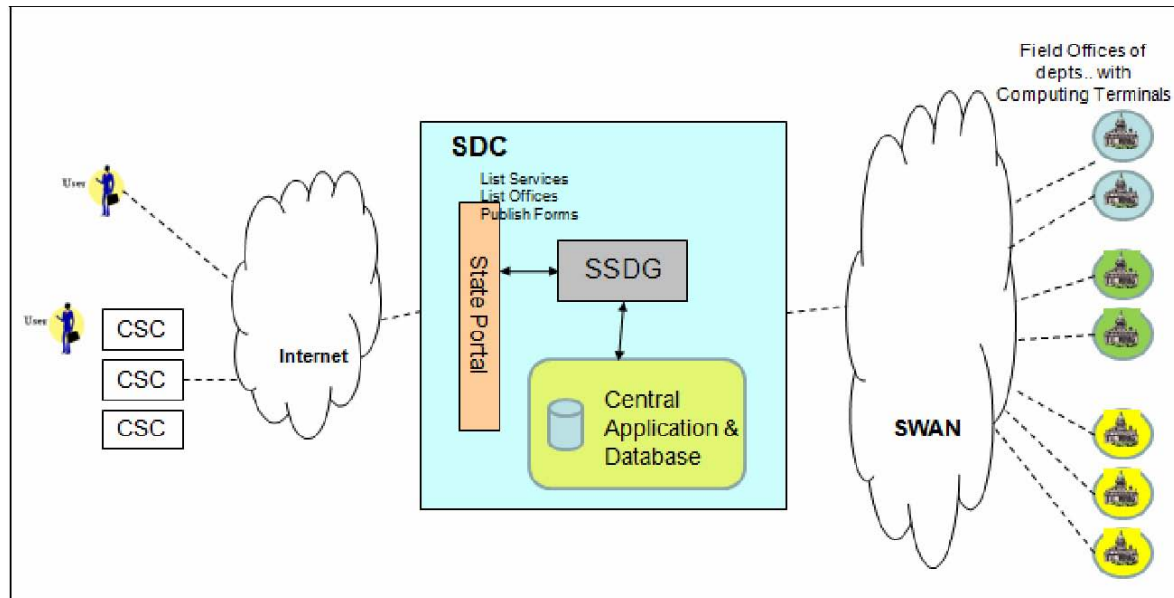


## Appendix C.

### Architecture for Service Delivery through Electronic Forms

The project aims to immediately provide the facility for citizens to submit online form for the services identified by the state. Subsequently, the citizen must be able to check the status of his/her application online. These submissions and status tracking can be done through the CSCs or through the State Portal directly.

In order to achieve the above-said objective, following top-level architecture, modules and flows are being proposed:



**Figure 1: Top-level Architecture**

**1. State Portal** – This will be the front-office for all the form submission and status tracking activity and will be hosted at the State Data Center (SDC). Exact specifications and guidelines for development of state portal, content management framework etc. will be shared by NIC. All the forms for the departments/ services identified by the State under this project shall be converted to e-forms and hosted on the State Portal. These e-forms should adhere to the following guidelines:

- a. Establishing user friendly format and maintaining consistent look and feel in the electronic forms
- b. The common fields in all the e-forms for various services MUST follow the metadata standards as laid out by the Standards Working Group, DIT, Gov. of India.
- c. There MUST be a field for UID (Unique Identification No.) in all the forms to cater to the future scenario wherein all the citizens will have a UID for unique identification and authentication

- d. Developing the process & infrastructure for monitoring the status of application through a Citizen Contact Centre: use of IVRS, SMS

Once the forms have been digitized and converted to e-forms, these forms could either be:

- a. downloaded at the CSC terminal, filled-in by the citizen, and submitted on the portal, along-with a scanned copy of all the necessary documents to be submitted along-with the application,
- b. OR, be filled online (on a CSC terminal) at the portal itself, along with scanned copies of all the necessary documents to be submitted along-with the application.

