

Annexure 04: Functional Requirements Specifications (FRS) for Extensions to CAS

This FRS specifies the functional requirements of UP Police in terms of state specific extensions to the CAS (State). The UP Police shall implement all the modules of CAS with state specific customizations to be finalized based on the system study to be done by the SI. The bidder may note that though the 'Citizen Centric Portal' is a part of CAS, it would be completely developed by the State SI. The bidder may refer to the SDA RFP and SRS of central SDA (at <http://ncrb.nic.in/cctns.htm>) for a complete description of CAS modules.

The following table details the additional modules/ functionalities to be developed/ integrated by the SI over and above CAS (State) modules.

Sl.	Module Name	Type	Type of Services/ Application	Scope of Work of SI
1.	Citizen Centric Portal	Customization	Web enabled internet accessible Police services to citizens.	Customize the CAS (State) Citizen Portal to the requirement of UP State Police.
2.	Nominal Roll System	Customization	Personnel details of Police Department.	SI shall perform a study of Nominal Roll system and build the appropriate requirements for integration.
3.	Personnel Management System	Customization	Personnel details of Police Department.	SI shall perform a study of Personnel Management system and build the appropriate requirements for integration.
4.	SMS Gateway	Extension	SMS based services to citizens.	To be developed by SI.
5.	Knowledge Repository	Extension	Knowledge base for police department.	To be developed by SI.
6.	FSL Integration	Extension	To streamline the work flow between different divisions of FSL right	To be developed by SI.

Sl.	Module Name	Type	Type of Services/ Application	Scope of Work of SI
			from receipt of samples to dispatch of expert reports, capturing data related to each division Performance monitoring of Mobile Crime Scene teams, etc.	
7.	Logistics Module	Extension	To keep record of all the assets under department, including the assets maintained and owned by the Police Department of the State. These could vary from built up property to office infrastructure and workplace equipment.	To be developed by SI.
8.	Police Station Daily Duty Management Module	Extension	Record the Daily Duty Allocation / Distribution of Work at the Police Station and provide reporting functionality to the Higher Offices	To be developed by SI.

Specification for Citizen Service Portal

The creation of a “Citizen Centric” portal is a significant requirement to improve the delivery of services to citizens. The scope of work with respect to citizen centric portal is provided below:

Specifications for Citizen Centric Portal of UP Police

- Customization of CAS (State) portal provided by NCRB
- The portal shall allow Unicode based multiple languages for all sections including forms, information etc. Hindi and English languages must be supported.
- View upcoming case trial dates (search based on the FIR number or by date)

Specifications for Citizen Centric Portal of UP Police

- Ability to download copies of relevant case documents (FIR, Charge Sheet etc.)
- Ability to view the Status of Passport Verification with Police
- Detailed Procedures, service levels and forms (downloadable) for availing the following general services (Only a sub-set of following services are enabled for the citizen to submit the application through the portal. However, the detailed procedures and forms should be available for all the below general services.)
 - Certificate for a lost document
 - Certificate for a lost cell phone
 - Character Antecedent Verification
 - No-objection certificate for job
 - No-objection certificate for Vehicle
 - Senior Citizen Registration
 - Maid Registration / Verification
 - Tenant Verification
 - Submission of Information on Locked House
 - Non-Traceable Certificate
 - Permission for Crackers
 - Arms License (Fresh application as well as renewals)
 - Cinematography License (Fresh application as well as renewals)
 - NOC for Establishments such as Hotels, Cyber Cafes, Restaurants (Fresh application as well as renewals), and other commercial entities (public resorts)
 - NOC for installation of Petrol Pump (Fresh application as well as renewals)
 - Permission for Film Shooting
 - Permission for Public Meetings / Processions / Dharnas / Rallies / Loud Speakers
 - Any other services as specified by the State
- The Portal solution shall provide MIS reports on all portal transactions.

Architecture of UP Police CCTNS Portal

The components of CAS (State) – UP Police Portal, CAS (State) Application, UPSWAN and SDC are interdependent on each other for achieving the overall integrated service delivery objectives.

