REQUEST FOR PROPOSAL

FOR

DESIGN, DEVELOPMENT & MAINTENANCE OF NRC SOFTWARE SOLUTION AND SETTING UP OF NRC SEVA KENDRAS

Volume I

(Functional, Technical and Operational Requirements)

NOT TRANSFERABLE

OFFICE OF THE COMMISSIONER & SECRETARY TO THE GOVERNMENT OF ASSAM, POLITICAL DEPARTMENT &

STATE COORDINATOR OF

NATIONAL REGISTRATION (NRC), ASSAM

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RFP Reference Number: SPMU/NRC/SI/26/2014/260 dated 07th September 2014

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Political Department, Government of Assam shall be the sole and final authority with respect to qualifying a bidder through this RFP. The decision of Political Department, Government of Assam in selecting the System Integrator who qualifies through this RFP shall be final and Political Department, Government of Assam reserves the right to reject any or all the bids without assigning

any reason thereof. Political Department, Government of Assam further reserves the right to negotiate with the selected agency to enhance the value through this project and to create a more amicable environment for the smooth execution of the project.

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

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Glossary of Terms

Abbreviation	Text
ACRCR	Assistant Circle Registrar of Citizen Registration
ADRCR	Additional District Registrar of Citizen Registration
BFD	Best Finger Detection
BA	Business Analytics
CRCR	Circle Registrar of Citizen Registration
DCR	Director of Citizen Registration
DRCR	District Registrar of Citizen Registration
DC	Data Center
DEE	Data Entry Executives
DEity	Department of Electronics and Information Technology
DR	Disaster Recovery
DG	Diesel Generator
DLDD	Digitized Legacy Data Development
DNS	Domain Name System
EC	Empowered Committee
FTP	File Transfer Protocol
FLO	Field Level Officers
GUI	Graphical User Interface
HTTP	Hyper Text Transfer Protocol
IPR	Intellectual Property Rights
ITIL	Information Technology Infrastructure Library
IE	Internet Explorer
IP	Internet Protocol
ICT	Information and Communications Technology
LRCR	Local Registrar of Citizen Registration
LOI	Letter of Intent
MPLS	Multi-Protocol Level Switching
MLLN	Managed Leased Line Network
MCA	Master in Computer Applications
MIS	Management Information Systems
NAC	Network Admission Control
NAS	Network Attached Storage
NRC	National Registration of Citizen
NRCSDEO	NRC State Data Entry Office
O&M	Operations and Management
OTP	One Time Password

Abbreviation	Text
OEM	Original Equipment Manufacturer
PMC	Project Monitoring Consultant
RGCR	Registrar General of Citizen Registration
RFP	Request for Proposal
SECC DB	Socio-Economic and Caste Census Database
SI	System Integrator
SIDEC	SI Data Entry Centre
SSL	Secured Socket Layer
SAN	Storage Area Network
SLA	Service Level Agreement
SCNR	State Coordinator of National Registration
SPMU	State Program Management Unit
UAT	User Acceptance Testing
UPS	Unlimited Power Supply
VPN	Virtual Private Network
VTL	Virtual Tape Library
VT	Verification Teams
VLEW	Village Level Extension Workers

1 PURPOSE OF RFP

The purpose of this RFP is to solicit proposals from the interested bidders for selection of System Integrator (SI) for the Design, Development & Maintenance of NRC Software Solution and Setting up and operationalizing NRC Seva Kendras (ICT Helpdesks for Citizens) in the state of Assam through a competitive bidding process.

The RFP intends to bring out the details with respect to scope of services that are deemed necessary to share with the interested bidder.

In this RFP the successful bidder is referred as System Integrator (SI).

2 RFP STRUCTURE

The content of this RFP has been structured and documented in a set of three volumes as explained below:

Volume I: Functional, Technical and Operational Requirements

This volume of RFP intends to bring out all the details with respect to Software solution, IT & Non-IT and Manpower requirements that are deemed necessary to share with the potential bidders. This information contained in Volume – I include:

- Detailed scope of work for the System Integrator
- Functional, Technical, and Operational requirements

Volume II: Commercial and Bidding Terms

This volume of RFP purports to detail out all that may be needed by the potential bidders to understand the bidding process, evaluation criteria, technical and commercial formats and commercial terms.

Volume III: Contractual and Legal Specifications

Volume III of this RFP contains the contractual and legal terms. It also includes a draft version of the contract that shall form the basis of engagement with the chosen System Integrator.

This volume is RFP Volume I of this RFP

3 PROJECT OVERVIEW

3.1 ABOUT NRC UPDATION PROJECT

National Register of Citizens (NRC) updation basically means the process of enlisting the names of all citizens residing in Assam at the time of NRC updation.

After the conduct of Census of 1951, a National Register of Citizens (NRC) was prepared in respect of each village showing the houses or holdings in a serial order and indicating against each house or holding the number and names of persons staying therein, and in respect of each individual, the father's name/mother's name or husband's name, nationality, sex, age, marital status, educational qualification, means of livelihood or occupation and visible identification mark. This was done by copying out in registers the particulars recorded during Census done in 1951. This NRC was prepared under a directive from the Ministry of Home affairs (MHA).

In the tripartite meeting held on 5th May 2005 to review the implementation of Assam Accord, the Government of Assam agreed to updation of National Register of Citizens (NRC), 1951. Pursuant to the above, the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003 was amended based on modalities received from Government of Assam for updation of National Register of Citizens (NRC) 1951 in Assam based on relevant records

The modalities for NRC updation have been jointly developed by the Government of Assam and Government of India in adherence to the major statues governing NRC Updation in Assam (The Citizenship Act, 1955 and The Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2013).

Hearing a writ petition filed regarding updation of NRC in the state the Supreme Court directed the Union and the State Government to complete the updation of NRC in all parts of Assam in a time-bound manner.

The political department of Government of Assam is in the process of implementing the NRC Project on behalf of the Registrar General of India (RGI), who is designated as Registrar General of Citizens Registration (RGCR).

For the purpose, every household will be provided with an application form (Refer Annexure IV – Application form template) which would be filled up by the head of the family and submitted to the nearest Government Office set up for the purpose. The offices so setup for application receipt would

be called the LRCR (Local Registrar of Citizen Registration) offices. 1500 such LRCR offices would be setup across the state.

In order to establish proof for citizenship, the applicants shall have to provide a copy of the 1951 NRC or any pre-1971 electoral roll wherein the name of the applicant or the applicants' ancestors appear. These data of 1951 NRC or any pre-1971 electoral rolls will also be referred to as the Legacy Data. The legacy data would be made available online allowing access to the public.

NRC Updation works would be carried out under the aegis of State Coordinator of National Registration (also Commissioner and secretary, Political Department). This exercise shall be carried out throughout the state of Assam through institutional arrangements at the following four levels:

(i) State level

(ii) District level (DRCR/SDO)

(iii) Circle level (CRCR)

(iv) Local Level (LRCR)

In order to implement this project, the Department seeks to undertake the following key activities

(i) Digital Imaging and Archiving, Transliterating & Publication of Legacy Data (data of 1951 NRC or any pre-1971 electoral rolls)

(ii) Setting up a call center based helpline which would enable the citizens to clear their doubts about NRC Updation procedure

(iii) Design, Development & Maintenance of NRC Software Solution , Setting-up of NRC Seva Kendras & Digitization of Citizen Application Forms for NRC Updation.

This RFP is for the selection of SI for the Design, Development & Maintenance of NRC Software Solution and Setting up of NRC Seva Kendras (ICT based Helpdesks for Citizens) in the state of Assam through a competitive bidding process.

3.2 PROJECT OBJECTIVES

Political Department, Government of Assam is keen to take up the NRC project with the following objectives:

(i) To enlist the names of the citizens of the State of Assam on a common platform.

(ii) To create standard procedure for establishing the proof of citizenship

(iii) To create a common digitized platform for the citizens of Assam where all the information is stored in a structured way and is easily accessible to the citizens

(iv) To introduce systems that simplify the NRC Updation process and improve their effectiveness

(v) To establish interfaces among key stakeholders that are easy to access and interoperable

3.3 STAKEHOLDERS

The key stakeholders of the project are shown below:

3.3.1 **Registrar General of Citizens Registration (RGCR)**

The overall superintendence, direction and control of the updation of National Register of Citizens are vested with the Registrar General of India (RGI), who is designated as Registrar General of Citizens Registration (RGCR).

3.3.2 **Director of Citizen Registration (DCR)**

The Director of Census Operation of the state acts as the representative of RGI at state level in the capacity of the Director of Citizen Registration (DCR). The preparation of the updated NRC for the state is under the superintendence, direction and control of the DCR.

3.3.3 **State Coordinator of National Registration (SCNR)**

The State Government shall assist the Central Government in carrying out the process of updating of NRC, 1951. The State Government notified the Commissioner & Secretary to the State Government, Political Department as the State Coordinator of National Registration for updating NRC, 1951.

3.3.4 **District Registrar of Citizen Registration (DRCR)**

Deputy Commissioner of the district shall be the overall in-charge as District Registrar of Citizen Registration (DRCR) of the entire NRC updation operation pertaining to his district. The Additional Deputy Commissioners and the Sub-Divisional Officer (SDOs) shall be appointed as Additional District Registrar of Citizen Registration (ADRCR) to strengthen the capacity of the DRCR

3.3.5 **Circle Registrar of Citizen Registration (CRCR)**

The Circle Officer in-charge of the revenue circle shall function as Circle Registrar of Citizen Registration (CRCR) in respect of the concerned circle. The CRCR shall be assisted by Assistant Circle Registrar of Citizen Registration (ACRCR)

3.3.6 **Local Registrar of Citizen Registration (LRCR)**

For one or a cluster of villages a gazetted officer shall be appointed by DRCR with the approval of State Coordinator Local Registrar of Citizen Registration (LRCR) would be responsible for display of the records as well as for the issue and receipt of Application forms etc.

3.3.7 **Field Level Officers (FLO)**

The Booth level Officers appointed under the Election Commission shall be engaged under NRC updation project as the Field Level Officers (FLOs).

3.3.8 **Verification Teams (VTs)**

To verify the particulars submitted by the applicants before deciding upon inclusion of their names in the updated NRC. The VTs would consist of the LRCR, Village level extension workers (VLEW), Supervisors Kanungos (SKs), Lot Mandals and Gaonburhas of the area and the concerned FLO.

3.3.9 **Citizens**

All people residing in the state of Assam. National Register of Citizens (NRC) updation basically means the process of enlisting the names of all citizens residing in Assam.

3.4 NRC UPATION PROCESS

Under this project, applicants shall have to prove their citizenship. For this purpose, either they will have to prove that they are

(i) offspring of persons whose names occur in the NRC of 1951 or Electoral Rolls of any year prior to 1971

(ii) in possession of any of the documents stipulated.

Legacy Data Publishing & Searching

In order to enable public to establish linkages with NRC 1951 or Electoral Rolls prior to 1971, the data of these documents (Legacy Data) shall be published and people will be given an opportunity to access the same to find their ancestral linkages. This would be done by way of:

(i) Digitisation of the Legacy data to enable computerised search

(ii) Imaging of the Legacy Data & its storage indexed to the smallest unit – District, Mauza, Thana, Village

(iii) Linking of the digitised data with the image

(iv) Giving a unique ID to each row (each person). Such ID would be given observing MDDS standards.

(v) Facility to search in digitised data ("like" type search) with display of original image

(vi) Facility to take printout of extract of digitised Legacy data (including the Unique ID)

(vii) The above data shall be published on the web and also distributed to all the Help Desks to be known as the NRC Seva Kendra. However for the data published on web free download of the entire digitized legacy database shall not be allowed. Extracts can be taken at NRC Seva Kendras or through internet (only after an OTP or email

registration). The Legacy Data shall be encrypted. And also provide for an Audit Trail to kept trail of all issues made from the NRC Seva Kendras. Downloads by public directly from the Internet also will be allowed only after individual registration. Commercial misuse etc to be made punishable wherever private operators (operators at NRC Seva Kendra & Call Centre) are involved through signing of NDAs (Non-Disclosure Agreement).

(viii) NRC Seva Kendras will provide Legacy Data Extract of only one family at a time. In case the search does not result in locating the Legacy data of the person, a "Not Found" Certificate would be given by the LRCR. The data base of "Not Found'' entries shall be maintained.

(ix) In addition to the web-enabled search, physical copies shall also be available of the Legacy Data at the offices of the DCs, SDOs, Circle Level CRCR, LRCR, GP Offices (in case LRCR is not located in the GP Offices)

(x) NRC Seva Kendras will be established at each LRCR office for a cluster of 15-20 villages covering a population of approximately 21,000. Each Help Desk will have 2 Computer Operators with 1 Computer (Laptop) and one Heavy duty printer to issue Legacy Data extract printout. Printer should have a paper feeding and printing system to enable printing only of the extract (of digitised data) to save paper. In case it is found that the system of Legacy Data Printout is taking too much time, modular increase (additional HR with a computer (Laptop) and Printer) shall be made to the LRCR level.

(xi) A model NRC Seva Kendra shall be established to be located at a prime location of the State's Capital City Guwahati. The model centre would be of a 3-4 times more of the size of a regular NRC Seva Kendra located at LRCR office. It would act as the model/showcase for all the activities to be carried out by NRC Seva Kendras across the state. The Centre would be equipped with 20 computer operators and 10 computers and 5 printers.

(xii) Call Centre to assist in searching.

Application Forms Availability:

For the purpose of applying, bilingual Application Forms would be distributed house to house. The Application Forms will not be numbered at any time before receipt. As such, downloaded Application Forms or photocopies will also be acceptable. For the purpose of house to house distribution, the SECC (Socio-Economic Caste Census) data shall be used to ensure maintenance of order and record of distribution, which would later be useful in monitoring of Application receipt.

Application Forms shall also be available for the public at all LRCR offices. In case of loss or damage to the Application Form, a new Form would be issued from the LRCR office.
In case a person had remained uncovered during SECC and therefore does not receive the Application Form at home, he/she can collect the Blank Application Form from the LRCR office.

The SECC data as above shall also be shared with System Integrator (SI) / NRC SDEO (NRC State Data Entry Office) to monitor receipt of Application Forms. The SECC data shall also be provided to each of the LRCR offices (of the people residing in the jurisdiction of the LRCR) to enable search of the applicant at the time of application Form submission.

Submission of Application Forms

Thereafter, the public will submit Application Forms at the NRC Seva Kendras. The Applications submitted would be accompanied by extract of Legacy Data (mentioning the Unique ID) to prove citizenship. In case Legacy Data is not available, the Application Form would have to be submitted alongwith the documents as stipulated.

Area of jurisdiction of an LRCR office/ NRC Seva Kendra shall be divided into groups with each group consisting of around 2 villages (average 500 households – 64 lakh households/ 26394 villages x 2) and make a time-table earmarking a week for each such group (@ 40 Application Forms per day). This would enable covering of all the villages in the first 3 months. Special efforts shall be made by the Circle Level CRCRs under supervision of the DCs (DRCRs) to ensure mobilization and participation of the public as per the time-table. As such, receipt of Application Forms vis-a-vis issue / house to house distribution would be closely monitored at all levels – LRCR, CRCR, DRCR and SCNR. In case of poor receipt in some areas, immediate steps would be taken for publicity or mobilisation.

In case 70% number of Application Forms is so received during the first 3 months itself, field verification of the Application Forms would start at the end of the 3 months itself. During the subsequent months, the NRC Seva Kendras would function on a daily basis for reduced working hours – 10 AM to 2 PM to enable the LRCR to carry out field verification during the remaining part of the day.

On the other hand, if less than 70 % Application Forms are received, the village-wise grouping would be carried out for another 2 months wherein, the same groups would be allotted 4-5 days to enable coverage of the left-out households of all the villages. Once 90% of the Application Forms would have been received, field verification shall be undertaken.

The last month would be used to carry out a Mop-up of all the remaining applicants. The option of mobility will be available for the LRCR Offices and enable them to function through a camp approach and thereby go closer to the people to collect the Application Forms. This would be carried out if the turnout appears low. This mobility can also be focused on remote and inaccessible areas.

While receiving the Application Forms, 2 computer operators will be deployed – one operator to scan and give App Form Receipt printout and the other operator to search the SECC data and get the same validated in presence of the applicant. In case it is found that the system of App Form Receipt is taking too much time, or in case of a sudden or undue increase in public turnout, modular increase (additional HR with a computer (Laptop) and Scanner/Printer) shall be made to the NRC Seva Kendras. In case, the turnout of the public remains poor, additional Mobile teams shall be deployed for selected LRCR areas.

The Application Forms can also be submitted online. For this purpose, "One Time Password (OTP)" system would be used to allow online applications. Some HR at the SIDEC (SI Data Entry Centre/ NRC State Data Entry Office (NRC SDEO) shall be assigned for monitoring online application submission. The printouts of the Application Forms received online shall be taken out at the Circle Level CRCR. Proper system shall be developed to ensure assigning of these online forms to the concerned NRC Seva Kendra. Whereas the Legacy data details shall be entered online, scanned documents if any would be allowed to be uploaded.

The Application Form submitted would be checked at the NRC Seva Kendra to see whether all the relevant data has been filled up or not and all relevant documents enclosed. In case of doubt, the LRCR/ ALRCR present shall take the final decision. Either the LRCR or Assistant LRCR shall have to be continuously present at the location during the time of Application receipt. In case the Application and documents appear acceptable, the Application Form will be scanned.

A printout of the scanned copy of the Application Form will be given as an acknowledgement to the applicant. While receiving the Application Forms, only the Application Form would be scanned and not the other documents submitted as enclosures of the Application. The computer generated receipt would include the copy of the Application Form and a summary list of the documents submitted. For this purpose, the software for application receipt would be so designed as to provide a check-box type of system listing the names of the likely documents on the computer screen enabling quicker generation of the receipt.

It is expected that preliminary checking and scanning of one App Form would require around 5 minutes. In case of extreme loads, there will be a modular increase in the infrastructure at the NRC

Seva Kendra through deployment of additional HR and hardware (Laptop computer & Printer/ Scanner). Mobile numbers of the applicants would be captured to enable any contact with the applicant to clarify about any illegible entries found at the time of data entry at SIDEC (SI Data Entry Centre).

While receiving the Application Forms at the NRC Seva Kendra, the data from the SECC data would be searched and in case the same is found, it shall be polled and displayed on the screen for the applicant. The fields that are common for NRC Application Form and SECC 2011 are state code, district code, village code, household number, name of members of the family (including applicants), sex, date of birth, marital status, name of father & mother, occupation and education. In case of the need for any corrections in the data it shall be made on the spot.

Data of all the fields available in the SECC shall therefore be digitized at the NRC Seva Kendras itself. For the Legacy Data also, the data will be polled from the Legacy Database and validated in presence of the applicant. For the remaining fields such as place of birth, identification mark, address in case of migrated population etc the data entry shall be carried out from scanned application forms at state level at the SIDEC (SI Data Entry Centre)

A maximum of 10 Application Forms only would be accepted from one person. Picture of the person submitting the Application Form would be taken and attached with the data.

The scans of the Forms would be sent to the SIDEC for data digitisation – that is the data entry of the fields not polled from SECC data or all the fields in case of unavailability of the person's details in the SECC data. The Application Forms data would be digitised at the SIDEC and after proper quality checks uploaded onto the Server for download at the Circle Level CRCR.

The original Application Form along with the documents submitted by the applicants would properly be made into a Bundle and put into a Folder. A Bar Code for every Application Form would be generated and 3 copies would be taken. One copy to be affixed on the original Application Form, another copy to be affixed on the App Form Receipt issued to the applicant and the third copy affixed on the Folder containing the Application Form and the documents.

Application Verification

The Folder containing the Application Forms shall be sent to the office of the Circle Level CRCR periodically for validation and office verification. Proper record of the same shall be kept of this movement. At the Circle Level CRCR, a blank Verification Form would be added to the Application Form Bundle and office verification carried out by the Circle Level CRCR staff and VT members. The office verification would consist of validation of the proof of citizenship submitted.

This verification shall be carried out by the respective VT members and supervised by the ADRCRs. The verification would mean cross-checking with the original document wherever available. The entire process of office verification shall be carried out during the period of Application Receipt. The Progress report and monitoring of office verification would be generated by the NRC Application Software weekly and provided to the LRCR/NRC Seva Kendra concerned.

This progress would also be monitored by Circle Level CRCR, DRCR & SCNR. Wherever the issuing authority of the document is not available in the same district, requiring inter-district or inter-state verification, all the documents submitted and the Verification Report would be scanned and the original Application Form along-with the documents sent to the DRCR for carrying out inter-district or inter-state verification. Proper record of this movement shall be recorded. This movement of Application Forms for inter-district or inter-state verification shall also be recorded in the NRC Application Software at the office of the Circle Level CRCR and the DRCR. At the office of the Circle Level CRCR, an earmarked ACRCR would keep track of such Application Forms sent for inter-district or inter-state verification while at the office of the DRCR, an earmarked ADRCR would keep track.

After office verification, the Application Form bundles shall be sent to the NRC Seva Kendras for physical storage. In cases, where validation could not be conducted during the office verification period, the documents shall be verified during field verification. This movement shall be done by the respective VT Members. Proper record of this movement shall be recorded. The movement of Application Forms shall also be recorded in the NRC Application Software at the office of the Circle Level CRCR and the DRCR. The second Operator of the NRC Seva Kendra shall accompany the VT Team in field verification for recoding of findings. Further, all the digitised data of the Applications would be made available to the NRC Seva Kendras. The data would be transferred onto the NRC Seva Kendra Laptop computers.

