Inception Report

Development of an Energy Database Management System (EDMS) for Bartica Guyana

Abstract

Project Initiation and first deliverable of IT Consultancy for TNES Project to deliver an EDMS with specific initial focus on the Bartica model.

AgileLight

#503 Emerald Plaza,

St. Augustine, Trinidad and Tobago, W.I.

868.788.6166 / 61.401.426.508

kendellpatrice@agilelight.net

Inception report submitted July 2018.

Document Control

File Ref: P01/06/29062018

Revision History

Version	Date	Author	Changes Reference
1.0	27/06/2018	Sunil Sheen	Draft Scope, Issues addressed, and components of FSD.
1.0	27/06/2018	Sunil Sheen	Draft project approach and methodology included.
1.0	28/06/2018	Sunil Sheen	Draft initial risk assessment included.
2.0	29/06/2018	Sunil Sheen	Introduction and Background
2.1	01/07/2018	Kendell Patrice	Detailed work plan
2.2	03/07/2018	Kendell Patrice	Work plan changes
3.0	05/07/2018	Sunil Sheen	Grammar review, document formatting.
3.0	05/07/2018	Kendell Patrice	Final document review and amendments.

Approvals

Name	Signature	Role	Date of Issue	Version
Sunil Sheen		Solutions Architect Consultant	05/07/2018	V3.0
Kendell Patrice		Project Manager and Technical Expert	05/07/2018	V3.0

Distribution

This document has been distributed to:

Name	Title	Date of Issue	Version
Caribbean Community Climate Change Center, Office of Climate Change		06/07/2018	V3.0

Table of Contents

Acronyms

EDMS	Energy Data Management System
DR	Disaster Recovery
ERD	Entity Relationship Diagram
EnPi	Energy Performance Indicators
ETL	Export Transform and Load
FSD	Functional Specification Document
GEA	Guyana Energy Agency
GPL	Guyana Power and Light
LAN	Local Area Network
LDAP	Lightweight Directory Access Protocol
MOU	Memorandum of Understanding
MVSTS	Microsoft Visual Studio Team Services
NDMA	National Data Management Authority
PMU	Project Management Unit
SLA	Service Level Agreements
SOP	Standard Operating Procedure
ISO	International Organization for Standardization
TNES	Transitioning to National Energy Security: Bartica a Model Green Town

Introduction

The present document shall outline goals of the Information Management Systems Consultancy under the TNES Project in Guyana; detailed work plan for achieving the project solution, project deliveries, procedures and methods used during project solution and acceptance of project deliveries.

The various departments within Guyana that are associated with the TNES Project were in summary receptive to the initiative. Through assessment and discussions, it was determined that the project pillars should encompass the following:

1) Provision of hardware or cloud services
2) Creation of a technology platform
3) Implementation
4) Capacity building and Knowledge Transfer

Throughout the workshops and various stakeholder meetings, there was a recurring theme expressed by a few stakeholders; resources are required to improve the current business processes. In the most basic case, project failure can easily be just the inability of stakeholder groups to be able to access the EDMS and its associated datasets. As well, project success can be achieved by creating a platform that supports the easy updating and extending of current datasets to enable future data growth and dimensions related to energy management data. This should in no way negate the fact that users and data contributors need to be given access and provided with resources, to allow them to effectively connect and update systems accordingly.

Training at various levels is also an essential requirement. In due process as the Data Management Maturity of the stakeholder group grows and more data is collected and aggregated, need for advance SQL and analytical training will become necessary. The need to identify and retain a database specialist might become a necessity.

One key area for concern is human capacity to support the ICT initiative going forward. It will be challenging to accommodate the implementation of a complex system that requires a huge IT knowledge capital within each stakeholder group. Secondly, it is imperative that the NDMA be leveraged where possible for a successful implementation and sustainable system as they provide the local ICT knowledge base for the Guyana's public administration. Albeit, if cloud services or software as service strategies are employed, all consideration would be given to evaluate the NDMA as a collaborative agent. As such, the design of both the platform and the software to be implemented would consider long-term ease of support, maintenance, redundancy and business continuity.

