

# CENTRE FOR DEVELOPMENT OF IMAGING TECHNOLOGY (C-DIT)

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**Project Proposal**

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## Project Proposal

**For**

State Portal and Service Portal

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### Introduction

The official web portal of the Government of Kerala viz. kerala.gov.in has been envisaged to provide information, resources and online services from a single point of source. The objective of the portal along with the service portal is to build an e-hub of all informations, activities, resources, schemes, services pertaining to the state government. Website and portals have emerged as the front end of government initiatives and programs and it has become highly imperative that all these services and information shall come under a single umbrella which shall therefore enable the citizen to get involved with government activities.

### 2. About C-DIT

Centre for Development of Imaging Technology(C-DIT) is an autonomous society registered under the Travancore Cochin Registration Act, 1955 with diverse skill sets and achievements in the areas of Imaging Technology & ICT and their applications. Founded in December 1988, C-DIT started its operations in the field of research and development in film and electronics technology and in the area of science and development communication. Subsequently, C-DIT diversified into Information & Communication Technologies including website design, software development, digitization and other IT enabled services. C-DIT has been functioning as a Total Solutions Provider in IT and Communication fields for the Government sector for the last 20 years. C-DIT's main ventures are in software development, live web streaming, digitization projects, facility management service, multimedia learning solutions for ICT enabled education, Malayalam language computing, digital archiving, ICT technical consultancy for e-governance and high security certificates & hologram production

### 3. Scope of the Project

- ❖ Development of official portal on custom CMS platform
- ❖ Development of government order repository
- ❖ Development of noticeboard portal
- ❖ Development of dashboard portal
- ❖ Development of citizen service information portal

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- ❖ Development of web based service portal.
- ❖ Development of m-governance application for iOS and Android platforms.
- ❖ Integration of online payment gateway.
- ❖ Integration of SMS gateway.
- ❖ Integration with DigiLocker.
- ❖ Integration with multiple payment channels.
- ❖ Integration with Bharath Bill pay systems.
- ❖ Hosting of the web portal in the server space identified by KSITM.
- ❖ Security testing of the web portal by a CERT-In empanelled agency.
- ❖ Training and hand-holding to the stakeholders of the project.
- ❖ Annual maintenance of the portal.

#### 4. Existing system

Existing official web portal of Kerala Government is built on Liferay framework. The framework has become obsolete and newer version of the same CMS is out in the market. The existing web portal was developed based on the then practices and guidelines which has been completely revisited owing to the various international and global standards that has been adapted by the Government of India for developing web portals and service portals.

The need for modernization arised due to the glitches and non user friendliness of the existing portal. The existing portal was non user friendly towards an extent that, non technical personnel found it difficult to add and edit contents to the portal. Also the inherent design and development concepts employed in the backend of the portal, resulted in accidental data loss. To combat the issue, only technical personnel were be able to update the contents in the existing portal. Lack of user manual and other documentation also did not help to the above facets.

The service portal developed at present is not in use and the service delivery gateway presently employes has been replaces with a newer bridge and hence the entire service portal and backend needs facelifting and upgradation. To enhance the same, a new service portal shall be developed such that it employs a common backend for the service web portal and mobile applications adhering to the guidelines and practices adopted during the development of UMANG web and mobile applications and

as per the GIGW compliances. Also the existing service portal did not had features as enlisted by the NESDA benchmarks. Moreover the introduction of Right To Service act has also resulted in major changes in providing services and e-services, which has to be accomodated to the service portal and mobile application as well.

The Administrative Reforms committee in its eleventh report had stated the need for upgradation of the underlying technology stack for the state portal and service delivery portal. The ARC has also further stated that the implementation of the SSDG project in the state is not successful as envisaged and the concerned stakeholders needs to consider revamping the project to achieve its intended goal of providing single point access for e-governance services.

## 6. Proposed System

The proposed system contemplates a federated approach towards the development of the portal, whereby the state portal shall acts as the sinlge point window for the citizen and this portal would be an agglomeration of various sub portals whereby each sub portal managing their intended activities. At present the state portal is overcrowded with information which requires priority and organisation, and creating sub portals for this organisation shall be beneficial for the customers as well as the back end users for effective management.

