BH-L1033: CITIZEN SECURITY AND JUSTICE PROGRAMME (CSJP)

TERMS OF REFERENCE

CONSULTANCY:
Design and Implementation of an Integrated Justice Information System for Case Management (IJIS)

1. Background

The Ministry of Finance of The Commonwealth of The Bahamas has received from the Inter-American Development Bank (IADB) (Loan BH-L1033), to implement a Citizen Security and Justice Programme. The overall objectives of this program are to: (i) improve behaviours for non-violent conflict resolution in New Providence; (ii) increase employability and employment of the at-risk youth population in New Providence; (iii) strengthen institutional capabilities of justice services; and (iv) reduce the recidivism rate among persons within the juvenile system. In order to reach the third of the loan's objectives, the Ministry of National Security intends to apply part of the proceeds of this Loan to contract a Consulting Firm for the Design and Implementation of an Integrated Justice Information System for Case Management (IJIS)

Context:

In The Bahamas, there is consensus about the limited institutional capacity of the justice system to respond to the public's expectations about the delivery of justice. The absence of an integrated justice information system has hindered the delivery of timely justice, which has contributed to the increase in incidents of violence, placing a further burden on investigative agencies to solve crimes and increasing the backlog of cases awaiting trial. Experience has shown that those delays have further resulted in a diminishing number of convictions in those cases affected. It is also broadly accepted that addressing these challenges requires the existence of a functioning justice administration system that is harmonized with existing related systems/platforms, accessible and reliable as well as ensuring the presence of appropriate information and access control levels where users are restricted to what they can see and do. To properly perform its role a justice system should also be expeditious, which means that the system includes automated workflows and notifications to support the goal of effectively resolving disputes and cases in a reasonable time.

Reforming the administration of justice, both criminal and civil, involves numerous institutions, thus requiring a comprehensive approach. In order to resolve challenges to the administration of justice on the criminal side of the justice system, it will entail reform on the civil side of the system as well. Critical personnel in the justice system, the judicial decision makers, are largely engaged on all sides of the justice system. Probate administration and other essential judicial functions are also within the purview of those judicial officers.

Achieving expeditious case management involves addressing a broad array of sector-wide administrative policies and practices which impact, on the criminal side of the courts, case

management and the flow of cases from the police to the prosecution and through the courts; including corrections, probation and parole. It also includes ensuring coordination between inter-dependent agencies and establishing best practices throughout for critical steps such as, inter alia: voluntary bills of indictment, listing, crown briefs, bail, jury summonsing, witness care, court reporting, plea bargaining,

On the civil side of the court, it includes reforming antiquated procedural requirements in respect of the filing of documents, the setting of hearing dates, the management of the flow of voluminous files across a dispersed justice system with registries significantly isolated due to the demands for space, from essential elements of a justice system, the registrars and judges.

Overall, the sheer infrastructure capacity of the system, such as the number of courtrooms, the capacity of those courts for certain types of cases, the availability of judges and their effective deployment across the justice system, financial and human resources matters, Information and Communications Technology (ICT), the involvement of the Bar Association and other justice sector participants also has to be considered.

Integrated Case Management System (ICMS) is intended to support the Supreme Court on its mission to create a paperless court. The functionality of the applications will drive the modernization of certain court rules and the practices for e-Services rollout. The ICMS application will have added functionality to track the overall performance of the Supreme Court and its management of resources as well as an intelligent case distribution algorithm which will be based upon a predefined algorithm developed with the court. The judiciary represented by the Supreme Court, Magistrates and Coroners Court, will be included in the ICMS.

The ICMS will help the judiciary modernize by combining document management, data management and business process automation. The reporting functionality of the ICMS will be crucial to provide feedback and help the court locate areas for improvement.

Each application and module that constitutes the ICMS will be tailored according to the specific needs of the Bahamas Supreme Court. The beneficiary institutions who will be inputting data into the system will have modules developed to allow access and assure interoperability of data exchange.

The ICMS to be implemented should, therefore, combine the use of software, hardware, and cloud technologies to bring the judiciary to the highest level of performance and lead it on the path to a fully paperless court with e-Services.

The ICMS should also automate the entire production of court performance reporting and analytics, making it possible for courts, judges, administrators and registrars to quickly and easily develop new lines of sight into the efficiency of their operations and the execution of their duties.

2. Objective(s) of the Assignment:

The main objective of this consultancy is to strengthen institutional capabilities of justice services. It is also the aim of the ICMS to transform and improve the efficiency and transparency of the judicial process. It will be the bedrock for new ways of managing the judicial process, through a configurable and flexible core CMS engine together with e-Functionality and access to third party products that will assist with modernizing processes at the courts and throughout the whole judiciary. This solution will also have elements, such as document e-Filing, case and court e-Scheduling, e-Payments as well as the entire case management and case reporting and analysis modules. The reporting functionality of the ICMS will be crucial to provide feedback and help the court locate areas for improvement.

More specific objectives are to:

i. Design and implement an Integrated Case Management System (ICMS), for the judiciary, hosted in the Government of The Bahamas' Data Center (Cloud Facility)
ii. Develop and implement an electronic filing feature via a secure web portal for authorized users
iii. Allow court officers to manage all aspects in the life cycle of a case via an electronic scheduling feature
iv. Create and implement e-Notifications and messaging functionality
v. Provide the ability to pay online, assign fees, and process payments through the solution
vi. Integrate digital recording and transcript software, into the ICMS
vii. Create and implement intelligent workflows and rules
viii. Allow for the production and management of proper reporting and analytics
ix. Implement Cybersecurity and Data Privacy Policies & Standards within development of the solution
x. Create an implement interoperability processes for data sharing
xi. Provide secure signatures that are legally binding (according to the Electronic Communications and Transactions Act) and also at the minimum allows for user authentication.

3. Specific tasks to be performed by the Firm:

Under the overall supervision of the Ministry of National Security's Citizen Security and Justice Programme, the Firm will answer to the Project Manager and work with an assigned Coordinator to design and implement an Integrated Case Management System. This will also be done through the collaborative process with the Supreme Court, Department of Transformation and Digitization (DTaD) and other dedicated contact staff to design and implement the functionality, so that it is fully tailored for the judiciary.

The suggested approach is based on the "Agile Development" model; evolving, improving, delivering and supporting services based on user experiences, feedback and business needs. This is to ensure that the software functionality can be customized to meet the demands of the judiciary.