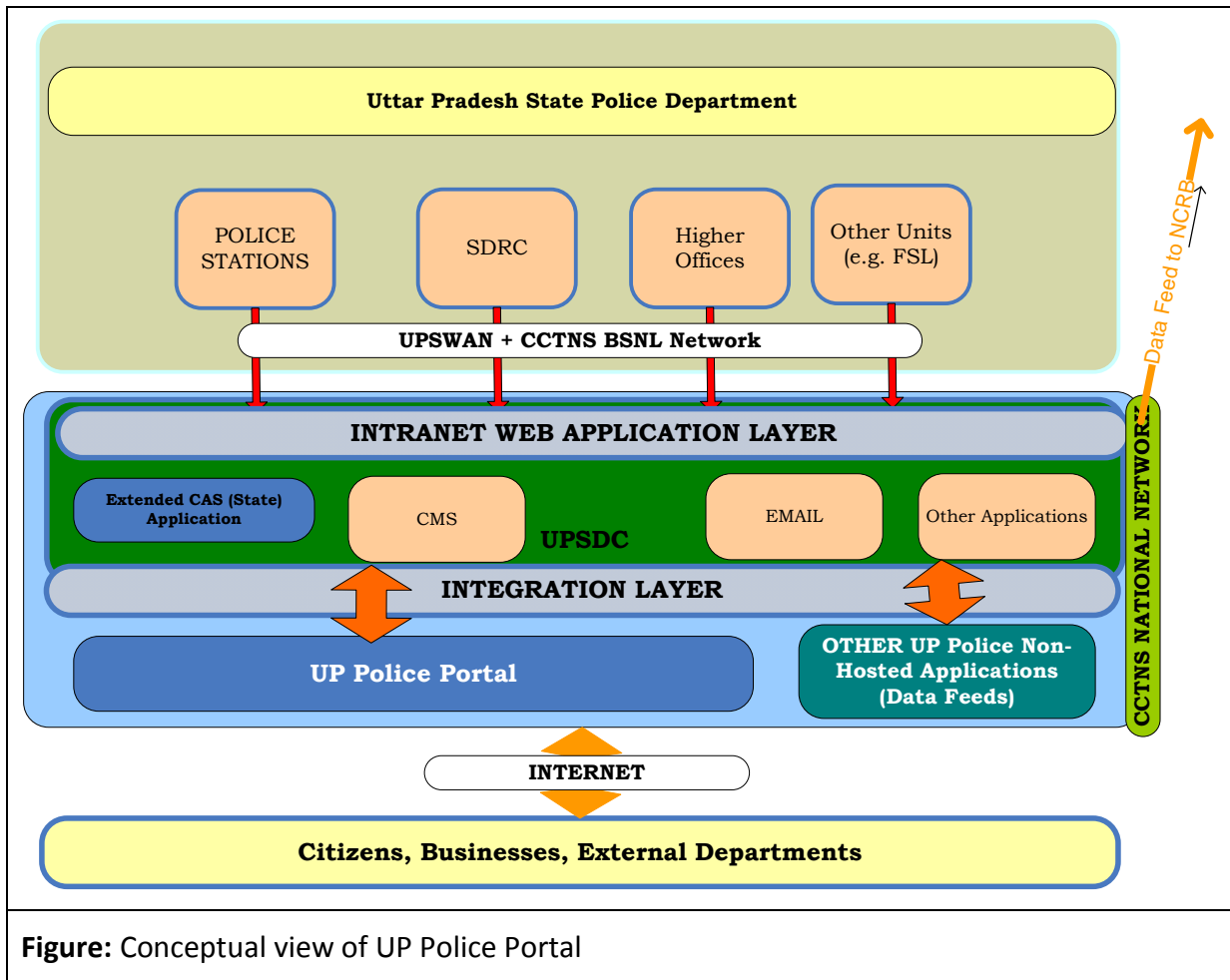


Figure: Conceptual view of UP Police Portal

Citizens, external stakeholders as well as the external departments (e.g. RTO) may access the portal, which is hosted in the UP SDC. The following paragraphs highlight the overarching requirements of UP Police Portal

Overarching Requirements of UP Police CCTNS Portal

The System Integrator should clearly understand *that the desire of the UP Police is not to create a web-site but an integrated information infrastructure that will expand, integrate and enhance the functional needs of the UP POLICE*. The design of such a comprehensive solution requires the judicious use of technology combined with foresight and a desire to

create a best-in-class solution. It is in this spirit that the following core design and functional requirements are elaborated below:

- i. **Alternative & Integrated Channel for Service Access** – The UP Police Portal is expected to serve as an important and critical service access channel. The Portal is an alternative but interlinked channel for access to UP Police services where any citizen desirous of availing a service may register and make a request and generate an acknowledgement/complaint number. The acknowledgement/ complaint number thus generated would serve as a link and reference if the same is used for e.g. in a Police Stations to submit relevant documents.
- ii. **Service Completion**– The objective of the UP Police Portal should be delivery of the service from initiation to completion wherever possible. The System Integrator (SI) should make every effort to design the services so that a citizen should be able to enter the portal, through any channel, perform required tasks which may involve single or multiple back-end interactions and transactions and complete his service through the portal. In this sense the portal is much more than a single information source; which directs the end-user toward various completion channels and informs of the next step.
- iii. **One Time Authentication** – The System Integrator must design the portal to enable single-sign-on so that any user once authenticated and authorized by the portal would not need to be re-authorized for completing any services. The SI may keep user history and data to enable the process during the session.
- iv. **Anywhere, Anytime Services** – The portal, SMS Gateway would enable and allow access and completion from anywhere, anytime. Though the portal and UPSDC are accessible through the internet and the intranet, the design should be simple, configurable, and easily modifiable to fit the requirement of various devices for e.g. Tablet PCs, Smart Phones and Feature Phones.
- v. **Creation of a Unique Registration/ Complaint/ Acknowledgement/ Response number** – The portal solution should facilitate the provision of a Unique Number for all those who access UP Police Portal Services for each service/ transaction which will be linked across service channels:
 - o SMS Gateway
 - o Police Stations
 - o Any new channels added
- vi. **Service Oriented Architecture (SOA)** - The UP Police Portal design should conform to an application development and integration methodology based on a Service Oriented Architecture (SOA), and the integration methodology should be based on XML/ Web Services/ W3C compliant standards.

- The solution should be architected to ensure that current and new services/applications from UP Police can be seamlessly integrated into the proposed and implemented solution architecture with minimal impact and changes.
- vii. **Scalability** - One of the fundamental requirements of architecture for UP Police Portal is its scalability. The architecture should be proven to be highly scalable and capable of delivering high-performance as and when the volumes increase. The portal should also be designed for seamless and effortless integration with the CAS (State) application such that new services can be added with relative ease at the UP Police Portal.
- viii. **Security** - The systems implemented for the project should be highly secure, considering that it is intended to handle sensitive applications relating to citizen data and Police records. The overarching security considerations are described below:
 - The solution should provide for maintaining an audit trail of all the transactions and all entries into the system. The portal security solution must be capable of comprehensive logging of the transactions and access attempts to the resources/applications through the portal. It should be capable of logging transaction history, unauthorized access attempts, and attempts to login that fail. It should also be capable of notifying appropriate parties of suspicious activity.
 - The solution shall be designed to support advanced user authentication mechanisms including Digital Certificates
 - The solution should handle errors due to communication failure, hardware failure, etc. and roll back the changes appropriately so that transaction consistency is maintained at all times.
 - The overarching requirement is the need to comply with the latest ISO 27001 standard of security
 - The solution must use encrypted communication between its components and the CAS (State) application/ portal databases. The solution must provide compatibility with industry standard encrypted network traffic, which may be used to transmit critical data (e.g. HTTP over SSL, and LDAP over SSL etc).
 - The portal security solution must provide for session settings such as idle or max session time-outs, concurrent sessions and other session control settings.
 - The portal solution must have the ability to perform password management functions including: controlled password expirations, minimum password lengths, and enforcement of alphanumeric password standards, password history logging, and user lockout from failed login attempts.

Non-Functional requirements of UP Police Portal

The UP Police Portal is aimed as a single point of access for all the services offered by Uttar Pradesh Police Department.

- i. **Branding:** The 'UP Police Portal' must standardize the look & feel of the solution, in concurrence to the local factors & Government requirements, specifically regarding the use of images and colours;
- ii. **Other Government Portals:** The 'UP Police Portal' should provide links to other Government online resources
- iii. **Open Standards:** The 'UP Police Portal' should make use of open standards such as protocols, languages (e.g. XML) and applications, where appropriate. This should help protect the site and technology against redundancy;
- iv. **Browser Compatibility:** The portal should be displayed correctly in the latest version of each of the commonly available and popular web browsers, including Internet Explorer, Chrome, Mozilla etc; The Web Portal security solution must not mandate the use of additional client software for web access, other than a standard web browser. In case any specific application requires the use of such a component, it should be made available on the portal for a free download by the end-users (e.g. Adobe Acrobat).
- v. **Usability reviews:** The design should also take into consideration the results from more detailed discussions held with users regarding their expectations in using the portal. This shall be performed through feedback mechanisms targeted at users registered with the portal, e-mails received from citizens/businesses; survey conducted by the SI targeted at the specific stakeholder communities.
- vi. **Search Functionality** - 'UP Police Portal' is aimed as a repository of Information & services related to UP Police and eventually will contain volumes of information, making it difficult for users to locate the information they require. Portal shall provide efficient search functionality through the automatic categorization and indexing of the content, services, documents etc.

