

2. Suggested Requirements for State Portal

State Portal will act as the electronic face of the government. It will be the single source of information for all government matters and will provide a single window interface for all transactional government services for citizens, businesses and overseas people. All State Portals are expected to provide similar functionality with a similar user interface. However in exact terms portal functionality may vary from state to state.

Core functionality provided by the State Portals would include (but not limited to) the following provisions:

- a. Provide information
 - i. About government departments, government organization etc.
 - ii. Related to government structure in the state, budget, key notifications, government schemes etc.
- b. Provide transactional government services
 - i. For citizens, business establishments and overseas people
 - ii. From all government departments and organizations
- c. Deliver all government services in integrated fashion.
- d. Provide electronic submission of application forms for various services from government departments and organizations.
- e. Provide status reporting, status inquiry and acceptance of payments.
- f. Provide multilingual content; primary languages would be state language and English, optionally in national language Hindi.
- g. Provide access to State Portals from kiosks, common service centres, government service delivery counters as well as comforts of home and office over Internet using personal devices such as desktop computers, mobiles phones and PDAs.
- h. Provide content personalization, self service, portal usage reporting etc.
- i. Provide web based interface for content authoring, submission, publishing and management to various government departments and organizations so that they can easily contribute content.
- j. State portal would be highly available, responsive, scalable, secured, interoperable, user friendly and accessible to one and all.

The sub-sections mentioned below provide further details on informational, services, functionality and architecture related requirements.

2.1. Information Categories

State Portal should provide wealth of information on government matters and subjects of general public interest. It should work as the single source of information for all matters related to the state government. Following are the suggested categories of information to be provided on State Portals: -

S.No	Information Categories
1.	About State government, Departments, Organisations
2.	Sector/ Regional profile
3.	Programmes and Schemes
4.	Services
5.	Application forms
6.	Acts and rules
7.	Documents and Reports
8.	Circulars and Notifications

9.	Tenders
10.	Recruitments
11.	News and press release
12.	Contact details
13.	Events/Announcements
14.	Discussion forums and chat rooms

Refer "Scope of Content" section for further explanation on these information categories.

2.2. Transactional Government Services

State departments and other state government organizations provide number of services. Information about these transactional government services as well as interface to access and use them should be made available. It may be challenging to make all these transactional government services accessible over internet. In practice it would happen in phases. Following is the suggested list of transactional government services, which should be made accessible on State Portal. State would define required list of services.

S. No	Name of the Service	Department Name
1.	Registration and Issuance of Birth Certificate	Municipal Corporation / Panchayat
2.	Registration and Issuance of Death Certificate	
3.	Immovable Property tax collection	
4.	New Water Tap Connection	State Water Board
5.	Collection of Energy Charges	State Electricity Board
6.	New Electricity Connection	
7.	Enhancement of existing connection into higher load connection	
8.	Dues list / Duplicate bill generation	
9.	Complaints Registration	
10.	Issue of Non- Encumbrance Certificate	Registration
11.	Issue of Certified Copy of documents	
12.	Registration of vehicles	Transport
13.	Payment of vehicle taxes	
14.	Learner's license	
15.	Driving license	
16.	Vehicle Information	
17.	Application for new Ration Card	Food Public Distribution and Consumer Affairs
18.	Inclusion/Deletion of Names, Change of address	
19.	Application for caste certificate	District administration
20.	Issue of copy of FIR	Home/Police
21.	Results of all state level exams such as a. Secondary School Certificate b. Higher Secondary School Certificate c. Medical Entrance Examination d. Engineering Entrance Examination	Exam results

S.No	Name of the Service	Department Name
	e. Management Entrance Examination f. Post Graduate Entrance Examination g. State Service Commission etc.	

2.2.1. Web Form Services

Some of the state departments, which are yet to adopt computerization and automate their processes, would directly use Web Form services based approach to provide services on State Portal. In such a case services will not be interacting with any departmental applications. They implement all the required functionality as part of the service. As far as E-Form application under this project is concerned, it has to use the SSDG as the middleware. The application architecture will be as per the Appendix C.

2.3. Portal Functionalities

In addition to transactional government services and wealth of information State portal would provide number of features, facilities or functions for citizens. These features would be essential to provide rich user experience. State Portal would provide the following functionalities:

S.No	Functionality	Description
1	Metadata replication	Implement a service as per defined standard functionality for replicating metadata from state portal content repository to consolidated content repository. State portal is required to comply with defined standard for content taxonomy, metadata and master data.
2	Content management	Provide web based interface for content authoring, submission, review, approval and publishing. All government department and organizations should be provided requisite access so that they can contribute content with ease.
3	Full text Search	Provide facility to search state portal content based on full text search approach.
4	Metadata based search	Provide metadata based search facility to search State Portal content.
5	Information browser	Provide explorer type interface for browsing all information, which is published on the State Portal.
6	Personalization	This includes user specific customizations such as display themes, customization on home page etc.
7	Portal usage reports	Provide various reports related to usage of portal. This will help to analyze user behaviour and content of interest to users.
8	Self service	This includes user registration, user profile management. Certain services and functionality may be provided only to registered users.
9	Notifications	Registered users should be able to subscribe to specified type of content categories. Whenever any content of subscribed categories gets published subscribed users should be notified by means of email.
10	FAQ	Provide frequently asked questions and answers on various topics of general public interest.
11	Portal administration	This includes administration functionality for user management and application administration.