The following modules or features form the foundation of the ICMS:

- Judges portal
- Attorney portal
- e-filing platform which delivers electronic filing via a secure web portal for attorneys, government agencies and self-represented litigants
- e-Scheduling module that allows court officers to manage all aspects in the life cycle of a case as it moves through the courts, process documents and reporting functions, as well as to resolve any Attorney scheduling conflicts
- e-notifications and messaging when actions are confirmed
- e-payments platform (ability to file and pay online, fee assignment, payment processing)
- Case management and distribution
- e-Docketing- ability to view case docket online and integrate with e-Calendar
- Digital recording and transcript generation software to help streamline courtroom recordings for post hearing review and research, while ensuring accurate, trustworthy jurisprudence (Please note the current system for recording of court proceedings is called "FTR," it is deployed but still has yet to see full use)
- Intelligent Workflow and rules management
- Creation of trial bundles
- Reporting and analytics module
- e-Library, a depository for Scanned PDF documents such as Authorities which can be referenced and attached to e-Docket and case files, thereby eliminating the need for paper copies of the most cited case authorities
- Digital signature and court stamp for document verification

4. FUNCTIONAL REQUIREMENTS

The Functional requirements outlined below are described as either "Must have" – A requirement that is of vital importance and needs to be fulfilled by the ICMS; "Should have" – A requirement that should be fulfilled by the ICMS however a workaround solution provided by the consultant is acceptable; "Could have" – A requirement that ideally the ICMS would have and both Project Implementation Unit (PIU) and consultant will aim to achieve through available means but is seen as a nice-to-have.

Case Management

Requirement	Category
• System has Case Categories and Subcategories that will allow cases to be categorized using defined drop-down list	Must have
• The ability to identify Linked Cases, which enables a user to establish a link to a Related or Associated case(s)	Should have
• The ability to maintain Case Status, also by updating case status inclusive of having case status details	Must have
• The ability to Sort Case Listing by any of the displayed fields	Should have
• Allow Parties to be added to Case(s), including: o Assign roles to parties o Set access rights for a party	Must have
• Allow Case Notes to be added: o Enable voice to text feature for notes capture o Allow internal, draft and published notes	Must have
• Allow for Case information to include, but not limited to: o Created Date o Case No. o Title o Status o Note o Amount o Instructions o Complexity o File Location o Assign Judge o Date Closed o Disposition Type o Summary o and Others	Must Have
The ability to auto-generate Case Numbers	Should have

Search

Requirement	Category
Should allow for Person and Case Searches	Must have
Have the ability to display case and person search results using one or more of the data fields below, and filter search results by sortable fields in ascending or descending order: o Case Number o Case Title o Case Type o Case Subtype o Status of Case o Parties to the case o Judge	Must have
The ability to Search using Person and Case Attributes	Must have
Allow for Export and Download Search Results	Must have
The ability to Sort case listing by any of the data field displayed	Should have

Document Management

Requirement	Category
Ability to upload Document/s - additionally, convert document into PDF format as needed for E-Filing	Must have
Ability to define Document Types and Document Categories: o Document Category can have one or more Document Types o Upload documents must have a specific Document Type	Must have
The ability to display Document in their respective category	Must have
Allow for Annotation on Document	Must have
Ability to create Shared Document	Could have
The user interface and folder directories which will be repositories for court documents should follow the labeling and coloring scheme depicted by the code of practice ("Court Practice Directions 2005,")	Should have

Document Intake (Central Registry)

Requirement	Category
The ability of the Central Registry of the Magistrate Court to receive all incoming documents for Civil matters. The following functionality will be required: o scanning and authorizing received documents o assuring they are deposited into the corresponding folders for the case.	Must have
Central Registry should have the ability to receive documents via online e-Filing according to the prerequisites for e-Filing.	Must have

Diagram docket Labeling

Requirement	Category
The ability to add a new document using the browser and be able to add Rich Text to the document and invite other users to collaborate on the document	Should have
Allow for the opening of multiple case document at one time and easily move between the opened documents	Could have
Ability to accept scan document	Must have
Ability to accept multiple document formats	Must have
Allow separate document view for judges	Must have

Division	File, Folder Color
APPEALS (APP) all sub-divisions	WHITE
COMMERCIAL (COM)all sub-division (EXCEPT for labor)**	YELLOW
Labor (COM/lab)	PURPLE
COMMON LAW&EQUITY (CLE) all sub-divisions	GREEN
CRIMINAL (CRI)all sub-divisions	RED
FAMILY (FAM)all sub-divisions	BLUE
PROBATE (PRO) all sub-divisions	BROWN
PUBLIC LAW (PUB) all sub-divisions	ORANGE

Must have

eDockets

Requirement	Category
Allow for an e-Docket sheet functionality. Docket sheets keep track of everything that happens during the pendency of the case, as well as all documents filed in the case. Information on a docket sheet includes but is not limited to:	Must have
• Both civil and criminal case records should include docket sheets as part of the official file kept at the courthouse.	Must have
• A listing of all parties and participants including judges, attorneys, and trustees	Should have
• A compilation of case related information such as cause of action, case number, nature of suit, and dollar demand	Should have
• Attorney names and their appearances	Must have
○ Parties being represented and attorney for the parties	Must have
• Summaries of hearings	Must have
• Notes made by the Judge/Magistrate	Must have
• A chronology of dates of case events entered in the case record	Must have
• Judgments or case status	Must have
• Types of documents filed for certain cases	Must have

• The docket sheet is placed in case files immediately upon the creation of the file. The system will offer electronic access to case dockets to retrieve information.	Must have
• The e-Docket sheet will be electronic and attached to each case file upon its creation.	Must have
• It should be populated by the court clerk or Magistrate/Judge during the life of the case until resolution.	Must have
• In a criminal case, the initial appearance and arraignment of the defendant will be noted on the docket sheet.	Must have
• The system will offer electronic access to case dockets to retrieve information.	Should have
• The data from the e-Docket will also be used to populate e-Calendar functionalities and for cross referencing availability of Attorneys between Magistrate and Supreme Court.	Must have

E- Notifications & Messaging

Requirement	Category
Ability to provide a messaging system to send and receive messages	Could have
Allow users to receive messages	Could have
Allow users to create a message and send to another IJS (Integrated Justice System)	Could have
Ability to View Messages, Filing and Tasks associated with the user cases	Must have
Allow Task to be marked and read and completed	Must have
Ability to setup email and message notifications based on data triggers	Should have
Allow Configuration and setup Notifications for: o Case o Document Filing / Uploads o Fee o Hearing o Note o Judgment o New Account Approval o Order o Party o Payment o Task	Must have
Allow Notification to be configured for Email, SMS and Internal	Must have
Allow Notification to be sent to: o Case Parties o A person with a specific role in the Case o Court Staff	Must have

○ Online listing of the e-Docket (similar to a message board for matters to be heard)	
Allow for a listing of cases to be heard on a given date, including the following information: ○ Date and time ○ Court Room ○ Magistrate ○ Type of matter ○ Case number ○ Parties to the case ○ Attorneys to the case	Should have