The proposed service portal shall be an integrated platform which shall have 3 major entities – citizen center portal, service portal over web and m-governance application. The following are the major modules of the proposed system.

### 6.1 CMS portal

The official portal of the Government acts as the digital gateway for the citizen. The ubiquitous and easily identifiable URL identifier of the state government is associated with the state portal. The proposed web portal shall follow the content management approach whereby concerned users can add and update contents to the web portal with minimum to nil technical knowledge. The web portal will be built on an indegenous framework providing prominence to user friendliness, ease of use, lightweight, best security practices and compliance to guidelines and standards. The underlying principle for the user managment of the web portal shall be built on the basis of the 3 tier and/or 2 tier Content Contribution, Moderation

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and Approval Policy as stipulated under the GIGW guidelines. As per the NESDA guidelines the CMS portal shall incorporate modules such as Personalized content delivery, Complaint Grievance system, Feedback system and Contact Us sections. The web portal shall be bilingual (English and Malayalam) and shall have the following features.

- 6.1.a. Sitemap
- 6.1.b. Contact Us
- 6.1.c. Downloads (category wise filtering)
- 6.1.d. Search results list page
- 6.1.e. Different types of filtering -> category wise, A to Z wise etc.
- 6.1.f. Statistics -> no. of visitors, avg. time spent.
- 6.1.g. Feedback
- 6.1.h. Complaint redressal
- 6.1.i. Help
- 6.1.j. FAQ
- 6.1.k. What's New
- 6.1.l. Help desk, online support, call centre contact details
- 6.1.m. Citizen survey questionnaire
- 6.1.n. Information about concerned department
- 6.1.o. Information about compatible browser/platforms/screen resolution
- 6.1.p. Accessibility
- 6.1.q. Type, size, duration of uploaded files (doc, audio, video)
- 6.1.r. Display feedback results
- 6.1.s. Last updated timestamp for all contents, and site as a whole.
- 6.1.t. Open data policy
- 6.1.u. Search feature
- 6.1.v. Social media integration
- 6.1.w. About the Portal/Website' section.
- 6.1.x. User satisfaction surveys
- 6.1.y. Analysing website usage reports, including search terms and statistics

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## 6.2 Document. Respository

The proposed document repository portal shall be a separate portal under the subdomain doc.kerala.gov.in preferably. Separation of the government orders and all documents to a separate portal shall allow the main portal to be light wieght both in functionality and ease of use. The G.O. repository portal shall be the single point respository of all government orders, circulars, cabinet decissions and other orders. Citizen can search for any government orders, cabinet decissions and other documents using the search facility available in the portal. Backend user shall be able to upload all sanctioned documents to the webportal under respective category with relevant associated information for indexing. Content will be published to the web portal intune with the CMAP policy established for the official web portal. The portal envisages to become the singlemost respository of all state government orders from 1957 onwards till date. The following details shall be collected for each government order and circular.

### 6.2.A. Details of documents

- 6.2.A.a. File number
- 6.2.A.b. File Date
- 6.2.A.c. Keywords
- 6.2.A.d. Department details

The following are the various document types to be handled by the document repository portal.

### 6.2.B. Document types

- 6.2.B.a. Government Order
- 6.2.B.b. Circular
- 6.2.B.c. Cabinet Decission
- 6.2.B.d. RTI documents
- 6.2.B.e. RTS documents
- 6.2.B.f. Ordiances
- 6.2.B.g. Acts and Rules
- 6.2.B.h. Five year plan



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- 6.2.B.i. State budget
- 6.2.B.j. Economic Review
- 6.2.B.k. Guidelines
- 6.2.B.l. Citizen Charter
- 6.2.B.m. FAQ

Content publish policy, content archival policy and content review policy established for the official web portal shall be applicable to the government order repository portal as well. The portal shall be integrated with the newer version of e-office so as to enable real time publishing of government orders without human interference and delays.

### 6.3. Noticeboard portal

The need for a separate portal which would act as the noticeboard was arisen due to the present way of management of advertisements and inadvertent articles being published on to the official portal of the government. In the present web portal all notices and informations pertaining to activities such as tender invitation, quotation placement, brochures, intra-inter department circulars, advertisements etc are placed on the prominent locations in the web portal which thereby makes the portal over crowded and dilutes the intended usage of the portal. Government performs activities with the business people and citizen as well and are therefore bound to have notices and other information which needs to be passed on to the respective stakeholders in an easy and efficient manner. The present way of dissemination of this information lacks efficiency in multiple regards as follows.

