SI shall validate the data before uploading the same to the production environment.

VIII. SI shall generate appropriate control reports before and after digitisation to ensure accuracy and completeness of the data.

IX. SI shall conduct the acceptance testing and verify the completeness and accuracy of the data Digitised to eDistrict Application.

X. SDA and SPMU may, at its will, verify the test results provided by SI.

[The following need to be kept in mind when preparing the scope of work of SI for data digitization

I. Data Digitization does not refer to performing scan/ OCR of the records and storing them in the database. It refers to data entry of citizen records in specified formats for a defined period of time.

II. As per the Integrated Service Delivery Framework, it is envisaged that Data digitization Data Digitization of citizen records would be performed for those Services of the concerned Department with the ultimate motive of providing the Service across the counter, wherever feasible.

III. There are some key decisions to be taken by the State up front with respect to the quantum of data to be digitized. This is dependent on factors such as registers to be digitized and time period till which the data entry would be performed as part of providing citizen services. The State may take its decision to ensure overall adherence to the timelines for implementation.

IV. The Digitization fund allotted for States in the DPR approval is a one-time grant and no further funds would be possible to be allocated for digitization. Thus, it is critical to fix a time period till which data entry would be done for current citizen records and legacy citizen

records. This is essential since it would not be sustainable to have the data entry personnel entering data manually as part of service delivery. Also, existence of both manual data entry and automated data entry through the e-District Application represents a redundant activity leading to wastage of time and effort. Thus, the State needs to decide a date beyond which manual entry of citizen records would be stopped and data would be captured only through the application and stored in the database. Further, it needs to be decided up front by the State on the back-date, the historical time period till which the records need to be digitized.

V. *It needs to be ensured by the State that a robust Quality Check Mechanisms is built-in to ensure 100% accuracy of digitized data. Any error in digitized data can have huge ramifications. For instance, an error in capturing the correct caste name of an applicant can lead to a number of issues for the citizen in getting the community certificate accepted by various Government and private agencies. Thus, there is no room for any error in digitized data and a thorough check should be done to ensure the accuracy. Normal sampling methods deployed may not be adequate for this reason. State may look at deploying dedicated department personnel at the Districts to do a thorough check or may institute some incentives for compliance. State together with SPMU may arrive at a mechanism to ensure data accuracy of digitized data]*

4.3.4.2.1 Sign off Deliverables / Exit Criteria

I. Data Digitisation Strategy Document
II. Approval by SDA / SPMU on successful digitisation of data

4.3.5 Site Preparation

I. The SI is expected to prepare the client sites for setting up the necessary client site infrastructure.
II. Site preparation at all required client offices will include:
    A. Electrical fittings and LAN cabling along with conduit.
    B. Furniture & Fixtures (if required).
III. SI will have to ensure that CSCs are also equipped to offer services through eDistrict Application. Any gap infrastructure at CSCs that is required for providing services using eDistrict Application shall be provided by SI.
IV. The details of number of offices for site preparation will be provided by the <name of State IT department>.
V. Maintenance of the computing and connectivity infrastructure for 3 years and training support to be imparted to the end user.

A template for scope of work for Networking is provided at Annexure: 6.4 of this Document.

[The following need to be kept in mind when arriving at Site Preparation requirements for implementation:

I. *A basic pre-requisite for putting the Site Preparation requirements would be the list of various departmental offices across State, Districts, Blocks and Taluks. The State along with SPMU can work together to have this information ready for plugging in the relevant sections of this RFP.*

II. *The site is to be provided by the district administration for housing the hardware and as such an expense would be incurred to refurnish the existing sites and offices.*

III. *SPMU would decide whether the responsibility centre for Site Preparation together with the SDA. The responsibility of site preparation could entrusted with the either SI or the DeGS. Factors such as availability of competent personnel in DeGS would determine this decision. Irrespective of whether it is done through the SI or DeGS, the following need to be provisioned under Site Preparation at the minimum:*
    A. *Connecting all desktop / laptops to Internet / LAN Cable, etc.*
    B. *Back up Connectivity for the desktops/ laptops*
    C. *Internal cabling*
    D. *Power back up for the Network*

IV. *State will have to arrange for Site Preparation costs from the ACA Share.*

V. *To enable the Site Preparation requirements, a variety of components may need to be procured and installed including Fire fighting equipment, casing, Generator, labour, etc. However, the funding approved in the DPR only caters to the components mentioned in ii (a) and ii (b).]*

4.3.4.3.1 Sign-off Deliverables / Exit Criteria

I. List of offices for site preparation.
II. Site Preparation Completion Report.

4.3.6 Supply / Procurement of IT Infrastructure at SDC

[In case the application services are provided by NIC or any State Public Sector, the inputs should be taken from the agency regarding the technical requirements and hence this section should be appropriately modified. Currently this section is made for the case where the SI is developing the application.
In case the SDC of the State is not ready and the application is hosted temporarily at any other place, the RFP should clarify whether the scope of Work for the SI includes the migration of the application & data to SDC, as soon as SDC becomes operational]

The <State / UT> will provision for the Data Center premises for hosting the IT Infrastructure. The Bidders are required to carefully assess the requirements of this RFP and size the infrastructure accordingly. Bidders are free to propose any higher / additional infrastructure that may be required as per their proposed solution to meet the project requirements, its scope of work and SLAs as listed in this RFP.

I. Bids / proposals which do not meet the minimum IT infrastructure specifications given in this RFP will be summarily rejected. The minimum technical specifications for the IT Infrastructure are provided in **Annexure 6.7: Bill of Material (Infrastructure at SDC) in Volume 2 of the RFP** and note that these are the minimum requirements only.

II. The Bidder will be responsible for sizing the hardware to support the scalability and performance requirements of the eDistrict application. The Bidder shall ensure that the servers are sized adequately and redundancy is built into the architecture required to meet the service levels mentioned in the RFP.

III. None of the IT Infrastructure proposed is declared "End-of-Sale" by the respective OEM in next 2 years as on date of submission of Bid.

IV. The IT Infrastructure proposed should be purchased within last 2 months from the date of deployment and documentary proof for warranty and proof of purchase should be produced at the time of deployment of infrastructure.

V. The IT Infrastructure proposed should be compatible with infrastructure at SDC, SSDG, SWAN, State Portal, etc.

VI. The Bidder should provide requisite licenses for all the system software required for servers including, but not limited to industry standard operating system, enterprise class database software, application server software, web server software, OS hardening, and all other required software with sufficient number of licenses.

VII. The Bidder will be responsible for providing all the details of the Bill of Material (BoM) and specifications of the IT Infrastructure proposed, licenses of the system software, all other equipment proposed as part of its Technical Proposal. The financial quote submitted by the Bidder should include costs for these.

4.3.7 Hardware Commissioning at Field Offices

4.3.7.1 Design, Supply, Installation, Commissioning, Operations & Maintenance of IT Infrastructure

This shall consist of

I. Supply / Procurement of IT Infrastructure at Department Offices (DHQ, Tehsil and Block)

II. Installation and Commissioning of IT Infrastructure

A template for capturing scope of work for H/W is provided at Annexure: 6.3 of this Document.

[It is assumed that SDC shall provide the necessary hardware for Storage, Firewall, DNS, Load Balancers, Antivirus software and DRS. The State / UT is required to perform study of gap infrastructure at various department offices (DHQ, Tehsil and Block) within the State / UT. It includes:

I. *Reuse the existing infrastructure (hardware as well as software licenses] available at SDC and at the various department offices. The details of infrastructure that will be made available at SDC should be specified so that the bidders can propose compatible infrastructure.*
II. *Information Security – Specify explicit requirements of the State and IT security infrastructure that will be made available so that the bidders can propose compatible infrastructure.*
III. *The details of number of offices, the requirement of units of gap infrastructure per office taking into considerations of the same either provided or provisioned under any e-governance mission mode project.*
IV. *Business or technical requirements for hardware are clearly specified*
V. *Specific and clear details on intended use of the hardware is provided – how, where*
VI. *Bill of Material (BOM) is specified with the right set of configurations to meet the performance requirements of the solution to be delivered. Right set of configurations mean:*
    a. *Technically up to date with the market or from latest generation of the relevant systems in context*
    b. *Compatible with other hardware to be installed*
    c. *Meets or exceeds performance standards expected from such hardware*
VII. *BOM should also detail the items and their quantities that need to be procured. It MUST not specify any brand name or indicate reference to any proprietary feature*
VIII. *It should include only those hardware the quantity and specification can be indicated*
IX. *Hardware does not depend on any specific type of product to function (no technology or product lock-in should be associated with that hardware)*
X. *Product is replaceable and upgradable without impacting any other installation or the solution at large*
XI. *Estimate of the load/number of users of the hardware is provided Hardware already in place at the locations, if at all*
XII. *List of hardware already installed or procured, if at all, is provided to avoid duplication of hardware, cost and efforts. For example: the infrastructure & services available for use by the bidder at the State Data Centre needs to be mentioned / committed to the bidder, so as to avoid duplication of costs*
XIII. *Hardware has vendor support in India or nearby location, post its installation]*

4.3.7.2 Supply / Procurement of IT Infrastructure at Department Offices (DHQ, Tehsil and Block)

The Bidders are required to carefully assess the requirements of this RFP and propose the IT Infrastructure required at Department Offices. The following hardware and peripherals need to be installed in different districts, blocks and tehsils offices spread across the State processing the service requests submitted by the citizens:

I. PC
II. Laptop
III. Digital Web Camera
IV. Scanners
V. Network Printers
VI. Laser Printers
VII. Other Printers
VIII. UPS (1 KVA)
IX. 9U Rack
X. 24 Port Switch
XI. Leased Line Modem
XII. Router

[State should provide the list of offices, exact office location, number of department users accessing the eDistrict Application, number of above specified Hardware & peripherals required at the respective office.

For district hardware, computing resources specified above has to be planned on the basis of requirement at each office (net of existing machines or machines planned under any other eGov projects).]

Bidders are free to propose any higher / additional infrastructure that may be required as per their proposed solution to meet the project requirements, its scope of work and SLAs as listed in this RFP.

I. Bids / proposals which do not meet the minimum IT infrastructure specifications given in this RFP will be summarily rejected. The minimum technical specifications for the IT Infrastructure are provided in **Annexure 6.7: Bill of Material (Infrastructure at Field Offices) in Volume 1 of the RFP** and note that these are the minimum requirements only.
II. None of the IT Infrastructure proposed is declared "End-of-Sale" by the respective OEM in next 2 years as on date of submission of Bid.
III. The IT Infrastructure proposed should be purchased within last 2 months from the date of deployment and documentary proof for warranty and proof of purchase should be produced at the time of deployment of infrastructure.

IV. The IT Infrastructure proposed should be compatible with infrastructure at SDC, SSDG, SWAN, State Portal, etc.

V. The Bidder will be responsible for providing all the details of the Bill of Material (BoM) and specifications of the IT Infrastructure proposed, licenses of the system software, all other equipment proposed as part of its Technical Proposal. The financial quote submitted by the Bidder should include costs for these.

4.3.4.4.4 Installation and Commissioning of IT Infrastructure

The selected Bidder is responsible for installation and configuration of the entire infrastructure set-up, including but not limited to the following:

I. All IT Infrastructure including operating systems and any other system software required for making the infrastructure operational and tuned for satisfactory performance.

II. The IT Infrastructure will be installed and configured in accordance with the IT Policies of the <<<State/UT>>.

The selected Bidder will ensure that the reports for monitoring of SLAs such as system uptime, performance, etc. are generated automatically from the system and the applicable penalties are calculated as indicated in the RFP.

4.3.5 Licenses

I. The system software licenses mentioned in the Bill of Materials shall be genuine, perpetual, full use and should provide upgrades, patches, fixes, security patches and updates directly from the OEM. All the licenses and support (updates, patches, bug fixes, etc.) should be in the name of <<State Designated Agency>>.

II. The SI shall provide with a full use database license. All the licenses and support (updates, patches, bug fixes, etc.) should be in the name of <<State Designated Agency>>. SI shall provide a comprehensive warranty that covers all components after the issuance of the final acceptance by <<State Designated Agency>>. The warranty should cover all materials, licenses, services, and support for both hardware and software. SI shall administer warranties with serial number and warranty period. SI shall transfer all the warranties to the <<State Designated Agency>> at no additional charge at the time of termination of the project. All warranty documentation (no expiry) will be delivered to Department.

III. SI shall review the licenses requirements with the SPMU and Nodal Officer. The SPMU with the help of Nodal Officer shall clarify on the licenses requirements to be brought by the SI and availability at SDC.