Notification system for Warrants (data exchange and update of status)

Requirement	Category
Should allow for the development of a warrant database for the Magistrate court that will collect issued warrants by Magistrates and have ability to share services with Police database.	Must have
Should support digital exchange data with warrant section of the Police	Must have
The ability to manage data updates to assure information is current and accurate.	Must have
The ability to Send updates to records in IJS and receive updates from IJS. The exchange of services with IJS system of Police will be a crucial part of the interoperability requirement.	Should have
Assure data integrity with the verification process done by the Magistrate, ability to capture signature and approval of Magistrate to assure legitimacy. ○ Clerk seal ○ Warrant is noted in case management and part of e-Docket ○ Warrant is automatically cross checked against the case file ○ Warrant will need to be checked with Bail Bond Management Project ○ The court daily book is updated and automatically updates the e-Docket with status.	Should have

E-Library

Requirement	Category
The ability to upload documents that are reference in Cases: ○ Laws ○ Rules ○ Guidelines ○ Practice Directives ○ and Others	Must have

The ability to Use Document indexing for rapid searches	Should have
The ability to produce google like result of key word searches across multiple documents	Could have
Be able to click on search result and go directly into document section where the key word was found	Should have
Allow Searching by case title, relevant litigants , judge, date, jurisdiction, type of matter (civil or criminal)	Must have
Ability to append documents from the e-library to docket filings	Should have
Allow Lawyers and legal professionals to continually update the library with their case authorities, in searchable PDF format. This will allow for continual expansion and lower burden of photocopying	Should have

Recording

Requirement	Category
The ability to import Audio, Video and Transcription files to include as official recording of Case to the case file	Must have
Should assign Audio, Video and Transcription files to Case	Must have

Custom Forms

Requirement	Category
Should be able to create Custom Forms	Must have
The ability to create any number of custom forms with any number of custom fields to capture Case and related information	Should have
Allow Custom field to include: o Text o Date o Number o Dropdown list	Must have
Allow Custom Field to be able to: o Have a default value o Be mandatory	Must have
The ability to Associated Custom Form with Case Type or Case Subtype	Should have

Document Templates

Requirement	Category
Should be able to create document template based on defined input fields for the following documents: o Court orders o Transcripts	Must have

○ Warrants (arrest, remand or committal) ○ Court Decisions ○ Witness Subpoenas ○ Witness and Defendant Summonses ○ Magistrate court dockets based on data already in IJS case files	

Use Field Tags e.g.

Requirement	Category
The format of case labeling will be dictated by the Practice Direction, for example: ○ 2020/CEL/GEN/0001 {date/Type of case/Category/Number}	Must have
Allow for the <CaseNo> in Document Templates will be used for the import/merge of data into the document workflows	Must have
Ability to create and manage Task and Task types for each court	Should have
Ability to create and manage Task template for different type of cases for each court	Should have
Ability to import Tasks using Task templates	Should have

Manage related sub-tasks, documents, fees, payments, e-Filing, etc.

Requirement	Category
The system must have an E-filing platform for electronic filing via a secure web interface inclusive of, but not limited to following capabilities: ○ Document Upload ○ Security & Access Control ○ Notification & Messaging ○ Anywhere, Anytime Access	Must have
Ability to categorize two (2) user groups for e-filing: ○ Regular Users (lawyers and litigants) ○ Institutional users (Department of Public Prosecutions, Office of Attorney General)	Must have
Must allow litigants to file documents electronically, by using a secure internet-based portal and by uploading a document to initiate a case	Must have
Must provide an option (button and/or menu) to 'File' (upload) a document	Must have
The ability to apply the following data to the document during the 'E-Filing' process ○ Case No. ○ Page No. ○ Filed Date	Must have

o Document Signing Certificate o Court Seal (Watermark)	
Allow for a web portal (for use at the courthouse or remotely) or kiosk through which litigants/ defendants can complete current paper forms electronically	Must have
Allow for document input by: o On-line upload o Through kiosk	Must have
The ability to create and submit cases	Must have
The ability to Upload Document/s to existing cases	Should have
Allow for the upload of documents via USB, or similar device	Should have
The ability to view uploaded document/s and related	Should have
The ability to view case information and case details such as: o Case Information o Documents o Notes o Status	Should have
Every user must first register to be able to login to the system to access	Must have
Allow user to have strong password based on best practice	Should have
Should include "forgot password" feature	Should have
Should include "remember me" feature	Could have
Must confirm email address (e-mail verification)	Must have
Should have a security feature on registration page to ensure that user input has not been generated by a computer, such as reCaptcha or similar	Must have
Should allow the scanning of identity card for registration	Should have
Allow for OCR (Optical Character Recognition) to transform into digital format	Should have
Should allow login using credentials issued from registration process to access system	Must have
User must accept Terms & Conditions on registration page	Should have
User must be assigned a role and security permissions	Must have

User must access permission based on user role in the system	Must have
The ability to assist users with uploads by providing help text and/or instructions as a guide	Could have
Allow access to the user guide and video tutorials, as Help Option	Should have
The ability to prompt user of Filing Acknowledgement (personal data should be redacted), and prescribe format for filing	Should have
Should mark fields that are mandatory	Should have
Should allow for digitized files to be placed in the CMS and then verified	Must have
Should have a checklist against which each type of document is examined to verify information completeness and for review.	Should have
Allow for the approval of the court, for assurance of user validity	Must have
The ability to generate a secure signatures, with assurance level substantial or high, in accordance with our Act.	Should have
Ability to have email feature as part of the e-filing workflow, upon completion and verification	Must have
Should allow e-filing, once completed, to move into CMS and indexed for further actions	Must have
Allow for e-payment functionality, to be able to pay for e-filing	Must have
Ability to manage fee types and fee amounts for each Court	Must have
Ability to Setup amount, effective date, expiry date for a fee	Must have
Allow all Fees to be grouped in invoices	Should have
Ability to generate Invoices and Invoice Numbers	Must have
Ability to manage payments against a fee	Must have
Ability handle partial payments	Must have
Allow payment to be applied to an invoice and be paid by Cash, Cheque or Credit Card	Must have

e-Schedule

Requirement	Category
Needs to be configurable to match the evolving scheduling needs of the Supreme Court	Must have
Allow for View Calendar in Day, Week and Month Views o Color-coding for calendars o Offline viewing in mobile device o Share calendars with others	Must have
The ability to add a Calendar item	Must have
The ability to include Holidays and Special Court days in the Calendar	Must have
Allow for the setting of a configurable time between Calendar events	Must have
Allows for a feature to Check for Calendar conflicts for, but not limited to: o Judge o Time slots	Must have
The ability to Filter Calendar by, but not limited to: o Event Types o Hearings o Judge or Judge Panel o Attorney o Location and/or Room o Court (Magistrate, Supreme and Coroners)	Should have
The ability to Export Calendar items	Should have
Allow for connectivity with Court e-Docket for import of attorneys, parties to a dispute, dates for hearings and deadlines for submittal of documents.	Should have
Allow for interoperability with IBM Notes/ domino for Calendaring and Scheduling; Google Calendar	Must have
Allow for the calendars to share information, dates, events, availability request calendar events, as well as send updates to events.	Should have