Requirements for SMS Gateway services

The SMS gateway / Mobile services shall provide most of the services of the Portal over SMS and through a mobile browser. The scope of work for the bidder includes the following:

Requirements for SMS Gateway Services

Requirements for SMS Gateway Services

- 1 Installation and commission of an SMS Gateway to provide SMS based services till the end of the contract period.
- 2 The bidder shall design, code, build, procure the required hardware/ software, install, operate, manage content and provide the SMS based services on a continuous basis.
- 3 The bidder shall get prior approval of the UP Police and UPPTS committees on the services to be provided before commissioning the SMS Gateway.
- 4 The bidder shall plan and provide informational and transactional services through the SMS Gateway.

- 1 Allow user (citizens) to access list of Citizens' Services via SMS
- 2 Allow users (citizens/petitioners) to search for their request on the basis of Service Request/ Acknowledge/ Complaint number.
- 3 Display petition/service request details and status on the screen based on the user search
- 4 Allow the citizen to get the phone number, address and other relevant details of Police Stations, PCR etc.
- 5 Allow the citizen to input his location and get the location of nearest Police Station.
- 6 Allow the citizen to input his location and get the number of an assigned Local Police personnel.
- 7 Allow the Police personnel to get basic FIR details (for a FIR already filed) through SMS.
- 8 Allow UP Police personnel to get vehicle details through SMS (the data would be generated through RTO).
- 9 Allow UP Police personnel to get basic case information through SMS.
- 10 Allow Citizens to subscribe to various broadcast service (e.g. traffic information) through SMS
- 11 Allow citizens to receive alerts through SMS on their case if service time have breached through registered mobile number during case filing
- 12 Allow citizens to receive alerts on status of their cases or on query
- 13 Allow interfaces and response in Hindi and English
- 14 Allow citizens to register their mobile numbers to receive SMS alerts

The bidder is expected to continually improve the number and quality of the services through SMS during the period of the contract.

Requirements for Knowledge Repository

As a part of scope of work, the bidder is expected to build a computerized intranet enabled knowledge repository which shall capture, classify, organize and store the inherent knowledge of UP Police. The objective of the knowledge repository would be to improve and extract knowledge, particularly with respect to crime related functions and procedures.

Knowledge Repository

- 1 Creation of a UP Police Knowledge Repository (KR) and operate and manage the same till the end of the contract period.

Knowledge Repository

- 2 The bidder shall design, code, build, procure the required hardware and software, install, operate, manage content and update the KR on a continuous basis.
- 3 The bidder shall get prior approval of the UP Police and UPPTS committees on a prototype designs and content before building the complete KR.
- 4 The KR shall contain factual, conceptual, procedural and meta-cognitive data. The KR shall enable content in different media including written, audio-visual & simulation.
- 5 KR should be a web-enabled application over the intranet and should be accessible through a link from CAS (State) Application.
- 6 UP Police shall provide content for KR including manuals, procedures, processes etc.
- 7 A user should not be required to re-login into the KR if she/he is already logged into the CAS (State) Application.
- 8 The KR data should be managed thorough a Content Management System.
- 9 The KR should have all the acts and rules, notifications, Government Orders relevant to Police Work including all central and state laws in searchable .pdf format. The .pdf formats shall be provided by UP POLICE.
- 10 All data imported or entered into the KR should be searchable.
- 11 The KR shall have an 'Expert Opinion' section with information on various procedures.
- 12 The KR shall have a collaboration tool where user should be allowed to post queries to be answered by their peers.
- 13 The users of KR shall be able to upload content. All content, other than queries, shall go through validation by a Content Management Committee to be setup by UP Police.
- 14 The KR shall have updated Governance Information and Department information.
- 15 The portal shall provide contact details, all police station details, all police station /higher offices contact details.
- 16 UP Police shall setup a procedure where all new content generated by Office of the DGP or other relevant offices (e.g. adding of new police stations) is updated in the KR within 7 days.
- 17 The KR shall have special users/ groups with administrative privileges to update / change the content. Content deletion shall require the approval of the Content Management Committee. The vendor must create a information, review, verification & proof-reading process for updating the KR.
- 18 The KR shall have online forms/ application link for various internal procedures – leave requests, transfers etc.
- 19 The KR shall have a:
 - FAQ
 - Provide RSS feeds
 - What's New Section
- 20 The KR shall have 'Accessibility Section' with:
 - Accessibility Features
 - Client side CSS
 - Text size modifications
- 21 The KR shall allow Unicode based multiple languages for all sections including forms, information etc. Two language must be supported:
 - English
 - Hindi