4.3.6 Capacity Building / Training

Capacity building will include the following:

I. Imparting training in Information Technology (IT), Business Process Reengineering (BPR) and Change Management.
   A. Such trainings and skills will be imparted to all levels of government employees involved in the processes pertaining to the selected services.
   B. These would range from senior officers such as the State Department Secretaries up to the officials working in the districts and sub districts such as Lekhpal/Patwaries/Panchayat Secretaries etc

II. Prepare and organize training programs to facilitate the user departments in the efficient usage of the new system training will be provided to department's employees whose Information & services will be provided through eDistrict Application.

III. SI shall include the learning from pilot project and update the necessary changes in the training. <For non-pilot state SI shall coordinate with pilot states for getting the learnings with the help from SPMU and Nodal Officer>.

IV. Training shall encompass the knowledge of basic functionalities of eDistrict Application, Guidelines and other backend processes.

V. Training shall also be provided for teaching the basic trouble shooting activities in case of problems.

VI. Trainings shall be provided to all the new employees as and when joining the department.

[The following need to be kept in mind when arriving at Capacity Building requirements for implementation:

I. A basic pre-requisite for arriving at the Capacity Building requirements would be the list of personnel in various departmental offices across State, Districts, Tehsils/ Blocks and Taluks. The State along with SPMU can work together to have this information ready for plugging in the relevant sections of this RFP.

II. The SI would be required to prepare a detailed training plan covering atleast the trainings to be conducted, targeted audience, location, dates for training, duration and training content. The training plan would be submitted to the Department as per timelines mentioned in this RFP for feedback and approval from the Department.

III. The SI would have to arrive at a training programme which at the minimum should contain the following:
   A. Computer Basics
   B. Business Process/ Application based Training
   C. Specialized Technology Training (for System administration and troubleshooting)

D. *Project management (for District Project Managers on general project management and on usage of PMIS)*
E. *Digital Certificate Usage Training (including refresher course)*

These training modules may be administered online to the training participants through class room learning or self-learning. State, together with SPMU would decide on the mode of instruction for each of the identified training modules

IV. *It is suggested that General Awareness Programmes should be kept outside the purview of the SI's scope of work. However, if the state may decide to include it in the scope of work of SI or unbundle it from this main RFP and may appoint any other specialised agency to carry out this training.*

V. *The training would be required to be provided again to ensure that personnel are ready to use the application whenever it is rolled out. The State may present the number of iterations of trainings to be given to Department personnel based on some factors. For instance, the district or department may have been covered under Pilot. This would impact on the number of iterations to be given to these personnel.*

VI. *State has the flexibility of engaging more than one training partner for providing these training programmes. The training partner(s) would be bidding together with the SI in such a scenario.*

VII. *State may also propose to use the services of DOEACC, DeGS and retired district officials for imparting quality training at District, Tehsil/ Block and Taluk levels.*

VIII. *It is important to ensure that the training provided is effective. State may devise mechanisms to ensure the training effectiveness. This could include performing periodic assessments of the trained personnel with hands-on tests online or providing incentives to personnel or districts who score exceedingly well in assessments, etc. State, together with SPMU may devise mechanisms to make training effective.*

IX. *SI would also be required to develop user manuals and computer based tool kits, PPTs and videos to promote self-learning and assist training participants in undergoing the training.*

X. *SI should also ensure that there is an ability to capture feedback of training programs conducted to gauge the effectiveness of instruction and make improvements]*

4.3.6.2.1 Sign off Deliverables / Exit Criteria

I. Capacity Building Plan

II. Change Management Plan
III. Training Plan
IV. Completion of training and change management activities

4.3.7 Manpower requirements

The project would require provisioning of dedicated manpower at each district to provide support during the roll out process. The details of the manpower needed may be captured as under:

S.No.	Name of Resource	District for which proposed			Qualification (Highest)	No. of Years of Experience	No. of Years with responding firm	Certification	Knowledge of Local Language
		Choice 1	Choice 2	Choice 3					
1									
2									
3									

<Please add rows to cover all districts in the State>

[The following needs to be considered when identifying manpower for roll out support at districts:

I. *The SI would be required to position resources to provide technical support at each of the districts during the roll out period. This would be essential to ensure sufficient handholding is provided to department personnel in the district level offices to manage the system after the end of SI's Contract Period.*
II. *The Technical support resources would be required to work closely with the District Project Manager and SPMU in ensuring adherence to the project timelines.*
III. *The SI should ensure that the roster schedule of all deployed manpower for each day at the required locations has been communicated in advance to SDA/ DeGS. No change to the deployed staff shall be done by the SI without written approval from the SDA/DeGS*
IV. *Adherence to all laws pertaining to personnel, labour laws, etc for any manpower deployed by the SI on this Project shall be the responsibility of the SI*
V. *The SI would issue Identity cards to each of the staff members deployed at the districts.*
VI. *The SI will maintain adequate leave reserve for the staff, so that the work in the respective districts remains unaffected in all cases.*
VII. *The State, together with the SPMU would need to devise criteria for selection of technical support resources who will be best positioned to handle the complexities*

associated with rolling out the application in the specific state, for instance, being conversant with the local language

VIII. *As part of national rollout of the eDistrict, no funding will be provided for pilot districts.]*

4.3.8 Business Continuity Planning

The selected Bidder is expected to develop a Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) for the operations carried out by the selected Bidder. An indicative list of activities to be performed by the selected Bidder is mentioned below:

I. Designing and implementing adequate data backup, business continuity and restoration procedures for the e-District application data (including but not limited to the database, attachments and all other data elements created in and generated by the system and users)

II. Ensuring that there is no single point of failure and adequate level of redundancy is built in to meet the uptime and other requirements of this RFP. While building redundancies, it should be ensured that failure of a single component of communication link does not result in failure of primary as well as secondary connectivity. Hence primary and secondary connectivity should be taken from 2 separate communication link providers and both links should not have any single point of failure. Preferably, all the redundancy will be in auto fail over mode so that if primary component fails, secondary component automatically takes over.

III. Ensuring data backup till the last transaction occurring in the system to ensure enhanced service levels and following RPO and RTO objectives:

   A. Peak hours: Zero RPO and Zero RTO

   B. Non-Peak Hours: Zero RPO and RTO <= 60 minutes

IV. Any storage space / media required to maintain backups and other requirements of the RFP should be provisioned for by the selected Bidder in his Bid.

V. Designing and implementing data synchronization procedures for the DR Site. Periodic testing may be done to ensure that all replication and data synchronization procedures are in place all the time. Replication between Data Centre and DR Site as well as change-over during disaster should be automatic and real-time for minimal impact on user experience.

4.3.9 Others

4.3.9.1 Information Security Management

Security of Application and the data contained therein is paramount for the success of this Project. Hence, the selected Bidder should take adequate security measures to ensure confidentiality, integrity and availability of the information.

Security Requirements	
Overall Solution	
1.	The proposed solution should include design and implementation of a comprehensive IS 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 IS security policy should be established by the selected Bidder and should be approved by the <<<State Designated Agency>>> before they are implemented. The IS 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.
2.	The designed IS policy is not in conflict with the security policy of the State Data Centre where the infrastructure would be hosted.
3.	The proposed solution should ensure proper logical access security of all the information Assets
4.	The proposed solution should be able to classify information assets according to criticality of the information asset.
5.	The proposed solution should provide security including identification, authentication, authorization, access control, administration and audit and support for industry standard protocols
6.	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 eGovernance 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

Security Requirements	
	and Logging as recommended by CERT-In (www.cert-in.org.in) • System shall comply with IT (Amendment) Act 2008.
7.	The proposed solution should support the below Integration security standards: • Authentication • Authorization • Encryption • Secure Conversation • Non-repudiation • XML Firewalls • Security standards support • WS-Security 1.0 • WS-Trust 1.2 • WS-Secure Conversations 1.2 • WS-Basic Security Profile
8.	The proposed solution should a multi-layered detailed security system covering the overall solution needs having the following features: i. Layers of firewall ii. Network IPS iii. Enterprise-wide Antivirus solution iv. Information and incident management solution for complete <<<State Designated Agency>>> landscape v. Two factor authentication for all administrators i.e. system administrators, network administrators, database administrators. vi. Audit Log Analysis Selected Bidder must ensure that the security solution provided must integrate with the overall system architecture proposed
9.	The proposed solution should be monitored by periodic information security audits / assessments performed by or on behalf of the <<<State Designated Agency>>>. 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.

Security Requirements	
	To the extent that the <<State Designated Agency>> 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 <<State Designated Agency>>'s representatives access to its facilities, installations, technical resources, operations, documentation, records, databases and personnel. The Selected Bidder must provide <<State Designated Agency>> access to various monitoring and performance measurement systems (both manual and automated). <<State Designated Agency>> 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
10.	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 <<State Designated Agency>>.
11.	The proposed solution should ensure that data, especially those to pertaining to registration process, transaction process as well as the data that is stored at various points is appropriately secured as per minimum standard 128 Bit AES/3DES encryption.
12.	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 <<State Designated Agency>> without changing the application code.
13.	The proposed solution should support native optional database level encryption on the table columns, table spaces or backups.
14.	The database of the proposed solution should provide option for secured data storage for historic data changes for compliance and tracking the changes.
15.	The proposed solution should be able to ensure the integrity of the system from accidental or malicious damage to data
16.	The proposed solution should be able to check the authenticity of the data entering the system
17.	The proposed solution should be able to generate a report on all "Authorization Failure" messages per user ID
18.	The proposed solution should be able to monitor the IP address of the system from

Security Requirements	
	where a request is received.
19.	The proposed solution should be able to differentiate between the systems of the <<State Designated Agency>> network and other external systems
20.	Retention periods, archival policies and read-only restrictions must be strictly enforceable on all logs maintained in the system
21.	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): i. Pharming ii. Trojan iii. Domains (old/new) similar to "<<State Designated Agency>> of Commercial Taxes, Government of Tamil Nadu etc."
22.	The proposed solution should be able to monitor security and intrusions into the system and take necessary preventive and corrective actions.
23.	The proposed solution should have the option to be configured to generate audit-trails in and detailed auditing reports
24.	The proposed solution must provide ACL objects and a security model that can be configured for enforcement of user rights
25.	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.
26.	The proposed solution should have tamper proof data storage to prevent unauthorised data tampering
27.	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.
	Password Requirement
1.	The proposed solution should allow the <<State Designated Agency>> to define password policies. The minimum password policies to be defined are: i. Minimum/ Maximum password length ii. Alpha numeric combination of password

Security Requirements	
	iii. Compulsory use of special characters iv. Minimum password age v. Password expiry period vi. Repeat passwords etc.
2.	The proposed solution should be able to automatically check the passwords with the password policy, which can be customized by the <<State Designated Agency>>
3.	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.
4.	The proposed solution should store User ID's and passwords in an encrypted format. Passwords must be encrypted using MD5 hash algorithm or equivalent(selected Bidder must provide details)
5.	The proposed solution should be capable of encrypting the password / other sensitive data during data transmission
6.	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.

4.3.10 Project Management

4.3.10.1 Project Planning and Management

e-District Mission Mode Project is a geographically spread initiative involving multiple stakeholders. Successful implementation and national roll out of the project ultimately depends on all its stakeholders, the role of SI is very critical. Hence SI is required to design and implement a comprehensive and effective project planning and management methodology together with efficient and reliable tools.

Project planning exercise shall essentially commence with the start of the project, however, project management exercise shall commence at the start of the project and shall continue till the O&M Phase of the project...

To have an effective project management system in place, it is necessary for the SI to use a Project Management Information System (PMIS) at State Headquarters of his respective

State to monitor the Project Progress. The SI shall address at the minimum the following using PMIS:

I. Create an organized set of activities for the project.
II. Coordinate and collaborate with various stakeholders including the Departments concerned.
III. Nodal Agency, State IT Department, NIC, SPMU, NPMU, DeitY, GoI.
IV. Establish and measure resource assignments and responsibilities.
V. Construct a project plan schedule including milestones.
VI. Measure project deadlines, budget figures, and performance objectives.
VII. Communicate the project plan to stakeholders with meaningful reports.
VIII. Provide facility for detecting problems and inconsistencies in the plan

During the project implementation the SI shall report to the State Nodal Officer/SPMU, on following items:

I. Results accomplished during the period;
II. Cumulative deviations to date from schedule of progress on milestones as specified in this RFP read with the agreed and finalized Project Plan;
III. Corrective actions to be taken to return to planned schedule of progress;
IV. Proposed revision to planned schedule provided such revision is necessitated by reasons beyond the control of the SI;
V. Other issues and outstanding problems, and actions proposed to be taken;
VI. Interventions which the SI expects to be made by the State Nodal Officer and / or actions to be taken by the State Nodal Officer before the next reporting period. Progress reports would be prepared by SI on a fortnightly basis. These reports may be required to be shared with either the SDA or the SPMU, as the case may be.
VII. Project quality Assurance
VIII. Change Control mechanism
IX. Project Management activities
X. Issue Management to help identify and track the issues that need attention and resolution from the State.
XI. Scope Management to manage the scope and changes through a formal management and approval process.
XII. Risk Management to identify and manage the risks that can hinder the project progress.