Jury Module

Requirement	Category
The ability to import potential jurors from multiple sources such as voter registration rolls and national identification records	Must have
The ability to randomly selects jurors for any type of trial	Must have
The ability to manage assignment of individuals in a general jury pool to trials that are ready for jury selection	Must have

Allows for the exclusion of individuals from random selection if they have served within a specified time frame	Must have
The ability to automatically calculate juror payments and completes payments	Should have
The ability to maintain permanent status, such as deceased, which excludes individuals from being selected for future juries	Must have
The ability to create jury reports including jury listing Procès-verbal, and other needed jury reports	Should have
The ability to track jurors throughout the process including summons, pre-court disqualifications, attendance, dismissal, and selection to serve on a specific jury	Must have
Ability to maintain a history of juror service	Should have
The ability to generate documents including summons and questionnaires	Should have
The ability to provide for web updates of jury status information	Should have
Allows for a database of all the jurors	Must have

System Administration

Requirement	Category
Allow for the System Administrator's function to include, but not limited to: o User Profiles o User Roles o User Groups o Case & Subtypes o Document Category o Document Types o Document Templates o Actions o Action Templates o Case Status o Disposition Types o Notifications o Fees o Customize Form o Holidays o System Settings	Must have

Monitoring, Evaluation & Reporting

Requirement	Category

The ability to automate the production of customizable reports, lists, charts, and "Public Views"	Must have
Allows reports, charts and graphs to be exported to common word processing software	Must have
Allows for the statistical reporting algorithm to incorporate the INTERNATIONAL CLASSIFICATION OF CRIME FOR STATISTICAL PURPOSES (ICCS)	Must have
Allows for Visualized case performance information with an interactive data, visualization toolkit, (reports, lists, charts) tracking the progress of ongoing case activities and revealing trends, inefficiencies or bottlenecks.	Must have
The ability to generate reports with information on the final disposition of a case versus what cases are still pending.	Should have
Provides a logged in user with a Dashboard View of their assigned cases: o Display case and person dashboard information o User Tasks o Upcoming Calendars Items Graphical presentation of the Case Status, Case Type and attachments	Must have
Provides a Dashboard View of all cases if the logged in user is authorized to view: o Display case and person dashboard information o User Tasks o Upcoming Calendars Items o Graphical presentation of Case Status, Case Type and others	Must have

5. NON-FUNCTIONAL REQUIREMENTS

5.1. Service Level Requirements

Requirement
Security
The solution should implement a security model and mechanisms which provide identification and authentication of users.
The solution should implement a security model and mechanisms which provide prevention of unauthorized access to resources and the use of a resource in an authorized manner.
The solution should implement a security model and mechanisms which provide protection of the confidentiality and integrity of information throughout its entire lifecycle.
The solution should implement a security model and mechanisms which provide encryption of information during transmission over unsecured communication channels.
The solution security implementation should be specified and documented by the vendor.
The Vendor will need to consult the Supreme Court management on the most appropriate cyber security framework (e.g.: NIST Cybersecurity Framework Vs. ISO 27002 Vs. NIST 800-53)

Requirement
Resource Auditing
The solution should provide proper auditing of all data resources, inclusive of the details associated with creation, modification and deletion operations. These details should include the identity of the user performing the operation, and the operation timestamp.
All deletions should be soft deletes in which the "deleted" resources are either logically marked as deleted or are moved to an online archive.
The solution must retain a copy of all data resources which are transmitted to external systems.

Requirement
Capacity
The solution for online services must support the following volumetric capacity levels: o Maximum Users (peak) - 2,500 users/day o Maximum Concurrent Users (peak) - 250 users o Maximum Transaction Throughput (peak) - 250 transactions/hour o Average Transaction Throughput - 100 transactions/hour
Maximum Concurrent Requests (peak) - 10 requests/second

Requirement
Performance
The solution is expected to have the following performance characteristics under peak load: o 90% of all user inquiry transactions should be completed in 2 seconds o 90% of all user update transactions should be completed in 3 seconds o The remaining 10% of user transactions (both inquiries and updates) should be completed in 5 seconds

Requirement
Reliability
The solution for any set of inputs should consistently produce the same correct results under different system operating conditions and loads

Requirement
Availability
The solution is expected to be available 24 hours per day, 7 days per week.
The allowed downtime for regular maintenance is 2 to 4 hours per month
Solutions for business applications must provide a test environment.

Solutions for business applications should provide for automatic failover between the production and the disaster recovery environments.
Solutions for business applications must provide for real-time replication between the production and disaster recovery environments.

Requirement
Fault Tolerance
The solution should implement proper exception handling at all layers.
The solution must be able to recover from exceptions relating to communication failures with external or remote systems.
The solution must ensure atomicity of transactions such that if any element of a transaction is not successful then the whole transaction is roll-backed completely.
The solution must ensure that no transaction failure will result in irrecoverable data loss.
The solution must report back all relevant exception and error messages with clear instructions on recovery methods and next steps.

Requirement
Supportability
The solution should be modifiable, extensible, and evolvable so as to allow for the future addition of new functionality, features, and capabilities, and exploitation of new technologies.

Requirement
Configurability
The behavior of the solution should be controlled through configuration.
Changes to configuration should not require the modification of source code or redeployment of any packages or compiled objects.
Database tables should be used to store the configuration that controls the solution behavior. This configuration should be loaded automatically at runtime.

Requirement
Scalability
The solution should have the ability to easily expand to accommodate additional users and additional transactions and data as the additional users are added.

Requirement
Configuration Management

All of the source (i.e. software program codes, database object codes, configuration files, operating system scripts, and system documents) for the solution must be maintained under version control software.

Requirement
Human Factors
The solution should be intuitive and easy to use by users without prior training.
The solution should be easy to learn and should allow users to efficiently complete tasks once they have learned the solution.
The solution should be designed to limit the quantity and severity of user errors and should provide the user with clear error messages and instructions on error recovery.

Requirement
Language and Localization
The language for the solution is English and the solution should be adapted to the locale of The Bahamas.

