

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

Development of Project Management Methodology for Digital Inclusion in Public Sector
Digital Transformation Projects

MARIA CELESTE PECH

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TUTOR

REVIEWER No.1

REVIEWER No.2

Maria Celeste Pech

DEDICATION

This final project is dedicated to each version of my past self. All of whom made me the person I am today.

ACKNOWLEDGMENTS

I would like to acknowledge my friends and family who have been pillars of support throughout my academic journey.

I would also like to acknowledge my tutor, Mr. Fabio Muñoz, who guided me in developing this Final Graduation Project.

ABSTRACT

The objective of this document is to develop a comprehensive Project Management Methodology tailored to the management of socially inclusive digital transformation projects in Belize's public sector. The application of the methodology ensures that projects deliver equitable access to digital public services. The Ministry of E-Governance (MEG) leads the digital transformation for the Government of Belize; however, it lacks frameworks and processes to ensure that each transformational initiative accounts for the population's access to technology, digital literacy and other accessibility needs. As a result, this ad hoc approach increases the risk of digitally excluding certain population groups.

To prevent digital exclusion in MEG's digitalization efforts, a project management methodology for digital inclusion has been developed. The methodology includes guidelines, templates, techniques and recommendations suitable to MEG and Belize's context, which makes it suitable for application in any digital transformation project.

As part of the methodology development, the project takes a qualitative research approach and reviews existing methodologies, frameworks and best practices. The project also seeks MEG's experience, opinions and recommendations for inclusion into the methodology.

The result of this process is a targeted and flexible Digital Inclusion Project Management Methodology (DI-PMM) which incorporates project management process groups, knowledge areas, templates, and tools. As a result, the methodology aligns with project management standards and is effective for practical application across projects with unique conditions.

Overall, the application of the methodology fosters a truly inclusive transition into the digital era and enhances the societal value of MEG's digital initiatives.

Key words: Belize, Digital Inclusion, Project Management Methodology, Ministry of E-Governance, Digital Transformation.

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INDEX OF ABBREVIATIONS AND ACRONYMS

DI-PMM - Digital Inclusion Project Management Methodology

DPI- Digital Public Infrastructure

MEG- Ministry of E-Governance

ICT- Information and Communication Technology

NDA- National Digital Agenda

PMBOK- Project Management Body of Knowledge

TAM- Technology Acceptance Model

UI- User Interface

EXECUTIVE SUMMARY

The Government of Belize embarked on its digital transformation journey with the foundational step of launching its National Digital Agenda in 2021. The Agenda serves as a roadmap for the journey towards a digital Belize during the period of 2022-2025. In alignment with the Agenda, the Ministry of E-governance (MEG) was created with the mandate of creating public value for all citizens through digital public services. As such, MEG places strong efforts into the digitalization of government services, particularly those of highest demand by the public. In digitalizing critical government-to-citizen services, the emphasis in digital inclusion is paramount to not only maintain but increase public access.

MEG leads a digital inclusion program which focuses on digital skills development and building digital literacy among citizens of Belize. However, as it relates to the digitalization of services, there is no systematic approach to ensure that each digital transformation effort is designed to cater for a population that is diverse in their educational level, cultural background, access to technology, level of basic and digital literacy. Consequently, the risk of inadvertently increasing digital exclusion is introduced. As such, it is critical to introduce structure and procedures to guide MEG through its digital transformation efforts.

Given the above, the project's primary objective is to develop a comprehensive Project Management Methodology tailored to the management of socially inclusive digital transformation projects in Belize's public sector to ensure that projects deliver equitable access to digital public services and prevent digital exclusion. The specific objectives to be realized are to analyze project management frameworks and best practices related to digital inclusion in public sector projects, to guide the development of a customized project management methodology for the Ministry's projects, to define the structure and components of the proposed Project Management Methodology in alignment with the Project Management Body of Knowledge (PMBOK) knowledge areas and process groups, to develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects, and finally to illustrate the practical application of the developed Project Management Methodology through a case study of an existing digital transformation project.

As part of the methodology development, a qualitative research approach was taken, particularly analytic-synthetic, interviews and inductive-deductive. In the application of these qualitative research techniques, existing methodologies, frameworks and best practices were reviewed. Furthermore, MEG's experience, opinions and recommendations were sought for inclusion into the methodology.

In alignment with the specific objectives, the Digital Inclusion Project Management Methodology (DI-PMM) was developed. The development of the DI-PMM was guided by the analysis of project management frameworks, best practices and insights from MEG. The DI-PMM incorporates the PMBOK process groups and knowledge areas to maintain alignment with internationally recognized standards. Furthermore, various templates and tools were developed to guide the project management team in its practical application. The implementation of the DI-PMM was also demonstrated through its application to one of MEG's projects, "The Design and Development of the Civil Registry and Vital Statistics System".

The primary recommendation is MEG's adoption of the DI-PMM as a standard framework for all digital transformation projects. Additional recommendations include the establishment of a National Digital Inclusion Baseline, which involves the collection of national level data on digital inclusion metrics to guide the effective design of project interventions. Lastly, it is recommended that complementary digital inclusion initiatives remain a priority to maintain a holistic approach to digital inclusion. These initiatives include the continued execution of the Digital Inclusion Program and the development of Digital Public Infrastructure. Actioning out these recommendations would enhance the effectiveness of the DI-PMM, strengthen the capacity of its project management team and processes and most importantly, it would enhance its ability to deliver digitally inclusive government services to all Belizeans.

In conclusion, the development of the DI-PMM addresses a critical gap in Belize's digital transformation processes, which is the absence of a structured, systematic approach to embedding digital inclusion within project management processes. The application of the DI-PMM will significantly enhance the public value of its initiatives, foster an inclusive transition into the digital era and enhance its project management skills and capacity.

1 INTRODUCTION

The following chapter presents an introduction to the nature of the project. It will present a brief background to provide context on the conditions and circumstances that surround the project, shed light on the problem identified and present the goal and objectives that strive to address the problem at hand.

1.1 Background

In recent years, the Government of Belize has taken a powerful stride towards digital transformation of the public sector. The foundational step was the launch of its National Digital Agenda in 2021. The Agenda serves as a roadmap for digital transformation for the years 2022-2025 with revisions to the Agenda to come thereafter. The National Digital Agenda led to the creation of the E-Governance & Digitalization Unit which has now evolved to the Ministry of E-Governance (MEG). The mandate of the Ministry of E-Governance is to create public value for all citizens through digital public services. Therefore, the Ministry places strong efforts into the digitalization of government services with priority for the services that are of highest demand to citizens (National Digital Agenda, 2021).

Since its inception, the Ministry has digitalized various government services by introducing digital platforms, online access to public services and reengineering processes to make them more efficient. Subsequently, it has developed and launched the Public Service Leave Management System which is an integrated platform used by Public Officers to manage their leave applications, the Criminal Records Registry which allows Belizeans to apply for a police record and it is currently overseeing the development of the Civil Registry and Vital Statistics System which will allow Belizeans to access and manage their vital records. A few projects are also in the pipeline such as the National Identification System and the E-Services Portal which

will serve as a hub for citizens to access any government service (Ministry of E-Governance, n.d).

Notably, the Ministry's initiatives are highly geared towards government to citizen services which requires an emphasis on digital inclusion to ensure that there is equitable access to these services. The Ministry leads a Digital Inclusion Program which involves the establishment of digital connect centers across Belize; building digital skills among vulnerable populations such as youth, women and the elderly (Ministry of E-Governance, n.d.).

1.2 Statement of the problem

As previously noted, MEG leads a digital inclusion program which focuses on digital skills development and building digital literacy among citizens of Belize with particularly vulnerable populations such as the elderly and youth. While these initiatives introduce substantial value for the people, there are other areas of digital inclusion which the program does not cover, for instance, these initiatives operate apart from MEG's digitalization efforts.

In the execution of projects related to digitalizing services, MEG considers digital inclusion in an ad hoc manner, and it is typically guided by lessons learned from other projects, stakeholder knowledge and feedback, and in-house expertise. Furthermore, there are no standard guidelines nor project methodologies to ensure that each digital transformation effort is designed to cater for a population that is diverse in their educational level, background, access to technology, level of basic and digital literacy. Essentially, there is no systematic approach accounting for digital inclusion in the process of digitalizing government services. Without standards and methodologies in place to guide each project, there is a risk of inadvertently increasing digital exclusion.

Therefore, the development of a Project Management Methodology for Digital Inclusion will be a critical asset for the MEG to ensure equitable access to critical public services. Overall, this will increase its alignment with its mission and vision which are both related to creating value for citizens.

1.3 Purpose

The Final Graduation Project aims to develop a comprehensive, strategic and tailored project management methodology for enhancing digital inclusion in the digital transformation projects led by Belize's Ministry of E-Governance (MEG) with particular focus on those related to the digitalization of government services.

The MEG was created for the purpose of leading the digital transformation in the public sector in support of the Government's efforts to optimize services, improve service delivery and generate increased public value. Therefore, in alignment with its core mandate, MEG is leading the digitalization of government services with priority on the highly sought and critical government services which is pivotal for national development. However, the current absence of a dedicated digital inclusion methodology to guide these projects presents a critical vulnerability. This gap risks excluding citizens with limited digital literacy and restricted access to technology from equitable participation in essential public services.

Therefore, the project management methodology presents a structured approach for considering digital inclusion in every project. It will include guidelines, templates, techniques and recommendations tailored to MEG's context, thus making it suitable for the team's application in any digital transformation project.

By developing this robust project management methodology, the following benefits can be expected:

- Significantly enhance the societal value and reach of MEG's digital initiatives
- Provision of guidance for the management of Belize's ongoing digital transformation journey; ensuring full consideration for the diverse digital needs of Belizeans
- Fostering a truly inclusive transition into the digital era
- Enhancement of MEG's project management skills and capacity; increasing international credibility and recognition as well as the likelihood of securing project funding.

1.4 General objective

To develop a comprehensive Project Management Methodology tailored to the management of socially inclusive digital transformation projects in Belize's public sector to ensure that projects deliver equitable access to digital public services and prevent digital exclusion.

1.5 Specific objectives

1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.
2. To define the structure and components of the proposed Project Management Methodology in alignment with the PMBOK knowledge areas and process groups.
3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.
4. To illustrate the practical application of the developed Project Management Methodology through a case study of an existing digital transformation project.

2 THEORETICAL FRAMEWORK

This chapter presents the theoretical foundation for the development of a Project Management Methodology for Digital Inclusion in public sector digital transformation projects. This section will outline the institutional context of the Ministry of E-Governance which includes its mission, vision, organizational structure, and service offerings. It will also analyze the project's alignment with the key project management principles, domains, and life cycle models as defined by the Project Management Institute. Finally, it will highlight relevant theories that directly align with the project at hand.

THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The Ministry of E-Governance was first established as the E-Governance and Digitalization Unit in 2020. Thereafter, in 2025, the Unit was transformed into its own Ministry, the Ministry of E-Governance. This was to allow for growth, development and consequently, better service provision for the Government of Belize.

The Ministry is responsible for the coordinating, planning and implementing of E-Governance in Belize. Its mission is to create public value by leading and supporting public sector digital transformation programs to achieve a Digital Belize. The Ministry seeks to build agile and citizen-focused employees that provide premier technical guidance on digital transformation, empower public sector organizations, engage stakeholders, and promote cross-sector collaboration.

The key areas of focus for the Ministry include:

- Delivering online public services;
- Building digital capacity in public sector;
- Improving the policy and legal environment;
- Developing infrastructure and shared services and fostering a digital society.

The Ministry has implemented and spearheaded several projects and programs to advance the objectives for a Digital Belize (Ministry of E-Governance, 2023).

2.1.2 Mission and vision statements

The mission and vision statements of the Ministry of E-Governance are listed below.

Mission:

To create public value by leading and supporting public sector digital transformation programs to achieve a Digital Belize. We invest to build agile and citizen-focused employees that provide premier technical guidance on digital transformation, empower public sector organizations, engage stakeholders, and promote cross-sector collaborations (Ministry of E-Governance, n.d).

Vision:

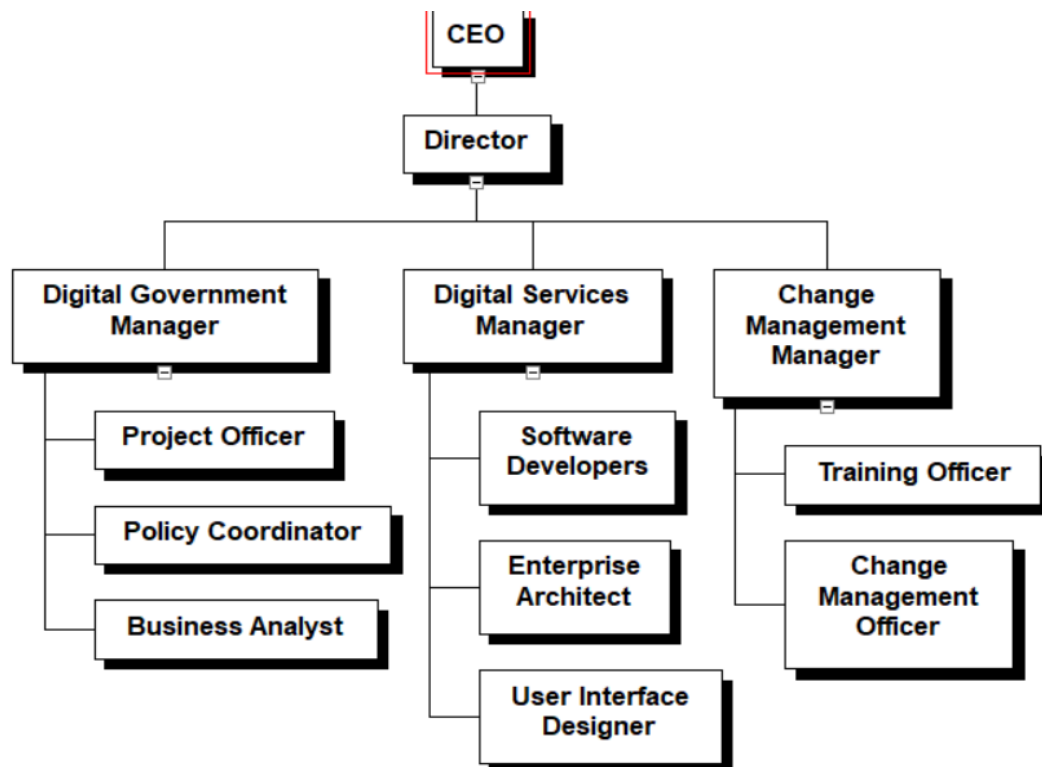
The E-Governance and Digitalization Department is the leading agile public sector organization providing premium products, expertise, and services to create value and transform the Government of Belize (Ministry of E-Governance, n.d).

2.1.3 Organizational structure

The Ministry of E-Governance started out as a small unit in 2020, the E-Governance and Digitalization Unit. It has evolved overtime and in 2025, it was upscaled to the Ministry of E-Governance responsible for coordinating the planning and implementation of E-Governance and cybersecurity in Belize.

The current organizational structure places the Chief Executive Officer at the highest management level, followed by the Director. The Ministry is composed of three functional teams, each with its respective managers. The structure can be better visualized via the organogram below:

Figure 1: Ministry of E-Governance Organogram



Note adapted from Peralta, A. (2023). E-governance and Digitalization Unit Enterprise Architecture. E-Governance and Digitalization Unit. Permission not sought.

2.1.4 Products Offered

The Ministry of E-Governance offers an array of services to deliver value for Belize's public sector. As indicated in MEG's Enterprise Architecture (Peralta, 2023), the key services and products offered are summarized below:

1. Consulting Services

- Provision of strategic and policy expertise to public sector institutions on digital transformation to ensure that the adoption of digital products, processes and models deliver value.

2. Project Management Services

- Provision of project management advice and oversight of digital transformation-related projects for the Government of Belize. In some cases, governmental institutions do not have the resources and/or capacity available to oversee digital transformation projects. Therefore, MEG provides the human resources and expertise to oversee the successful implementation of projects on behalf of other institutions.

3. Product Development Services

- Development of digital products designed to digitalize the services offered to citizens and businesses, for instance, the MEG recently built and launched the Criminal Records Registry which digitalized the highly demanded service of requesting a police record.

2.2 Project Management concepts

2.2.1 Project Management principles

The Project Management Institute (2021) outlines twelve principles of project management.

These principles are aligned with the values indicated in the PMI Code of Ethics and Professional Conduct, which include responsibility, respect, fairness and honesty.

All principles are deemed critical to achieve the ethical, effective and impactful delivery of project results. For this reason, the project, “Development of Project Management Methodology for Digital Inclusion in Public Sector Digital Transformation Projects”, will adhere to all principles of project management.

The project manager will serve as a steward for the project ensuring that high importance is placed in the work being carried out and it is operated with utmost respect for others involved in the project as well as leadership behaviors are demonstrated to increase buy-in and support of the project. Although the work may be executed by an independent individual, the project manager will foster a collaborative team environment where all stakeholders are heard and valued. The project will certainly focus on delivering value for the Ministry of E-Governance and by extension, the citizens that they serve. The development of the project methodology will be a dynamic process in that it will be responsive and adaptable to system interactions within the Belizean context and the natural complexities of Belize’s public sector. Overall, the project will work to generate increased quality from the processes and deliverables resulting from MEG’s projects. Most importantly, the project will enable change and an improved journey of digital transformation.

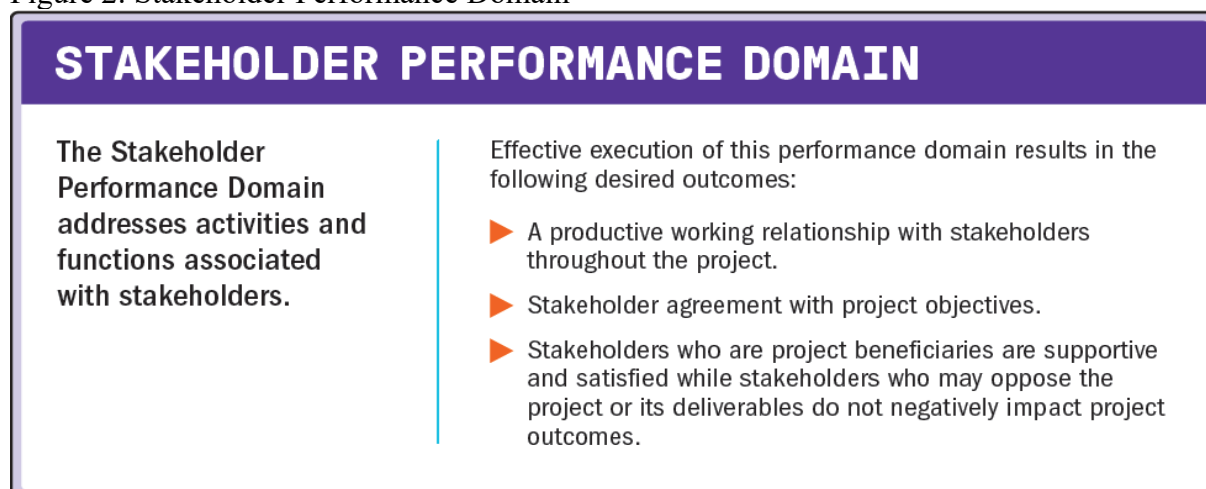
2.2.2 Project management domains

According to the PMBOK Guide (2021), project performance domains are interactive, interrelated and interdependent areas of focus that are critical for the delivery of project outcomes. The guide lists eight domains which include the following:

1. Stakeholders
2. Team
3. Planning
4. Project work
5. Development approach and lifecycle
6. Uncertainty
7. Measurement
8. Delivery

A key factor of project management domains is that they all operate simultaneously; more than one domain is expected to be at work at any given time during the lifetime of the project. The figures below provide additional details on each domain; they are accompanied by a brief description of each domain's alignment with the project.

Figure 2: Stakeholder Performance Domain

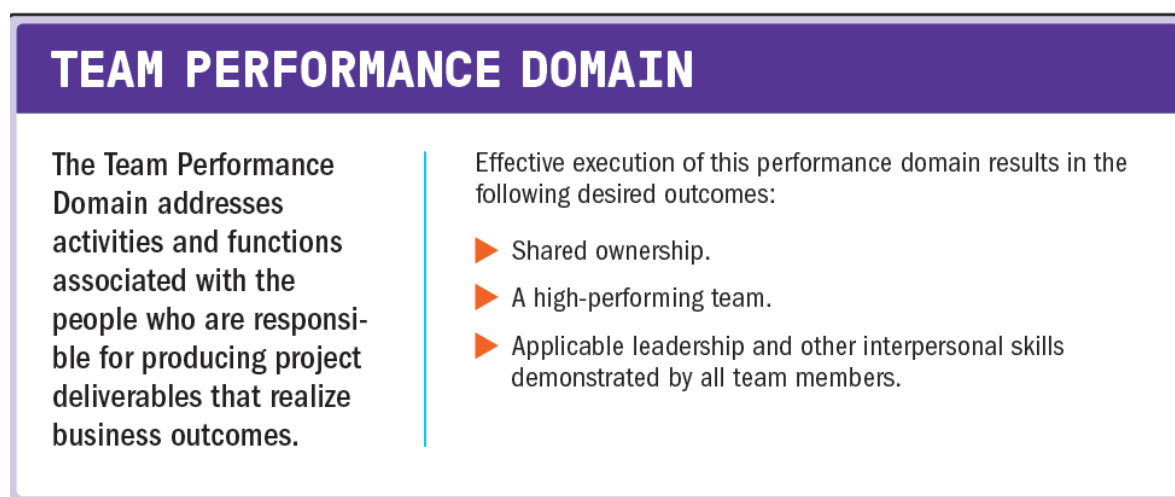


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

Permission not sought.

Throughout the project, stakeholder engagement with the Ministry of E-Governance will be paramount. The Project Manager will be sure to engage through effective communication and in a professional manner.

Figure 3: Team Performance Domain

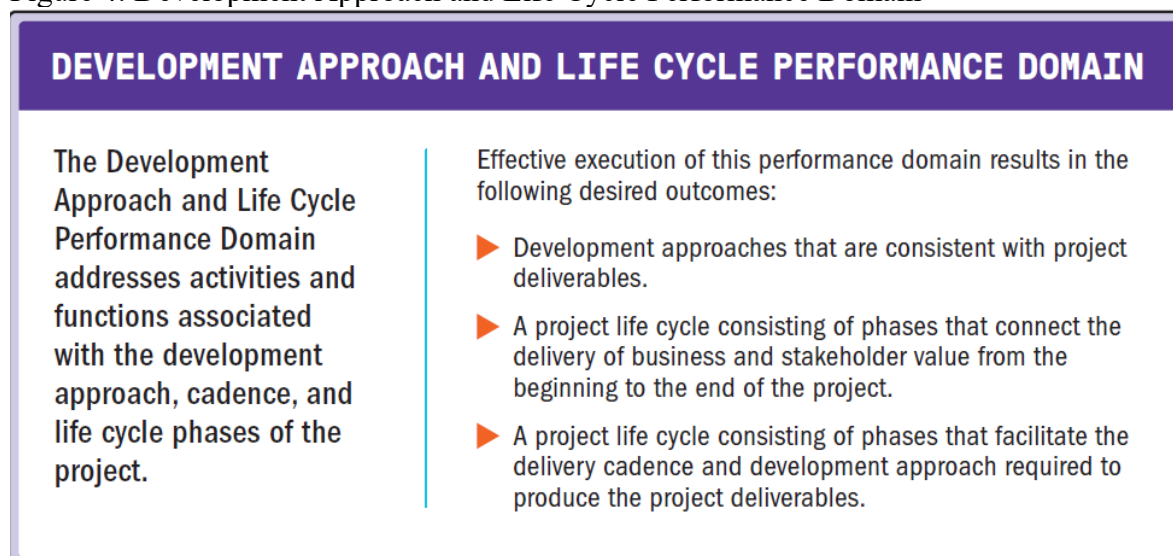


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

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While the project will be primarily executed by the project manager, there will be a need to rely on the expertise and support of external individuals. In these instances, strong leadership and interpersonal skills must be demonstrated.

Figure 4: Development Approach and Life Cycle Performance Domain

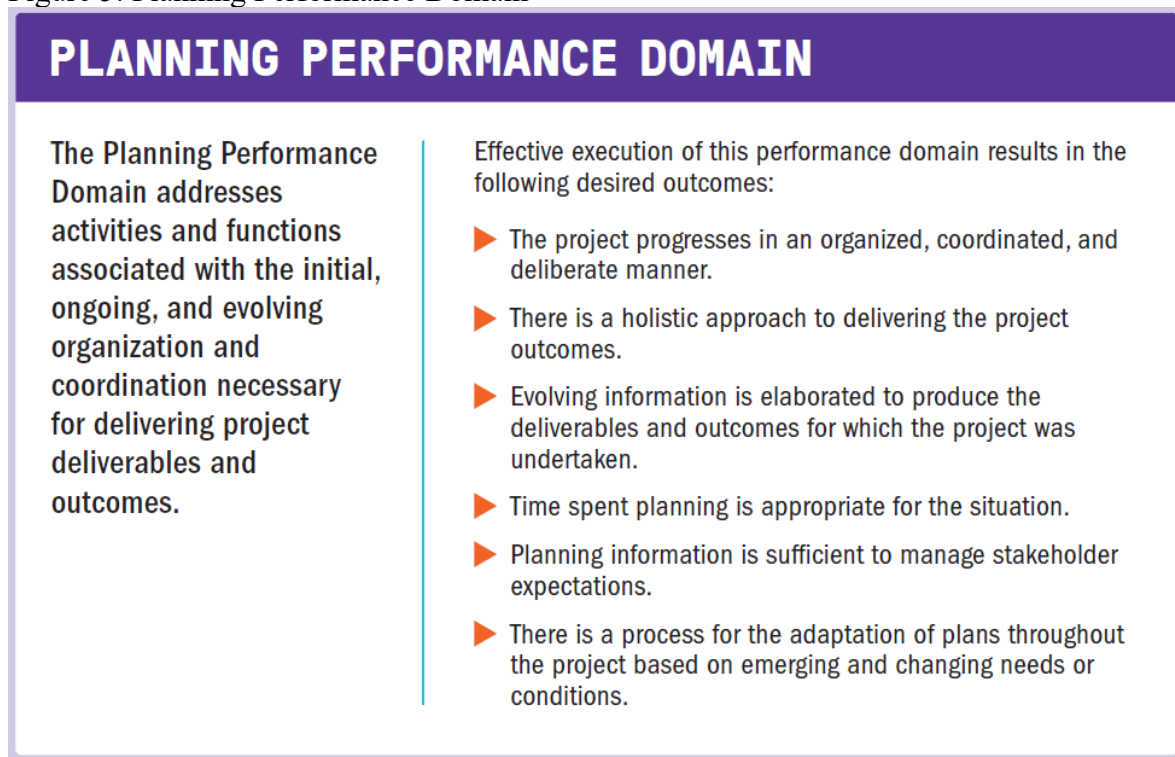


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

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The project will follow a hybrid development approach, which is elaborated further in Section 2. The characteristics of this development approach are most suitable for delivering the project results given the resources and time available.

Figure 5: Planning Performance Domain

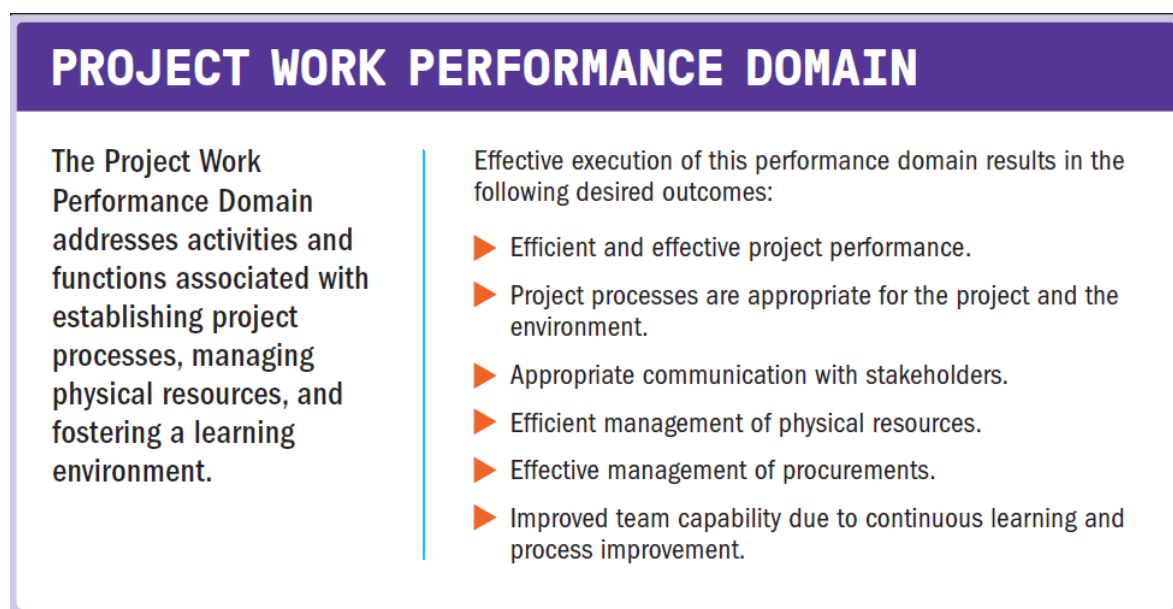


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

Permission not sought.

