

UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

THE DEVELOPMENT OF AN AGILE (SCRUM-BASED) METHODOLOGY FOR
MANAGING PROJECTS IN THE BASIC NEEDS TRUST FUND (BNTF)
PROGRAMME GRENADA

LEE ANTHONY PHILIP

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Master in Project Management (MPM) Degree

ALEJANDRO PAREDES
TUTOR

RONNY GONZÁLEZ
REVIEWER No.1

OSVALDO ALEXANDER MARTÍNEZ GÓMEZ
REVIEWER No.2



LEE ANTHONY PHILLIP
STUDENT

DEDICATION

I would first like to thank God for giving me health, strength, wisdom, and the knowledge to pursue one of my goals. I would like to dedicate this to my mother, Louise Phillip, and my beautiful daughter, Blessing Louise Serenity Phillip, who taught me patience, consistency, and purpose. To my friends and family for the love and support, and to the CDB operations officer for Grenada for allowing me to use the BNTF programme in Grenada to serve as the model for this project.

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ABSTRACT

The objective of this document is to develop a Scrum-based methodology that can be applied to the BNTF programme in Grenada to improve flexibility, responsiveness, and overall project performance. In this ever-evolving world of technological advancement and constant changes, the waterfall method and its approach to Project Management is no longer as effective with projects that require intermittent deviations and changes. The intention of this project/study is to reveal how many of these challenges can be resolved with the implementation of an Agile (Scrum-based) methodology, which is a more adaptive framework. The final product of this project consists of a Scrum-based methodology tailored for the BNTF programme in Grenada. The study is made up of an analysis between the Waterfall and Agile methodologies. The provision of a customized Scrum-based methodology for the BNTF Programme in Grenada, the development of templates, inclusive of a backlog template, a sprint planning template, a daily stand-up meeting template, a sprint review template, a sprint retrospective template, just to name a few at this point. This will culminate with the development of a case study document highlighting the advantages of the implementation of a Scrum-based methodology in the BNTF programme in Grenada. For this project, the research methods used were analytical, survey, and case study. Collectively, the outcome should provide a comprehensive understanding of the potential benefits to be derived using a Scrum-based methodology to enhance project management throughout the BNTF programme in Grenada.

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ABBREVIATIONS AND ACRONYMS

AI – Artificial Intelligence

BNTF – Basic Needs Trust Fund

CDB – Caribbean Development Bank

EHRD – Education Human Resource Development

PDA – Planning Development Authority

PPB – Public Procurement Board

RDU – Rural Development Unit

USAID - United States Agency for International Development

1 EXECUTIVE SUMMARY

A country's public projects are extremely important to its citizens since they serve as the foundation for national development. In Grenada, the Basic Needs Trust Fund (BNTF) Programme is in charge of several educational and community development initiatives throughout the tri-island state, including infrastructure and training. BNTF is a Caribbean-wide programme that promotes poverty reduction in low-income and vulnerable areas, which started in the year 1979 by the Caribbean Development Bank (CDB) and the United States Agency for International Development (USAID). Today, BNTF programme in Grenada is on its 10th cycle, with many success stories, however, projects have suffered from delays and cost overruns.

The BNTF Grenada operates within the typical (waterfall) project management framework, which employs a linear methodology. Decades ago, this method was very effective; however, in this new technological world with the constant changing of needs mid-course within any given project, the traditional (waterfall) project management approach faces numerous challenges when responding to these changes. To overcome these challenges, a Scrum-based methodology was embraced, which gave a more adaptable framework. Furthermore, by increasing resource efficiency via a Scrum-based strategy, this could ensure that public finances and human resources are better utilized.

The project's general objectives were to develop a Scrum-based methodology that could be applied to the BNTF programme Grenada to improve flexibility, responsiveness, and overall project performance. Additionally, the specific objectives were to develop a document that analyzes the current project management practices within the BNTF programme in Grenada to identify gaps and challenges that hinder flexibility and responsiveness, to develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects, to create key templates that would ensure consistency, reduce errors and save time, and to generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.

The methodologies employed in this project were based on literature reviews of similar research using analytical, survey, and case study methods, which offered valuable insights.

The analytical method allowed for examining the relationships between project management approaches and project outcomes, which assisted in identifying how Agile (Scrum-based) methodologies influence project flexibility and performance, just to name a few. The survey method allowed the collection of data from relevant stakeholders such as the CDB official and the BNTF team in Grenada. This data provided a broad understanding of perceptions and experiences from current project management practices and the potential impact of adopting the Scrum-based methodology. The case studies methods involved an in-depth analysis of specific projects within the BNTF programme, which offered detailed insights into the practical application, challenges, and benefits of implementing the Scrum-based methodology.

The analysis revealed that while the BNTF programme in Grenada plays an important role in community development, its reliance on the traditional (waterfall

approach) has limited its ability to adapt to changing community needs. This has resulted in delays, slow responsiveness, and implementation and monitoring challenges. Furthermore, it was also revealed that inadequate team communication and resistance to change are the primary restraints impeding the programme's responsiveness.

The assessment also highlighted that the team was unfamiliar with Scrum, but they were eager to learn about the project management process. A pilot implementation of the Scrum-based approach showed how Scrum principles could improve flexibility, responsiveness, and overall project performance.

Based on the findings, it was recommended that Scrum-based methodology be applied in stages to gradually replace the previous method. The transition should also prioritize team-building initiatives and change management strategies to increase readiness and collaboration. Workshops on Agile principles, the use of digital project management tools, and the use of standardized Scrum templates will be critical for effective outcomes while implementing and monitoring the Scrum-Based approach. These suggestions will help the programme become more adaptable and responsive.

In conclusion, while the BNTF Grenada programme had a significant contribution to community development, its reliance on the traditional (waterfall) method has a number of limitations in addressing flexibility and responsiveness. The findings and analysis demonstrated that adopting a Scrum-Based methodology can enhance flexibility, responsiveness, and project performance.

2 INTRODUCTION

2.1 Background

A country's public projects are extremely important to its citizens since they serve as the foundation for national development. According to EJA and Ramegowda (2019), governments, particularly in developing countries, have witnessed project failures during project implementation; however, the causes may differ. There is no precise definition of project failure, and there appear to be variations in acceptable definitions. According to EJA and Ramegowda (2019), project failure is caused by changes in project scope, communication, inadequate planning, and cost overruns. Similarly, Damoah and Kumi (2018) emphasize that factors such as political interference, corruption, poor planning, and lack of commitment often contribute to the failure of government projects in emerging economies. Given the scope of programmes such as the Basic Needs Trust Fund (BNTF) Programme in Grenada, operations may prove inefficient as a result of poor project management methodology.

The BNTF Grenada is in charge of several educational and community development initiatives throughout the tri-island state, including infrastructure and training. BNTF is a Caribbean-wide programme that promotes poverty reduction in low-income and vulnerable areas. In 1979, the Caribbean Development Bank (CDB) and the United States Agency for International Development (USAID) began the Caribbean Education Development and Basic Human Needs/Employment Sector programme. Shortly after, the Caribbean Development Bank (CDB) became the sole originator and renamed the scheme the Basic

Needs Trust Fund (BNTF). In Grenada, the BNTF is presently in its tenth cycle of construction projects.

The BNTF Grenada culture follows the classic waterfall technique, which has led to several delays and cost overruns over the years. According to current study, despite the fact that customer requirements and expectations are continually changing, there has been no noticeable improvement in building project management over the last few decades. As a result, traditional management approaches are inadequate to fulfill the demands of a quickly changing market (Liu, 2018 #7). Instead of implementing a full agile transformation, BNTF Grenada's activities focus on little, gradual adjustments, which leads to a lack of efficiency and overall project performance improvements.

This provided the impetus for this FGP, which proposed developing an Agile (Scrum-based) methodology for BNTF Grenada projects. This process would include changes such as, but not limited to, stakeholder participation, standardized templates and iterative planning. The intended outcomes include reduced delays and uncertainty, improved risk management, better resource allocation and usage and enhanced beneficiary satisfaction.

2.2 Statement of the problem

The BNTF Grenada operates within the typical (waterfall) project management framework, which employs a linear methodology. While this system was effective decades ago, with today's big shift towards the digital age, traditional project management approaches face numerous issues (Adeniran et al., 2024). As a result, adaptive methodologies are being explored by organizations within the construction industry.

The old technique causes several delays and overruns due to its inefficiency in responding to changes instantly. Several issues have been raised about the continued use of traditional project management practices within the BNTF Grenada programme, including flexibility and responsiveness, stakeholder involvement, and accountability and transparency. As community demands change, projects managed using linear systems may be unable to adjust fast, resulting in inferior outcomes. Furthermore, a lack of ongoing stakeholder engagement might result in initiatives that do not adequately reflect the local community's goals, jeopardizing their success and sustainability.