Requirement
Client Environment
The solution should support web browser based thin-clients and should communicate using HTTP/HTTPS over the standard TCP/IP ports.
The solution should be able operate correct with reasonable efficiency and response times on computing devices with the following specifications: o Web browsers - Microsoft Internet Explorer version 11 and later, Mozilla Firefox (last two versions), Apple Safari (last two versions), Microsoft Edge, and Google Chrome (last two versions) o Java Virtual Machine (last two versions) o Display resolution - 1024 x 768 pixels and higher o Network speed - 56 Kb/s and higher
The necessary hardware and infrastructure will be procured by the Beneficiary. The hardware component is not within the scope of this requirements document

Requirement	
Technical Standard	
Domain	**Standard**

Structured Documents and Messages	Extensible Markup Language (XML) and XML based Standards
Directory and Discovery	Universal Directory, Discovery and Integration (UDDI)
Web Services Definition	Web Services Definition Language (WSDL)
Workflow	Web Services Workflow Language (BEPL)
Remote Object Access and Activation	Simple Object Access Protocol (SOAP)
Programming Model	Specific J2EE Technologies: • Java Portlets • Java Server Pages (JSP) • Servlets as controllers in an MVC architecture • Java Naming and Directory Interface (JNDI) for directory access • Enterprise Java Beans (EJB) components (These should be used judiciously and not be used in high-volume situations) • Java Database Connectivity (JDBC) for database access • Java Message Service (JMS) for messaging • HyperText Markup Language (HTML). Cascading Style Sheets (CSS) for appearance and formatting.

Requirement		
Technical Standard (On Premise Data Center)		
Functionality	**Product**	**Ver.**
Application Server	WebSphere Application Server or Compatible Java EE Server	7.0
Database	DB2	9.7
	SQL Server	2008
Directory Service (intranet users)	Lotus Domino LDAP	8.5.2
Operating System	AIX	6.2
	Windows Server	2008
	Linux	Kernel 2.6
	IBM System i	V7R1
Software Configuration Management	Rational Team Concert	7.0

Requirement
Technical Standard (Off Premise Data Center) - gCloud

Functionality	Product
Application Server	**All major application servers (currently supported by vendor) are available upon request (x86):** Java-based (RedHat JBoss, Oracle J2EE, ASF Tomcat, Oracle WebLogic, IBM WebSphere Application Server, RedHat WildFly) Javascript-based (Node.js, Wakanda, Phusion, and more) Microsoft-based (IIS-Internet Information Services, Windows Server AppFabric, .NET Framework) Python-based (mod_python, Zope, etc) Perl-based (Catalyst, Plack, mod_perl, etc) PHP-based (Zend Server, PHP-FPM, etc) Ruby-based (Phusion Passenger, Iodine, etc)
Database	**All major releases of *Relational* and *NoSQL* databases (currently supported by vendor) are available upon request (x86):**
Structured Documents and Messages	**Relational:** Apache Derby, IBM DB2, MariaDB, Microsoft SQL Server, MySQL, Oracle, PostgreSQL, SQLite, SAP HANA (taken from https://en.wikipedia.org/wiki/Relational_database_management_system **NoSQL** (classified below by data model), taken from https://en.wikipedia.org/wiki/NoSQL#Types_and_examples_of_NoSQL_databases • Column: Accumulo, Cassandra, Druid, HBase, Vertica. • Document: Apache CouchDB, ArangoDB, BaseX, Clusterpoint, Couchbase, Cosmos DB, IBM Domino, MarkLogic, MongoDB, OrientDB, Qizx, RethinkDB • Key-value: Aerospike, Apache Ignite, ArangoDB, Berkeley DB, Couchbase, Dynamo, FairCom c-treeACE, FoundationDB, InfinityDB, MemcacheDB, MUMPS, Oracle NoSQL Database, OrientDB, Redis, Riak, SciDB, SDBM/Flat File dbm, ZooKeeper • Graph: AllegroGraph, ArangoDB, InfiniteGraph, Apache Giraph, MarkLogic, Neo4J, OrientDB, Virtuoso
Directory Service (intranet users)	**Deployed in production (current):** Microsoft Active Directory 2012 R2, Domino **Available upon request:** Apache Directory, OpenLDAP, Red Hat Directory Services, Oracle Directory Server Enterprise Edition
Operating System	**212 supported operating systems available upon request, including all variants of Windows/ Linux.** Details in attached list (downloaded for ESXi 6.5 U2 from https://www.vmware.com/resources/compatibility/search.php?deviceCategory=software&details=1&releases=408&productNames=15&page=1&display_interval=10&sortColumn=Partner&sortOrder=Asc&testConfig=16)

Software Configuration Management	**Available upon request:** VMware vRealize vRealize Configuration Manager, Chef, Puppet, Ansible Tower, Microsoft System Center Configuration Manager (formerly Systems Management Server).

Requirement
Interoperability
The ICMS will need to be able to communicate and exchange data with the Office of the Attorney General. The current systems in use are: o IBM – FileNet o SunGuard (OneSolution)- Integrated Justice System o Bail Bond Management Project o e-Payment system for Court ordered payments (civil and family court)
There is a system being developed by a local vendor for bail processing. It is called: o Bail Management System
The ICMS will also need to be able to receive data and index according to case file, name, type of offense and update dockets based on the data captured by the Bail Management System, as well as provide data to that system as it is updated in the Supreme Court. All three of these systems will be interacting with the Supreme Court ICMS at the level of document transmittal, queries on status updates, and e-Scheduling.

Requirement
E-Payment Non-Functional Requirement
For e-payment there are 2-parts. This information is intended to assist the vendor in understanding the environment in which the e-Payment is to be implemented.
(1) Online Payment Gateway: Application to RBC The vendor will need to apply for e-payment through the Royal Bank of Canada (RBC) merchant account. This will be coordinated with the Treasury Department. This is how e-payments are currently handled. The e-payment application vendor will be asked to create a connection between the e-payment application and the RBC's payment gateway vendor ("Plug-N-play"). Testing of the connection will need to be done with the Treasury and the Finance Officer at the sponsoring agency.
(2) Posting transactions to the Treasury system, *Infor* (financial management information system (https://www.infor.com/about) . *Infor* application is managed by the Department of Transformation and Digitization (DTaD). Transactions from the application (online and over the counter) must be automatically sent to the A/R and Receipting module for Infor. The application sends the transactions in a batch. Online transactions are batched, and the over-the-counter transactions are batched. The application calls the *Infor* Transactions Web service. The web service sends required data to *Infor*; then *Infor* returns a treasury receipt number and other data. The application

associates the treasury receipt number with the application's transaction for traceability and reconciliation.