The solution design will consider the practicality of the capital investment with a focus to ensure the implemented system is adequate to satisfy the needs of the project and stakeholders for possibly five plus years. Additionally, the technology that is used will be sustainable to allow for increase in capacity to support both hardware and software upgrades for another five years.

The success of this project is hinged on the coordination and collaboration of various stakeholders who are equally autonomous and have various ongoing initiatives relating to energy management and policy. Our research has shown the EDMS will benefit from the alignment with a management system standard ISO 50001 ensuring adherence to the quality requirements of the project, as well ensuring the best practices are employed regarding the processes that need to be mapped and implemented.

ISO 50001 clearly outlines a PDCA approach, which establishes a baseline and derives energy performance indicators and subsequently forming energy policies. This baseline data constitutes our primary dataset focus because one of our key deliverables is to collate and aggregate the data from the various consultancies and to ensure a single repository for future query and access of the datasets going forward.

To further ensure success, it is recommended that policy documents be prepared and signed off on by the key stakeholders. These should address the issue of long term support for the hardware investment and as well address issues relating to responsibilities of the license payments and ownership of the hardware to be supported going forward. Finally, there might be a need for a policy relating to usage and governance of the EDMS in alignment with the Government policies for records keeping and management. To ensure the system in no way subverts the requirements of the government service; the system however, should provide the mechanism for security; erasure and control.

In the context of the foregoing, let us reiterate that all stakeholders expressed a willingness to participate and share and or access the energy data; it is now to create the mechanism and execute the processes that enable the realization of this vision. Additionally, as the planning and design culminates, the proposed design and expected assistance would be communicated with the stakeholders and the feedback received to be incorporated into implementation as required.

Research and Investigation

Coming out of discussion with TNES Guyana Project Management Unit, we clarified the high-level issues of the project and further refined our objectives. The first visit to Guyana and Bartica was inclusive of two workshops accommodated by the OCC and The Bartica Municipality. During this visit, additional arrangements for stakeholder meetings were executed.

Currently, within Bartica or the OCC, there is no computerized Energy Data Management System. The hope is that over the duration of this project, the identified system can be implemented to start housing the datasets from the baseline studies and audits.

Our investigation showed; the data that exists within the PMU is mostly documents (excel and pdf) and the capacity to store and save documents was highlighted in discussions from the workshop. The TOR speaks to enabling a backup system within the Bartica Municipality; this will require the establishment of facilities to host a server as well as ensuring the requisite networking infrastructure is in place to support this item. At this time, however within the town council of Bartica the facilities to support such a system are not in place. Additionally, the network connectivity within the Bartica itself is not sufficient to host the requisite system for external stakeholder access at a national level.

That said, it is the vision of the Mayor and the Town Clerk that within the near future, the Bartica Town Council will be able to provide the facilities to host computer systems related the project. There is also an underlying theme that the Bartica data should remain accessible to the Bartica Town Council and other Bartician stakeholders. The focus here seems to be ensuring that any future changes do not leave the Bartician stakeholders orphaned from their datasets.

A concern highlighted by the primary stakeholder OCC is that the implementation be considered with the outlook that overtime this data along with other datasets will form a focus at the national level and hence alignment with National Agencies be a key requirement. Again, this would be best addressed in a policy document, and as well supporting the key agencies with a direct connection into the EDMS and its infrastructure, allowing the selected agency to retain the administrative responsibility for managing or reviewing resource utilization, and access to the EDMS as well as the data and resources that are captured. At this time no inter departmental policy related to data sharing or no cabinet note about the same have been identified.

The Government of Guyana has established the NDMA with primary focus on providing ICT services and resources for public sector agencies. Within the landscape of Guyana, the NDMA is the primary technical partner to get local ICT support for public sector stakeholders. Discussions with the NDMA were very fruitful, as the prospects that the Government of Guyana operates, a private cloud provider lends us to options for system implementation. Pros and cons for various implementation designs need to be considered.

The benefits of collaborating with the NDMA is a win in regard to long-term support and assistance with ensuring various agencies are granted the assistance they need in achieving network connectivity to the NDMA's data center(s) respectively. However, the Bartica Town Council are also willing to ensure that the facilities to host ICT infrastructure and empowering the local personnel to administer it can be achieved. Within the theme of capacity building this is key and even at simplest stage implementation of the system for immediate use by Bartica should be supported by knowledgeable ICT personnel even if the infrastructure is hosted within the NDMA's datacenter.