To overcome these challenges, adopting a Scrum-based methodology would give a more adaptable framework. Furthermore, by increasing resource efficiency, a Scrum-based strategy can help ensure that public finances and human resources are better utilized. Furthermore, an adaptive project management framework encourages continuous improvement, which is critical for meeting long-term, sustainable development objectives in a changing environment (Schwaber & Sutherland, 2020). Ultimately, once Scrum is embraced, it will deliver projects that are not only effective but also responsive to community needs.

2.3 Purpose

The primary purpose of this research is to evaluate the implementation of Scrum within the Basic Needs Trust Fund (BNTF) in Grenada. In other words, the research seeks to determine whether Scrum-based methodology can enhance overall project performance in comparison to the current traditional (waterfall) approach being used.

This study will also explore how a Scrum-based methodology might help BNTF Grenada make better use of its resources by eliminating inefficiencies in the traditional (waterfall) project management approach. Furthermore, because BNTF Grenada lacks conventional templates, this research will create standardized templates to enhance consistency, eliminate errors, and ultimately improve project productivity. Furthermore, developing a Scrum-based project management technique that is tailored to the BNTF Grenada operations will improve efficiency and adaptability, making project execution more structured while remaining flexible. Finally, it is widely recognized that agile approaches are commonly employed for IT and commercial sector projects but are less well known for public sector initiatives. This research will contribute to expanding Agile knowledge and best practices with public projects such as projects within the BNTF programme in Grenada.

The motivation for this research originates from the need to improve project management effectiveness in Grenada's Basic Needs Trust Fund (BNTF) programme in order to achieve optimal project performance.

Among the various advantages of this inquiry are better project execution and greater adaptability to change. The purpose of this FGP is to investigate: "Does the application of Agile project management principles, such as Scrum, improve the flexibility, responsiveness, and performance of BNTF projects when compared to traditional project management approaches?" It is founded on the assumption that agile approaches, specifically a Scrum-based methodology, enable continuous improvement and improve project efficiency.

In conclusion, the traditional method contributes to project delays and cost overruns. By employing a Scrum-based methodology, BNTF may address these issues and improve project performance.

2.4 General objective

To develop a Scrum-based methodology which can be applied to the BNTF programme Grenada to improve flexibility, responsiveness, and overall project performance.

2.5 Specific objectives

1. Develop a document that assesses the current project management practices within the BNTF programme in Grenada to identify possible challenges that hinder flexibility and responsiveness.
2. Develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.
3. Create key templates that will ensure consistency, reduce errors, and save time.
4. Generate a case study to highlight the advantage of implementing a Scrum-based methodology within BNTF Grenada.

3 THEORETICAL FRAMEWORK

3.1 Company/Enterprise framework

3.1.1 Company/Enterprise background

In 1979, the Caribbean Development Bank (CDB) launched the Caribbean Education Development and Basic Human Needs/Employment Sector programme in collaboration with the United States Agency for International Development (USAID) to alleviate poverty in a number of Caribbean countries. The scheme was renamed the Basic Needs Trust Fund (BNTF) the following year and was entirely funded by grants from the Caribbean Development Bank. BNTF implements targeted poverty reduction strategies on behalf of communities and groups defined by low income, vulnerability, and social exclusion, such as youth, the elderly, women, and people with disabilities (CDB, 2021, p 4). Overall, the BNTF Grenada plays a critical role in promoting sustainable community development throughout the Caribbean.

The BNTF is a cyclical initiative that runs for four years. Over the last four decades, sub-project interventions have increased access to improved social infrastructure, improved the quality of services provided by water, sanitation, and drainage systems, roads, and bridges, and provided certification training at various levels to improve employability and income generation capability (CDB, 2021, p. 4). Collectively, these efforts show how the BNTF has been working to reduce poverty and enhance community resilience.

The BNTF Grenada programme contributes significantly to the country's development by addressing core community needs through infrastructure development and capacity-building programmes. BNTF Grenada is a project unit within a government

department called the Rural Development Unit (RDU). The importance of the BNTF to communities within the tri-island state renders this project invaluable.

This study is being done on the Basic Needs Trust Fund (BNTF) programme in Grenada as an initiative to explore project management methodologies to better improve the outcome and delivery of projects. As previously indicated, the BNTF is a regional initiative targeted at poverty reduction. As a result, this background provides a comprehensive understanding of BNTF Grenada's objective and role in the community. By examining the organizational structure, management tactics, and project implementation strategies, the analysis identifies potential areas for improvement.

3.1.2 Mission and vision statements

The BNTF Grenada does not have a mission and vision statement; however, the enterprise follows the mission of the Caribbean Development Bank (CDB), whose mission is “Reducing Poverty and Transforming Lives through Sustainable, Resilient, and Inclusive Development” (CDB, 2021, p 4). This ensures that BNTF Grenada’s projects remain consistent with regional development goals.

3.1.3 Organizational structure

Project organizational structure can be defined as organizational forms, based on temporary teams that are created to perform particular tasks, which disappear after achieving the established goals (Cristóbal, 2018). When it comes to structuring a project, one of the most important decisions is the form of the organizational structure that will be used to execute the project. In order to attain the most effective organizational structure,

factors such as background and experience, personnel, flexibility, and cultural value must be considered. There are basically three (3) major types of organizational structures: functional project structure, pure project structure, and matrix project structure, according to Cristóbal et al. (2018). Therefore, choosing the right structure is essential for ensuring efficiency and the success of project outcomes.

The general structure of the enterprise and the particular project structure correspond and take the form of a functional project structure as it groups similar organizational functions together. Its structure has several functions but not limited to reducing uncertainty, and providing ease of supervision. For the scrum team, there will be a small group of self-managing and cross-functional groups. While a top-down, micromanaging organization may appear to resemble Scrum, it will not benefit from the core benefits of Scrum, which include reduced managerial overhead, a simpler and flatter organizational structure, and the full utilization of everyone's creativity and skills focused on the most promising problems. Scrum, when properly applied, enables teams to cooperatively lead the project in the right direction, a responsibility that has previously been reserved for upper management.

At the top of the organizational structure is the Caribbean Development Bank (CDB) as the funding agency. The CDB oversees the project financing, focusing on aspects such as engineering, finance, regulation, general compliance and development goals. The following level of the structure is the oversight Entity (OE) which is a board established by the government and is responsible for the execution of the project in compliance with requirements, standards, and covenants set out in grant agreements. The project manager

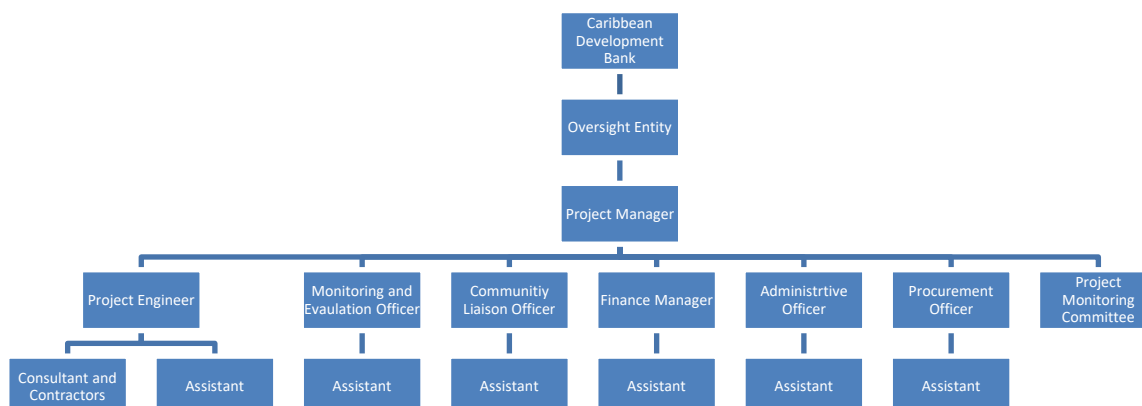
who is the head of the project team, has oversight for the management of the team and other staff. The project engineer, monitoring and evaluation officer, community liaison officer, financial manager, administrative office, project monitoring committee, and procurement officer report to the project manager (CDB, 2021, p. 8-9). This hierarchy structure ensures clear lines of authority and responsibility, which facilitates effective project management.

This structure ensures that each project component functions cohesively, with clear lines of responsibility. Personnel is grouped by their knowledge and skills, which helps achieve the highest degree of performance. Additionally, their roles and responsibilities are fixed, which facilitates easy accountability for the work.