At the time of field verification, the Application Form Bundles would be carried by the VTs and the particulars of applicants verified in the field. After return from field verification the following shall be entered in the digitised database at NRC Seva Kendra in LRCR office:

(i) Any modifications reported during field verification viz. facts requiring corrections or errors in spellings.

(ii) The particulars of the actual Application Form shall also be compared on-screen with the digitised data and any corrections required shall be recorded in the Laptop computer.

(iii) Findings of the field verification about eligibility in NRC in Yes/ No form shall also be recorded in the Laptop Computer.

(iv) Scans of essential documents which were left unverified/ unvalidated during office verification and the same documents are verified/ validated during field verification.

(v) Scans of essential documents which were not submitted with the Applications but were provided and verified/ validated during field verification.

Such modifications, corrections or findings about eligibility for inclusion in NRC or scans of newly verified / validated documents made in the LRC database of the Laptop computer shall be transferred electronically to the Circle Level CRCR database periodically (say everyday or once in 2-3 days) after approval from the Circle Level CRCR.

Such approval from the Circle Level CRCR shall be taken in a Bio-metric manner before transferring the modifications into the NRC Application Data base at the CRCR office. Entries so made to the NRC Application Database shall be compared on screen with the hard copy of the Verification Report and this event shall be recorded both electronically (Audit trail) and in writing (appropriate space provision to be kept in the VT Verification Form declaring that the results have been electronically recorded at Circle Level CRCR).

Publication

Once the verification of all the Application Forms has been completed, the draft NRC (LRC) would be prepared for approval first by the Circle Level CRCR. This would mean preparation in soft as well as printouts. The soft copy preparation (after approval of Circle Level CRCR) shall mean that the data of that LRCR cannot be modified thereafter by any person (except on orders of DRCR and SCNR). As and when the verification for the entire Circle is completed, the NRC (Sub District Register) would be compiled and after verification by the Circle Level CRCR sent to DRCR. This would mean preparation in both soft and printouts (only of those LRCs which were not printed earlier). The

printouts of all the LRCs combined together would constitute the Sub District Register and sent to the DRCR.

At the district level, the DRCR will continue to receive Drafts of SDRs as and when sent by the Circle Level CRCR. These Sub District Registers would continue to be taken up for approval by DRCR as and when received. In case of approval the Sub District Registers shall be kept at the DRCR level and in case of any modifications ordered by DRCR or SCNR, the Sub District Registers would be sent back to the Circle Level CRCRs for carrying out the necessary modifications. Once the Sub District Registers for the entire district are received and approved by the DRCR, the DRC shall stand prepared and sent to SCNR for approval.

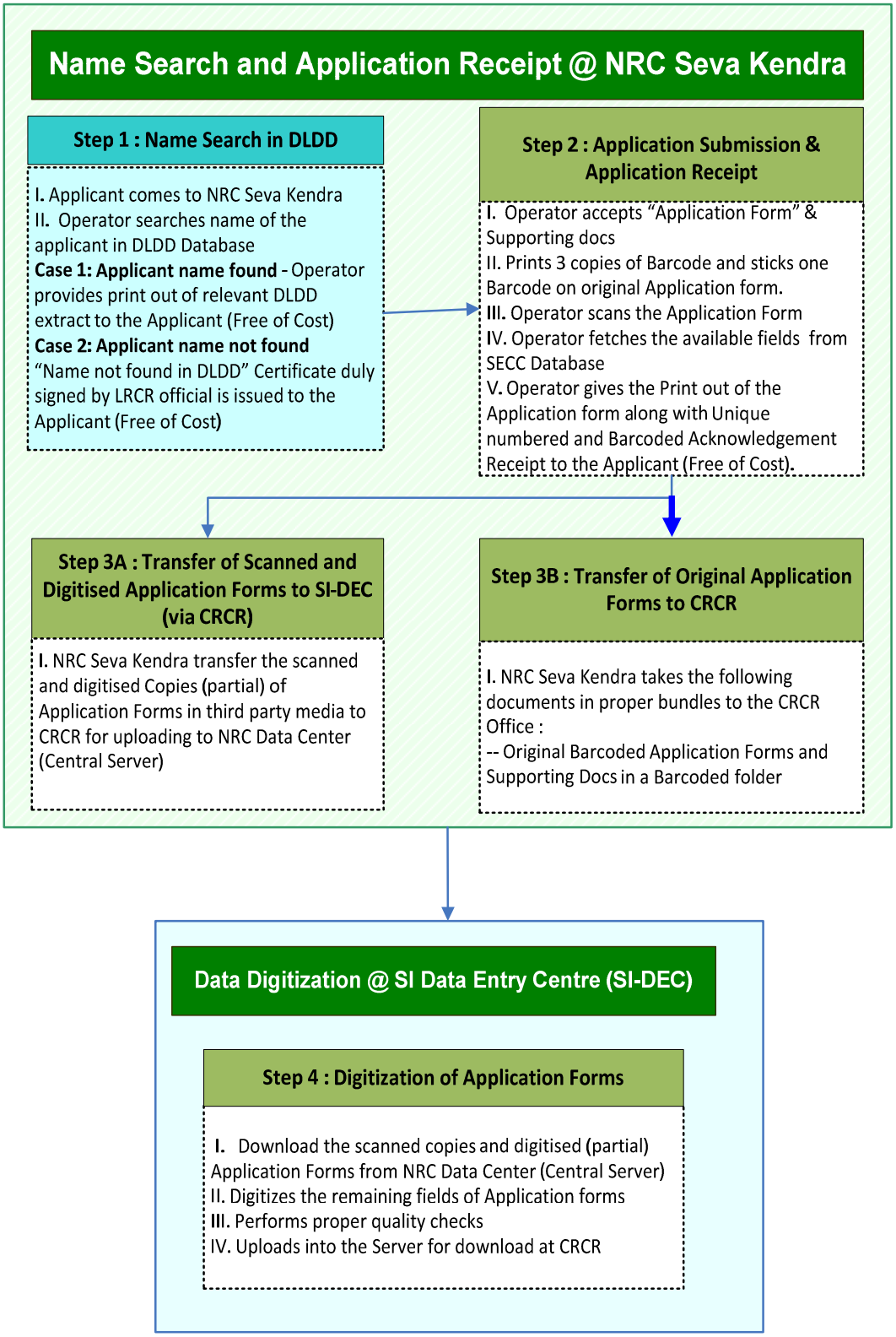
Reports of the entire process of LRC preparation, checking by CRCR, sending to DRCR and checking by DRCR shall be monitored through an MIS to be monitored at the state and DRCR level.

On the appointed date as notified by the SCNR, the DRC shall be published as a Draft NRC (DRC). The publication would be done at prescribed locations (5 copies of the NRC only shall be printed and made available at the prescribed locations) and also on the web and NRC Seva Kendras.

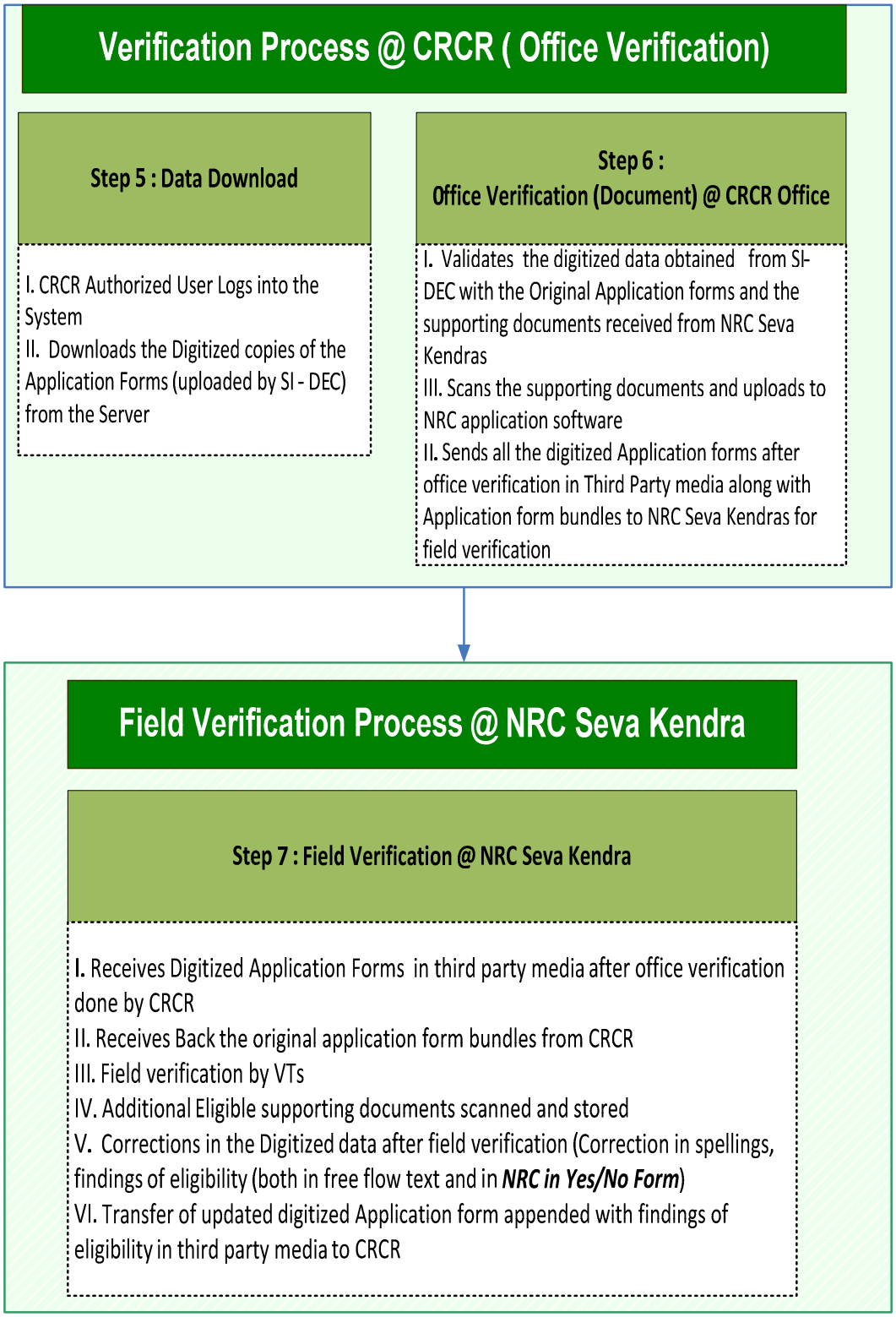
Public would submit claims and objections on the draft NRC which would be verified and the final NRC prepared as per their disposal. The final NRC shall be published under the authority of DRCR only after approval from the SCNR.

The process for receipt of Claims and Objections and preparation of supplementary for LRC, CRC and DRC shall be carried out in the same manner as that for the Application Forms.

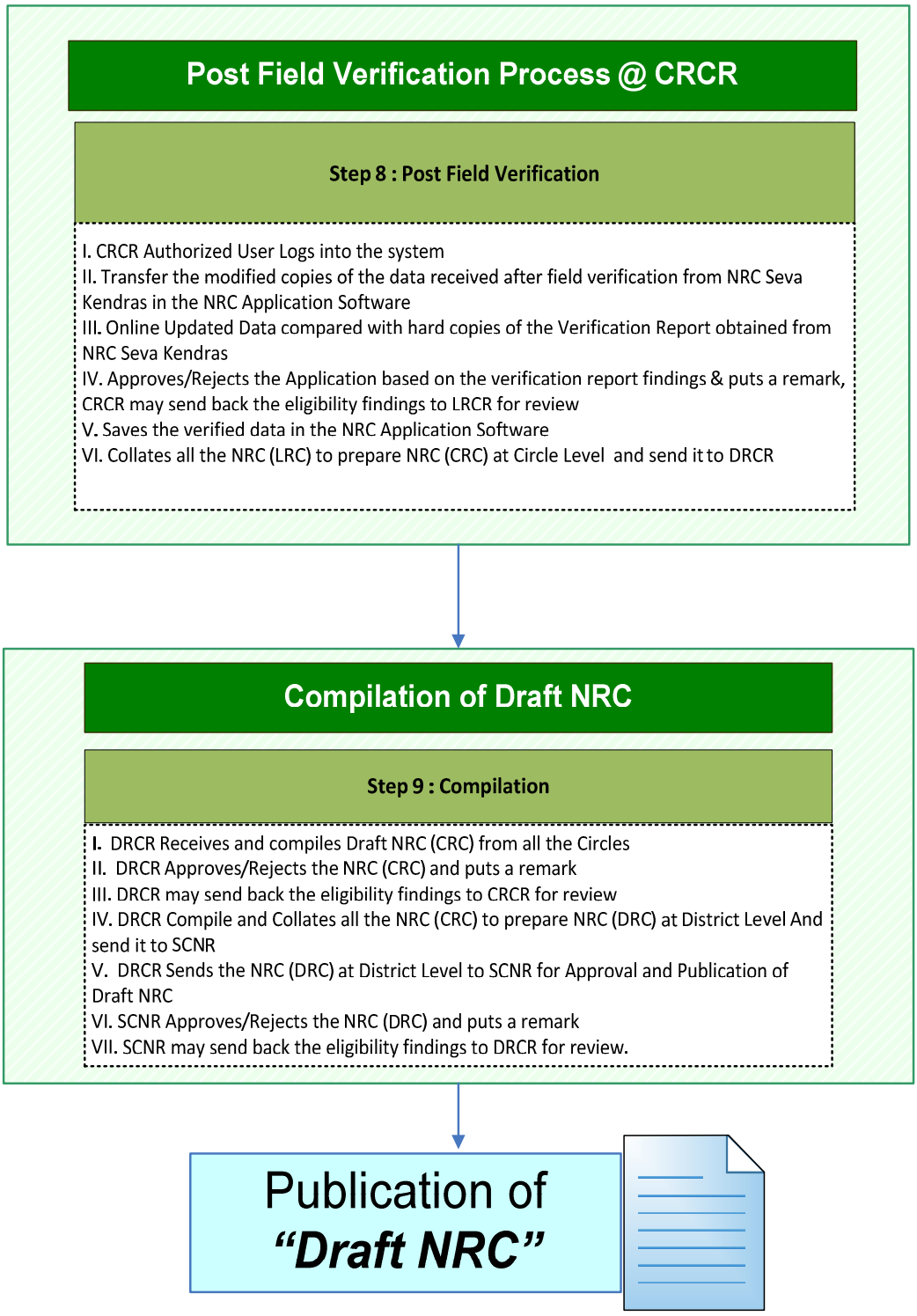
Name Search & Application



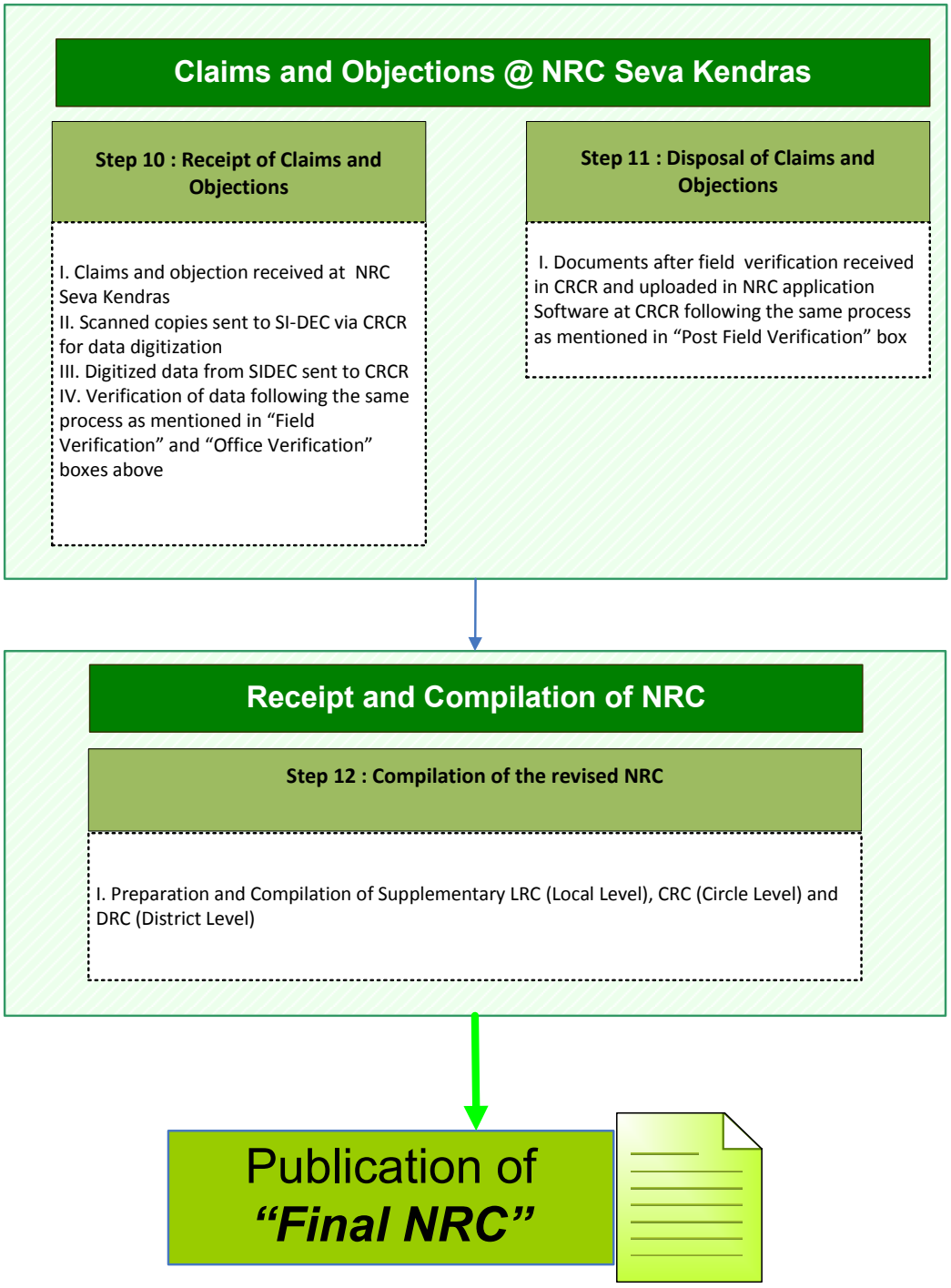
Verification



Post Field Verification & Draft NRC



Claims & Final NRC



The business processes for executing the task of NRC Project would be carried out in ICT enabled environment which is explained in section on NRC Project Components Environment.

4 SCOPE OF WORK FOR SI

The scope of work for the selected SI is categorized into the following five categories:

I. NRC Application Software

A. Design, Development, Hosting of the Central NRC Application software in the Data Centre.

B. Design, Development & Installation of

(i) NRC Seva Kendra software modules for local installation (to be installed in NRC Seva Kendras) for generation and issue of receipt/acknowledgement to citizens; modules for carrying out and recordkeeping of portion of verification process; receiving of claims and objections forms.

(ii) Required modules for CRCR offices to carry out the business functions such as Verification (Offline versions with capability to synchronize data with the central application), data upload and download etc.

C. Design, Development of Data Digitization software with user interface as replica of the application form.

D. Design Configuration of Business Analytic tool for analyzing data in the (NRC Application Software and generating required reports.

E. Design, Development of Online Application in a prescribed format for receipt of citizen's application over web.

II. IT & Non- IT Infrastructure for NRC Application Software Deployment in Data Centre (DC)

A. Procurement, Installation, commissioning of Enterprise IT infrastructure for hosting the application, storing the data and Maintenance for a period of two (2) years[1]. Department shall provide the space for Data Centre (Refer Annexure III for Layout of the proposed site) for deployment of IT & Non- IT infrastructure.

B. Procurement, Installation and Configuration of required System software and Maintenance for a period of two (2) years.

[1] Initial period for maintenance is for 2 years. Department may extend the maintenance period.

C. Procurement, Installation, commissioning of required non-IT infrastructure such as electrical and network cabling, false ceiling, Fire proofing of walls and raised flooring and Maintenance for a period of two (2) years.

D. Procurement, Installation, commissioning of required UPS and maintenance for a period two (2) years.

E. Integration of NRC Application solution with MPLS-VPN (MLLN) which shall be provided by the Department.

F. Deployment of trained Technical Resources to operate and manage the installed NRC infrastructure in DC.

G. Setting-up of Centralized Technical helpdesk at Guwahati to address the technical queries of NRC system.

H. Train end users on different modules of NRC software application. The following is the tentative list of Department users needs to be trained on the NRC software application:

S.No.	Level	No. of Trainees
1.	Circle	306
2.	District	54
4.	State Level	25
Total		**385**

III. NRC Seva Kendras

A. Setting up of ICT based Helpdesks called NRC Seva Kendras at 1500 LRCR offices across the entire state of Assam. Space for setting up of ICT based Helpdesks will be provided by Government of Assam at LRCR centres.

B. Procurement, Supply, Configuration, Installation & maintenance of required IT Hardware with necessary system software. The laptops to be used at NRC Seva Kendra centres should be installed with the relevant standalone modules NRC Seva Kendras

C. Procurement, Commissioning and Maintenance of Non-IT Equipment at NRC Seva Kendras.

D. Deployment of Trained Human Resources (2 Computer Operators at each NRC Seva Kendra)

E. Operating the NRC Seva Kendras for a period of 24 months.

F. Setting up of one (1) model NRC Seva Kendra at Guwahati with all required infrastructure and running these model NRC Seva Kendra.

