Terms of Reference

For Court Information and Service Framework Development, e-Executive Court System Development, Enhancement of e-Mobile Court System and Post Development Support.

Access to Information - II
Prime Minister's Office
Government of Bangladesh

1. Introduction

The UNDP funded Access to Information (a2i) Programme at the Prime Minister's Office has been spearheading the government's efforts to take services to the door-step of the people for the last few years and has achieved significant successes in drawing national attention and gaining much-sought-after leverage in influencing ICT related policies with great impact on national development. The overall objective of a2i is to provide support in building a digital nation through delivering services at the citizen's doorsteps. The programme aims to improve quality, widen access, and decentralize delivery of public services to ensure responsiveness and transparency. Working components of this project are (a) Strengthening existing e-services and launching a second generation of integrated, inter-operable e-government applications, (b) Sensitizing government officials, training service providers and expanding digital literacy among the general public, (c) Forging strong policy and strategy links to ensure implementation of needed legal and regulatory changes in support of the project and (d) Promoting innovation in the delivery of e-services.

To enhance second generation e-service integration platform by forming an interoperable ICT backbone for Justice Sector of Bangladesh appending justice e-service interventions, a2i has already developed electronic system for Mobile Court System that has four main components namely- Main Court Engine to manage court information, Citizen complain submission system, Court Monitoring System and Business Intelligence for Executive Magistrate Court and also case management system. This initiative also aims at promoting innovation in judicial sector in service delivery, linking policies supporting government having citizen centric good governance in the judicial area and building a common approach for e-Service development for those domains. Now a2i would like to take an integrated approach to address access to justice irrespective of internal judicial complexity where focus area would be procedures, information exchange between citizens and judicial administration, monitoring and access to the progress of cases, archives and proceedings in different level of courts.

2. Scope of work

2.1 Design and development of a common technology platform that is illustrated (not limited to) in Figure 4.2 which will, in the long run, accommodate all technology solutions for electronic judiciary under a single umbrella. This Technological platform will be referred as Court Information and Service Framework (CISF-version I).

2.2 CISF will have capability to accommodate all courts along with relevant geographical information, hierarchical relationship among courts, organogram of all courts, and horizontal and vertical integration among courts. Business process of Executive Magistrate Court, Mobile Court as well as Major business process of both High Court Division and Appellate Division will be the executable part of this CISF.

2.3 Study and Analysis of Appellate Court division and High Court division (as a major business process of CISF) to identify processes, process mapping, common data attributes and preparation

of a Business Requirement Specification (BRS) for major process of these courts to define the CISF-version I.

2.4 Study and Analysis of Executive Magistrate Court (as a major business process of CISF) to identify processes, process mapping, common data attributes and preparation of a BRS and SRS (Software Requirement Specification) for executive court system.

2.5 Development of a common data dictionary covering all major process of CISF (Appellate division and High Court division, Mobile Court, Executive Magistrate Court) which will be used in all existing as well as other courts.

2.6 Study and Analysis of the existing mobile court management system software along with its SRS and BRS. Modification of the existing SRS of Mobile court basing on the further requirements evolved.

2.7 Identification of required API for implementation of the developed CISF and develop the portion of the API which are required for Executive Court and Mobile Court.

2.8 Design and development of the complete software solution for Executive Magistrate Court. This solution must be compatible with CISF developed along with related e-solutions.

2.9 Technologically enhancement of the existing electronic mobile court management software along with its maintenance under the existing technology framework. Following major features (not limited to) are needed to be developed:

- Offline Compatibility.
- Module for Appeal.
- Module for Record Room.
- Fingerprint Matching Engine.
- Tracking of criminals based on their finger prints.
- Associating the prosecutor profile with relevant laws.
- Photo gallery.
- News/Notice.
- Use of better reporting tool for report management.
- Printing facility from Android devices.
- Integration of software tools for bio-metric device recognition.

2.9.1 This solution also must be compatible with CISF.

2.9.2 Development of BRS, SRS, DFD (Data Flow Diagram), Process Map and necessary Design Documents for both technologies developed and data standards identified mentioned above.

2.10 Upon completion of the development, the vendor will conduct training for approximate 50 project staffs and help desk agents to transfer knowledge about CISF as well as developed software solution.

2.11 Vendor will have the responsibility to provide maintenance support for the developed software solution within the contract period.

All developed solutions should have interoperability with judicial portal.