Figure 1 depicts the current organization structure of BNTF Grenda, with CDB at the top and contractors, consultants, and assistants at the bottom.

Figure 1

Organizational Structure for BNTF Grenada (Source: Author)



3.1.4 Products Offered

The BNTF Grenada provides a wide range of services, including infrastructure development, education and skills training, water and sanitation projects, community development assistance, environmental sustainability, climate change resilience, and disaster risk management through the use of renewable energy. The priority areas are as follows:

1. Education, Human Resource Development, and Livelihood Enhancement (EHRD): focuses on infrastructure development and skills training to improve trainee employability

2. Enhancement of Water and Sanitation: Construction of structures to offer access to safe drinking water and sanitation services
3. Improving Community Access and Drainage: Construction of secondary or minor roads which is not prioritized for development, putting disadvantaged households at risk

3.2 Project Management concepts

This section explains the principles of project management. It covers project management principles, domains, knowledge areas, approaches, and the project life cycle.

3.2.1 Project management principles

According to (PMI, 2021), as per the Standard for Project Management, the 12 project management principles are stewardship, team, stakeholders, value, systems thinking, leadership, tailoring, quality, complexity, risk, adaptability and resiliency, and change. The following are considered for this project:

Stewardship is accountable for carrying out actions with integrity, care, and trustworthiness while adhering to internal and external rules (PMI, 2021, p. 24). BNTF initiatives are publicly sponsored and benefit vulnerable communities, thus rigorous ethical and governance standards are already in place. However, the Scrum-based methodology will drive compliance inspections, ensuring that initiatives have the greatest possible social impact.

A team is made up of people with various skills, expertise, and experience (PMI, 2021, p.28). The BNTF Grenada team offers a varied set of talents, knowledge, and

experience. Agile techniques promote not only increased team collaboration and communication but also improved work ownership.

Engaging stakeholders proactively and to the extent required to contribute to project success and customer satisfaction is paramount in project success (PMI, 2021, p. 31).

BNTF stakeholders, such as community groups and non-governmental organizations, have an impact on projects and their outcomes. Sprint reviews and retrospectives will be used to obtain input, as well as strategic workshops and interviews, as advocated by the Scrum methodology.

Tailoring entails designing the project development strategy based on the project's context, objectives, stakeholders, governance, and environment, utilizing "just enough" processes to produce the intended outcome while maximizing value, managing cost, and enhancing cost (PMI, 2021, p. 44). Project success is dependent on adjusting to the project's specific context in order to discover the most appropriate techniques for achieving the intended results. Traditional agile approaches were intended for software development. Scrum is used in the BNTF project to fit infrastructure projects, with Scrum artifacts modified.

Quality is defined as maintaining a focus on quality to generate deliverables that match project objectives while also aligning with the needs, users, and acceptance requirements specified by relevant stakeholders (PMI, 2021, p. 47). This includes meeting stakeholder expectations and project needs, both of which BNTF Grenada does on a regular basis. As a result, BNTF projects require high-quality output, and Agile principles promote continual quality improvement. Sprint retrospectives will be utilized to detect and resolve

quality concerns, and other quality assurance techniques, such as feedback loops, will be promoted.

Risk can be defined as both opportunities and threats that can have a favorable or negative impact on the project and its outcomes. Risk should be examined on a regular basis to maximize positive impacts while minimizing negative consequences (PMI, 2021, p. 53). By conducting regular risk assessments during each Sprint, Agile methodology encourages early risk identification and rapid implementation.

Adaptability and resilience enable a project to tolerate change, recover from setbacks, and accelerate its work (PMI, 2021, p. 55). Traditional project management framework models, such as those now in use by BNTF Grenada, frequently struggle to handle changing requirements. The usage of Scrum retrospectives ensures that the team is sensitive to project changes.

3.2.2 Project management domains

According to the Project Management Standards section of the PMBOK Guide 7th Edition (PMI, 2021), the project management performance domains include stakeholders, teams, development strategy and life cycle, planning, project work, delivery measurement, and uncertainty. Project management performance domains are essential for guiding project success, and the following apply to the Scrum-based methodology:

Stakeholder - This domain addresses actions and functions related to stakeholders (PMI, 2021, p. 8). BNTF projects require the participation of numerous parties. The Scrum technique will include sprint reviews, backlogs, and stand-ups to gather stakeholder

feedback, prioritize community requirements, and keep team members on track with other stakeholders' expectations.

Team - refers to the activities and functions of the individuals in charge of creating project deliverables that achieve business objectives (PMI, 2021, p.16). BNTF Grenada has a time for collaboration and execution; however, the Scrum-based methodology promotes a high-performing team by allowing for continuous communication and accountability, with daily stand-up meetings that encourage continuous and effective communication and sprint retrospectives that help identify areas for improvement.

Development approach and life cycle - Address activities and functions related to the project's development approach, cadence, and life cycle stages (PMI, 2021, p. 32). Due to shifting community demands and budget constraints, BNTF initiatives will necessitate a more structured and adaptable strategy. The Scrum-based technique enables an adaptive life cycle, breaking down projects into manageable sprints while keeping the project aligned with changing conditions.

Planning focuses on the actions and functions connected with the initial, ongoing, and developing structure and coordination required to produce project outputs and outcomes (PMI, 2021, p. 51). Planning is vital in projects, particularly in the construction industry, for activity prioritization, resource allocation, scheduling, and other purposes. The implementation of sprint planning sessions will specify work for each iteration, while rolling wave planning will allow for revisions based on previous sprint outcomes, improving bad planning and reducing cost overruns and delays.

Project - includes activities and responsibilities related to establishing project procedures, managing physical resources, and creating a learning environment (PMI, 2021, p. 69). Coordination among team members, such as the engineer, procurement officer, and consultant, is critical. The implementation of a sprint backlog will organize work and provide transparency, while burndown charts will track job accomplishment.

3.2.3 Predictive, adaptive, and hybrid projects

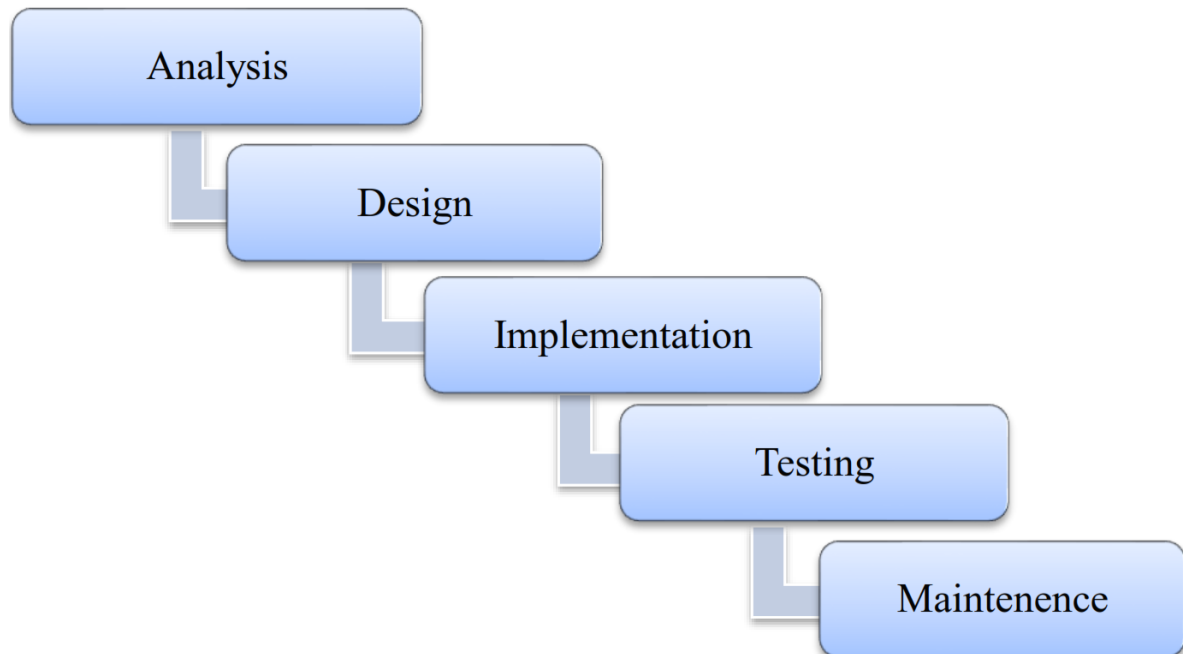
According to Gemino et al. (Silvius-Zuchi and Silvius, 2024), a development approach is the most advanced notion utilized when describing how a project will be designed and governed. It may also refer to the methods by which the product, service, or outcome is developed and refined throughout the course of the project. Predictive, adaptive, and hybrid techniques are the three (3) categories (Gemino et al. , 2024). Understanding these approaches is essential for selecting the most suitable methodology to ensure project success.