The Planning domain is critical to project success and will certainly be integrated into the final graduation project. Organization and coordination of activities will be a continuous process throughout the project duration which will ensure that results are delivered on time and to the satisfaction of all interested parties.

Figure 6: Project Work Domain

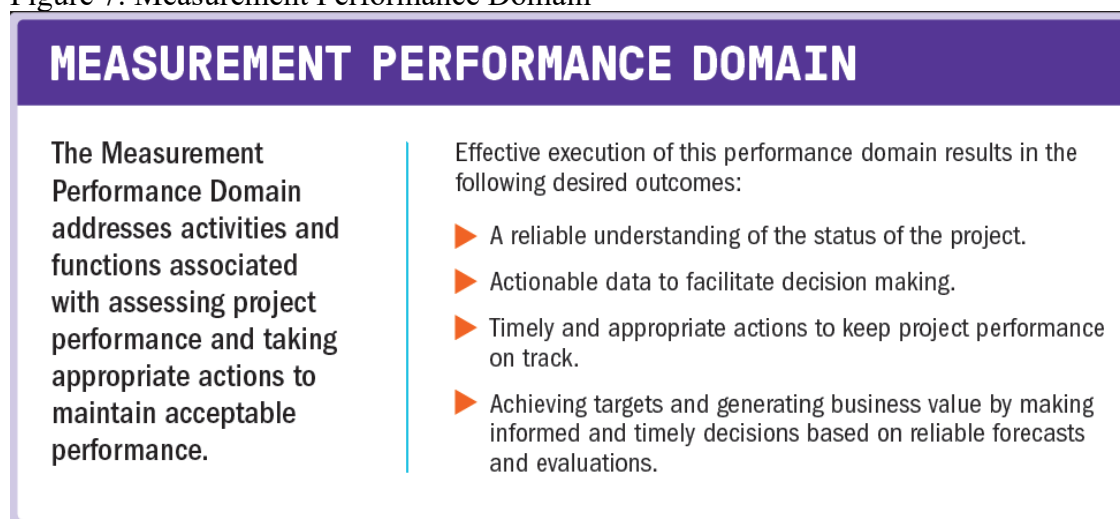


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

Permission not sought.

The delivery performance domain will be integrated into the project to ensure that the project management methodology for digital inclusion meets the intended objectives and is practical for implementation across the projects executed by the Ministry of E-Governance.

Figure 7: Measurement Performance Domain

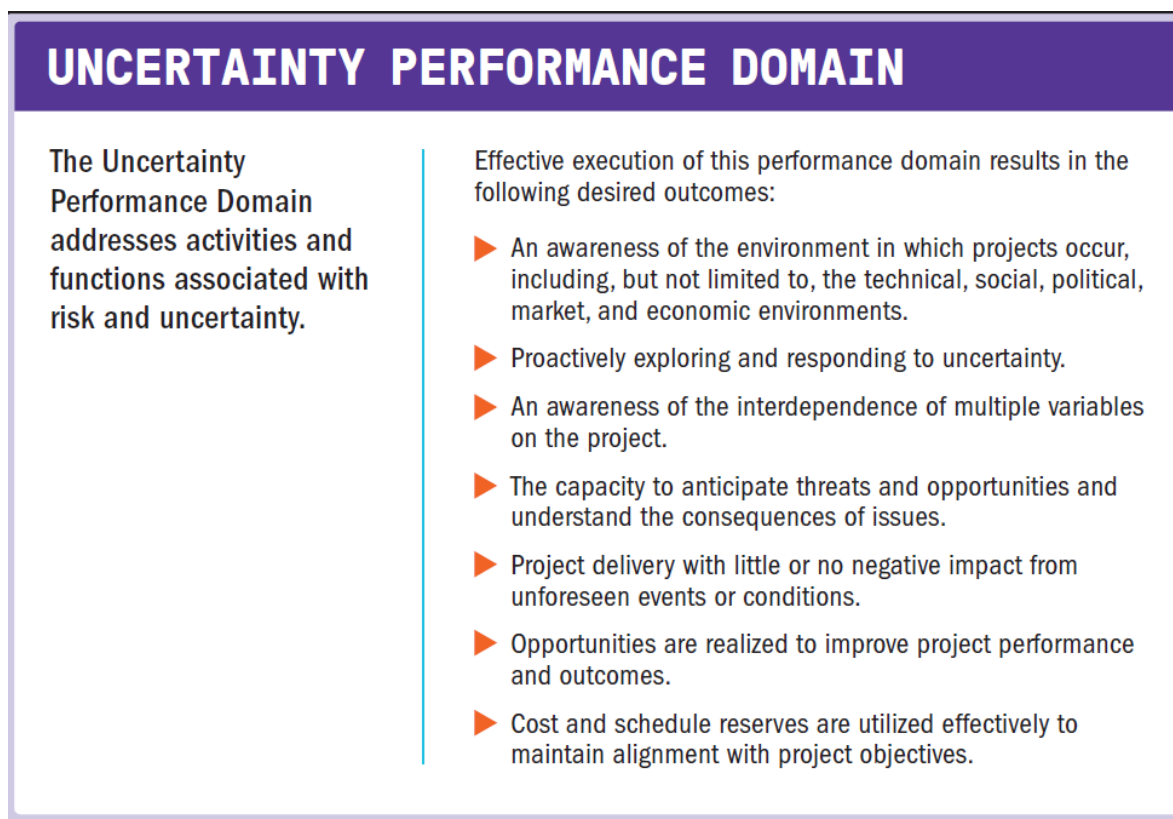


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

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The measurement performance domain will be critical throughout the project, particularly given that the core of the project is limited to a 3-month duration. It will be important that project performance is continuously monitored so that any uncertainties or slippages are quickly flagged. This will allow for early application of corrective actions to ensure that the project continuously remains on track.

Figure 8: Uncertainty Performance Domain

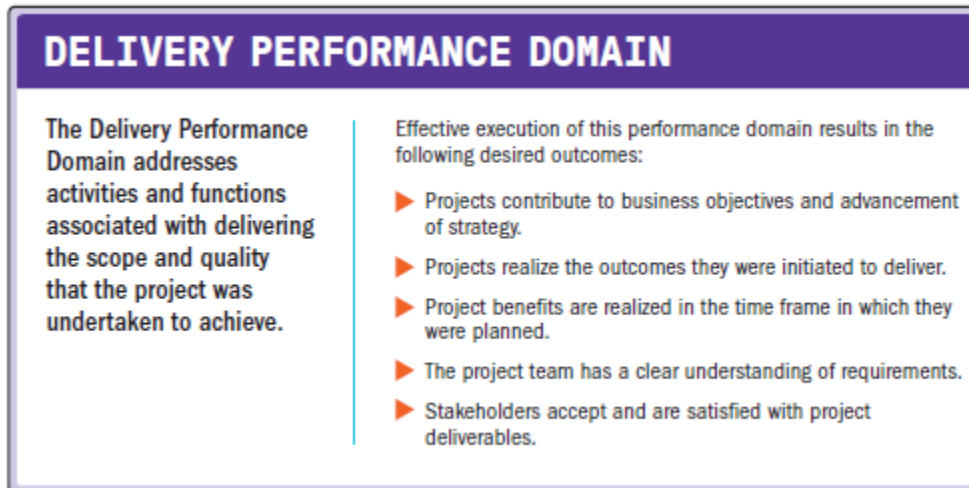


Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

Permission not sought.

Risks will be identified and assessed in the early stages of the project. These will be monitored throughout the project duration to identify any changes in their characteristics. New risks arising throughout the project will also be documented, assessed and monitored for the remainder of the project.

Figure 9: Delivery Performance Domain



Note. From Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc.

Permission not sought.

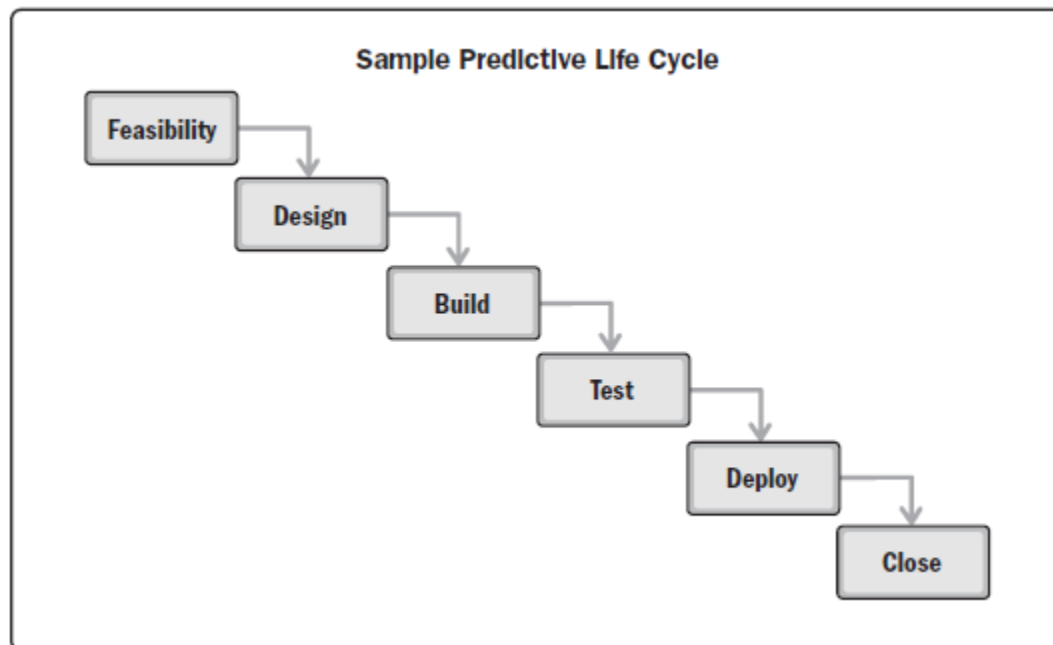
The project deliverables will be constantly validated against the project objectives to ensure direct alignment. Stakeholder collaboration will be maintained to ensure that the project results generate business value and are aligned with their strategic objectives.

2.2.3 Predictive, adaptative, and hybrid projects

Selecting the appropriate development approach is critical for a project; they are selected based on the key characteristics of the project such as the delivery schedule, organizational structure, time, budget and information availability. Below is a brief description of each development approach and an indication of which approach is selected for the final graduation project:

- Predictive Approach is often referred to as the “waterfall” approach. This approach is used where the project scope, time and cost are determined in the early stage of the project. The phases are executed in a sequential manner (Project Management Institute, 2021).

Figure 10: Predictive Approach



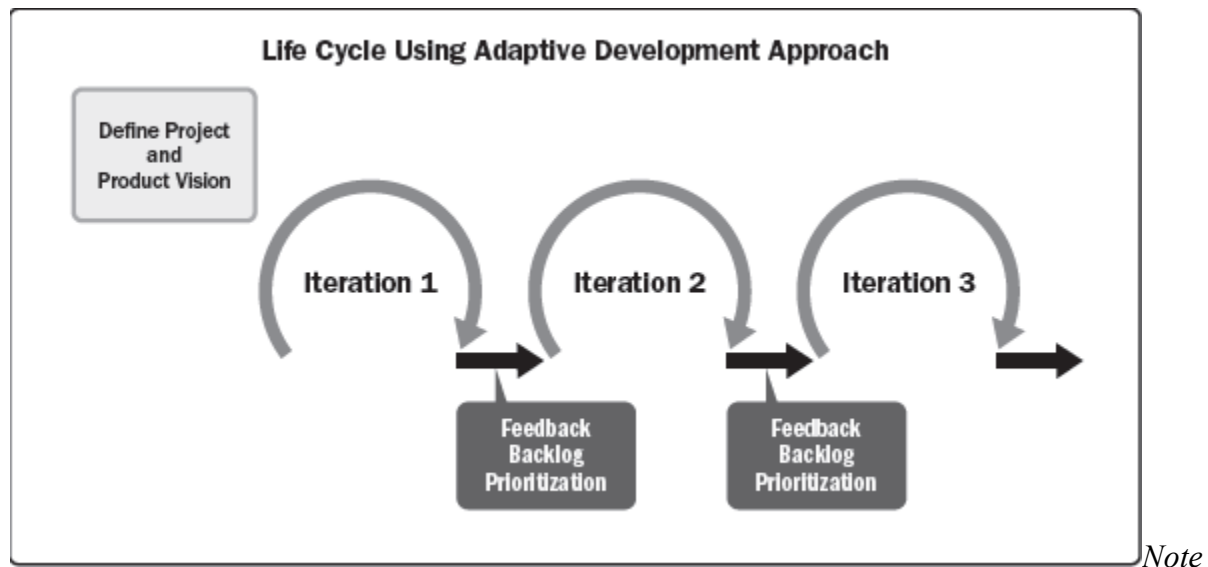
Note Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc. Permission not sought.

- Adaptive Approach is characterized by iterative and incremental development cycles.

They are commonly adopted when the product requirements are subject to a high level

of uncertainty and can quickly change throughout the project (Project Management Institute, 2021).

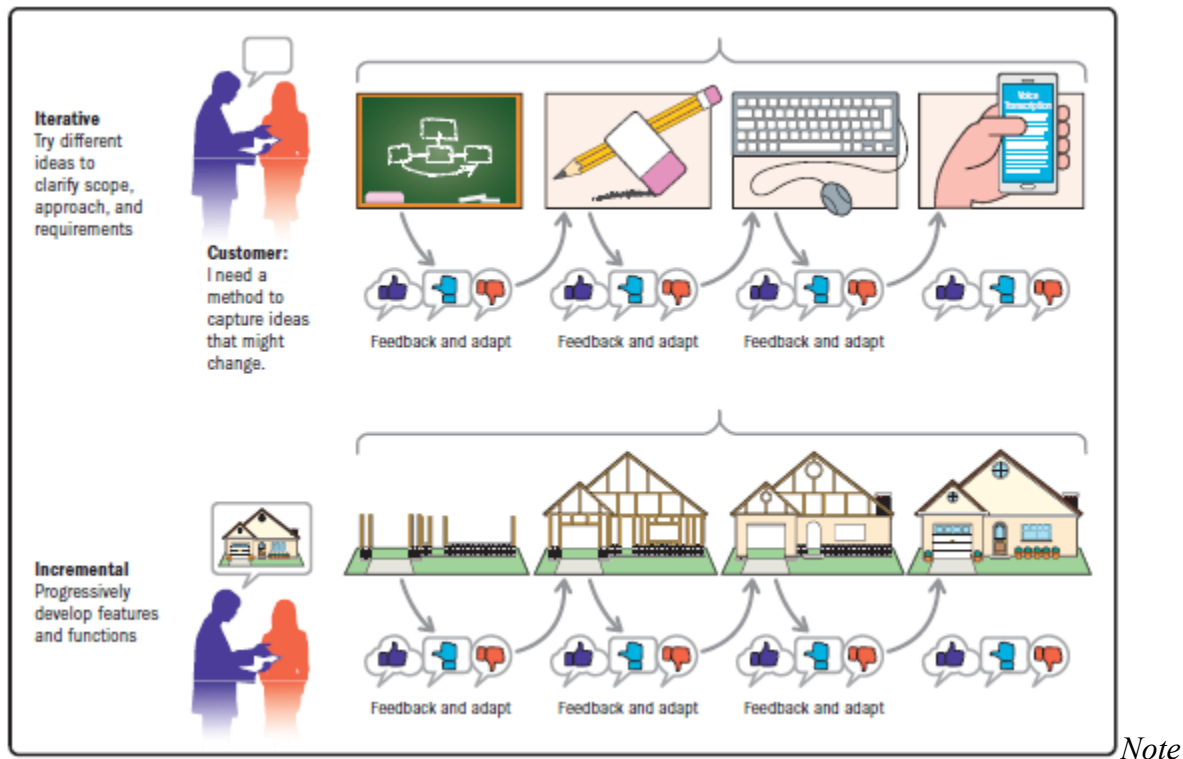
Figure 11: Adaptive Approach



Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc. Permission not sought.

- Hybrid Approach as the name suggests, is an approach that takes on characteristics of both the adaptive and predictive approaches. This approach provides flexibility for choosing which elements of the project are more appropriately executed in a predictive manner and those that can deliver greater benefit by following an adaptive approach. The final graduation project will follow a hybrid approach given that certain phases will follow a linear approach. However, the development of the project methodology will take an adaptive approach, as it will involve iterative deliveries and review of the methodology by the Ministry of E-Governance team.

Figure 12: Hybrid Approach



Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (7th ed.). Project Management Institute, Inc. Permission not sought.

2.2.4 Project management

The Project Management Institute (2021) defines project management as the application of knowledge, skills, tools and techniques to project activities to meet project requirements.

Furthermore, a famous figure in the area of project management, Dr. Harold Kerzner has highlighted that a project is not an isolated effort but a complex system of interconnected parts where changes in one area can affect the entire project. Kerzner also drives the point that project management is separate from ongoing operational management given its aim to achieve “short-term objectives” and its finite nature (Kerzner, 2025).

It is relevant to note that project management, administration and direction are not distinct concepts. Project Administration can be seen as the practical day-to-day work of managing the project's documentation, resources and logistics. Additionally, Project Direction is the leadership and guidance of the project team (Asana, 2025).

2.2.5 Project management knowledge areas and process groups

The Project Management Institute (2016) lists ten knowledge areas, each of which represents a set of concepts, processes, tools and activities required for specific phases in the project. Additionally, it establishes five process groups, which are processes employed to meet project objectives (Project Management Institute, 2016). Figure 19 below lists all knowledge areas and process groups. It also presents a clear picture of the relationship between both.

Figure 13: Process Group and Knowledge Area Mapping

PROCESS GROUP AND KNOWLEDGE AREA MAPPING

Knowledge Areas	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring and Controlling	Closing
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Monitor Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

Note. From Project Management Institute. (2017). *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (6th ed.). Project Management Institute, Inc. Permission not sought.

2.2.6 Project life cycle

The project life cycle is a series of stages that a project goes through from start to finish. It includes five main stages which are initiation, planning, execution, monitoring and control, and closure. Below is a brief summary of the project life cycle phases as guided by Atlassian (n.d):

1. Initiation- the project's scope is defined, along with its cost feasibility, timeline, success criteria.
2. Planning- the project action plan is devised which outlines the tasks required to complete the project and achieve the established goals.
3. Execution- the work outlined in the action plan is executed.
4. Monitoring and Controlling- the progress performance is monitored to identify any deviations from the plan. This allows the team to make changes accordingly.
5. Closure: once all deliverables are completed, the project is closed. This typically includes making final payments to vendors, closing out contracts, conducting post project reviews.

The mode of executing the above life cycle phases is dependent on the project life cycle model selected for the project which includes predictive, adaptive or hybrid life cycle models. For the final graduation project, a hybrid model will be implemented, meaning that elements of both predictive and adaptive approaches will be integrated in the project phases.

2.2.7 Company strategy, portfolios, programs and projects

The company/business strategy is a long-term plan of action designed to achieve a company's goals and objectives (Porter, 1996).

A portfolio is a collection of projects, programs, and other operational work managed together to achieve specific business objectives (Association for Project Management, 2025).

A program is a group of related projects and sub programs managed together in a coordinated manner in order to achieve beneficial outcomes that are too extensive and complex to achieve through a single project (Project Management Institute, 2021).

A project is a temporary endeavor undertaken to create a unique product, service or result (Project Management Institute, 2021).

2.3 Other applicable theory/concepts related to the project topic and context

2.3.1 Current situation of the problem or opportunity in study

The Ministry of E-Governance is the driving force behind the digital transformation of Belize's public sector. A core pillar of the digital transformation effort is the digitalization of high-demand services directly impacting citizens' daily lives (National Digital Agenda, 2022).

The MEG has actively pursued this mandate while spearheading numerous impactful initiatives. Notable achievements include the development and launch of the Public Service Leave Management System for public officers and the Criminal Records Registry for citizens. The Ministry is currently overseeing the development of the Civil Registry and Vital Statistics System which will fundamentally change how Belizeans access and manage vital records. The MEG also has several critical projects in its pipeline such as the National Identification System and the E-Services Portal designed to serve as a central hub for all government-to-citizen services (Ministry of E-Governance, n.d).

In parallel with these service-oriented transformations, the MEG also leads a dedicated Digital Inclusion Program. This program focuses on establishing digital connect centers in rural areas and inner cities, delivering essential digital skills training for youths and women, and implementing initiatives to enhance digital literacy among the elderly population (Ministry of E-Governance, n.d).

While the Digital Inclusion Program works to bridge basic access and skills gaps, it does not provide comprehensive frameworks or project methodologies to explicitly guide each public service digitalization effort. This critical gap means there's no standardized way to ensure that these new digital services are designed from inception to cater to Belize's diverse population, varying widely in educational background, access to technology, and levels of basic and digital literacy.

Therefore, the current situation presents a dual reality: a promising wave of digital government services is emerging but without an integrated project management methodology for digital inclusion there's a notable risk. This risk is that these otherwise beneficial transformations could potentially exclude large segments of the population limiting their equitable access to critical public services. Developing a Project Management Methodology for Digital Inclusion is thus a critical asset needed to navigate this challenge and fulfill the promise of a truly inclusive digital Belize.

2.3.2 Previous research done for the topic in the study

There exists limited data regarding topics such as digital equity, digital inclusion and digital access within the particular context of Belize. However, a study that is related to the topic of investigation is a Governance Acceptancy Survey carried out by the Statistical Institute of Belize in 2021. The survey assessed the factors related to E-Governance acceptance among the citizens. It looked at elements such as usefulness, ease of use, trust in E-Governance and behavioral control. A key finding of the survey is that 49% of respondents had accessed government services in the past year for survey execution and 65% of them expressed high interest in using E-services (Aguilar, 2021). These results demonstrate a high demand in e-services which puts the Ministry of E-Governance in a strategic position to create significant

public value through their efforts of digitalizing public services (Belize's National Digital Agenda, 2022). It proposes an important initiative to measure digital access in Belize particularly due to the number of citizens without access to digital devices. Unfortunately, this critical initiative has not been actualized yet.

2.3.3 Other theories related to the topic in the study

There are theories that directly relate and can guide the topic of study. These include the Digital Divide Theory, Public Value Theory, and Technology Acceptance Model. These are further described below:

Digital Divide Theory:

- Jan A.G.M. Van Dijk (n.d.) investigated the concept of the Digital Divide extensively. Since the origination of the term in the mid-1990s, it has been typically defined as the gap between people who do and do not have access to forms of information and communication technology (ICT) which are commonly considered as computers and the internet. Van Dijk has strongly criticized this partial definition of the digital divide and argued that it creates a number of misunderstandings. Therefore, he developed a framework for analyzing the successive levels of access to technology. He focuses on four levels: the undeniable importance of physical access to technology, motivational access, skills access and usage access.
- The digital divide theory is an important guiding resource for the development of the project management methodology for digital inclusion as it explores much beyond the concept of physical access. In doing so, it will support the creation of a comprehensive methodology for implementation into digital transformation projects to further support digital inclusion.

Public Value Theory:

- Public value is defined as the value created by the government through services, laws, regulation and other actions (Kelly, Mulgan & Muers 2002). Moore (1995) established the strategic triangle which encourages public managers to consider three key elements prior to embarking on a path to create public value. These include:
 - The benefits that the entity seeks to generate
 - Political legitimacy to drive a particular initiative
 - The resources available: human, technological and monetary
- These elements are critical for driving the creation of public value. However, just as important is the concept of measuring public value. Faulkner and Kaufman (2017) suggest that public value measurement must consist of outcome achievement, trust and legitimacy, service delivery, quality and efficiency. There are many researchers that have developed frameworks for public value measurement. Some of these researchers include Meynhardt's public value scorecard which focuses on four theory-based public value dimensions: moral-ethical, hedonistic-aesthetic, utilitarian-instrumental and political-social (Meynhardt et al. 2017). In addition, Moore's public value scorecard focuses on two key elements including the decreasing costs in producing public value and the means for tracking the envisioned and unforeseen outcomes which emanate from the work done (Moore, 2013). This theory is particularly relevant as it directly aligns with the Ministry of E-Governance's mission of delivering public value for all.

Technology Acceptance Model (TAM):

- The primary objective of TAM is to highlight the circumstances fundamental to the acceptance of technology and to predict the behavior of the successful implementation of technology. On the practical side, TAM seeks to guide practitioners towards the successful implementation of information systems (Marikyan and Papagiannidis, 2025).
- One of the intentions of the project management methodology is to improve the implementation of digital transformation projects and to drive acceptance of the systems being introduced. By creating products widely accepted by a diverse population, it would signify that it is consistent with the users' skills, level of technology accessibility and literacy. Therefore, contributing to digital equity among the digital public sector products.

“Rolling Wave Planning” method:

- The method suggests that planning should be done in successive waves; the distant project phases are planned at a high summary level while near term work is planned in detail. This type of planning aligns with the HCD process of following an iterative mode of software development and flexible delivery of other supporting project activities. This approach supports adaptation of the solutions following user testing and feedback.

3 METHODOLOGICAL FRAMEWORK

Introduction

Methodological frameworks provide structured practical guidance to assist in conducting a process or procedure, most commonly within research or other projects. The framework is expected to outline a series of steps, methods or principles to help ensure consistency, thoroughness and credibility in the chosen approach (McMeekin, Wu, Germani, et al, 2020). The following sections outline the methodological framework that will guide the execution of the final project.

3.1 Information sources

An information source is any material that can be used to derive information. A source is fundamental for research, decision making and learning. Information sources are typically categorized into Primary, Secondary and Tertiary sources (National Library of Australia, 2025, May).

3.1.1 Primary sources

Primary sources are firsthand evidence about an event, person, place etc. they are typically documented by persons who experience the events or conditions at the time of occurrence (UTEP, 2023). These sources are considered to be of original thought as they have not been modified by interpretation (Steton Hall University, n.d.) These sources of information can exist in a multitude of formats and are not restricted in any sense. A few examples include archives, photographs, recordings, speeches, memoirs.

For this project, the following primary sources will be explored:

- Interviews with the executive and project management team of the Ministry of E-Governance.
- Project documents on the Ministry's previous, ongoing and future digital transformation initiatives.
- Reports documenting first-hand experience in the application of project management methodologies, frameworks and tools related to digital transformation, inclusion and equity.

3.1.2 Secondary sources

Secondary sources originate from people who did not experience firsthand or participate in the events being researched (Harvard Library, 2025, May). They present an analysis or interpretation of primary sources without firsthand experience. These sources seek to describe, comment, evaluate and summarize the primary sources (UNSW Sydney, n.d).

For this project, the following secondary sources will be analysed:

- Existing project management methodologies, tools and frameworks, that have a particular focus on digital equity and digital inclusion.
- Reports which present an evaluation of various methodologies, tools and frameworks related to digital equity and digital inclusion.

Chart 1: Information Sources

Objectives	Information sources	
	Primary	Secondary
1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project	- Reports documenting firsthand experience on the implementation of project management methodologies and frameworks related to digital equity and digital inclusion.	- Articles and Books on the Digital Divide, Digital Inclusion and Digital Equity. - Comparative studies on digital transformation initiatives.

Objectives	Information sources	
	Primary	Secondary
management methodology for the Ministry's projects.		
2. To define the structure and components of the proposed Project Management Methodology in alignment with the PMBOK knowledge areas and process groups.	- Interviews with the project management and executive team of the Ministry of E-governance. - Organizational project management documentation. - Project Management Institute publications (Standards, process groups, methodologies).	- Scholarly articles and review papers. - Case studies - White papers
3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.	- Consultations with the Ministry of E-governance team. - International and National Standards/Guidelines for Accessibility and Usability. - Existing Toolkits developed and implemented across various entities. - Data from Digital Inclusion Program initiatives.	- Articles and Books on the Digital Divide, Digital Inclusion and Digital Equity. - Review papers on best practices, accessibility in E-government. - Comparative studies on digital transformation initiatives.
4. To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.	- Consultations with the Ministry of E-governance team on selection of and application to a project. - Project documents of the selected project: project charter, project management plans, requirements specifications.	- Published case studies of similar nature. - Comparative studies on the application of similar project management methodologies, frameworks or tools.

3.1.3 Research methods

Research methods are known as the strategies, processes or techniques utilized in the collection of data or evidence for analysis in order to uncover new information or create a better understanding of a topic (University of New Castle Australia, 2024, November). Common types of research methods are qualitative, quantitative and mixed research methods.

3.1.2 Qualitative Research Method

This research method is an approach that seeks to explore a topic by investigating experiences, perspectives and social processes. Qualitative research deals with non-numerical data such as text, audio and visual materials (UK Research and Innovation, 2022, March). Some common examples of qualitative research techniques include semi-structured or structured interviews, observation and open questionnaire surveys.

This project will primarily utilize qualitative methods in its approach to achieve the objectives. The various techniques to be integrated will be described in Chart 2.

3.1.3 Quantitative Research Method

A quantitative research method emphasizes objective measurements and the statistical, mathematical or numerical analysis of data collected through surveys or by manipulating preexisting statistical data using computational techniques (Babbie, 2010).