Upon submission,

- a. Pre-validation of the submitted e-form will be performed at the State Portal (level and extent of pre-validation possible will depend on the nature of the form).
- b. Post pre-validation, the e-form, along-with all the attachments will be appended as a <Body> element of the IIP/IIS message structure (Ref: IIP/ IIS specifications).
- c. With the help of Connectors for SSDG, an IIP/IIS specific message will be created (with requisite <ServiceId> parameter - refer: IIP/IIS specifications) and sent to the SSDG interface.
- d. Upon receipt of an acknowledgement (containing the unique application id) from SSDG, the same must be printable so that the acknowledgement of successful submission of application can be given to the citizen by the CSC operator.

**2. State e-Governance Service Delivery Gateway (SSDG)** – This is the middleware that is being positioned in all the States/ UTs and also at the national level ([www.nsdg.gov.in](http://www.nsdg.gov.in)) as a soft-infrastructure piece for the delivery of e-Governance services. This purpose of this middleware is to de-couple the front-end and the back-end in the delivery of services to ensure scalability, inter-operability between heterogeneous systems, authentication, ensure assured delivery, message routing, transaction logs, audit trails, time-stamping etc. and in future also provide for joined-up and integrated services. This middleware has a larger scope than being used just this project and will lead to convergence of the proposed model with the other MMPs (like e-District) as and when they are realized. SSDG will be hosted in the State Data Center (SDC).

Once the IIP/IIS message packet (from the State Portal) reaches the Gateway, after performing necessary operations like authentication of the sender (in this case the State Portal), timestamping, logging etc., the Gateway will route the message to the Central Application. In case some departments have their own centralized server, this message can be routed to that server, based on the information registered in the gateway.

In all its operation, the Gateway will not open/ read the contents of the payload – i.e. the submitted e-form.

**3. Central Application** – This is in application that will be developed specifically for this project and will be hosted at the State Data Center (SDC). This application will provide the following functionality:

- a. Centralized data repository for field offices of the various departments identified under this project, wherein all the submitted e-forms (along-with the requisite attachments) are stored in field-office/ department specific data stores. This compartmentalized central database will provide requisite access control mechanisms so that data of a particular department is not exposed/ accessible to other department etc. Appropriate security, data backup and disaster recovery also need to be in place.
- b. Generation of unique Application ID and automated sending of acknowledgement once the submitted form has been received and logged-into the database. This unique Application ID will be used by the citizen to track the status of his/her application. Sending of acknowledgement will be via SSDG, to the State Portal.
- c. Facility for operators at the Field Offices of the different departments to log-in to the application using specific credentials (username/ password), view the forms intended to be processed at that particular field office, download the form on their terminal for printing and update the status of application.
- d. MIS for the concerned departments whereby they can get information regarding the number of applications submitted status of each of those applications etc.
- e. Status reporting at various levels possible like
  - Submitted and awaiting action by the concerned officer (When submitted at the Central Application at SDC)
  - Under process - When the Form is viewed by the concerned departmental officer and printed
  - Processing complete. Documents can be collected from ....
  - Others Status levels to be identified
- f. In terms of interface level requirement from the central application with SSDG, the Central Application will expose web services for submission of e-forms and for status tracking.
- g. In terms of interface from field offices, it is a web interface for personnel at field offices of various departments to log-in using their credential and download and update the status of the forms intended for that particular field office.
- h. Acknowledgement at two levels
- i. Once when the Form reaches the Central Application at SDC
- ii. Once when the Form has been viewed by the concerned department

**4. Field Office Terminals** – These are intended to be client machines with network connectivity, browser and printing facility. Operators at the Field Offices of various departments that are identified under this project will:

- a. Log-in to the Central Application (which is hosted at the SDC) with appropriate

credentials.

- b. View the applications that have been submitted to be processed at that particular field office
- c. Download the submitted e-form, along with the submitted attachments
- d. Print the form and requisite documents
- e. Update the status of the application in the Central Application.

As the processing of this application passes through various stages, the application status has to be updated accordingly (again by the operator logging-in to the Central Application and updating the status).

**Note:** *In case certain departments already have a centralized server and application, which in-turn is connected to its field offices, and then the same can be registered as SSDG and the packet from the State Portal can be routed directly to that departmental central server rather than to the Central Application & Database proposed here. However, this will require some amount of integration efforts with the SSDG connector.*