12	CSC locator	This application should help users to locate a common service centre nearest to place of their interest.
13	Government office locator	This application should help users to locate a government office based on department, type of service, place etc.
14	Send a email to government	This application should allow registered users to send an email to desired government department.

2.4. Architectural Requirements

Architectural requirements define the overall qualities or attributes of the system. They place restrictions on the system and processes and specify external constraints the system must meet. In general, functional requirements define what a system is supposed to do whereas non-functional requirements define how a system is supposed to behave or operate.

This sub-section explains suggested architectural requirements for the State Portals. Specific architectural requirements would vary from state to state based on the factors like:

- a. Exact portal functionality
- b. Volume of content
- c. Nature and number of Transactional Government Services
- d. Capital and operational budget
- e. Usage frequency etc.

2.4.1. Performance

Performance implies responsiveness of State Portal. State portal should be responsive. Care should be taken so that users should not be forced to unduly wait for page displays. Size of pages should be such that even on low bandwidth satisfactory internet connections response time are maintained.

Following is the suggested approach for defining response time or performance requirements.

“[P] percentage of requests to be responded, within [T] seconds, when [N] page requests per second are submitted by, [M] number of concurrent users”

Suggested values are as follows:

[P] : 90% to 95%

[T] : 5 to 15 Seconds (as measured on server side)

[N] : 50 to 200

[M] : 10 to 50

2.4.2. Scalability

State portal should be scalable. It is expected that load on State Portal would increase with time and on specific events such as declaration of exam results , Announcement of New Policies, Annual Budget etc. State portal should be able to service significant increase in load or page requests, without noticeable degradation in performance, by means of deploying additional hardware but without making any changes to existing code.

State Portal must be scalable. There must be a well defined capacity management plan, clearly specifying hardware changes to be made for servicing increasing load.

2.4.3. High Availability

State portal should be highly available. State portal implementation should ensure that portal as a whole withstands failure of individual components. Further care should be taken to protect it from any system failures.

2.4.4. Portability

State Portal should ensure portability of Data & Content on any Platform as per the discretion of the state. Portal must be built using Open standards & provide interoperability with other platforms.

2.4.5. Extensibility

Extensibility refers to the ability to add new functionality without requiring major changes to existing code. State Portal should be extensible to adopt following types of changes with minimal or no changes to existing code:

- a. Providing new categories of information
- b. Deleting existing categories of information
- c. Providing new content publishing workflows
- d. Significant growth in content objects
- e. Providing new transactional government services
- f. Deleting existing transactional government services
- g. Providing new functionality or feature or services

2.4.6. Multi Lingual User Interface

State Portal should support content in multiple languages. All information must be displayed in at least English, Regional language and optionally in National language Hindi.

2.4.7. Interoperability

Interoperability refers to the ability of State Portal to work with other systems and products without significant effort. State Portal need to provide interoperability with following systems and products:

- a. National Portal
- b. Departmental applications
- c. Website of state government departments and organizations
- d. COTS products which may be used for implementing State Portals, such as Web server, Content management systems, Application server, Database server, Directory server etc.

2.4.8. Universal Accessibility

The term 'Universal Accessibility' refers to making a website accessible to ALL irrespective of technology, platforms, devices or disabilities of any kind. In other words, State Portal should consider the needs of a broad spectrum of visitors, including general public, specialised audiences, people with disabilities, those without access to advanced technologies, and those with limited English proficiency. Detailed guidelines are provided in the document "Guidelines for Indian Government Websites" of Data Centre and Web Services Division of NIC. This document is available at <http://web.guidelines.gov.in>. State Portal should comply with these guidelines.

2.4.9. Security

2.4.9.1. Application Level Security

Following are the suggested application level security requirements:

- a. Implement security as per the defined security policy.
- b. Public content should be accessible to all users where are secured content should be accessible to only authenticated users.
- c. Sensitive data should be stored in a secured manner.
- d. Integration with third party security tools should be supported.
- e. Single sign-on should be provided for accessing all services and information.

2.4.9.2. Infrastructure Level Security

Following are the suggested infrastructure level security requirements:

- a. Preventive solution for detecting and preventing threats such as viruses, intruders etc. should be implemented.
- b. Security audits should be performed as per the defined security policy.
- c. Data center of State Portal should have adequate physical security so as to allow entry only to authorized persons.
- d. Must establish, maintain, and effectively implement plans for emergency response, backup operations, and post-disaster recovery to ensure the availability of critical information resources and continuity of operations in emergency situations.
- e. Establish an incident handling capability that includes adequate preparation, detection, analysis, containment, recovery, and user response activities; and track, document, and report incidents to appropriate officials and/or authorities.

2.4.10. Access Points and Access Devices

Following are the suggested access points and access devices related requirements:

- a. All popular web browsers such as Internet explorer, Firefox etc. should be supported. State would define specific browser versions required to be supported.
- b. Primarily access devices would be desktop and laptop computes. However other devices such as mobile telephone, PDA etc. would be supported in future.
- c. Some of the functionality of transactional government services such as viewing status should be supported on mobile telephones. State would define exact functionality required to be supported on mobile telephones and specific mobile browser version to be supported.
- d. Should be accessible from common service centers.