SI will closely work with SPMU and send the reports to the SPMU as well. SPMU will assist Nodal Officer in acceptance of the report/ document and suggest the action plan to the Nodal Officer. The Project plan prepared by the SI at the initial stage of the project

shall be reviewed by the <state PeMT> / by the Apex / Empowered Committee on the advice of the State Mission Team and SPMU.

The SI shall update and maintain the Project Plan throughout the duration of the engagement. All changes are to be reviewed and approved by the <Nodal agency name> or appointed representatives.

4.3.2.1 Sign off Deliverable/ Exit Criteria

I. PMIS data update & functioning.
II. Periodic Reports on on-going basis

4.4 Scope of Services - Operation and Maintenance Phase

The selected Bidder is responsible for the day to day maintenance of the system for the entire period of Contract. For the IT Infrastructure procured as part of this RFP, the selected Bidder will be responsible for smooth Operations and Maintenance Services for the period covering onsite support for 1 year of warranty and followed by 3 years of AMC from the date of commissioning the IT Infrastructure covering the following:

I. Onsite Warranty support
II. Onsite Periodic and AMC support including repair and replacement
III. Annual Technical Support (ATS) for all the licensed software
IV. Providing Help desk support with Escalation matrix for registration of complaints related to the IT Infrastructure procured through this RFP at the State designated premises.

4.4.1 Overview of Post Implementation Services

An indicative list of activities and nature of support to be provided is mentioned below:

I. System Administration and Trouble Shooting
   A. Overall monitoring and management of all IT and Non-IT infrastructure deployed by the selected Bidder for the Project including Server Infrastructure at SDC, Departmental locations, networking equipments & connectivity, system software, application, database, and all other services associated with these facilities to ensure service levels, performance and availability requirements as prescribed in the RFP are met.
   B. Repair or replace infrastructure deployed for this Project, either directly or through a third party warranty provider depending on the case
   C. Replace component due to technical, functional, manufacturing or any other problem with a component of the same make and configuration. In case the component of same make and configuration is not available, the replacement shall conform to open standards and shall be of a higher configuration and shall be approved by the Department
   D. Perform system administration tasks such as managing the user access, creating and managing users, taking backups etc.
   E. Performance tuning of the system to ensure adherence to SLAs and performance requirements as indicated in the RFP.
II. Network Administration and Trouble Shooting
   A. Coordinate with the network service providers to maintain smooth network operations and ensure uptime and performance requirements of the IT infrastructure as indicated in the RFP are met. The selected Bidder will be totally responsible for all networking equipments installed by him.
III. Database Administration and Trouble Shooting

A. Undertake end-to-end management of database on an on-going basis to facilitate smooth functioning and optimum utilization including regular database backup and periodical testing of backup data, conducting configuration review to tune database, maintaining the necessary documentation and managing schemes to database schema, disk space, user roles, and storage.

IV. Overall

A. Undertake preventive maintenance (any maintenance activity that is required before the occurrence of an incident with an attempt to prevent any incidents) and carry out the necessary repairs and replacement of parts wherever needed to keep the performance levels of the hardware and equipment in tune with the requirements of the SLA. Such preventive maintenance shall not be attended during working hours of the State Departments, unless inevitable and approved by the <<State Designated Agency>>.

B. Undertake reactive maintenance (any corrective action, maintenance activity that is required post the occurrence of an incident) that is intended to troubleshoot the system with sufficient teams

C. Escalate and co-ordinate with its OEMs for problem resolution wherever required

D. The selected Bidder will be required to comply with various policies relating to monitoring and management of infrastructure such as IS Policy, backup and archival policy, system software update policy etc. of the <<<State/UT>>.

4.4.2 Warranty Support

As part of the warranty services SI shall provide:

I. SI shall provide a comprehensive warranty and on-site free service warranty for 4 years from the date of Go Live for all equipment. SI shall obtain the four year product warranty and five year onsite free service warranty from OEM on all licensed software, computer hardware and peripherals, networking equipment and other equipment for providing warranty support to SDA.

II. SI shall provide the comprehensive manufacturer's warranty and support in respect of proper design, quality and workmanship of all hardware, equipment, accessories etc. covered by the RFP.

III. SI 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.

IV. SI 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.

V. SI is responsible for sizing and procuring the necessary hardware and software licenses as per the performance requirements provided in the RFP. During the warranty period SI shall replace or augment or procure higher-level new equipment or additional licenses at no additional cost to the <<State Designated Agency>> in case the procured hardware or software is not adequate to meet the service levels.

VI. **Mean Time Between Failures (MTBF)**: If during contract period, any equipment has a hardware failure on four or more occasions in a period of less than three months, it shall be replaced by equivalent or higher-level new equipment by the SI at no cost to <<State Designated Agency>>.

VII. However, if the new equipment supplied is priced lower than the price at which the original support services for all system software, DBMS (Database Management System), EMS (Enterprise Management System), other products deployed as part of this project will require proper arrangements of SI with OEM.

VIII. During the warranty period SI shall maintain the systems and repair / replace at the installed site, at no charge to <<State Designated Agency>>, all defective components that are brought to the SI's notice.

IX. Warranty should not become void, if <<State Designated Agency>> buys, any other supplemental hardware from a third party and installs it within these machines under intimation to the SI. However, the warranty will not apply to such supplemental hardware items installed.

X. The SI shall carry out Preventive Maintenance (PM), including cleaning of interior and exterior, of all hardware and testing for virus, if any, and should 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.

XI. SI shall use the antivirus which is available at state. However in case there is a requirement to procure the license for anti-virus, SI shall in consultation with SPMU and Nodal Officer procure the anti-virus Licenses and maintain the service part.

XII. SI shall monitor warranties to check adherence to preventive and repair maintenance terms and conditions.

XIII. The SI shall ensure that the warranty complies with the agreed Technical Standards, Security Requirements, Operating Procedures, and Recovery Procedures.

XIV. Any component that is reported to be down on a given date should be either fully repaired or replaced by temporary substitute (of equivalent configuration) within the time frame indicated in the Service Level Agreement (SLA).

XV. The SI shall develop and maintain an inventory database to include the registered hardware warranties.

4.4.3 *Annual Technical Support*

As part of the ATS services SI shall provide:

I. SI shall maintain data regarding entitlement for software upgrades, enhancements, refreshes, replacements and maintenance.

II. If the Operating System or additional copies of Operating System are required to be2 installed / reinstalled / de-installed, the same should be done as part of ATS.

III. SI should carry out any requisite adjustments / changes in the configuration for implementing different versions of Application Software.

IV. Updates / Upgrades / New releases / New versions / Patches / Bug fixes: The SI shall provide from time to time the Updates / Upgrades / New releases / New versions / Patches / Bug fixes of the software, operating systems, etc. as required. The SI should provide free Updates / Upgrades / New releases / New versions / Patches / Bug fixes of the software and tools to SDA as and when released by OEM.

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

VI. SI shall have complete manufacturer's technical support for all the licensed software problems and/or questions, technical guidance, defect and non-defect related issues. SI shall provide a single-point-of-contact for software support and provide licensed software support including but not limited to problem tracking, problem source identification, problem impact (severity) determination, bypass and recovery support, problem resolution, and management reporting.

4.4.4 *Help Desk and Trouble ticket management system*

I. The selected Bidder as part of provisioning support for Department users at each location and the SDC will setup centralized helpdesk and coordinate with the respective OEMs of the IT Infrastructure deployed at SDC and the Department offices. For the <State / UT>, the selected Bidder will undertake the following:

   A. Provide Help Desk services to track and route requests for service and to assist department users in answering questions and resolving

problems related to the IT Infrastructure installed at Data Centre and at all the Department Offices .

B. Become the central collection point for contact and control of the problem, change, and service management processes (This includes both incident management and service request management)

C. Shall provide a first level of support for application and technical support at eDistrict implementation locations across the State where the software, hardware, and other infrastructure will be rolled out.

D. Provide the following integrated customer support by establishing <9 hrs X 6 days> Help Desk facility for reporting issues/ problems with the software, hardware and other infrastructure.

II. This shall be an online system deployed centrally and shall be used by the selected Bidder extensively for management of network support activity and handling calls from citizen, departmental staff, any other stakeholders. Service desk is an application that facilitates the end-to-end service support. The proposed system should include required hardware and software.

III. This proposed software system is expected to facilitate the following:

A. User Interface: - The proposed system should have an easy to use user interface (preferably a browser based), so that users across the State can lodge any complaints and service requests. The solution shall have a reporting interface with a consolidated view of the network status. All users (departmental and external) of the system should be able to log a request in the system using any of the following channels:

1. Telephonic call on the Toll-free Helpline
2. email
3. Online chat on the departmental web-portal
4. Through intranet for departmental users or web-portal for external users

B. **Complete incident and problem management: -** Service desk should address both Incident Management and Problem Management. The application should maintain a classification system that will distinguish the single occurrence trouble tickets or incidents needing immediate resolution from in-depth root cause analyses that may require longer term to resolve a problem.

The flow of events at the call centre should be:

1. Event is triggered and forwarded to service desk.
2. Service desk submits and updates the trouble ticket.

Tasks expected:

1. Ticket mapping and allocation: According to the severity, the ticket should be given the priority level. Also it should map the ticket to the appropriate personnel for the resolution.
2. Updating the status: Update the status of ticket.
3. It should be able to log and escalate user interactions and requests.
4. It should have an updateable knowledge base for technical analysis and further help end-users to search solutions for previously solved issues.
5. Status of registered calls with interface for Call centre, using which call centre can inform the status to users over phone.
6. Historical report indicating number of calls, time to resolve, status etc for a specified period of time.

All relevant infrastructure and supporting system software required for the deployment and operation of the help desk is to be provided by the selected Bidder.

The system deployed by the SI shall be complied with ITIL and ISO 20000 service specifications.

4.5 General Requirements

I. Licensing Requirements

A. All system software, licenses, etc. have to be procured in the name of the <Specify the appropriate name>

B. The licenses should be perpetual and enterprise wide for the core application and other software unless otherwise stated. The software licenses shall not be restricted based on location and the <<State Designated Agency>> should have the flexibility to use the software licenses for other requirements, if required

II. Asset Management

The selected Bidder will perform the following asset management functions with respect to the infrastructure deployed at various locations:

A. Take periodic stock of, review physical inventory and maintain stock registers of hardware at all locations covered under this Project. The selected Bidder would maintain stock registers as per format agreed with the <<State Designated Agency>>.

B. Maintain documentation of the hardware assets, maintain asset Information for all Project locations, on parameters to be mutually agreed between the <<State Designated Agency>> and the selected Bidder, which shall include details like -
    1. Product type, model number, version number
    2. Manufacturer
    3. Office location
    4. Maintenance status, etc.

C. Update or correct the asset information following any new installations, movement, addition, or change performed by the selected Bidder.

D. Produce periodic reports and machine readable files in agreed upon format pertaining to some or all of the asset information.

E. Restrict movement of server/equipment/items in or out of SDC or any other location under the Project without prior permission from the <<State Designated Agency>>.

III. Warranty and Support

A. The selected Bidder shall warrant that the IT Infrastructure supplied to the <State / UT> for this Project shall have no defects arising from design or workmanship or any act or omission of the selected Bidder. The warranty shall remain valid for the Contract period on all the items supplied as per the Contract.

B. The selected Bidder shall replace any parts/ components of the IT infrastructure supplied for the Project if the components are defective and during the entire warranty period the selected Bidder shall apply latest upgrades for all the hardware components after appropriate testing. The <<State Designated Agency>> will not pay any additional costs separately for warranty and the overall IT infrastructure cost quoted by the selected Bidder shall include the same.

IV. Since the Project aims to reuse the common infrastructure created under SDC, SWAN, CSC, SSDG Projects, the selected Bidder will also be required to coordinate with SDC, SWAN, SSDG, CSC teams to ensure that uptime and performance requirements of the RFP are met. However, the selected Bidder shall be held solely responsible for performance and service levels of any infrastructure deployed by the selected Bidder as part of this Contract.