The predictive approach, also known as the traditional waterfall approach, is helpful when the project and product requirements can be developed, assembled and examined at the beginning of the project (PMI, 2021, p. 35). This approach's single development cycle is its primary feature. The project progresses logically through a sequence of phases, beginning with Analysis and concluding with Maintenance (Aroral, 2021, p. 93).

Figure 2, which shows the predictive or waterfall approach, gives the five (5) phases of the approach, starting from analysis and ending with maintenance.

Figure 2

Predictive Approach (Source: Exact Copy of Original Work)



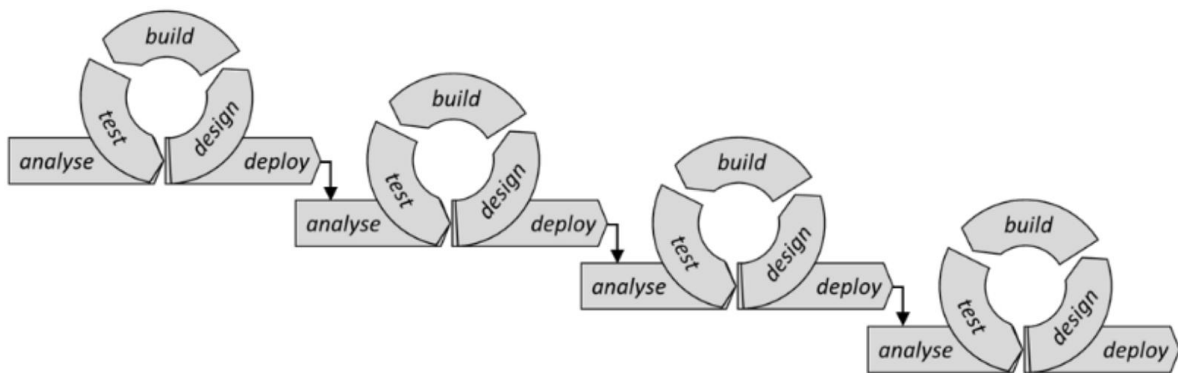
Note. From “Waterfall Process Operations in the Fast-paced World: Project Management Exploratory Analysis” by Harkirat Kaur Aroral, 2021, Figure 1, p. 93. Permission is not sought.

When needs are very volatile and unpredictable and are expected to change throughout the course of the project, an adaptive approach can be helpful (PMI, 2021, p. 38). The iterative development cycle is the primary feature. Parts of the product, referred to as increments, are subjected to the logical sequence of activities rather than the full product all at once. Consequently, an iterative process of brief development cycles of product increments is produced by the adaptive approach (Silvius-Zuchi & Silvius, 2024). This approach's adaptability to change is an additional characteristic.

Figure 3 is the adaptive approach, which shows iteration of design, build, and test of each phase throughout the life cycle of a project.

Figure 3

Adaptive Approach (Source: Exact Copy of Original Work)



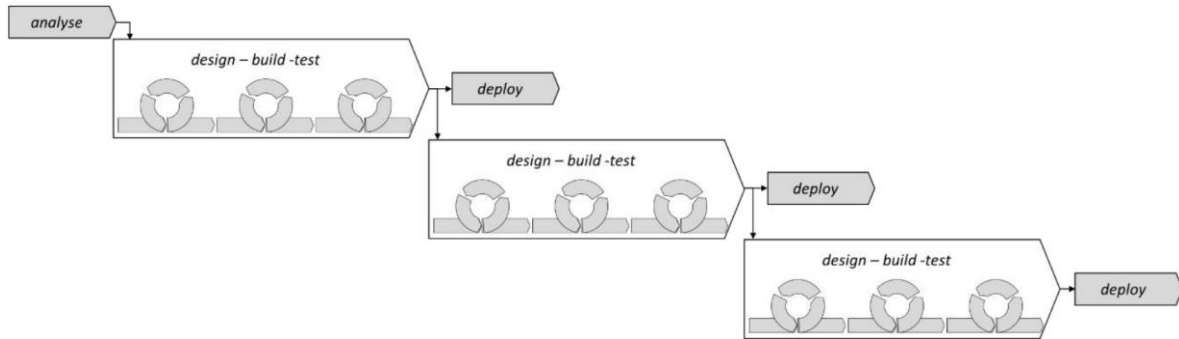
Note. From “Predictive, Adaptive and Hybrid Project Approached” by A.J. Gilbert Silvius, 2024, Figure 22.1. Permission is not sought.

Zhao (2022) claims that the hybrid approach to project management has been recognized as a successful technique that balances the disadvantages of both agile and traditional approaches while combining their benefits. This approach's primary feature is its capacity to integrate predictive and adaptive methodologies. Sequential, parallel, and integrated hybrid approaches are among the various types of hybrid approaches that have been identified (Silvius-Zuchi & Silvius, 2024). By combining the strength of both the predictive and the adaptive approaches, the hybrid approach is established, which offers flexibility, making it the most suitable approach for complex projects with changing needs.

Figure 4 depicts the hybrid approach, which is a combination of both the traditional and agile methods, in which each phase goes through the iteration of design, build, and test.

Figure 4

Hybrid Approach (Source: Exact Copy of Original Work)



Note. From “Predictive, Adaptive and Hybrid Project Approaches” by A.J. Gilbert Silvius, 2024, Figure 22.7. Permission is not sought.

Currently, the approach being used in BNTF Grenada is the predictive approach, based on BNTF’s operational manual, which suggests a preference for structural and sequential methodology. However, the adaptive approach is the one that aligns with the Scrum-based methodology. Feedback from stakeholders and ongoing iteration will be possible using this process. At the beginning of the project, a clear vision is set, and the original requirements are refined, detailed, altered, or replaced based on user feedback, the environment, or unforeseen circumstances. Additionally, organizational capacity, timeline restrictions, and stakeholder management were taken into account when choosing the adaptive strategy.

3.2.4 Project management

The application of knowledge, skills, tools, and procedures to project activities in order to achieve project requirements is known as project management (PMI, 2021, p. 245).

Project administration, the administrative structure that facilitates resource scheduling, project planning, progress monitoring, and status reporting, is one of the procedures that characterize project control. According to Ponomarov (2024), administrative management is a managerial activity that aims to continuously optimize the organization's full set of duties and operations through digitization and the advancement of digitization to assure its ongoing competitiveness.

Artificial intelligence (AI) has an impact on both the present and the future of project management. According to Prieto (2021), the conventional use of project administration is being phased out in favor of AI and other technologies, which is the direction modern project management is taking. Prieto (2021) went on to add that in the future, virtual assistants will schedule meetings instead of fitted meeting rooms. This is already happening, since audio and video recordings of meeting minutes are being transcribed using voice recognition software. However, Ponomarov (2024) highlighted that modernizing an organization's administrative management entails much more than simply merging technologies and IT infrastructure. According to Ponomarov (2024), this is a cultural evolution aimed at changing strategies, continually updating leaders' and employees' abilities and competencies, and introducing new management tools to optimize their long-term worldwide efficacy. This evolution indicates that current organizational paradigms will be abandoned in favor of new management methods that will better prepare for future economic, social, and technical changes.

Another point of view is that project management is undergoing major transformation as the world moves toward the digital age. As a result, the incorporation of digital

technologies is altering traditional project management approaches, posing both opportunities and challenges (Adeniran et al., 2024). As such, the developing trend in project management is the use of digital communication platforms like Slack, Microsoft Teams, and Zoom, as well as flexible solutions like Trello and Asana. As a result, there is a greater emphasis on agile and other flexible approaches, which are significant trends for designing future project management (Adeniran, 2024, p. 2634). Scrum, a specialized Agile framework, enables structured yet customizable project management by defining roles, events, and artifacts. Scrum teams operate in short sprints to achieve incremental improvements, allowing for ongoing feedback and refinement (Schwaber & Sutherland, 2020). These benefits are especially important in the digital age, as projects frequently entail quickly evolving technologies and market situations.

3.2.5 Project management knowledge areas and processes

According to (PMI, 2017), as per a Guide to the Project Management Body of Knowledge, there are 10 knowledge areas: integration, scope, schedule, cost, quality, resources, communications, risk, procurement, and stakeholders.