There is also an ongoing project to run fiber optic subsea cables to Bartica which would result in better internet connectivity. Thus, enabling for datasets to be easily accessed from a centralized storage within a national government agency as well for local copies to be easily replicated from Bartica and vice versa. Strong support and recommendation also came from the Bartica Town Council that the project ensure knowledge transfer and that leadership of Bartica town council will consider actions such as to enable the increasing institutional capacity with addition of ICT personnel if required to support project.

It is noteworthy to consider system access and authentication via a centralize LDAP implementations within Guyana if one exists and if useable by the project. There is also a significant campaign to get persons to use the egov.gy domain accounts. These factors are instrumental in designing security for this system and were consider carefully in what might be the best strategy going forward.

Our research revealed that the project is focused on energy efficiency and transitioning to a model green town. The datasets identified in the TOR will capture the Bartica energy data baseline, over the course of next few years this will be contributed to allow for com. However, with the advent of cloud service providers the opportunity exists that the Bartica datasets can be modeled against other international dataset for comparison and insights. This technical feat can more easily and readily be enabled by using a cloud hosting and purchasing of data models etc. With the key requirement being the temporary usage of large computer systems compute power, memory and storage which are costed per hour or per second.

Running the data models might only occur biannually and with the right system requirements might not take more than a few hours on each occasion to complete. Hence, using cloud services hosting provider will allow for this to be cost effectively implemented. There is also the possibility of using a hybrid implementation to ensure that both a local and cloud copy of the data exists. This will enable the security and achievement of business continuity as well achieve some of the highlighted benefits above both leveraging NDMA and Cloud can lead to a better-balanced system implementation. This is sufficient to support the options that are possible for disaster recovery and business continuity scenarios, especially with the facilitation for cloud services for the sharing of large datasets with international consultants. Using NDMA and leveraging the network topology already in place and external internet connectivity, which will be a vital component of this project along with backups from public cloud to the private cloud and vice versa are excellent options to have.

In preliminary discussions with the GEA, it was highlighted, their principal requirement from this project, is getting access to the data. They also see that this dataset can form part of a larger dataset in the overall Guyana Energy Management going forward. As such, the CEO of GEA stressed access to the raw data to enable their statistician and analyst would be a key requirement for them. Other stakeholders namely GPL also expressed the same enthusiasm in getting access to the data. As well as ensuring accuracy of the data captured, hence any effort to ensure data quality should be considered. In terms of holding, owning or managing this data at the national level, it has yet to reveal an agency or entity who would take that sole ownership responsibility. Yet each agency expressed willingness to contribute and consume data equally from the platform. This relationship is one that should be addressed via a MOU to ensure all parties involved are aware of their responsibility within the arrangement.

In closing, during the initial stakeholder discussions, there was the sentiment of making this EDMS focused at a national level. The Head of the OCC expressed this vision as well it came out from discussions with the System Planning and Design Manager, GPL. What is envisaged here, is that overtime this data repository be able to facilitate data for all energy related usage and be supported for countrywide datasets and not just Bartica.

Again, the need for policy guidelines for use of the system will be an imperative going forward. The primary challenge however; is to consider how the initial baseline data, which is the output from the other consultancies, would be formatted to enable insertion into the database. This will form one of larger processes for Extract Transform and Load (ETL) jobs. In preliminary reviews with key agencies such GPL and GEA there is no current established business processes that are in place to guide specific steps of formatting that data and how it must be saved. In the absence of established local energy processes related to data management, best practices would be employed to assist in the identification of system requirements.

We have determined it beneficial to align the project to a respective management system standard, ISO50001. One long-term benefit here might be that GEA in using the EDMS to consume the Bartica data may decide in future with the right policy mechanisms in place, may decide to use same EDMS to store energy related data going forward. As such, to allow for achievement of this vision of a national system as well binding multiple stakeholder to a systematic approach. It was seen that utilizing best practices and, in this case, a key management standard would be a good place for starting for the design of the EDMS. Therefore, we would seek guidance from an ISO Management System framework and leverage ISO 50001 as a guideline. Additional to using other researched best practices for the energy data management.