Chart 2: Research Methods

Objectives	Research methods		
	Qualitative-Analytic-Synthetic	Qualitative-Interviews	Qualitative-inductive-deductive
1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.	Literature Review/Document Analysis of existing project management frameworks related to digital inclusion and equity. The relevant concepts will be broken down and applied to the project objectives as necessary.	Not Applicable	The current state of digital inclusion and equity within the Belizean context will be analysed. General theories or frameworks identified through the analytic/synthetic process will be further assessed for its applicability to the Belizean context.
2. To define the structure and components of the proposed Project	Literature Review/Document Analysis of existing	Interviews to be held with the Ministry of E-governance	

Objectives	Research methods		
	Qualitative-Analytic-Synthetic	Qualitative-Interviews	Qualitative-inductive-deductive
Management Methodology in alignment with the PMBOK knowledge areas and process groups.	project management frameworks related to digital inclusion and equity. The information gathered will be analysed and relevant concepts, synthesized into the applicable components of the project management methodology.	personnel to guide the development of the methodology.	
3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.	Relevant accessibility standards and guidelines will be analysed to extract applicable concepts for integration into the methodology templates and recommendations.	Interviews will be conducted with the Ministry of E-governance personnel to determine the needs and applicability of various project management tools. These insights will guide the development of the templates and recommendations.	
4. To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.	Documents of various projects will be analysed to determine the most suited project for application of the methodology. Once the project is selected, the various project documents will be analysed to determine areas where the methodology can be applied.	Members of the Ministry of E-governance team will be interviewed to determine the most suitable approach for implementation of the methodology.	

3.3 Tools

Tools refer to resources such as instruments, software, system or technique that support project teams in planning, executing, monitoring and controlling a project. Some examples of tools

include Gantt charts, kanban boards, checklists, mind maps and project calendars (Landau, 2024). Throughout the project, a number of tools will be used to support the achievement of each objective. The following chart will list the specific types of tools that will be implemented for each objective.

Chart 3: Tools

Objectives	Tools
1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.	Checklists, benchmarking, affinity diagrams, root cause analysis, document analysis
2. To define the structure and components of the proposed Project Management Methodology in alignment with the PMBOK knowledge areas and process groups.	Mind maps, interviews, focus groups, checklists, expert judgement, interpersonal and team skills, process analysis.
3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.	Brainstorming, interviews, document analysis
4. To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.	Brainstorming, interviews, affinity diagrams, process analysis

3.4 Assumptions and constraints

Assumptions are defined as any factor relating to a project that is considered to be true, real or certain without any empirical evidence (Regan, 2024, July). Any project will require that a few assumptions be made as it is impossible to assess each variable that the project may face.

Therefore, it is key to determine the assumptions, monitor their development throughout the project and address any potential risks that may arise from such assumptions. A few assumptions are being made for this project. These are described in Chart 4.

Constraints are limitations that can impede the successful completion of a project. There are six key categories of constraints that are accounted for in project management, these include cost, resources, time, quality, scope and risk (Asana, 2025, March). It is highly unlikely for a project to be set up in perfect circumstances. As such, there are always constraints to monitor throughout the project lifetime. The constraints related to the final project are listed in Chart 4.

Chart 4: Assumptions and Constraints

Objectives	Assumptions	Constraints
1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.	Comprehensive and organized documentation regarding digital equity project management frameworks and best practices will be readily accessible for analysis.	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. Due to the compact project timeline, it will not be possible to execute an extensive survey among the Belizean public to gather information on their level of digital literacy and needs related to digital access. There are limited comprehensive studies that have been conducted to assess the Belizeans' level of access to technology and digital tools.
2. To define the structure and components of the proposed Project Management Methodology in alignment with the PMBOK knowledge areas and process groups.	The proposed project management methodology developed during this project will be directly applicable and relevant to the unique socio-economic and technological context of Belize. Key personnel from the MEG will actively engage and provide timely, comprehensive input throughout the methodology development process. The Lead Researcher has the requisite skills to develop the project management methodology. The MEG will endorse the project management methodology and commit to its systematic implementation across all relevant future digital transformation initiatives.	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. The development of templates, tools and recommendations will primarily rely on a thorough review of credible literature and expert insights from the Ministry of E-governance (MEG), rather than direct, large-scale citizen feedback. The MEG personnel may have limited time available to review progress and provide feedback on the methodology.
3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.	The proposed project management methodology developed during this project will be directly applicable and relevant to the unique socio-economic and technological context of Belize. The Lead Researcher has the requisite skills to develop the project management methodology.	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. The development of templates, tools and recommendations will primarily rely on a thorough review of credible literature and expert insights from the Ministry of E-governance (MEG), rather than direct, large-scale citizen feedback.

Objectives	Assumptions	Constraints
		The MEG personnel may have limited time available to review progress and provide feedback on the methodology.
4. To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.	The MEG will endorse the project management methodology and commit to its systematic implementation across all relevant future digital transformation initiatives. There is a suitable project that the project management methodology can be applied to.	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. The MEG personnel may have limited time available to review progress and provide feedback on the methodology.

3.5 Deliverables

Deliverables represent the tangible and intangible outputs a project aims to produce and serve as critical benchmarks for progress and quality. Project deliverables must be managed effectively to ensure the project meets objectives, stays on schedule and satisfies stakeholder expectations (Atlassian, n.d.)

Chart 5: Deliverables

Objectives	Deliverables
1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.	Analysis on existing digital equity project management frameworks and best practices
2. To define the structure and components of the proposed Project Management Methodology in alignment with the PMBOK knowledge areas and process groups.	Methodology structure, components and procedures.
3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.	Templates and tools of the proposed methodology.
4. To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.	Case study demonstrating the practical application of the project management methodology.

4 RESULTS

The Results section encompasses the final project's core deliverables in alignment with the project objectives. These deliverables establish the new Digital Inclusion Project Management Methodology (informed by an analysis of existing frameworks and best practices), outlines all supporting templates and tools, and validates the methodology through its application to an ongoing MEG digitalization project.

4.1 Deliverable 1: Analysis on existing digital equity project management frameworks and best practices

To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.

Digital Inclusion and Digital Equity

As part of launching its National Digital Agenda (NDA) in 2022, Belize has led numerous digital transformation efforts within the Public Sector. At this juncture, the Government of Belize, through the Ministry of E-Governance is revising its National Digital Agenda for the years 2026-2030. The renewal of the NDA shows a stark commitment towards Belize's transition into a digital era.

The Public Sector's digital transformation has the potential to deliver increased value to citizens, increase economic efficiency and foster greater accessibility of public services by citizens in Belize and abroad. A key dependency for achieving the above benefits is the equitable access to the digital public services being introduced.

Digital Equity is a critical concept to consider in digital transformation efforts. Digital Equity is defined as a condition in which everyone has the technological capacity needed for full

participation in society, democracy and economy. Digital equity plays a critical role in shaping individual's access to government services and their ability to engage in civic activities (Smith, 2024).

While Digital Equity is the goal, the underlying problem is the existence of a Digital Divide. Furthermore, the work that is undertaken to bridge the digital divide and achieve digital equity is referred to as Digital Inclusion. For greater understanding, these terms are defined below:

- **Digital Divide** refers to the gap between those who have access to technology and the skills to use it (Pasquarello, 2024). Bridging the digital divide is not only about providing access to information. In the context of government services, it is about ensuring that every citizen, regardless of socioeconomic background, can actively participate in shaping the policies and decisions that impact their lives.
- **Digital Inclusion** refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communications Technology (Pasquarello, 2024).

Pasquarello (2024), through the National Digital Inclusion Alliance, presents five pillars that determine digital inclusion:

1. Affordable and high-speed internet
2. Internet-enabled devices that meet the needs of the user
3. Access to digital literacy training
4. Quality technical support
5. Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration

Another concept closely related to digital inclusion is **Universal Meaningful Connectivity** which suggests that connectivity should not be merely defined by a person's access to the internet. It presents six dimensions as described by the Digital Economy Working Group (2024):

1. Connection quality- high-speed and stable internet suitable for their needs.
2. Internet availability- the internet is available to use when needed and across locations.
3. Affordability- cost of internet is relative to people's income.
4. Access to devices- to engage with and benefit from digital opportunities.
5. Appropriate digital skills- capacity to leverage digital opportunities.
6. Safety and security- secure internet connections and safe online usage.

Therefore, in developing a project management methodology for digital inclusion, it will be critical to consider the dimensions of digital inclusion and universal meaningful connectivity as described above.

State of Digital Inclusion in Belize

Belize's NDA places Connectivity and Inclusive access as a key strategic theme under the pillar of ICT and technology enablers. The theme relates to the "Expansion of reliable internet connection and access points to remote and rural areas in Belize to support the use of digital services and mobile applications. It will facilitate access, adoption, and application of information and communication technologies by marginalized communities as a means for socio-economic prosperity" (National Digital Agenda, 2022).

Validating the status of Connectivity and Inclusion requires extensive baseline data and continuous monitoring thereafter to measure progress. Unfortunately, data on this subject

remains at a very high level whereby a lack of disaggregated data prevents us from making specific insights into the demographic groups that are digitally excluded or are at risk of it.

Kindly see below some key statistics regarding connectivity in Belize:

- 304,000 individuals were using the internet in Belize at the start of 2025; representing an internet penetration rate of 72.4% of the total population (Kemp, 2025).
- A total of 345,000 cellular mobile connections were active in early 2025. However, some of these connections are limited to only voice and SMS. There are also cases where individuals have multiple connections. As such, the figure does not equate to the number of citizens (Kemp, 2025).
- In 2020, the Rural Connectivity Index and Significant Connectivity Index indicated that Belize belonged to the cluster with low significant connectivity; this means that there is a huge gap between urban connectivity and rural connectivity with populations which do not have access to connectivity services of sufficient quality (IDB, IICCA, 2020).
- More specific data on the digital access gap in Belize is unavailable. Notably, one of the actions in the National Digital Agenda 2022-2025 was to estimate the digital access gap, particularly the following indicator “Percent of children and elderly at risk of digital exclusion”. Unfortunately, this action was not realized during the Agenda’s implementation period. As such, the data remains limited to effectively measure the existing digital divide.

Based on the above, it is evident that the availability of data and digital inclusion monitoring frameworks can be strengthened. Considerations for data gathering and monitoring must be made in the digital inclusion methodology to be developed.

Best practices for Fostering Digital Inclusion & Equity

To develop an effective Digital Inclusion Project Management Methodology, it is important to gain an understanding of factors that enable digital inclusion. Below are some key takeaways of themes that have been shown to foster inclusive participation in the digital ecosystem, which digital government services are a part of.

Digital Public Infrastructure

Firstly, Digital Public Infrastructure (DPI) has become increasingly known as a foundation for building inclusive, efficient and transparent digital governance. More specifically, it acts as a foundational layer for secure and inclusive delivery of both public and private services. The World Bank (2024) defines DPI as foundational and re-usable digital platforms and building blocks such as digital identification, digital payments and data sharing that underpin the development and delivery of trusted, digitally enabled services across the public and private sectors.

As mentioned above, DPI consists of key building blocks. Below is further context on how these blocks facilitate access, inclusion and efficiency; therefore, making it relevant to the digital inclusion project management methodology.

- Unified identity system- In Belize, IDs are typically the primary requirement for accessing any public service whereby each service type may require a distinct form of ID. This requirement creates a barrier for citizens who must constantly renew and carry various forms of ID. With the availability of a standard national ID and the ability for any office to validate a person's ID, citizens would be able to securely authenticate themselves across various services such as healthcare, education, social protection and voting.

- Interoperability- facilitates inter-agency data sharing which reduces the time needed for data verification and alleviates citizens from having to submit documents at every government service encounter. This means that there would be a reduced need to acquire and submit documents such as copies of birth certificates, income letters and land titles. This particularly benefits citizens of remote areas who must spend time and money to access any type of service.
- Digital payment systems- payment gateways facilitate online payments for services which reduces the need for physical visits and improves transparency. Belize currently does not have a payment gateway. Therefore, online payments for services are only facilitated through the more advanced banks. As a result, those who bank with other institutions are excluded from the online payment process.

In general, DPIs aim to allow equal, nondiscriminatory access to services, as well as foster inclusion and user choice, data privacy and consent (World Bank and Inter-American Development Bank, 2024).

According to the Digital Public Infrastructure Map (n.d), Belize is in the process of establishing its Digital ID System and its Data Exchange System; it also has a Digital Payment System that meets some of the DPI criteria. It is evident that Belize is on the path to establishing its DPI. To further prioritize this process, it is worthwhile including it in the digital inclusion methodology. As demonstrated, DPI is a key building block for accessible and efficient service delivery of digital government services. However, for full realization of its benefits, it must be complemented with a user centric lens which directs focus towards elements such as appropriate user design and digital literacy initiatives.

User Interface Design

User Interface (UI) Design is more than making a page aesthetically pleasing. It is a primary tool for enabling digital inclusion and equity. UI design is a key enabler for ensuring that population groups with low literacy, limited language proficiency and disabilities can adequately access government services.

Various resources exist with guidelines on how to consider the various limitations that may exist among the population, for instance, the benchmark for ensuring accessibility for users with disabilities is the Web Content Accessibility Guidelines. The guidelines suggest numerous UI design strategies that address key disabilities. Other resources such as Digital Lift (2024) provide additional guidance to ensure that the disabled community is not excluded from participating in the digital society. Recommendations are also available for populations with low literacy and diverse languages. Given the criticality of UI design in promoting digital equity, it must be included as a key element of the digital inclusion methodology.

Digital Literacy

Many populations lack the digital skills necessary to navigate the internet effectively which includes tasks like online research, filling out online forms, using email, and navigating through their devices and internet access confidently. If digital literacy remains low or lacking among the population, it may result in the Government of Belize building accessible, secure, interoperable and user-friendly services but the population remains incapable of using them. Therefore, it remains critical to continuously instill digital literacy across the population according to their needs.

Stakeholder Consultations

While factors like digital literacy and UI design are widely known to foster digital inclusion, there may be other factors that prevent citizens from accessing services. These factors may be

unique to individuals or could be common across a large group. The only mechanism for unearthing these factors is to consult the expected users of a given service. Engaging with users would allow for the gathering of information on their challenges, barriers, concerns, needs and wants. This process would allow for the development of a service that directly caters to the users, which is key in striving towards digital equity.

In digitalizing services, it is common for teams to make design decisions based on assumptions of the typical barriers that users face in accessing services. However, consultations provide more context on the specific barriers that they face, and they can validate the assumptions previously made, for instance, engaging with remote communities, the elderly or their representative can reveal the need for simplified iconography and mandatory in-person support options.

Consultations can also assist in ensuring cultural and language appropriateness, preventing bias and gaining community buy-in.

Link to Project Management Frameworks & Methodologies

To support the development of a project management methodology for digital inclusion, it is important to define project management frameworks and methodologies, inclusive of their differences, the types and respective characteristics.

A **Project Management Framework** is a generalized set of principles that help project managers determine how to manage the project to best ensure success. The key types of project management frameworks include predictive, adaptive and hybrid (Bell, n.d.).

A **Project Management Methodology** is a system of practices, techniques, procedures, and rules that guide the execution of a project. It provides a structured approach to project management by defining how tasks should be planned, executed, monitored and controlled to

achieve the desired outcomes. The key types of methodologies include waterfall, agile, human-centered design and lean (Bell, n.d.).

As part of this analysis, various project management methodologies and frameworks were explored. While a distinct “digital inclusion methodology” was not identified, the existing methodologies/frameworks that demonstrate the closest link to digital inclusion are elaborated below:

Agile Methodology

- Agile methodology is highly adaptable and emphasizes continuous feedback, collaboration and iterative development. The methodology is highly appropriate for the continuous inclusion of user’s needs (White, 2008). This methodology is relevant to the development of digital inclusion methodology because of the following reasons:
 - Prioritizes and caters for frequent stakeholder engagement
 - Encourages prototyping and testing with diverse groups including marginalized ones
 - Supports inclusive decision making through frequent and open collaboration and engagements with the project team through sessions like daily stand-ups and retrospectives.

Human-Centered Design

- A creative approach to problem solving that focuses on the human element- users, customers and stakeholders. It means designing with people and not just for them. This approach also involves stakeholders throughout the entire process (IDEOU, 2023). The key characteristics of this methodology are:

- Empathy- considered to be the cornerstone of HCD; it refers to deeply understanding people's lives, emotions, motivations and contexts.
- Curiosity- designers remain open to the unknown. Curiosity fuels exploration that precedes innovation.
- Embracing ambiguity- designers resist the urge to jump to conclusions and instead stay present in ambiguity, they leave space for deeper understanding and more meaningful breakthroughs.
- Humility- listening with an open mind and resisting bias.
- Iteration- quick prototypes and ongoing feedback are key.
- Collaboration- co-creation among teams, users and communities are highly emphasized.
- Optimism- even when faced with complex challenges, designers look for opportunities to progress ahead.

4.2 Deliverable 2: Digital Inclusion Project Management Methodology

Introduction and Purpose:

The Digital Inclusion Project Management Methodology (DI-PMM) is a strategic and tailored framework for guiding the Ministry of E-Governance in the execution of digitalization projects, particularly within Belize's public sector. The purpose of the methodology is to ensure that digitalization projects take full consideration of the diverse digital needs of Belizeans, therefore fostering a truly inclusive transition into Belize's digital era.

The methodology also takes into consideration MEG's enterprise environmental factors, organization process assets and the Belizean context overall. This information has contributed

towards the development of a targeted, specific and flexible methodology that can be implemented across diverse types of digitalization projects.

In alignment with the PMBOK guide, the methodology structure mirrors the key project life cycle phases referred to as the Process Groups. The process groups include Initiating, Planning, Executing, Monitoring and Closing. The Knowledge Areas are also incorporated into the various process groups as applicable. These include Integration, Scope, Schedule, Cost, Quality, Resource, Communication, Risk, Procurement and Stakeholders.

Furthermore, the methodology is guided by the Agile and Human-Centered Design (HCD) methodologies which were seen to best align with its human centric and inclusive nature. Both methodologies are intertwined throughout the various phases of the DI-PMM.

With the DI-PMM being guided by the PMBOK Guide's rigid project management structure, it is influenced by human-centric methodologies and tailored to the Belize context. It is expected to be a pragmatic and effective tool for digitalization projects led by the MEG.

Guiding Principles

The DI-PMM is also guided by key principles which align with its purpose of driving citizen-centric digitalization initiatives. The four key principles include:

1. **Trust-** digitalization initiatives should aim to increase the citizens' confidence in public sector services and products. Citizens should trust that government entities have their best interest in mind and constantly aim towards making public services more efficient and accessible to them.
2. **Equity-** public services should generate value for each citizen regardless of location, ability and socioeconomic status.

3. **Transparency**- there should be clear communication of digitalization projects that is inclusive of their intent, progress and outcomes.
4. **Adaptability**- while MEG's projects are often similar in nature, each project has unique circumstances that alter its implementation approach. As such, the methodology should be further tailored to the unique context of each digitalization project.

Methodology Prerequisite

In the analysis deliverable, it was noted that data on digital inclusion in Belize was lacking. Therefore, it is recommended that data on digital inclusion at a national level be collected to guide the effective design of inclusion interventions. Once established, it would not be necessary to repeat in every project.

The recommended metrics to be collected are aligned with the pillars of Digital Inclusion as established by the National Digital Inclusion Alliance and the dimensions of Universal Meaningful Connectivity. Key metrics that should be assessed include the following:

- Access to affordable and high-speed internet
- Access to internet-enabled devices that meet the needs of users
- Level of digital skills amongst the population
- Safety and security of internet connections.

The data captured should also be disaggregated by demographic parameters such as sex, socioeconomic status, age and ethnicity.

Phases of DI-PMM

The DI-PMM is a hybrid approach to project management as it incorporates elements of both predictive and adaptive frameworks. Therefore, while its structure is guided by the core process

groups of project management, the intent is for these processes to occur iteratively as required instead of sequentially and only once throughout the entire project.

The hybrid approach is also necessary to balance the flexibility required to address user feedback and needs while maintaining structure and control as needed for public sector and donor funded projects. The degree of rigidity needed for a project is determined by its unique circumstances. As such, the principle of adaptability described above is key for utilizing the methodology.

Phase 1: Initiating

- The initiating phase seeks to identify its audience and determine the scope of the digital inclusion challenge to be addressed by the digital service. This phase is highly influenced by the Observation phase of the HCD methodology whose goal is to understand the people that you are designing for by learning about them (Vinney, 2023).

Key Actions:

1. **Develop Inclusion Project Charter-** the charter must encompass key sections including the project's purpose, objectives, high-level deliverables, budget, timeline, constraints, assumptions and risks. See Digital Inclusion Project Charter template for guidance.
2. **Stakeholder identification:** identify individuals or groups who will interact directly with the service, as well as persons who have an interest in the project or are affected by the outcome either positively or negatively. Emphasis must be placed on identifying “**excluded user segments**”, which refer to persons with disabilities, low literacy, or who are linguistic minorities. This information can be gathered through consultations with the primary beneficiary of the digital service as they have first-hand
 - a. knowledge of their customer base.

3. **Determine Digital Inclusion Considerations:** Based on the stakeholder identification process, determine the digital inclusion considerations that will need to be incorporated into the project. For instance, if linguistic minorities have been identified, it is expected that the digital product must incorporate translation functionality.
4. **Determine Digital Inclusion Targets:** Establish measurable digital inclusion targets that must be met by the service or product that is being developed. These targets will serve as part of the product's success criteria among its users.

Phase 2: Planning

- The planning phase seeks to establish an effective Project Management Plan that guides the fulfillment of the project objectives and places digital inclusion at the forefront of the digitalization process. The plans developed at this stage are subject to refinement during the subsequent phases of the project, thus keeping in line with the flexibility and adaptive approach of digitalization projects.

Key Actions:

2.1 Scope Planning:

- In this stage, the team must determine the project scope that will be achieved. The team must employ the **Rolling Wave Planning** technique to maintain adaptability and flexibility in response to user feedback and testing.

Key actions:

1. **Refine the scope-** the project scope is to be refined and illustrated through the **Scope Statement** and the **Product Backlog**. The Scope Statement determines the high-level system design and limitations, budget caps and other governance elements that are required for public sector projects. The Product Backlog is a dynamic execution plan

that details user stories, order of development and acceptance criteria. Both documents combined assist the project team in establishing the project scope and guide its monitoring and execution.

The Product Backlog is meant to be a flexible document that may change based on user feedback. At this stage, the backlog can contain the high-level system elements and may be further refined during the execution phase. The following can be included:

- a. Key project milestones
- b. System requirements:
 - i. Key functionalities
 - ii. High level Process flows
 - iii. User role model
 - iv. Digital Inclusion Targets
 - v. Identified accessibility standards as guided by the Web Content

Accessibility Guidelines 2.2

2. **Detail Near-Term Work-** the detailed features and tasks are to be planned in the near term, which can vary from two weeks to two months. This planning approach maintains flexibility and prevents wasted effort on features that are subject to change.

2.2 Mandatory Digital Inclusion Scope Elements

- Based on the analysis of the digital inclusion context in Belize, the items below were determined to be critical for fostering digital inclusion in the projects led by MEG. The project scope must incorporate the following elements:

Chart 6: Recommended Project Components

Inclusion Recommendation	Actionable Scope Requirement
Capacity Building and Training	Execute various types and levels of digital literacy training and capacity building for two key user groups: - Beneficiary Organization- Training on the management and operation of the new system. - Citizens- digital literacy training to ensure service usability and adoption.
Digital Public Infrastructure Integration	Assess the status and availability of the three DPI building blocks and incorporate into the system design and requirements. These include: Unified ID System, Interoperability and Digital Payment Systems. Ensure that the incorporation of the pillars facilitate equal and nondiscriminatory access to services.

For further guidance on incorporating digital inclusion initiatives in the project scope, the

“Digitally Inclusive Projects Checklist” (Chart 27) should be referenced. The checklist has been tailored to the MEG and Belize context.

2.3 Cost Planning:

- Government funded projects require approval of budgets prior to the start of the project. Thereafter, approval of additional funds not originally budgeted is unlikely or would be a tedious process. As such, comprehensive cost planning at the beginning of the project is imperative.

Key Actions:

1. Develop a budget to include all project costs, including the digital inclusion project activities.
2. A **Contingency Reserve** of 25% should be allocated within the project budget. The reserve should be dedicated to absorbing unforeseen costs related to accessibility issues, especially those resulting from iterative software development and user testing.

2.4 Resource Planning:

- The project resources are critical for driving the tasks that will ultimately lead to achieving the project goal and objectives.

Key Actions:

1. Estimate all project resources, including MEG employees, external contracted expertise and necessary supplies/equipment.
2. Identify and allocate the internal expertise necessary to support the project. The existing roles within MEG are listed below and should be integrated into the project activities:
 - User Interface and User Experience Designer
 - Change Management Officer
 - Training Officer
 - Business Analyst
 - Software Developers
 - Project Manager
 - Software Testers
3. Determine project needs that require external expertise to balance existing MEG capacity and workload.

2.5 Schedule Planning:

- The Rolling Wave Planning technique will be utilized to plan for the completion of the project within the allocated timeline. This technique allows for planning in detail only the upcoming work (two weeks to two months) while the overall project phases and end date remain as fixed milestones.

Key Actions:

1. Develop project schedule based on the project scope resulting from the scope planning activity. At this stage, the activities should be defined, sequenced and assigned an estimated duration. The project schedule should be visualized and monitored using two key tools:
 - a. A **Gantt Chart** is used to outline the high-level schedule of milestones/phases and activities, clearly outlining the fixed end date. This high-level schedule is important for project governance, approval and reporting to executives and key stakeholders. This schedule has a low degree of detail.
 - b. A **Product Backlog** is used to manage the iterative component of the project, particularly the system development, testing and quality control phases. This tool is flexible enough to adjust to the dynamic process of developing a system using the Human Centered Design approach.
2. Ensure that sufficient time is allocated for the execution of key inclusion activities such as:
 - a. Digital literacy and skills training
 - b. User testing with diverse groups
 - c. Corrective accessibility fixes
3. The schedule must be monitored, controlled and adjusted as the project progresses.

2.6 Procurement Planning

Key Actions:

1. If outsourcing is necessary, the below requirements must be followed to mitigate risks related to project schedule and digital exclusion.

- a. Assess contract factors such as funding source and contract value to effectively forecast the time required for the procurement process. Effective procurement planning must be prioritized to prevent any project delays.
 - b. All Terms of References developed must be aligned with the Digital Inclusion Targets and any other accessibility standards defined.
2. Based on the project factors at play, a Procurement Plan must be devised to outline the resources to be procured, procurement processes required and the date when needed.

2.7 Stakeholder Planning

- The methodology focuses heavily on the needs of the stakeholders, particularly the excluded user segments. As such, stakeholders along with their respective goals and needs are identified in the process of developing the Digital Inclusion Project Charter in the Initiation Phase. Nevertheless, at this stage, any new information that arises can be used to update the Stakeholder Register.

Key Actions:

1. Revise the Stakeholder Register based on any new information that arises.

2.8 Communication Planning:

- The project team must define a structured approach for effective exchange of information tailored to the particular needs of each stakeholder. The communication approach must leverage the previously identified key stakeholders, particularly the excluded user segments.

Key Actions:

1. Develop the communication plan which defines:

- a. Mechanism for information exchange tailored to the needs of each stakeholder, particularly the excluded user segments.
 - b. The content, consistency, modality and formation of all information artifacts and techniques.
2. Mandate that communication artifacts are in accessible and multilingual formats.

2.9 Quality Planning:

Key Actions:

1. Outline the inclusion standards that the digital product must adhere to. The standards must be aligned to the Digital Inclusion Targets and the Web Content Accessibility Guidelines.
2. Establish the techniques and tools to be used to monitor quality at the various project intervals.

2.10 Risk Planning:

- A risk is an uncertain event or condition that, if it occurs, has a positive or negative effect on one or more of the project objectives (PMI, 2017).

Key actions:

1. Identify potential risks to the project. These must also be analysed and assigned a practical response should they arise. The risk details must be compiled into a Risk Management Plan.
2. Priority must be placed in incorporating risks related to **digital exclusion**.

2.11 Executive Approval

Key Actions:

1. **Plan for executive approval-** public sector projects typically require approval from high level management on the project roadmap prior to the execution phase. As such, the project roadmap and any other supporting document must be submitted for approval at this stage. In the case of MEG, the executive team will consist of the Director and the CEO of the Ministry.

Phase 3: Executing

- The Executing Phase seeks to action out the various activities that will lead to achieving the project goals and objectives. The phase is guided by the project roadmap developed in the Planning Phase.

3.1 Development Approach

- The software development process will be led by an **iterative** approach. This approach allows for high user engagement and ultimately leads to a product that meets the needs of and creates added value for its users.
- The development process is highly aligned with the key phases of the HCD methodology, as can be seen in the actions below. Note that these phases are intended to operate in a cyclical manner as opposed to only once.

Key Actions:

1. **Rapid Prototyping:** the team must build a “**Low-Fidelity prototype**”, which is a simple diagram of an early-stage design concept. It drives ideation and innovation for basic page layout, content organization and user flow (Figma, n.d.). Examples of low fidelity prototypes include Wireframes and Story Boards.
2. **User Feedback:** the prototype must be tested by a group of users that is representative of the identified stakeholders, particularly the excluded user segments. This is a critical

stage in the development process, as the insight gathered from the testing will guide the intensive development of the product that will follow. As such, it is important to get the prototype in the hands of users with diverse abilities and literacy levels.