G. Transferring the Original application forms along with supporting documents to CRCR office.

H. Transferring the scanned copies of the application forms in third party media to CRCR for uploading to NRC Data Centre (Central Server) through the NRC Application Software.

I. Supply of consumables for NRC Seva Kendra operations like:

   i. Fuel for Diesel Generator

   ii. Stationery

   iii. IT consumables (cartridge, CDs etc.)

J. Setting up and running of mobile NRC Seva Kendra using the existing NRC Seva Kendra infrastructure (For a period of 4 months)

IV. CRCR Offices

A. Procurement, Supply, Configuration and Installation of required user level IT Hardware with necessary system software and relevant modules for CRCR.

B. Deployment of Trained Human Resources (2 Computer Operators) at 153 CRCR offices (List of CRCR offices enclosed in Annexure II). One resource should be deployed for 25 months and the other resource for 10 months from the start date of the project. These resources shall assist the Department officials in verification of Application forms.

V. NRC State Data Entry Office (NRC SDEO)

A. Supply and deploy a team of 70 Data Entry Executives (DEE) for a period of 6 months. The Department may extend the deployment period of these DEE. The premises for NRC Data Entry Office shall be provided by the department in Guwahati.

B. Quality check of the data digitized with the scanned application forms- conduct Quality check on sample basis

VI. SI Data Entry Centre (SI - DEC)

A. Setting up of required IT & non IT infrastructure in Guwahati, Assam for carrying out Data Entry work for an estimated 70 lakh scanned Application forms[2]. Each form shall have an average of 2 Legal size pages.

B. Hiring appropriate trained manpower to perform the task in the given period of 6 months whilst meeting the SLAs.

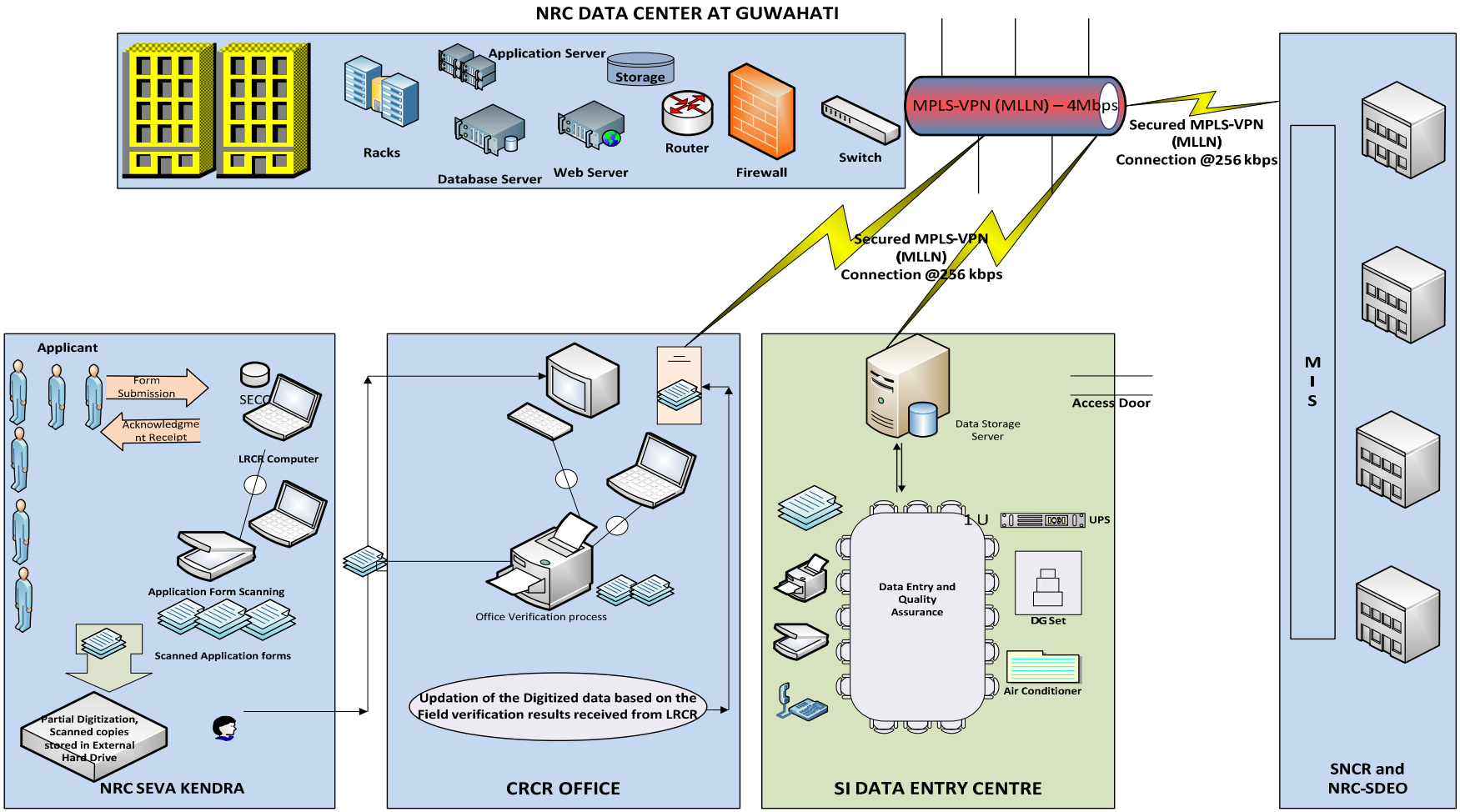
[2] It is expected that the Application forms would be digitized partially in the NRC Seva Kendra by pulling and auto-populating the fields from the SECC DB. SECC DB shall be provided by the department to the SI.

5 NRC PROJECT COMPONENTS AND ENVIRONMENT

The business processes for executing the task of NRC Project would be carried out in ICT enabled environment. End-to-end business process would span across these offices. The prowess of ICT is envisaged to be leveraged to connect the processes to efficiently and securely carry out the task.

The schematic below provides an overview of the integrated ICT environment to be developed for NRC Project.

Overview of NRC project



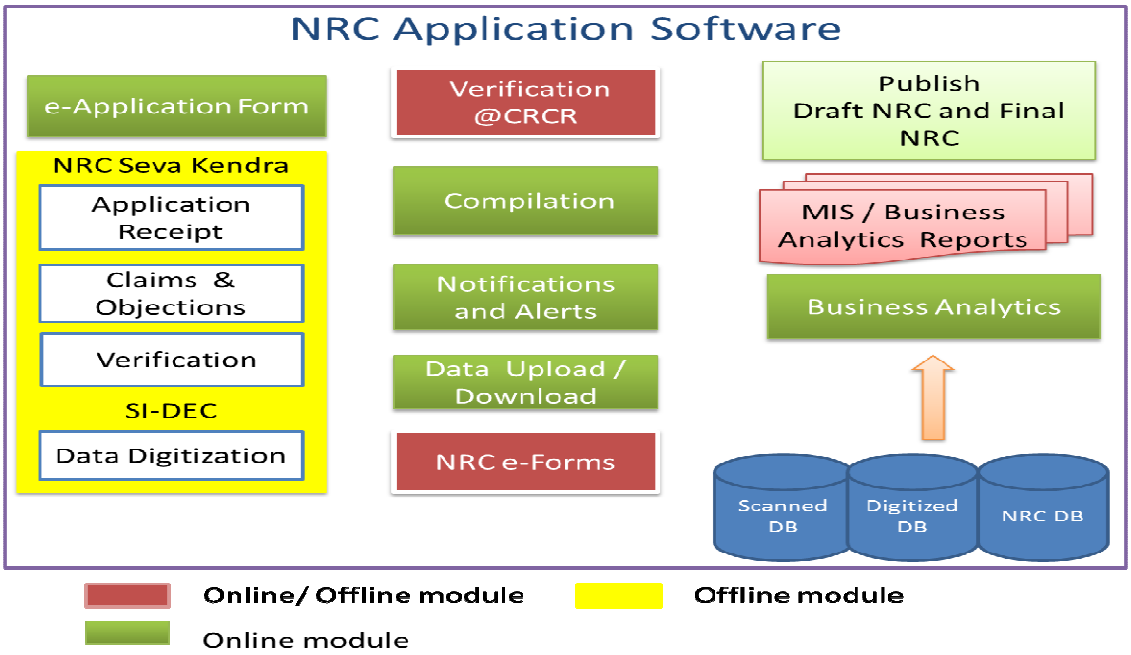
The various activities for successfully executing the task of NRC project would be performed in the following locations / areas:

- ❖ NRC Seva Kendras
- ❖ CRCR Offices
- ❖ SI State Data Entry Office
- ❖ NRC State Date Entry Office
- ❖ NRC Application Software
- ❖ IT Infrastructure for NRC Application Software Deployment in DC

5.1 NRC Application Software

5.1.1 Functional Requirements

This section describes the functional design of the overall application architecture of the project. Conceptually each module should be independent in its functionality and interact with other modules of the system to provide integrated services. All modules shall be typically incorporated through interfaces. The software design should be modular in design and should have the capability to work independently. The various functional modules and sub modules of the NRC application software are shown in the figure below:



Note: The modular decomposition for the key functionalities is indicative only. The SI shall design the functional module and meet the business requirement of NRC Seva Kendra Project

General Requirements

a) Any data transferred to Third Party media should be securely encrypted and the same can only be decrypted using the NRC Application Software or its module, as applicable.

b) Facilitate synchronization of data from the relevant offline – online module with the NRC Application Software when provided with connectivity, with the user computer

c) All changes in data made by any user of the user must mandatorily be audit trailed. No data entered in the system should be removed. The system should store and display the data with the author of the data.

The following are the indicative modules and high level functional coverage of the NRC Application Software:

(i) Application Receipt module: This module should be capable of working in offline mode. This module would be deployed in the laptop computer of the NRC Seva Kendras.

Key functionalities envisaged to be covered in the Applications Receipts Module

a) For Application Receipt process:

i. This module should facilitate in storing the scanned application forms submitted by the applicants.
ii. It should also facilitate for listing and generating the list of supporting documents submitted by the applicant
iii. Facilitate in printing the scanned copy of the application form along with the list of documents submitted along with an acknowledgment slip having a unique number.
iv. Facilitate storing of scanned applications in date-wise folder.
v. Facilitate storing of scanned applications in third party media.

b) For Claims and Objections process:

i. This module should facilitate in storing the scanned Claims / Objections form submitted by the applicant
ii. It should also facilitate for listing and generating the list of supporting documents submitted by the applicant
iii. Facilitate in printing the scanned copy of the Claims / Objections form along with the list of documents submitted with an acknowledgment slip having a unique number.
iv. Facilitate storing of scanned applications in date-wise folder.
v. Facilitate storing of scanned applications in third party media.

(ii) Data Digitization Module

This module should be capable of working in offline mode only. Data digitization of the Application form, Claims and Objections form shall be performed using this module. This module would be deployed in the computers of the NRC Seva Kendra and SI- DEC. This module shall have a user interface for data entry as replica of the application form. The module would follow a life cycle process covering the minimum:

i. Data Entry function using the user interface
ii. Ability to auto populate the applicants data from the external databases (SECC[3] and DLDD)
iii. Data Quality Assurance for ensuring correctness of the data entered in this module.

NRC Application Data entry at NRC Seva Kendra: The applicant's data entry interface should be an exact replica of the Application form. It should be capable of auto-populating the applicant's data from the SECC Database based on inserting one of the certain pre-defined parameters such as Name or father's name. User Interface should have features like predictive search mechanism and facilitate selection of fields from the drop down list. The module should facilitate transferring data in encrypted form to Third Party media.

Data Access Mechanism at SI-DEC: The scanned documents (Application Forms)and the partially digitized forms would be residing in the NRC Application Software deployed in the DC. Only one node in the SI –DEC would be whitelisted and provided the required MPLS VPN connectivity access to the NRC Application Software. The whitelisted node having the Data Digitization module would interface the NRC Application Software and download the documents in the main server of the SI-DEC. The various data entry nodes would access the local server (located in the SI- DEC) and perform the task of data entry from their machines. At a pre-defined interval this local server would upload the digitized data in the NRC Application Software. Accordingly, the architecture of this module should be designed.

(iii) Data Upload / Download module

This module should work in online version only. The scanned documents of Application Forms, Claims and Objections and digitized data should be transferred to the NRC Application Software through this module.

[3] Socio-Economic Caste Census (SECC) Database shall be provided by the department

(iv) Verification Module

This functionality would be available in both online and offline mode. Wherever the connectivity is not present, the end user computer should have a stand - alone module capable of working in that machine.

The module should facilitate for scan and upload the supporting documents to NRC application software, as applicable.

The lifecycle of Verification is split indicatively into four broad parts.

a. **Office Verification (Document) @ CRCR**

This module should be available in both offline and online mode.

The following functions would be carried out in the CRCR office.

- **i.** Validation of the digitized data obtained from SI- DEC with the Original Application forms and the supporting documents received from NRC Seva Kendras
- **ii.** Keeping the record of the Application form (bundles) sent to NRC Seva Kendras for field verification

The module should allow the CRCR user to download the digitized forms. The module should allow the CRCR to enter the data in regards to the verification of the digitized and original form. Module should auto generate the application into different categories based on pre-defined categories.

System should have the facility to export the data into Third party media. The data generated through offline mode should be able to synchronize with the NRC application software.

b. **Field Verification @NRC Seva Kendra**

This module should be available in offline (stand-alone) mode

The module should allow the Verification Team (VT) to upload eligible documents. It should also allow the VT to make changes in the details of the digitized Applicant forms while maintain the audit trail of the any change made in the data with user, date and time stamp. It should also allow the VT to approve / reject the outcome of the Application process.

System should have the facility to export the data into Third party media.

c. **Post Field Verification @ CRCR:**

This module should be available in both offline and online mode

It should allow the authorized user to log into the system. The data from the Third Party media received from NRC Seva Kendra should get copied to the CRCR Laptop. In case, the

CRCR office has connectivity then the data should get synchronized with the Central database. The module should auto-compare the result of verification done earlier in the CRCR office with the result of post field verification done by the VT. The module should provide the CRCR to change the verification outcome elucidated by the VT.

d. **Compilation**

This module should be available in both Offline and Online mode.

The NRC Application System should sort and aggregate the verified applications by the CRCR/LRCR offices and post it to the respective DRCR for further analysis and approval. The module should allow the DRCR to approve / reject / remit back the application verified by the CRCR. The module must mandatorily prompt the DRCR to provide a remark if the DRCR prefers to revise the verification outcome given by the CRCR. All the approved and rejected application form of all the DRCRs should be aggregated for approval and publication

(v) Publication of Draft NRC

The aggregated application form data with the verification outcome (approved / rejected) should be accessible to the SNCR office user. The module should allow the user to revise the verification outcome and must mandatorily assign a reason for the same. The module should allow the SNCR to approve / reject / remit back the application verified by the DRCR.

After the approval of the application form data, this module should have the ability to publish a Draft version which may be grouped by DRCR, CRCR and LRCR.

(vi) Claims and Objections:

The key features envisaged are as below:

i. Allows receipt of claims / objections with supporting documents.
ii. Allows scanning of the document and provide print out of the scanned document along with the acknowledgment slip.
iii. Transfer data to Third Party media with proper encryption to CRCR
iv. Upload data to NRC Application Software.
v. Process the Claims / Objection process and track the progress in the NRC Application Software.
vi. Provide outcome of the claims and objections process
vii. Allow appending the list of approved and rejected application forms
viii. Publish the successful claims and objections application

(vii) Publication of Final NRC

Publish the Final NRC after completion of the Claims / Objection process by appending the draft NRC.

(viii) NRC e-Forms

This module shall contain the e-version of all the statutory and other relevant NRC forms. This module would provide certain authorized users to create new forms on the fly.

(ix) e-Application Form (For online submission of application form)

a) This module works in online version only. This module facilitates applicants to fill the "Application forms" and submit it over the web through proper registration mechanism – OTP (One Time Password)

b) This module should allow the user to upload the supporting documents.

c) Upon successful submission of the application form, this module should generate the Receipt with the unique number.

(x) MIS and Business Analytics

This module shall be available in online version to authorized users. This module shall leverage the prowess of Business Analytics (BA) tool to generate required reports to track and monitor project status and data analytics. The user should be provided the ability to generate multiple data, process, location based analytical reports etc. on the fly. Especially, the tool should have the prowess to perform extensive data analysis and generate reports thereof. It should also have ability to store Business / Data analytics reports prepared by department users.

NOTE: Indicative key Process Stakeholders and relevant Business Process Automation Requirements are elicited in Annexure - V

5.1.2 **Technology and Other Requirements**

The users of the NRC application software will access the system through standard web browsers through secure MPLS – VPN communication only as depicted in the below schematic diagram:

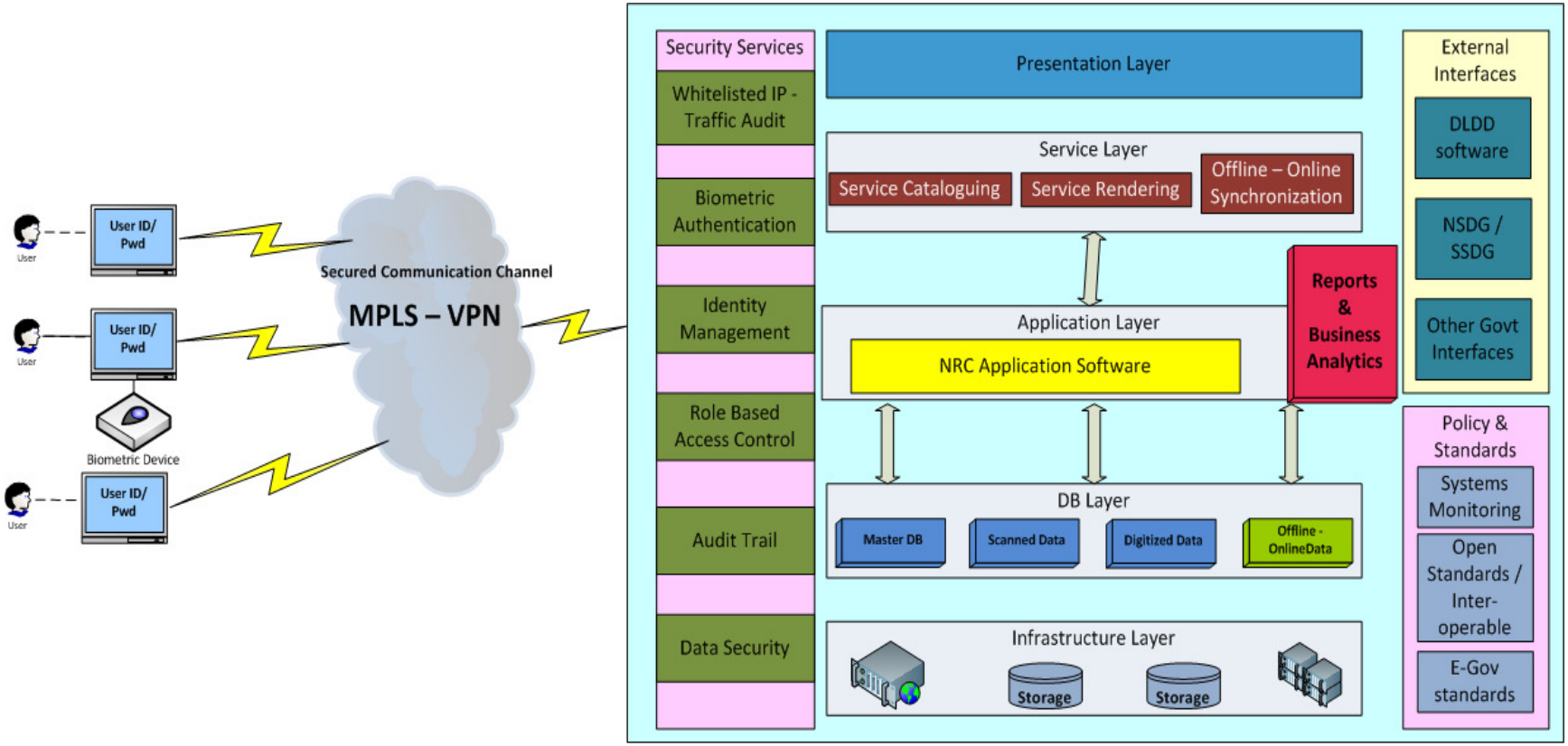


Fig: Application Architecture

In addition to the secured MPLS – VPN network, only the whitelisted IP addresses with appropriate auditing mechanism, would have access to the system. Two factor authentications would be done using on username/ password and biometric detection (BFD – Best Finger Detection). On successful authentication user would have access to the system.