Project Objectives

- Analyze and investigate the best options for implementing computer related infrastructure for the EDMS, identifying Primary and Disaster Recovery sites or other hosting options and ensuring required network infrastructure and connectivity are in place.
- Execute stakeholder consultations to determine user requirements and capacity requirements for EDMS.
- To translate the various user requirements and assessments into a Functional Specification and produce a document that reflects the full EDMS architecture and constraints.
- To assess data sharing arrangements and strategize for data sharing arrangements that will support the realization of the EDMS and its functionality.
- To request, review, and shortlist quotations for the equipment to be purchased by the OCC PMU for TNES Project.
- To develop an EDMS that satisfies the constraints identified and delivers the functionality in accordance with the FSD.
- To provide interfaces where necessary (APIs or SDKs) to allow other systems to interact with the EDMS.
- To implement EDMS, configuring hardware and software as required.
- To document operation procedures of the EDMS and its Infrastructure and handover to supporting departments and users.
- To provide a system that averts human error, corruption or contradiction by utilizing technology to ensure that information collected is accurate and verifiable, is collected and placed in a secure location and that access to it is controlled and all auditing features are enabled.
- To enable capacity building and knowledge transfer by training users in this proposed system to be able to ensure implementation of this system with as little disruption as possible to the business of Guyana energy Stakeholders.

Approach and Methodology

Overall Approach

In approaching this consultancy, the Microsoft Solutions Framework (MSF) process model will be used. Further to which PMP concepts to managing documents and engagements with stakeholders and the customer especially given that the project itself is part of a larger Programme.

Figure 1

The MSF Process Model (MSFPM) defines a generalized sequence of activities for building and deploying enterprise solutions. It also highlights key roles throughout the project lifecycle that will be used to reflect the focal points for the consultant on this particular project. The key phases of the MSFPM are: Envisioning, Planning, Developing, Stabilizing and Deploying. The MSF also identifies Product Management, Program Management, Development, Testing, Release Management and User Experience as the key roles that are to be encompassed throughout the process. This approach is further correlated with the deliverables of the TOR. Hence ensuring within the technical framework that this project is completed within, it adheres to the outputs as required by the TOR. The first deliverable of the project speaks to submission of the Inception Report. The inception report workshop will be the opportunity to interface with the stakeholders. The consultant will use this opportunity to start managing expectations and identifying all stakeholders and risk as it relates to the project. One of the major challenges for this consultancy would be clarity of the stakeholders in determining the datasets that should be developed into the system. Additionally, with various projects coming on stream, the requirements specifications will have to be crafted to not just accommodate what is known data schemas but to allow future schemas to be easily incorporated into the system.

Envisioning

This is when the initial requirements collection takes place – The envisioning phase addresses one of the most fundamental requirements for project success, the unification of the project stakeholders behind a common vision. Envisioning is done by creating a high-level view of the project's goals and constraints and serves as the delivery contract. Where possible in the envisioning phase wireframes to reflect software, workflow diagrams to clarify processes and outputs will be utilized. This enables the feedback process early on into the project and reduces the need for rework in the later phases. User Stories or Usage Scenarios will be used to document the business processes and persons interacting at each point within these processes. The producing of the Inception Report would be a milestone within this project phase. Within the Inception Report, the components to be delivered from the next phase (planning) should be clearly identified to include in detail all sections that the document must contain.

ENVISIONING		
Inputs	**Tools and Techniques**	**Outputs**
• Stakeholder Register • Project Charter • OCC TOR • Data Samples • Operating Procedures and System documentations, Manuals • User Instructions • Systems / Software in use.	1) Stakeholder analysis 2) Questionnaires and Surveys 3) Scenario development 4) Workshops in each island. 5) Research and prototyping 6) Identification of similarities and gaps. 7) Data definitions and cataloging. 8) Interviews 9) Shadowing users for complex data manipulation processes.	• Use cases / Usage Scenarios • Data Catalog • Business Rules Catalog. • Actors Catalog. • Draft Technology Assessment • Assessment of technical capacity to support project. • Technology Change Management Guidelines • Training Plan requirements. • Updated Risk Register • Updated Stakeholder Register