Project - includes activities and responsibilities related to establishing project procedures, managing physical resources, and creating a learning environment (PMI, 2017, p. 23). Coordination among team members, such as the engineer, procurement officer, and consultant, is critical. The implementation of a sprint backlog will organize work and provide transparency, while burndown charts will track job accomplishment.

Scope Management entails the steps necessary to guarantee that the project includes all of the work required to execute it successfully (PMI, 2017, p. 23). The scope will be

controlled using the Product Backlog, which adds, refines, or removes new stories (tasks) based on stakeholder requirements.

Schedule Management refers to the processes required to ensure that the project is completed on schedule (PMI, 2017, p. 24). The methodology for managing and tracking schedules will incorporate sprints and burndown charts.

Cost management is the process of planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project is finished within the allocated budget (PMI, 2017, p. 24). Estimates for the project are delivered all at once. The implementation of Agile budgeting will allow for sprint-based estimation.

Quality management refers to the processes for implementing the organization's quality policy in terms of planning, managing, and regulating project and product quality requirements in order to meet stakeholder expectations (PMI, 2017, p. 24). Continuous quality assurance, control, and planning will be implemented through daily stand-up meetings, reviews, and retrospectives.

Resource management refers to the procedures of identifying, acquiring, and managing the resources required for the project's successful completion (PMI, 2017, p. 24). The BNTF organization has remained consistent over the years. If the project has a vast scope, this process will allow the team to divide it into different teams. In addition, Scrum values will be used to create the team, encouraging self-organization in team building.

Communication Management entails the processes necessary to enable the timely and suitable planning, collecting, development, distribution, storage, retrieval, management, control, monitoring, and ultimate disposition of project information (PMI, 2017, p. 24). The

BNTF normally has monthly meetings to discuss progress. The Scrum technique will encourage successful communication through daily stand-up meetings, sprint reviews, and retrospectives.

Risk management includes the activities of risk identification, analysis, response planning, implementation, and monitoring on a project (PMI, 2017, p. 24). Risk management is rarely carried out during the project life cycle at BNTF. The Scrum methodology will identify and mitigate risks through Sprint planning and retrospectives.

According to (PMI, 2017) a project management process group is a logical grouping of project management processes to achieve specific project objectives and are independent of project phases.

Initiating - the steps taken to define a new project or a new phase of an existing project by getting permission to begin the project or phase (PMI, 2017, p. 23). BNTF Grenada lacks a framework for assigning roles in a project. Using the Scrum-based methodology, you will construct a project vision, identify the Scrum master and other important stakeholders, form the Scrum team, develop epics, create a prioritized product backlog, and plan releases.

Planning refers to the activities required to set the scope of the project, refine the objectives, and specify the course of action required to achieve the project's goals (PMI, 2017, p. 23). This process involves defining user stories, identifying and estimating work, developing a sprint roadmap, and updating the sprint backlog.

Monitoring and controlling are the processes required to track, review, and regulate the project's process and performance; identify any areas where changes to the plan are

required; and implement the necessary changes (PMI, 2017, p. 23). This will enable the usage of burndown charts and risk management programmes.

Closing refers to the steps used to formally complete or close a project, phase, or contract (PMI, 2017, p. 23). A sprint retrospective will be undertaken to identify process improvement opportunities, lessons learned will be documented for future project improvement, a handover plan will be established, and community feedback sessions will be held.

3.2.6 Project life cycle

A project life cycle is a sequence of phases that a project goes through from start to finish (PIM, 2021), whereas a project phase is a collection of logically related project activities that result in the completion of one or more deliverables. As a result, a project life cycle provides a basic framework for project management, with the phases of the chosen life cycle remaining constant regardless of the specific project activity performed. The PMBOK GUIDE also includes four types of project life cycles that are appropriate for specific various types of projects.

Figure 5 below shows the project life cycle for different project management approaches, outlining their main characteristics.

Figure 5

Project Life Cycle type (Source: Exact Copy of Original Work)

Approach	Requirements	Activities	Delivery	Goal
Predictive	Fixed	Performed once for the entire project	Single delivery	Management of cost
Iterative	Dynamic	Repeated until correct	Single delivery	Correctness of solution
Incremental	Dynamic	Performed once for a given increment	Frequent smaller deliveries	Speed
Agile	Dynamic	Repeated until correct	Frequent small deliveries	Customer value via frequent deliveries and feedback

Note. From “A Guide to the Project Management Book of Knowledge PMBOK GUIDE Sixth Edition” by Project Management Institute, 2017, *Agile Practice Guide*, Table 3-1, p. 18. Copyright 2017 by the author. Permission is not sought.

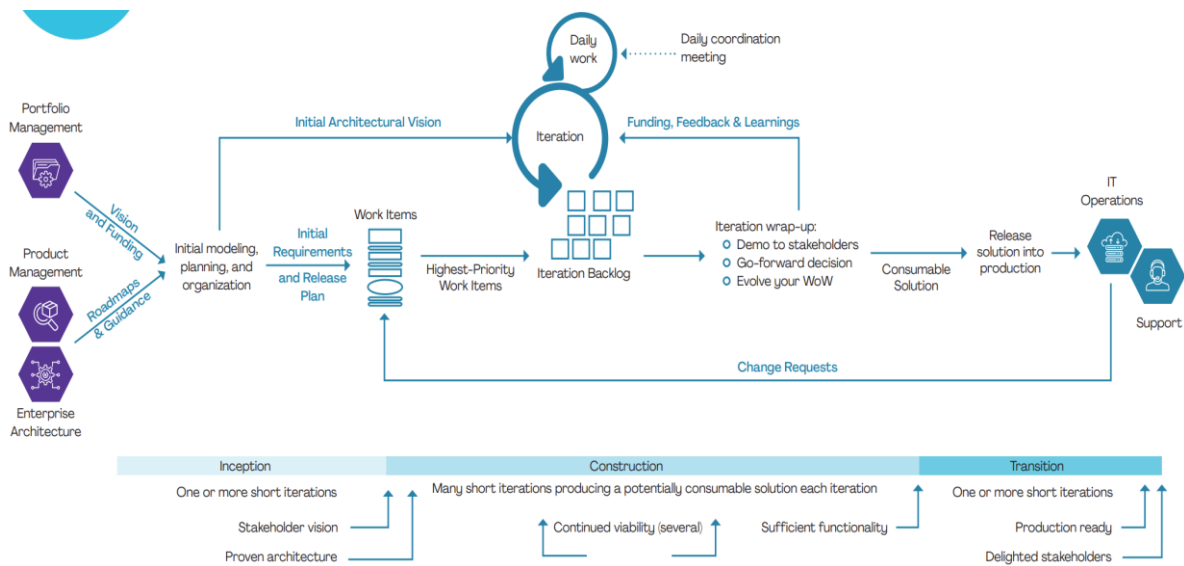
While an iterative life cycle is a little incremental and an incremental life cycle is a little iterative, an agile life cycle, also known as the change-driven or adaptive approach, is equally iterative and incremental, which are both vital for success. There are two (2) different approaches that agile frameworks can take, which are Iteration-Based Agile (Scrum) and Flow-Based Agile (Kanban) (PMI, 2021). Agile methodologies, which combine iterative and incremental procedures, allow teams to respond quickly to changes.

In iteration-based agile methods, projects have phases called sprints. Sprints are timeboxed, meaning that they are of uniform duration; therefore, each phase will likely have the same costs and will be straightforward to budget.

Figure 6 illustrates the agile project life cycle, depicting how iterative development and continuous feedback guide the process from start to finish.

Figure 6

Agile (Scrum-based) Lifecycle (Source: Exact Copy of Original Work)



Note. From “DA’s Agile (Scrum-Based) Lifecycle”, Project Management Institute, n.d. Permission is not sought.

3.2.7 Company strategy, portfolios, programs, and projects

A project may be managed in three separate scenarios, which are stand-alone projects, programs, and portfolios that is complicated and difficult, and it should be done using best practices in applied knowledge, competencies, procedures, techniques, and tools to meet requirements. As a result, it is useful to distinguish between them.

Varajao et al., (2025) describe a project as a brief endeavor to attain one or more specific goals. In other terms, a project is a short-term endeavor to develop a one-of-a-kind product, service, or outcome (PMI, 2021, p. 245). A project, which is typically overseen by a project manager, focuses on attaining goals within the constraints of quality, time, and cost, and will have a start and finish date. In addition, other characteristics of a project are

that it changes business strategies, satisfies stakeholder needs, and creates, improves, or fixes a product, service, or process. When projects are managed within an organization, resources are more effectively used, and negative risk is reduced.