3. Deliverables:

3.a: Summary

1. Solutions of Court Information and Service Framework (CISF) with detailed documentation (including data dictionary) as discussed in the scope.
2. BRS, Process, Process mapping, data standards and data dictionary of Appellate Court Division and High Court Division.
3. BRS, Data Dictionary, SRS, DFD, Process Map and necessary design documents of Executive Court management System and Mobile court.
4. Developed APIs with proper documentation.
5. Complete Solution of Executive Magistrate Court according to SRS.
6. Preparation of Training guidelines/user instructions for training
7. Enhanced Software solution of Mobile Court Management System.
8. Maintenances support.
9. Source code and design document of the products developed.

3. b: Deliverable Details :

Sl.	Deliverables	Timeline
1.	• SRS of Executive Court (version-1) • BRS, Process, Process mapping, data standards and data dictionary of Appellate division and High Court division (version-1) • Documentation on CISF (version-1) • Changes scope documentation of Mobile Court Management System.	After two months of the delegation of assignment.
2.	• SRS Executive Magistrate Court (final) • BRS, Process, Process mapping, data standards and data dictionary of Appellate Division and High Court Division (final) • Modified SRS of Mobile court. • Enhanced software solution of Mobile court • CISF document (version-2) • Executive Magistrate Court management system as a prototype of CISF	After four month of the delegation of assignment.
3.	• Complete, functional, documented version of CISF • Full software solution of Executive court with UAT and other technical review • Piloting of Mobile court with new framework (CISF) • Record room access point for Mobile court & Executive Magistrate Court cases	After six month of the delegation of assignment.

4.	• Bug Fixing /changes request implementation of Mobile Court Management System identified in pilot implementation • Piloting Executive Magistrate Court with new framework (CISF) • Documents for training guideline and user manual • Conduct training program for project staffs and helpdesk agents	After eight month of the delegation of assignment.
5.	• Bug Fixing /changes request implementation of Executive Magistrate Court Management System identified in pilot implementation • Maintenance of developed software solutions • Revised version of CISF, addressing issues found in pilot implementation for Mobile court and Executive Magistrate Court	After ten month of the delegation of assignment.
6.	• Maintenance of developed software solutions	After twelve month of the delegation of assignment.

4. High Level Design of CISF

All feature depicted in figure 4.2 (Not Limited to)will be integrated in the solution. The Framework will be built on a three-tier architecture to provide a separation of the client, business objects, and data store.