Planning

The planning phase is where the bulk of the planning for the project is completed. At this stage, the consultant will clearly describe your requirements in project documentation showing the functional specifications describing the product's performance, technologies and design. At this point going forward, product management is very important and adherence to the list of user requirements and

design is important. However, the consultant will be responsible for requirements management, which is obtaining and controlling requirement changes and ensuring that other relevant plans and data are kept current. Requirements management continues all through the project, culminating in the comparison of the product against the requirements prior to deployment. In the planning phase all the outputs from envisioning will be available as inputs and will be refined further with feedback across the focus group to present the outputs of the system specification. At end of this phase of the project, the consultant will be able to propose the required hardware or software specifications for purchase by the OCC. The output document of the planning phase is the Functional Specification Document, which would contain various components that enumerate in totality the required components for the system both hardware, software and what should be built by the consultant.

PLANNING		
Inputs	**Tools and Techniques**	**Outputs**
• Vision and Scope Document • Quality and performance metrics • Non-functional requirements • Functional requirements. • All the outputs from envisioning phase. • Outline of Scope	1) Prioritizing requirements 2) Restating requirements 3) Conceptual Design 4) Selection of Application Architecture 5) Validation of Conceptual design. 6) Research and design 7) STRIDE Threat modeling. 8) UML Modeling	• Functional Specifications with ranking and compliance criteria. • Hardware capacity plan for 3-5 years • Technical capacity report. • Technology Change Management Guidelines. • Training Plan • Technology Selection Guidelines and Application Architecture. • Updated Risk Register • Test Plans Draft, with quality controls. • Logical design • Physical design • Data layer specifications • Security specifications

Development

The software solution development is the most critical stage of the project where most of the programming, coding and testing takes place. During the developing phase, most of the building of solution components (documentation as well as code) will be accomplished. However, some development work may continue into the stabilization phase in response to testing. This particular stage is the longest and daily builds will be done using the MVSTS. Additionally, given the approach incorporates the benefits of Agile development, where possible the Consultant will expose our builds to the client for review and comments. This in turn would assist in ensuring the final delivered product

is to specification as requested by customer. During this phase, constant unit testing will be done to verify application functionality, including fixing any bugs identified during system testing, tackling any gaps, which OCC may wish to address.

Stabilizing

The stabilizing phase conducts testing on a solution whose features are complete. At this stage, the Consultant would define the best possible integration sequence, integrate product components and deliver the product to the client as a pilot. In this phase, the pilot will be prepared and tested, all test procedures during this phase emphasizes usage and operation under realistic environmental conditions. In this phase benchmarking the performance requirements for the system will also be done, updating configuration documentation for implementation of hardware or cloud services. This phase will also mark the beginning of creation of Standard Operating Procedures that will be used to ensure proper handover and training for the system. Thorough testing is an integral part of the approach to application development, testing the Internet-based systems developed for browser compatibility, HTML syntax and CSS validation, and functional operation and accuracy. Each of these different test areas enable surety that the systems developed are bug-free, meet client expectations and fulfill end users' functional and aesthetic needs.

Deploying

During this phase, the Consultant will deploy the core technology and site components, stabilizes the deployment, transitions the project to the client's operations and support, and obtains final customer approval for the project. Quality Assurance should be an essential part of projects and as such after the deployment; we will conduct a project review and a customer satisfaction survey. At this stage, all final documentation is handed over to the client.

Project Stakeholders

Country	Name	Name Title	Stakeholder meetings and discussions.
Belize	Caribbean Community Climate Change Center	Dr. Mark Bynoe Ms. Allison Williams	
Guyana	Office of Climate Change	Janelle Christian Yasmin Bowman	
Guyana	TNES Project Management Unit	Junita Thomas	
Guyana	TNES Project Manager	Gavin Bovell	
Guyana	Bartica Town Council	His Worship, Mayor of Gifford Marshall Phebe Wallerson, Town Clerk	
Guyana	Guyana Energy Agency	Dr. Mahender Sharma Shevon Wood Gayle Best	
Guyana	National Data Management Authority	Latoya Martin, Manager	
Guyana	Guyana Power and Light	Horace Woolford Amir Dillawar	
Guyana	Bureau of Statistics	Andre Phillip – Workshop representative Mr. Lenox Benjamin	
Guyana	The Consultancy Group	Dr. Troy	
Guyana	2R Productions	Dr. Huntley Medley	