3. **Iteration:** document the feedback gathered from user testing, with particular focus on the “inclusive” features, as it will fuel the subsequent development increments/sprints. Note that each increment must be tested by the users before continuing development of the following increment.
4. **Team Planning-** adopt agile techniques to increase team cohesion during the development process. Techniques may include **Daily Scrum** and **Sprint Reviews**.

3.2 System Acceptance

- Acceptance of the final product is a critical step in the digitalization projects led by MEG. The acceptance process involves validating the product against the established standards, as well as transitioning ownership of the product to the beneficiary who will manage and operate it moving forward. This process must be done in the Execution Phase, as complementary activities such as system training must be done based on a complete and accepted product.

Key Actions:

1. **Final Inclusion Audit Checkpoint:** mandate the execution of a final Inclusion Audit Checkpoint prior to handing over the product to the primary beneficiary. The process must include screening against the Digital Inclusion targets, WCAG compliance and any other inclusion metric that was established during the project. Evidence of any non-compliance will need to be addressed prior to final handover.

2. **Signing of the Beneficiary Acceptance Agreement:** once the Inclusion Audit

Checkpoint determines that all standards were met, the product may be handed over to the beneficiary. The handover process must be documented through the signing of the Beneficiary Acceptance Agreement. While the MEG team champions the digitalization of services, ownership must be absorbed by the primary beneficiary entity to ensure successful adoption and delivery of the reengineered service.

3.4 Apply the planned project activities:

Key Actions:

1. **Implementation of all project activities:** in addition to software development, the complementary activities must also be actioned out. These activities may include the application of resources, communication mechanisms, stakeholder engagement and digital skills building activities.

3.5 Project Integration:

- Project integration is fundamental across the various phases of the project. It is of utmost importance in the execution phase when all process groups are at work and competing demands exist not only within the same project but across various projects across the MEG's portfolio.

Key Actions:

1. **Maintain a single source of truth:** The product backlog must remain as the authoritative record for scope and schedule decisions. Any change must be reflected in the backlog so that it always remains up to date and relevant.
2. **Collaboration among specialized MEG roles:** Conduct regular meetings with key team members such as the UX/UI Designer, Change Management Officer and the

Software Developers to review the software increments. This ensures that the technical elements of the software align with the human-centered design principles.

3. **Resolve Inter-project resource conflicts:** Establish and communicate a clear chain of escalation for competition over shared resources among the various MEG projects. The executive team must arbitrate such conflicts based on the Ministry's priorities.
4. **Prioritization of Feedback Adaptation:** Require that user feedback is immediately analysed and integrated into the product backlog for the upcoming sprints. Feedback regarding accessibility must be prioritized for the subsequent sprint.
5. **Daily Synchronization:** Mandate the Daily Scrum exercises among the development team to coordinate the daily work and resolve any issues.

Phase 4: Monitoring

- The Monitoring Phase seeks to maintain control over the project to ensure that it remains aligned with the goals and objectives throughout its lifespan.

4.1 Scope and Schedule Control

- While the adaptive form of development allows for flexibility and changes as a result of identified user needs, care must be taken to avoid extensive scope creep which can overextend MEG's resources. Therefore, it is critical to ensure that all changes being accepted are aligned with the overall project goal, objectives and digital inclusion targets. Scope and Schedule Control is also directly related to the Project Integration Knowledge Area.

Key Actions:

1. **Establish change request process:** all scope adjustments or feature enhancements should pass through a formal change control process. The Product Owner is responsible for assessing every request.
2. **Enforce Inclusion Standards:** All change requests are screened against the Digital Inclusion Targets and WCAG standards, resulting in the assignment of an “**Exclusion Risk Score**”. Any change that can potentially limit inclusion should be flagged for higher analysis and consideration at the executive level.
3. **Control schedule through prioritization:** the priority of items may be adjusted to maintain control of the schedule. Instead of extending the project deadline, added features can be incorporated in a subsequent version of the digital solution. Nevertheless, critical inclusion-related changes should trigger consideration of the timeline.
4. **Align with project goals:** any change request must be verified to be aligned with the project goal, objectives and digital inclusion targets.

4.2 Quality Control:

- Exercising quality control techniques is a crucial part of monitoring the operation and success of a project. The mechanisms identified in the Planning stage must be executed at this stage. It must be noted that quality control processes must be planned throughout the various project phases and must not be left towards the end of the project.

Key Actions:

1. **Mandate Audit Checkpoints:** schedule mandatory Inclusion Audit Checkpoints at the completion of each product increment.

2. **Address Defects:** any form of non-compliance with accessibility standards identified through the audit should be immediately logged and prioritized for resolution in the upcoming sprint.
3. **Utilize standard tools:** checkpoints should be executed and documented through the Compliance Checklist found in the “Templates and Tools” section.

Phase 5: Closing

- The Closing Phase seeks to successfully wrap up the project by assessing the adherence to all inclusion targets, handing over the product to the beneficiary and documenting the knowledge and experience gained throughout the project for improving the delivery of future digitalization projects.

5.1 Lessons Learned

- It is important to assess and document the lessons learned throughout the project period. This information will be critical for future projects and will foster a culture of continuous improvement amongst the team.

Key Actions:

1. **Final team meeting:** schedule a final project team session to openly discuss topics such as challenges faced, lessons learned and best practices. This open discussion format will foster team communication and collaboration which will be of great benefit for future projects.
2. **Complete the lessons learned template:** document all lessons learnt throughout the project in the Lessons Learned template.

Definitions of Methodology Terms:

- Scope Creep- The uncontrolled expansion to product or project scope without adjustments to time, cost, and resources (PMI, 2017).
- Product Owner- the person accountable for maximizing the value of the product by representing the beneficiary and guiding the development team (Scrum.Org, n.d.).
- Primary Beneficiary- the public sector office who manages the service that is being digitalized.
- Excluded User Segments- persons or groups that may face some degree of exclusion from the digitalization project.
- Daily Scrum- quick meetings held each day at the same time for members of the product development team working on a particular sprint. The team collectively reviews the progress made toward achieving the Sprint Goal (Product Plan, n.d.).
- Sprints- short, repeatable phases, typically one to four weeks long. The number and length of the sprints should be determined at the beginning of the project, and each sprint should result in a draft, prototype, or workable version of the final deliverable (Gurnov, n.d.).
- Sprint Reviews- a working meeting where the team presents their completed work to stakeholders and asks for feedback, this ceremony marks the end of a sprint (Scrum.Org, n.d.).

4.3 Deliverable 3: Templates and Tools for the Digital Inclusion Project Management

Methodology

Initiation Phase Templates and Tools

Digital Inclusion Project Charter Template

Project Name:

Version History:

Version	Author(s)	Date	Description
1	Ministry of E-Governance	November 23, 2025	Initial Draft

Background

Indicate the reasons why the project is needed. Provide any context which helps the reviewer to understand the project better.

Project Goal

Indicate one high level project goal to be accomplished.

Project Objectives

Indicate the various objectives to be accomplished.

Project Milestones & Timeline

Indicate the high-level milestones to be achieved throughout the project, along with an estimated timeline for completion.

Chart 7: Project Milestones and Timeline

Milestone	Q 1			Q2			Q3			Q4	
	1	2	3	4	5	6	7	8	9	10	11
<i>Project Start Date:</i>											
Project Initiation:											
<i>List milestones for each project phase.</i>											
Project Planning:											
Project Execution:											
Project Closure:											
<i>Estimated Completion Date:</i>											

Program Indicative Budget

Present the estimated cost of the project. Comprehensive budgets at the onset of government-funded projects are critical. Requesting an additional budget at a later stage is tedious and approval is not guaranteed.

Chart 8: Program Budget Template

Item	Cost
<i>Activity 1</i>	\$
<i>Activity 2</i>	
Subtotal	\$
Contingency Reserve (25%)	\$
Cost Baseline	\$
Management Reserve (10%)	\$
Total Budget	\$

Project Risks

List project risks that are known at the Initiation Phase.

Project Assumptions

List assumptions that are known at the Initiation Phase.

Project Constraints

List constraints that are known at the Initiation Phase.

Stakeholders

List the stakeholders who have been identified at this stage.

Chart 9: Stakeholder Register Template

Stakeholder Register				
ID	Stakeholders	Description	Main Expectations	Influence/Impact (Low-Medium-High)
1	<i>Indicate the stakeholder or stakeholder group.</i>	<i>Describe the stakeholder.</i>	<i>Indicate what the stakeholder expects from the project.</i>	<i>Rate the stakeholder's influence and impact on the project.</i>
2				

Excluded User Segments

The excluded user segments may be a subgroup of the stakeholders. They are groups of users who may be at risk of digital exclusion.

Chart 10: Excluded User Segments Template

Excluded User Segments			
ID	Excluded User Segments	Description	Main Expectations
1	<i>Indicate the Excluded User Segments</i>	<i>Describe them for better understanding.</i>	<i>Indicate what they may expect from the project.</i>

Digital Inclusion Considerations & Targets:

Based on the stakeholder identification process, indicate the Digital Inclusion Considerations and the measurable Digital Inclusion Targets that will address each of them

Chart 11: Digital Inclusion Considerations and Targets Template

Digital Inclusion Consideration	Digital Inclusion Target
<i>Indicate the Digital Inclusion Consideration that will need to be addressed.</i>	<i>Indicate a measurable Digital Inclusion Target.</i>

Charter Approval

The MEG Executive Team must sign off on the Project Charter.

Signature:

Date:

Print Name:

Title:

Annex:

Include any additional content that can provide a better understanding of the project.

Recommended annexes are completed user personas to allow the leadership team to understand the needs of the key stakeholders and excluded user segments.

Template Description: The Digital Inclusion Project Charter provides an overview of the key elements of the project. The charter is meant to be approved by the MEG executive team.

Approval of the charter would then transition the team into more detailed project planning.

User Persona Template

Figure 14: User Persona Template

JOSE CARRILLO		
PROFILE Gender : Male Age : 65 Education : Primary School Occupation : Taxi Driver Location :  “	BIOGRAPHY MOTIVATIONS USER END GOALS FRUSTRATIONS 	POTENTIAL AREAS OF EXCLUSION TECHNOLOGY USAGE Software Social Media Mobile App PAYMENT METHODS

Template Description: The user persona template guides the team in creating fictional profiles to represent a group of users. It guides the design and development team to understand their user groups and address their user goals and needs.

Planning Phase Templates and Tools:

Scope Planning Template: Product Backlog

Chart 12: Product Backlog

Task Id	User Story/Task Name	Sprint #	Assigned To	Acceptance Criteria	Start	Finish	Story	Priority	Status

Template Description: The product backlog template is meant to be populated with all the user stories and tasks that are within the project scope and are required to achieve the project goal. Given the agile nature of the execution phase of the DI-PMM, a product backlog is a more flexible way to keep track of software development tasks and requirements which are subject to change as a result of user testing.

Cost Planning Template

Chart 13: Project Budget Template

Item	Cost
<i>Activity 1</i>	\$
<i>Activity 2</i>	
Subtotal	\$
Contingency Reserve (25%)	\$
Cost Baseline	\$
Management Reserve (10%)	\$
Total Budget	\$

Template Description: The Budget/Cost Planning template is meant to capture all expected costs of the project. A contingency reserve of 25% is recommended to account for any unexpected costs that may arise from addressing user feedback. Management reserve of 10% is recommended to cover costs related to administration of the project.

Resource Planning Templates

Chart 14: Project Team Requirements Template

Name	Position	Functions	MEG Employee/ Outsourced
<i>Name of Team Member</i>	<i>Employment Position</i>	<i>Indicate their role within the project.</i>	<i>Indicate whether they are a MEG employee or if they will be temporarily contracted for the project.</i>

Template Description: The Project Team Requirements Table presents all persons who will form part of the project team.

Chart 15: Project Resource Log Template

Resource	Category	Procurement (Y/N)	Start	Finish
<i>Type of resource required: physical or human</i>	<i>Indicate the category of resources they fit into</i>	<i>Will the resource need to be procured?</i>	<i>Date when resource will be required</i>	<i>End date of resource use/involvement in the project</i>

Template Description: The Project Resource Log indicates a list of all resources that will be required throughout the project, as well as other details that will facilitate effective resource mobilization.

Procurement Planning Template

Chart 16: Procurement Plan Template

Resource	Quantity	Procurement Process	Requirements	Date Needed
<i>Indicate resource required</i>		<i>Indicate the process to be followed to procure the resource: competitive, single source etc.</i>	<i>Requirements that the resource should meet.</i>	<i>Date when the resource is required.</i>

Template Description: The Procurement Plan presents all resources required for project execution which will need to be procured. It assists the team in planning the procurement activities at the onset of the project to ensure that all resources are acquired and available when needed to maintain smooth project execution.

Project Integration Planning Template

Chart 17: Exclusion Risk Score Matrix

Criteria	Weight (Multiplier)	Description	Assigned Score (1-5)	Weighted Score
A. Severity of Exclusion	3	How many users/groups would the change negatively impact? • 1= No impact on citizen access or defined Digital Inclusion targets, change only affects internal operations and/or minor visual aesthetics. • 2= change creates minor inconvenience for a small user segment. E.g. group with rare disabilities. • 3= change creates a defined barrier for a small user group. The user can still complete the action using alternative methods. • 4= change creates a significant barrier that prevents defined groups (e.g. rural citizens) from completing key actions. E.G. cannot verify identify or submit form • 5= change breaks a core accessibility feature or goes against an established Digital Inclusion Target, significantly excluding a large number of users across multiple excluded groups.		0
B. WCAG/Standard Compliance	2	Does the change violate a mandatory standard (WCAG 2.2 AA or established Digital Inclusion Target? • 1= No violation • 2= Violates 1-2 guidelines that are not included in the WCAG Tiered Roadmap for WCAG Alignment • 3= Violates 3-4 guidelines that are not included in the WCAG Tiered Roadmap for WCAG Alignment • 4= this score may be assigned if either of the following proves to be true: - o Violates one Digital Inclusion Target - o Violates either a Tier or Tier 2 Guideline • 5= Violates one or more Digital Inclusion targets and Tier 1/Tier 2 Guidelines.		0

Criteria	Weight (Multiplier)	Description	Assigned Score (1-5)	Weighted Score
C. Reversibility/Cost to Fix	1	How many hours would it take to reverse the change or fix the resulting exclusion later? • 1= 4 or less hours • 2= 5-8 hours • 3= 9-16 hours • 4= 17- 32 hours • 5= More than 32 hours- signifying that it would require extensive redesign		0
TOTAL ERS (Maximum Score: 30)		Sum (A + B + C)	—	[Total ERS]
ERS Score Range	Risk Classification	Required Action/Approval Level		
5	No Risk	No potential exclusion risk is identified. Project Manager / Product Owner can approve immediately.		
6-12	Low Risk (L)	Project Manager / Product Owner can approve immediately.		
13 - 18	Medium Risk (M)	MEG Director must approve. Reasoning must clearly state why the benefit outweighs the moderate exclusion risk.		
19 - 30	High Risk (H)	MEG CEO must approve. The rationale for proceeding must be documented, acknowledging the failure to meet the respective accessibility standard and/or Digital Inclusion Target.		

Template Description: The Exclusion Risk Score Matrix is a tool for assessing the potential risk of exclusion that a change request to the project scope may pose. The first section presents viable exclusion questions that lead to the assignment of an Exclusion Risk Score. The latter section guides the team on the action that should be taken based on the assigned score.

Stakeholder Planning Template

Chart 18: Stakeholder Register Template

Stakeholder Register				
ID	Stakeholders	Description	Main Expectations	Influence/Impact (Low-Medium-High)
1	<i>Indicate the stakeholder or stakeholder group.</i>	<i>Describe the stakeholder.</i>	<i>Indicate what the stakeholder expects from the project.</i>	<i>Rate the stakeholder's influence and impact on the project.</i>
2				

Template Description: The Stakeholder Register is meant to document all identified project stakeholders. The register assists the project team in managing the various stakeholders according to their level of influence and impact on the project. The content is essentially the same as what was identified as part of developing the Project Charter. If additional information was gathered after approval, it can be included in the planning stage.

Chart 19: Excluded User Segments Template

Excluded User Segments			
ID	Excluded User Segments	Description	Main Expectations
1	<i>Indicate the Excluded User Segments</i>	<i>Describe them for better understanding.</i>	<i>Indicate what they may expect from the project.</i>
2			

Template Description: The Excluded User Segments template is meant to complement the stakeholder register. It presents specific users or user groups who may be at risk of digital exclusion. These may be a subset of identified stakeholders.

Communication Planning Template

Chart 20: Communications Management Matrix Template

Stakeholder Group	Key Representative	Interests	Communication Goal	Communication Modality
<i>Indicate all stakeholders/ stakeholder groups.</i>	<i>Indicate the representative in the case of organizations or groups.</i>	<i>Indicate the elements of the project they are interested in.</i>	<i>Indicate the information that they seek to obtain.</i>	<i>Indicate how information will be shared with them. For example, email updates, project reports etc.</i>

Template Description: The Communications Management Matrix indicates how the team will communicate with each stakeholder group in accordance with their interests and goals.

Quality Planning Template

Chart 21: Quality Control Plan Template

Quality Tool/Technique	Objective	Cadence	Person Responsible
<i>Indicate the tool or technique that will be used to validate quality.</i>	<i>Indicate the objective of utilizing such tools or techniques.</i>	<i>Indicate how often the tools or techniques will be utilized.</i>	<i>Indicate who is responsible for implementing the quality activity.</i>

Template Description: the template guides the team in developing a plan for monitoring and confirming that the product meets the quality standards established.

Risk Planning Template

Chart 22: Risk Management Plan Template

Key Risks Areas	Identified Risks & Implications	Severity	Mitigation Measures
<i>Indicate the category of risks that exist</i>	<i>Detail the risks and their implications</i>	<i>Rate the level of severity that the risk will pose to the project if actualized.</i>	<i>Indicate the actions that will be taken to mitigate the impacts of the risk.</i>

Template Description: The Risk Management Plan helps the team to identify potential risks and determine a plan of action to minimize any negative impact they may pose on the project.

Project Execution Phase Templates:

Chart 23: Daily Scrum Meeting Minutes Template

Question	Feedback
What did I complete yesterday?	Indicate the feedback of each of the Scrum Team members.
What will I work on today?	
What impediments are blocking my progress?	

Template Description: The template guides the team on executing and documenting the feedback of each Daily Scrum session.

Chart 24: Sprint Review Meeting Minutes

Meeting Date & Time	
Participants	
Meeting Item	Meeting Notes
Sprint Goal Review	
Backlog Review	
Product Demonstration	
Feedback	
Closing	

Template Description: The template presents a structure for how the sprint reviews must be executed to gather maximum value from the session.

Chart 25: User Testing Script Template

Sprint			
Test Date & Time			
Facilitator			
Testers			
Excluded User Segments/ Stakeholder Groups			
Task ID	User Story/Action	Success Criteria (Yes/No)	Time Taken (minutes)
1	Indicate the user/story or system action being tested.		
2			

Template Description: The template presents a guide for executing user testing, which is a core part of the DI-PMM.

Chart 26: User Feedback Log Template

Finding	Suggested Backlog Item	Owner
<i>Document what was discovered from the user testing activity.</i>	<i>Indicate what action will be taken to address the observation, if necessary.</i>	<i>Indicate who will be responsible for actioning out the activity.</i>

Template Description: The template guides the team in documenting the actions that will be taken to address the findings from each user testing session.

Project Monitoring Phase Templates & Tools:

Digital Inclusion Audit Checkpoint

The document is included in Annex 5. The document is a guide to validating the product's compliance with the WCAG. It also presents a roadmap for tiered compliance of the WCAG, should time and resources be limited to address each standard.

Checklist for Delivering Digitally Inclusive Products

Chart 27: Checklist for Delivering Digitally Inclusive Products

Checklist for Delivering Digitally Inclusive Products		
Project Component	Description	Integrated (Y/N)
Capacity Building	Deliver comprehensive system training to the Beneficiary Organization. The training should focus on building internal capacity for both the administration and the operation of the new system. This knowledge transfer initiative is critical for the sustainability of the project.	
Capacity Building	Deliver digital literacy training for citizens. This will empower them with the knowledge and skills to utilize the system and access services.	
Community Support	Create a network of Community Digital Support Buddies to assist community members with accessing online services, devices, and opportunities for building digital skills. The network of 15 Digital Connect Centers located across urban and rural areas of Belize can be leveraged. Each cluster of buddies can be based in the communities that have established a Digital Connect Center which are equipped with computers and internet connectivity.	
Community Support	Train the Community Digital Support Buddies on how to use each digital service launched. This will keep them up to date with all digitalized services and will allow them to relay knowledge and skills to community members.	
Service Delivery	Ensure that the digital service allows the beneficiary organization to continue offering in-person services. The possibility for citizens to walk into a government office and obtain in-person assistance to access a service should never be removed. Therefore, workflows should be designed to maintain this possibility.	
System Design	Incorporate Digital Public Infrastructure (DPI) blocks into the system design and requirements. The status of DPI rollout is continuously evolving. As such, each project must involve the assessment of the status of key DPI blocks and incorporate them into the system design. The DPI blocks include Unified ID System, Interoperability Platform and Digital Payment Systems.	
Accessibility Standards	Utilize the Web Content Accessibility Guidelines as the standard to develop an accessible and inclusive user interface and experience.	

Template Description: The Checklist presents all activities that should be incorporated into all digital transformation projects. These project elements are tailored to MEG's context and have been proven to be effective in driving inclusion by international standard or MEG's prior project experience.

Project Closure Templates & Tools:

Chart 28: Lessons Learned Log

Project Name:				
Consultancy Name (if applicable):				
Funding Agency (if applicable):				
Expected Start date:				
Expected End Date:				
Actual Start Date:				
Actual End Date:				
Actual Total Cost:				
<u>Challenges</u>				
Description of Experience/Observation	Date (If available)	Action/s taken	Recommendations for alternative actions	Conclusion/Lesson Learnt
<u>Successes and Best Practices</u>				
Description of Experience/Observation	Date (If available)	Action/s taken	Recommendations for alternative actions	Conclusion/Lesson Learnt

Template Description: The Project Closure template is to be used at the end of the project and is meant to document the challenges, successes, and best practices identified as well as lessons

learnt throughout the project. This information is highly valuable for future projects led by MEG, it fosters a culture of continuous improvement in project implementation.

4.4 Deliverable 4- Application of the Digital Inclusion Project Management Methodology

Digital Inclusion Project Charter

Project Name: Development of the Civil Registry and Vital Statistics System

Version History

Version	Author(s)	Date	Description
1	Ministry of E-Governance	November 23, 2025	Initial Draft

Background

A well-functioning civil registry is recognized as a growing priority worldwide in ensuring an individual's right to a legal identity. It provides a foundation for an identity management system that facilitates citizens' access to critical public services, including healthcare, education, and employment. A country's civil registry is indispensable for governance, development, and the protection of individual rights. It enables effective planning, service delivery, and legal recognition of individuals, fostering both social and economic progress. The Vital Statistics Unit (VSU) is the governmental entity responsible for upkeep and safeguarding the country's register of all life events occurring in Belize territory, including births, deaths, marriages, and adoptions. Despite the importance of the civil registry for the country, insufficient efforts have been made to improve its management. A few challenges affecting the operation of the civil registry include:

1. **Analog process:** most of the service process flow is done manually and is paper based, requiring the completion and filing of various forms. All vital records are also manually documented in books.

2. **Processes are not standardized:** there are no standard operating procedures for delivering services. Employees often have different understandings of how processes are performed. The requirements that citizens need to meet for the application of services are changed often.
3. **Outdated data management system:** the VSU utilizes a legacy system based on outdated software and hardware. It does not allow for interoperability with other government systems.
4. **Centralized Service Delivery:** VSU has offices across the country, centralizing services. However, the majority of services are only offered at its headquarters, requiring citizens to travel to the headquarters to access all services.

The government has launched its National Digital Agenda that seeks to integrate technology within government services to increase public value, improve customer service, and increase collaboration and interoperability across government entities. The government has prioritized addressing its needs of the VSU, considering the criticality of its services to the country.

Project Goal

The “Development of the Civil Registry and Vital Statistics System” Project aims to modernize and improve all birth registration services through simplified procedures and inclusive and accessible online services.

Project Objectives

The following are the primary objectives to be targeted by the project to achieve its goal:

- To evaluate the needs and constraints for the citizens in accessing birth registration services.
- To simplify and re-engineer the business process of birth registration service.

Knowledge Transfer and Lessons											
Learnt Documentation											
<i>Estimated Completion Date: December 28th 2026</i>											

Program Indicative Budget

This section provides an estimated cost required to successfully complete the project. The project will be executed by the Ministry of E-governance (MEG) team who has extensive expertise in digitalization projects. As such, human resource costs may be limited to specialized expertise that will require outsourcing.

The project will be fully Government-funded.

Chart 30: Program Budget

Item	Cost
Stakeholder Engagement	\$5,500
System Development, Testing & Deployment	\$62,000.00
Change Management & Capacity Building	\$32,500.00
Operational	\$30,000
Subtotal	\$ 130,000.00
Contingency Reserve (25%)	\$ 32,500.00
Cost Baseline	\$ 162,500.00
Management Reserve (10%)	\$ 16,250.00
Total Budget	\$ 178,750.00

Project Risks

The following are key project risks that could impact the success of implementation of the project initiatives:

- The risk of certain groups or individuals being excluded from accessing critical services due to the digitalization process.

- User Interface and User Design make the system inaccessible for citizens with certain disabilities and limitations
- The risk of insufficient stakeholder engagements could lead to non-commitment and lack of participation.
- Given the existing operational practices and procedures, there is a high possibility of resistance to change from personnel at all levels at the VSU.
- Limited digital literacy among the VSU team and the general public can limit uptake of the new CRVS.
- The possible unwillingness to standardize and re-engineer business processes will hinder the chances of achieving the actual mission of the project.

Project Assumptions

- Key VSU subject matter experts and stakeholders will be available for process reengineering, testing and training.
- The project budget will be released according to the project timeline.
- The required MEG experts will remain on the project throughout its lifetime.
- Flexibility will be maintained in the execution of the project to truly align with the hybrid nature of the Digital Inclusion Methodology.

Project Constraints

- The system must adhere to the Digital Inclusion Targets established.
- Possibility of additional budget allocations is low. As such, the project must be executed within the approved budget.
- The VSU is stretched thin in having to deliver critical services to the public. It may be a challenge to participate in meetings, consultations and testing exercises.

Stakeholders

Below are individuals or groups who will interact directly with the service, as well as persons who have an interest in the project or are affected by the outcome either positively or negatively.

Chart 31: Stakeholder Register

Stakeholder Register				
ID	Stakeholders	Description	Main Expectations	Influence/Impact (Low-Medium-High)
1	Vital Statistics Unit	Institution mandated to deliver services for registration of births occurring in Belize.	To have the knowledge and resources to deliver efficient services to its customers.	High
2	Ministry of Health and Wellness	The source of Births data	To securely relay birth data to VSU.	Medium
3	Ministry of E-Governance	Entity responsible for project implementation	To deliver public value through the successful execution of the project.	High
4	Belizean Citizens	Persons born in Belize who may or may not be residing in the country.	To have high access to timely and cost-effective birth registration services.	High

“**Excluded User Segments**” are more specific groups or individuals derived from the list of project stakeholders. These user segments may be at risk of digital exclusion. As such, their needs need to be considered in system design.

Chart 32: Excluded User Segments

Excluded User Segments			
ID	Excluded User Segments	Description	Main Expectations
1	Citizens in rural and remote areas.	These citizens reside a long distance from a VSU office.	To access VSU services without having to traverse to an office. If they must travel to an office, to be able to carry out the complete service in one visit.

Excluded User Segments			
ID	Excluded User Segments	Description	Main Expectations
2	Linguistic Minorities	Groups whose primary language is not English. Common languages spoken include Spanish, Mandarin, German, Hindi, Maya (Ketchi, Yucatec, Mopan).	To execute online services in a language that they are comfortable with.
3	Citizens with limited to no digital literacy	Limited knowledge and skills to navigate smart phones and the internet.	To have the option of continuing to access walk-in services at the VSU offices.
4	Belizean Diaspora	Citizens living outside of Belize	To execute the full-service cycle online from wherever they reside.
5	Citizens with low connectivity	Limited to no access to internet and smart devices	To have the option of continuing to access walk-in services at the VSU offices. To have access to public spaces equipped with devices and the internet.
6	Citizens with disabilities	Visual impairment, hearing impairment, physical impairment, cognitive or learning disability	To access services independently despite their disabilities.

Digital Inclusion Considerations & Targets:

Based on the stakeholder identification process, the following digital inclusion considerations were derived. These have been identified as critical to prevent the exclusion of the “Excluded User Segments”. Measurable and actionable Digital Inclusion Targets have also been established. The system will be required to comply with these targets. Both the considerations and targets are subject to change based on continued stakeholder engagement and testing.