V. Knowledge Transfer

A. At the end of the Contract period, the selected Bidder will be required to provide necessary handholding and transition support to designated staff or any other agency that is selected for maintaining the system post the Contract with the selected Bidder. The handholding support will include

but not be limited to, conducting detailed walkthrough and demonstrations for the IT Infrastructure, handing over all relevant documentation, addressing the queries/clarifications of the new agency with respect to the working / performance levels of the infrastructure, conducting training sessions etc.

B. Knowledge Transfer is an integral part of the scope of work of the selected Bidder. This will have to be done even in case the Contract with the Bidder ends or is terminated before the planned timelines.

Please note that this is only an indicative list. Any other activity, over and above these, as may be deemed necessary by the selected Bidder to meet the service levels and requirements specified in this Contract are also required to be performed by the selected Bidder at no additional cost.

4.6 Exit Management

4.6.1 Purpose

I. This sets out the provisions, which will apply on expiry or termination of the MSA, the Project Implementation, Operation and Management SLA.

II. In the case of termination of the Project Implementation and/or Operation and Management, the Parties shall agree at that time whether, and if so during what period, the provisions of this Schedule shall apply.

III. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Schedule.

4.6.2 Transfer of Assets

I. <<State Designated Agency>> shall be entitled to serve notice in writing on the SI at any time during the exit management period as detailed hereinabove requiring the SI and/or its sub-contractors to provide the <<State Designated Agency>> with a complete and up to date list of the Assets within 30 days of such notice. <<State Designated Agency>> shall then be entitled to serve notice in writing on the SI at any time prior to the date that is 30 days prior to the end of the exit management period requiring the SI to sell the Assets, if any, to be transferred to <<State Designated Agency>> or its nominated agencies at book value as determined as of the date of such notice in accordance with the provisions of relevant laws.

II. In case of contract being terminated by <<State Designated Agency>>, <<State Designated Agency>> reserves the right to ask SI to continue running the project operations for a period of 6 months after termination orders are issued.

III. Upon service of a notice under this Article the following provisions shall apply:

A. in the event, if the Assets to be transferred are mortgaged to any financial institutions by the SI, the SI shall ensure that all such liens and liabilities have been cleared beyond doubt, prior to such transfer. All documents regarding the discharge of such lien and liabilities shall be furnished to the <<'State Designated Agency'>>.

B. All risk in and title to the Assets to be transferred / to be purchased by the <<State Designated Agency>> pursuant to this Article shall be transferred to <<State Designated Agency>>, on the last day of the exit management period.

C. <<State Designated Agency>> shall pay to the SI on the last day of the exit management period such sum representing the Net Block (procurement price less depreciation as per provisions of Companies Act) of the Assets to be transferred as stated in the Terms of Payment Schedule.

D. Payment to the outgoing SI shall be made to the tune of last set of completed services / deliverables, subject to SLA requirements.

E. The outgoing SI will pass on to <<State Designated Agency>> and/or to the Replacement SI, the subsisting rights in any leased properties/ licensed products on terms not less favorable to <<State Designated Agency>>/ Replacement SI, than that enjoyed by the outgoing SI.

4.6.3 Cooperation and Provision of Information

During the exit management period:

I. The <<'System integrator'>> will allow the <<State Designated Agency>> or its nominated agency access to information reasonably required to define the then current mode of operation associated with the provision of the services to enable the <<State Designated Agency>> to assess the existing services being delivered;

II. promptly on reasonable request by the <<State Designated Agency>>, the SI shall provide access to and copies of all information held or controlled by them which they have prepared or maintained in accordance with this agreement relating to any material aspect of the services (whether provided by the <<'System integrator'>> or sub-contractors appointed by the <<'System integrator'>>). The <<State Designated Agency>> shall be entitled to copy of all such information. Such information shall include details pertaining to the services rendered and other performance data. The <<'System integrator'>> shall permit the <<State Designated Agency>> or its nominated agencies to have reasonable access to its employees and facilities as reasonably required by the Chairman, PIU to understand the methods of delivery of the services employed by the <<'System integrator'>> and to assist appropriate knowledge transfer.

4.6.4 Confidential Information, Security and Data

I. The <<'System integrator'>> will promptly on the commencement of the exit management period supply to the <<State Designated Agency>> or its nominated agency the following:

A. information relating to the current services rendered and customer and performance data relating to the performance of sub contractors in relation to the services;

B. documentation relating to Computerization Project's Intellectual Property Rights;

C. documentation relating to sub-contractors;

D. all current and updated data as is reasonably required for purposes of <<State Designated Agency>> or its nominated agencies transitioning the services to its Replacement <<'*System integrator*'>> in

a readily available format nominated by the <<State Designated Agency>>, its nominated agency;

E. all other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable <<State Designated Agency>> or its nominated agencies, or its Replacement <<*'System integrator'*>> to carry out due diligence in order to transition the provision of the Services to <<State Designated Agency>> or its nominated agencies, or its Replacement <<*'System integrator'*>> (as the case may be).

II. Before the expiry of the exit management period, the <<'System integrator'>> shall deliver to the <<State Designated Agency>> or its nominated agency all new or up-dated materials from the categories set out in Schedule above and shall not retain any copies thereof, except that the <<'System integrator'>> shall be permitted to retain one copy of such materials for archival purposes only.

III. Before the expiry of the exit management period, unless otherwise provided under the MSA, the <<State Designated Agency>> or its nominated agency shall deliver to the <<'System integrator'>> all forms of <<'System integrator'>> confidential information, which is in the possession or control of Chairperson, PIU or its users.

4.6.5 Employees

I. Promptly on reasonable request at any time during the exit management period, the <<'System integrator'>> shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide to the <<State Designated Agency>> or its nominated agency a list of all employees (with job titles) of the <<'System integrator'>> dedicated to providing the services at the commencement of the exit management period.

II. Where any national, regional law or regulation relating to the mandatory or automatic transfer of the contracts of employment from the <<'System integrator'>> to the <<State Designated Agency>> or its nominated agency, or a Replacement <<'System integrator'>> ("Transfer Regulation") applies to any or all of the employees of the <<'System integrator'>>, then the Parties shall comply with their respective obligations under such Transfer Regulations.

III. To the extent that any Transfer Regulation does not apply to any employee of the <<'System integrator'>>, department, or its Replacement <<'System integrator'>> may make an offer of employment or contract for services to such employee of the <<'System integrator'>> and the <<'System integrator'>> shall not enforce or

impose any contractual provision that would prevent any such employee from being hired by the Chairperson, PIU or any Replacement <<'System integrator'>>.

4.6.6 Transfer of Certain Agreements

On request by the <<State Designated Agency>> or its nominated agency the <<'*System integrator*'>> shall effect such assignments, transfers, licences and sub-licences as the Chairperson, PIU may require in favour of the Chairperson, PIU, or its Replacement <<'*System integrator*'>> in relation to any equipment lease, maintenance or service provision agreement between <<'*System integrator*'>> and third party lessors, vendors, and which are related to the services and reasonably necessary for the carrying out of replacement services by the <<State Designated Agency>> or its nominated agency or its Replacement <<'*System integrator*'>>.

4.6.7 Rights of Access to Premises

I. At any time during the exit management period, where Assets are located at the <<'*System integrator*'>>'s premises, the <<'*System integrator*'>> will be obliged to give reasonable rights of access to (or, in the case of Assets located on a third party's premises, procure reasonable rights of access to) the <<State Designated Agency>> or its nominated agency and/or any Replacement <<'*System integrator*'>> in order to make an inventory of the Assets.

II. The <<'*System integrator*'>> shall also give the <<State Designated Agency>> or its nominated agency or its nominated agencies, or any Replacement <<'*System integrator*'>> right of reasonable access to the Implementation Partner's premises and shall procure the <<State Designated Agency>> or its nominated agency or its nominated agencies and any Replacement <<'*System integrator*'>> rights of access to relevant third party premises during the exit management period and for such period of time following termination or expiry of the MSA as is reasonably necessary to migrate the services to the <<State Designated Agency>> or its nominated agency, or a Replacement <<'*System integrator*'>>.

4.6.8 General Obligations of the <<'System integrator'>>

I. The <<'*System integrator*'>> shall provide all such information as may reasonably be necessary to effect as seamless a handover as practicable in the circumstances to the <<State Designated Agency>> or its nominated agency or its Replacement <<'*System integrator*'>> and which the <<'*System integrator*'>> has in its possession or control at any time during the exit management period.

II. For the purposes of this Schedule, anything in the possession or control of any <<'*System integrator*'>>, associated entity, or sub-contractor is deemed to be in the possession or control of the <<'*System integrator*'>>.

III. The <<*'System integrator'*>> shall commit adequate resources to comply with its obligations under this Exit Management Schedule.

4.6.9 Exit Management Plan

I. The <<*'System integrator'*>> shall provide the <<State Designated Agency>> or its nominated agency with a recommended exit management plan ("Exit Management Plan") which shall deal with at least the following aspects of exit management in relation to the MSA as a whole and in relation to the Project Implementation, and the Operation and Management SLA.

   A. A detailed program of the transfer process that could be used in conjunction with a Replacement <<*'System integrator'*>> including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;

   B. plans for the communication with such of the <<*'System integrator'*>>'s sub contractors, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on the <<State Designated Agency>>'s operations as a result of undertaking the transfer;

   C. (if applicable) proposed arrangements for the segregation of the <<*'System integrator'*>>'s networks from the networks employed by <<State Designated Agency>> and identification of specific security tasks necessary at termination;

   D. Plans for provision of contingent support to <<State Designated Agency>>, and Replacement <<*'System integrator'*>> for a reasonable period after transfer.

II. The <<'System integrator'>> shall re-draft the Exit Management Plan annually thereafter to ensure that it is kept relevant and up to date.

III. Each Exit Management Plan shall be presented by the <<'System integrator'>> to and approved by the <<State Designated Agency>> or its nominated agencies.

IV. The terms of payment as stated in the Terms of Payment Schedule include the costs of the <<'System integrator'>> complying with its obligations under this Schedule.

V. In the event of termination or expiry of MSA, and Project Implementation, each Party shall comply with the Exit Management Plan.

VI. During the exit management period, the <<'System integrator'>> shall use its best efforts to deliver the services.

VII. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.

VIII. This Exit Management plan shall be furnished in writing to the <<State Designated Agency>> or its nominated agencies within 90 days from the Effective Date of this Agreement.

5 Detailed Implementation and Roll-out Plan

I. SI shall prepare a detailed roll-out plan for each of the districts in the phase and get the same approved by the <<State Designated Agency>>. SI is also responsible for conducting workshops for the key officers (State Mission Team, District Mission Team, and District Core Team, NIC, SPMU, NPMU, <<State Designated Agency>>, State DIT) of the Districts / State for presenting the District-Wise roll-out plan and get the approval of the same.

II. Before getting the final approval of the State Nodal Officer, the SI shall also provide the necessary assistance for the key stakeholder of the Districts / State during the design and implementation of e-District project in the <<<State/UT>>. A detailed rollout checklist should be maintained for migrating application to production as well as for location readiness.

III. One of the important factors that would determine the success of the e-District implementation in the <<State/UT>>> is the continuous availability of domain experts like Project Manager, Database Administrator, Change Management Expert, Technical Assistance, to the implementation team which would be selected with the approval of <State Name>. SI shall put together a team of domain experts with a minimum of 10 years of experience in the State Departments who will work on this project on a full time basis during the entire duration of the project.