Please note that a procurement for an e-Payment system for the Magistrate Court to handle court ordered payments is in process. The system is scheduled to be implemented in February 2020 at the Magistrates Court and the Family Islands. It will process payments and allow for tracking of payments as well as payment management. The e-Payment functionality of the ICMS will need to integrate with the payment system that will be procured.

Requirement
System Integration
The ICMS will be required to have the capacity to import and export data without ongoing support by the software vendor
The ability to customize and automate import and export utilities, with date specification and transaction receipts is highly prioritized
The import/export programming language must either be open, or a reliable and flexible data transfer tool must be integrated with the software to facilitate the secure and reliable transfer of data between multiple and diverse external systems
There are 3 principle systems with which the ICMS will connect: (i) The Police and Department of Public Prosecutions are using the Integrated Justice System (IJS). (ii) The new system for bail management will send information to the Criminal Registrar through the Supreme Court ICMS. The ICMS modules will update the whole case file and calendar where required. The bail management system currently being developed is modern and modular based; it will be able to connect with the Supreme Court ICMS. The vendor will need to define with the Supreme Court what information is required for cases and reporting purposes. (iii) The Office of the Attorney General (OAG) is implementing an IBM based system called FileNet Content Manager. This system is intended to assist the Attorney General Civil and Criminal division with managing their workflow and internal CMS. The OAG still needs to interact with the ICMS at the Supreme Court for case searches, docket preparation, e-Scheduling and perhaps performance indicators.

Requirement
Interface Requirements
In order to achieve a fully Integrated Case management system, data will need to be received and sent to beneficiaries outside of the courts. This specifically relates to the beneficiaries: Attorney General, Department of Public Prosecutions, Police and Department of Corrections. The ICMS will need to communicate with the following systems used by the beneficiaries listed: • IBM FileNet -(AG office) • IJS (Integrate Justice System) - Police

- Bail Bond System -(DOC)

The ICMS for the judiciary will need to import relevant case data from the above systems, depending on the subject matter (civil, criminal, traffic matters, warrants, bail, etc.) The imported data will relate to case attachments and updates on the status of specific cases.

Requirement

Security and Privacy – Cybersecurity Standards

The solution should implement a security model and mechanisms which will:

- Provide identification and authentication of users.
- Prevention of unauthorized access to resources and the use of a resource in an authorized manner.
- Protection of the confidentiality and integrity of information throughout its entire lifecycle.
- Encryption of information during transmission over unsecured communication channels.

Requirement

Audit Trail

The audit trail should include user activities, access to data, login attempts, administrator activities, or automated system activities.

Audit records will contain elements which include:

- What the event was
- What user, system or application launched the event (this information should include IP address and device type)
- The date and time the event occurred

Requirement

System Availability

The application must be available to users Monday through Friday between the hours of 6:00 until 00:15

The Peak hours are from 8:00am to 5:00pm EST.

Requirement

Data Retention

The Supreme Court will draft a data retention policy in line with National Legislation and International requirements to ensure that captured data is properly stored and disposed.

Requirement

Error Handling

Error handling will be covered under the initial contractual software warranty period. The customization performed by the vendor for the courts may require debugging based on customer feedback after official release and customization. This will be covered under the warranty period.

Requirement
System Functionality and Performance Validation
The validation will be conducted prior to full roll-out in a test environment.
The functional requirements will be tested against the installed system in a test/validation environment.
Testing will be conducted by inputting test cases and scenarios, created by the vendor.
The test cases will identify inputs, actions, or events and expected responses to determine if a feature of the application is performing as required.
To maximize time and resources, the vendor shall produce test cases that will be written in a manner to have the highest likelihood of uncovering as many errors as possible with as few test cases as necessary.
The testing will utilize Business Process Mapping as a guide to the testing.
A requirements traceability matrix will be developed during this phase, by the vendor, to trace the requirements to the test case and throughout the remaining steps of the software validation activities.

Requirement
Training Requirements
The vendor, along with the courts shall ensure that all users must be adequately trained in the use of each module, function, feature, screen and buttons and icons on each screen
The users must be able to understand the purpose and the proper use of each of the above
They must also be able to understand and interpret error messages and instructions displayed / popped up on the screen
The vendor shall provide a description of their approach to delivering training
The vendor shall provide a preliminary training plan detailed descriptions of training courses to be carried out, including: • Course title • Learning or training objective • Class size and composition • Course duration • Training sequence (relation to other courses)

- Class outline (subject area, topics and critical learning points)
- Delivery methods
- Locations of course offerings

The Vendor shall provide a description of their approach to updating the training plan as details of training requirements are finalized during the course of the project.

A detailed training schedule, including the dates, areas covered, time and the training literature (to be supplied to the Courts) at various stages of the cycle must be provided in the technical proposal.

Requirement

Documents and Manuals

The vendor shall be responsible for developing manuals listed, but not limited to the below:

- Equipment (hardware & software) architecture and design, inclusive of security any database design
- Build and deployment guide
- Administration, configuration, and operational guides
- Training Manuals
- User Manuals
- Configuration Document

Requirement

Maintenance, Support and Warranty Requirements

In addition to normal three (3) months warranty coverage, the Supreme Court requires that the Vendor provide the on-going maintenance costs for the software and service provided as part of this procurement for a three (3) year period following the warranty period.

The Vendor shall include a detailed Warranty, Maintenance and Support plan in its tender, including:

- Warranty period for three (3) months
- On-going support for all software components of the solution for a period of three (3) years, three (3) months (3 warranty plus 3 maintenance), including:
    - Distribution, documentation, and installation of patches and upgrades
    - Bug fixes
    - Rectification of any issues which hamper normal business

    Modifications / customization / configuration to meet any minor new application functionalities / reports requirements. Minor requirement shall be defined as those which require less than 60 person days of programming efforts
- The SLA times that are proposed to respond to trouble tickets, resolution times and inquiries.
- Make qualified personnel available to the Supreme Court by telephone, via a domestic or toll-free line staffed during business hours of The Bahamas, for the reporting of non-

conformities or other problems with the system. During the Warranty Period, such telephone service to Supreme Court shall be unlimited.

- During or as a result of telephone conferences, or electronic exchanges, the Vendor shall make every reasonable effort to correct such Non-Conformities or to resolve such problems. If any such Non-Conformities or problems are not corrected within four (4) hours of the initial Telephonic Contact, Vendor shall send qualified maintenance personnel to the project sites upon the conclusion of such four (4) hours, and such personnel shall ensure that such non-conformities are resolved.
- The Vendor shall commence the work necessary to remedy defects or damage in accordance with specifications in the contract.
- The successful Vendor shall be required to enter into Source Code Escrow Agreement as part of the support contract.
- For outright purchase Vendor shall provide maintenance contracts inclusive of all consumables (annually and/or on a three year agreement).