Chart 33: Digital Inclusion Considerations and Targets

Digital Inclusion Consideration	Digital Inclusion Target
Multi language capability for diverse linguistic needs.	Multi-language Capability- 100% of all viewer-visible text, error messages and service application content must be available in English, Spanish, Mandarin and Hindi.
Service processes should prevent citizens from having to make multiple trips to a VSU office. Particularly for those living in remote areas where transportation to an office is timely and costly.	Prevent Multiple Trips- One Trip Completion Rate (OTCR): Achieve a 90% successful completion rate for service transactions without requiring the user to visit an office after initial application.
Self-service kiosks and customer support are available at all VSU offices.	Kiosks with Customer Support- install at least 2 self-service kiosks at all VSU Offices. Customer support must also be available when needed.
Walk-in services with cash payment options remain available across all offices.	Walk-in services/Cash Payment- walk-in services with cash payment options remain available for all service types at each of the VSU Offices.
Availability of a fully online process, especially for Belizeans residing outside Belize.	End to End Online Process- a fully online service process is available, from account creation, identity verification, application, payment and digital certificate receipt
WCAG Guidelines compliance for citizens with disabilities	WCAG Guidelines Compliance- - Minimum compliance: Achieve and maintain 100% compliance with the WCAG Tiered Roadmap. - Ideal Compliance: Achieve and maintain 100% compliance with the WCAG Checklist.

Charter Approval

The undersigned acknowledge they have reviewed the Digital Inclusion Project Charter.

Signature:

Date:

Print Name:

Title:

Annex:

User Persona Exercise

To better understand the user segments, three user personas were devised with characteristics of the excluded user segments. These personas are illustrated below.

Figure 15: Completed User Persona 1

JOSE CARRILLO		
PROFILE Gender : Male Age : 65 Education : Primary School Occupation : Farmer Location : Sarteneja Village	BIOGRAPHY Jose lives in the Northern village of Sarteneja. He speaks Spanish and understands only a bit of English. He depends on his niece to handle almost all official paperwork, including government forms and banking. He is intimidated by technology.	POTENTIAL AREAS OF EXCLUSION - Limited understanding of English - Language/Design: Complex navigation, small text, and lack of plain language will prevent self-service completion.
	MOTIVATIONS - To secure his official documents quickly and correctly. - To avoid spending an entire day and high bus fares traveling to the district office. - To rely on a human officer for verification and guidance.	TECHNOLOGY USAGE Software ☐ Social Media ☐ Mobile App ☐
	USER END GOALS - Obtain an official copy of his son's marriage certificate with minimal travel. - Use the new system reliably without needing technical assistance from his niece.	
	FRUSTRATIONS - Pop-up ads, confusing icons, and unfamiliar terminology on websites. - Forms that require data he doesn't immediately have. - The stress of having to ask his busy niece for help every time he needs a government service. - having to make multiple trips to the VSU office to complete a transaction.	
		PAYMENT METHODS Cash Only

Figure 16: Completed User Persona 2

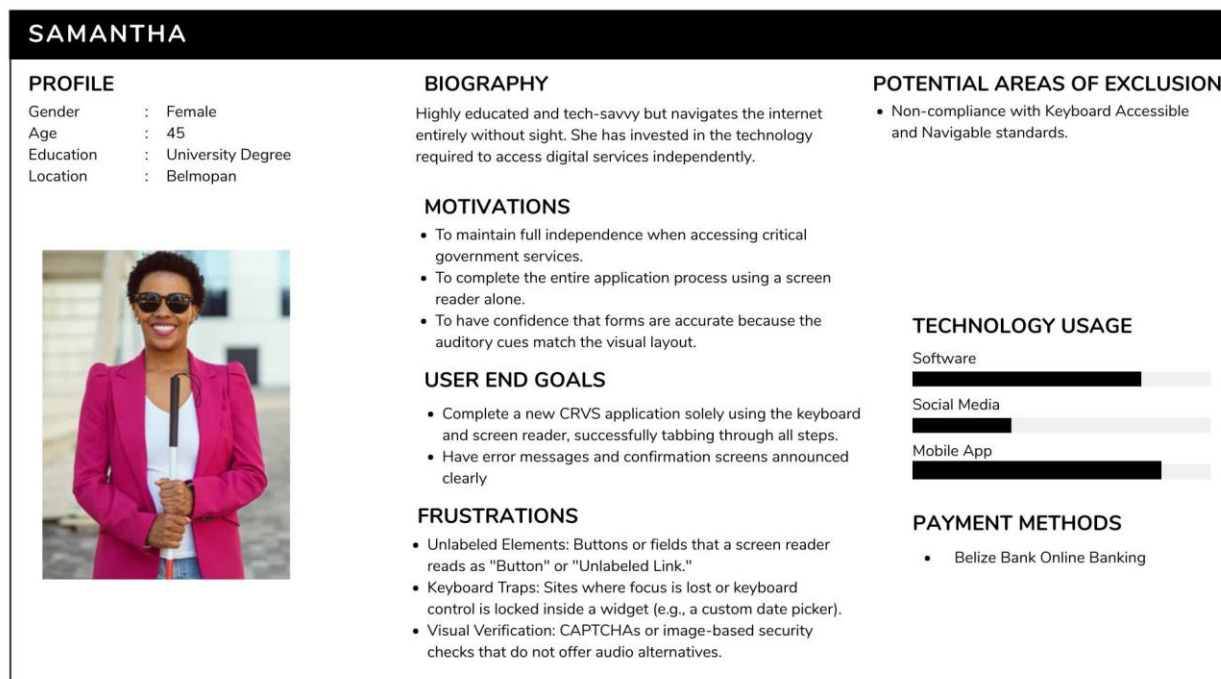
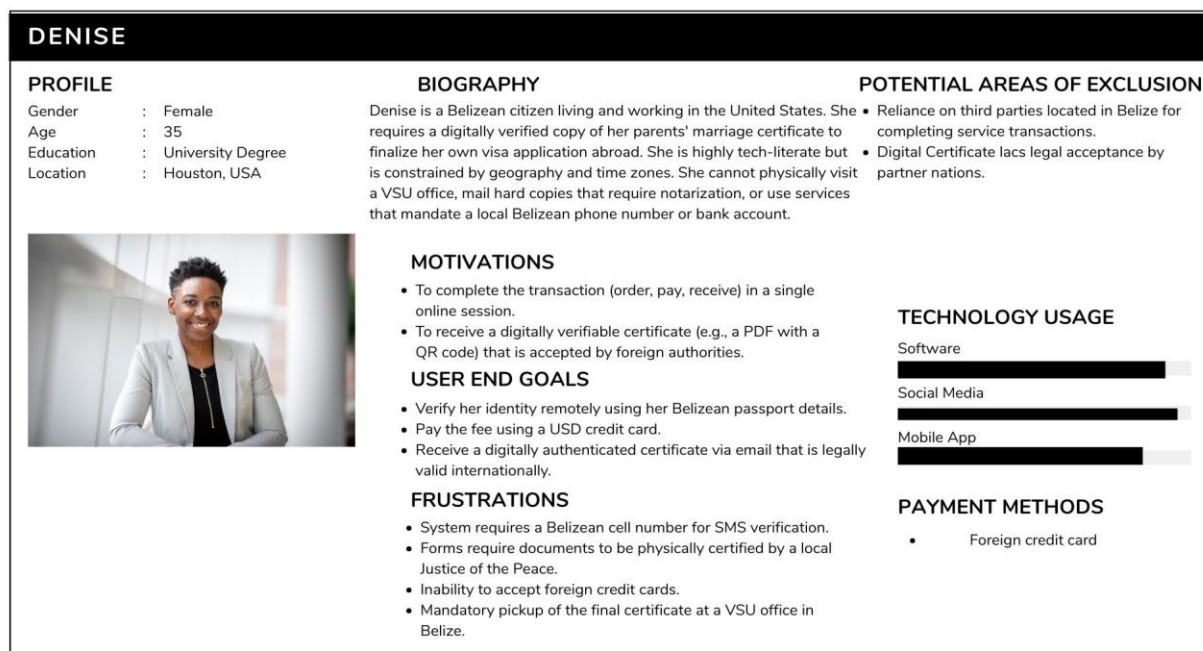


Figure 17: Completed User Persona 3



Development of the Civil Registry and Vital Statistics System

Project Management Plan

Version History

Version	Author(s)	Date	Description
1	Ministry of Egovernance	November 23, 2025	Initial Draft

Introduction

The Project Management Plan seeks to establish an effective roadmap that guides the fulfillment of the project objectives and places digital inclusion at the forefront of the digitalization process. In keeping with the hybrid nature of the project execution, the planning elements developed at this stage are subject to refinement during project execution.

Project Goal

The “Development of the Civil Registry and Vital Statistics System” Project aims to modernize and improve all Vital Statistics Services through simplified procedures and inclusive and accessible online services.

Project Objectives

The following are the primary objectives to be targeted by the project to achieve its goal:

- To evaluate the needs and constraints for the citizens in accessing vital statistics services.
- To simplify and re-engineer the business process of all vital statistics services.

- To increase accessibility of vital statistics services through user-centric and inclusive digital services.
- To facilitate the buy-in and adoption of the new Civil Registry and Vital Statistics System across VSU and the Belizean population.

Scope Planning

At this stage, the high-level scope is defined based on the information gathered from the development of the Digital Inclusion Project Charter. The Scope Statement presents the high-level system design and exclusions, while the Product Backlog serves as an adaptive execution plan that is subject to change based on the iterative development process and user feedback.

In defining the project scope, the “**Digitally Inclusive Project Checklist**” should be utilized as a guide to ensure that key digital inclusion initiatives are incorporated into every digitalization project executed by MEG.

Scope Statement

The project aims to design and develop the Civil Registry and Vital Statistics System (CRVS), which is to be a modular and integrated system that will manage the registration of birth and related services offered by the Vital Statistics Unit. The CRVS should be designed with the possibility to onboard additional services in the future.

The CRVS will offer two types of services:

- Registration Services- to register or amend birth events.
- Information Services- to issue birth certificates from the Civil Registry.

The following are key features that the CRVS will achieve.

- Users will be able to create accounts in CRVS to securely access services and manage their birth record.
- Users can access end-to-end online services, from account creation to obtaining an electronic birth certificate.
- The service application forms will be tailored to the operational and regulatory requirements of VSU.
- Alignment with Belize's Digital Public Infrastructure, including:
 - User verification through the National ID System
 - Integration of Digital Payment Systems
 - Alignment with the Interoperability Platform
- CRVS will generate e-certificates with a secure QR code to verify the validity of the birth record.
- Facilitate the delivery of walk-in services at any VSU office.
- Roles based access control, with users being granted distinct privileges and access rights based on their duties.
- CRVS must meet the Digital Inclusion Targets detailed in the Project Charter.
- CRVS must align with the Web Content Accessibility Guidelines as the standard to develop an accessible and inclusive user interface and experience.

To align with the Ministry's Digital Inclusion goals, the project will also incorporate the following initiatives:

- Delivery of comprehensive CRVS training to VSU. The training will cover both administrative and operational elements of the CRVS.

- Delivery of digital literacy training for citizens to build knowledge and skill to use the CRVS.
- Leverage the Ministry's Digital Connect Centers to create a network of Community Digital Support Buddies. The buddies should be trained on CRVS so that they can support members of their community in accessing critical birth registration services.

Scope Exclusions:

The following initiatives are out of scope of the project:

- Replacement of system hardware in VSU offices; the CRVS will operate on existing systems.
- Integration with Social Security Board and Immigration Systems for identification validation.
- Digitalization and onboarding of marriage, death and adoption registration services.

Chart 34: Product Backlog

TASK ID	USER STORY/TASK NAME	SPRINT #	ASSIGNED TO	ACCEPTANCE CRITERIA	START	FINISH	STORY	PRIORITY	STATUS
1	As a citizen, I need a secure public platform to initiate and track applications for birth certificates without visiting a physical office.	1	B. Hooves	The portal must be live, require authenticated login, and display a real-time status tracker for applications.	1/4/2026	30/4/2026	Yes	High	Not Started
2	As a citizen, I need to pay for services using international credit cards and receive a digital receipt.	1	B. Hooves	Payment gateway supports Visa/Mastercard (USD/BZD) and updates the application status to "Paid" immediately.	1/4/2026	30/4/2026	Yes	High	Not Started
3	As a citizen, I need to complete a service at a VSU office with the possibility to pay in cash.	2	B. Hooves	CRVS has a Cashier role who can accept cash payments and issue physical receipts.	1/5/2026	31/5/2026	Yes	High	Not Started
4	As a VSU Officer, I need a high-speed search function to search for birth records in the electronic Civil Registry.	2	D. Rawa	Search query must return results in under 2 seconds for a database of 5 million records.	1/5/2026	31/5/2026	Yes	Medium	Not Started
5	As a citizen, I want to verify my identity using my National ID.	3	D. Rawa	The CRVS system sends an encrypted query to the National ID API and receives a validation response within 1.5 seconds.	1/6/2026	30/6/2026	Yes	High	Not Started
6	As VSU, I need the CRVS to generate a secure E-certificate that is legally verifiable by third parties.	3	D. Rawa	The e-certificate PDF is generated, contains a unique QR code, and passes a third-party verification test.	1/6/2026	30/6/2026	Yes	High	Not Started

TASK ID	USER STORY/TASK NAME	SPRINT #	ASSIGNED TO	ACCEPTANCE CRITERIA	START	FINISH	STORY	PRIORITY	STATUS
7	As VSU, I need the application forms to capture data that is legally required to record a birth in the Civil Register.	4	D. Jones	Application forms are aligned with VSU data requirements.	1/7/2026	31/7/2026	Yes	Medium	Not Started
8	As a VSU, I need a role-based access control (RBAC) to restrict officers from performing certain administrative tasks.	4	M. Sienna	RBAC is enforced, and users can only view what pertains to them, as determined by VSU.	1/7/2026	31/7/2026	Yes	High	Not Started
9	As a citizen, I need that all system text be available in English, Spanish, Mandarin and Hindi.	5	M. Sienna	Translation option available and successfully translates application forms, error messages and guided text to the selected language.	1/8/2026	31/8/2026	Yes	Medium	Not Started
10	As a citizen, I need to complete an entire service transaction in one visit to the VSU office.	5	M. Sienna	Users can request express services and CRVS will mark these applications as priority for completion.	1/8/2026	31/8/2026	Yes	Medium	Not Started
11	As a citizen with disabilities, I need the CRVS to align with the WCAG Guidelines.	Continuous across sprints	M. Sienna	WCAG Guidelines template is complied with.	1/4/2026	31/8/2026	Yes	High	Not Started
12	As VSU, I need that CRVS be aligned with the interoperability standards for future data sharing possibilities.	5	M. Sienna	Compliance with the Interoperability requirements document.	1/8/2026	31/8/2026	Yes	High	Not Started
13	Deliver CRVS technical and operational training for the VSU officers.	NA	D. Juanes	All VSU officers participate in the training.	15/10/2026	30/10/2026	No	High	Not Started

TASK ID	USER STORY/TASK NAME	SPRINT #	ASSIGNED TO	ACCEPTANCE CRITERIA	START	FINISH	STORY	PRIORITY	STATUS
14	Deliver digital literacy training for identified groups.	NA	D. Juanes	Minimum of 50 citizens with low digital literacy trained.	15/10/2026	30/10/2026	No	High	Not Started
15	Create a network of Community Digital Support Buddies.	NA	D. Juanes	Minimum of two digital buddies cohorts formed.	1/9/2025	15/10/2026	No	Medium	Not Started
16	Train Digital Support Buddies on use of the CRVS.	NA	D. Juanes	All newly created digital buddies cohorts trained in use of CRVS.	1/11/2026	10/11/2026	No	Medium	Not Started
17	Install at least 2 self-service kiosks at all VSU Offices.	NA	B. Hooves	2 self-service kiosks installed and with possibility to access CRVS.	15/11/2026	30/11/2026	No	Medium	Not Started

Cost Planning

The project will be executed by the Ministry of E-governance team who has extensive expertise in digitalization projects. As such, human resource costs are limited to specialized expertise that will need to be outsourced.

The project will be fully Government-funded. Therefore, the budget presents a comprehensive list of project costs. A contingency reserve of 25% has been included to absorb any unforeseen costs related to accessibility issues discovered during software development and user testing.

Chart 35: Project Budget

Item	Cost
Stakeholder Engagement	
Travel & Food Stipends for stakeholders	\$ 3,000.00
Workshop Materials	\$ 2,500.00
System Development, Testing & Deployment	
Temporary Software Developers	\$ 30,000.00
Software Licenses	\$ 20,000.00
Testing Devices	\$ 12,000.00
Change Management & Capacity Building	
Kiosk Installation	\$ 30,000.00
Training Material	\$ 2,500.00
Operational	
Transportation	\$ 10,000.00
Accommodation	\$ 1,500.00
Catering	\$ 5,000.00
Venue Rentals	\$ 10,000.00

Item	Cost
Employee Per Diem	\$ 3,500.00
Total Activity Costs	\$ 130,000.00
Contingency Reserve (25%)	\$ 32,500.00
Cost Baseline	\$ 162,500.00
Management Reserve (10%)	\$ 16,250.00
Total Budget	\$ 178,750.00

Resource Planning

The Resource Plan includes all project resources that will be required to successfully execute the project.

Chart 36: Project Team Requirements

Name	Position	Functions	MEG Employee/ Outsourced
Cielo Ortiz	Director	To provide overall direction of the project. Sign off on project deliverables.	MEG Employee
Benito Casas	Project Manager	Deliver the project within the agreed scope, schedule and budget.	MEG Employee
Ophelia Lum	User Interface and User Experience Designer	Designs mockups and prototypes. Conducts usability testing. Ensures product aligns with WCAG guidelines.	MEG Employee
Olivia Daniz	Change Management Officer	Prepares VSU team for cultural, procedural and technological shift.	MEG Employee
Dani Juanes	Training Officer	Develops and delivers training curriculum for VSU officers and citizens. Assesses VSU team competency before and after launch.	MEG Employee
Natalia Lafor	Business Analyst (Product Owner Role)	Gather and document system requirements.	MEG Employee
Ben Hooves	Software Developer 1 (Scrum Master Role)	Technical build-out of the CRVS, including front-end interfaces, back-end logical and integration layer.	MEG Employee

Name	Position	Functions	MEG Employee/ Outsourced
Dom Rawa	Software Developer 2	Technical build-out of the CRVS, including front-end interfaces, back-end logical and integration layer.	Outsourced
McKenna Sienna	Software Developer 3	Technical build-out of the CRVS, including front-end interfaces, back-end logical and integration layer.	Outsourced
Mari Sosa	Software Tester 1	Validate the quality and performance of the CRVS against requirements and user expectations.	MEG Employee
Willow Tierra	Software Tester 2	Validate the quality and performance of the CRVS against requirements and user expectations.	MEG Employee

Resource Estimation

The table below provides details on the human, physical and technical resources that will be required to execute the project. Time periods for when they would be necessary are also included. However, given the dynamic and flexible approach of the project, the timelines may shift. Therefore, the resource management plan will continuously be updated to address the project needs.

Chart 37: Resource Log

Resource	Category	Procurement (Y/N)	Start	Finish
Director	Team	N	5/1/2026	11/27/2026
Project Manager	Team	N	5/1/2026	11/27/2026
User Interface and User Experience Designer	Team	N	5/1/2026	11/27/2026
Change Management Officer	Team	N	1/10/2026	11/27/2026
Training Officer	Team	N	1/10/2026	11/27/2026
Business Analyst	Team	N		11/27/2026
Software Developer 1	Team	N	1/2/2026	11/27/2026
Software Developer 2	Team	N	1/2/2026	11/27/2026
Software Developer 3	Team	N	1/2/2026	11/27/2026
Software Tester 1	Team (Outsourced)	Y	1/4/2026	11/27/2026
Software Tester 2	Team (Outsourced)	Y	1/4/2026	11/27/2026
Testing Laptops	Equipment	Y	1/4/2026	11/27/2026

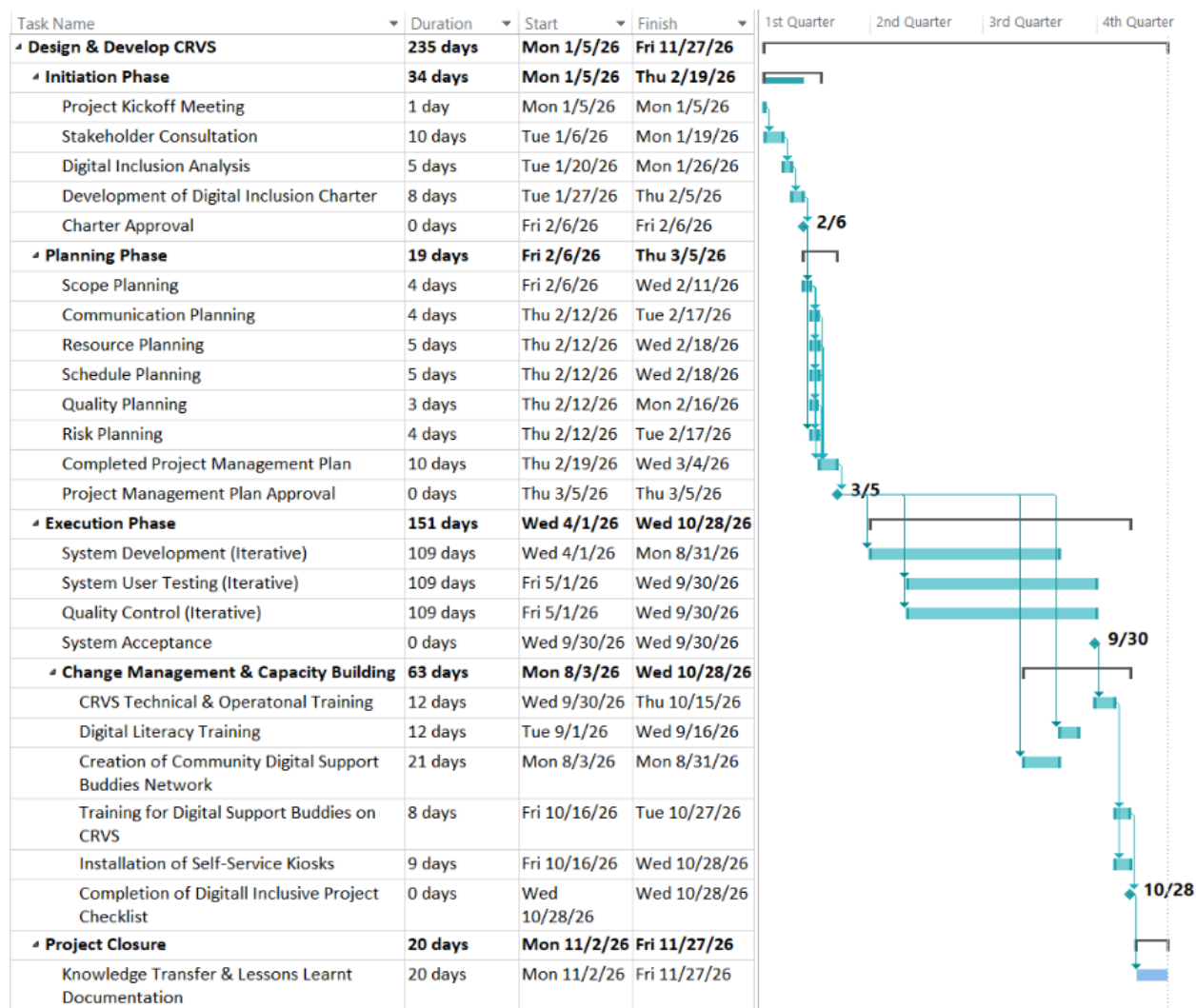
Resource	Category	Procurement (Y/N)	Start	Finish
Software Development Licenses	Software	Y	1/2/2026	11/27/2026
Kiosks (Computer stations)	Equipment	Y	01/10/2026	NA
Workshop Materials	Equipment	Y	01/08/2026	11/27/2026

Schedule Planning

The project schedule is outlined in two tools, these are the:

- **Gantt Chart** (Microsoft Project): visualizes the overall project timeline, project phases, milestones and non-system development activities.
- **Product Backlog**: outlines the iterative components of the project which are primarily the system development, user testing and quality assurance phases. The activities related to these phases are dynamic and not appropriate for representation in a Gantt Chart. Nevertheless, the duration of these phases is outlined in the Project Gantt Chart for effective reporting and project governance. Product Backlog can be viewed in the Scope Planning section, Chart 34.

Figure 18: Project Schedule



Procurement Planning

The table below outlines the resources to be procured and related procurement processes to be considered. These procurement processes are critical for ensuring that the required resources are available when needed within the project timeline.

Chart 38: Procurement Plan

Resource	Quantity	Procurement Process	Requirements	Date Needed
Software Developers	2	Hired as external consultants. Hiring ads must be published on LinkedIn and social media platforms	Bachelor's Degree in Information Technology. 3 years experience in Software Development	1/4/2026
Testing Laptops	2	Quotation based purchase. 3 quotes are necessary.	Core i5 12th Gen - 15.6" FHD Display - 8GB Memory - 512GB Storage - Windows 11 Pro.6 I5 8GB 256SSD WIN 11	1/4/2026
Kiosks (Computer stations)	14	Quotation based purchase. 3 quotes are necessary.	64 bit OS OEM license included / Windows 10 version 1809. With a monitor, keyboard and mouse.	01/10/2026
Workshop Materials	Bulk	Selective purchasing	Markers Poster boards Post-it notes Pens Notebooks	01/08/2026

Project Integration Planning

Team Integration

The Resource Management Plan outlines the MEG team members that will play a direct role in the project. The following mechanisms will be incorporated to maintain effective team integration:

- Regular meetings to discuss project progress, obstacles and achievements.
Furthermore, daily synchronization will be maintained among the system development team through the Daily Scrum exercises.
- MEG executes multiple projects simultaneously. As such, there may be instances where the projects must compete for the team member's time and expertise. Where conflicts are identified, the Project Manager must immediately raise the concern with the MEG Director for resolution and assignment of team members based on the Ministry's priorities.

Changes to Scope and Schedule

Change requests are submitted to the Project Manager. The Project Manager assigns the Product Owner to assess every request. The assessment process will involve the following:

- Screening against the Digital Inclusion Targets and the WCAG Standards, which would result in the assignment of an **“Exclusion Risk Score”**. See Chart 17 for details on the steps to take based on the assigned score.
- Change requests must be verified to be aligned with the project goal and objectives.
- Change requests may be accepted but agreed to be incorporated into a subsequent version of the product. As such, the project schedule remains unaffected.

Chart 39: Application of Exclusion Risk Score Matrix

Criteria	Weight (Multiplier)	Description	Assigned Score (1-5)	Weighted Score
A. Severity of Exclusion	3	How many users/groups would the change negatively impact? • 1= No impact on citizen access or defined Digital Inclusion targets, change only affects internal operations and/or minor visual aesthetics. • 2= change creates minor inconvenience for a small user segment. E.g. group with rare disabilities. • 3= change creates a defined barrier for a small user group. The user can still complete the action using alternative methods. • 4= change creates a significant barrier that prevents defined groups (e.g. rural citizens) from completing key actions. E.G. cannot verify identify or submit form • 5= change breaks a core accessibility feature or goes against an established Digital Inclusion Target, significantly excluding a large number of users across multiple excluded groups.		0
B. WCAG/Standard Compliance	2	Does the change violate a mandatory standard (WCAG 2.2 AA or established Digital Inclusion Target? • 1= No violation • 2= Violates 1-2 guidelines that are not included in the WCAG Tiered Roadmap for WCAG Alignment • 3= Violates 3-4 guidelines that are not included in the WCAG Tiered Roadmap for WCAG Alignment • 4= this score may be assigned if either of the following proves to be true: - o Violates one Digital Inclusion Target - o Violates either a Tier or Tier 2 Guideline		0

Criteria	Weight (Multiplier)	Description	Assigned Score (1-5)	Weighted Score
		• 5= Violates one or more Digital Inclusion targets and Tier 1/Tier 2 Guidelines.		
C. Reversibility/Cost to Fix	1	How many hours would it take to reverse the change or fix the resulting exclusion later? • 1= 4 or less hours • 2= 5-8 hours • 3= 9-16 hours • 4= 17- 32 hours • 5= More than 32 hours- signifying that it would require extensive redesign		0
TOTAL ERS (Maximum Score: 30)		Sum (A + B + C)	—	[Total ERS]

Chart 40: Exclusion Risk Score & Associated Actions

ERS Score Range	Risk Classification	Required Action/Approval Level
5	No Risk	No potential exclusion risk is identified. Project Manager / Product Owner can approve immediately.
6-12	Low Risk (L)	Project Manager / Product Owner can approve immediately.
13 - 18	Medium Risk (M)	MEG Director must approve. Reasoning must clearly state why the benefit outweighs the moderate exclusion risk.
19 - 30	High Risk (H)	MEG CEO must approve. The rationale for proceeding must be documented, acknowledging the failure to meet the respective accessibility standard and/or Digital Inclusion Target.