6 Annexures

6.1 Template for Capturing Office Wise Requirements

S. No	District	Office Name	Office ID	Office Address	eDistrict Service being delivered from this office	Approx. No. of Users	Level of Office (District / Block / Tehsil/ Others)	Network Availability? (Yes/ No)	Additional H/W Required? (Yes/ No)	Site Preparation Required? (Yes/ No)
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

[*It is suggested that state update the above table and make changes to it, befitting their state specific requirements. Office ID will ensure that there is a unique identifier for collection of information. Office ID could be any existing identification notation used in the state or create afresh for example: <StateName>/<DistrictNam>e/<BlockName>/123….*]

6.2 Template for Capturing Network Connectivity Requirement

S. No	Office ID	SWAN Available? (Yes / No)	SWAN Available			SWAN Not Available			
			Type of connectivity	Existing service provider	Service level / baseline	Distance from nearest SWAN POP	Bandwidth required	Type of Technology to be used	Equipment (Router, Switches, OFC, etc.) required
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									

[*It is suggested that state update the above table and make changes to it, befitting their state specific requirements. Also include BOM required for network connectivity to ensure that the entire list of equipment is captured.*]

6.3 Template for Capturing Hardware Requirement

Office ID				
S. No	Hardware Type	Total Requirement	Availability for re-use	Gap Hardware to be procured
		(A)	(B)	(A) – (B)
1.	PC			
2.	Laptop			
3.	Digital Web camera			
4.	Scanners			
5.	Network Printer cum fax			
6.	Laser Printer			
7.	Other Printer			
8.	UPS (1 KVA)			
9.	9 U Rack			
10.	24 Port Switch			
11.	Leased Line Modem (pair)			
12.	Router			

[*It is suggested that State/UT update the above table for each Office ID which is to be covered as part of State Wide Roll out of eDistrict MMP*]

6.4 Template for Capturing Site Preparation Requirement

S. No	Office ID	Site Preparation Required to be done? (Yes / No)	If yes, then provide additional info	If no, then details of Site Preparation requirement
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

[*It is suggested that state update the above table and make changes to it, befitting their state specific requirements.*]

6.5 Template for Data Entry

[The Scope of work for data entry should specify the following :

- *Software for data entry*
- *Language of data entry*
- *Use of transliteration – clarity on software to be provided*
- *Back-up responsibility*
- *Process to ensure Data integrity*
- *Autocorrect software and logics to be used*
- *Data base in which data is to be kept*
- *Place/Location of data entry*
- *Manner in which the records would be handed over and taken back*
- *Hardware services required]*

Illustrative

I. The bidder has to deploy at least 10 sets of workable set of computers and minimum 20 data entry operator for completing the data entry assigned to them with in timeline.
II. Among all system there should be one server system.
III. The data entry will be done on the provided software.
IV. The minimum System configuration to run the software is as follows:
    - Windows XP with SP2 or higher /Windows 2000 professional with SP4 or higher
    - SQL Server 2000 or higher as database.
    - Net framework 2.0
    - Minimum 512 MB RAM

- 800 MHz Pentium (or equivalent) processor or higher.

V. Quality Check
   - The bidder should ensure 98% data accuracy.
   - Random checking will be conducted by the officer/agency appointed by the data digitization committee.

VI. Location of work
   - Centralized – District Administration, <district name> will provide space for setting up temporary working office in District <district name> for project duration. Bidder has to arrange all necessary facilities not limited to electricity, power back up, water, cleaner, computers & other hardware at his own.

VII. Loss of data
   - Bidder should take good care of all Government records and will be responsible for security of the record from time of receipt to time of delivery.
   - Penalty for per record will be charged against the loss or damage of record.
   - The bidder should not accept illegible record. Non-readable record at the time of returning of the data will be considered as damaged record.

[The data entry Scope of work should provide for the type of records to be computerized, the number of such records and typical time taken (Based on time and motion study) to carry out data entry for a particular record.

Illustrative

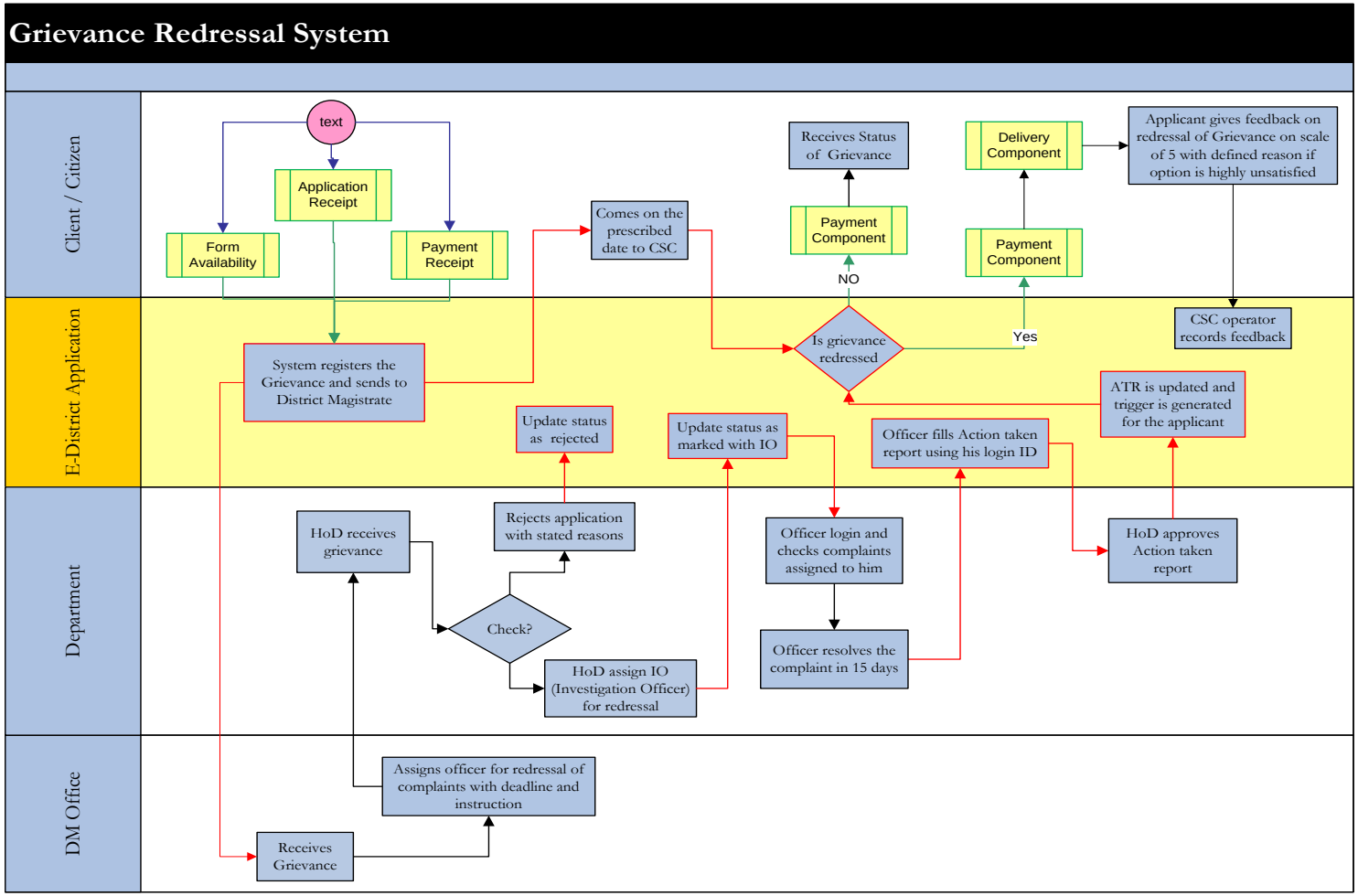
S.No	Group Name	Database Name	Job description	Estimated Quantity (approx.)	Unit	Location of the database where it is placed	Indicative time taken for data entry based on average time taken for random 100 records (mimutes)
1	A	Family register	Data digitization of family register	700000	Per family member	Block	
2	B	Ration card	Data digitization of ration card	400000	Per member in ration card	District/Tehsil /Block	
3.a	C	Revenue court case	Data digitization of Revenue court cases	5000	Per Revenue court case	District/Tehsil	
3.b.1		Pensions (Old age pension)	Data digitization of all old age pensioners	30000	Per pensioner form	District	
3.b.2		Pension (Widow)	Data digitization of all widow pensioners	30000	Per pensioner form	District	
3.b.3		Pension (Handicap)	Data digitization of all Handicap pensioners	20000	Per pensioner form	District	
3.d.1		Caste Certificate	Data digitization of all Caste certificate	200000	Per caste certificate form	Tehsil	

S.No	Group Name	Database Name	Job description	Estimated Quantity (approx.)	Unit	Location of the database where it is placed	Indicative time taken for data entry based on average time taken for random 100 records (mimutes)
3.e.1		Handicap certificate	Data digitization of all Handicap certificate	15000	Per Handicap certificate	District/Tehsil	
4.f.1		Birth/ Death certificate	Data digitization of all Birth/ Death Certificate	100000	Per death/Birth certificate	Block	

]

6.6 Template for Preparing FRS and Process Maps (with illustrative data)

Sample Process and FRS



S. No	Process Description	Responsibility Centre
Grievance Process		
1	Form availability, application receipt and payment receipt component are pre-defined process. The output of the pre-defined process is the input of e-district application	e-district application
2	The e-district application registers the Grievance from citizen.	e-district application
3	Once the Grievance has been registered, the e-district application would notify DM for marking to department	e-district application
4	DM logs onto e-district application and receive service request. Upon receiving, DM checks the service request and marks to HoD of relevant department	DM office
5	HoD officer at District/Tehsil/ Block level logs into account and receives Grievance	HoD
6	HoD officer at District/Tehsil/Block level checks the Grievance • HoD update approval status and assigns Investigation Officer (IO) onto e-district application using his digital signature • If the grievance is not genuine, then HoD officer update rejection status with reason onto e-district application using his digital signature	HoD
7	The e-district application registers service request of HoD and notifies to IO	e-District application
8	IO logs onto e-district application and receive notification from HoD	IO (District/Tehsil/Block)
9	IO upload action taken report onto e-district application using digital signature. The e-district application would give notification to the HoD about the report.	IO (District/Tehsil/Block)
10	HoD logs onto e-district application and verifies the action taken report.	HoD (District/Tehsil/Block)
11	HoD on basis of IO report updates his decision and final status.	e-district application
12	The applicant visits CSC with application receipt issued	Applicant

	by CSC during grievance registration and gets the copy of Action taken Report after payment of service charges	
13	Applicant gives feedback on scale of 1 to 5 (Highly Unsatisfied, Unsatisfied, Neutral, Satisfied, and Highly Satisfied). If applicant selects option Highly unsatisfied than he has to select the reason from one of the following options • Investigation is not conducted at field • Discussion with applicant has been not done • Investigation was biased	Citizen
Grievance Status Tracking		
1	The applicant would be able to know the status of the grievance through SMS, Online and CSC/e-Suvidha centre.	e-district application
2	Upon registration of application, the applicant would receive communication of approval/rejection of application through SMS. If application is rejected then applicant would be able to view the rejection with stated reasons through online and CSC/e-Suvidha centre.	e-district application
3	The applicant would check the final status through Online or visiting to CSC/e-Suvidha centre. Through SMS the applicant would get the final status (work in progress/ ATR ready to collect).	e-district application
S.No	**Process Description**	**Monitoring Centre**
Grievance Monitoring		
1.	The monitoring component <MIS 1> relates to monitor the processing of service request for grievance at the following intermittent point – ▪ When the grievance is rejected by the HoD ▪ When the Investigation Officer appointed by HoD	MIS Component 1
2.	<MIS 1> component will monitor and track the following on the defined service levels – • Successful receival of the application form • Action taken by the DM/HoD on the Grievance	MIS Component 1
3.	<MIS 1> component will auto generate daily report for the DM and provide the information given in	MIS Component 1

	subsequent section **Monitoring report**	
4.	The monitoring component <MIS 2> relates to monitor the successful completing the service request by the HoD	MIS Component 2
5.	<MIS 2> component will monitor and track the following on the defined service levels – • Disposal of the grievance and submission of ATR by IO • Authentication and verification of disposal by HoD	MIS Component 2
6.	<MIS 2> component will auto generate daily report for the HoD and provide the information given in subsequent section **Monitoring report**	MIS Component 2
7.	The monitoring component <MIS 3> relates to monitor the successful completing the overall activity against the grievance	MIS Component 3
8.	<MIS 3> component will monitor and track the following service delivery on the defined service levels – • Grievance is redressed by HoD • Effectiveness and efficiency of Department in redressal of grievance	MIS Component 3
9.	<MIS 3> component will auto generate weekly report for the DM/Secretary and Chief Secretary to provide the information given in subsequent section **Monitoring report**	MIS Component 3

Database required

S. No.	Database	Remarks
1		

Service Request Form – Grievance

The format of Grievance redressal form would comprise of following fields:

S.No	Fields Description of the form
	Name of Applicant:
	Father's Name:

	Village:
	Block:
	Tehsil:
	District:
	Subject of Grievance:
	Details:
	Name of department (if Known):
	Self declaration:
	Date:
	Applicant Signature

Records view for a Logged in user

DM record view

S.No	Fields Description of the view
1	Application Number
2	Name of department (to be selected by PA to DM)
3	Grievance details
4	Date of filling of Grievance
5	Date of disposal

The fields required in showing the status of approved/rejection application **under MIS component 1 (HoD for approval/rejection of service request)** are as follows:

HoD record view

S.No	Fields Description of the view
1	Application Number
2	Status (Approved/Rejected)
3	HoD officer details
4	Reasons of rejections, if any

The fields required in delegating of service request to Investigation Officer (HoD can appoint himself also as IO) **under MIS component 2** are as follows:

HoD/IO record view

S.No	Fields Description of the view
1	Application Number

2	Name of IO
3	Date of Action Taken Report (ATR) submission

The fields required for updating service request by IO **under MIS component 2** are as follows:

HoD/IO record view

S.No	Fields Description of the view
1	Application Number
2	Action Taken Report (ATR)
3	Date of ATR submission (Locked Field)

The fields required in showing the final status **under MIS component 3** are as follows:

DM record view

S.No	Fields Description of the view
1	Name of HoD
2	Number of grievances assigned
3	Number of grievances disposed
4	Number of grievance delayed in redressal by less than or equal to 3 days
5	Number of grievance delayed in redressal by more than 3 days
6	HoD officer details

Monitoring Report

The following table specifies the fields required in the MIS Report **(MIS component 1**) generated for the DM

S.No	Name of the HoD	Number of Grievances received by HoD	Number of Grievance for which IO has been appointed	Number of Grievances for which appointment of IO is delayed by HoD	Number of Grievances rejected by HoD with stated reasons
1.					
2.					