A program can be described as a collection of program components (projects or other related activity) that are managed in a coordinated manner to provide benefits that are not possible through individual management (Varajao et al., 2025, p. 2). This is likewise overseen by a project manager, but it will require a more comprehensive plan to fulfill its objectives. Efficiency and performance improve within a company when resources are pooled across numerous projects.

According to PMI (2021), a portfolio is a collection of projects, programs, subsidiary portfolios, and activities that are managed together to meet strategic goals. In other words, portfolios are a collection of portfolio components, such as projects, programs, or other portfolios and associated works, that have been collected to assist their management in order to accomplish strategic objectives (Varajao et al., 2025, p. 2). To effectively manage a project portfolio, an organization can take the path of forming its own management approach; however, to meet this challenge, it requires complete and well-structured information on existing standards and guidelines for project portfolio management (Kononenkoa & Kpodjedoa, 2021). Proper portfolio management is therefore essential for aligning projects with organizational strategies and optimizing the use of resources to achieve long-term objectives.

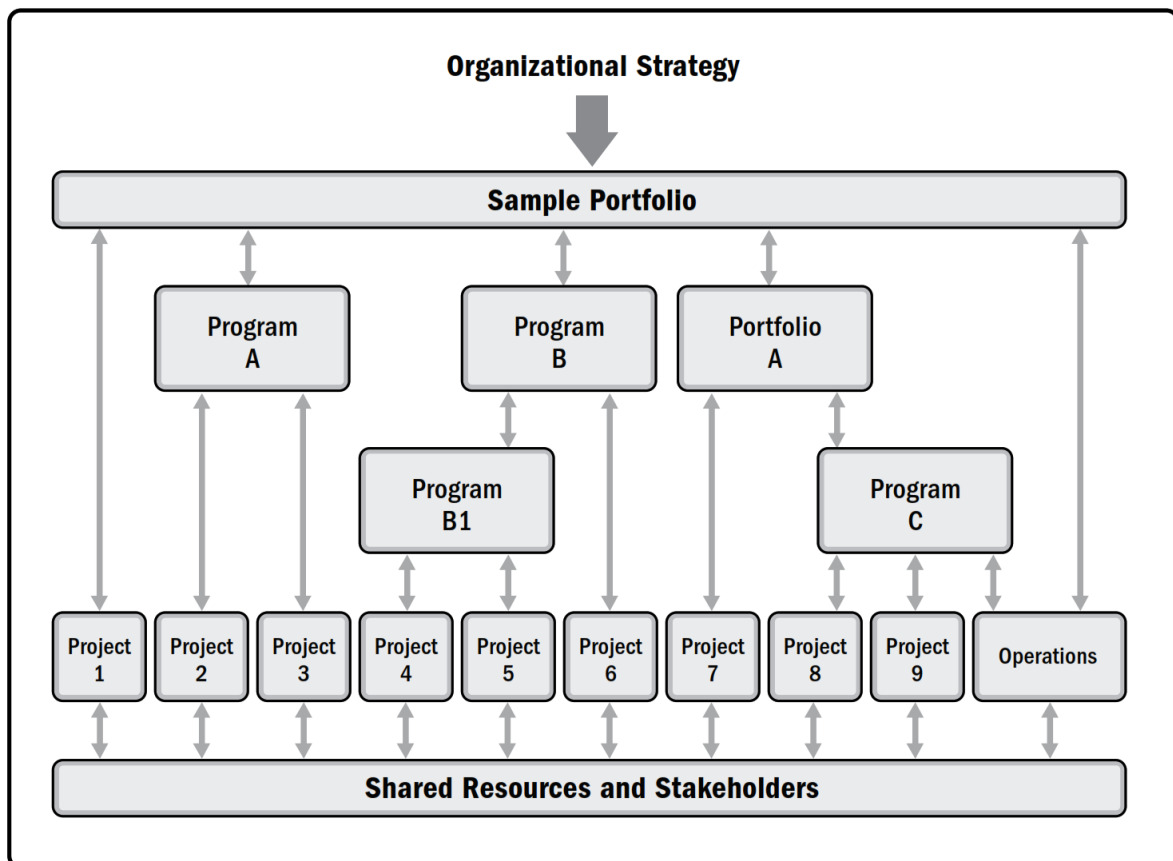
Business strategy is the driving force behind a project, and all demands are tied to achieving value (PMI, 2021).

BNTF Grenada is classified as a program since it includes a number of programs targeted at community development and poverty alleviation. These projects not only have similar objectives, but also resources.

Figure 7 below shows the hierarchical relationship between organizational strategies, portfolios, programs, and projects.

Figure 7

Portfolio, program, Project, Operation (Source: Exact Copy of Original Work)



Note. From “A Guide to the Project Management Book of Knowledge PMBOK GUIDE Sixth Edition” by Project Management Institute, 2017, Figure 1-3, p. 12. Copyright 2017 by the author. Permission is not sought.

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

3.3.1 Current situation of the problem or opportunity in study

The BNTF is an initiative that promotes poverty reduction in several Caribbean countries, including Grenada. The BNTF Grenada initiative is in its tenth cycle and has translated poverty reduction through a variety of areas such as education, infrastructure, and skills training. Despite best efforts, significant hurdles remain that prevent the complete goal from being met.

Project delays were the most significant difficulty experienced during the tenth cycle, affecting project completion time and cost overruns. To address these issues, digital project management solutions such as Microsoft Project were employed to track and enhance project performance. Despite these attempts, difficulties still persist.

The BNTF Grenada programme operates within the traditional (waterfall) framework, which is appropriate for building projects but is not the greatest answer for addressing the current difficulties in the construction industry. When the waterfall technique is used in projects, scope modifications can be extremely slow and necessitate a format change control process, which causes delays and, eventually, cost overruns. Although cost overruns in construction projects are regarded as one of the most serious and common global challenges, they can be minimized to a minimum by implementing a Scrum-based methodology in the BNTF Grenada programme.

Adopting project management techniques is an important decision for corporate governance in firms since managing risk, cost, and communication is critical to a project's success or failure (Marques et al., 2023). A project management methodology is a step-by-

step approach to project management that offers the project manager with a proven framework, guiding principles, and standardized templates (Marques et al., 2023).

Agile (Scrum-based) approach is one of the most successful frameworks for overcoming delays. According to Sassa et al. (2023), Scrum emphasizes teamwork in order to improve communication and cooperation among team members, resulting in higher future production. Furthermore, Scrum provides for short-term problem solving, lower project risks, greater customer interaction across processes, and produces more functional goods or services more often. Most project delays are due to inadequate planning, inefficient communication, scope creep, and a variety of other causes. Scrum mitigates and handles this aspect with built-in elements such as daily stand-up meetings, product backlogs, and retrospectives.

3.3.2 Previous research done for the topic in the study

The primary research focuses on project management strategies used in businesses with construction projects, with a focus on converting from traditional waterfall methods to Agile methods, namely Scrum-based ones. This research is critical in determining the feasibility of using the Scrum-based Methodology within the BNTF Grenada programme.

Marques et al. (2023) presented a thorough study of the traditional (waterfall) approach of project management. According to Marques et al. (2023), the processes between techniques will differ; nonetheless, the final aim stays the same, which means that the project will be finished on budget, in scope, and within the defined time frame, while satisfying all stated project goals and objectives. According to Marques et al. (2023), one of the disadvantages of using the waterfall method is that sponsors are usually dissatisfied

with the deliveries because the deliverables are based on documented requirements, and at the end of the product development, changes can be difficult and expensive to implement. An advantage of using an Agile method that was highlighted was the sponsor's frequent involvement in making decisions and changes throughout the development process. This document presented facts that allows for an informed decision as to why the Agile approach can be incorporated into the BNTF Grenada framework.

Barberjee (2024) provided a full explanation of how scrum works and Agile transformation in many sectors, which will lead the method's overall implementation in the BNTF Grenada operations. Burger and Zulch (2018) describe the technical knowledge required for project managers, particularly for building projects. This information will help to generate specific templates, namely those related to the construction process, design process, and cost.

The BNTF Operations Manual was useful in providing background on BNTF. CBD (2021) also provided a list of persons who will be involved in the BNTF programmes. Furthermore, it will help to analyze BNTF's present project management procedures.

Krishna and Nisha (2020) compared the application of Agile management in the construction industry across two (2) projects. This document discusses the root causes of construction project delays and shows why agile methodology is the most sophisticated way for construction project management than the classic waterfall method. Krishan and Nish (2020) also supplied construction project ideas and information on how to create templates for scrum major parts. Overall, this document will present proof that the adoption

of the Scrum-based methodology will enhance the flexibility and responsiveness of BNTF Grenada projects.