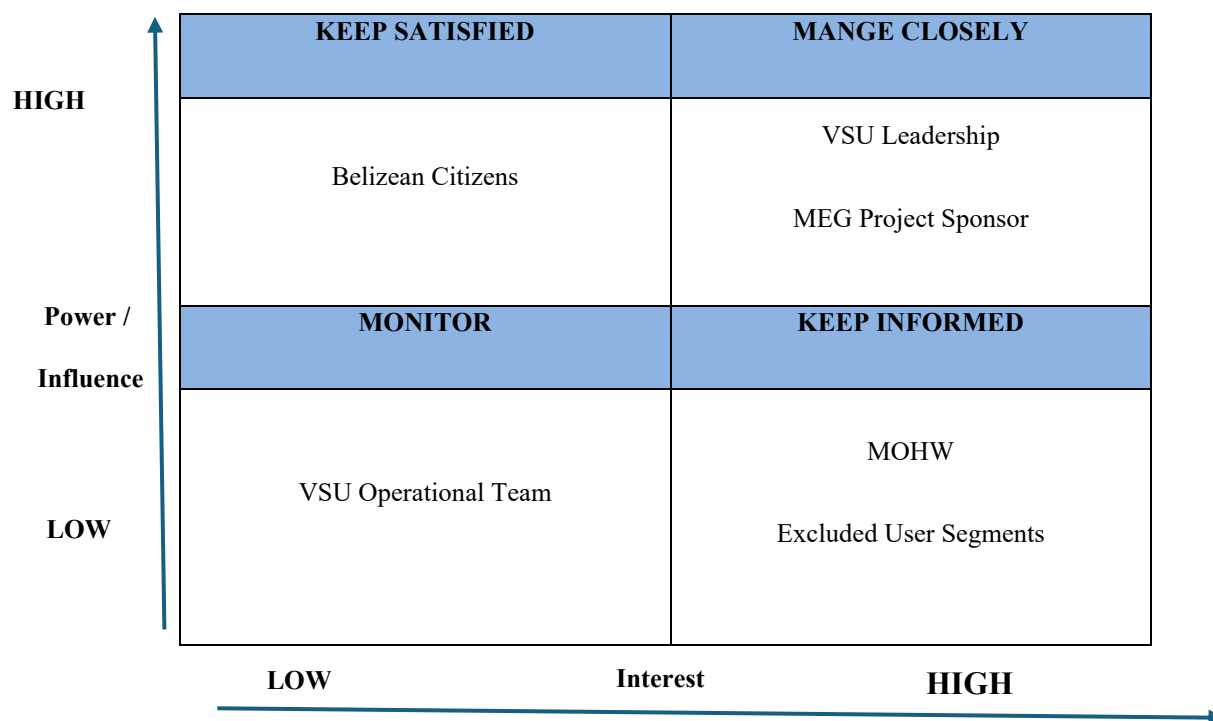
Stakeholder Planning

The data on Stakeholders and Excluded User Segments is derived from the initial analysis conducted in the Initiation Phase; some revisions were made based on additional information that was gathered in the Planning phase.

Chart 41: Stakeholder Register

ID	Stakeholders	Description	Main Expectations
1	VSU Leadership	Leadership unit of the institution mandated to deliver services for registration of births occurring in Belize.	Align with the Government's identity and civil registration frameworks
2	VSU Operational	The on-the-ground team delivering birth registration services to citizens.	To have the knowledge and resources to deliver efficient services to customers.
3	Ministry of Health and Wellness (MOHW)	The source of Births data	To securely relay birth data to VSU.
4	Ministry of E-governance (MEG) Project Sponsor	Entity responsible for project implementation	To deliver public value through the successful execution of the project.
5	Belizean Citizens	Persons born in Belize who may or may not be residing in the country.	To have high access to timely and cost-effective birth registration services.
6	Excluded User Segments	Persons or groups that may face some degree of exclusion from the digitalization project.	Continuing to have access to the public service being transformed into a digital format.

Figure 19: Stakeholder Power/Interest Grid



The Excluded User Segments are further defined and categorized below. This information has influenced the Digital Inclusion Targets and the Communication Management Plan.

Chart 42: Excluded User Segments

Excluded User Segments			
ID	Excluded User Segments	Description	Main Expectations
1	Citizens in rural and remote areas.	These citizens reside a long distance from a VSU office.	To access VSU services without having to traverse to an office. If they must travel to an office, to be able to carry out the complete service in one visit.
2	Linguistic Minorities	Groups whose primary language is not English. Common languages spoken include Spanish, Mandarin, German, Hindi, Maya (Ketchi, Yucatec, Mopan).	To execute online services in a language that they are comfortable with.
3	Citizens with limited to no digital literacy	Limited knowledge and skills to navigate smart phones and the internet.	To have the option of continuing to access walk-in services at the VSU offices.
4	Belizean Diaspora	Citizens living outside of Belize	To execute the full-service cycle online from wherever they reside.
5	Citizens with low connectivity	Limited to no access to internet and smart devices	To have the option of continuing to access walk-in services at the VSU offices. To have access to public spaces equipped with devices and the internet.
6	Citizens with disabilities	Visual impairment, hearing impairment, physical impairment, cognitive or learning disability	To access services independently despite their disabilities.

Communication Planning

The Communications Management Plan is influenced by the Stakeholder Management Plan and will be reviewed and updated throughout the execution phase to reflect changes in stakeholders' communication needs.

Chart 43: Communications Management Matrix

Stakeholder Group	Key Representative	Interests	Communication Goal	Modality
Vital Statistics Unit Leadership	Solicitor General	Policy Alignment, Operational Readiness	Policy compliance updates, project updates	Project reports, email updates
VSU Operational	Deputy Registrar	System Usability, New Procedures	Training, feedback collection	Interviews, training sessions
Ministry of Health and Wellness	Director of Public Health	Data Exchange	Technical coordination, issue logging	Virtual working sessions, email issue reporting
Belizean Citizens	No focal representative.	Cost-effective & Reliable Services	Public service announcements	Social media, news and radio outlets
Development Team	Scrum Master	Clear Requirements, Technical issues	Task assignment, daily updates, issue resolution.	Daily Scrum and Sprint Review sessions
Diaspora Citizens	Embassy Representative	Remote Access, International Validity	Public education, service availability	Social media
Excluded User Segments	No focal representative.	Accessibility, Assisted Services, Reliable Services	Public service announcements, Kiosk instructions, Community outreach.	Social media, news and radio outlets

Quality Planning

Quality assurance is critical for the MEG's mission to deliver effective products that generate value for Belizeans. To ensure that the product meets the quality expectations, the following must be complied with:

- Digital Inclusion Targets established in the Digital Inclusion Project Charter
- Web Content and Accessibility Guidelines
- In-Scope System Requirements

Chart 44: Quality Control Plan

Quality Tool/Technique	Objective	Cadence	Person Responsible
Digital Inclusion Audit Checklist.	To ensure that CRVS complies with standard accessibility guidelines and the digital inclusion targets identified in the Initiation Phase.	Executed after each product increment.	Project Manager, UI/UX Designer
Final Inclusion Audit Checkpoint	To ensure that the product meets all accessibility standards prior to handing over to Key Beneficiary.	At the end of the final development sprint, prior to moving towards beneficiary acceptance.	Project Manager, UI/UX Designer
Validating Acceptance Criteria for each User Story	To ensure that the system requirements are achieved.	After the sprint where the respective user story was developed.	Project Manager, Software Developer 1

Risk Planning

Identified risks are detailed in the table below. It will be critical to maintain the Risk Management Plan up to date as the project dynamics and environment changes throughout the execution period.

Chart 45: Risk Management Plan

Key Risks Areas	Identified Risks & Implications	Severity	Mitigation Measures
Digital Exclusion	The risk of certain groups or individuals being excluded from accessing critical services due to the digitalization process.	High	Citizens groups that are at risk of exclusion will be identified. Their needs will be reflected in the Digital Inclusion Targets which the system will comply with to prevent any form of exclusion.
CRVS Design	User Interface and User Design make the system inaccessible for citizens with certain disabilities and limitations	High	The system will comply with the Web Content Accessibility Guidelines and the Digital Inclusion Targets.
Stakeholder Engagement and Buy-in	The risk of insufficient stakeholder engagements could lead to non-commitment and lack of participation.	Medium	The team will determine the different mediums necessary to ensure continuous communication and engagement with key stakeholders in order to maintain their interest in the project.

Key Risks Areas	Identified Risks & Implications	Severity	Mitigation Measures
Resistance to change	Given the existing operational practices and procedures, there is a high possibility of resistance to change from personnel at all levels at the VSU.	High	The project will engage a change management team to adequately train and assist in the organizational change and procedures.
Capacity building at VSU	Limited digital literacy among the VSU team and the general public can limit uptake of the new CRVS.	High	The project will provide training for VSU in building digital skills and capacity for operating the CRVS.
Standardized & Re-engineered Business Process	The possible unwillingness to standardize and re-engineer business processes will hinder the chances of achieving the actual mission of the project	High	The change management strategy will address issues in mitigating against resistance to changes in the business process. Standard operating procedures will be established and endorsed as the official standardized process.

Project Execution- Sample

A sample case study of project execution and closure is provided below.

System Development

The CRVS is developed in an iterative approach, whereby the development team builds the product in sprints of two weeks in length.

Team Planning and Review

To facilitate the sprint development process, the team meets every day for Daily Scrum.

The Daily Scrum is a 15-minute session held every day with the Development team. The goal is to inspect progress towards the sprint goal and remove any potential obstacles. See below the minutes of a sample Daily Scrum session:

Chart 46: Minutes of a Daily Scrum Session

Question	Feedback
What did I complete yesterday?	B. Hooves: I analyzed the National ID specifications document.
	D. Rawa: I completed the development of the Information Service application form.
	M. Sienna: I was out sick yesterday.
What will I work on today?	B. Hooves: I will begin to work on National ID integration.
	D. Rawa: I will work on the Spanish translation of the Information Service application form.
	M. Sienna: I will work on aligning the CRVS icon colors to the VSU brand manual
What impediments are blocking my progress?	B. Hooves: The National ID team takes too long to respond to my questions.
	D. Rawa: None, I'm doing okay.
	M. Sienna: The brand manual is outdated; if I align to this version, they may request changes very soon.

Once the sprint is completed, the development team presents the product increment to the project team and VSU, as the key beneficiary. See sample minutes of a Sprint Review session:

Chart 47: Sprint Review Meeting Minutes

Meeting Date & Time	April 21 st 2026
Participants	B. Hooves, N. Lafor, B. Casas, VSU Deputy Registrar
Meeting Item	Meeting Notes
Sprint Goal Review	Scrum Master reminded the team of the Sprint Goal that was established.
Backlog Review	The Product Owner reviewed the items that were completed and those that weren't.
Product Demonstration	D. Rawa demonstrated the process of account creation, application initiation and payment.
Feedback	VSU: The liability statements in the application forms need to be updated to align with the Belizean laws. We will share the revised text that must be added.
Closing	Product Owner reviewed the reprioritized Product Backlog based on feedback obtained. The next sprint review was scheduled for May 15 th 2026.

User Testing

After each Sprint Review, select users must test the product increment. User feedback is documented and incorporated into the following sprint. See below a sample User Testing Script and User Feedback log.

Chart 48: User Testing Script

Sprint	1		
Test Date & Time	April 30 th 2026 10:00 am		
Facilitator	Natalia Lafor		
Testers	Marty, Madrid, Sammy		
Excluded User Segments/ Stakeholder Groups	Linguistic Minority, Citizens with low Digital Literacy		
Task ID	User Story/Action	Success Criteria (Yes/No)	Time Taken (minutes)
1	Create a personal account using National ID.	Yes	5
2	Populate the Birth Registration Form with sample birth data.	Yes	10
3	Pay for the application with a Visa Credit Card.	No	4

Chart 49: User Feedback Log

Finding	Suggested Backlog Item	Owner
The field labels on the application form are too small.	Refine: Increase field label font size by 2 points.	B. Hooves
Verification of the National ID credentials was failing.	Bug Fix: Verify National ID API requirements.	D. Rawa
The pop-up text was not translated to Spanish.	Bug Fix: Ensure that translations are activated for all system text.	D. Rawa

Quality Assurance

After each product increment, the team must internally conduct an Inclusion Audit

Checkpoint to verify the product's alignment with the Digital Inclusion Targets and the WCAG Checklist. The post-increment checkpoint will involve validating the accessibility standards that were to be addressed during the respective sprint. See sample checkpoint below:

Chart 50: Sample Inclusion Audit Checkpoint

WCAG/Digital Inclusion Targets	Achieved (Y/N)	Feedback
Multi-language Capability- 100% of all viewer-visible text, error messages and service application content must be available in English, Spanish, Mandarin and Hindi.	N	Pop-up Messages not translated.
Keyboard (2.1.1)	Y	
Focus Visible (2.4.7)	Y	
Color Contrast (1.4.3)	Y	
Non text Content (1.1.1)		The following was not met: Images are not appropriately titled.
Info and Relationships (1.3.1)	Y	
Link Purpose (In Context) (2.4.4)	Y	
Location (2.4.8)	Y	
Section headings (2.4.10)	Y	

Change Request Process

Below is a sample application of a change request screening process using the Exclusion Risk Score Matrix.

Change Request Description: System to system integration with the Ministry of Health and Wellness information system to notify VSU of the occurrence of a birth and relay key birth data. The integration will contribute towards increasing the coverage of birth registration. It will also reduce the users' application population time given that data will be pre-populated once a user enters unique details about a particular birth.

Chart 51: Sample Exclusion Risk Score Matrix

Criteria	Weight (Multiplier)	Description	Assigned Score (1-5)	Weighted Score
A. Severity of Exclusion	3	How many users/groups would the change negatively impact? • 1= No impact on citizen access or defined Digital Inclusion targets, change only affects internal operations and/or minor visual aesthetics. • 2= change creates minor inconvenience for a small user segment. E.g. group with rare disabilities. • 3= change creates a defined barrier for a small user group. The user can still complete the action using alternative methods. • 4= change creates a significant barrier that prevents defined groups (e.g. rural citizens) from completing key actions. E.G. cannot verify identify or submit form • 5= change breaks a core accessibility feature or goes against an established Digital Inclusion Target, significantly excluding a large number of users across multiple excluded groups.	1	3

Criteria	Weight (Multiplier)	Description	Assigned Score (1-5)	Weighted Score
B. WCAG/Standard Compliance	2	Does the change violate a mandatory standard (WCAG 2.2 AA or established Digital Inclusion Target?) • 1= No violation • 2= Violates 1-2 guidelines that are not included in the WCAG Tiered Roadmap for WCAG Alignment • 3= Violates 3-4 guidelines that are not included in the WCAG Tiered Roadmap for WCAG Alignment • 4= this score may be assigned if either of the following proves to be true: - o Violates one Digital Inclusion Target - o Violates either a Tier or Tier 2 Guideline • 5= Violates one or more Digital Inclusion targets and Tier 1/Tier 2 Guidelines.	1	2
C. Reversibility/Cost to Fix	1	How many hours would it take to reverse the change or fix the resulting exclusion later? • 1= 4 or less hours • 2= 5-8 hours • 3= 9-16 hours • 4= 17- 32 hours • 5= More than 32 hours- signifying that it would require extensive redesign	1	1
TOTAL ERS (Maximum Score: 30)		Sum (A + B + C)	—	5 [Total ERS]

Chart 52: Exclusion Risk Score & Associated Action

ERS Score Range	Risk Classification	Required Action/Approval Level
5	No Risk	No potential exclusion risk is identified. Project Manager / Product Owner can approve immediately.
6-12	Low Risk (L)	Project Manager / Product Owner can approve immediately.
13 - 18	Medium Risk (M)	MEG Director must approve. Reasoning must clearly state why the benefit outweighs the moderate exclusion risk.
19 - 30	High Risk (H)	MEG CEO must approve. The rationale for proceeding must be documented, acknowledging the failure to meet the respective accessibility standard and/or Digital Inclusion Target.
Action: The change request was assigned an Exclusion Risk Score of five (5). According to the Risk Classification criteria, this request poses no exclusion risk. Therefore, the Product Owner can approve immediately.		

Project Closure- Sample

At project closure, a project closing meeting is held with the project team. Additionally, a Lessons Learnt log is populated. This information will serve as an important knowledge asset for future projects. See sample Lessons Learnt Log below:

Chart 53: Lessons Learnt Log

Project Name:	Development of the Civil Registry and Vital Statistics System
Consultancy Name (if applicable):	
Funding Agency (if applicable):	
Expected Start date:	January 5 th 2026
Expected End Date:	November 27 th 2026
Actual Start Date:	January 10 th 2026
Actual End Date:	December 5 th 2026
Actual Total Cost:	\$175,250

<u>Challenges</u>				
Description of Experience/Observation	Date (If available)	Action/s taken	Recommendations for alternative actions	Conclusion/Lesson Learnt
The Deputy Registrar was the assigned VSU focal point. However, she also oversees the VSU operations and has limited time to dedicate to the project.	Not applicable	The team had to make significant efforts to gather her feedback on the product.	Request that the beneficiary organization sign an MOU committing to assign the necessary human resources to support the project execution.	MOU template must be developed.
<u>Successes and Best Practices</u>				
Description of Experience/Observation	Date (If available)	Action/s taken	Recommendations for alternative actions	Conclusion/Lesson Learnt
Weekly project team meetings were held throughout the project lifetime.	Not Applicable	none	none	Close team coordination is critical for project success.

5 CONCLUSIONS

This Final Graduation Project sets out to address a critical gap in Belize's public sector digital transformation process: the lack of a structured, systematic approach to embedding digital inclusion within project management processes. Through analytical research, stakeholder engagement, methodological design, and practical application, the project successfully achieved its objectives. The conclusions below are aligned with each specific objective of the project.

Conclusion for Specific Objective 1

To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects.

The analysis of project management frameworks, methodologies, and best practices demonstrated that digital inclusion is widely recognized as a priority in light of an evolving digital society. The analysis process proved to be invaluable to guiding the development of the Digital Inclusion Project Management Methodology. As part of this process, key insights were gathered which helped to shape the DI-PMM into a targeted and effective guide that MEG could realistically adopt in its digitalization projects. Through the analysis exercise, it was gathered that data on Digital Inclusion at the national level was lacking. Consequently, its absence can deter MEG's ability to design targeted interventions towards bridging the digital divide and preventing digital exclusion. Despite the lack of digital inclusion data, it was gathered that there were key actions that could be taken to foster digital inclusion. The key initiatives include establishment of DPI, prioritizing user interface design, incorporating digital literacy for citizens and stakeholder engagement.

Furthermore, the analysis revealed that frameworks such as Agile and Human-Centered Design provide valuable mechanisms for user engagement, user-centric design and flexibility in development, however, they do not independently ensure project accountability and structure. On the other hand, traditional PMBOK-aligned methodologies provide governance and structure which are critical pillars of public sector projects, but lack explicit guidance on addressing digital exclusion risks. As such, the methodology blends these internationally recognized methodologies and frameworks into a digital inclusion methodology customized for the Ministry of E-Governance.

Conclusion for Specific Objective 2

To define the structure and components of a Project Management Methodology aligned with PMBOK knowledge areas and process groups.

The development of the Digital Inclusion Project Management Methodology was guided by the project management knowledge areas and process groups to remain aligned with project management standards. Additionally, the DI-PMM was aligned with the Human-Centered Design and Agile methodologies, whose nature and values aligned with the goal to develop a methodology for enhancing digital inclusion. Finally, to ensure that the methodology was practical and realistic for application, it considers the environment which MEG operates in, including the human resources, physical resources, organizational culture, governmental processes and Belizean dynamics.

Conclusion for Specific Objective 3

To develop practical templates and recommendations for incorporating digital inclusion throughout the project lifecycle.

To support the execution of the DI-PMM, numerous templates and tools were developed. These instruments provide practical guidance for executing each step presented by the DI-PMM, for instance, conducting accessibility check points or assessing the digital exclusion risk score of a change request. The instruments are expected to serve as guides. The expectation is that MEG may tailor these to meet particular needs or requirements set by each project.

Conclusion for Specific Objective 4

To illustrate the practical application of the methodology through a digital transformation case study.

The final deliverable was the application of the methodology to a project. As part of this exercise, the methodology was applied to one of MEG's flagship projects, "The Development of the Civil Registry and Vital Statistics System". The application process involved the demonstration of how each phase of the methodology would be applied from initiation to project closure. The project was guided by the methodology and reinforced with the use of the templates and tools developed in Deliverable 3. As part of this process, it was necessary to make minor adjustments to the methodology to better suit MEG's needs. This process of tailoring the methodology was testament to the notion that MEG will need to maintain flexibility in applying the methodology as each project is defined by unique circumstances.

Overall Conclusion

To conclude, the Digital Inclusion Project Management Methodology has been developed with the needs of Belizeans at the center. The Government of Belize is steadfast in its work towards delivering value to all Belizeans through inclusive and accessible public services. As such, this project delivers a methodology that is perfectly in line with the vision of MEG and the larger Government of Belize.

6 RECOMMENDATIONS

Based on the findings and conclusions of this project, the following recommendations are proposed. Each recommendation identifies a clear responsible actor to ensure accountability and practical implementation.

Recommendation 1: Institutional Adoption of the Digital Inclusion Methodology

Responsible actor: Ministry of E-Governance Executive Leadership

It is recommended that the Ministry of E-Governance formally adopt the Digital Inclusion Project Management Methodology as a standard framework for all digital transformation projects.

Recommendation 2: Establishment of a National Digital Inclusion Baseline

Responsible actor: Ministry of E-Governance in collaboration with national statistical and policy entities

It is recommended that national-level data on digital inclusion be collected to guide the effective design of inclusion interventions. The recommended metrics to be collected are aligned with the pillars of Digital Inclusion as established by the National Digital Inclusion Alliance and the dimensions of Universal Meaningful Connectivity. Key metrics that should be assessed include the following:

- Level of access to affordable and high-speed internet
- Level of access to internet-enabled devices that meet the needs of users
- Level of digital skills amongst the population
- Availability of safe and secure internet connections

To derive maximum value from the data, it should be disaggregated by demographic parameters such as sex, socioeconomic status, age and ethnicity.

Recommendation 3: Advancement of Digital Public Infrastructure (DPI)

Responsible actor: Ministry of E-Governance Infrastructure Architect

DPI was shown to be a catalyst for digital inclusion, user choice and nondiscriminatory access. As such, MEG should prioritize the advancement of DPI within Belize. It would not only contribute towards digital inclusion but it would serve as a strong foundation for a digital government. To ensure that it remains a priority, it should be incorporated into Belize's National Digital Agenda 2026-2030 and other digital transformation related plans.

Recommendation 4: Continued Execution of the Digital Inclusion Program

Recommended Actor: Ministry of E-Governance Change Management Officer

MEG should also continue to execute and expand its Digital Inclusion Program. Although the DI-PMM is focused on accelerating digital inclusion through digitalization projects, it should not be the only mechanism for doing so. MEG must maintain this program active by ensuring that it is reflected in the National Digital Agenda 2026-2030. Below are a few key activities that can be executed through the digital inclusion program which will also complement the DI-PMM:

- Uplifting the Community Digital Support Buddies by keeping them engaged through capacity building opportunities, information sharing and involvement in MEG's initiatives which may or may not be related to digitalization projects.

- Digital literacy training for citizens. It is key that citizens are continuously trained on basic digital literacy which will allow them to better navigate the digitalized public services. In addition, MEG should also uplift citizens by training them in more advanced digital skills. These skills will prepare the citizenry to pursue careers in the digital landscape or equip them for a job market that values digital skills.

7 VALIDATION OF THE FGP IN THE FIELD OF REGENERATIVE AND SUSTAINABLE DEVELOPMENT

7.1 Introduction

Regenerative development is an approach to planning, design and development that seeks to actively restore, renew and enhance the capacity of ecosystems, communities and economies (MDPI, 2024). Recognizing the undeniable negative impacts that modernization and the industrial revolution have had on the environment, culture and communities, regenerative development is a concept that is crucial for not only the protection of critical systems but the restoration of damaged or non-functional systems.

Sustainable development, while linked to regenerative development, has its niche focus. It is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (International Institute for Sustainable Development, n.d.). This concept is critical for balancing the use of resources for economic and societal use to protect the long-term wellbeing of the planet and future generations.

Regenerative & Sustainable development can be embedded into various disciplines, including project management. Below are a few mechanisms in which project management integrates both sustainable and regenerative development.

- **Systems thinking planning-** understanding that the projects are interconnected with their broader environment, whether that be their natural, social or cultural environment (Minney, 2024), interconnectedness of systems is a key principle of regenerative development.

- **Integrated design and action-** diverse disciplines collaborate to develop solutions to address human and environmental needs.
- **Resource management and procurement-** greater focus is placed on optimizing resource consumption and integrating the use of renewable resources.

The project directly supports the concepts of regenerative and sustainable development. The project stems from the idea of interconnectivity; understanding that the digitalization of services can directly impact citizens' ability to access critical services that are required for procedures related to health, education and employment. Therefore, in an effort to not disenfranchise citizens from their ability to navigate these areas critical to daily life, the project seeks to introduce a systematic approach for prioritizing digital inclusion in all digitalization projects led by MEG.

The Sustainable Development Goals (SDGs) prioritize integration, as they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability (United Nations Development Programme, n.d.). As explained above, the project fully recognizes the links that exist between the approach that citizens take to access services and their abilities to conduct other activities that are much needed for daily life.

To conclude, it is not expected for the project deliverables to disfavor the SDGs, regenerative sustainable development. On the contrary, it is in direct alignment with these concepts.

7.2 Relationship of the project to the Sustainable Development Goals.

The Sustainable Development Goals (SDGs) are part of the 2030 Agenda for Sustainable Development, which was adopted by all United Nations Member States in 2015. They are considered a universal call to action to end poverty, protect the planet and ensure that by 2030 all people enjoy peace and prosperity (United Nations, n.d.).

In this section, each SDG is analyzed and their particular relation to the project is determined.

SDG 1: “No Poverty”- relates to ending poverty in all forms, which involves targeting vulnerable populations, increasing access to basic resources and services, and supporting communities affected by conflict and climatic disasters (United Nations Development Programme, n.d.). Notably the project aims to support MEG’s efforts to increase accessibility of key services for the citizens of Belize which will facilitate access to resources and services related to education and employment, both of which are directly related with curtailing poverty.

SDG 2: “Zero Hunger”- relates to ensuring that everyone has access to nutritious food. Therefore, it involves the promotion of sustainable agriculture, supporting small-scale farmers and equal access to land (United Nations Development Programme, n.d.). The project does not relate to food and agriculture; therefore, there is no evident link to this particular goal.

SDG 3: “Good Health and Well Being”- identifies the importance of health for living long and fulfilling lives. It relates to various areas of health including life expectancy, reducing the prevalence of infectious diseases, reducing maternal mortality and so much more. The

development of a methodology for digital inclusion may lead to more accessible digital health services and public health information systems, which will contribute to better health outcomes.

SDG 4: “Quality Education”- relates to increasing enrollment rates, especially in developing regions, reducing drop out rates, increasing literacy rates and the number of girls in school (Local Governments for Sustainability, 2015, November). Given that MEG is responsible for the digital transformation of all government services, the methodology for digital inclusion can also be implemented for education services, such as digital literacy programs and online learning platforms. Therefore, ensuring that they are designed to be accessible to the entire population, regardless of factors such as locations and socio-economic status.

SDG 5: “Gender Equality”- aims to empower women and girls, and recognizes that ending female discrimination as crucial for a sustainable future (United Nations Development Programme, n.d.). The digital inclusion methodology will ensure that digital services and training initiatives are not biased toward a specific gender; therefore, ensuring equal participation of genders in the economy and society.

SDG 6: “Clean Water & Sanitation”- focuses on ensuring safe and affordable drinking water for all by 2030, which involves investment in infrastructure, provision of sanitation facilities and promotion of hygienic practices. The project has no direct link to this SDG as these are outside of the scope of digital services.

SDG 7: “Affordable & Clean Energy”- focuses on reducing reliance on fossil fuels and investing in renewable energy sources. It also involves improving energy productivity and ensuring energy for all (Local Governments for Sustainability, 2015, November). The project has no direct link to this SDG as it is more planet focused and outside of the scope of digital services.

SDG 8: “Decent Work & Economic Growth”- involves promoting economic growth, technological innovation and entrepreneurship all with the intent to foster productive employment and decent work for all (United Nations Development Programme, n.d.). With increased equitable access to efficient government services, citizens can save time and resources, which they can then better contribute more productively towards the economy. The methodology would also involve skill development which can foster greater opportunities for meaningful employment.

SDG 9: “Industry, Innovation & Infrastructure”- recognizes the importance of technology and innovation for developing effective solutions to economic and environmental challenges. The MEG is the hub for technology and innovation amongst the public sector; they are using technology to improve access, productivity and to solve issues. Therefore, a digital inclusion methodology would ensure that the technological solutions being developed will benefit and create value for all.

SDG 10 “Reduced Inequalities”- recognizes that high levels of inequality not only foster poverty traps but impact all elements of human development (Local Governments for Sustainability, 2015). The project seeks to prevent any potential inequalities with access to

critical government services and targets aspects such as the digital divide, which is a major driver of inequality in developing countries such as Belize.

SDG 11: “Sustainable Cities & Communities”- focuses on creating safe and productive communities by creating career and business opportunities, safe and affordable housing and building resilient societies and economies (United Nations Development Programme, n.d.). Ensuring that government services are available in both urban and total services can improve the quality of life for all citizens, regardless of their location.

SDG 12: “Responsible Consumption & Production”- refers to reducing our ecological footprint by adjusting the way we produce and consume resources. The project does not directly link to this goal, as it is more focused on economic production and the use of natural resources, as opposed to digital services.

SDG 13: “Climate Action”- focuses on building more resilient economies and communities to climate change impacts, as well as taking action for mitigating the drivers of climate change. Similar to above, this SDG is more planet focused and does not directly relate to the project objectives.

SDG 14: “Life Below Water”- aim to sustainable manage and protect marine and coastal ecosystems. The project does not directly link to this particular goal as it does not involve the management of natural resources.