The following table specifies the fields required in the MIS Report **(MIS component 2**) generated for the PIO

S.No	Name of the Investigation Officer	Number of Grievances processed by Investigation Officer	Number of Applications for which action taken by IO is delayed by 5 days	Number of Applications for which action is delayed by IO by more than 5 days
1.				
2.				

The following table specifies the fields required in the MIS Report **(MIS component 3**) generated for the DM

S.No	Name of the HoD	Number of Grievances redressed and ATR approved by HoD with marks*	Number of Grievances for which action taken report by HoD is delayed by less than or equal to 3 days	Number of Grievances for which action taken report by HoD is delayed by more than 3 days
1.				
2.				

*Note: Marks will be represented as {<Efficiency> & <Effectiveness>}

Efficiency will ratio of Number of complaints disposed and number of complaints arrived and Effectiveness will be average of feedback points received from citizen. In case of no feedback from citizen highest marks i.e 5 will be given to officer.

Service Level - Grievance

S. No.	Activities	Time required	Service Level (from date of service request)
1.	Filling of grievance	1Day	Day 0
2.	Generation of Receipt		Day 0
3.	Marking of grievance to HoD		1st day
4.	Appointment of Investigation Officer (IO) by HoD	2 day	3rd day
5.	IO logs in and receive communication from HoD		3rd day
6.	IO does redressal of grievance	9 days	12th day
7.	IO Uploads Action Take Report (ATR) on e-district application	1 day	13th day
8.	HoD logs onto e-district application and verifies ATR submitted by IO & Availability of ATR against grievance	2 days	15th day

Auto Escalation Matrix

S.No	Activity	Activity Owner	Service Level	L1		L2		L3	
				Designation	**Time**	**Designation**	**Time**	**Designation**	**Time**
1.	Approving/Rejecting/Marking Grievance	DM	1st day	Commissioner	2 day	Chief Secretary			
2.	Approving/Rejecting/Appointing Investigation Officer by HoD	HoD	3rd day	DM	2 day	Commissioner	2 day	Chief Secretary	
3.	Action on Grievance	Investigation Officer	12th day	HoD	2 day	DM	3 day	Commissioner	
4.	Verification and release of redressal on e-District site	HoD	15th day	DM	3 day	Commissioner	5 day	Chief Secretary	

Number of Digital Signature required

S.No	Designation officer	Number of Digital Signature Used (In – Number)
1	District Magistrate	1
2	ADM	2
3	HoD of all 10 Departments	10
4	SDM	All SDM
5	Tahsildar	All Tahsildar
6	BDO	All BDO

Functional Requirement Specification – (Grievance)

Sr.	Description
1.	E district Application is the application meant for maintaining all the transactions related to e district services. With regard to filing grievance the application i.e. the Lokvani Grievance Redressal System deals right from grievance filing to obtaining Action Taken Report by the applicant.
2.	Should be able to identify the user logging into the system as per the login component
3.	Should be able to provide information to the citizens about details related to grievance filing.
4.	Should be able to generate a unique registration number during registering an applicant with the application. Should be able to identify the applicant uniquely based on this registration number.
5.	Should be able to issue an acknowledgement receipt once the applicant is registered with the system.
6.	Should be able to map the payment details of the transaction with the kiosk
7.	Should be able to mark the application to the District Magistrate for grievance redressal
8.	Should maintain records of all the grievances filed through the Lokvani Kendras for a particular period of time.
9.	Should allow the DM to reject any frivolous grievances using the rejection component.
10.	Should be able to help the District Magistrate to assign officials to take action

Sr.	Description
	on the filed grievance
11.	Should allow the stakeholders to track the application status at different stages as per the status tracking component.
12.	Should allow the assigned officer the Action Taken Report over the system duly digitally signed by him
13.	Should be able to store soft copy of Action Taken Report (ATR) in database and generate trigger for CSC / Applicant that the certificate has been prepared and he can take a printout of the same.
14.	Should be able to auto generate grievance to higher authorities in case specified SLAs are not met by the officials as per the auto escalation mechanism of monitoring component.
15.	Should generate monitoring reports on specified time intervals and send it to relevant authorities
16.	Should provide access to authorities to monitor Application Status / Performance / SLAs for a particular period by logging onto the system
17.	Should allow the user to take a print out of the soft copy of the Action Taken Report as per the delivery component
18.	Should provide a site map at the opening page of the application
19.	Should be able to deliver the output (ATR – Printout) from any of the registered centres
20.	Should be able to send SMS to applicant in case of missing of final SLAs and status tracking.

[*It is suggested that state update the above section befitting their state specific requirements.*]

6.7 Template for Bill of Material

Form A: Bill of Material (Softwares)

S. No	Item	Proposed Solution (Provide the Product Name or fill Custom Built, in case of a new development)	Unit of Measurement	Number of Licenses (Development Environment)	Number of Licenses (UAT)	Number of Licenses (Training)	Number of Licenses (Data Center Production)	Number of Licenses (DR Site)

Form B: Bill of Material (Infrastructure at SDC)

[This is a sample table – to be modified based on the actual requirements of the proposed solution]

Sl. No	Description of Item	Quantity
1.	Web Servers	
2.	Application Servers	
3.	Database Servers	
4.		

For each hardware mentioned in the above, provide the following information in a table

(i) Reference of the server/storage information in the Submitted Proposal (Please provide page number/section number/ volume)

(ii) Services proposed to be hosted on the Server

(iii) Quantity
(iv) Make and Model
(v) Year of Introduction
(vi) Operating System along with version (if applicable)
(vii) Processor and Number of Cores Offered (if applicable)
(viii) Architecture (RISC/EPIC/CISC) (if applicable)
(ix) RAM/HDD/LAN Ports/ HBA (as relevant)
(x) Additional Information as required to indicate the compliance to the requirements in the RFP (ex, Capacity, Disk Space) (if applicable)

[Based on the requirements, SPMU can provide the list of hardware required at the SDC to host the proposed solution. A sample specifications table is provided below for Web Servers. Similar tables for the identified hardware items should be included in this section along with the minimum specifications, if any.]

1 Web Servers *[This is a sample table – to be modified based on the actual requirements]*

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Must be specified. All the relevant product brochures and manuals must be submitted.		NA	
3	**Processor**	*[Specify the minimum requirement, if any]*			
4	**Number of Cores**	*[Specify the minimum requirement, if any]*			
5	**Processor Architecture**	*[e.g. RISC, EPIC, CISC - Specify the requirement, if any]*			
6	**RAM**	*[Specify the minimum requirement, if any]*			
7	**HDD**	*[Specify the minimum requirement, if any]*			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
8	**Operating System**	*[Specify the requirement, if any]*			
9	*[Include the additional features and their corresponding specifications, if any]*				

Form C: Bill of Material (Infrastructure at Field Offices)

[This is a sample table – to be modified based on the actual requirements of the proposed solution]

Sl. No	Description of Item	Quantity
1.	Desktop / PC	
A	With Proprietary Operating System	
B	With Open Source Operation System	
2.	Laptop	
A	With Proprietary Operating System	
B	With Open Source Operation System	
3.	Digital Web camera	
4.	Scanners	
5.	Network Printer cum fax	
6.	Laser Printer	
7.	Other Printer	
8.	UPS (1 KVA)	
9.	9 U Rack	
10.	24 Port Switch	
11.	Leased Line Modem (pair)	
12.	Router	

Important Note for bidders:

(i) It is mandatory to furnish complete technical specifications of the hardware & peripherals being offered, strictly as per the format, provided here. Correct technical information of the product being offered must be filled in.

(ii) Filling the technical specifications/ information in the format using terms such as 'OK', 'Accepted', 'Noted', 'As given in Brochure/ Manual', 'Complied' is not acceptable. The offers not adhering to these guidelines are liable to be rejected.

(iii) All relevant product information such as user manuals, technical specifications sheet etc. should be submitted along with the offer. Failure to submit this information along with the offer could result in disqualification of the bid.

(iv) In case any technical variance is offered, the same must be specified under the "Deviation, if any" column.

(v) For each item listed below, the bidders should propose only one product.

(vi) These specifications should be considered as the minimum to be fulfilled.

1 A. Desktops /Personal Computer for each location (Proprietary Operating System)

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
10	**Make**	Must be specified		NA	
11	**Model**	Tower Model Required. Must be specified. All the relevant product brochures and manuals must be submitted.		NA	
12	**Processor**	Intel Pentium or AMD Athlon; Dual Core Processor; min 2.7 GHz			
13	**Motherboard**	OEM Motherboard			
14	**Chipset**	Latest Generation compatible chipset to the supplied CPU			
6	**RAM**	Memory2GB (1x2GB) expandable to 8GB Non-ECC DDR3 1333MHz SDRAM Memory, minimum Two DIMM slots			
7	**Hard Disk Drive & controller**	HDD320 GB 7200 RPM 3.5" SATA Hard Drive			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
8	**Optical Drive**	Optical Drive16X Max DVD+/ RW			
9	**Graphics**	Integrated Graphics			
10	**Audio**	High Definition Audio Card			
11	**Ethernet**	NIC 10/100/1000			
12	**Slots**	4 PCI / PCI Express slots, VGA (1), USB 2.0 (8)			
13	**Ports**	Rear I/O: (6) USB 2.0 ports, (1) serial port, (1) RJ-45, (1) VGA, (1) line out, (1) mic in, Front I/O: (2) USB 2.0 ports			
14	**Power Supply**	250-watt ATX Power Supply – PFC (Active Power Factor Correction (PFC) power supply). Surge protected			
15	**Keyboard**	USB 104 keys keyboard (Same make as PC) with bi-lingual keys (English and local language of the State/UT)			
16	**Monitor**	18.5" LED Monitor , Maximum resolution - 1366 x 768; Response time (typical)- 5ms ; TCO 5 certification for Monitor;			
17	**Mouse**	USB 2 Button			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		Optical Scroll Mouse(Same make as PC)			
18	**Operating System**	A proprietary Operating System Preloaded that is equivalent to Genuine Windows(R) 7 Professional SP1 (English) or above with updates / patches over the period of 5 years			
19	**Compliance And Certification**	As per industry standard for PC and energy star for Monitor			
20	**Drivers for different Operating systems**	Drivers should be freely available on OEM's web site and should be supplied in media along with PC			

1 B. Desktops /Personal Computer for each location (Open Source Operating System)

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Tower Model Required. Must be specified. All the relevant product brochures and manuals must be submitted.		NA	

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
3	**Processor**	Intel Pentium or AMD Athlon; Dual Core Processor; min 2.7 GHz			
4	**Motherboard**	OEM Motherboard			
5	**Chipset**	Latest Generation compatible chipset to the supplied CPU			
6	**RAM**	Memory2GB (1x2GB) expandable to 8GB Non-ECC DDR3 1333MHz SDRAM Memory, minimum Two DIMM slots			
7	**Hard Disk Drive & controller**	HDD320 GB 7200 RPM 3.5" SATA Hard Drive			
8	**Optical Drive**	Optical Drive16X Max DVD+/ RW			
9	**Graphics**	Integrated Graphics			
10	**Audio**	High Definition Audio Card			
11	**Ethernet**	NIC 10/100/1000			
12	**Slots**	4 PCI / PCI Express slots, VGA (1), USB 2.0 (8)			
13	**Ports**	Rear I/O: (6) USB 2.0 ports, (1) serial port, (1) RJ-45, (1) VGA, (1) line out, (1) mic in, Front I/O: (2) USB 2.0 ports			
14	**Power Supply**	250-watt ATX Power Supply – PFC (Active Power Factor Correction (PFC) power			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		supply). Surge protected			
15	**Keyboard**	USB 104 keys keyboard (Same make as PC) with bi-lingual keys (English and local language of the State/UT)			
16	**Monitor**	18.5" LED Monitor , Maximum resolution - 1366 x 768; Response time (typical)- 5ms ; TCO 5 certification for Monitor;			
17	**Mouse**	USB 2 Button Optical Scroll Mouse(Same make as PC)			
18	**Operating System**	An Open source Operating System Preloaded that is equivalent to Linux 2.4 Kernel (or above) Enterprise with updates / patches over the period of 5 years			
19	**Compliance And Certification**	As per industry standard for PC and energy star for Monitor			
20	**Drivers for different Operating systems**	Drivers should be freely available on OEM's web site and should be supplied in media along with			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		PC			