6. The Firm will answer to the Project Manager and work with an assigned Coordinator to:

6.1. Analysis:

i) Conduct a comprehensive analysis of the functional and non-functional requirements of Supreme Court

ii) Use data from the "Preparation of a Roadmap for the Design and Implementation of an Integrated Justice Information System for Case Management (IJIS)" document on current practices/protocols/approaches, as well as country context, and other country specific issues related to the deliverables

iii) Determine further system requirements, and data on expected performance (task analysis) and actual performance (using surveys, interviews, observations, tests and records)

iv) Create a Requirements Traceability Matrix (RTM), after validating the requirements

6.2. Design and Development:

i) Create a System Design Document for the ICMS aligned with all requirements, and specifying the construction details of the system, how each system component's interaction with other components and external systems, and the interface that allows end users to operate the system and its functions. Describe how the system will satisfy requirements.

ii) Design forms/screens/wireframes and other software artefacts to closely reflect the courts' expectations;

iii) Advise vendors (where applicable) and development team on business context and details to ensure that requirements are correctly interpreted and covered in system development;

iv) Create Test Plan, and update RTM.
v) Create Training Plan, in accordance with requirements for training, inclusive of Systems Manuals, Training Manuals, Operational Guides and other training aids such as videos and tutorials
vi) Develop and install the ICMS solution, inclusive of any customizations, of products and services based on the results of the approved System Design Document. Installation will be within the The Bahamas Government's Data Centre, with replication in the Disaster Recovery site.
vii) Assist in the building and maintenance of test databases for testing the integrated case management system with respect to conformance with user requirements, performance, security and other software quality attributes;
viii) Prepare and submit reports on work progress on a regular basis;

6.3. Conduct Feedback and Evaluation which will ensure that:

i) Participate in system testing and user acceptance testing and follow up on fixing of incidents;
ii) Prepare and update relevant technical and user documentation and produce online help to assist with all software changes;
iii) Validate intermediate and final deliverables of the software development life cycle;
iv) Conduct training of all users, supplementing also with manuals and guides;
v) Provide Post implementation support and maintenance.

7. Qualifications/expertise sought (required educational background, years of relevant work experience, other special skills or knowledge required):

Team Composition & Qualification Requirements for the Key Experts

7.1. Consulting firm Overarching Qualifications and Experience:

7.1.1. At least ten (10) years professional experience with demonstrated competence in designing and implementing Integrated Case Management System (ICMS) within large organizations that includes and is not limited to Public Sector organizations, in particularly working with the Judicial System. Such demonstrated competence and proven success record will include and is not limited to providing advice and recommendation on System hardware and software

7.1.2. A minimum of three (3) professional references who will verify the firm and product's competence and, professionalism, based on previous contractual relationships

7.1.3. Demonstrated knowledge and skill in managing Case Management Projects requiring experience working with a wide range of interagency stakeholders and Focal Point team members representing requisite Ministries, Departments and Agencies

7.1.4. Experience in working with large, diverse organizations, the Public Sector and small island nations are strong assets

7.2. The Consulting firm should have expertise in the following:

7.2.1. Strong troubleshooting skills to identify positives and negatives of solutions;

7.2.2. Reviews of software requirements, software design, prototypes and other relevant software artefacts;

7.2.3. Excel in operations and systems analysis is also necessary;

7.2.4. Excellent in IT Infrastructure and Cloud Technologies

7.2.5. Assessing technology hardware and software needs as well as present and future state requirements;

7.2.6. The ability to work with modeling, creating systems and processes that include data migration and organization in accordance with the needs and requirements of multiple stakeholder groups;

7.2.7. Strong skills in validating requirements and models in conjunction with stakeholders;

7.2.8. Recommending standard integrated case management practices to be embedded into the software;

7.2.9. Developing comprehensive test scripts in collaboration with stakeholders;

7.2.10. Validating intermediate and final deliverables of the software development life cycle;

7.2.11. User training and support, with good knowledge of contemporary IT technologies;

7.2.12. Project Management experience;

7.2.13. Strong problem solving skills.

7.3. Team Composition should have the following expertise and skillset:

7.3.1. **Team Leader:** at least a Master's degree in Computer Science or Computer Engineering from an accredited educational institution and or related background/qualification at a Master's Degree level and at least 5 years' experience managing teams tasked with designing and implementing an Integrated Case Management Systems (ICMS) or similar solution. Skills in Project and Product Management. Excellent verbal and written communication skills is a must;

7.3.2. **Solutions Architect**: at least a Master's degree level or equivalent in Computer Engineering from an accredited educational institution and at least 5 years' experience designing, developing and implementing case management solution or similar, with demonstrated knowledge and skill in system analysis. At least 5 years in IT Architecture and Standards, and Cloud development. Excellent verbal and written communication skills is a must;

7.3.3. Solution Developer: at least a Master's degree from an accredited educational institution, in Computer Science, or related field, with a minimum of 5 years prior experience in Computer Programming, System Analysis, Software Debugging and Testing, for the design, development and implementation of a case management system. Also have demonstrated knowledge and skills in development languages and tools. Additionally, knowledge and skill in at least one common Software Development Methodology;

7.3.4. Systems Analyst: at least a Bachelor's degree from an accredited educational institution, in Computer Science or a related field; at least 5 years' experience analyzing, and designing systems for implementation. Demonstrated knowledge and skills in system analysis and design, IT Architecture and Standards. Excellent verbal and written communication skills is a must;

7.3.5. UX/UI Designer: at least a Bachelor's degree from an accredited educational institution, in Computer Science or a related field; at least 5 years' experience creating wireframes and prototypes for designing, developing and implementing systems for an Integrated Case Management System or similar. Excellent verbal and written communication skills is a must;

7.3.6. Trainer: at least a Bachelor's degree from an accredited educational institution, preferably in adult education or human resource development with a specialty/certification in facilitation; at least 5 years' prior experience in facilitating content for front end and back end usage to diverse audience groups. Knowledge of Integrated Case Management System or similar. Excellent verbal and written communication skills is a must.