SDG 15: “Life on Land”- focuses on the urgent action needed to protect natural habitats and biodiversity from severe impacts of deforestation, wildlife trafficking and changing

climate conditions. The project does not directly link to this particular goal as it does not involve the management of natural resources.

SDG 16 “Peace, Justice and Strong Institutions”- strives for peace, stability, human rights and effective governance across the global society. By developing a structured methodology for integrating digital inclusion into all digital transformation projects, MEG’s ability to execute positive and impactful projects will be augmented. By extension, MEG will improve its capacity as a government institution to better serve the people of Belize.

SDG 17: “Partnership for the Goals”- emphasizes the importance of global partnerships and cooperation for achieving the sustainable development goals. The successful application of the methodology will involve greater collaboration between different government entities, private sector and civil society.

7.3 Analysis of the project according to Standard P5

The P5 Impact Analysis was done for the final graduation project. The results demonstrate strong sustainable outcomes being generated, particularly in the areas of people, given the strong social context of the project. The details of the analysis can be viewed by double clicking on the icon below.



7.4 Relationship of the project to the dimensions of Regenerative Development

Regenerative development is defined by six dimensions. Below is a brief explanation of the project's relation to each of these dimensions.

Environmental- the project is not directly linked to this dimension as it is not an environmental initiative. However, the project results may still have an indirect impact on the environment. For instance, a well-managed digital government has the potential to reduce the environmental footprint by requiring less physical travel to government offices and reducing the need for paper-based processes.

Social- the project has the strongest link to this particular dimension. By developing a methodology that promotes equitable access to digital services, the project will foster greater citizen participation in public sector initiatives, empowerment of communities, equitable opportunity for developing digital skills and accessing digital tools.

Economic- digital transformation is a direct contributor to economic growth as it facilitates business, investment, entrepreneurship and fosters productivity. Therefore, if the transformation is made to be inclusive of all members of society, the economic growth will be even further stimulated.

Political- by following a structured methodology in each project, a culture of transparency, accountability and efficiency can be fostered in MEG.

Culture- in implementing an inclusive project management methodology, consideration will be made to the traditions, languages and identities of the Belizean public.

Spiritual- by ensuring that no one is left behind in the digital transformation, citizens will feel empowered and have a greater sense of belonging in their communities.

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[scrum/#:~:text=What%20is%20a%20Daily%20Scrum,the%20team%20selects%20for%20themselves.](https://www.productplan.com/glossary/daily-scrum/#:~:text=What%20is%20a%20Daily%20Scrum,the%20team%20selects%20for%20themselves.)

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APPENDICES

Appendix 1: FGP Charter

CHARTER OF THE PROPOSED

FINAL GRADUATION PROJECT (FGP)

1. Student name

Maria Celeste Pech

2. FGP name

Development of Project Management Methodology for Digital Inclusion in Public
Sector Digital Transformation Projects

3. Application Area (Sector or activity)

Public Sector Digital Transformation

4. Student signature



5. Name of the Graduation Seminar facilitator

Carlos Brenes

6. Signature of the facilitator



7. Date of charter approval

August 18th 2025

8. Project start and finish date

September 1st 2025

November 30th 2025

9. Research question

What is necessary for the Ministry of E-governance to incorporate digital inclusion principles in all its digital transformation projects to ensure that there is equitable access to public services?

10. Research hypothesis

Is it possible to develop a project management methodology to guide all digital transformation projects in maintaining digital inclusion and equitable access to public services?

11. General objective

To develop a comprehensive Project Management Methodology tailored to the management of socially inclusive digital transformation projects in Belize's public sector to ensure that projects deliver equitable access to digital public services and prevent digital exclusion.

12. Specific objectives

1. To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.
2. To define the structure and components of the proposed Project Management Methodology in alignment with the PMBOK knowledge areas and process groups.

3. To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.
4. To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.

13. FGP purpose or justification

The Final Graduation Project aims to develop a comprehensive project management methodology for digital inclusion designed for digital transformation projects led by Belize's Ministry of E-Governance (MEG). As the mandated leader of public sector digitalization, MEG's focus on delivering highly sought-after public services is pivotal for national development.

However, the current absence of a dedicated digital inclusion methodology to guide these projects presents a critical vulnerability. This gap risks excluding citizens with limited digital literacy and restricted access to technology from equitable participation in essential public services.

By developing this robust project management methodology, MEG can significantly enhance the societal value and reach of its digital initiatives. The methodology will strategically guide the management of Belize's ongoing digital transformation journey;

ensuring full consideration for the diverse digital needs of the Belizean populace and fostering a truly inclusive transition into the digital era.

14. Work Breakdown Structure (WBS). In table form, describing the main deliverable as well as secondary, products or services to be created by the FGP.

Final Graduation Project

1.1 FGP profile

1.1.1 Charter

1.1.2 WBS

1.1.3 Introduction

1.1.4 Theoretical framework

1.1.5 Methodological framework

1.1.6 Preliminary bibliographical research

1.1.7 Annexes

1.2 FGP development

1.2.1 Analysis on existing digital equity project management frameworks and best practices

1.2.1.1 Conduct literature review on digital equity project management frameworks and best practices.

1.2.1.2 Analyze relevance of research to the Belizean context.

List of core inputs to the proposed methodology.

1.2.2 Development of the methodology structure, components and procedures.

1.2.2.1 Establish methodology scope.

1.2.2.2 Establish the integration of the project management phases and knowledge areas into the methodology.

1.2.2.3 Establish critical processes for managing socially inclusive digital transformation projects across the project lifecycle.

1.2.3 Develop templates and tools of the proposed methodology.

1.2.3.1 Design user friendly and practical templates

1.2.3.3 Identify tools and resources to support the methodology's processes.

1.2.4 Develop a case study to demonstrate the practical application of the project management methodology.

1.2.4.1 Identify a standard project where the methodology can be implemented.

1.2.4.2 Demonstrate the methodology's application to the project.

1.2.5 Conclusions

1.2.6 Recommendations

1.2.7 Reference lists

1.2.8 Annexes

1.2.9 Tutor approval for reading.

1.3 Reader's review.

1.4 Board of Examiners evaluation.

15. FGP budget

Item	Description	Total Cost (USD)
In-person Engagement		
Transportation	Rate of \$50 per trip 3 trips @ \$50	\$150.00
Per Diem Allowance	Rate of \$50 to cover meals and other expenses 3 sessions @ \$50	\$150.00
Snacks	\$40 to cover snacks & refreshments for each interview/focus group session \$3 sessions @ \$40	\$120.00
Information Processing		
Software Licenses	Office 365 license	\$100.00

Literature Purchase	Lump sum to cover the purchase of peer reviewed articles and journal subscriptions	\$150.00
Total Cost of Activities		\$670.00
Contingency (5%)		\$33.50
Grand Total		\$703.50

16. FGP planning and development assumptions

1. Comprehensive and organized documentation regarding digital equity project management frameworks and best practices will be readily accessible for analysis.
2. The proposed project management methodology developed during this project will be directly applicable and relevant to the unique socio-economic and technological context of Belize.
3. Key personnel from the MEG will actively engage and provide timely, comprehensive input throughout the methodology development process.
4. The MEG will endorse the project management methodology and commit to its systematic implementation across all relevant future digital transformation initiatives.

17. FGP constraints

1. The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher.
2. Due to the condensed project timeline, it will not be possible to execute a wide-reaching survey among the Belizean public to gather information on their level of digital literacy and needs related to digital access.
3. Consequently, the development of templates, tools and recommendations will primarily rely on a thorough review of credible literature and expert insights from the Ministry of E-Governance (MEG), rather than direct, large-scale citizen feedback.
4. There are limited comprehensive studies that have been conducted to assess the Belizeans level of access to technology and digital tools.

17. FGP development risks

1. A change in MEG's management during the methodology development process can reduce endorsement and support for the project, thereby impacting the project's progress and ultimate adoption of the digital inclusion project management methodology.
2. The qualitative input and expert feedback provided by MEG may be subjective and lack sufficient empirical evidence which can affect the development of an

objective and credible methodology, potentially limiting its effectiveness in addressing real-world challenges.

3. Unforeseen personal circumstances (health concerns, family commitments) or competing professional demands may impact the lead researcher's ability to consistently commit the dedicated ten hours per week to project tasks. This may result in project delays or a reduction in the depth or quality of research.
4. The proposed strategies outlined in the methodology may prove to be too costly or technologically complex to fully incorporate into certain projects. This would lead to partial or limited adoption of the methodology across MEG's digital products and services, consequently reducing its impact on widespread digital inclusion.

18. FGP main milestones

Milestones are related to deliverables on the second level (deliverables) and third level (control accounts) of the WBS of section 14 of this Charter. At the same time, the deliverables are related to the specific objectives (in the case of the FGP please include the times for the tutorship reviews as well as for the readership).

Deliverable	Finish estimated date
1.1 FGP profile	August 18, 2025

Deliverable	Finish estimated date
1.1.1 Introduction	August 11, 2025
1.1.2 Theoretical Framework	July 28, 2025
1.1.3 Methodological Framework	August 4, 2025
1.1.4 Preliminary bibliographical research	July 14, 2025
1.1.5 Annexes (FGP schedule, FGP WBS, FGP Charter)	August 18, 2025
1.2 FGP development	November 25, 2025
1.2.1 Analysis on existing digital equity project management frameworks and best practices	September 29, 2025
1.2.2 Development of the methodology structure, components and procedures	December 16, 2025
1.2.3 Develop templates and tools of the proposed methodology.	November 3, 2025
1.2.3 Develop a case study to demonstrate the practical application of the project management methodology.	November 18, 2025
1.2.5 Conclusions	November 20, 2025
1.2.6 Recommendations	November 20, 2025
1.2.7 Reference lists	November 20, 2025
1.2.8 Annexes	November 20, 2025
1.2.9 Tutor approval for reading	November 25, 2025

Deliverable	Finish estimated date
1.3 Readers review	December 18, 2025
1.4 Board of Examiners Evaluation	January 15, 2025

19. Theoretical framework

19.1 State of the “matter”

In 2021, the Government of Belize launched its National Digital Agenda which aims to digitally transform Belize’s public sector in an effort to provide increased value to Belizeans. The agenda led to the creation of the E-Governance and Digitalization Unit. Presently, the Ministry of E-Governance is to lead the digital transformation. One of the key components of the agenda is the digitalization of government services with priority for the services that are of highest demand to citizens (National Digital Agenda, 2021).

As such, the Ministry of E-Governance has led numerous initiatives since its inception, for instance, it has developed and launched the Public Service Leave Management System which is an integrated platform used by Public Officers to apply for various types of leave, the Criminal Records Registry which is used by Belizeans to apply for a police record and it is currently overseeing the development of the Civil Registry and Vital Statistics System which will allow

Belizeans to access and manage their vital records such as birth, death, adoption and marriage certificates. The Ministry also has a few projects in the pipeline such as the National Identification System and the E-Services Portal which will serve as a hub for citizens to access any government service (Ministry of E-Governance, n.d). Notably, the Ministry's initiatives are highly geared towards government to citizen services.

The Ministry also leads a Digital Inclusion Program which primarily involves the establishment of a network of digital connect centers in rural areas and inner cities, training initiatives to upskill youths and women in digital skills, and activities to improve digital literacy among the elderly population (Ministry of E-Governance, n.d).

While the Digital Inclusion Program is key to increasing access to technology and digital skills, it does not provide guidelines, frameworks nor project methodologies to guide each public service transformational effort to ensure that they are being designed to cater for a population that is diverse in their educational level, background, access to technology, level of basic and digital literacy.

For this reason, the development of a Project Management Methodology for Digital Inclusion will be a critical asset for the Ministry of E-Governance to ensure equitable access to critical public services.

19.2 Basic conceptual framework

1. Digital Transformation
2. Digital Inclusion
3. Digital Equity
4. Digital Exclusion
5. Project Management Methodology
6. Public Services
7. Public Sector
8. Digital Literacy

20. Methodological framework

21. Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
To analyze existing project management frameworks and best practices related to digital inclusion in public sector projects to guide the development of a customized project management methodology for the Ministry's projects.	Analysis on existing digital equity project management frameworks and best practices.	Primary: Reports documenting firsthand experience on the implementation of project management methodologies and frameworks related to digital equity and digital inclusion. Secondary: Articles and Books on the Digital Divide, Digital Inclusion and Digital Equity. Comparative studies on digital transformation initiatives.	Qualitative-Analytic-Syntethtic Qualitative-Inductive-Deductive	Checklists, benchmarking, affinity diagrams, root cause analysis, document analysis	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. Due to the compact project timeline, it will not be possible to execute an extensive survey among the Belizean public to gather information on their level of digital literacy and needs related to digital access. There are limited comprehensive studies that have been conducted to assess the Belizeans' level of access to technology and digital tools.
To define the structure and components of the proposed Project Management Methodology in alignment with	Methodology structure, components and procedures.	Primary: Interviews with the project management and executive team of the Ministry of E-governance.	Qualitative-Analytic-Syntethtic Qualitative-Interviews	Mind maps, interviews, focus groups, checklists, expert judgement, interpersonal and	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. The development of templates, tools and recommendations

21. Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
the PMBOK knowledge areas and process groups.		Organizational project management documentation. Project Management Institute publications (Standards, process groups, methodologies). Secondary: Scholarly articles and review papers. Case studies White papers		team skills, process analysis.	will primarily rely on a thorough review of credible literature and expert insights from the Ministry of E-governance (MEG), rather than direct, large-scale citizen feedback. The MEG personnel may have limited time available to review progress and provide feedback on the methodology.
To develop practical templates and recommendations for incorporating digital inclusion considerations throughout the lifecycle of digital transformation projects.	Templates and tools of the proposed methodology.	Primary: Consultations with the Ministry of E-governance team. International and National Standards/Guidelines for Accessibility and Usability. Existing Toolkits developed and implemented across various entities.	Qualitative-Analytic-Syntethic Qualitative-Interviews	Brainstorming, interviews, document analysis	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. The development of templates, tools and recommendations will primarily rely on a thorough review of credible literature and expert insights from the Ministry of E-governance (MEG), rather than direct, large-scale citizen feedback.

21. Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
		Data from Digital Inclusion Program initiatives. Secondary: Articles and Books on the Digital Divide, Digital Inclusion and Digital Equity. Review papers on best practices, accessibility in E-government. Comparative studies on digital transformation initiatives.			The MEG personnel may have limited time available to review progress and provide feedback on the methodology.
To illustrate the practical application of the developed Project Management Methodology through a detailed case study of a typical digital transformation project.	Case study demonstrating the practical application of the project management methodology.	Primary: Consultations with the Ministry of E-governance team on selection of and application to a project. Project documents of the selected project: project charter, project management plans, requirements specifications.	Qualitative-Analytic-Syntethic Qualitative-Interviews	Brainstorming, interviews, affinity diagrams, process analysis	The project is constrained by a maximum of 10 dedicated hours per week from the lead researcher. The MEG personnel may have limited time available to review progress and provide feedback on the methodology.

21. Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
		Secondary: Published case studies of similar nature. Comparative studies on the application of similar project management methodologies, frameworks or tools.			

22. Validation of the work in the field of regenerative and sustainable development.

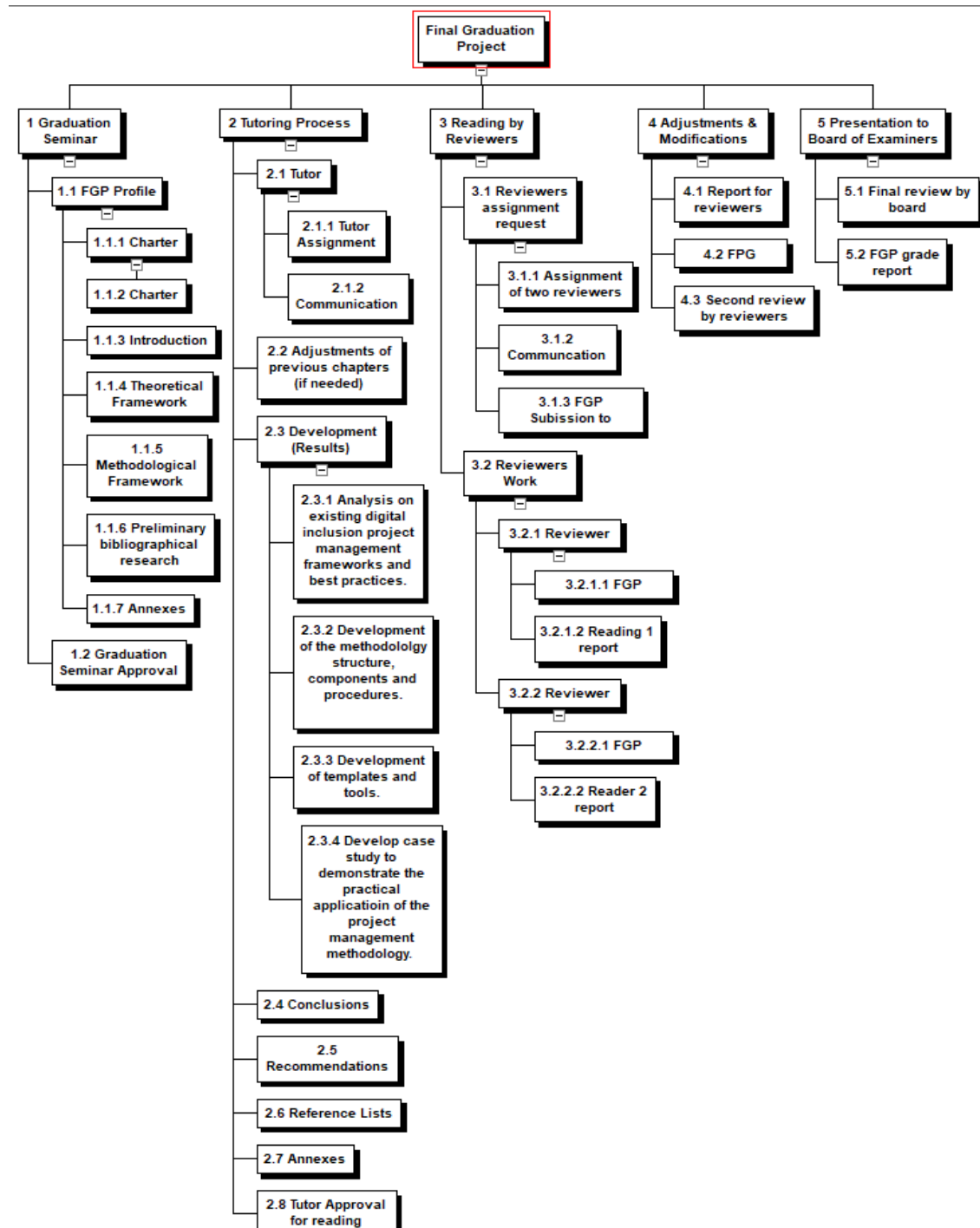
The project is directly aligned to the concepts of regenerative and sustainable development. The focus of the project is on ensuring that digital inclusion remains a pillar of digital transformation efforts. As a result, citizens will maintain or increase their accessibility to governmental services critical to modern day living such as services linked directly or indirectly to health, employment, education, identity and much more. In doing so, citizens have the tools necessary and feel empowered to positively contribute to the economy, uplift their communities and protect their environment.

In sections 7.2 and 7.4, the relationship between sustainable and regenerative development with the project was thoroughly analysed. Firstly, each of the seventeen sustainable development goals were assessed for their relationship with the project. The project was noted to have direct links to ten of the SDGs, which are: “No Poverty”, “Good Health and Well Being”, “Quality Education”, “Gender Equality”, “Decent Work & Economic Growth”, “Industry, Innovation & Infrastructure”, “Reduced Inequalities”, “Sustainable Cities & Communities”, “Peace, Justice & Strong Institutions” and “Partnership for the Goals”. The details of the relationship of each of the previously mentioned SDGs to the project are elaborated in section 7.3.

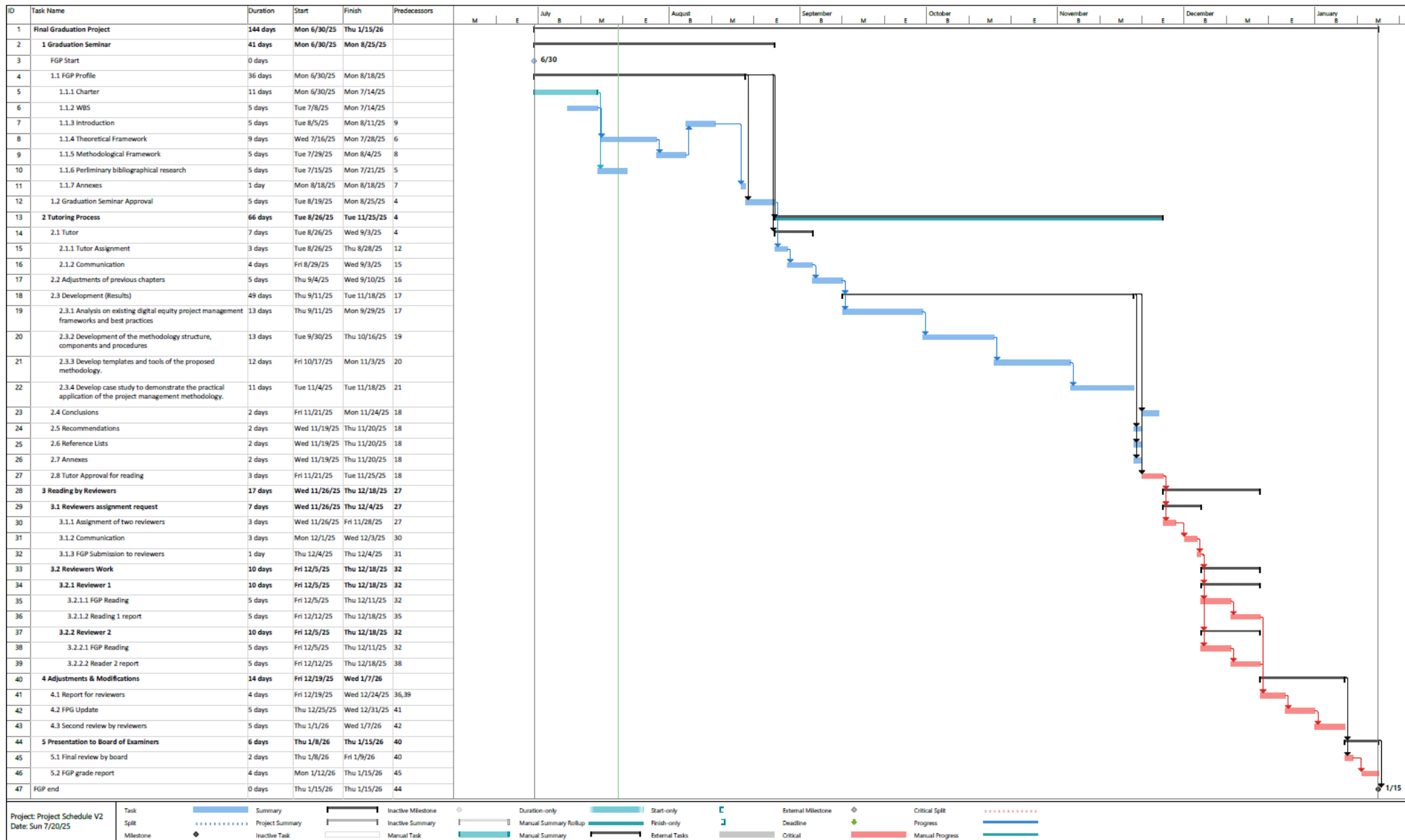
Furthermore, the alignment of the dimensions of regenerative development to the project was assessed. Out of the six dimensions, a direct link was made to the following dimensions: social, economic, political, culture and spiritual. As for the environmental

dimension, an indirect link was noted, whereby an efficient digital government can significantly reduce the environmental footprint of the country. Further details of the relationship between the project and the dimensions of regenerative development can be noted in section 7.4.

Appendix 2: FGP WBS



Appendix 3: FGP Schedule



Appendix 4: Preliminary Bibliographical Research

1. Artificial Intelligence in the Public Sector. The World Bank Group.

The article elaborates on the role of artificial intelligence in delivery of government services. As an important emerging technology, it is necessary that the actional plan to be developed covers the element of AI and people's thoughts and interactions with it.

Therefore, this report can make significant contributions to embedding the concept of AI into the action plan to be developed.

2. *E-Government Survey* (2024). United Nations Department of Economic and Social Affairs.

The E-government report presents valuable data on the state of e-governance and digital transformation across all member states. It hones in on digital development at the regional, national and local level. The report was selected as it will provide valuable data on the state of digital transformation within Belize as well as analysis on e-governance trends such as digital inclusion, which is critical for the proposed project.

3. Izvoranu, A. (2021) : The rural digital divide: Recommendations from a scoping review, In Agrarian Economy and Rural Development - Realities and Perspectives for Romania. International Symposium. 12th Edition, The Research Institute for Agricultural Economy and Rural Development (ICEADR), Bucharest, pp. 251-260

This study will shed light on the digital divide that may exist in rural communities versus urban areas given that it involves a scoping exercise that assessed numerous articles on the topic of the rural digital divide. As part of the scoping exercise, numerous social,

political and education issues were identified. In response, the article suggests numerous recommendations for bridging the digital divide. In the Belize context, the rural communities are one of the key populations with low digital literacy. Therefore, the proposed action plan will need to encompass the context of the rural communities, of which this article is very much appropriate to do so.

4. Lennart, K. & Sellung, R. (2024). User and Design Research of Digital Government. Electronic Mobile Government.

The article evaluates the online application design practices and user involvement strategies that are used in existing e-government service platforms. The article is particularly relevant to the project because the project intends to suggest user design principles in the proposed manual to guide developers on designing an easy and user friendly interface.

5. Lhuras, S., Hafeez, S. Helo, P., Mubarak, M. (2024).

The article focuses on digital transformation for SME's. While the Ministry of E-governance does not particularly focus on MSME's, it can significantly benefit from learning of successful initiatives conducted in other product sectors. These may be appropriate to implement in Belize among the vulnerable populations.

6. Martinez-Alcala, C., Rosales-Lagard, A., Alonso-Lavernia, M., Ramriez-Salvador, J., Jimenez-Rodriguez, B., Cepeda-Rebollar, R., Lopez-Noguerola, J., Bautista-Diaz, M.L., and Agis-Juarez R. (2018). Digital Inclusion in Older Adults: A Comparison Between

Face-to-Face and Blended Digital Literacy Workshops. *Frontiers in ICT*, 5 (21).

<https://doi.org/10.3389/fict.2018.00021>

The article highlights the importance of supporting the older adult population in acquiring and enhancing digital competencies. It focuses on a study that tests the effectiveness of blended workshops based on a Learning Management System. The article was selected because it can assist the Ministry of E-Governance to identify new initiatives that can be used to increase digital literacy among the older population where low digital literacy may be more prevalent.

7. Ren, A., & Zhu, Y. (2022). Leaving No One Behind in the Digital Era: Opportunities and Challenges.

The article speaks to how the use of the internet and technology can support individuals who are struggling with poverty or can prevent them from falling into the lines of poverty. However, the existing digital divide further widens the class gap and exacerbates poverty. As such, the study presents the notion of cultivating digital capabilities as a mechanism to uplift persons out of poverty. The study is particularly relevant to the proposed project as it demonstrates the importance of harboring digital skills and suggests strategies to do so; therefore, directly linking to the project goal.

8. The National Digital Agenda (2020). *Government of Belize*.

Belize's National Digital Agenda is the Ministry of E-Governance's roadmap for digital transformation. The action plan will be significantly by the agenda given that it outlines

the purpose and scope of current and future projects. This will ensure that the action plan is well aligned with MEG's current and future work.

9. Williams, D. (2021). Ethical considerations for the use of artificial intelligence: lessons from the evolution of digital transformation strategies at the regional and national levels in the Caribbean. *GuIA.ai*.

The paper highlights that the digitization of government processes will involve the use of artificial intelligence systems. While this has not been achieved as yet in Belize, it may become a reality for future projects. Therefore, to ensure that the action plan remains relevant in the upcoming years, it must take into account how the use of artificial may impact how populations access public service. Therefore, this report can be valuable in designing the AI elements of the action plan.

10. Zhu, X., Shilun, G., & Wang. N. (2021). Digital Transformation: A systematic literature review. *Computers and industrial engineering*, 162.
<https://doi.org/10.1016/j.cie.2021.107774>

The study seeks to explore the concept of digital transformation and what this means for the human population. The article will provide substantial insight into the concept of digital transformation which will contribute towards devising an effective action plan that considers both digital transformation for development and the prioritization of people in this process.

Appendix 5: Digital Inclusion Audit Checkpoint

Digital Inclusion Audit Checkpoint Ministry of E-Governance

Objective:

The Digital Inclusion Audit Checkpoint is meant to guide the Ministry of E-Governance Governance Team in validating the product against the Web Content Accessibility Guidelines and the tailored Digital Inclusion Targets unique to the project.

WCAG 2 Checklist

(Adopted from WebAim)

The checklist below is aligned with the accessibility principles and techniques of the Web Content Accessibility Guidelines. The checklist seeks to simplify and summarize the guidelines for improved validation and conformance of digital content.