Below are the key technical requirements which the envisaged system should be developed:

Sl.No	Technology Requirements
1.	Architecture- The application architecture should be n-tiered and must include all necessary software components. Architecture shall allow for future scalability and scope addition by way of defining new services.
2.	Interoperability - SI shall propose the solution and technology platform that is based on the open standards, provide interoperability with other operating systems and application servers, guarantee portability of data and content and that the best meets the functional, non-functional and technical specifications provided in the RFP. SI must follow the DIT guidelines on open standards available at http://egovstandards.gov.in/
3.	Integration with Existing IT Applications: SI should ensure that the proposed solutions are having necessary interfaces for data exchange with the existing IT applications.
4.	Web Services- SI should ensure that the solutions proposed be integrated based on open standards supporting Web Services principles
5.	Multilingual interface - The system should provide multilingual interface/labels in languages of English, Assamese and Bengali/Bangla
6.	Compatibility -The system should run on multiple browsers (IE 6.0 and above, Firefox 2.0v and above, and Google Chrome).
7.	The solution architecture should be platform, database and vendor independent.
8.	The solution is required to provide modularity (business function and process) that should support addition / removal of one more modules as and when required.
9.	The solution should ensure data safety and integrity in the event of communication channels operation failures, software and hardware operability failures.
10.	The solution should have the ability to scale up as and when the new business applications and services are added without compromising the performance of the overall solution. The architecture should be proven to be highly scalable and capable of delivering high performance as and when the transaction volumes increase.

11.	System should employ a common user access and authentication service to ensure Single-Sign on for the end-user.
12.	The system should be developed to be deployed in n-tier data center Architecture.
13.	System should be extensible to provide access to the interfaces through mobile data terminals.
14.	System should support secure transmission of data over the network and support Secured Socket Layer (SSL).
15.	Any access to the solution database shall only be via application after appropriate authentication
16.	System should support requirement of OTP, digital certificates and biometric technology for authentication and non-repudiation.
17.	As part of their Technical Bid Response, the SI shall provide the detailed architecture and comprehensive Bill of Materials for all components of the proposed solution.
18.	Offline – Online Mode: The System should work in both online and offline mode and have the capability to synchronize with the central application once the data generated in offline mode gets the required connectivity

Key Security Requirements

The security of the data is of paramount importance. In view of this the following is suggested.

S.No.	Key Security Requirements
1.	Application can only be accessed through MPLS-VPN communications channel. ***NRC application should not be accessible through any other channel.***
2.	NRC application should allow only the whitelisted IPs from the listed pool to access the application and data.
3.	System should log each and every instance with the IP of the credential login into the system. All traffic must be audited and logged separately in the system for monitoring the traffic.
4.	End users at CRCR department shall have two factor login systems. In addition to successful login and password, user credential shall be further verified using biometric detection system.
5.	Data shall be stored in encrypted form using private encryption key and it should be decrypted through application only.

	The SI shall be exclusively responsible for any data leakage or loss of data.
6.	System should implement mechanisms, protocols, and algorithms necessary to protect sensitive and confirmation data and information both during communication and storage/backup.
7.	Scanned PDF / JPEG file shall be stored in the DB in binary format.
8.	The system must keep an unalterable audit trail including the user initiating and or carrying out the action (create, read, update and delete), and date and time of the event.
9.	Audit trail shall be recorded in kept in the DB. The System shall ensure that audit trail data is available for inspection as and when it is required.
Anti-Spam and Anti-Virus	
10.	In order to protect all the desktops/Laptops and all the servers from any kind of virus / worm / Trojan attack, System Integrator should provision and implement an enterprise wide Anti-Virus and Anti-Spam solution
11.	SI should propose the latest version of the proposed Anti-Virus solution available in the market on the day of submission of the bid.
Security measures for stand-alone offline-online modules	
12.	All scanned documents should be encrypted and kept in the database in binary format in stand-alone systems.
13.	Data transferred into third party media should be encrypted and can only be decrypted using the NRC application software
14.	The scanned documents should be kept in the auto generated day folder in the stand alone system
15.	The stand-alone system should not allow deletion of the auto generated folders
Security measures for stand-alone offline-Data Entry module	
16.	The NRC application software should check for duplicate records before accepting in the system

The bidder can propose innovative solutions over and top of the above, to ensure that the system is secure at applications, operating and data level.

Since data is the most critical component of the entire NRC Updation project, therefore, the additional key requirements for Data management are elicited below. The bidder in the Technical proposal may suggest best in class Application and Data management framework to ensure SCIA (Security, Confidentiality, Integrity and Availability) of the data. The bidder shall also articulate in the proposal the recovery management of data in case of partial or complete data loss.

In the context of secure data management, storage and recovery, the bidder shall propose in the technical proposal a data back- up plan and recovery plan. This should contain amongst others, frequency of data back-up and the type of back up.

5.1.3 **Key Requirements for Data Management**

The structure of the Data Management system should reflect a lifecycle approach to data management. The Data management framework encompasses business rules to ensure the security and consistency of data. The system should:

(i) Provide the NRC with a framework for best practices in data management

(ii) Facilitate effective management of NRC data within legislative guidelines.

(iii) Provide highly secure environment for storing the data

5.1.4 **Data Management Framework Requirements**

As data is the most critical component of the NRC Solution, it is emphasized that a data management framework should be in place for the proper use of data.

(i) Data Management activities should be planned and governed, based upon business needs with relevance to the highly critical and sensitive nature of the NRC data

(ii) The database should be established for ensuring data integrity, risk management and availability.

(iii) Data should be classified and labelled as per sensitivity and risk categorization.

(iv) Data should be acquired, updated and catalogued in a coordinated manner and in accordance with agreed standards regarding acquisition, access, updation, storage, analysis and dissemination.

(v) There should be a policy framework, mechanisms, and audit procedures for proper use of the data. At every step, NRC or its representatives shall have the right to check these mechanisms and have their comments incorporated

(vi) There should be accountability for data management.

(vii) In this context it should maintain regimes for data integrity, data identification and maintain an inventory of all data holdings

(viii) It should have metadata repositories, which provide details of applicants, documents, NRC Seva Kendra and CRCR location etc.

The SI should have clear formulated policies regarding the items mentioned below which will form the basis of their data management solution:

(i) Database management systems and open standards

(ii) Backup and recovery

(iii) Access management

(iv) Data integration

(v) It should ensure that NRC business data access and usage is audited.

(vi) It should document and implement architectures and procedures for data operations and maintenance.

The database server proposed should be among the best of the breed and comparable to all the other major database servers. The proposed product should meet the below mentioned criterion:

- RDBMS product
- Direct Unicode support
- Conform to open standards
- In-built support for storage of binary objects and XML
- ODBC and JDBC Support
- Easy to use tools for designing and export / import
- In built data recovery features

Supportability

- The proposed products shall be accompanied with a valid license
- The proposed product must have a product roadmap for at least the next 5 years.
- The proposed product should have been in use either in the present form or in any previous version.
- System should ensure Integrity and non-repudiation of information

Manageability

- The system shall provide remote monitoring of status and statistics of all the applications.
- The system shall have management capability to start/stop/restart services & systems.
- Ability to track changes in configurations of the system components to track Service/System disruptions.

5.2 IT Infrastructure for NRC Application Software Deployment in NRC DC

5.2.1 **Infrastructure requirements**

The envisaged NRC Application software would be deployed in the NRC DC. Space for setting-up of DC shall be arranged by the department. Networking equipment shall be provided by the department. Following table provides an indicative list of IT components required for deployment.

S.No	Item	Quantity
1.	Blade Servers (Web Server, App server, DB server in High Availability mode with six blades	1
2	SAN Storage Usable 40 TB	1
3	24 port SAN Switches	1
4	12 Port Switches	1
5	Firewall	1
6	Router	1
7	Virtual Tape Library	1
8	Backup Software	1
9	42U Racks	2
10	In-row Air conditioner	2
11	UPS 40 KVA (Modular and in-built redundancy with Minimum Battery support for 1 hour)	1
The proposed room layout is attached in Annexure III. SI is required to undertake the flooring and ceiling work. *The bidders are encouraged to visit the proposed DC location in consultation with the department and assess the exact requirements		
12	Enterprise Database	As required
Indicative Specification are provided in Annexure I.		

5.2.2 **Users and Data Volumes for NRC Application, Server and Storage sizing**

NRC Application Software would be accessed by approximately 250 Whitelisted IPs. Approximately 70, 00,000 (Seventy Lakhs) scanned documents (each document comprising of min 2 pages of Legal size page) would be stored in the system. The data of these documents would be digitized and again stored in the NRC Application System. Thereafter, these data would be used for further processing for statutory processing. The Server and storage would be sized keeping this into consideration.

The bidder while sizing the solution should factor for redundancy and future scalability.

5.2.3 **Disaster Recovery**

Department envisages a DR site for Disaster Recovery. The required infrastructure would be procured at a later stage.

5.2.4 **Operational Requirements**

(i) The SI shall be responsible for required modifications or enhancements in the functionality. The enhancements in the software or new development may also be required to fix some complex problem requests or defect fixes.

(ii) SI shall ensure that correct version of the application / program units are being considered to carry out application enhancements/ new development through configuration management plan for configuration management and version control using the version control software.

(iii) SI shall support the department in carrying out the UAT for the modifications / enhancements.

5.2.5 **Centralized Technical Help Desk Requirements**

A centralized Help Desk has to be provided at Guwahati for providing technical help to end users of NRC system for a period of two years from project Go-live. As part of the Centralized Helpdesk Services, SI shall provide the following:

1. The service will be provided in English, Assamese and Bengali.

2. The service will serve as a single point of contact for reporting / resolution of all tickets (queries, errors, incidents, issues either application or infrastructure or operations related for all users).

3. The SI shall establish a helpdesk manned by two resources. These resources shall be responsible for taking any queries / problems reported by the users and address for resolution of the same. If required the technical personnel should visit the site to address the problem.

4. The service should be available on all working days to the users

5. There should be a single incoming number. Department will facilitate the SI in obtaining 4 or 6 digit short code. Till such numbers are activated and functional, the SI shall support with SI's telephone numbers.

6. The helpdesk shall be located at Guwahati and all required infrastructure for the helpdesk shall be the responsibility of SI including the telephone lines.

5.2.5.1 **Application Management**

(i) SI shall be responsible for defect free operation of the envisaged system during the O&M period and ensuring its 24x7 availability at all the end-user locations. Any bugs reported in the application shall need to be fixed within a time frame mutually agreeable to the department and SI.

(ii) SI shall also be responsible for version control of the application files and shall need to update application documentation to reflect the current features and functionality of the application.

(iii) SI shall provide a pre-production environment in the data centre for testing of changes/ patches before applying them on production environment.

5.2.5.2 **Infrastructure Management**

Infrastructure management includes overall management and administration of entire IT and non-IT infrastructure of the DC. SI shall be responsible for the following activities as part of infrastructure management:

Incident management

- Provide resolution to incidents as per the resolution time limit agreed upon with department

Problem management

- Perform root cause analysis for infrastructure problems/recurring incidents and initiate request for change
- Schedule and complete preventive maintenance activities

Availability management

- Review key monitoring parameters (to be finalized in consultation with Department) from availability point of view
- Performance tuning of the system to enhance system's performance and comply to SLAs on a continuous basis with no extra cost to the Department
- Provide prior communication on outages as per agreed communication processes
- Ensure availability of sufficient critical spares, sufficient consumable spares at all relevant locations

- Ensure availability of consumable spares.

Monitoring management

- Preparation of monthly dashboard on monitoring coverage, alerts generated/ closed, alerts escalated and other hits/ misses

Backup management

- SI should evolve a backup and archival strategy
- Regular backups of project related data
- Media management like inter and intra city tape transfers
- Handling service requests on backup and restoration
- Generation of monthly report on the backup/restoration performance

Security management

- 100% antivirus coverage with patterns not more than one week old on any given system
- Reporting and resolution of security incidents
- Maintaining secure domain policies
- Vendor management
- Escalation and co-ordination with other vendors for problem resolution

General administration and support

- Providing suitable access to department to tools implemented for monitoring infrastructure components
- Creation/deletion/modification of user accounts at the OS level and the whitelisted IPs
- Periodic review of user privileges at the OS level
- Password management
- Any other day-to-day administration and support activities required
- Clean up / archival of NRC Application system logs operation

5.2.5.3 **NRC DC Operations Team**

To perform the Operations and Management of the NRCDC, the SI shall deploy a team of 4 technically skilled resources during the contract period.

i. Data Centre Operations Manager

Min Educational Qualification: BE / B.Tech / MCA (relevant certification would be desirable) along with atleast 5 years of the DC operations including Networking experience. Ideal candidate should be well versed with ITIL process.

ii. Application Administrator

Min Educational Qualification': BE / B.Tech / MCA (relevant certification would be desirable) with at least 5 years of the application development in the proposed platform of NRC Application Software

iii. Database Administrator

Min Educational Qualification': BE / B.Tech / MCA (relevant certification would be desirable) with at least 3 years of the DBA experience in in the proposed DB platform of NRC Application Software

iv. Systems Administrator

Min Educational Qualification': BE / B.Tech / MCA (relevant certification would be desirable) with at least 3 years of the Systems Administration experience in in the proposed platform and environment of NRC Application Software

Note: It is stated in most clear terms that the department reserves the right to seek removal of any of resources on conditions such as non-performance, indiscipline etc. SI shall mandatorily replace the resource immediately, in case the resource is removed.

5.3 NRC Seva Kendras

The selected SI shall have to set up 1500 NRC Seva Kendra across the state of Assam.

The requirements in a typical NRC Seva Kendra are depicted in the table below:

Infrastructure[4]			
IT Infrastructure		**Number**	**Specifications**
1.	Laptop Computer	2	(i) 1.8Ghz Pentium M/2MB L2 Cache/400Mhz FSB (ii) Windows XP Pro / windows 7 professional (iii) 4 GB DDR PC2700 Memory (iv) 500GB HDD (v) 15" SXGA+ Screen

[4] Space for NRC seva kendra and electricity shall be provided by the department

			(vi) CDRW/DVD Combo Drive/External NEC ND-6500A DVD Burner (vii) Nine Cell Lithium-Ion Battery/ Modular Bay Battery (viii) Intel 2200BG Wireless/Bluetooth/56k Modem (ix) 2 USB 2.0/2 PCMCIA Slots/Parallel Port/Serial Port//VGA Out/PS2 Port
2.	Extra Display Screen	1	21" LED screen
3.	Heavy duty Scanner cum Printer	1	
4.	Barcode Label Printer	1	
5.	Barcode Label Scanner	1	
6.	T-Shirts for SI employees	3000	
7.	Apron for SI employees	3000	
Consumables			
1.	Cartridge	As required	
2.	Legal Size Paper	As required	Each NRC Seva Kendra is expected to receive 5000 application approximately during the operating tenure. Each application is expected to be of 2 no. of Legal size pages
3.	Plastic File Folder (Legal size)	5000	
4.	CDs	200	
5.	CD envelope	200	Bubble pack water resistant CD envelope (CD mailer)
Electrical & Miscellaneous			

1.	DG Set	1	I KVA
2.	Multi-point Extension power cord	1	
3.	Wiring for setting up DG connection		
4.	Dry powder Fire extinguisher	1	Type DC 2Kg – valid for 1 year
Furniture			
1.	Chair	4	
2.	Computer Table	2	
3.	Printer cum scanner table	1	
4.	Metallic Almirah	1	
5.	Vehicle on hire	For 4 months (6 days a week)	
6.	Bench for applicants		
Consumables			
1.	Fuel for DG	As required	
2.	Fuel for vehicle	As required	*Note: Mobile Camp scheduling to be done by Department officials(CRCR & LRCR)*
3.	First Aid kit	As required	
Manpower requirements			
1.	Computer operator	2 • One for a period 25 months • Another for a period of 10	a. The person should be of age 21 years and above. b. The person shall be minimum diploma / Graduate. c. The person should have a basic

		months	understanding of operating a computer and should be comfortable with local language. d. Basic knowledge in computer operations (Ability to scan, print) and ability to type in Assamese, English & Bengali
	Working hours – 9AM to 6 PM on all working days *May have to work extra days / extended hours depending on the work load*		
	Applicants Footfall in the NRC Seva Kendra: The footfall in the NRC Seva Kendra is expected to be evenly loaded in the first four months. The footfall of applicants in the subsequent may rise. In such event, the SI would deploy an additional HR / Laptop computer / scanner to scan and store the application forms.		

The bidder is expected to propose in the technical proposal about the following:

i. Operations team structure and reporting mechanism to the department with respect to operations of the chain of NRC Seva Kendras in the state of Assam

ii. Plan to scale up the number of NRC Seva Kendras as and when required by the department

iii. Plan to ensure that the computing devices such as laptops, scanners are in working order and the replenishment plan whenever any of these device fails to ensure that the operations in the NRC Seva Kendras continues smoothly.

iv. Plan to ensure that all the consumables are adequately provisioned and made available in the NRC Seva Kendras.

It is made clear that the SI shall supply the end user computing devices for the tenure of the operations of the NRC Seva Kendras. At the end of the NRC Seva Kendra operations period, the SI shall take back these devices. However, the data residing in these computers are the exclusive asset of the department. The SI has to purge the data from the laptop before taking back these devices.

5.4 Model NRC Seva Kendra

The selected SI shall have to set-up one (1) Model NRC Seva Kendra in Guwahati with adequate IT and non-IT infrastructure. SI shall be responsible for complete setting up of model NRC Seva Kendra

including space acquisition, site preparation and installation of every piece of requisite infrastructure. The initial period of model Seva Kendra shall be for a period of 2 years, department may extend for further period.

The model NRC Seva Kendra should have the following facilities / features:

i. Model NRC Seva Kendra should have facility to run 10 counters with a provision of 100% expansion in future
ii. Each counter should be equipped with one computer with UPS, one printer cum scanner and One display unit/ monitor, facing the applicant
iii. Each model NRC should be manned by 20 operators and One operations manager
iv. The model NRC Seva Kendra will be required to be set up in a centrally situated area which is easily accessible to public and has ample parking space. However exact site of model NRC Seva Kendra will have to be jointly finalised by SI and department
v. Design Layout and interiors has to be approved by the department
vi. Reception cum Token Issuance counter
vii. Electronic Queue Management System
viii. Electronic Token Dispensing System
ix. Adequate Air-conditioning equipment, with adequate ventilation in case of failure of electrical power supply;
x. Generator and UPS backup
xi. LAN facility connecting the local Server with all the computing systems in the model NRC Seva Kendra including the token dispensing system and the EQMS
xii. One Colour Television placed strategically to provide a good view to citizens
xiii. Filtered water dispensing unit
xiv. Conveniently located writing tables for filling up of forms
xv. Well-maintained toilet facilities for gents and ladies with special provision for elderly & physically challenged
xvi. Newspaper stand (alongside waiting area) fixed with 4 newspapers & 4 magazines (1 English, 1 Hindi, 1 Assamese and 1 Bengali)
xvii. Drop box for collection of citizen feedback, with adequate no. of pre-printed feedback form stationery;
xviii. Aesthetically designed signages and displays
xix. Adequate space for waiting of applicants with 20 seats
xx. The interiors at each model NRC Seva Kendra should be done up as per a uniform colour pattern to give the same look and feel.
xxi. All the personnel deployed by the SI shall wear distinctly visible photo-id badges

xxii. The model NRC Seva Kendra should be working Monday to Saturday from 9AM to 6PM. Based on work load extended working hours to be decided in consultation with department

The above mentioned features is indicative only, the SI is suggested to propose a layout for approval by the department.

Indicative bill of materials for model NRC Seva Kendra:

S. No	Component	Qty
1.	Building space (100ft X 50ft = 5000sft)	1
2.	Operators	20
3.	Chairs for Operators	20
4.	Operations Manager	1
5.	Chairs for Operations Manager	1
6.	CCTV surveillance system	1 set
7.	Computer with UPS	12
8.	Extra Display Screen (21"LED)	10
9.	Computer Table	12
10.	Barcode Label Printer	10
11.	Barcode Label Scanner	10
12.	Scanner cum Printer	10
13.	display unit/ monitor	10
14.	Electronic Queue / Token Management System	1
15.	Air conditioning	2
16.	Generator	1
17.	LAN equipment	As required
18.	Colour TV	1
19.	Filtered water dispensing unit	1
20.	Desk for filling form	5
21.	Wash rooms	
22.	Racks for Newspaper / Magazines	1
23.	designed signages and displays	
24.	Chairs for Citizens	20
25.	Interiors	Set
26.	T-Shirts for SI employees	22
27.	Apron for SI employees	22

5.5 CRCR Offices

The SI shall install and configure the end using computing devices in the office of the CRCR and deploy manpower for running the computers in the office. It is reiterated that initially153 CRCR

offices would require setting up of end user devices. SI may be required to install and configure end user computing devices in additional CRCR offices and deploy manpower as well.

The infrastructure requirements in a typical CRCR office are depicted in the table below.