Liu (2018) explores and analyzes the benefits of using Scrum in construction projects, highlighting the Scrum roles that will improve project performance. During the design process. This paper will help with the creation of the Scrum-based methodology.

Pacana and Czerwinska (2023) provide a list of tools and approaches that can be employed with agile methodologies. This can help with template creation and the overall growth of the Scrum-based approach.

Sassa et al. (2023) provide a systematic literature analysis on an Agile project management tool and a quick comparison of traditional and agile project management approaches. The document outlines their respective concepts, traits, and key contrasts. Furthermore, Agile approaches incorporate quantitative and qualitative data that demonstrate the Scrum framework's characteristics. As a result, it will provide best practices for Scrum application, assisting in the development of a methodology that includes standard operating procedures for BNTF projects.

The Scrum Guide describes the key Scrum concepts and structure, which will be used to customize the Scrum-based approach for BNTF Grenada projects.

3.3.3 Other theories related to the topic in the study

Project management methodology is a rigorously defined set of principles regarding logic, methods, and processes that establish how best to design, develop, and control a project during its continuous implementation phase (Ungureanu and Ungureanu, n.d.). In project management, there are several ways and strategies that can be utilized to handle different sorts of projects. All project methodologies can be classified into classic and modern approaches. particular project management techniques are tailored to particular projects, and adaptation of these methodologies may be better appropriate for some projects. The waterfall technique is a typical project management methodology that consists of six steps: initiation, planning and design, execution, controls and integration, validation, and closure. The current approaches are the PMBOX Guide, PRINCE2, CPM, Lean, Six Sigma, CCPM, and SCRUM.

According to Ungureanu and Ungureanu (n.d) the PMBOK Guide is a broad inventory of best practices and ideas on project planning and implementation. PRINCE 2

According to PMI (2021), many projects involve changing systems, behavior, activities, and, in some cases, cultures, and managing this type of change necessitates thinking about how to transition from the current to the intended future state. Change management, on the other hand, can be characterized as a methodical approach used by managers to transition their organization from one status to another by establishing new goals, internal processes, and shared values (Hamdo, 2021, p. 4). There are several different change models, including ADKAR, Managing Change in Organizations, Kotter's 8 Steps

Change Management, Virginia Satir Change, Kurt Lewin's Change Management, Transition Model, and others, each with its own distinct characteristics.

The BNTF's linear project execution approaches face challenges, and a change model will be required to convert to an Agile (Scrum-based) approach. Applying change management theory will ensure that staff are properly trained and that team members have an adaptive mindset. John Kotter introduced the 8-stem process for leading change for organizational transformation, which is a top-down approach in which the need for change originates at the top level of the organization and is then prompted down through the organization's management layers to change recipients (PMI, 2021). Kotter presented his change management approach, which included eight steps: creating urgency, forming a powerful coalition, developing a vision for change, communicating the vision, removing obstacles, achieving short-term wins, building on the change, and anchoring the change in corporate culture. According to Hando's (2021) definition of Kotter's change management model, managers must first establish a sense of change urgency among all stakeholders, with a focus on influential stakeholders who can help market the change idea to other stakeholders. After marketing the change idea, managers should develop a well-defined version of the change so that all stakeholders understand what is required and can contribute to its successful implementation.

This change management model takes into account three major stages of change management: identifying the importance of change, the transmission stage, and change achievement and stability.

Projects are growing increasingly complicated, necessitating the use of a specific project management methodology to ensure success. Lean thinking is seen as a means of getting more with less since it is thought to be effective in managing the construction process and attaining project goals by eliminating waste (Thakkar and Lyer, 2021). In other words, lean initiatives are systems that are designed to deliver the product while increasing value and reducing waste (Cruz et al., 2020). By focusing on efficiency, lean principles help projects achieve better outcomes while minimizing unnecessary costs and delays.

4 METHODOLOGICAL FRAMEWORK

Data connection plays a crucial role in any form of analysis and could be either qualitative or quantitative, from which facts or figures are used to determine a conclusion. The different method used for collecting data falls into two (2) categories, primary and secondary.

4.1 Information sources

According to Choudhary (n.d.), information sources include primarily books, periodicals, and newspapers; however, unpublished sources are becoming increasingly important. Malipatil (2020) backed up this assertion by stating that traditional information sources would include primarily books, periodicals, and newspapers; however, the numbers and forms of sources are increasing rapidly. Malipatil (2020) went so far as to say that a document in any form could be a source of information for a long time, with printed pages remaining the most beneficial form. As technological advances in media are made, additional sources of useful data become available. However, the extent to which they are reputable must be determined. According to Malipatil (2020), in addition to printed paper, several additional types of papers have become popular, requiring increased attention. These are numerous audio-visual materials, such as films, film strips, and various types of phono records, that have been regarded as sources of information and are available in modern libraries (Malipatil, 2020, p. 63). Information sources are broadly classified into two types: documentary sources and non-documentary sources. The focus of this Final Graduation Project will be on documentary sources, which are those in which information is recorded in any of the following forms and can be classed as Primary, Secondary, or Tertiary.

4.1.1 Primary sources

As the name implies, primary sources are records or articles that provide direct or first-hand proof regarding an event, person, objective, or work of art, as well as an original document conveying unfiltered original ideas (Choudhary n.d.). In other words, primary sources are the initial published records of original research and development that have not been filtered, condensed, or evaluated by a second party (Malipatil, 2020, p. 64). According to Malipatil (2020), primary sources include magazines, conference proceedings, research monographs, patents, standards and specifications, research reports, trade publications, and theses and dissertations. Accordingly, any source that provides original information related to an area of focus is a primary source. Hence, the key sources for this Final Graduation Project will be standards and specifications, such as the Scrum Guide and BNTF Operational Manual, as well as research reports gathered through interviews and questionnaires.

4.1.2 Secondary sources

On the other hand, secondary sources depend on primary sources according to (Choudhary n.d.). Malipatil (2020) explains that a secondary source is a material that has been modified, selected, or rearranged for a particular purpose or audience. These include indexing periodicals, abstracting periodicals, reviews of progress, and reference books. For the purpose of the Final Graduation Project, indexing periodicals, with the use of journals and reference books, are used.

Table 1 below shows the objectives of the current proposal and the information sources selected to meet said objectives. The table is broken down to detail the purpose of each primary and secondary source proposed.

Table 1

Information Sources (Source: Author)

Objectives	Information sources	
	Primary	Secondary
To develop a document that analyzes the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.	The BNTF operational manual, together with questionnaires and interviews, will provide information on the current project management structure.	Journals and books provide information on the comprehension comparison between traditional and Agile methodology.
To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.	The Scrum Guide, together with interviews, will provide the principles for Scrum methodology and the fundamental principles and best practices for Scrum implementation.	Journals and books provide information on the implementation of Agile methodology.
To create key templates that will ensure consistency, reduce errors, and save time.	PMBOK Guide, questionnaires, and interviews will help create tailored Scrum templates that will	Journals and books with information on Scrum and agile templates standardization help create templates.

Objectives	Information sources	
	Primary	Secondary
	fit BNTF Grenada Projects.	
To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNTF Grenada.	Interview and survey for the project team.	Journals on case studies about similar projects and methodology.

4.1.3 Research methods

According to Raman and Sambamoorthy (2023), research methods are the specific techniques and tools employed by researchers to collect data, analyze information, and conduct investigations as part of a study. Raman and Sambamoorthy (2023) went on to emphasize that these methods are practical steps taken to address the research questions or objectives of a study and depending on the nature of the research and the type of data required, researchers may use qualitative, quantitative, or mixed methods to gather and analyze the information. Among the common research methods are surveys, experiments, observations, case studies, content analysis, and statistical analysis.

4.1.4 Analytical method

The analytical method tries to reach the answer to the research questions related to the connections, relations, and patterns between variables (Taherdosst, 2020). According to Raman and Sambamoorthy (2023), the analytical method also known as explanatory research, aims to investigate the relationships between variables to understand the underlying causes and factors influencing a phenomenon. Raman and Sambamoorthy

(2023) went on to say that explanatory research seeks to explore why certain patterns or behaviors exist and tests hypotheses to draw conclusions about cause-and-effect relationships. The characteristics of analytical research include causal relationships, hypothesis testing, and experimental and non-experimental, while its application is usually in medicine and health, psychology, social science, and economics (Raman and Sambamoorthy, 2023).

4.1.5 Survey Method

According to Raman and Sambamoorthy (2023), surveys involve collecting data through questionnaires, interviews, or online forms to gather opinions, attitudes, or information from a sample population. Surveys are commonly used to explore large-scale trends and opinions within a target group.