The ultimate goal for each digital product developed by the Ministry of E-Governance is to address each guideline in the checklist to meet full compliance with WCAG. However, if resources are limited, teams can focus on high-impact guidelines first, then expand coverage. See “Tiered Roadmap for WCAG Alignment” section for more details on the tiered approach.

• Principle 1: Perceivable

Web content is made available to the senses - sight, hearing, and/or touch

Guideline 1.1 Text Alternatives

- Provide text alternatives for any non-text content

1.1.1 Non-text Content

- Images, image buttons, and image map hot spots have appropriate, equivalent [alternative text](#).
- Images that do not convey content, are decorative, or contain content that is already conveyed in text are given empty alternative text (alt="") or implemented as CSS backgrounds. All linked images have descriptive alternative text.
- Equivalent alternatives to complex images are provided in context or on a separate linked page.
- Form buttons have a descriptive value.
- Inputs have appropriate [accessible names](#).
- Embedded multimedia is identified via accessible text.

- Frames and iframes are appropriately **titled**.
- If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided. Avoid CAPTCHA that rely solely on sensory characteristics (e.g., color or shape).

Guideline 1.2 Time-based Media

• Provide alternatives for time-based media

NOTE: If the audio or video is designated as an alternative to web content (e.g., an audio or sign language version of a web page, for example), then the web content itself serves as the alternative.

1.2.1 Audio-only and Video-only

(Prerecorded) 

- A **descriptive transcript** of relevant content is provided for non-live audio-only (audio podcasts, MP3 files, etc.).
- A descriptive transcript or **audio description** of relevant content is provided for non-live video-only, unless the video is decorative.

1.2.2

Captions

(Prerecorded)

d) 

- **Synchronized captions** are provided for non-live videos (YouTube videos, etc.).

1.2.3 Audio Description or Media Alternative

(Prerecorded) 

- A descriptive transcript **or** audio description is provided for non-live video.
NOTE: Only required if there is relevant visual content that is not presented in the audio.

1.2.4 Captions (Live)

- 

☐ Synchronized captions are provided for live media that contains audio (audio-only broadcasts, web casts, video conferences, etc.)

1.2.5 Audio Description (Prerecorded)

- 

- Audio descriptions are provided for non-live video.
NOTE: Only required if there is relevant visual content that is not presented in the audio.

- While not required at Level AA, for optimal accessibility WebAIM recommends descriptive transcripts in addition to audio descriptions.

1.2.6 Sign Language (Prerecorded)

- 

☐ A sign language video is provided for media that contains audio.

1.2.7 Extended Audio Description (Prerecorded)

- 

- When audio description cannot be added to video due to insufficient pauses in the audio, an alternative version of the video with pauses that allow audio descriptions is provided.

[1.2.8 Media Alternative \(Prerecorded\)](#)

-  

- A descriptive transcript is provided for pre-recorded media that has a video track. For optimal accessibility, WebAIM strongly recommends transcripts for all multimedia.

[1.2.9 Audio-only \(Live\)](#)

-  

- A descriptive text transcript (e.g., the script of the live audio) is provided for live content that has audio.

Guideline 1.3 Adaptable:

- Create content that can be presented in different ways (e.g., simpler layout) without losing information or structure

[1.3.1 Info and Relationships](#)

- [Semantic markup](#) is appropriately used to designate headings, regions/landmarks, lists, emphasized or special text, etc.
- [Tables](#) are used for tabular data and data cells are associated with their headers. Data table captions, if present, are associated to data tables.
- [Text labels](#) are associated with form inputs. Related form controls are grouped with fieldset/legend. ARIA labelling may be used when standard HTML is insufficient.

[1.3.2 Meaningful Sequence](#)

- The [reading and navigation order](#) (determined by code order) is logical and intuitive.

[1.3.3 Sensory Characteristics](#)

- Instructions do not rely upon shape, size, or visual location (e.g., "Click the square icon to continue" or "Instructions are in the right-hand column").
- Instructions do not rely upon sound (e.g., "A beeping sound indicates you may continue.").

[1.3.4](#)

- Orientation of web content is not restricted to only portrait or landscape, unless a specific orientation is necessary.

[1.3.5 Identify Input Purpose](#)

-  

- Input fields that collect [certain types of user information](#) have an appropriate autocomplete attribute defined.

[1.3.6 Identify Purpose](#)

-  

- Regions/landmarks are used to identify page regions.
- ARIA is used, where appropriate, to enhance HTML semantics to better identify the purpose of interface components.

Guideline 1.4 Distinguishable:

- **Make it easier for users to see and hear content including separating foreground from background**

1.4.1 Contrast (Minimum)

-  AA 2.0
- Text and images of text have a contrast ratio of at least 4.5:1.
- Large text - at least 18 point (typically 24px) or 14 point (typically 18.66px) and bold - has a contrast ratio of at least 3:1.

1.4.2 Resize text

-  AA 2.0
- ☐ The page is readable and functional when the page is zoomed to 200%. NOTE: 1.4.10 (below) introduces additional requirements for zoomed content.

1.4.3 Images of Text

-  AA 2.0
- ☐ If the same visual presentation can be made using text alone, an image is not used to present that text.

1.4.4 Contrast (Enhanced)

-  AAA 2.0
- Text and images of text have a contrast ratio of at least 7:1.
- Large text - at least 18 point (typically 24px) or 14 point (typically 18.66px) and bold - has a contrast ratio of at least 4.5:1.

1.4.5 Low or No Background Audio

-  AAA 2.0
- ☐ Audio with speech has no or very low background noise so the speech is easily distinguished.

1.4.6 Visual Presentation

-  AAA 2.0
- Blocks of text over one sentence in length:
 - Are no more than 80 characters wide.
 - Are NOT fully justified (aligned to both the left and the right margins).
 - Have adequate line spacing (at least 1/2 the height of the text) and paragraph spacing (1.5 times line spacing).
 - Have defined or inherited foreground and background colors.
 - Do NOT require horizontal scrolling when the text size is doubled.

1.4.7 Images of Text (No Exception)

-  AAA 2.0
- ☐ Text is used within an image only for decoration (the image does not convey content) OR when the information cannot be presented with text alone.

1.4.8 Reflow

-  AA 2.1
- No loss of content or functionality occurs, and horizontal scrolling is avoided when content is presented

at a width of 320 pixels.

- This requires responsive design for most web sites. This is best tested by setting the browser window to 1280 pixels wide and then zooming the page content to 400%.
- Content that requires horizontal scrolling, such as data tables, complex images (such as maps and charts), toolbars, etc. are exempted.

1.4.9 Non-text Contrast

- 
 - A contrast ratio of at least 3:1 is present for differentiating graphical objects (such as icons and components of charts or graphs) and author-customized interface components (such as buttons, form controls, and focus indicators/outlines).
 - At least 3:1 contrast is maintained in the various states (focus, hover, active, etc.) of author-customized interactive components.

1.4.10 Text Spacing

- 
 - No loss of content or functionality occurs when the user adapts paragraph spacing to 2 times the font size, text line height/spacing to 1.5 times the font size, word spacing to .16 times the font size, and letter spacing to .12 times the font size.
 - This is best supported by avoiding pixel height definitions for elements that contain text.

1.4.11 Content on Hover or Focus

- 
 - When additional content is presented on hover or keyboard focus:
 - The newly revealed content can be dismissed (generally via the Esc key) without moving the pointer or keyboard focus, unless the content presents an input error or does not obscure or interfere with other page content.
 - The pointer can be moved to the new content without the content disappearing.
 - The new content must remain visible until the pointer or keyboard focus is moved away from the triggering control, the new content is dismissed, or the new content is no longer relevant.

• Principle 2: Operable

Interface forms, controls, and navigation are operable

Guideline 2.1 Keyboard Accessible:

- **Make all functionality available from a keyboard**

2.1.1 No Keyboard Trap

 2.0

2.1.2 Keyboard focus is never locked or trapped at one particular page element. The user can navigate to and from all navigable page elements using only a keyboard. **Keyboard (No Exception)**

•  2.0

- ☐ All page functionality is available using the keyboard.

2.1.3 Character Key Shortcuts 2.1

- If a keyboard shortcut uses printable character keys, then the user must be able to disable the key command, change the defined key to a non-printable key (Ctrl, Alt, etc.), or only activate the shortcut when an associated interface component or button is focused.

Guideline 2.2 Enough Time:

- **Provide users enough time to read and use content**

2.2.1 Timing Adjustable

- If a page or application has a time limit, the user is given options to turn off, adjust, or extend that time limit. This is not a requirement for real-time events (e.g., an auction), where the time limit is absolutely required, or if the time limit is longer than 20 hours.

2.2.2 Pause, Stop, Hide

- Automatically moving, blinking, or scrolling content (such as carousels, marquees, or animations) that lasts longer than 5 seconds can be paused, stopped, or hidden by the user.
- Automatically updating content (e.g., a dynamically-updating news ticker, chat messages, etc.) can be paused, stopped, or hidden by the user or the user can manually control the timing of the updates.

2.2.3 No Timing

- 

- ☐ The content and functionality have no time limits or constraints.

2.2.4 Interruptions

- 

- ☐ Interruptions (alerts, page updates, etc.) can be postponed or suppressed by the user.

2.2.5 Re-authenticating

- 

- ☐ If an authentication session expires, the user can re-authenticate and continue the activity without losing any data from the current page.

2.2.6 Timeouts

- 

- ☐ Users must be warned of any timeout that could result in data loss, unless the data is preserved for longer than 20 hours of user inactivity.

Guideline 2.3 Seizures:

- **Do not design content in a way that is known to cause seizures or physical reactions**

2.3.1 Three Flashes or Below Threshold

- ☐ No page content flashes more than 3 times per second unless that flashing content is sufficiently small and the flashes are of low contrast and do not contain too much red. ([See general flash and red flash thresholds](#))

2.3.2 Three Flashes

- 

- ☐ No page content flashes more than 3 times per second.

2.3.3 Animation from Interactions

-  AAA 2.1

- ☐ Users can disable non-essential animation and movement that is triggered by user interaction.

Guideline 2.4 Navigable:

- Provide ways to help users navigate, find content, and determine where they are

2.4.1 Link

Purpose (In Context) A 2.0

- The purpose of each link (or image button or image map hotspot) can be determined from the link text alone, or from the link text and its context (e.g., surrounding text, list item, previous heading, or table headers).
- Links with the same text that go to different locations are readily distinguishable.

2.4.2 Multiple Ways

-  AA 2.0

- ☐ **Multiple ways** are available to find other web pages on the site - at least two of: a list of related pages, table of contents, site map, site search, or list of all available web pages.

2.4.3 Headings and Labels

-  AA 2.0

- ☐ Page headings and labels for form and interactive controls are informative. Avoid duplicating heading and label text unless the structure provides adequate differentiation between them.

2.4.4 Focus Visible

-  AA 2.0

- ☐ There is a visible indicator for page elements when they receive keyboard focus.

2.4.5 Location

-  AAA 2.0

- ☐ If a web page is part of a sequence of pages or within a complex site structure, an indication of the current page location is provided, for example, through breadcrumbs or specifying the current step in a sequence (e.g., "Step 2 of 5 - Shipping Address").

2.4.6 Link Purpose (Link Only)

-  AAA 2.0

- The purpose of each link (or image button or image map hotspot) can be determined from the link text alone.
- There are no links with the same text that go to different locations.

2.4.7 Section Headings

-  AAA 2.0

- ☐ Beyond providing an overall document structure, individual sections of content are designated using headings, where appropriate.

2.4.8 Focus Not Obscured (Minimum)

- **AA** 2.2

☐ When elements have keyboard focus, they are not entirely covered or hidden by page content.

2.4.9 Focus Not Obscured (Enhanced)

- **AAA** 2.2

☐ When elements have keyboard focus, they are entirely visible.

2.4.10 Focus Appearance

- **AAA** 2.2

- If a custom focus indicator or background color is in place, the focus indicator pixels must:
 - have at least 3:1 contrast between focused/unfocused states
 - be at least as large as the area of a 2 pixel thick perimeter surrounding the element. The formula $(width \times 4) + (height \times 4) = focus\ indicator\ area$ can be used for rectangular components.

Guideline 2.5 Input Modalities:

- **Make it easier for users to operate functionality through various inputs beyond keyboard**

2.5.1 Pointer Gestures **A** 2.1

- If multipoint or path-based gestures (such as pinching, swiping, or dragging across the screen) are not essential to the functionality, then the functionality can also be performed with a single point activation (such as activating a button).

2.5.2 Pointer Cancellation **A** 2.1

- To help avoid inadvertent activation of controls, avoid non-essential down-event (e.g., on mouse down) activation when clicking, tapping, or long pressing the screen. Use on click, on mouse up, or similar instead. If on mouse up (or similar) is used, you must provide a mechanism to abort or undo the action performed.
- If an interface component (link, button, etc.) presents text (or images of text), the accessible name (label, alternative text, aria-label, etc.) for that component must include the visible text.

2.5.3 Motion Actuation **A** 2.1

- Functionality that is triggered by moving the device (such as shaking or panning a mobile device) or by user movement (such as waving to a camera) can be disabled and equivalent functionality is provided via standard controls like buttons.

2.5.4 Target Size

- **AAA** 2.1

☐ Clickable targets are at least 44 by 44 pixels in size unless an alternative target of that size is provided, the target is inline (such as a link within a sentence), the target is not author-modified (such as a default checkbox), or the small target size is essential to the functionality.

2.5.5 Concurrent Input Mechanisms

- **AAA** 2.1

☐ Content does not require a specific input type, such as touch-only or keyboard-only, but must support alternative inputs (such as using a keyboard on a mobile device).

2.5.6 Dragging Movements

- **AA** 2.2

- Functionality that uses pointer dragging can also be achieved using a single pointer without dragging (unless dragging is essential).

Target Size (Minimum)

- **AA 2.2**
- Pointer input target sizes are at least 24 by 24 pixels unless:
 - A 24 pixel diameter circle centered on the target element does not intersect with any other target or a 24 pixel circle centered on an adjacent target.
 - The functionality can be achieved in some other conformant manner.
 - The target is in a sentence or list.
 - The target size can't be modified or is essential to the functionality.

• Principle 3: Understandable

Information and the operation of the user interface must be understandable.

Guideline 3.1 Readable:

- **Make text content readable and understandable**

3.1.1 Language of Page **A 2.0**

- The language of the page is identified using the lang attribute (e.g., <html lang="en">).

3.1.2 Language of Parts

- **AA 2.0**

- The language of page content that is in a different language is identified using the lang attribute (e.g., <blockquote lang="es">).

3.1.3 Unusual Words

- **AAA 2.0**

- **Words** that may be ambiguous, unfamiliar, or used in a very specific way are defined through adjacent text, a definition list, a glossary, or other suitable method.

3.1.4 Abbreviations

- **AAA 2.0**

- The meaning of an unfamiliar abbreviation is provided by expanding it the first time it is used, using the <abbr> element, or linking to a definition or glossary.

3.1.5 Reading Level

- **AAA 2.0**

- A more understandable alternative is provided for content that is more advanced than can be reasonably read by a person with roughly 9 years of primary education.

3.1.6 Pronunciation

- **AAA 2.0**

- If the pronunciation of a word is vital to understanding that word, its pronunciation is provided immediately following the word or via a link or glossary.

Guideline 3.2 Predictable:

- **Make Web pages appear and operate in predictable ways**

3.2.1 Consistent Navigation

- **AA 2.0**
 - ☐ Navigation links that are repeated on web pages do not change order when navigating through the site.

3.2.2 Consistent Identification

- **AA 2.0**
 - ☐ Elements that have the same functionality across multiple web pages are consistently identified. For example, a search box at the top of the site should always be labeled the same way.

3.2.3 Change on Request

- **AAA 2.0**
 - ☐ Substantial changes to the page, the spawning of pop-up windows, uncontrolled changes of keyboard focus, or any other change that could confuse or disorient the user must be initiated by the user. Alternatively, the user is provided an option to disable such changes.

3.2.4 Consistent Help **A 2.2**

- Contact and self-help details or functionality are presented consistently when present on multiple web pages. Platforms should offer the option to contact customer service through written communication, rather than just via phone call.

Guideline 3.3 Input Assistance:

- **Help users avoid and correct mistakes**

3.3.1 Error Identification **A 2.0**

- Required inputs or inputs that require a specific format, value, or length provide this information within the element's label.
- **Form validation** errors are efficient, intuitive, and accessible. The error is clearly identified, quick access to the problematic element is provided, and the user can easily fix the error and resubmit the form.

3.3.2 Labels or Instructions **A 2.0**

Inputs are identified by labels or instructions that help users know what information to enter.

3.3.3 Error Suggestion

- **AA 2.0**
 - ☐ If an input error is detected (via client-side or server-side validation), suggestions are provided for fixing the input in a timely and accessible manner.

3.3.4 Error Prevention (Legal, Financial, Data)

- **AA 2.0**
 - ☐ Submissions, changes, and deletions of legal, financial, or test data can be reversed, verified, or confirmed.

3.3.5 Help

- **AAA 2.0**
 - ☐ Instructions and cues are provided in context to help in form completion and submission.

3.3.6 Error Prevention (All)

- AAA 2.0

☐ If the user can submit information, the submission is reversible, verified, or confirmed.

3.3.7 Redundant Entry A 2.2

☐ Information that a user must re-enter to complete a single-session process must be auto-populated or available for the user to select, unless re-entering the information is essential to the functionality, the information poses security issues, or the previously-entered information is no longer valid.

3.3.8 Accessible Authentication (Minimum)

- AA 2.2

☐ A cognitive function test (such as remembering a password or solving a puzzle) is not required for any step in an authentication process unless the cognitive function test can be bypassed in some way, can be completed with assistance by some other mechanism, uses object recognition (such as "click on the photo of a flower"), or uses identification of non-text content provided by the user (such as a user-provided image).

3.3.9 Accessible Authentication (Enhanced)

- AAA 2.2

☐ A cognitive function test (such as remembering a password or solving a puzzle) is not required for any step in an authentication process unless the cognitive function test can be bypassed in some way or can be completed with assistance by some other mechanism.

• Principle 4: Robust

Content can be used reliably by a wide variety of user agents, including assistive technologies

Guideline 4.1 Compatible:

- Maximize compatibility with current and future user agents, including assistive technologies

4.1.1 Parsing (Obsolete and removed) A 2.0

NOTE: This success criterion is no longer useful and as of 2023 has been removed from WCAG. It previously required that significant HTML validation/parsing errors be avoided.

4.1.2 Status Messages

- AA 2.1

☐ If an important status message is presented and focus is not set to that message, the message must be announced to screen reader users, typically via an ARIA alert or live region.

Additional Best Practices:

- Color Blindness Simulation (Best Practice)- Check usability for color-impaired users.

- Automated Tools (Best Practice)- Utilize automated tools such as Wave or IBM Equal Access Accessibility to run accessibility checks.

Full Checklist Available online at: webaim.org/standards/wcag/checklist

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Tiered Roadmap for WCAG Alignment

Compliance with the Web Content Accessibility Guidelines is critical for delivering a digital product that is inclusive and accessible to users with diverse abilities. Ideally, it is recommended for the digital product to be assessed against the complete WCAG Checklist for the following reasons:

- **Comprehensive coverage**- the WCAG is designed to be a holistic framework. Focusing on only a subset of the guidelines can lead to accessibility gaps that can deter users with particular disabilities.
- **User centric** – the focus of the digital product is for users to be able to comfortably interact with the product despite their diverse abilities.
- **Linkage**: Various guidelines complement each other to target accessibility issues.
- **Future Proof**: aligning with the WCAG prepares the digital product for evolving requirements.

If certain project circumstances prevent the team from conducting holistic WCAG assessments, a tiered approach can be implemented where certain guidelines are prioritized. This approach allows the team to assess high impact guidelines first and subsequently expand coverage. The guide below presents guidelines that can be implemented across sprints based on level of priority.

Tier 1 – Critical

Recommended for Sprint 1-2

The goal is to maintain basic operability for all users.

- Keyboard (2.1.1)
- Focus Visible (2.4.7)

- Color Contrast (1.4.3)
- Non text Content (1.1.1)
- Info and Relationships (1.3.1)
- Link Purpose (In Context) (2.4.4)
- Location (2.4.8)
- Section headings (2.4.10)

Tier 2- Core

Recommended for Sprint 3-4

The goal is to enhance usability, especially for users that rely on assistive technology.

- Name, Role, Value (4.1.2)
- Bypass blocks (2.4.1)
- Resize Text (1.4.4)
- Captions (Prerecorded) (1.2.2)
- Form Labels & Error Messaging (3.3.1, 3.3.2, 3.3.3)
- Use of Color (1.4.1)
- Redundant entry (3.3.7)

Tier 3- Enhanced

Recommended for Sprints 5 onwards

The goal is to enhance the compliance with WCAG and ensure an inclusive user experience.

- Audio Descriptions (1.2.5)
- Timeout Adjustable (2.2.1)
- Animations Control (2.3.1, 2.2.2)
- Target size (2.5.5)
- Content Appropriateness (3.1.3, 3.1.4, 3.1.5)
- Consistent Identification (3.2.4)
- Help (3.3.5)
- Consistent help (3.2.6)

- Color Blindness Simulation (Best Practice)- Check usability for color-impaired users.
- Automated Tools (Best Practice)- Utilize automated tools such as Wave or IBM Equal Access Accessibility to run accessibility checks.

Note that additional accessibility standards may be incorporated into the checklist based on the particular needs of the user group.

Digital Inclusion Targets

Digital Inclusion Considerations	Digital Inclusion Targets	Achieved (Y/N)	Feedback

Appendix 6: Stakeholder Beneficiary Agreement

Online System Beneficiary Acceptance Agreement

Between:

THE MINISTRY OF E-GOVERNANCE

And

THE “*MINISTRY NAME*”

Date:

This Online System Beneficiary Acceptance Agreement (the "Agreement") is made and entered into as of this __ day of ____, 2025 BETWEEN the Ministry of E-Governance (hereinafter called “MEG”), , and the _____ (hereinafter called “the ____”) hereinafter referred to collectively as “Parties”.

WHEREAS:

1. Pursuant to an understanding between the MEG and the “*Ministry Name*”, MEG was designated as the Executing Agency for the “*Project Name*”.
2. The “*Ministry Name*” is the primary beneficiary and owner of the “*System Name*”.
3. “*Ministry Name*” has had the opportunity to review and assess the CRVS and is prepared to formally accept it.

NOW, THEREFORE, the Parties agree as follows:

1. Acceptance of the “*System Name*” by the “*Ministry Name*”

The “*Ministry Name*” hereby acknowledges that it has examined and assessed the CRVS and confirms that the CRVS meets its requirements and is satisfactory for its intended purpose. The AGM formally accepts the CRVS.

2. Release of MEG:

Upon the “*Ministry Name*” acceptance of the System, the Beneficiary hereby releases and forever discharges the MEG, its officers, directors, employees, agents, and affiliates, from any and all claims, actions, causes of action, demands, rights, damages, losses, expenses, and

liabilities whatsoever, whether known or unknown, arising out of or in any way connected with the development and delivery of the “*System Name*”, except for any ongoing obligations of the MEG that are explicitly stated in a separate written agreement between the MEG and the “*Ministry Name*” and that survive this Acceptance.

3. Conditional Acceptance

Any pending tasks, outstanding issues, or anticipated changes to the “*System Name*” as of the Effective Date of this Agreement are documented in **Annex A**, attached hereto. **Annex A** shall clearly outline the nature of each item, the party responsible for its completion or implementation, and the agreed-upon timeline or conditions for its resolution. The AGM’s acceptance of the CRVS herein does not waive its right to the satisfactory resolution of the items listed in **Annex A**.

4. Governing Law:

This Agreement shall be governed by and construed in accordance with the laws of Belize. **IN WITNESS WHEREOF the Parties**, each acting through their respective duly authorized representatives, have put their hands and seal the day and year first written.

SIGNED FOR and on behalf of the Ministry of E-Governance

CHIEF EXECUTIVE OFFICER
MINISTRY OF E-GOVERNANCE

SIGNED FOR and on behalf of the “*Ministry Name*”

“*Ministry’s CEO*”
“*Ministry Name*”

Appendix 7: Philological Dictum

1 Valencia Street
City of Belmopan
Cayo District
Belize

29th December, 2025

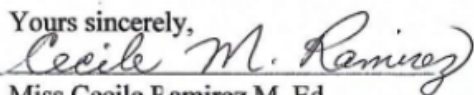
Academic Advisor
Master's Degree in Project Management
Universidad para la Cooperacion Internacional (UCI)

Dear Academic Advisor,

**Re: Philosophical Review of Final
Graduation submitted by Maria Celeste Pech in
partial fulfillment of the requirements for the Master's in Project Management Degree.**

I hereby confirm that Maria Celeste Pech has made all required corrections and improvements suggested to the project entitled "Development of Project Management Methodology for Digital Inclusion in Public Sector Digital Transformation Projects" document as I have recommended. In my judgement, the document meets the literary and linguistic standards required of a student studying for a degree at the Master's level.

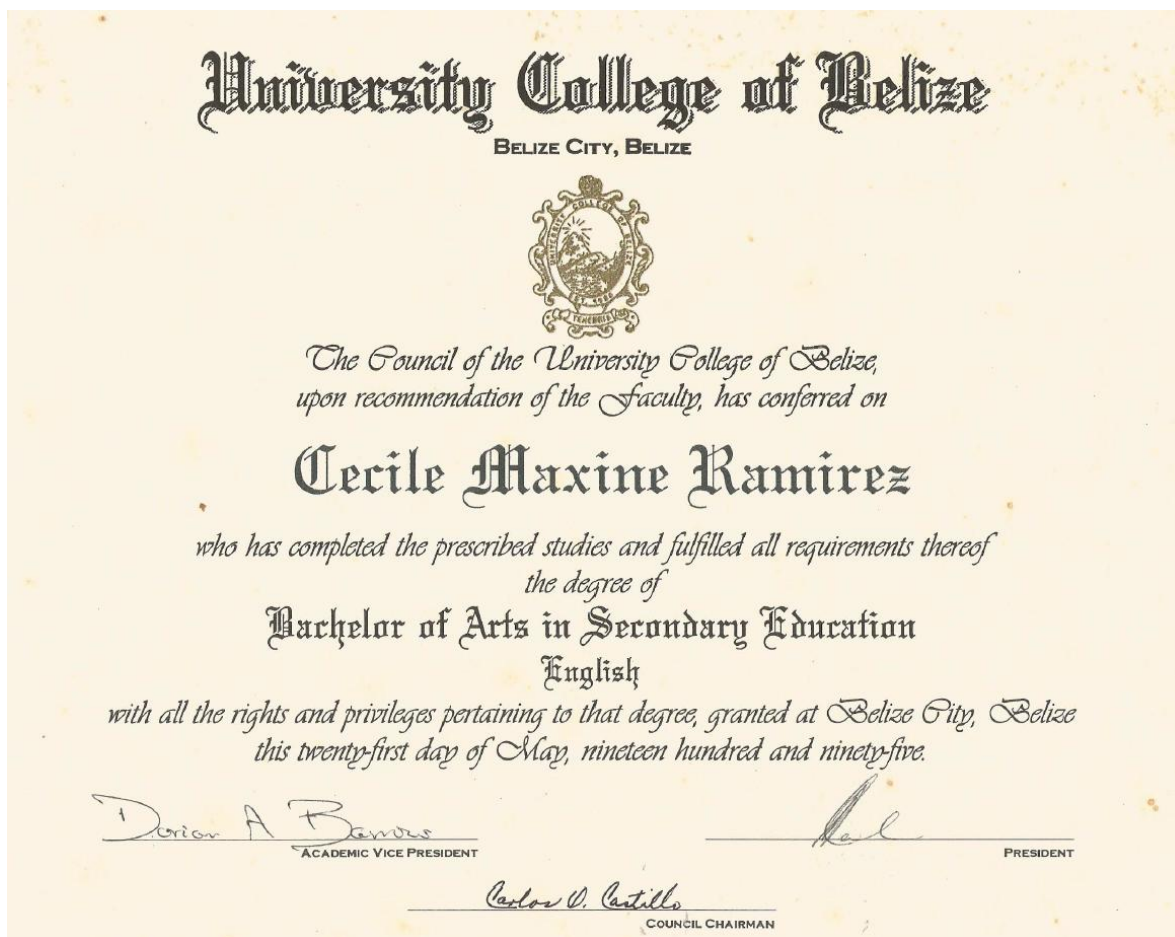
Yours sincerely,



Miss Cecile Ramirez M. Ed.



Appendix 8: Philologist Qualifications



University of North Florida

has conferred on

Cecile Maxine Ramirez

the degree

Master of Education

Secondary Education

and all the rights and privileges thereunto appertaining.

*In Witness Whereof, this diploma, duly signed, has
been issued and the seal of the University affixed.*

*Issued by the Board of Trustees upon the recommendation of the Faculty of the
College of Education and Human Services at Jacksonville, Florida, this second day of August, A.D. 2002*

Jet Ruse
Governor



June H. Hopkins
President

Katharine Gaston
Dean

University of North Florida

College of Education and Human Services

Certificate of Award

May it be known that this Certificate has been presented to

Cecile Maxine Ramirez

*For the satisfactory completion of 12 semester hours
of intensive course work in
Teaching English as a Second Language (TESOL)*

On this 2nd day of August, 2002

S. Pritch Smith
Program Sponsor

Katherine Boston
Dean of the College of Education