Guyana	Phil Mingo	Phil Mingo	
Canada	CBCL Limited	Anthony Hlahastsi Jared Smith	
Portugal	IDAD: Institute of Environment and Development	Miguel Coutinho	

Risk Assessment and Proposed Mitigation Approaches

These are risks identified and mitigation approaches based on the current circumstances:

Risk Type	Objective/ Outputs	Potential risks	**Mitigation approach**	
			Initial	**Updated**
Project	Procurement	Delay in acquisition of hardware for deployment.	Ensure that specifications are well thought out so unnecessary changes would not be required. Procure hardware in advance to avoid problems associated with delays.	
Project	Functional Specification Document and Development	System does not reflect the user's expectations.	Ensure that key stakeholders are involved in the planning stages of the project (& other stages) to	Daily builds and using focus groups to review key areas of the

Risk Type	Objective/ Outputs	Potential risks	Mitigation approach	
			Initial	Updated
			ensure "buy-in" by all relevant parties. Using mock-ups and prototypes to gather feedback before development and during development respectively.	system being built.
Project	Development	Total features required may be beyond what could be developed within the scope.	Develop system in phases. Define clear scope boundaries as to what are the deliverables. This will be addressed in second report (FSD document).	

Issues addressed during first visit

Item No	Issue	Outputs	Methods of assessment / Notes	Expected component in FSD to address issue.
1	Identification of datasets or databases that exists within the group of stakeholders.	Documentation of current datasets and ERD Data size and growth estimations	An estimated three consultancies will produce base data for the system.	Logical Design & Data Layer Design
2	Identify current inter-departmental data sharing agreements.			Policy and Regulations
3	Review and strategize with Stakeholders data sharing agreements and		Stakeholder meetings	Policy and Regulations

	arrangements that would be plausible.		Inception Workshop	
4	Review documentation of Standard Operating Procedures that exists in relation to current systems implemented or involved in the project.	List of existing SOPs. Gap of the SOPs that should be developed for proposed system.	Interviews	Operational Requirements
5	Physical Infrastructure to support IT equipment for hosting of the EDMS.		Site survey, Interviews	Physical Design Section
6	Network Infrastructure Assessment	Assessment Report of Current Network. Proposed Network Topology.	Interviews	Physical Design Section
7	Hardware Assessment	Current server and client hardware assessment report. Proposed Component and Data Topology. Proposed specification of Hardware systems and configuration.	Inspection, Questionnaires and possible(network scans)	Physical Design
8	Software Assessment	Documentation of various software used to complete tasks related to the project.	Questionnaires and Interviews	Client System Hardware Specification
9	Training Assessment	Documentation of the skills and knowledge of the	Workshop	Training plan

		personnel who would be using the proposed EDMS.		
11	User requirements elicitation	Requirements Document User Stories Business Rules Catalog Actors Catalog	Interviews, User Instructions, Focus Groups and Prototyping	Software Specification
12	Solution Planning and Design		Online meeting with Project Manager, Bartica Town Council and other invited personnel.	