Infrastructure[5]			
IT Infrastructure		Number	Specifications
	Laptop Computer	2	(i) 1.8Ghz Pentium M/2MB L2 Cache/400Mhz FSB (ii) Windows XP Pro / windows 7 professional (iii) 4 GB DDR PC2700 Memory (iv) 500GB HDD (v) 15" SXGA+ Screen (vi) CDRW/DVD Combo Drive/External NEC ND-6500A DVD Burner (vii) Nine Cell Lithium-Ion Battery/ Modular Bay Battery (viii) Intel 2200BG Wireless/Bluetooth/56k Modem (ix) 2 USB 2.0/2 PCMCIA Slots/Parallel Port/Serial Port//VGA Out/PS2 Port
	Biometric finger print scanner	1	UIDAI Biometric Device Specifications (BDCS-03-08)
	Barcode Label Scanner	1	
	Heavy Duty Scanner cum Printer	1	
	External Hard Disk	1	Min 2 TB Storage Capacity
	T-Shirts for SI employees	306	
	Cotton Apron for SI employees	306	
Consumables			

[5] Space for CRCR and electricity shall be provided by the department

	Cartridge	As required	
	Legal Size Paper	As required	Each CRCR is expected to take print of 300,000 A4 size pages
	CDs	200	
	CD envelope	200	Bubble pack water resistant CD envelope (CD mailer)
Furniture			
	Chair	2	
	Computer Table	2	
	Printer cum scanner table	1	
	Metallic Almirah	1	
Manpower requirements			
	Computer operator	2 One for a period of 24 months and the other for 12 months	i. The person should be of age 21 years and above. ii. The person shall be minimum diploma / Graduate. iii. The person should have a basic understanding of operating a computer and should be comfortable with local language. iv. Basic knowledge in computer operations (Ability to scan, print) and ability to type in English
	Working hours – 9AM to 6 PM on all working days *May have to work extra days / extended hours depending on the work load*		

5.6 SI Date Entry Centre(s) (SI DEC)

Key Requirements in the SI DEC

i. The SI shall establish requisite infrastructure to carry out the work of digitization of the application forms.

ii. It is estimated to receive 70 Lakh Application forms. Each Application form may contain 2 Legal size pages

iii. It is mandated that the SI shall establish the infrastructure in Guwahati, Assam to carry out the Data Digitization work.

iv. The SI DEC shall have a NRC Data Entry software which shall have user interface as the exact replica of the "Application Form"

v. The SI shall follow proven quality assurance mechanism to ensure that there are no errors in data digitization

vi. For a team of 25 Data Entry Operators there should be one dedicated Data Quality Executive to monitor and check the quality of Data entry

Suggested methodology and Governance of SI DEC

i. The Data Entry operator shall digitize the data through the user interface

ii. Some of the forms which may be illegible shall be forwarded to Data Quality Executive

iii. The Data Quality Executive shall make a phone call to the applicant and gather the correct details

iv. The Data Quality Executive shall enter the gathered data in the NRC Data Entry software

v. The data digitized shall be stored in the local server of the SI DEC

vi. Each SI DEC centre shall have one Supervisor

vii. Each SI DEC centre shall have one identified and dedicated node with static IP through which data communication with the central server will take place

viii. The Supervisor of each SI DEC centre shall be authenticated using the user name, password and Biometric through finger print scan

ix. Data communication[6] with the Central server in the NRC Data Centre

x. The designated Supervisor shall retrieve the scanned documents in a pre-defined frequency to the identified node.

xi. The digitized, final quality checked data shall only be ported to the central server by the designated Supervisor through the identified node.

xii. All data communication shall be done through the NRC application software only

5.7 NRC State Date Entry Office (NRC SDEO)

SI shall supply and deploy a team of 70 Data Entry Executives (DEE) for a period of 6 months. The Department may extend the deployment period of these DEE. Minimum Qualification should be Diploma / Graduation, Age 21 year and basic knowledge of operating computers.

The Department shall provide the space and set up the IT and Non IT infrastructure for these DEEs.

[6] Communication network from SI - NRC Data Entry Centre to Data Centre will be provided by the department

Envisaged Job Responsibilities of the DEEs:

- The DEEs shall access the digitized application from NRC Data Center (NRC Central Server) through a single node.
- Generating MIS reports from the NRC Application Solution and onward submission to State NRC officials
- Keeping track of NRC Seva Kendra wise application forms received and data digitized
- Quality check of the data digitized with the scanned application forms- conduct Quality check on sample basis and only after getting satisfied about quality of digitization, then only it would allow the data to be updated
- NRC Project status tracking.

6 ASSET OWNERSHIP

The NRC Project involves deployment of large number of end user computing device for successful operations of NRC Seva Kendra and CRCR offices. In addition, IT Infrastructure for NRC Application Software deployment (DC) would require enterprise level hardware.

6.1 End User IT computing devices in NRC Seva Kendra and CRCR offices

In regards to the end user computing devices, the department provides the liberty to the SI to bring these devices, deploy them in the NRC Seva Kendra and CRCR offices, install licensed version of System Software and operationalize during the relevant tenure of the NRC Project and take back these devices after the completion of project with the concurrence of the department.

However, it is made clear that the data generated and residing these computing devices are the exclusive property of the department. The SI has to ensure that the data is transferred to the department and purged from these system before is taken back.

In this context, it is pertinent to mention here, that the department would not be responsible for the insurance of these assets.

6.2 Ownership of hardware and system software for IT Infrastructure for NRC Application Software deployment in DC

The hardware and system software for deployment of NRC Application Software and the associated storage and network devices shall be the property of the department. SI shall procure, supply, install, configure and maintain these assets for the contract period. It is made clear, that even after the contract period, the department would retain these assets.

NRC Application Software (both online, stand alone and offline modules) - It is stated in most clear terms that the department shall have exclusive ownership and IP on the NRC Application Software which includes the online and offline (standalone) modules.

7 PROJECT DELIVERABLES

An indicative list of deliverables as a part of this RFP is furnished below:

1. Detailed Project plan
2. Detailed NRC Seva Kendra Management Plan
3. Data Entry Plan
4. SRS document for the software solution
5. Design Documents
6. Satisfactory training to the stakeholders
7. Application User manuals (Both soft and hard copy)
8. Technical User Manuals (Both soft and hard copy)
9. Deployment of IT Hardware in appropriate quantity and as per the specified Technical specifications at the appropriate locations to support functioning
10. Deployment of appropriate non - IT Hardware in appropriate quantity and as per the specified specifications at the appropriate locations to support functioning
11. Hardware Commissioning Reports
12. Digitized and Verified data by way of data entry and digitization of the records.
13. Operations and Maintenance support for NRC Application Software
14. SLA and performance monitoring plan

The Bidder will be asked to propose a list of deliverables as part of its response to this RFP along with corresponding formats/templates for each deliverable. A final list will be arrived at through discussions between the SI and the department.

8 PROJECT DOCUMENTATION

The SI shall create / update and maintain all project documents that would be submitted to the Political Department during different phases of the project implementation. Each project documentation will be provided to the Political Department as two sets of hard copies and two sets of soft copies on separate CDs. All project documents are to be kept up-to-date during the course of the project

8.1 Reports During Implementation Phase

The various reports to be submitted during the implementation phase include, but are not limited to, the following:

i. Results accomplished during the period

ii. Cumulative deviations to date from schedule of progress on milestones as specified in this RFP, the agreement and 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 PMC/ Political Department before the next reporting period

vii. Project Progress reports on a weekly basis (IT Infrastructure at DC , CRCR and NRC Seva Kendra)

viii. Project quality assurance reports

ix. Change control mechanism

x. User Manuals and Training Materials for all Applications including on-line help– updated versions every three months

xi. Gold copy of SOURCE code of all applications/modules

xii. Installation & Maintenance Manuals for all the Hardware Components

8.2 Reports during Operations & Maintenance Phase

The various reports to be submitted during the O&M phase include, but are not limited to, the following.

i. Service Level Management Reports (refer Volume III - Service Levels)

ii. Details of applications, infrastructure and operations – updated versions every month

9 IMPLMENTATION STRATEGY

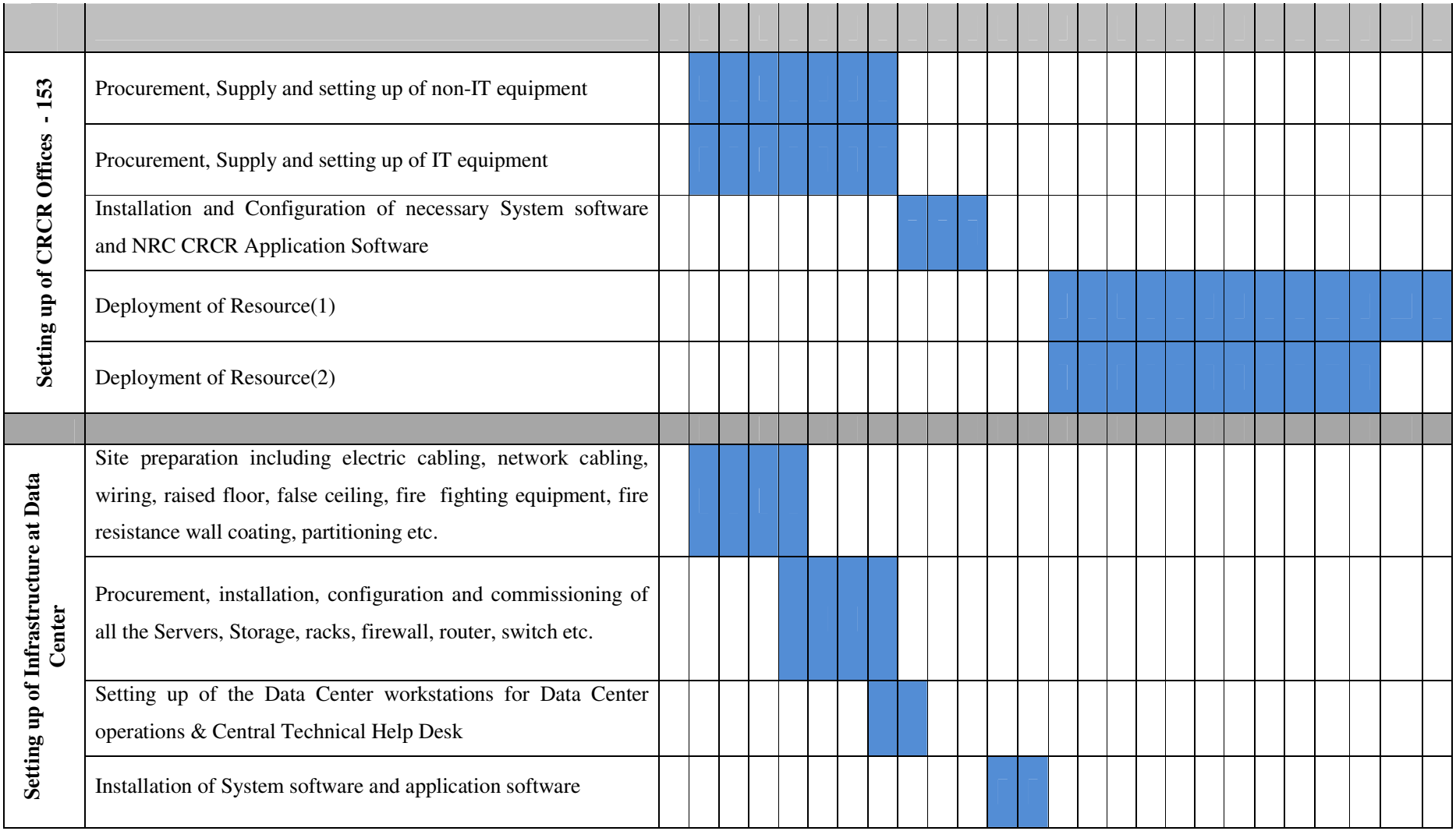
9.1 IMPLEMENTATION TIMELINES

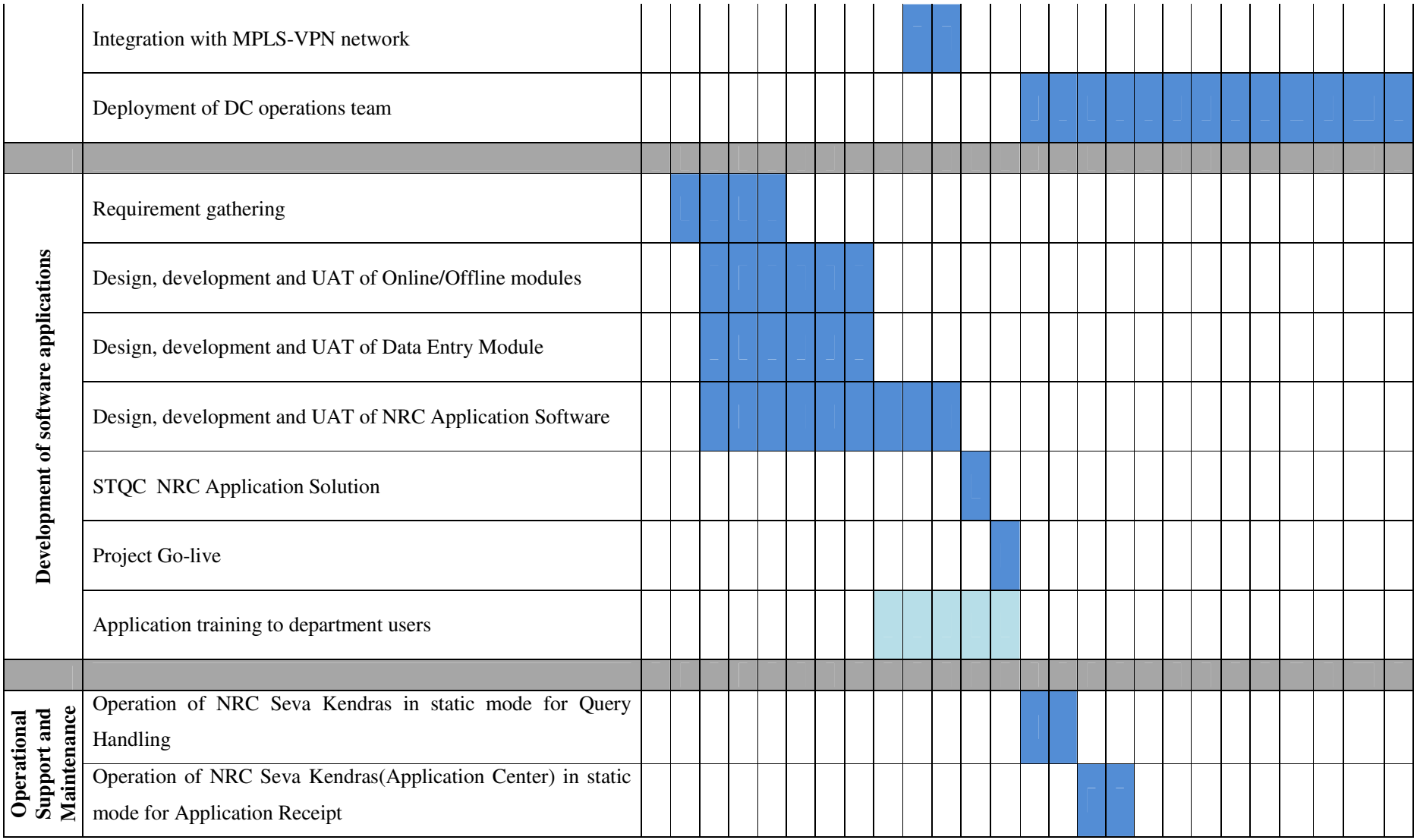
The SI is required to complete the development of the NRC system and operationalize the project within a period of (3) month from the date of award of the contract.

Following are the proposed timelines for the key activities involved in implementation of the project.

NRC Project Timelines

	Tasks / Activities	Oct-14					Nov-14					Dec-14																		
		M 1					M 2					M 3				M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12	……	M 15	……	M 28		
		W 0	W 1	W 2	W 3	W 4	W 5	W 6	W 7	W 8	W 9	W 10	W 11	W 12																
Setting up of NRC Seva Kendra (Helpdesk) – 1500 and Model NRC Seva Kendra (2)	Selection of Agency/ Awarding contract / Issue of LOI																													
	Supply and setting up of non-IT equipment for NRC Seva Kendra at LRCR offices																													
	Supply and setting up of IT equipment for NRC Seva Kendra at LRCR offices << Desktop and Printer etc. >>																													
	Induction Training to LRCR Helpdesk personnel																													
	Deployment of Resources																													
	Installation of NRC Seva Kendra Software and required System Software																													
	Installation of DLDD Application with search facility in Helpdesk Computers (to be supplied by DLDD vendor)																													


Setting up of CRCR Offices - 153
Procurement, Supply and setting up of non-IT equipment
Procurement, Supply and setting up of IT equipment
Installation and Configuration of necessary System software and NRC CRCR Application Software
Deployment of Resource(1)
Deployment of Resource(2)
Setting up of Infrastructure at Data Center
Site preparation including electric cabling, network cabling, wiring, raised floor, false ceiling, fire fighting equipment, fire resistance wall coating, partitioning etc.
Procurement, installation, configuration and commissioning of all the Servers, Storage, racks, firewall, router, switch etc.
Setting up of the Data Center workstations for Data Center operations & Central Technical Help Desk
Installation of System software and application software


Integration with MPLS-VPN network
Deployment of DC operations team
Development of software applications
Requirement gathering
Design, development and UAT of Online/Offline modules
Design, development and UAT of Data Entry Module
Design, development and UAT of NRC Application Software
STQC NRC Application Solution
Project Go-live
Application training to department users
Operational Support and Maintenance
Operation of NRC Seva Kendras in static mode for Query Handling
Operation of NRC Seva Kendras(Application Center) in static mode for Application Receipt

	Operation of NRC Seva Kendras(Application Center) in mobile mode	
	Operation of NRC Seva Kendras in static mode after Draft NRC publication	
	Support at CRCR offices	
	Operation of NRC State Data Entry office	

10 ACCEPTANCE CRITERIA

The primary goal of Acceptance Testing, Audit & Certification is to ensure that the system meets requirements, standards, and specifications as set out in this RFP and as needed to achieve the desired outcomes. The basic approach for this will be ensuring that the following are associated with clear and quantifiable metrics for accountability:

1. Functional requirements
2. Infrastructure Compliance Review
3. Availability of the Services in the defined locations
4. Performance
5. Security
6. Manageability
7. NRC Seva Kendra Management Plan
8. SLA Reporting System
9. Project Documentation
10. Data Quality Review

As part of Acceptance testing, audit and certification, Department shall appoint a third party agency to review all aspects of project development and implementation covering software, hardware and networking including the processes relating to the design of solution architecture with all the technical and functional requirements of the RFP and the agreement.

Department will establish appropriate processes for notifying the SI of any deviations from defined requirements at the earliest instance after noticing the same to enable the SI to take corrective action. Such an involvement of the Acceptance Testing & Certification by the Third Party nominated by Department, will not, however, absolve the operator of the fundamental responsibility of designing, developing, installing, testing and commissioning the various components of the project to deliver the services in perfect conformity with the SLAs. Following are the acceptance criteria to be adopted for NRC Project mentioned above.

10.1 Functional Requirements Review

The system developed by SI shall be reviewed and verified by the SI against the Functional Requirements signed-off between Political Department and SI. Any gaps, identified as a severe or critical in nature, shall be addressed by SI immediately prior to Go-live of the system. One of the key inputs for this testing shall be the traceability matrix to be developed by the SI for the system. Apart

from Traceability Matrix, SI may develop its own testing plans for validation of compliance of system against the defined requirements. The acceptance testing w.r.t. the functional requirements shall be performed by the SI (external audit) as well as the internal acceptance committee comprising the representatives from NRC project team, CRCR, DRCR etc. for User Acceptance Testing.

10.2 Infrastructure Compliance Review

Third party SI shall perform the Infrastructure Compliance Review to verify the conformity of the Infrastructure supplied by the SI against the requirements and specifications provided in the RFP and/or as proposed in the proposal submitted by SI. Compliance review shall not absolve SI from ensuring that proposed infrastructure meets the SLA requirements.

10.3 Security Review

The software developed for NRC Project shall be audited by the SI from a security & controls perspective. Such audit shall also include the IT infrastructure and network deployed for NRC system. Following are the broad activities to be performed by the SI as part of Security Review. The security review shall including amongst others the following activities:

1. Audit of Server and Application security mechanisms
2. Assessment of authentication mechanism provided in the application /components/ modules
3. Assessment of data encryption mechanisms implemented for the solution
4. Assessment of data access privileges, retention periods and archival mechanisms
5. Server and Application security features incorporated etc

10.4 Performance

Performance is another key requirement for the system and SI shall review the performance of the deployed solution against certain key parameters defined in SLA described in this RFP and/or in the agreement between the Political Department and the SI. Such parameters include request-response time, work-flow processing time, concurrent sessions supported by the system, Time for recovery from failure, Disaster Recovery drill, (if required) etc. The performance review also includes verification of scalability provisioned in the system for catering to the requirements of application volume growth in future.

10.5 Availability

The system should be designed to remove all single point failures. Appropriate redundancy shall be built into all the critical components to provide the ability to recover from failures. The SI shall perform various tests including network, server, and security tests to verify the availability of the services in case of component/location failures. The SI shall also verify the availability of services to all the users in the defined locations.

10.6 Manageability Review

The SI shall verify the manageability of the system and its supporting infrastructure deployed. The manageability requirements such as remote monitoring, administration, configuration, inventory management, fault identification etc. shall have to be tested out.

10.7 Data Quality

The SI shall perform the Data Quality Assessment for the Data digitized/ migrated by SI to the system. The errors/gaps identified during the Data Quality Assessment shall be addressed by SI before moving the data into production environment.

11 Intellectual Property Rights (IPR)

The Intellectual Property Rights (IPR) of all software code, data, algorithms, documentation, manuals etc. generated as a part of implementation of this project shall solely vest with the Political Department. The SI will not have any right to share, use or disclose above mentioned components/artifacts.

The IPR and Source code generated as a part of the project will be submitted to the Political Department in 2 sets in DVDs before go-live.

12 Exit Management Plan and Handover Mechanism

The SI shall prepare and provide the Political Department an Exit Management Plan. Details of the Exit Management are furnished in volume-III of this RFP.

The Exit Management Plan shall contain the details thereof including the following:

(i) A detailed program of the transfer process that could be used in conjunction with a Replacement Vendor, 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 during the transfer;

(ii) Modalities for communication with SI's sub-contractors, staff, suppliers, service providers and any related third party as are necessary to avoid any detrimental impact on the Systems operations as a result of the transfer;

(iii) Plans for provision of contingent support to the project and Replacement Vendor for a reasonable period after the transfer.