Knowledge Repository

- 22 The KR shall be designed to be accessible to the handicapped or people with disabilities. The vendor shall ensure that content:
- Readable by screen readers
 - Provide captioning wherever required
- 23 The bidder shall operate, manage and enable growth of KR during the period of the contract.

Requirements for FSL Integration Module

The requirements for integration of Forensic Science Labs (FSL) – DNA Databank sub-module are provided below. The SI shall perform a System Study of the FSL processes and design the functionalities of FSL module. The FSL shall be design and developed by the SI and shall become a part of CAS (State) for UP.

FSL Integration Module

FSL Integration Sub Module

- Should maintain database of missing persons, unidentified dead bodies, offenders and suspects (with case details E.g. FIR number) along with their DNA profiles.
- Should be able to add new DNA profiles along with details of reported convicts/ suspects/ missing persons (or their parents/ siblings), Unidentified dead bodies/ any other person.
- Should be able to add data relating to unnatural deaths, unidentified dead bodies, missing persons' data automatically from the Citizen Portal Database and Registration module.
- Should have linkage with all the other databases maintained for searching match (missing persons/ unidentified dead bodies/ convicts and criminals) against the DNA profile obtained.
- Should have the facility to compare and cross match the DNA Profiles stored in the database.
- Should be able to link/ cross match DNAs of past crime/ criminal activity and generate reports (exact and relaxed match).
- Should have the facility to update the registration and Investigation module on the basis of the DNA matching result
- Should have provisions of making recommendations based on the search results by FSL team

- FSL team should only have access to the results of DNA profiling and search exercise.

Requirements for Logistics Module

The requirements for integration of Logistics Module are provided below. The Logistics Module shall be design and developed by the SI and shall become a part of CAS (State) for UP.

Logistics Module

1. System should have the inventory status (Receipt/ Issue/ Store Holding) of all type of assets including vehicles, arms and ammunitions, land & buildings, radio and IT equipments, other movable items, consumables and the goods and property stored in the "Malkhana" in the Police Station (Head wise and Sub Head wise).
2. System should allocate unique asset no. to every asset based on their category like computer system, laptop, car, arms etc. The unique number should be meaningful and indicate head, subhead, year of purchase etc.)
3. System should provide a detailed maintenance management service – date, time, permit no., asset no., bill no., cost of maintenance etc of assets sent for maintenance
4. System should have the option to check the availability of an inventory in the Organization
5. System should allow allocation of the office inventory to departments /projects on the basis of requirements
6. System should allow monitoring of inventory issued to individual members of the service (especially Gazetted Officers) with the due date. Should also generate annually the list of inventory with each official for his information and acknowledgement
7. System should allow to generate letter for purchase/ permission approval of new office inventory
8. System should be possible to maintain the approval process hierarchy for these letters
9. The system should have the provision to monitor the condition of assets/equipment and components and in case of motor vehicles assist in periodic vehicle maintenance.
10. System should provide actual status of asset holdings with each officer or a class of officers for seeking acknowledgement
11. System should be able to generate No Dues certificate at the time of superannuation of officer, once the asset holdings have been submitted in the Store
12. System should capture details of insurance/ warrantee/ AMC of each asset

Logistics Module

for periodic checks and necessary action

13. System should generate alerts for periodic maintenance/insurance renewal/ AMC renewal, etc. for each asset
14. System should be able to capture the Purchase Terms & Conditions of each asset, which should be available for reference of Police Units
15. In case of purchase of assets, system should capture details of its receipt in store and further issuance or delivery to a specific location.
16. Once the asset has been received by an individual or by a Police Unit, system should be able to capture the acknowledgement from the concerned and generate receipt
17. This module must be configured for the Police Station "Malkhana" to keep track of the property deposit and property releases.

Police Station Daily Duty Allocation

1. System should have the functionality to input and submit the daily duty allocation for all police personnel at the Police Station level.
2. System should have the view functionality of this by all higher offices.