- distracts non-potential users of the web portal
- potential users find it difficult to traverse to the relevant section

The noticeboard portal intends to segregate all information pertaining to the nature of advertisement, announcement, tender and quotation related, inter-intra department circulars, results, events, press releases, corrigendum, and galleries. This segregation allows for better management of all these information so that filtering, searching and classifying of the resources becomes more user friendly and efficient.

Contents to the noticeboard portal can be classified under the following category.

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### 6.3.A. Content classification

6.3.A.a. Announcement

6.3.A.b. Advertisement

6.3.A.c. Office orders, disciplinary actions

6.3.A.d. Results

6.3.A.e. Educational information related information

6.3.A.f. Job vacancies information.

6.3.A.g. Events and programs

6.3.A.h. Tenders, Quotations, Corrigendum and related documents

6.3.A.i. Media gallery

6.3.A.j. Weather related information

6.3.A.k. Press releases

6.3.A.l. Department guidelines

6.3.A.m. Publication information

6.3.A.n. Notifications

Content publish policy, content archival policy and content review policy established for the official web portal shall be applicable to the government order repository portal as well.

### 6.4. Dashboard Portal

A comprehensive dashboard portal encompassing all major indices and statistics pertaining to the state as a whole and district wise is being envisaged. This dashboard shall adhere to the open data policy promoted by the Government of India. The dashboard intends to build transparency in government initiatives by publishing documents and datasets pertaining to various developmental activities performed by the government in various sectors as well. In the initial phase contents from the state economic review and planning commission shall be used.

## 6.5. Citizen Center Service Portal

Service portal of the state government comes under the purview of the National e-Governance Plan which aims to enable citizen to access services offered by the state government in various modes thereby accentuating the propagation of the services to its intended base. The citizen service portal shall act as a single window system for the citizen to access all the government services offered by its various departments, directorates and institutions. The citizen center service portal is broadly classified into two categories.

### 6.5.A. Citizen Center portal

This part of the portal caters to provide information regarding all the services, schemes, projects and programmed initiated by the state government. The state government had always been vehement in launching new schemes for the upliftment of various sectors and facets of the society. These projects has been one of the reason that the state has attained its achievements across various socio-economic indices in the country. Albeit the achievements, various schemes launched by the government had not materialized to the full extent it was envisaged. This had happened primarily due to various constraints such as lack of awareness and knowledge amongst the concerned section of the society, hurdles in getting the relevant and required information for the citizen regarding the objective, procedure, process and results of the project. As the first step towards mitigating this divide between the citizen and the government, the citizen center portal shall be used as a launch vehicle for disseminating all information pertaining to all the services currently offered and to be offered in future to the general public in an easy and efficient manner.

The following information regarding the services shall be available in the portal.

#### 6.5.A.1 Information to be captured in the portal

6.5.A.1.a. Name of the services

6.5.A.1.b. Name of the department

6.5.A.1.c. Target group - children/women/feeding mothers/etc.

6.5.A.1.d. Abstract of the scheme

6.5.A.1.e Objective of the scheme

- 6.5.A.1.f. Criteria for the scheme
- 6.5.A.1.g. Eligibility for the scheme
- 6.5.A.1.h. Type of the scheme/service -
- 6.5.A.1.i. Required documents
- 6.5.A.1.j. Mode of application
- 6.5.A.1.k. Links - url, application form
- 6.5.A.1.l. Government order
- 6.5.A.1.m. Instructions regarding the scheme
- 6.5.A.1.n. Grievance redressal

In addition the portal shall also provide success stories and articles in different modes such as textual content, animation, poster, motion poseter and video, so as to motivate and encourage citizen to pursue these schemes.

Content publish policy, content archival policy and content review policy established for the official web portal shall be applicable to the government order repository portal as well.

#### 6.5.B. Service Portal

The service portal forms the second part of the citizen service portal, which provides the web interface for the underlying service provider backend. The service portal shall have the following features.