7.4. Deliverables:

i) Create a Work Plan and corresponding timeline will be submitted within the first two (2) weeks of the consultancy.
ii) Create a System Design Document for the ICMS aligned with all requirements, and a Requirements Traceability Matrix (RTM)
iii) Implement the Integrated Case Management System, with any customization
iv) Conduct User Acceptance Testing (UAT) using test scripts and RTM
v) Create Training Plan, inclusive of Systems Manuals, Training Manuals, Operational Guides and other training aids such as videos and tutorials
vi) Deployment of a test and training environment
vii) Conduct training for all users, in accordance with Training Plan

8. Payment Schedule:

This assignment should be completed during the period of 12 months

i) 10% on submission and acceptance of Work Plan and corresponding timeline
ii) 15% on submission and acceptance of System Design Document for the Integration Case Management System (ICMS)
iii) 50% on submission and acceptance of Implementation of the Integrated Case Management System
iv) 15% on submission and acceptance of User Acceptance Testing (UAT) inclusive of test scripts and RTM
v) 10% on submission and acceptance of the development and application of training and all training materials.

9. Performance Evaluation:

- Practical knowledge of and experience in the field
- Ability to adapt knowledge and experience to assigned tasks
- Initiative
- Productivity
- Ability to work with others
- Adherence to TOR and executing agency's working regulations
- Quality of work completed

10. Citizen Security & Justice Programme Recourse:

The Citizen Security and Justice Programme reserves the right to withhold all, or a portion of payment if performance is unsatisfactory, if work outputs are incomplete, not delivered, or for failure to meet deadlines.

11. Documents to be included when responding to the Expression of Interest:

Interested candidates shall submit the following documents/information to demonstrate their qualifications:

i) Letter of interest (dated and signed), along with brochures, website URL, descriptions of similar assignment, experience in similar conditions, availability of appropriate skills among staff, etc.
ii) Completed CVs updated on behalf of all team members
iii) Include biographies and **relevant** experience of **key** staff and management personnel. List the **key** personnel who will work on this project along with their qualifications, relevant experience, as well as their specific role and responsibility for this project. Affirm that no employees working on the engagement have ever been convicted of a criminal offence either inside or outside the Commonwealth of The Bahamas.

iv) The nature of this project and solution is deemed a matter of national security and for due diligence, the following is required of the principles and partners of the company:
    a. Copy of valid passport
    b. Police Character Reference
    c. Proper address (local and abroad)
    d. (All of the above copies should be apostille)

12. Obligations of Citizen Security and Justice Programme, Project Implementation Unit:

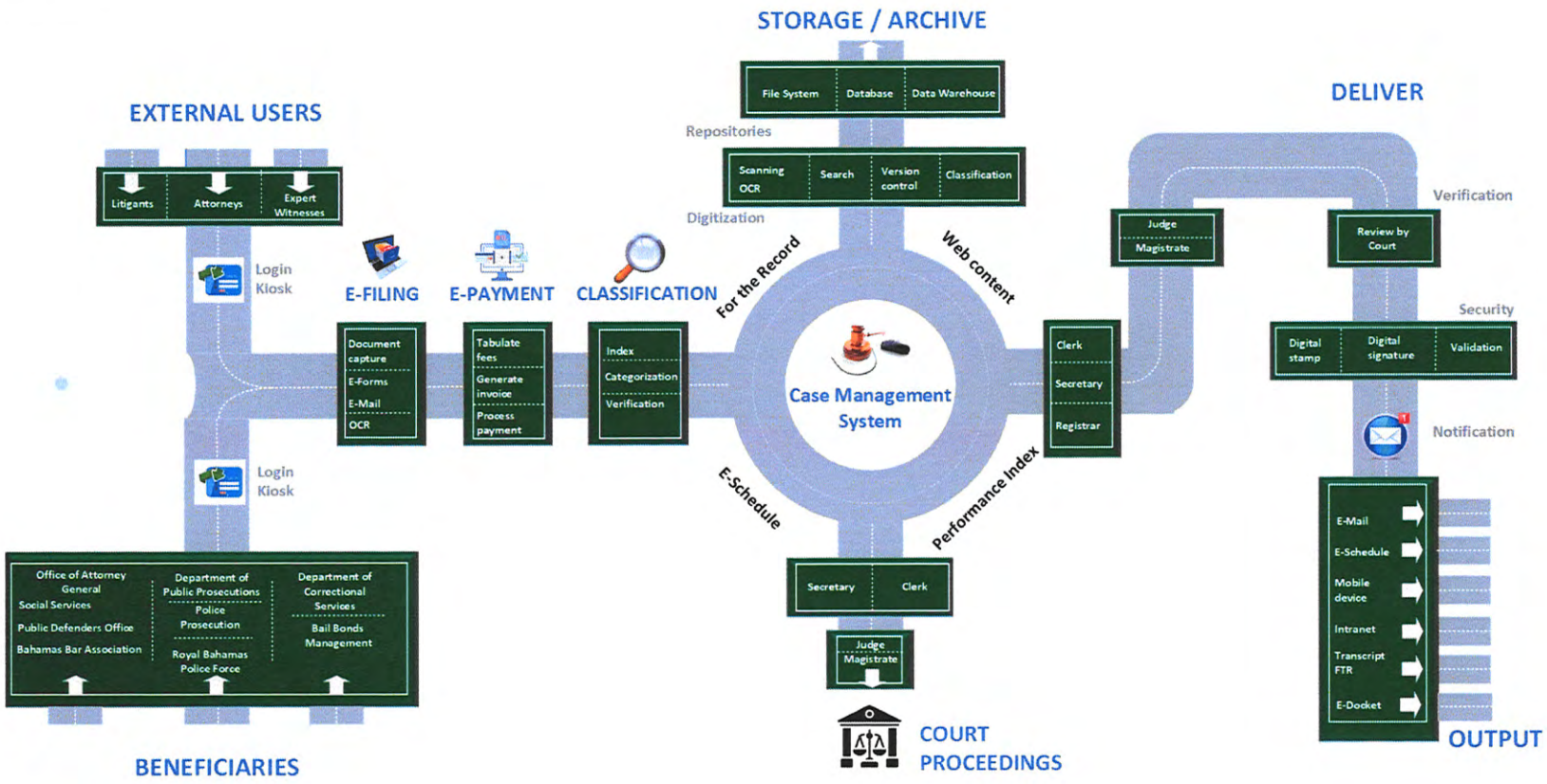
The Citizen Security and Justice Programmes, Project Implementation Unit agrees to:

i) Review and provide feedback on consultancy deliverables;
ii) Provide the Firm with all necessary logistical support to ensure that the Firm undertakes the consultancy with reasonable efficiency;
iii) Meet all the agreed cost related to the consultancy;
iv) Provide relevant documents and make all necessary contacts that may be needed; and
v) Guide the consultancy as needed and necessary.

13. Intellectual Property Rights:

The Bahamas Government shall hold all property rights, such as copyright, patents and registered trademarks, on matters directly related to, or derived from, the work carried out through this contract. The Firm shall avoid copyright violations on all work related to this contract.

ANNEX 1



SYSTEM AND DATA CONTEXT DIAGRAM