Handover Mechanism:

(i) At the end of the specified O&M services period, the Political Department may exercise its option to renew the O&M services with the existing SI or decide to undertake these activities on its own or to a third-party

(ii) If Handover is required to Political Department / any other vendor at the end of the existing O&M or otherwise, SI would be responsible for handing over the complete know-how, documentation records, software logs and all such relevant items that may be necessary for the transition process

13 PROJECT GOVERNANCE STRUCTURE

Given the enormity and complexity of the project, the implementation of the same requires a robust and still flexible project governance and management structure. The project will have following three tier structure as depicted in the figure below for the project governance:

13.1 STEERING COMMITTEE (SC)

The Steering Committee will provide overall strategy and policy guidelines. The Steering committee will be chaired by Commissioner and Secretary, Political Department, Government of Assam and shall consist of key members from the department nominated by the Commissioner and Secretary.

Role of Steering Committee*:*

- Provide overall project strategy and guidance to project teams
- Make decisions on all important and on policy matters related to the project

13.2 SPMU

The broad responsibilities of SPMU include but not limited to the followings:

- Serve as secretariat for Steering Committee (SC)
- Overall responsibility of project design and development
- Timely Resolution of Project issues raised by SI
- Obtain approvals from component authority, under guidance of EC,
- Milestones based inputs & approvals to external agencies
- Exercise Strategic Control

13.3 PROJECT MONITORING CONSULTANT (PMC)

Project Monitoring Consultant (PMC) team will function as an extended arm of the SPMU and will assist them in day-to-day monitoring of project implementation. This will ensure that the project runs within the cost, time and quality parameters, keeping the risks at the minimum possible levels.

Roles and responsibilities of PMC:

The broad responsibilities of the PMC shall include ensuring Quality of deliverables, Service Level Agreement (SLA) Monitoring, Risk Assessment, Monitoring &Evaluation and developing the Methodology for reporting.

The detailed responsibilities of the PMC would include, but not be limited to, the following:

- Assist Political Department to track and monitor Project Implementation
- Monitoring key metrics and SLA compliance by System Integrator as per RFP terms
- Review the Deliverables are met as per the Project plan by SI
- Generation and analysis of MIS, SLA deviation reports on a regular basis and reporting thereof
- Support Political Department in Capacity Building and Training of its staff in co-ordination with SI
- Support Political Department in Quality Assurance & Risk Management
- Monitoring the quality and on time delivery / closure of deliverables/milestones by the SI
- Review the scope and technical solutions covering all components provided by the SI
- Validating & Monitoring the Application Training Plan developed by SI
- Assisting Political Department in strategic control of the project.
- Escalate issues / key concerns related to project implementation to State Coordinator, NRC project and take adequate follow up measures

The SI team will interact with the Political Department through PMC team for all issues related to implementation and monitoring of the project.

13.4 Roles & Responsibilities of the Political Department

The Political Department will provide support to the project and will monitor the project through its team or through other agencies nominated by the Political Department such as Project Monitoring Consultant and other agencies that it may get on board during the course of the project.

The responsibilities of the Political Department are given below:

i. Overall responsibility of overseeing the project activities including the project schedules and service level compliance.

ii. Undertake site visits during the execution of the project in order to ensure that the implementation is going on as per the requirements in the RFP and that the SI is discharging his responsibilities effectively

iii. Provide necessary secure space in the NRC state office to store & install all the material required for NRC project as may be required for project implementation and support

iv. Arrange for the Government Secure Repository where all NRC project related artifacts will be stored.

v. Provide all necessary support at district level for all circle and district level officers and in Guwahati for state level officers to conduct user training programs as specified in this document.

vi. Provide all necessary inputs & support required in terms of statutory & regulatory aspects as and when they arise

vii. Ensure reasonably timely signoffs related to any requirement of authorization towards delivery of normal scheduled services as in the agreement, completion of specific services as rendered by the SI in response to request/requirements of such services by Political Department.

13.5 Roles & Responsibilities of Selected SI

i. The SI shall setup a Project Office, with key personnel of the project team from the SI, in Guwahati to ensure access and availability of the key personnel of the project team to Political Department on a short notice.

ii. The Project Office has to be setup within a week after the award of Letter of Intent (LoI) or before Project Commencement whichever is earlier.

iii. The same team of key personnel shall continue into the project even after the completion of the transition. Under exceptional circumstances, if the Key Personnel are to be replaced or removed, the SI shall put forward the profiles of personnel being proposed as replacements, which will be either equivalent or better than the ones being replaced. However, whether these profiles are better or equivalent to the ones being replaced will be decided by Political Department. Political Department will have the right to accept or reject these substitute profiles.

iv. SI shall depute senior resources to represent the Service Provider in the Committees setup by Political Department to monitor the project. As part of the project management activities, the SI shall undertake:

a) Issue Management to identify and track the issues that need attention and resolution from the State.

b) Scope Management to manage the scope and changes through a formal management and approval process

c) Risk Management to identify and manage the risks that can hinder the project progress

ANNEXURE I – IT Hardware and software Specifications

The quantity and specifications are indicative only. The bidder shall make an independent assessment and propose solutions based on the project requirements and meet the SLAs.

I.1.1 Blade server with Chassis Specifications

(i) The Blade chassis shall accommodate at least 6 blade systems with fully equipped of each chassis all the power, cooling, and I/O infrastructure needed to support modular server, interconnect, and storage components today and ensure the same shall support at least for next 2 years.

(ii) An *optional* redundant network and storage interconnect modules shall be an additional requirement along with basic configuration. It shall include a shared, 5 terabit per second high-speed Nonstop midplane for wire-once connectivity of server blades to network and shared storage.

- The power shall also deliver through a pooled-power backplane with power input flexibility is provided with choices of single-phase, 3-Phase AC input, and -48V DC Input.
- The Device bays shall be up to 8 Full-height Blades
- It shall support 8 Interconnect Bays with support for any I/O fabric
- The interconnects of Ethernet shall support at least , but not limited to HP 1/10Gbit Virtual Connect Ethernet Module ,Virtual Connect Flex-10 Ethernet Module
- The interconnects of fibre channel shall support, but not limited to 4Gbit Virtual Connect Fibre Channel Module ,8 port 4Gb FC Pass-Thru Module Brocade 4Gb SAN Switch

I.1.2 Storage Area Network including Tape library

Sl. No	Items	Description
1	Storage controller	A Unified Storage System must be offered. The storage system must have at least two controllers running in an active-active mode with automatic failover to each other in case of one controller failure. The vendors who propose gateway architecture should factor the necessary hardware required to meet this criteria for NAS and SAN.

		When more drives or controller are added, storage system should automatically load balance the data across the old and new drives & controllers. The storage should be scalable upto at least 120TB usable capacity.
2	Cache required/ cache protection	The system should have at least 32 GB of cache across the dual controllers with ability to protect data/destage the data of the cache if the system fails Cache should be scalable to a minimum of 256GB with controller upgrade within the same chassis.
3	Protocols supported	The storage must be configured with FCoE, FCP, NFS, FTP, NDMP protocols with provision to work with iSCSI and CIFS protocols in future. Any hardware/software required for this functionality shall be supplied along with it in No Single Point OF Failure mode.
4	Storage capacity	The storage shall be supplied with 40 TB (in Ratio of around 5% SSD, 25% SAS {15K RPM}, 70% NL-SAS/SATA {Min. 7.2K RPM} of net usable data capacity after RAID 5 for SAS and SSD disks and RAID 6 for NL-SAS/SATA disks after removing the drives required for (a) Parity/Mirror,(b) Hot spares. The storage is to support SAS, SATA (7.2K, 10K, 15K RPM) and SSD disks on the proposed controller. (c) The storage should have minimum 6 Gbps SAS Drive interface.
5	Front-End & Back-End Connectivity	The storage should be configured End to End with SAS 2.0 with Back-End throughput of 48Gbps (4 lanes X 2 ports or 1 lane X 8 Ports). The storage should be configured with minimum of 12 X 8Gbps FC Front-end Ports, 4* 10 Gbps FCoE Ports, 4*10 Gbps iSCSI ports across proposed controllers.
6(a)	RAID Configuration	The system should support RAID 1, 5, RAID 1+0, RAID6 or equivalent. The RAID implementation on the storage will be such that it is able to protect against Hard disk failing in the same RAID Group simultaneously. It should be possible to assign multiple raid arrays to single pool and it should be possible to allocate volume which spans across all

		the disks in the pool.
6(b)	On-line Expansion/RAID Group Creation /Expansion	System should have online expansion and shrinking of RAID Group or Addition and deletion of new RAID Group. Must be able to add and delete additional disks on the fly to expand or reduce the RAID group capacity or create new RAID Group.
7	Storage Scalability	The storage should be scalable upto minimum of 120 TB usable capacity in the same ratio using similar disk capacities
7(a)	Data Availability and load-Balancing	Storage should support Automatic load balancing.
7(b)	Data De-Duplication	The storage system should have file and block-level Data-Deduplication with compression. The cost of perpetual license should be included in the product cost.
7(c)	Thin Provisioning	The storage system should have thin provisioning and thin reclamation. Storage system should also have compression for NAS and SAN.
8	Snapshot and Full copy/ clone functionality	The proposed storage should be configured with Snapshot License with both create & restore functionality.
9	Storage built-in functionality	The storage to have the ability to expand LUNS/Volumes on the storage online and instantly. The storage should also support shrinking of volumes/LUNs without any downtime. The storage shall have the ability to create logical volumes. It should be possible to convert a thin volume/LUN into a thick volume/LUN without downtime and without any data migration. The storage shall support quality of service by allocating system resource priority on the corresponding LUNS/Volumes through priority allocation or by use of cache partitioning. The storage shall support standard storage (SAN & NAS) security features. Storage should support following features: 1. Online Data Migration across different storage disk types. This feature should be used for situations like hardware/software upgrade with minimal downtime of host and application. System should have redundant hot swappable components like controllers, disks, power supplies, fans etc.
10	Maintenance	Offered storage shall support online non-disruptive Firmware

		upgrade for controller.
11	Licensing	All the licenses on the storage system should be for entire usable capacity supported by the system from day one.
12	Upgradeability/Investment Protection	The proposed system should be field upgradable to a higher model in the family.
13	Management	Easy to use GUI and web enabled administration interface for configuration, storage management, real time performance analysis, monitoring and reporting. The tool should be able to report parameters-both physical (ports utilization%, CPU%, disk%) and also logical (LUN level latency) on the controller.
14	Auto Tiering	The storage should have the capability of auto tiering to optimize work load performance by moving highly active blocks to SSDs and less active to SAS and then to NL-SAS/SATA dynamically and non-disruptively.
15	OS Support	Support for industry leading Operating System platforms including. LINUX, Microsoft Windows, HP-UX, SUN Solaris, IBM-AIX.
15(a)	Mirroring/Replication	Storage array should support storage based data replication across all models of the offered family.
15(b)	Virtualization Support	Should integrate and support the virtualization technology.
16	Racks	• OEM racks with adequate rack accessories and PDU should be provided. The exact dimensions of the racks and the number of tiles occupied by the rack should be mentioned. The rack height should not exceed 42U. • Cabling for all the power and network connectivity should be neatly structured. • The weight of the storage system must not exceed 1000Kg/Sq.m per rack.
17	Power supply & Fans	Dual Redundant, Hot Swappable power supply and cooling fans with power cord.
18	Cables & Accessories	All necessary cables, rack mountable kit and other accessories must be provided.
19	Warranty and support	5 years onsite comprehensive warranty with 24X7 support
20	SAN Switches	2X24 port SAN Switch with associated cables and rack mountable kit. Each port should support 8 Gbps.

I.1.3 Virtual Tape library

SL. No	Specification - VTL
1	Proposed disk based backup appliance should be able to interface with various industry leading server platforms and operating systems.
2	Must support LAN/SAN based D2D backup and VTL backup simultaneously via NFS v3, CIFS, FC and NDMP protocols.
3	Must support global and inline data duplication using variable block length deduplication technology.
4	Must support industry leading backup software like EMC Networker, Symantec Netbackup, Commvault and HP Data Protector etc.
5	Must have the ability to perform different backup or restore jobs simultaneously.
6	Must support single management pane for backup software and multiple backup devices for ease of management.
7	Must supports communications and data transfers through 8GB SAN, 10 Gb & 1 Gb ethernet LAN
8	Should support backup throughput of 5TB/hr or more for data deduplication at backup storage for the Proposed capacity.
9	Proposed solution should have min 40 TB usable capacity Upgradable to 100 TB for deduplicated data.
10	Must support for deduplicated replication of data over Local or Wide Area Networks
11	Proposed solution should support tape out capability to create additional copy of data on tape media in native format.
12	Must support selective replication with bandwidth throttling for optimum utilization of the WAN bandwidth
13	Must have simultaneous replication process while backup is running
14	Replication should support bi-directional, many-to-one, one-to-many, and one-to-one replication
15	Should support Link Aggregation Control Protocol (LACP) and VLAN tagging
16	Should support IP Aliasing, ethernet failover and aggregation
17	Should support 256 bit AES encryption for data at rest and data-in-flight during replication.
18	Must have RAID 6 technologies with minimum 3TB disk drives on SATA/SAS technology.

I.1.4 Backup Software

S. No.	Specification

1	Should be available on various OS platforms such as Windows 2000/ NT, Linux and UNIX platforms and be capable of supporting backup/ restores from various platforms including Windows, UNIX, HP-UX, IBM AIX, Linux, NetWare. Both Server and Client software should be capable of running on all these platforms.
2	Ability to backup data from one server platform and restore it from another server platform to eliminate dependence on a particular OS machine and for disaster recovery purposes.
3	Should support various level of backups including full, incremental, differential, synthetic and virtual synthetic backups
4	The backup software should be able to encrypt the backed up data using 256-bit AES encryption on the backup client and should not demand for additional license, any such license if needed should be quoted for the total number of backup clients asked for.
5	Must support dissimilar system hardware restore on multiple platforms including Windows, Solaris, Linux, HP-UX, and AIX.
6	Must support wizard-driven configuration and modifications for backups and devices
7	Should have firewall support and single management pane to manage backup/restores and all backup target storage devices.
8	Must support deduplicated backup and recovery for Microsoft Hyper-V using VSS at the host to protect both the host and guest.
9	Should able to break up large subsets into smaller subsets to be backed up in parallel to allow backups to complete faster for Unix and Linux clients
10	Should have in-built calendar based scheduling system and also support check-point restart able backups.
11	The Backup software should have the ability to report inactive files, which will help the customer decide what to backup/archive.
12	Should support backups for clustered servers and support industry popular clusters like Sun cluster, Tru 64, HP service guard, EMC cluster, HACMP i.e. should have the ability to backup data from clustered servers from the virtual client.
13	The software should support virtual platform like VMWare, Citrix Xen Server and Hyper V, licensing of such environments should be based on physical hosts not on the number of virtual instances.
14	Must support backup / recovery of raw SCSI volumes
15	Licensing of the software should not to be dependent on the number of CPUs of the client machines.
16	Should support advanced backup to disk backups where backups and restores from the backup media (disk in this case) can be done simultaneously.

17	The solution must support client-direct backup feature to reduce extra hop for backup data at backup/media server to cater stringent backup window
18	Backup clients should be updated automatically using the client push feature
19	Should integrate with third party VTL which has data deduplication capabilities.
20	Must support source capacity based licensing.
21	Agent/Modules for Databases such as MS SQL, Oracle, Exchange, Lotus, DB2, Informix, Sybase should be per host and not dependent on number of CPUs
22	Backup software must support Robotic/automated Tape library, the licensing of such library should be on the number of slots and not on the drive counts as additional drives are added to improve performance.
23	Must support Hardware and storage array based snapshot backup for off host zero downtime and zero load on the primary backup client.
24	Must support OST for backup to disk storage appliances
25	The backup software should support data movement directly from the backup client to the disk target without passing through the backup server.
26	Backup Solution must support multi tenancy feature for creation of distinct data zones where the end users have access without being able to view data, backups, recoveries, or modify in other data zones.
27	The proposed solution should have inbuilt feature for extensive alerting and reporting with pre-configured and customizable formats.
28	The proposed solution must have capability to do trend analysis for capacity planning of backup environment not limiting to Backup Application/Clients, Virtual Environment, Replication etc.

I.1.5 Enterprise Database

S.No	Functional and technical specification of Enterprise Database :
1.	Class of Database – Enterprise Edition. Should be open standards and current latest version, which is commercially available.
2.	The support should be provided with patches and updates available from OEM.
3.	Database Server should be available and function in multiple operating systems like Linux, Unix, and Windows.
4.	Database License should be un-restricted and perpetual, to prevent any non-compliance in an event of customization & integration.
5.	Should Support multi hardware platform.

6.	Database should have native, active-active clustering with objectives of scalability and high availability. The solution should provide single image database concurrently accessed by multiple database servers, without repartitioning or changes to the database objects or 3rd party transaction routing mechanisms. If any additional license in software or hardware is required to implement the active-active cluster, the same should be factored along with database license.
7.	RDBMS architecture should include partitioning, in which a single logical table and its indexes are broken up into one or more physical tables, each with its own index. Indexes associated with partitioned tables can be partitioned.
8.	Database should provide standard SQL Tool for accessing the database. The tool should be able to monitor, maintain and manage the database instance, objects, and packages.
9.	Must ensure inter-dependency of user concurrency and data consistency. Should provide non-escalating lock mechanism and multi version read consistency for the transaction processing.
10.	Database should support terabyte scaling.
11.	Should provide connectivity using native connectivity, JDBC, ODBC and connectivity to various technologies like .NET, ASP, Java etc.,
12.	Database should have built-in backup and recovery tool, which can support the online, incremental backup. The tool should facilitate the media recovery, partial recovery and full recovery.
13.	Should be able to provide database level storage management mechanism
14.	Support for central storage of data with multiple instances of database in a clustered environment access the single database.
15.	Database should support Internet Protocol Version 6 (IPv6) for packet switched networks. Should be capable to connect to other hosts using IPv6 (Network and Routing support)
16.	Database should have built-in DR solution to replicate the changes happening in the database across DR site
17.	Database should provide mechanism to recover rows, tables when accidentally deleted. The mechanism should provide ways and means of recovering the database.
18.	Database should provide functionality to replicate / propagate the data across different databases.
19.	Database should provide native functionality to store XML, Images, Text within the database and support search, query functionalities.

20.	Should include tools for enterprise class high availability solution like monitoring performance, diagnose and alert for problems, tuning bottlenecks, resource monitoring and automatic resource allocation capabilities.
21.	Database should be able to compress data while backing up through utilities. Database should be able to compress redo data as it is transmitted over the network which will minimize data transmission time to standby database
22.	Should support data warehouse capabilities like caching the query join results, parallelism, OLAP, Data Mining capabilities
23.	Should provide ETL functionalities within the database
24.	Should provide control data access down to the row-level so that multiple users with varying access privileges can share the data within the same physical database.
25.	Should support native database level encryption on the table columns, table spaces or backups as well as the network traffic between the applications.
26.	Should be having native auditing capabilities for the database
27.	The enterprise database should provide single web-based console for management of the database.