##### 6.5.B.1. Features of service portal

- 6.5.B.1.a. Contact information about concerned department related to the service
- 6.5.B.1.b. Forms for services which does not have online services
- 6.5.B.1.c. Service delivery charter
- 6.5.B.1.d. User profile
- 6.5.B.1.e. Integration with Aadhar
- 6.5.B.1.f. Single sign on
- 6.5.B.1.g. Promotional campaigns for e-services
- 6.5.B.1.h. History of transaction for users
- 6.5.B.1.i. Transaction count

- 6.5.B.1.j. Information about electronic/digital signature for e-services
- 6.5.B.1.k. 2 click reach from home page
- 6.5.B.1.l. User manual, guides
- 6.5.B.1.m. End service - SMS, email, receipt
- 6.5.B.1.n. Service delivery timeline information - RTS
- 6.5.B.1.o. Alert to users about password expiry, reset, change etc.
- 6.5.B.1.p. Submit online forms
- 6.5.B.1.q. Online payment
- 6.5.B.1.r. Digital signature
- 6.5.B.1.s. Linking to digilocker
- 6.5.B.1.t. Auto populate content based on service
- 6.5.B.1.u. Auto calculation based on service
- 6.5.B.1.v. Helpline for online payment issues

Approximately 1200 services has been identified for which the service portal, citizen center and m-governance application needs to be developed.

## 6.6. m-governance application

The service portal mentioned above shall have mobile front end on both iOS and Android platforms. These mobile application shall access through API to the service portal back end for providing the necessary services. The mobile application shall acts as a single point mobile application from where all services pertaining to the state government can be accessed.

### 6.6.A. Features of the mobile application

- 6.6.A.1. Available on iOS and Android platform
- 6.6.A.2. Usage of m-pin
- 6.6.A.3. User profile creation
- 6.6.A.4. Inbuilt scanner and compression for document upload
- 6.6.A.5. Digilocker integration
- 6.6.A.6. Bharath Bill Payment System Integration

6.6.A.7. Aadhar integration

6.6.A.8. Digital signature integration

## 7. Users identified in the proposed system

The users for content updation in all the portals shall follow the 3 tier / 2 tier CMAP policy architecture. Under the 3 tier CMA Policy following are the user types for each portal.

### 7.1. CMA Policy user types.

7.1.a. Contributor – creates the content for the portal.

7.1.b. Moderator – review the content written by the contributor.

7.1.c. Approver – approves the content to be published to the portal.

### 7.2. CMS portal users

7.2.a. Administrator – responsible for the administrative settings of the portal.

7.2.b. Department Assistant – responsible for creating department specific contents to the portal.

7.2.c. Department SO – responsible for reviewing contents written by assistant.

7.2.d. Department Head – responsible for publishing department specific contents to the portal.

7.2.e. Streaming User – responsible for publishing live streaming session to the portal.

### 7.3. Document repository users

7.3.a. Backlog publisher – contributor, moderator and approval hierarchy to be followed for publishing existing published portals.

7.3.b. Administrator – responsible for administrative settings of the portal.

### 7.4. Dashboard users

Follows the CMAP user policy along with an Administrator.

### 7.5. Noticeboard users

Follows the CMAP user policy along with an Administrator.

#### 7.6. Citizen Service portal

Follows the CMAP user policy along with an Administrator. In addition the portal shall also include department level users adhering to the CMAP user policy for updating department specific contents to the portal. General public can create user profile and registration facility in this portal.

### 8. Security features

The web portal developed by C-DIT will have following standard security features.

- ❖ All the connections to the software will be through Secure Socket Layer (SSL).
- ❖ Controlled access to authorized users.
- ❖ All the accesses to the system will be based on the privileges defined by the system.
- ❖ Encrypted login credentials.
- ❖ Two factor authentication for backend users.

### 9. Compliance

The proposed web portal and mobile application shall have all features which are in compliance with the following recommendations.

- **GIGW – Government of India Guideline for Websites and mobile applications.**
- **NeSDA – National eService Delivery Assessment**
- **RTS Act – Terms and conditions for services that comes under Right To Service Act.**
- **WCAG – Web Content Accessibility Guideline issued by W3C.**

### 10. Constraints and Dependencies

Various constraints and dependencies should be considered for the implementation of the project. These can be classified as constraints and dependencies based on policy decision making and infrastructure constraints. These are as follows.