2 A. LAPTOPS (Proprietary Operating System)

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Must be specified. All the relevant product brochures and manuals must be submitted.		NA	
3	**Processor**	Intel Pentium or AMD APU; Dual Core Processor; min 2.0 GHz			
4	**Chipset**	Latest Generation compatible chipset to the supplied CPU			
5	**System Memory**	System Memory2GB Up to 8GB supported, 1333MHz Dual Channel DDR3,2 DIMM slots			
6	**Graphics**	Integrated Graphics			
7	**Hard Drive**	Primary Storage Options320GB 7200RPM SATA Hard Drive (Parks & protects HDD against system drops)			
8	**Optical Drive**	Optical Drive 8X or above DVD+/-RW with double-layer DVD+/-R write capability			
9	**Display**	Display14.0" High Definition Wide LED Anti-Glare Display (1366x 768)			
10	**Audio/Visual**	SRS Premium Sound™ Integrated stereo speakers Integrated microphone (dual-microphone array when equipped with optional			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		HD webcam) Stereo headphone/line out / Stereo microphone in Optional 720p HD webcam			
11	**Communications**	Gigabit Ethernet network; WWAN 3G supported(optional)			
12	**Integrated Wireless**	Wireless LAN: 802.11b/g/n and Bluetooth (BT V3.0)			
13	**Keyboard**	Spill-resistant keyboard; min 86 keys keyboard with bi-lingual keys (English and State/UT's local language)			
14	**Pointing Device**	Touchpad with gestures support, on/off button with LED indicator, two-way scroll, two pick buttons			
15	**Battery**	Battery Options 6-cell (47WHr) Lithium Ion battery integrated with optional long life cycle battery			
16	**Interfaces / Ports**	Media Card Reader - One (1) VGA - One(1) HDMI- One(1) Stereo microphone in -One(1) Stereo headphone/line out - One(1) Power connector -One(1) RJ-45/Ethernet -One(1) USB 2.0- Four(4) LED status indicators- Nine(9)			
17	**Operating System**	A proprietary Operating System Preloaded that is equivalent to Genuine Windows(R) 7 Professional SP1 (English) or above with updates / patches over the period of 5			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		years			
18	**Drivers for different Operating systems**	Drivers should be freely available on OEM's web site and should be supplied in media along with PC			

2 B. LAPTOPS (Open Source Operating System)

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Must be specified. All the relevant product brochures and manuals must be submitted.		NA	
3	**Processor**	Intel Pentium or AMD APU; Dual Core Processor; min 2.0 GHz			
4	**Chipset**	Latest Generation compatible chipset to the supplied CPU			
5	**System Memory**	System Memory2GB Up to 8GB supported, 1333MHz Dual Channel DDR3,2 DIMM slots			
6	**Graphics**	Integrated Graphics			
7	**Hard Drive**	Primary Storage Options320GB 7200RPM SATA Hard Drive (Parks & protects HDD against system drops)			
8	**Optical Drive**	Optical Drive 8X or above DVD+/-RW with double-layer DVD+/-R write capability			
9	**Display**	Display14.0" High Definition Wide LED Anti-Glare Display (1366x 768)			
10	**Audio/Visual**	SRS Premium Sound™			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		Integrated stereo speakers Integrated microphone (dual-microphone array when equipped with optional HD webcam) Stereo headphone/line out / Stereo microphone in Optional 720p HD webcam			
11	**Communications**	Ethernet network; WWAN 3G supported(optional)			
12	**Integrated Wireless**	Wireless LAN: 802.11b/g/n and Bluetooth (BT V3.0)			
13	**Keyboard**	Spill-resistant keyboard; min 86 keys keyboard with bi-lingual keys (English and State/UT's local language)			
14	**Pointing Device**	Touchpad with gestures support, on/off button with LED indicator, two-way scroll, two pick buttons			
15	**Battery**	Battery Options 6-cell (47WHr) Lithium Ion battery integrated with optional long life cycle battery			
16	**Interfaces / Ports**	Media Card Reader - One (1) VGA - One(1) HDMI- One(1) Stereo microphone in -One(1) Stereo headphone/line out - One(1) Power connector -One(1) RJ-45/Ethernet -One(1) USB 2.0- Four(4) LED status indicators- Nine(9)			
17	**Operating System**	An Open source Operating System Preloaded that is equivalent to Linux 2.4 Kernel			

S. No.	Features	Specifications	Specifications offered	Compliance (Yes / No)	Deviations, if any
		(or above) Enterprise with updates / patches over the period of 5 years			
18	**Drivers for different Operating systems**	Drivers should be freely available on OEM's web site and should be supplied in media along with PC			

3 Digital Web Camera (Webcam)

S. No	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Must be specified		NA	
3	**USB**	4 pin USB Type A			
4	**Pixel**	5 MP			
5	**Video Capture**	640X480 pixels			
6	**USB cable**	5 ft			

4 Scanner

S.No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	All the relevant product brochures and manuals must be submitted.		NA	
3	**Scanner type**	Legal Size Flatbed			
4	**Scan**	Charge Coupled			

S.No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
	technology	Device (CCD)			
5	**scan speed**	min 20 PPM			
6	**ADF capacity**	50 sheets			
7	**Duty cycle**	Min 800 pages per day			
8	**Scan resolution:**	Min 600 dpi			
9	**Output resolution dpi settings**	300, 600			
10	**Color bit depth**	24-bit			
11	**Grayscale levels**	256			
12	**Double-feed detection**	Yes			
13	**File formats**	BMP, JPG, TIFF, TIFF (compressed), multi-page TIFF, PNG, PDF, RTF, TXT, UNICODE, HTM, DOC			
14	**Connectivity**	Hi-Speed USB 2.0			
15	**Software**	ISIS and Twain drivers			
16	**Compatible operating systems**	Windows XP, Windows Vista, Windows 7, MAC OS 9.0, MAC OS X, Linux Kernel 2.4 or later			

5 Network Printer cum Fax

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	All the relevant product brochures and manuals must be submitted.		NA	
3	**Speed (min.)**	min 25 PPM			
4	**Memory(min.)**	min 64 MB			
5	**Resolution**	1200 x 1200 dpi			
6	**Interface**	USB, Ethernet (UTP) with respective cables			
7	**Monthly Duty Cycle**	Min 18000 pages			
8	**Duplex**	Automatic Duplex			
9		ADF, Fax, and Network ready			
10	**Drivers**	Windows XP, Windows Vista, Windows 7, MAC OS 9.0, MAC OS X, Linux Kernel 2.4 or later			

6 Laser Printers

S. No	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	All the relevant product brochures and manuals must be submitted.		NA	
3	**Speed (min.)**	min 20 PPM (A4)			
4	**Memory(min.)**	min 8 MB			
5	**Resolution**	600x600 dpi			
6	**Interface**	USB, Ethernet (UTP) with respective cables			
7	**Monthly Duty**	min 10000 Pages			

S. No	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
	Cycle				
8	**Drivers**	Windows XP, Windows Vista, Windows 7, MAC OS 9.0, MAC OS X, Linux Kernel 2.4 or later			
9	**Duplex**	Automatic Duplex			

7 Other Printers

S. No	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	All the relevant product brochures and manuals must be submitted.		NA	
3	**Speed (min.)**	ISO / IEC 24734 min 12 PPM - Black (A4)			
4	**Memory(min.)**	min 8 MB			
5	**Resolution**	600x600 dpi			
6	**Interface**	USB, Ethernet (UTP) with respective cables			
7	**Monthly Duty Cycle**	min 10000 Pages			
8	**Drivers**	Windows XP, Windows Vista, Windows 7, MAC OS X, Linux Kernel 2.4 or later			
9	**Duplex**	Automatic Duplex			

8 UPS – 1 KVA online UPS

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be	NA		

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		specified			
2	**Model**	All the relevant product brochures and manuals must be submitted.	NA		
3	**Power Rating**	1 kVA/ 700 W with 30 min backup			
4	**Technology**	True On-Line Double Conversion Architecture			
5	**Nominal input voltage (VAC)**	220/230/240 VAC			
6	**Input voltage Range**	160-300 VAC			
7	**Operating Frequency**	50Hz			
8	**Nominal output Voltage**	230 VAC			
9	**Output voltage Regulation**	+/-1.5%			
10	**Overload Capacity**	Up to 110 % for 30 sec, 111-150% for 200ms			
11	**Efficiency**	Min. 85% (On-Line mode)			
12	**Load Crest Factor**	3 : 1			
13	**LED**	LCD Display having complete information about the Input and Output data			
14	**Standard Communication ports**	RS232			
15	**Form Factor**	Floor Mounted			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		type			
16	**Battery Type**	Sealed Maintenance Free			
17	**Battery Runtime**	**For 30 Min. backup minimum VAH should be 900.** Total number of batteries offered should be clearly mentioned. Voltage of each battery offered should be clearly mentioned Ampere-Hour rating of each battery offered should be clearly mentioned. Total Volt-Ampere-Hour rating of the Battery Bank Offered should be clearly mentioned			
18	**Start-On-Battery**	Should allow startup of UPS without utility input			
19	**Operating Temp.**	0°C - +40°C			
20	**Storage Temp**	Recommended 0°C - +40°C			
21	**Audible Noise**	<50 dB battery mode			
22	**RoHS Compliance**	Should be EU RoHS / WEEE			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		Compliant			
23	**Markings**	CE			
24	**Safety**	IEC 60950			
25	**EMC**	EN 50091-2 /equivalent			

9 9 U Rack

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified	NA		
2	**Model**	All the relevant product brochures and manuals must be submitted.	NA		
3	**Dimensions**	600(w)x 530(d)x 9U(h)			
4	**Weight Capacity**	132 lbs (60 kg)			
5	**Side doors**	Complete knockdown format for easy installation & later maintenance; with lock & key			
6	**Ventilation**	Standard with one side exhaust fan			

10 24 Port Switch

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	All the relevant product brochures and		NA	

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations , if any
		manuals must be submitted.			
3	**Standards**	1. IEEE 802.1D 2. IEEE 802.1p 3. IEEE 802.1Q 4. IEEE 802.1s 5. IEEE 802.1w 6. IEEE 802.1x 7. IEEE 802.1ab 8. IEEE 802.1ad 9. IEEE 802.3 10.IEEE 802.3u 11.IEEE 802.3ab 12.IEEE 802.3z 13.RFC 854 14.RFC 951 15.RFC 1305 / RFC2030			
4	**Protocol**	CSMA/CD			
5	**Throughput**	Min 8 Gbps			
6	**Data Transfer Rates**	Non Blocking Architecture			
7	**Network Cables**	10BASE-T: UTP Cat. 3, 4, 5 (100 m) EIA/TIA-586 100-ohm STP (100 m) 100BASE-TX: UTP Cat. 5 (100 m) EIA/TIA-568 100-ohm STP (100m max.)			
8	**Number of Ports**	10/100Mbps port x 24			
9	**Twisted-pair Rx Reverse Polarity**	Auto-correction for each port			
10	**MAC Address Learning**	Automatic update			
11	**RAM**	64 MB			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
12	**Power Supply**	100 - 240 VAC, 50/60 Hz			
13	**Security**	Should support a) 802.1x b) AAA c) SSH v1, v2 d) SSL e) Host to Host and Switch to Switch authentication			
14	**Management**	Should have a. IPv6 management capability b. SNMP v1, v2, v3 c. RMON d. RADIUS e. CLI via console f. Web interface g. Provision of software and firmware upgrades with latest version releases through admin login			
15	**Uplink Ports**	Switch should have 2 dual-purpose uplink ports (10/100/1000 or SFP)			

11 Leased Line Modem (pair)

S.No	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Must be specified		NA	
3	**Modem V35**	2-Wire, Standalone,			