I.1.6 Firewall Specifications

	Hardware Architecture
1.	The appliance based security platform should be capable of providing firewall / IPS and VPN (IPSec and SSL) functionality simultaneously from day one
2.	The appliance should support at least 6 10/100/1000 Gigabit ports with 4 10Gigabit ports from Day one
3.	The appliance should support at least one 10/100/1000 dedicated management interfaces to configure/manage the firewall policies, perform image upgrades even in case of failure of the data interfaces. Data ports should not be used for management purpose
4.	The appliance hardware should be a multicore CPU architecture with a hardened 64 bit operating system to support higher memory
5.	Firewall should support hardware based IPS module having it's own processor & memory to ensure there is no performance bottleneck.
6.	Proposed Firewall should not be proprietary ASIC based in nature & should be open architecture based on multi-core cpus to protect & scale against dynamic latest security threats.
7.	The appliance should support redundant inbuilt power supplies from day one

8.	**Performance & Scalability**
9.	Firewall should support at least 20 Gbps of Multi-protocol real-world throughput based on protocols like HTTP, SMTP, FTP, IMAP (Only UDP based performance nos. will not be considered)
10.	Firewall should support at least 10Gbps of combined Firewall & IPS throughput
11.	Firewall should support at least 1,000 IPSec/SSL concurrent VPN peers
12.	Firewall should support at least 1 million concurrent sessions
13.	Firewall should support at least 20,000 new connections per second
14.	Firewall should support Jumbo Frames upto 9216 bytes
15.	**Firewall Features**
16.	Firewall should support IPv4 & IPv6 dual stack functionality to be able to use IPv4 & IPv6 simultaneously
17.	Firewall should support creating access-rules with IPv4 & IPv6 objects simultaneously eg: Ipv4 source & Ipv6 destination
18.	Firewall should support operating in routed & transparent mode
19.	Firewall should support mixed mode with virtual firewalls where virtual firewall should support routed & transparent mode simultaneously
20.	In transparent mode firewall should support arp-inspection to prevent spoofing at Layer-2
21.	Firewall should support passing of BPDU's & filtering of non-ip traffic with ether-type acls.
22.	Failover function should ensure that the routes learned via dynamic routing protocols are maintained in the standby unit as well
23.	Firewall should support failover of IPv4 & IPv6 sessions
24.	Firewall should replicate Nat translations, TCP,UDP connection states, ARP table, HTTP connection states, ISAKMP &IPSec SA's, SIP signalling sessions
25.	Firewall should provide application inspection for DNS, FTP, HTTP. SMTP,ESMTP, LDAP, MGCP, RTSP, SIP, SCCP, SQLNET, TFTP, H.323, SNMP
26.	Firewall should provide IPv6 application inspection for DNS, FTP, HTTP, SIP, SMTP & IPv6
27.	Application inspection engine for DNS should support matching specific flag in the DNS header, DNS type including Query & RR type, DNS class, DNS Question, resource-record, Authority RR, DNS message domain name list, & setting actions like drop all packets, drop connection, send-protocol-error, reset the connection & send logs.
28.	Application inspection for FTP should support dynamically opening the secondary/data channels for FTP data transfer, preventing sending FTP embedded commands in web browsers, enforce RFC compliance of FTP, filtering of FTP traffic based on FTP

	commands & FTP usernames
29.	Application inspection engine for HTTP should support enforcing conformance to RFC 2616, filtering based on content-type mismatch, HTTP request method, text matching in http request body, maximum HTTP request message body length & more parameters
30.	Firewall should support DOS protection functionalities like TCP intercept/TCP Syn cookie protection, Dead Connection Detection/ TCP sequence randomization, TCP normalization to clear tcp packets of anomalies like clearing or allowing selective tcp options, reserved bits, urgent flags & provide TTL evasion protection.
31.	Firewall should support setting connection limits based on max embryonic-connections, per-client embyonic connections, per-client max connections, setting embronic connection timeouts & idle-timeouts. These settings should be applicable on web servers & clients.
32.	Firewall should be able to create access policies based on the User/group info from the Active Directory either through clientless or agent based mechanism .
33.	Firewall should support static nat, pat, dynamic nat, pat & destination based nat
34.	Firewall should support Nat66 (IPv6-to-IPv6), Nat 64 (IPv6-to-IPv4) & Nat46 (IPv4-to-IPv6) functionality
35.	Firewall should support WCCP v2 to redirect selected types of traffic to web cache engines.
36.	Firewall should support integration with Radius, Tacacs+, RSA, Ldap v3 Directory servers, Kerberos, NT server & Local Database
37.	**High-Availability Features**
38.	Firewall should support stateful failover of sessions in Active/Standby & Active/Active mode
39.	Firewall should support ether channel functionality for the failover control & date interfaces for provide additional level of redundancy
40.	Firewall should support the functionality for allowing Asymmetrically Routed Packets in active/active mode
41.	Firewall should support redundant interfaces to provide interface level redundancy before device failover
42.	Firewall should support 802.3ad Etherchannel functionality to increase the bandwidth for a segment.
43.	Firewall should support stateful failover of nat translations, tcp&udp connections, ISAKMP &IPSec SA's & SIP Signalling sessions
44.	**VPN Features**
45.	Firewall should support IPSec& SSL Client based VPN from day one for unlimited no. of

	users
46.	Firewall should support RFC 6379 based Suite-B Cryptography Suites/algorithms like AES-GCM/GMAC support (128-, 192-, and 256-bit keys), ECDH support (groups 19, 20, and 21), ECDSA support (256-, 384-, and 521-bit elliptic curves) for enhanced VPN security.
47.	Firewall should support latest IKEv2 standards for supporting SHA-2 256, 384 & 512 bit message integrity algorithms in hardware to ensure there is no performance bottleneck & higher security.
48.	Should support pre-shared keys & Digital Certificates for VPN peer authentication
49.	Should support perfect forward secrecy & dead peer detection functionality
50.	**Routing Features**
51.	Firewall should support IPv4 & IPv6 static routing, RIP, OSPF v2 & v3
52.	Firewall should support PIM multicast routing
53.	Should support stateful failover for ospfv3
54.	Firewall should support SLA monitoring for static routes
55.	**Management Capabilities**
56.	Firewall should support management of firewall policies via Cli, Telnet, SSH & inbuilt GUI management interface.
57.	Firewall should support syslog with the functionality of sending syslogs messages via email to different teams based on syslog severity
58.	Firewall should support sending syslogs over TCP with the capability to block new connections in case the syslog server is down
59.	Firewall should support the function of sending syslogs in a encrypted format using SSL/TLS
60.	Firewall should support SNMP logging & specify which messages are to be sent to SNMP servers
61.	Firewall should support rate-limiting of syslog messages to avoid Dos attacks on the firewall
62.	Firewall should support Netflow /jflow to provide detailed flow information about the connections
63.	Firewall should support SNMP v1,2c & 3 simultaneously
64.	Firewall should support the functionality of identifying issues quickly with continuous monitoring & providing notifications of potential problems in which a service request has been raised with all diagnostic data attached.
65.	Firewall should support the functionality to automatically generate service request with the OEM support center, route it to the appropriate support team which provides detailed

	diagnostic information to speed up problem resolution.
66.	Firewall GUI management interface should support backing up & restoring configurations
67.	Firewall GUI should support inbuilt function to simulate network traffic to check firewall rules & for troubleshooting network access issues
68.	Firewall should support packet capturing functionality to send the packet capture to ethereal/wireshark for detailed packet analysis
69.	Firewall should support the functionality of Auto-Update to check for latest software versions & download the same & replicate the image to the standby unit

I.1.7 Router Specifications

The router shall have Integrated Services that shall provide the following and not limited to:

(i) Wire-speed performance for concurrent services such as security and voice , and advanced services to multiple T1/E1/ xDSL WAN rates

(ii) Enhanced investment protection through increased performance and modularity

(iii) Enhanced investment protection through increased modularity

(iv) Increased density through High-Speed WAN Interface Card Slots (four) with 2 high speed WAN interfaces

(v) Enhanced Network Module Slot Support for new modules

(vi) Support for majority of existing AIMs, NMs, WICs, VWICs, and VICs

(vii) Two Integrated 10/100/1000 Ethernet ports

(viii) Optional Layer 2 switching support with Power over Ethernet (PoE) (as an option)

(ix) Support of up to 1500 VPN tunnels with the AIM-EPII-PLUS Module

(x) Antivirus defense support through Network Admission Control (NAC)

(xi) Intrusion Prevention as well as stateful IOS Firewall support and many more essential security features

ANNEXURE II - District wise Circle/CRCR list with estimated Households & population

S.No.	District Name	Name of Circle	CRCR	No of Circle Offices	No of Households	Population
1.	Kokrajhar	Gossaigaon (Pt)	Gossaigaon (Pt)	4	53825	270952
2.	Kokrajhar	Bhowraguri	Bhowraguri		15736	78061
3.	Kokrajhar	Dotoma	Dotoma		29562	144393
4.	Kokrajhar	Kokrajhar (Pt)	Kokrajhar (Pt)		52149	253094
5.	Kokrajhar	Golokganj (Pt)			5842	26671
6.	Kokrajhar	Dhubri (Pt)			6965	33809
7.	Kokrajhar	Bagribari (Pt)			10903	51001
8.	Kokrajhar	Bilasipara (Pt)			1869	8736
9.	Kokrajhar	Chapar (Pt)			4230	20425
10.	Dhubri	Gossaigaon (Pt)		8	10740	53842
11.	Dhubri	Agamoni	Agamoni		40127	172146
12.	Dhubri	Golokganj (Pt)	Golokganj (Pt)		41413	192587
13.	Dhubri	Dhubri (Pt)	Dhubri (Pt)		85800	425809
14.	Dhubri	Bagribari (Pt)	Bagribari (Pt)		29136	152733
15.	Dhubri	Bilasipara (Pt)	Bilasipara (Pt)		55197	257905
16.	Dhubri	Chapar (Pt)	Chapar (Pt)		27959	139122
17.	Dhubri	South Salmara	South Salmara		51962	249508
18.	Dhubri	Mankachar	Mankachar		72340	305606
19.	Goalpara	Lakhipur	Lakhipur	5	53360	279581
20.	Goalpara	Balijana	Balijana		54891	280438
21.	Goalpara	Matia	Matia		50989	258223
22.	Goalpara	Dudhnai	Dudhnai		16581	80847
23.	Goalpara	Rangjuli	Rangjuli		22633	109094
24.	Barpeta	Barnagar (Pt)	Barnagar (Pt)	8	49111	234235
25.	Barpeta	Kalgachia	Kalgachia		36482	195983
26.	Barpeta	Baghbor	Baghbor		57946	306065
27.	Barpeta	Chenga	Chenga		27845	142845
28.	Barpeta	Barpeta	Barpeta		73224	365608
29.	Barpeta	Sarthebari	Sarthebari		39088	195070
30.	Barpeta	Bajali (Pt)	Bajali (Pt)		22976	102425
31.	Barpeta	Sarupeta (Pt)	Sarupeta (Pt)		26548	129853
32.	Barpeta	Jalah (Pt)			4709	21538
33.	Morigaon	Mayong	Mayong	5	46453	242718
34.	Morigaon	Bhuragaon	Bhuragaon		22455	123469
35.	Morigaon	Laharighat	Laharighat		46105	253582
36.	Morigaon	Marigaon	Marigaon		41179	200441
37.	Morigaon	Mikirbheta	Mikirbheta		28410	137213
38.	Nagaon	Kaliabor	Kaliabor	10	41415	197470
39.	Nagaon	Samaguri	Samaguri		66675	330575

40.	Nagaon	Rupahi	Rupahi		43717	228206
41.	Nagaon	Dhing	Dhing		62224	330491
42.	Nagaon	Nagaon	Nagaon		86872	406840
43.	Nagaon	Raha	Raha		35825	175125
44.	Nagaon	Kampur	Kampur		45824	223843
45.	Nagaon	Hojai	Hojai		42784	228530
46.	Nagaon	Doboka	Doboka		55467	303767
47.	Nagaon	Lanka	Lanka		78537	398921
48.	Sonitpur	Dhekiajuli (Pt)	Dhekiajuli (Pt)	7	93308	470018
49.	Sonitpur	Chariduar	Chariduar		69674	343749
50.	Sonitpur	Tezpur	Tezpur		61635	282032
51.	Sonitpur	Na-Duar	Na-Duar		44900	215820
52.	Sonitpur	Biswanath	Biswanath		70998	346624
53.	Sonitpur	Helem	Helem		29173	144037
54.	Sonitpur	Gohpur	Gohpur		23231	121830
55.	Lakhimpur	Narayanpur	Narayanpur	7	28954	135641
56.	Lakhimpur	Bihpuria	Bihpuria		39485	210165
57.	Lakhimpur	Naobaicha	Naobaicha		27936	148973
58.	Lakhimpur	Kadam	Kadam		20683	107330
59.	Lakhimpur	North Lakhimpur	North Lakhimpur		50196	250643
60.	Lakhimpur	Dhakuakhana (Pt)	Dhakuakhana (Pt)		22922	114295
61.	Lakhimpur	Subansiri (Pt)	Subansiri (Pt)		14131	75090
62.	Dhemaji	Dhemaji	Dhemaji	4	29133	139920
63.	Dhemaji	Sissibargaon	Sissibargaon		42491	234030
64.	Dhemaji	Jonai	Jonai		30012	169898
65.	Dhemaji	Dhakuakhana (Pt)			5733	29575
66.	Dhemaji	Subansiri (Pt)			2827	13950
67.	Dhemaji	Gogamukh	Gogamukh		19673	98760
68.	Tinsukia	Sadiya	Sadiya	4	19317	102434
69.	Tinsukia	Doom Dooma	Doom Dooma		81443	416789
70.	Tinsukia	Tinsukia	Tinsukia		91211	438031
71.	Tinsukia	Margherita	Margherita		76627	370675
72.	Dibrugarh	Dibrugarh West	Dibrugarh West	7	32833	159580
73.	Dibrugarh	Dibrugarh East	Dibrugarh East		57758	270230
74.	Dibrugarh	Chabua	Chabua		32442	159585
75.	Dibrugarh	Tengakhat	Tengakhat		46801	220478
76.	Dibrugarh	Moran	Moran		35160	169759
77.	Dibrugarh	Tingkhong	Tingkhong		32308	159295
78.	Dibrugarh	Naharkatiya	Naharkatiya		39565	187408
79.	Sivasagar	Dimow	Dimow	6	32257	152166
80.	Sivasagar	Sibsagar	Sibsagar		43948	198642
81.	Sivasagar	Amguri	Amguri		31418	144009
82.	Sivasagar	Nazira	Nazira		43945	197618
83.	Sivasagar	Sonari	Sonari		69109	325056

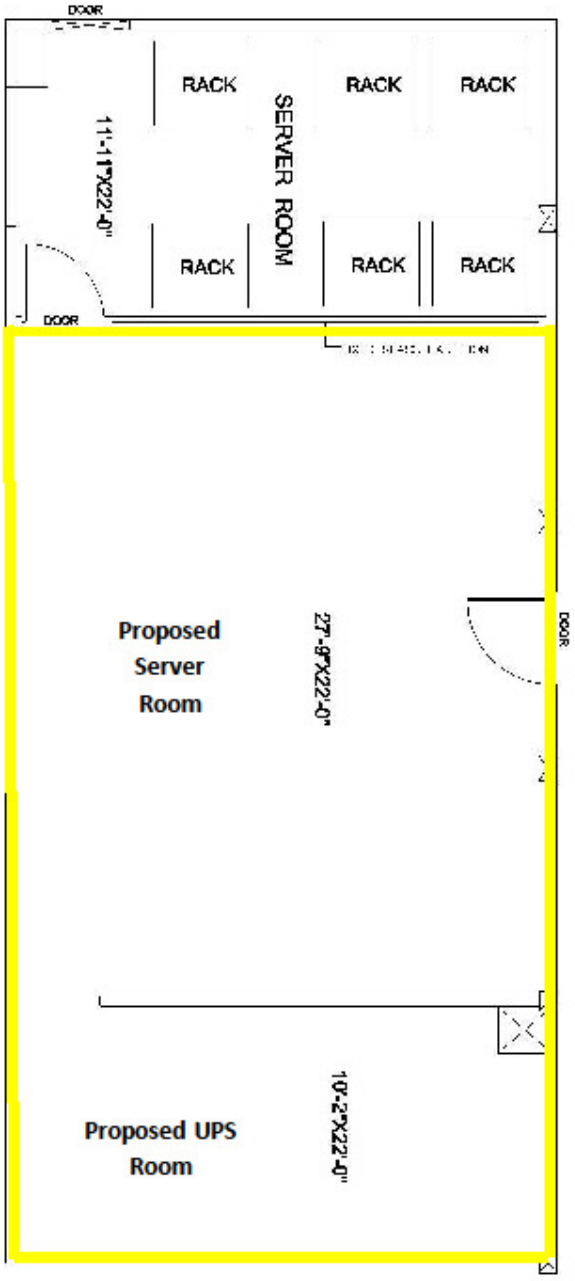
84.	Sivasagar	Mahmora	Mahmora		27690	133559
85.	Jorhat	Majuli	Majuli	6	32236	167304
86.	Jorhat	Jorhat West	Jorhat West		45895	211539
87.	Jorhat	Jorhat East	Jorhat East		44942	195398
88.	Jorhat	Teok	Teok		40914	184611
89.	Jorhat	Titabor	Titabor		43474	201791
90.	Jorhat	Mariani	Mariani		28801	131613
91.	Golaghat	Bokakhat	Bokakhat	6	34618	163945
92.	Golaghat	Khumtai	Khumtai		18117	85835
93.	Golaghat	Dergaon	Dergaon		31199	146101
94.	Golaghat	Golaghat	Golaghat		70432	327231
95.	Golaghat	Morangi	Morangi		24308	114851
96.	Golaghat	Sarupathar	Sarupathar		48523	228925
97.	Karbi Anglong	Donka	Donka	4	51609	295358
98.	Karbi Anglong	Diphu	Diphu		57945	289850
99.	Karbi Anglong	Phuloni	Phuloni		50854	279848
100.	Karbi Anglong	Silonijan	Silonijan		17238	91257
101.	Dima Hasao	Umrangso	Umrangso	4	10149	49952
102.	Dima Hasao	Haflong	Haflong		15139	76721
103.	Dima Hasao	Mahur	Mahur		5875	33859
104.	Dima Hasao	Maibong	Maibong		11089	53570
105.	Cachar	Katigora	Katigora	5	62857	291875
106.	Cachar	Silchar	Silchar		156321	704465
107.	Cachar	Udarbond	Udarbond		27094	124090
108.	Cachar	Sonai	Sonai		71698	324315
109.	Cachar	Lakhipur	Lakhipur		61985	291872
110.	Karimganj	Karimganj	Karimganj	5	56574	278300
111.	Karimganj	Badarpur	Badarpur		32898	164703
112.	Karimganj	Nilambazar	Nilambazar		47637	242451
113.	Karimganj	Patharkandi	Patharkandi		53614	261368
114.	Karimganj	Ramkrishna Nagar	Ramkrishna Nagar		56991	281864
115.	Hailakandi	Algapur	Algapur	4	26783	121379
116.	Hailakandi	Hailakandi	Hailakandi		36922	166897
117.	Hailakandi	Lala	Lala		44670	202943
118.	Hailakandi	Katlichara	Katlichara		34975	168077
119.	Bongaigaon	Bongaigaon (Pt)	Bongaigaon (Pt)	3	34763	156095
120.	Bongaigaon	Boitamari	Boitamari		24641	127396
121.	Bongaigaon	Srijangram	Srijangram		51966	266700
122.	Bongaigaon	Bijni (Pt)			25840	130242
123.	Bongaigaon	Sidli (Pt)			12808	58371
124.	Chirang	Kokrajhar (Pt)		3	4765	22001
125.	Chirang	Bengtol	Bengtol		9984	49941
126.	Chirang	Sidli (Pt)	Sidli (Pt)		31941	158881
127.	Chirang	Bongaigaon (Pt)			1747	8253

128.	Chirang	Bijni (Pt)	Bijni (Pt)		46984	233586
129.	Chirang	Barnagar (Pt)			1974	9500
130.	Kamrup	Goreswar (Pt)		11	7910	38061
131.	Kamrup	Rangia (Pt)	Rangia (Pt)		34016	155333
132.	Kamrup	Koya	Koya		6620	32350
133.	Kamrup	Kamalpur	Kamalpur		38177	169235
134.	Kamrup	Hajo	Hajo		52362	262531
135.	Kamrup	Chhaygaon	Chhaygaon		25411	121628
136.	Kamrup	Goroimari	Goroimari		24026	134387
137.	Kamrup	Chamaria	Chamaria		22989	126604
138.	Kamrup	Nagarbera	Nagarbera		15112	78280
139.	Kamrup	Boko	Boko		23509	111880
140.	Kamrup	Palasbari	Palasbari		50418	239026
141.	Kamrup	North Guwahati (Pt)	North Guwahati (Pt)		10564	48227
142.	Kamrup Metropolitan	Azara	Azara	5	14642	64247
143.	Kamrup Metropolitan	North Guwahati (Pt)			6482	28400
144.	Kamrup Metropolitan	Guwahati	Guwahati		100947	433771
145.	Kamrup Metropolitan	Dispur	Dispur		131101	534872
146.	Kamrup Metropolitan	Sonapur	Sonapur		29840	143371
147.	Kamrup Metropolitan	Chandrapur	Chandrapur		10100	49277
148.	Nalbari	Barama (Pt)		7	2806	13642
149.	Nalbari	Tihu (Pt)	Tihu (Pt)		14472	67656
150.	Nalbari	Pachim Nalbari	Pachim Nalbari		26113	127252
151.	Nalbari	Barkhetri	Barkhetri		38037	202196
152.	Nalbari	Barbhag	Barbhag		13494	67544
153.	Nalbari	Nalbari	Nalbari		32257	154826
154.	Nalbari	Banekuchi	Banekuchi		8228	40559
155.	Nalbari	Ghograpar (Pt)	Ghograpar (Pt)		18305	90376
156.	Nalbari	Baganpara (Pt)			1536	7588
157.	Baksa	Barnagar (Pt)		6	28275	139149
158.	Baksa	Bajali (Pt)			648	2994
159.	Baksa	Sarupeta (Pt)			11332	55011
160.	Baksa	Jalah (Pt)	Jalah (Pt)		17125	81979
161.	Baksa	Goreswar (Pt)	Goreswar (Pt)		30439	153747
162.	Baksa	Rangia (Pt)			2704	14357
163.	Baksa	Barama (Pt)	Barama (Pt)		10238	49715
164.	Baksa	Tihu (Pt)			3690	17508
165.	Baksa	Ghograpar (Pt)			738	3652
166.	Baksa	Baska	Baska		25444	124585
167.	Baksa	Baganpara (Pt)	Baganpara (Pt)		13782	69741

168.	Baksa	Tamulpur	Tamulpur		46802	235403
169.	Baksa	Pathorighat (Pt)			484	2234
170.	Darrang	Khoirabari (Pt)		4	1918	8398
171.	Darrang	Pathorighat (Pt)	Pathorighat (Pt)		21001	95338
172.	Darrang	Sipajhar	Sipajhar		25546	123498
173.	Darrang	Mangaldoi (Pt)	Mangaldoi (Pt)		42840	202435
174.	Darrang	Kalaigaon (Pt)			5500	25246
175.	Darrang	Dalgaon (Pt)	Dalgaon (Pt)		90978	473585
176.	Udalguri	Khoirabari (Pt)	Khoirabari (Pt)	5	16842	81209
177.	Udalguri	Pathorighat (Pt)			235	1008
178.	Udalguri	Mangaldoi (Pt)			1022	4799
179.	Udalguri	Kalaigaon (Pt)	Kalaigaon (Pt)		17710	85616
180.	Udalguri	Dalgaon (Pt)			10368	52627
181.	Udalguri	Harisinga	Harisinga		49584	242676
182.	Udalguri	Udalguri	Udalguri		42617	212360
183.	Udalguri	Mazbat	Mazbat		26899	132773
184.	Udalguri	Dhekiajuli (Pt)			3440	18600
				153	**64,06,471**	**3,12,05,576**