### 10.1 Policy decisions

- 10.1.1. Decision regarding policies such as Privacy policy, hyper link policy, copyright policy, terms and conditions.
- 10.1.2. Decision regarding policies such as content approval policy, content archive policy and content review policy.
- 10.1.3. Decision regarding policies such as Contingency management plan and disaster recovery.
- 10.1.4. Policies pertaining to integration of various services such as Digilocker, BBPS and Aadhar.
- 10.1.5. Password policy, password expiry policy, customer alert policy.

### 10.2. Portal specific

- 10.2.1. Integration of e-office platform.
- 10.2.2. Usage of SSDG or any other middleware for service portal.
- 10.2.3. Three tier or two tier architecture for content publication to each portals.
- 10.2.4. Providing login for departments for updating contents to the official portal and citizen center portal.
- 10.2.5. Periodic updation of contents about government departments and their services.
- 10.2.6. Classifying and filtering of backlog government orders to be imported to the document repository.
- 10.2.7. Building mobile application on native platform or on hybrid platform. [project cost differ based on platform choice]
- 10.2.8. User registration policy for accessing citizen service on web portal and mobile application.
- 10.2.9. User login policy for accessing citizen service on web portal and mobile application.
- 10.2.10. Priority of services to be integrated to the service portal and mobile application.
- 10.2.11. Document types to be included into the document repository.

## 11. Task to be done by C-DIT

- 11.1. Development of web portals.
- 11.2. Development of mobile application.



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- 11.3. Perform security auditing by third part auditor.
- 11.4. Integration of online payment gateway.
- 11.5. Integration of SMS gateway.
- 11.6. Integration to Digilocker
- 11.7. Integration of Aadhar
- 11.8. Integration of Email API.
- 11.9. Hosting of the application in the server space identified by KSITM.
- 11.10. Training and hand holding to concerned stakeholders of the project.

### 12. Task to be done by Kerala State IT Mission

- 12.1. Providing API for SMS gateway.
- 12.2. Providing API for email.
- 12.3. Providing API for integration to BBPS.
- 12.4. Providing API for integration to Digilocker.
- 12.5. Providing server for hosting the application.
- 12.6. Providing API for integration to Aadhar.
- 12.7. Providing API for e-office integration.
- 12.8. Liasoning with client departments for periodic content updation.
- 12.9. Liasoning with client departments for providing API to be integrated to the service portal.
- 12.10. Providing list and details of all services that comes under the NESDA recommendation and RTS act.
- 12.11. Identify document types such government orders, ordinances, cabinet decissions etc. present in the existing portal that needs to be included in the document repository portal.
- 12.12.

### 13. Duration of the project

The duration of the project shall be 12 months from the date of signing of MoU cum Agreement. This does not cover security testing of the application software.



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### 16. Payment Terms

- 1) 50% of the total project cost including applicable taxes shall be released within 7 days from the date of signing of the MoU cum Agreement
- 2) Balance 50 % of the total project cost including applicable taxes shall be released on successful implementation of the software.
- 3) Security Testing of the application by the third partt agencnt required for hosting the application at State Data Centre shall be paid as additional amount.
- 4) If the application is hosted at other than State Data Centre, the hosting and server maintenance charges shall be paid as additional amount.

### 17. Terms & Conditions

- 1) Warranty and Free Customer Support will be provided for a period of **six months** from the date of commissioning of the software.
- 2) Further support will be provided by C-DIT after the initial one year under Annual Maintenance Contract (AMC). The terms and conditions regarding the AMC shall be discussed and finalized before the end of warranty period.
- 3) The monitoring/reviewing shall be carried out by both parties and necessary corrective actions should be taken by both sides for the successful and speedy implementation.
- 4) A Memorandum of understanding should be signed between the Kerala State IT Mission and C-DIT for the implementation of the project. The terms and conditions regarding the project shall be included in the MoU.
- 5) The application shall be hosted to the server identified by the Kerala State IT Mission.
- 6) Hosting charges of the applications shall be paid additional if the application has to be hosted by C-DIT.



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