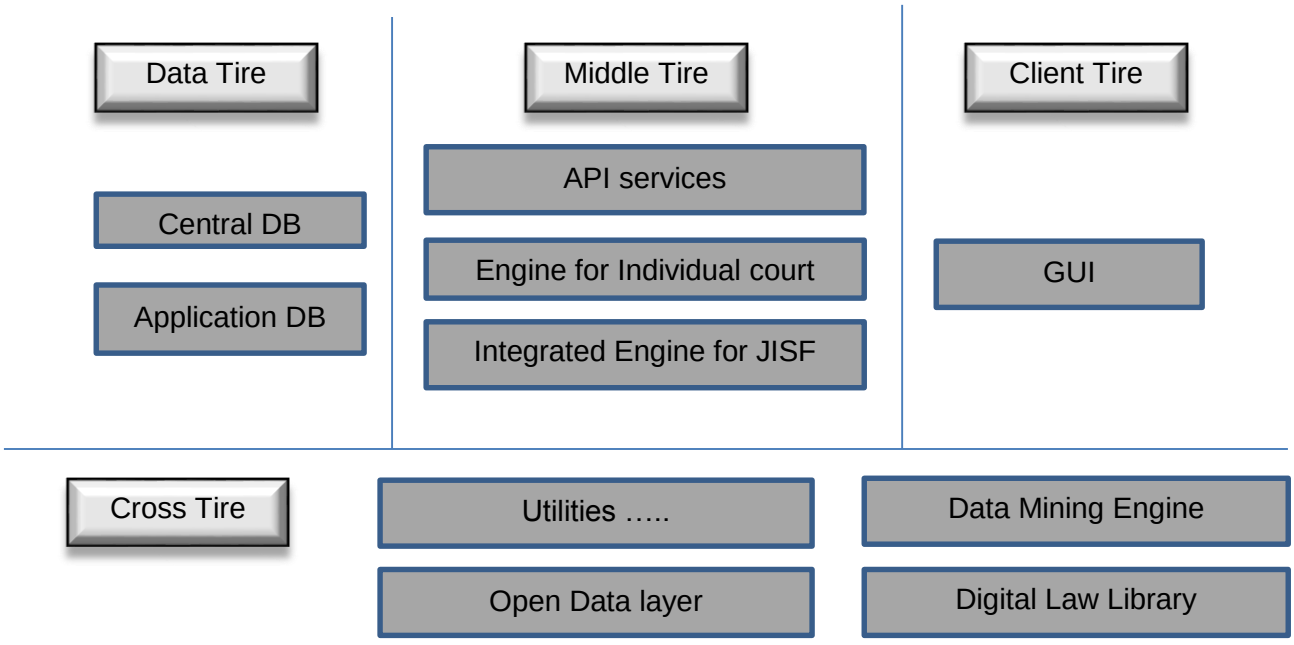

Figure 4.1

4.1 Data Tire

The Data Tier is responsible for the storage of data into a persistent store. The Data Tier provides a Persistence Service that gives the Middle Tier necessary data manipulation functions while shielding it from the specific implementation details of the persistent store. The MySQL RDBMS will be used to support a highly available, robust persistent storage for the system. It will have two separate components as follow

4.1.1. Central database :

This will be the base repository for case Information, judge's profile and law, etc. irrespective of courts, crimes, judgment and justice. It will also contain common data like Court Information, Case Reference, Case Archive etc.

4.1.2. Application database:

This will integrate Judiciary and Executive Magistrate Court Centric Citizen services like Complain submission, Complain Tracking, Case Tracking, Case Nothi Management, Appeal, Mobile Apps and for other related G2C services in the area.

4.2 Middle Tire

The Middle Tier services will be implemented by using Web or Application Server technology to provide a robust and highly available set of middleware services. Its components are

4.2.1. API Services

This will manage integration and data access by Court Services from Application to Central DB.

4.2.2. Engine for Individual Court

Each court engine will developed in such a way that will address the CISF and have the capability to share information of case management system of the court along with order sheet and inter-court Nothi transactions .

4.2.3. Integrated Engine for CISF

All Court systems will be interoperable.

4.3 Client Tire

The Client Tier is responsible for the presentation of system information objects to the user or to software components within the system. The Client Tier is supported by a set of services that provide data collection and presentation of system information to the user. The Client Tier is made up of a collection of GUI applications. These applications are responsible for presentation of information to the user in the form of integrated map based views, high level (or rollup) data views, and lower level (drill down) data views.

Cross tire: The Cross-Tier Services are composed of a set of system utilities that provide a set of re-usable system components that are used by one or more tiers of the architecture. These utilities include communication, query, formatting, printing and other commonly used functions.

a. Open data layer And Data mining engine And

As result of data mining, this component will form a dataset for open access by any other services or for public access.

b. Mobile app and R&D

The conceptual diagram of the CISF can be predicted as bellow:

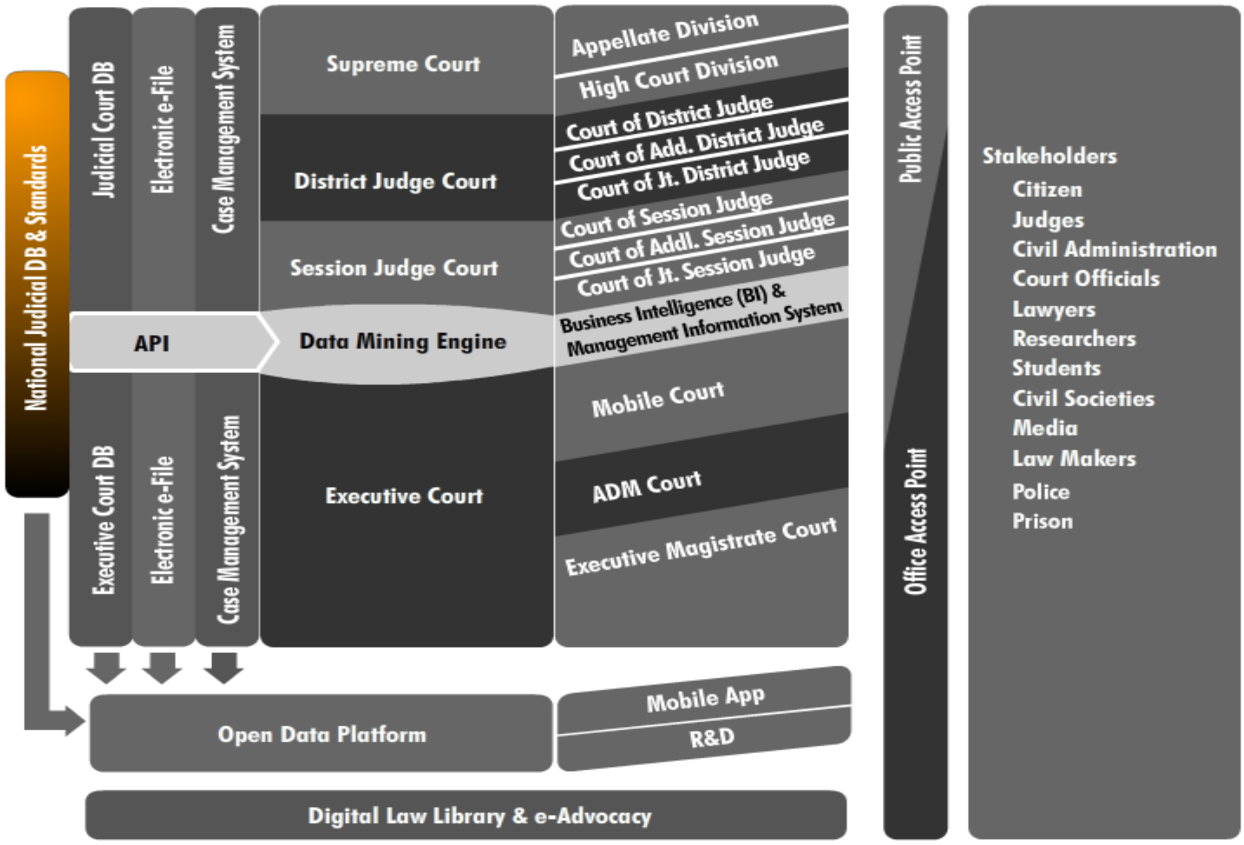

Figure: 4.2

5. Technology Specification

5.1 Technology Platform

1. Need to use Open Source Development Platform.
2. PHP based platform CakePhp 3.x, JavaScript, JQuery/Angular JS and Bootstrap etc. must be used.
3. Common Tools and Standards developed by A2I need to be used for similar purpose.
4. Future technology Change, iterative prototyping and agility in product design are the generic expectation.
5. Technology and all related design/data will be open to a2i.
6. Need to work in IDE (Integrated Development Environment) with a2i Tech Team.

5.2 Security

The vendor should follow any of the industry standard secure development methodology such as (but not limited to) Comprehensive Lightweight Application Security Process (CLASP) by OWASP etc. The vendor should consider (but not limited to) common vulnerabilities such as SQL Injection, Cross Site Scripting (XSS) etc. Vendor will undertake responsibility for Input Validation Controls, Authorization/Authentication Control and other security controls in place in both test and production environment of application.

6. Duration of the assignment

Total Duration of the assignment is 1 calendar year.

7. Eligibility criteria

1. Minimum 4 years experience in ICT business in Bangladesh.
2. Must have 3 years practical experience of developing web-based enterprise solution.
3. Experience of developing Software Solution for Government of Bangladesh or any of its agencies will be an added advantage.
4. Vendor needs to have experts having at least 5 years' experience in developing web applications in PHP using tools/model/architecture like CakePHP/Phalcon/Laravel.
5. Project Manager should have at least BSc. in Computer Sc./Eng. and 10 years of experience in IT.

6. Solution Architect should have at least BSc in Computer Eng./Science and 5 years of experience in System Design and Architecture.
7. Needs to have full time Database Specialist capable of designing robust shared database with at least 5 years practical experience in Database Design and Development in MySQL.
8. Senior Software Engineer should have at least Bachelor Degree in Computer Eng./Science,/Masters with related diploma and 5 years of experience in PHP.
9. Software Engineer should have at least Bachelor Degree in Computer Eng./Science,/Masters with related diploma and 3 years of experience in PHP.
10. Vendor's Headquarter must be located at Dhaka.
11. Multiple Companies having technical and legal competency for developing such Product can bid jointly but they must have legal agreement among them where one company needs to be master. Master company needs to fulfill all conditions mentioned in this ToR. Joint-venture agreement needs to have clear identification about each responsibility matrix along with IPR.