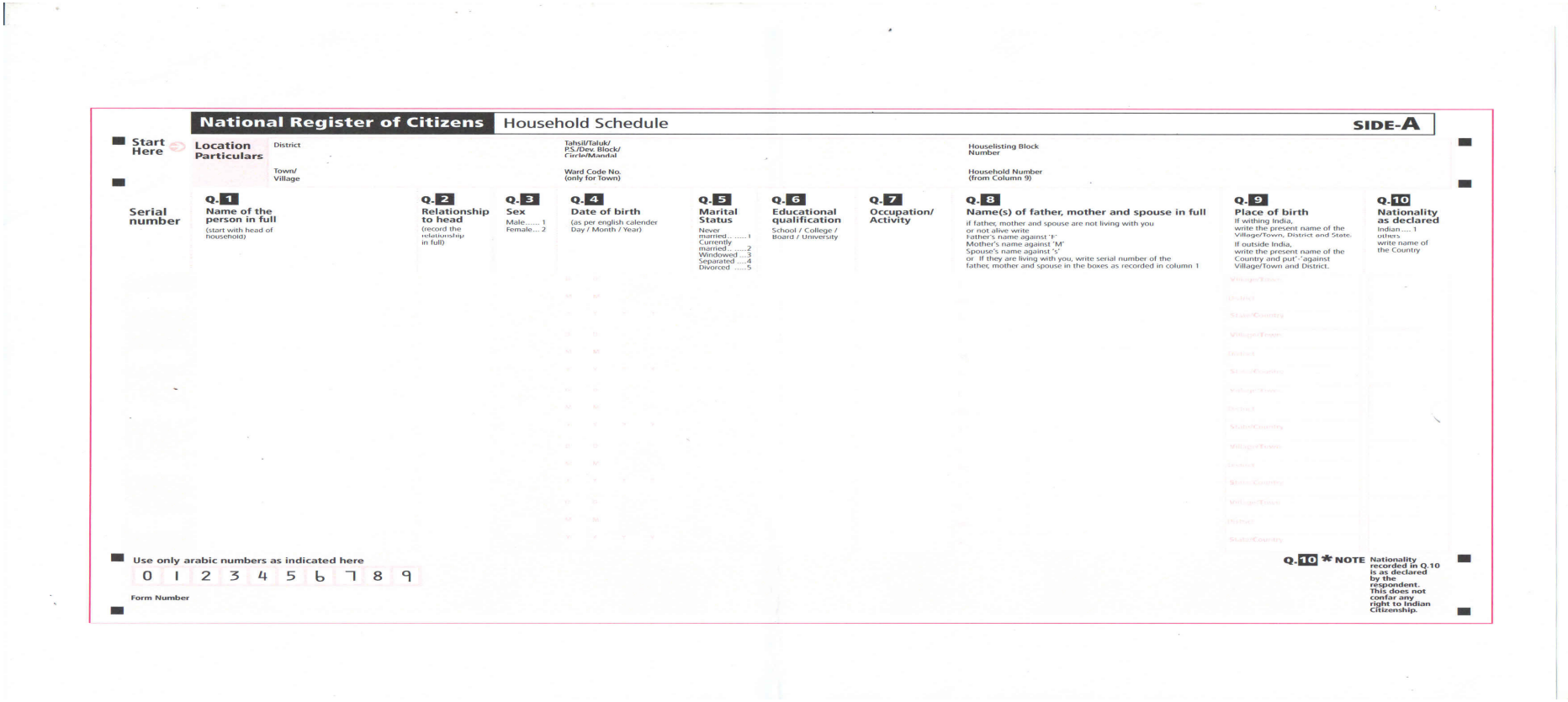
ANNEXURE III – Layout of Proposed site for Data Centre

Layout of proposed site for Data Centre



Area highlighted with yellow is earmarked for Data Centre

ANNEXURE IV – Application Form For Inclusion of Name in the Updated NATIONAL REGISTER OF CITIZENS (NRC)7



National Register of Citizens Household Schedule **SIDE-A**

Start Here

Location Particulars

District

Town/ Village

Tahsil/Taluk/ P.S./Dev. Block/ Circle/Mandal

Ward Code No. (only for Town)

Houselisting Block Number

Household Number (from Column 9)

Serial number	Q.1 Name of the person in full (start with head of household)	Q.2 Relationship to head (record the relationship in full)	Q.3 Sex Male..... 1 Female... 2	Q.4 Date of birth (as per english calender Day / Month / Year)	Q.5 Marital Status Never married.....1 Currently married.....2 Windowed ....3 Separated ....4 Divorced 5	Q.6 Educational qualification School / College / Board / University	Q.7 Occupation/ Activity	Q.8 Name(s) of father, mother and spouse in full if father, mother and spouse are not living with you or not alive write Father's name against 'F' Mother's name against 'M' Spouse's name against 'S' or If they are living with you, write serial number of the father, mother and spouse in the boxes as recorded in column 1	Q.9 Place of birth If withing India, write the present name of the Village/Town, District and State. If outside India, write the present name of the Country and put '-'against Village/Town and District.	Q.10 Nationality as declared Indian..... 1 others write name of the Country

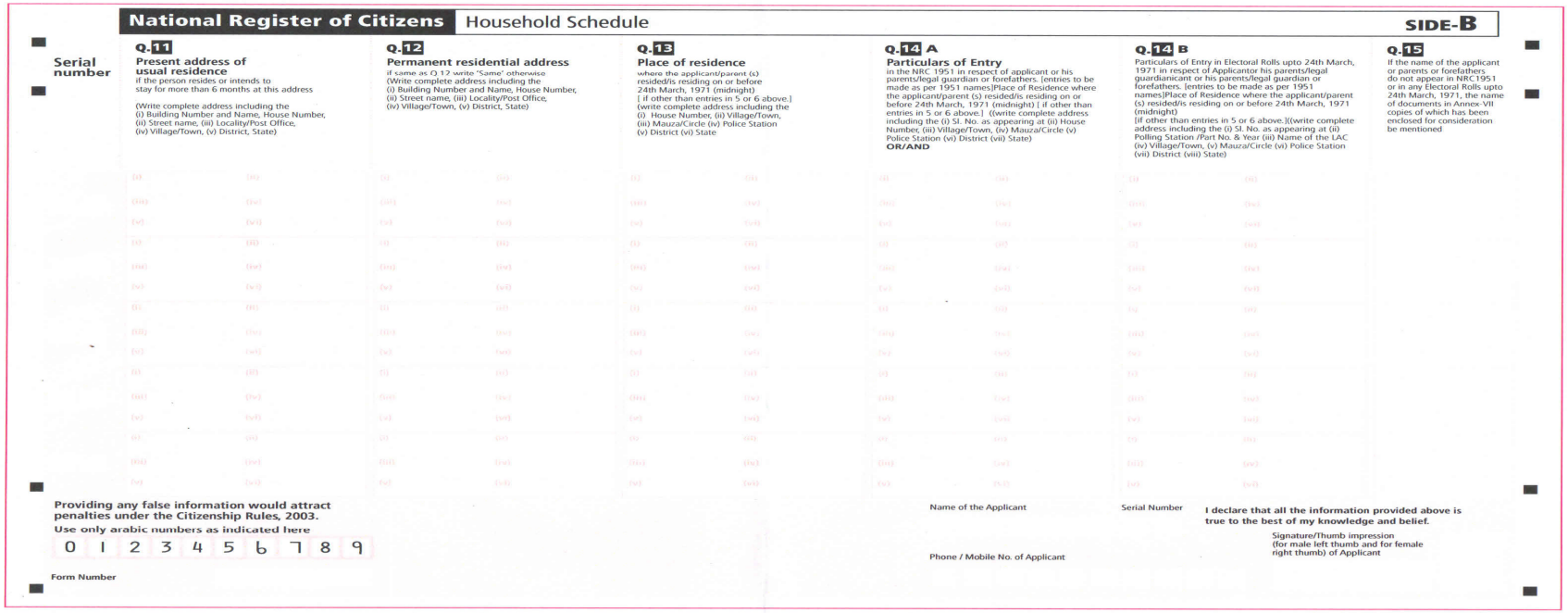
Use only arabic numbers as indicated here

0 1 2 3 4 5 6 7 8 9

Form Number

Q.10 * NOTE Nationality recorded in Q.10 is as declared by the respondent. This does not confar any right to Indian Citizenship.

[7] Application form should have the provision to capture the Applicant's mobile number and unique ID of the DLDD based on which the applicant is establishing citizenship



National Register of Citizens Household Schedule **SIDE-B**

Serial number

Q-11 **Present address of usual residence**
if the person resides or intends to stay for more than 6 months at this address

(Write complete address including the (i) Building Number and Name, House Number, (ii) Street name, (iii) Locality/Post Office, (iv) Village/Town, (v) District, State)

Q-12 **Permanent residential address**
If same as Q 12 write "Same" otherwise
(Write complete address including the (i) Building Number and Name, House Number, (ii) Street name, (iii) Locality/Post Office, (iv) Village/Town, (v) District, State)

Q-13 **Place of residence**
where the applicant/parent (s) resided/is residing on or before 24th March, 1971 (midnight)
[if other than entries in 5 or 6 above.] (write complete address including the (i) House Number, (ii) Village/Town, (iii) Mauza/Circle (iv) Police Station (v) District (vi) State

Q-14 A **Particulars of Entry**
in the NRC 1951 in respect of applicant or his parents/legal guardian or forefathers. [entries to be made as per 1951 names]Place of Residence where the applicant/parent (s) resided/is residing on or before 24th March, 1971 (midnight) [if other than entries in 5 or 6 above.] ((write complete address including the (i) Sl. No. as appearing at (ii) House Number, (iii) Village/Town, (iv) Mauza/Circle (v) Police Station (vi) District (vii) State)
OR/AND

Q-14 B
Particulars of Entry in Electoral Rolls upto 24th March, 1971 in respect of Applicantor his parents/legal guardianicant or his parents/legal guardian or forefathers. [entries to be made as per 1951 names]Place of Residence where the applicant/parent (s) resided/is residing on or before 24th March, 1971 (midnight)
[If other than entries in 5 or 6 above.]((write complete address including the (i) Sl. No. as appearing at (ii) Polling Station /Part No. & Year (iii) Name of the LAC (iv) Village/Town, (v) Mauza/Circle (vi) Police Station (vii) District (viii) State)

Q-15
If the name of the applicant or parents or forefathers do not appear in NRC 1951 or in any Electoral Rolls upto 24th March, 1971, the name of documents in Annex-VII copies of which has been enclosed for consideration be mentioned

Providing any false information would attract penalties under the Citizenship Rules, 2003.

Use only arabic numbers as indicated here

0 1 2 3 4 5 6 7 8 9

Form Number

Name of the Applicant

Serial Number

I declare that all the information provided above is true to the best of my knowledge and belief.

Signature/Thumb impression (for male left thumb and for female right thumb) of Applicant

Phone / Mobile No. of Applicant

ANNEXURE V - Process Stakeholders - Business Process Automation Requirement

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
1.	NRC Seva Kendra NRC Seva Kendra are not envisaged to have MPLS – VPN connectivity	Searches the name of the applicant in the DLDD[8] database and provide applicant, printout of relevant page of the search result. Socio – Economic Caste Census (SECC)	DLDD Application shall be provided by the department which will be installed in the Laptop of the NRC Seva Kendra SECC DB: Department shall provide a database which contains the details of applicants. The NRC Seva Kendra relevant module should access this database and auto-populate the relevant fields.	
		Application Forms Processing: i. Receives application of the applicant ii. Scans the application form iii. Generates a unique number of	Software automation envisaged should have the following features: i. Ability to scan the Application Form ii. Ability to assign a system generated unique id to the scanned application	a. Auto-detect the Third Party media and upload data in an encrypted form. b. Encrypted data should be decrypted only through

[8] DLDD Database shall be provided by the department. This shall be installed in the computer (laptop) in the NRC Seve Kendra

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
		the scanned application iv. Gives barcoded Acknowledgement Slip to the applicant	iii. Ability to save the scanned document in a folder iv. Ability to store the document in an encrypted form v. Ability to print the scanned document along with the bar coded Acknowledgement slip vi. Ability to transfer the scanned document in a Third Party Media in an encrypted form	NRC Application software only c. Print three copies of bar code labels using a bar code label printer. d. Stick one copy of the bar code label in the acknowledgement receipt, one in the original Application form and the third in the folder.
		Claims and Objections Forms Processing i. Receives the application for Claims / Objections from the applicant	Software automation envisaged should have the following features i. Ability to scan the Claims or Objections Form along with the supporting documents	a. Auto-detect the Third Party media and upload data in an encrypted form. b. Encrypted data should be decrypted only through NRC Application

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
		ii. Scans the application **iii.** Generates a unique number of the scanned application **iv.** Gives barcoded Acknowledgement Slip to the applicant	ii. Ability to assign a system generated unique id to the scanned application iii. Ability to save the scanned document in a folder iv. Ability to store the document in an encrypted form v. Ability to print the scanned document along with the barcoded Acknowledgement slip vi. Ability to transfer the scanned document in a Third Party Media in an encrypted form	software only c. Print three copies of bar code labels using a bar code label printer. d. Stick one copy of the bar code label in the acknowledgement receipt, one in the original Application form and the third in the folder.
		<u>Data Digitization at NRC Seva Kendra</u> SECC DB*: Department shall provide a database which contains the details of applicants. The NRC Seva Kendra relevant module	i. Ability to auto populate the applicants data from SECC DB ii. User Interface should have features like predictive search mechanism and facilitate selection of fields from	a. Facilitate transferring data in encrypted form to Third Party media.

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
		should access this database and auto-populate the relevant fields. * Some applicants' details may not be available in the SECC DB. In such cases, complete application form digitization should be done in SI-DEC	the drop down list	
2.	CRCR Office This office may be equipped with MPLS-VPN connectivity	**Application Forms Upload for both:** a. Application Forms b. Claims and Objections	Software automation envisaged should have the following features: **Case A:** CRCR Office does not have MPLS – VPN connectivity i. Ability to scan the Third Party Media and upload the data in the Computer (Laptop) of the office. ii. Ability to synchronize the data to the NRC Application software when connectivity is provided	Case A: CRCR Office does not have MPLS – VPN connectivity Features required: a. Scanned Data brought in Third Party Media should be stored in encrypted form b. Synchronize data with proper date, time and user authentication

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
			Case B: CRCR Office is equipped with MPLS – VPN connectivity i. Ability to scan the Third Party Media and upload the data to the NRC Application Software	Case B: CRCR Office is equipped with MPLS – VPN connectivity Features Required: a. Synchronize data with NRC Application software with proper date, time and user authentication
3.	SI –Data Entry Centre << SI –DEC shall have single node enabled with MPLS – VPN Connectivity for downloading the scanned and	**Download Scanned and Digitized Documents** i. Digitized (Partial) Application forms* ii. Scanned Application Forms iii. Claims and Objections Forms	Software automation envisaged should have the following features: A single computer shall have credentials: i. Ability to log on to the NRC Application software ii. Ability to download the scanned documents (previously not downloaded)	a. Ability to keep a record of the date and time stamp of download

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
	digitized documents and uploading the digitized forms only)	* Some applicants' details may not be available in the SECC DB. In such cases, complete application form digitization should be done in SI-DEC	iii. Ability to download the Digitized (Partial) Application forms	
		Digitization of application forms forms: i. Application Forms ii. Claims and Objections Forms	Software automation envisaged should have the following features: a. Data Digitization Interface should be replica of the relevant form. b. Follow life cycle approach in data entry with minimum two steps viz., Data Entry and Data Quality Assurance c. All data entry (digitization) of the Scanned documents should be stored in the locally in the SI – DEC	a. Download data in encrypted form and decrypt it locally in the SI-DEC server
		Upload Digitized Document	a. Upload Digitized data after due	a. Encrypt the Digitized Data

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
		i. Application Forms ii. Claims and Objections Forms	diligence in Data Quality Assurance, upload the data in the NRC Application Software	before uploading it into the NRC Application Software
4.	NRC – State Date Entry Office	The Data Executive shall access the NRC Application and review the Data Digitized by the SI-DEC	Software automation envisaged should have the following features: A single computer shall have credentials: i. Ability to log on to the NRC Application ii. Ability to download the digitized application forms earlier uploaded by the SI- DEC iii. Ability to keep a record of the date and time stamp of download iv. Perform quality check on the data digitized by the SI-DEC v. Provide comment on the quality of the Data Digitized by the SI-	

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
			DEC	
		Data Analytics using the Business Analytics Tool	Software automation envisaged should have the following features: A single computer shall have credentials: i. Download digitized data in the local server ii. Perform in depth data analysis iii. Generate Reports from these analysis	a. Upload created Business/Data analytic reports into the NRC application software b. These reports with proper Date/Time stamping
5.	CRCR Office This office may be equipped with MPLS-VPN connectivity	**Download Digitized Forms:**	Software automation envisaged should have the following features: Case A: CRCR Office does not have MPLS – VPN connectivity i. Ability to download the Digitized Application form relevant to the CRCR office whenever connectivity is made	a. Download data in encrypted form and decrypt it

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
			available	
			Case B: CRCR Office is equipped with MPLS – VPN connectivity i. Ability to download the Digitized Application form relevant to the CRCR office	
		Document Verification	Case A: CRCR Office does not have MPLS – VPN connectivity i. Ability to download the Digitized Application form relevant to the CRCR office whenever connectivity is made available ii. Ability to verify the documents with the digitized data after making comparison with the original document. iii. Ability to store the data in the local	a. Ability to encrypt and save it in the local machine

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
			machine with regards to the verification of the digitized form	
			Case B: CRCR Office is equipped with MPLS – VPN connectivity i. Ability to verify the documents with the digitized data after making comparison with the original document. ii. Ability to download the document verified Digitized Forms database having suitable interface in the local machine. iii. Ability to transfer the data in Third Party media with proper encryption	a. Ability to encrypt and send the data to the NRC Application Software b. Ability to encrypt the data and store it in Third Party media c. Ability to inter-CRCR, inter-DRCR transfer of the application for verification using proper approval mechanism

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
6.	NRC Seva Kendra << NRC Seva Kendra are not envisaged to have MPLS – VPN connectivity >>	**Field Level Verification** i. The VTs would perform Field Verification about the particulars of the applicants ii. VTs may collect additional supporting documents, if required iii. Make corrections in the form and make relevant updates in the Digitized Forms	Software automation envisaged should have the following features: The Local machine should have the database with suitable user interface of digitized forms of all the applicants falling within it's jurisdiction i. The VT should be able make changes of the applicants particulars in the local machine ii. Ability to scan and upload the additional supporting documents iii. The VTs can make verification outcome based on the survey in the form "Approved or Rejected" in the Digitized Form database with proper remarks iv. Ability to encrypt and store the data in local system	a. The Digitized Form Database at the NRC Seva Kendra should have the ability to synchronize with the latest data sent by the CRCR office after document verification process b. Ability to transfer the data in Third Party media in an encrypted form

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
			v. Ability to transfer the data in Third Party media in an encrypted form	
7.	CRCR Office This office may be equipped with MPLS-VPN connectivity	**Post Field Verification**	Software automation envisaged should have the following features: Case A: CRCR Office does not have MPLS – VPN connectivity i. Ability to synchronize the data in the local computer in CRCR office ii. Ability to review the Field level verification performed by the VTs iii. Ability to review and revise the Verification Outcome "Approve / Reject" and by making relevant remarks for the same	a. All data stored should be in encrypted form b. Ability to synchronize the verification data with the NRC Application Software

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
			Case B: CRCR Office is equipped with MPLS – VPN connectivity i. Ability to synchronize the Verification process data with the NRC Application software whenever connectivity is made available ii. Ability to review the Field level verification performed by the VTs iii. Ability to review and revise the Verification Outcome "Approve / Reject" and by making relevant remarks for the same	
8.	DRCR Office These offices will be equipped with	**Compilation**	Software automation envisaged should have the following features: i. Ability to view the verification of	

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
	MPLS – VPN connectivity		the CRCR verification outcome falling within it's jurisdiction ii. Ability to revise the verification outcome given by the CRCR iii. Ability to resend the application(s) back to CRCR office iv. Ability to send the approved application(s) to the State NRC Coordinator	
9.	State NCR This office will be equipped with MPLS – VPN connectivity	**Scrutiny and Approval of NRC for Draft Publishing**	Software automation envisaged should have the following features: i. Ability to review the Verified Applications ii. Ability to resend the application(s) back to DRCR office	
10.	The Claims and Objections Forms application receipt process has been dealt in the respective rows of this current document. After publishing of			

S.No	Project Stakeholders	Services	Business Process Automation Requirements	Other Requirements
	Draft NRC, it is envisaged that applicants would come with claims and / or objections. Claims and Objections Process would be followed and the outcome would be recorded in the system. **After the completion of Claims and Objections process, records would be updated and "Final NRC" shall be published.**			
11.	Business Analytics: This tool would be used by the department to perform deep insight into the data and generate reports thereof.			