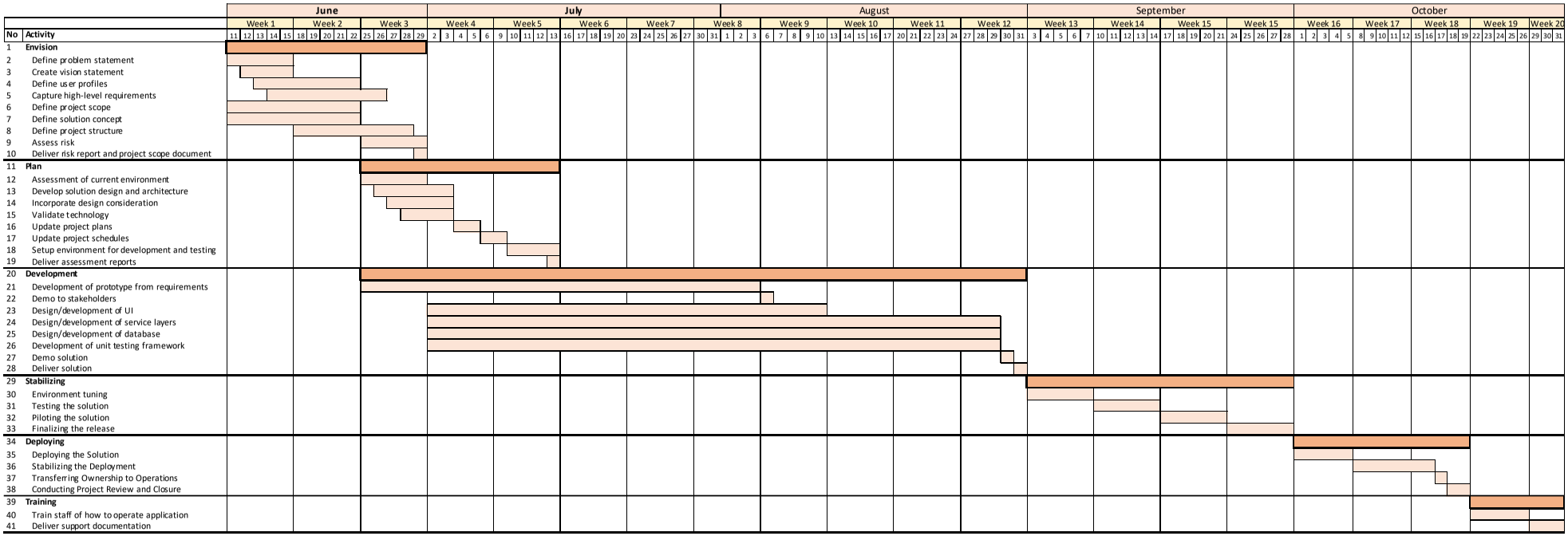
Components of the Second Report

Components	Details	Format and FSD Section
Executive Summary	An overview of the proposed system and mechanisms required to ensure successful implementation and continued use.	
Assessment	Details pertaining to the project and highlights from the assessment exercises completed.	
Hosting Infrastructure (Primary and DR site)	1. Datacenter / facilities recommendation 2. Server Specifications (Processor, Memory, Network Interfaces, Operating System, Disks and specific RAID configuration) 3. Networking Equipment Specifications (Firewall, Switches, IDS, Routers) 4. Network Topology 5. SAN Specification (If required based on design specs.) 6. Capacity plan current, proposed future and strategy to scale up. 7. Datacenter Configuration 8. Primary and DR sites configuration 9. Warranties, SLA and Licenses	Text write up, diagrams, configuration documents.
System Interfaces	This section describes the dependency and relationship requirements of the system to other enterprise/external systems. Include any interface to a future system or one under development. For clarity, a graphical representation of the interfaces would be presented.	
Logical Designs	• High-level user interface design • Logical Object Model • Logical Data Model	
Physical Designs	• Component diagrams • Network Topology • Component and Data Topology • Deployment Model • Data Layer Design (Database Schema, Data Dictionary)	Diagrams, Documentation ERD Diagrams

Software Specification	Requirements Traceability Matrix	
Operational Requirements	• Security • Audit Trail • Reliability • Recoverability • Availability • Performance • Capacity	
Policy and Regulations	Specify relevant applicable laws, regulations, policies, and standards that will affect the operation and performance of the system, as well as any relevant external regulatory requirements, or constraints imposed by normal governmental practices. Identify the MOUs, policy documents that will speak to proper mechanisms to ensure system is successfully implemented and maintained.	
Deployment and Testing	Test Plans Deployment Strategy	
Training Plan	Specify Training requirements for the system based on specific user groups and roles.	
SOPs	A list of the Standard Operating Procedures that are pertinent to the implementation and maintenance of the system and associate hardware platforms.	
General Recommendations	This will include any additional considerations for the system or effective functioning of the system that might be considered outside the scope of the project, but were unearthed during the stakeholder meetings. This includes: Additional Training, Infrastructure projects, next steps for the EDMS platform. Identifications of key roles that should be retained in the various stakeholder groups.	

Appendix A	User Requirements Document	
Appendix B	Assessments (Network, Hardware, Physical Infrastructure, Training)	

Project Schedule with Milestones and Deliverables



Inception report submitted July 2018.