S.No	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		V.35 Interface, Ethernet (UTP) Port for Management, Supports 220 to 240V			
4	**Modem G703**	2-Wire, Standalone, G.703 (Balanced) Interface, Ethernet (UTP) Port for Management, Supports both 230V & 48V DC Power Interfaces			
5	**USB cable**	The modems supplied should also work on bandwidth between 64 Kbps to 2 Mbps.			
6	**Certifications**	Should have TEC Certification			

12 Router

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
1	**Make**	Must be specified		NA	
2	**Model**	Must be specified		NA	
3	**Architecture**	a) Should be chassis based & modular architecture for scalability and should be a single box configuration for ease of management. b) Should have support for			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		IPSEC VPN. c) Should have minimum of 256MB of RAM and 32 MB of Flash Memory			
4	**Interface**	a) 2 x 10/100 Base interface. b) At least 2 free additional slots for future 1. Note: These additional slots should support both the following interfaces: • V.35 (2 Mbps) interface including necessary cables • 10/100 Ethernet Base interface.			
5	**Performance**	a) Should support high performance traffic forwarding with concurrent features like Security, Voice enabled b) Should support			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		variety of interfaces like V.35 Sync Serial (2 Mbps), E1, ADSL for remote office aggregation c) Should support 3G USB modem for connectivity or support external 3G modem d) Should have USB 2.0 ports for storing OS images			
6	**High Availability**	a) Should support redundant connection to LAN b) Should support Non-Stop forwarding for fast re-convergence of routing protocols c) Should support boot options like booting from TFTP server, Network node d) Should support VRRP or equivalent			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
7	**Protocols**	a) Should support Routing protocols like RIP ver1 (RFC1058)&2, (RFC 1722 and 1723), OSPF ver2 (RFC2328), BGP4 (RFC1771), IS-IS (RFC1195), Telnet (RFC854) b) Multicast routing protocols support : IGMPv1,v2, v3 (RFC 2236), PIM-SM (RFC2362), PIM-SSM and PIM-DM, M-BGP/ MSDP c) Should have full IPv6 features from day 1. d) Should have RIPng and OSPFv3 for IPv6.			
8	**QoS Features**	a) Classification and Marking: Policy based routing, IEEE 802.1p b) Congestion Management: WRED, Priority queuing, Class based queuing c) Traffic			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		Conditioning: Committed Access Rate/Rate limiting d) Bandwidth guarantee e) Signalling: RSVP f) Link efficiency mechanisms: cRTP, LFI, MLPPP g) Per VLAN QoS. Time Based Shaping and Policing for QoS h) Port mirroring			
9	**Security Features**	a) Support for GRE Tunneling, NAT b) Support for MD-5 / SHA-1/SHA-2 route authentication for RIP, OSPF and BGP c) Shall support multi-level of access d) Support for SNMPv3 authentication, SSHv2 e) AAA support using Radius			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		and/or TACACS+ f) Support for PAP and CHAP authentication for P-to-P links g) Multiple privilege level authentications for console and telnet access through Local database or through an external AAA Server. h) Time based & Dynamic ACLs for controlled forwarding based on time of day for offices i) IEEE 802.1x support for MAC address authentication			
10	**Management**	a) Shall have support for Web based management, CLI, Telnet and SNMPv3 b) Shall support Secure Shell for secure			

S. No.	Feature	Specification	Specifications offered	Compliance (Yes / No)	Deviations, if any
		connectivity. c) Shall support Out of band management through Console and external modem for remote management			
11	**Certification**	a) Common Criteria Certified b) FCC c) Safety EMI/EMC			
12	**Power**	AC 200 – 240V			

6.8 Non-Functional Requirements

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, SI shall prepare System Requirement Specifications (SRS) and obtain a formal sign-off before proceeding with the design and implementation of the solution.

#	Non-functional Requirements
a)	**Technical Solution Architecture Requirements**
1.	The e-District solution needs to be architected using robust and proven software and hardware technologies like Service-Oriented Architecture (SOA) and open industry standards.
2.	The solution architecture should be built on sound architectural principles enabling fault-tolerance, high-performance, and scalability both on the software and hardware levels.
b)	**Software Architecture Requirements**
1.	Software architecture must support web services standards including XML, SOAP, UDDI and WSDL
2.	Software architecture must support appropriate load balancing for scalability and performance
3.	Software architecture must support flexibility in adding functionalities or applications.
4.	Software architecture components should utilize the high availability, clustering, and load balancing features available in the proposed hardware architecture to increase system performance and scalability features.
5.	Software architecture must support trace logging, error notification, issue resolution and exception handling.
c)	**Hardware Architecture Requirements**
1.	Hardware architecture at SDC must provide redundancy and high availability capabilities at the hardware level; this includes servers, etc. However, the hardware infrastructure for the DRC can be as per the SDC specifications.
2.	All servers and systems must be configured with no single point of failure.
3.	Hardware architecture should be capable of consolidating several applications / workloads in a number of servers as required.
4.	Servers must be placed within proper security infrastructure for the Solution.
5.	Hardware architecture must support existing Storage Area Network (SAN) & backup solution (at SDC)
6.	The technical solution architecture for e-District should be sound and complete with high performance, redundancy, and scalability.
d)	**Development, Testing, Staging, and Production Requirements**
1.	Appropriate development, test, and staging hardware 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 support the implementation activities of e-District Solution.

2.	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.
3.	The test, development, and staging environment should include required workstations, desktops, and tools appropriate to support development, testing, and staging, and deployment tasks.
4.	The development, test, and staging hardware environments must include similar operating systems, software components, products, and tools to those of production environment.
5.	The development, test, and staging environments should be independent logically and physically from the production environment and of each other.
6.	The development environment should be used for development and should be configured to allow access for developers' workstations.
7.	The staging environment should be used for functional and user acceptance testing, stress testing, and performance benchmarking.
8.	The test environment should be used as a testing environment of e-District Solution and its software components and products. The test environment should be a scaled-down configuration of the production environment.
e) Security Requirements	
1.	A secure solution should be provided at the hardware infrastructure level, software level, and access level.
2.	Authentication, Authorization & Access Control 3 factors (User ID & Password, Biometric, and Digital Signature) security mechanisms should be implemented to enable secure login and authorized access to portal information and services.
3.	Confidentiality of sensitive information and data of users and portal information should be ensured.
4.	Appropriate mechanisms, protocols, and algorithms necessary to protect sensitive and confirmation data and information both during communication and storage should be implemented.

	f) Monitoring and Management Requirements
5.	The e-District Solution should provide monitoring and management of the entire Solution including all software components and application.
6.	The monitoring and management should monitor health of software and hardware infrastructure running the e-District Solution covering operating system, database, software components, applications, servers, and other related software and hardware components. It should provide proactive monitoring, alerting and reporting.
	g) Performance and Scalability Requirements
1.	The design of the e-District Solution should be scalable to handle increasing number of users.
2.	e-District Solution should provide measurable and acceptable performance requirements for users, for different connectivity bandwidths.
3.	The e-District solution should provide optimal and high performance Portal Solution satisfying response time for slow Internet connections and different browsers.
	h) Implementation Requirements
1.	The SI will be required to deploy manpower and other project resources as per the terms & conditions of the Contract
2.	The SI will be required to work closely with the SDA and perform detailed functional requirements and analysis of e-District Solution to confirm and document functional / system requirement specifications for the portal and its applications to fulfil its objectives.
3.	The SI will be expected to carry the complete implementation and deployment of the e-District within the timelines specified in the RFP.
4.	The SI is expected to develop, test, stage, and deploy all functional modules of the e-District software and any hardware components of technical & functional requirements
	i) Project Management

1. Selected bidder is required to provide an implementation plan illustrating all functional analysis, development, testing, staging, and deployment activities.

2. Selected bidder is required to specify and describe the different phases and activities of the project. It is very important for the SDA 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.

3. Selected bidder is required to use standard project management tools such as precedence diagrams, critical path charts, etc. to create and manage implementation plan and schedule. The table below shows the minimum stages and deliverables:

Stage	Activities	Deliverables
Functional & Requirements Analysis	• Define Functional Requirements • Requirements management • Prototyping • Documentation • Data Migration Preparation	• Software Requirements and Specifications Document • Detailed Scope of Work • Work Breakdown Structure • Detailed Project Schedule • Data Migration Plan
Design	• Detailed Software Solution Architecture design • Detailed Hardware Solution Architecture Design • Data Schema design • User Interface Design • Integration & Interfaces Design • Prototyping design Validation • Documentation	• Design Specifications Documents of Software solutions • Design Specifications Documents of Hardware solutions • User Interface Design Specifications • Integration Design Specifications • Data design and migration
Development	• Software installation, configuration, and customization • Hardware installation and configuration • Development • Unit Testing • Documentation	• Development Plan • Updated Design Document • Installed software and hardware • Functional modules & Portal Solution • Problem reporting

Testing	• System Testing • Integration Testing • Stress Testing • User Acceptance Test Results • Completed Test Cases • Data Migration tests • Documentation	• Complete Test Cases • Test Plan • User Acceptance Criteria • Problem reporting • Problem resolution testing • Data Migration Testing
Deployment	• Training courses and sessions • Operations Planning • User Manual • Operations Manuals	• Knowledge Transfer and training plan • Operations Plan • Operations Policies and Procedures

4.	Selected bidder is required to describe in detail project management processes, methodologies and procedures.
5.	Describe what SDA resources will be necessary for the project to succeed.
6.	Describe how SDA management will receive up-to-date reports on project status.
7.	Describe the change management procedures to handle such things as "out-of-scope" requests or changing business needs of SDA while the project is underway.
8.	Describe what procedures will be used to keep the project on track, and what escalation procedures will be employed to address any problems with project progress.
9.	Describe what quality assurance processes, procedures, formal reviews, etc. will be in place.
10.	Describe the proposed conflict resolution / escalation process between the Bidder and SDA to handle project or contractual disputes.
11.	Selected bidder is required to describe the proposed project structure identifying all project individuals including project manager, business analysts, software developers, QA engineers, hardware / network engineers, administrators, Change Management experts, and others.
12.	Selected bidder shall provide a comprehensive warranty that covers all components after the issuance of the final acceptance of e-District. The warranty should cover all materials, licenses, services, and support for both hardware and software. Selected bidder shall administer warranties with serial number and warranty period. Upon final acceptance of the SDA, all OEM warranties will be transferred to the SDA at no additional charge. All warranty documentation (whether expired or not) will be delivered to SDA at the issuance of the final acceptance certificate.
13.	Selected bidder is required to provide Premium Level warranty and support through the vendor for all hardware and software used for e-District. Selected bidder' warranty must cover all equipment and work activities contained in the contract against all design, manufacturing, and environment faults until the issuance of the final acceptance.
14.	Selected bidder is required to commit to the following warranty terms: • All products / components / parts shall be covered under OEM warranty up to the Implementation Phase and AMC support shall commence after successful implementation. • The warranty shall include the repair or replacement of the products / components / parts during the warranty period by the bidder. The replacement products / components shall meet the related specifications without further repair or modification. • Selected bidder shall be liable for all costs including, but not limited to, the costs of material, labour, travel, transport and living expenses associated with the collection and return of the units covered by the warranty. • The date of manufacture or assembly of any equipment, parts or consumables, shall not be more than six months before delivery. • Selected bidder shall state the location of his repair Centre(s) for all items not being repaired onsite. • SDA has the right to require a replacement if the repair is deemed to be impractical. • Selected bidder ensure that replacement components shall be available for any failed component during the warranty period.

- 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 five (5) 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.
- Selected bidder need to define the process & methodology in their proposal, for achieving the response time of engineers to respond to an incident and also for resolving such incidents as per the SLA.
- Selected bidder is required to provide additional training if the satisfaction levels/ learning does not reach 80% in evaluation/feedback from trainees, and expected to provide additional training, if required.
- The e-District 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.

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

j)	**Operations Requirements**
15.	The selected bidder is expected to provide the following in support of e-District 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 SDA 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 SDA 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 SDA with weekly portal performance reports showing health of system operations. Selected bidder will be required to provide SDA with Helpdesk for recording all the 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 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.
k)	**Quality Assurance & Acceptance Requirements**

16.	Selected bidder is required to develop and implement quality assurance processes and procedures to ensure that the e-District development and operations are performed to meet the quality standards that are relevant to each area in all project phases.
17.	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.
18.	In order to ensure that such a QA mechanism is effective and acceptance of e-District, 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.
19.	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 5 processes.
20.	Furthermore, Selected bidder to describe their documentation standards e.g. Documentation description, documentation identification, content, nomenclature etc. as well. Sample documents to be enclosed as part of the technical proposal.