4.1.6 Case Studies

According to Raman and Sambamoorthy (2023), case studies are in-depth investigations and analyses of a particular subject, individual, organization, or small group during a specific time period. Researchers thoroughly investigate a case in order to get a thorough understanding of the subject area, frequently employing different data sources.

Table 2 below shows the objectives of the study with the research methods that will be carried out to achieve said objectives. The table is detailed to show the specific method that will be used for each objective.

Table 2*Research methods (Source: Author)*

Objectives	Research methods		
	Analytical	Survey	Case Studies
To develop a document that analyze the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.	This will involve examining existing project management practices, frameworks, etc., to identify inefficiencies and areas for improvement.	This method will gather insight from stakeholders through structured questionnaires to understand perceptions, challenges, and areas for improvement.	This method will involve an in-depth examination of specific BNTF-funded projects to understand successes, failures, and lessons learned. Interviews will be conducted with the project manager and other employees to explore real-world experiences with budgeting, stakeholder engagement, and change management.
To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.	The method will help assess existing project management practices and evaluate how scrum principles can be tailored to BNTF projects. Scrum framework used in development	Delays and other challenges will be identified through questionnaires and other operations of the enterprise.	

Objectives	Research methods		
	Analytical	Survey	Case Studies
	projects will be examined and elements that can be adapted to BNFT projects will be identified.		
To create key templates that will ensure consistency, reduce errors, and save time.	Existing reports, thesis, etc. will be examined with standardized templates that can be used with the implementation of a Scrum-based methodology.	This method will identify current templates being used, and their challenges.	
To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.			This method will assist in the evaluation of how scrum principles can improve responsiveness and flexibility. Additionally, this method will assess other case studies that have successfully implemented Scrum.

4.2 Tools

One of the key goals of research methodology is to assist researchers in selecting the most appropriate research methodologies and tools for a research project. According to Raman and Sambamoorthy (2023), research tools are used to collect evidence or data from

a sample population. A researcher needs a variety of data collection methods and procedures. Tools vary in complexity, design, interpretation, and administration. The Final Graduation Project will use the following tools.

Questionnaires are an organized compilation of questions delivered to a sample of the population to gather desired information (Raman and Sambamoorthy, 2023). According to the Project Management PMBOK Guide 6th Edition (PMI, 2012), questionnaires are written sets of questions intended to quickly collect information from a large number of responders. This will be advantageous to my research because it will not only allow for the collection of consistent information from numerous sources, but it will also utilize fewer resources and can be administered quickly.

Interviews allow researchers to engage in direct conversations with participants to gather information. Interviews can be structured, following a predetermined set of questions, or unstructured, allowing for more open-ended responses (Raman and Sambamoorthy, 2023). According to the Project Management PMBOK Guide 6th Edition (PMI, 2012), an interview is a formal or informal approach to elicit information from stakeholders by talking to them directly. Interviews not only allow for the exploration of participants' perspectives in detail but also can reveal the why, when, and how behind made decisions and perceptions.

Benchmarking entails comparing actual or planned project practices or the project's quality standards to those of comparable projects to find best practices, develop suggestions for improvement, and offer a basis for monitoring performance (PMI, 2017, p. 281).

Finally, benchmarking serves as a valuable tool for identifying performance gaps and driving continuous improvement.

Table 3 gives the list of tools to be used to achieve each specific objective, which outlines how data will be collected and analyzed.

Table 3

Tools (Source: Author)

Objectives	Tools
To develop a document that analyzes the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.	Questionnaires will be used to gather qualitative data from the BNTF Grenada Project manager. Interviews will be held with CDB officials to gather information to understand deeper project management issues. Rating Scale will be used to measure BNTF Grenada stakeholder satisfaction and the perceived effectiveness of current processes.
To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.	Questionnaires will be used to assess staff readiness for Scrum adoption and current Agile awareness. Interviews will be used to gather expert insights on Scrum feasibility.
To create key Scrum templates that will ensure consistency, reduce errors, and save time.	Questionnaires will be held to gather data on the documentation currently being used and the documentation that could be implemented.
To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.	Benchmarking will be used to compare traditional based with scrum based

Objectives	Tools
	projects too assess improvement in various categories.

4.3 Assumptions and constraints

An assumption is a factor that is considered to be true, real, or certain, without proof of demonstration while a constraint is a limiting factor that affects the execution of a project, program, portfolio, or process (PMI, 2021). According to Deshmukh (2021), assumptions are made to proceed with planning and decision-making in the absence of complete information. They help set the foundation for project plans and enable project managers to move forward with certain expectations. Deshmukh (2021) went on to say that critical assumptions plays a vital role in project management, influencing various aspects of the planning, execution, and success of a project, and that understanding the criticality of assumptions is essential for project managers and teams. It is assumed that the BNTF Grenada relies on the Traditional (waterfall) methodology and that Agile methodology, such as Scrum, would improve flexibility and efficiency.

Table 4 outlines the key assumptions and constraints for each specific objective. The intended outcomes are highlighted together with the limitations that may affect implementation.

Table 4*Assumptions and Constraints (Source: Author)*

Objectives	Assumptions	Constraints
To develop a document that analyze the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.	BNTF Grenada will provide access to all the relevant information.	Some important information, such cause of issues, may be concealed by BNTF Grenada.
To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.	An Agile (Scrum-based) methodology will improve project outcomes.	There may be a lack of Scrum knowledge among the team.
To create key templates that will ensure consistency, reduce errors, and save time.	It is assumed that all templates can be customized for different project types.	With the limited time for the FGP, creating all the necessary templates may be challenging.
To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.	Scrum-based methodology can be adapted to fit the structure of BNTF Grenada projects	There may not be sufficient comparative data from existing and past BNTF projects.

4.4 Deliverables

In the Project Management Standards section of the PMBOK Guide 7th Edition (PMI, 2021), a deliverable is defined as any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. It was also defined as the finished products that are expected to result from its tasks and work packages (Dr. P. Shanthi et al., n.d.). Ultimately, deliverables serve as the tangible outcomes that demonstrate progress and confirm successful completion of project goals.

Table 5 presents the deliverables for each specific objective, demonstrating how each objective will be translated into tangible outputs.

Table 5*Deliverables (Source: Author)*

Objectives	Deliverables
To develop a document that analyzes the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.	A comprehensive report detailing BNTF Grenada's Current project management Framework.
To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.	A comprehensive document detailing how Scrum will be adapted to BNTF Grenada's projects and a visual representation of how Scrum will function within BNTF's project lifecycle.
To create key templates that will ensure consistency, reduce errors, and save time.	A list of templates will include the product backlog template, sprint planning template, daily stand-up meeting template, sprint review template, sprint retrospective template, burndown chart template, risk management template, stakeholder engagement and communication template, project closer, and lessons learned template.
To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.	A formal document outlining the Scrum methodology throughout the project life cycle.

5 RESULTS

A questionnaire of fifteen (15) questions was prepared and populated in June of 2025 by the current BNTF Team in Grenada as part of the research process for assessing the project management practices of the programme. The survey was distributed using digital forms (Google Forms) via email and WhatsApp. The survey was distributed to six (6) members on the management level of the current BNTF team; however, only five members responded. The members of staff targeted were the heads of department, which included the procurement officer, financial officer, engineer, evaluation and monitoring, and the project manager. The questions were designed to provide information on the type of project management methodology that is currently used, together with its effectiveness, and the implementation of an Agile (Scrum-based) methodology into the BNTF programme.

Table 6 below shows the summary of the questions proposed in the survey alongside the responses received.

Table 6*Questionnaire Summary (Source: author)*

QUESTIONNAIRE (SURVEY)		
Number	QUESTIONS SUMMARISED	RESPONSES SUMMARIZED
1	How long have you been involved in BNTF projects?	1 – 3 years: 2 respondents 4 – 6 years: 1 respondent More than 6 years: 2 respondents
2	Which project management methodology does BNTF Grenada primarily use?	Waterfall: 4 respondents Hybrid: 1 respondent Agile/Scrum: 0 respondents
3	How effective is the current project management approach in responding to changing community needs?	Moderately effective: 5 respondents Very effective/ somewhat effective/ not effective: 0 respondents
4	Which stages of the current process need the most improvement? (Select all that apply)	Implementation and monitoring: 4 respondents Completion: 3 respondents Planning and design: 3 respondents Identification and selection: 1 respondent
5	What are the key performance indicators (KPIs) used to measure project success?	Timely completion: 3 respondents Community satisfaction: 3 respondents Budget adherence: 2 respondents Quality of deliverables: 2 respondents
6	What are the most common challenges faced in project execution?	Delays in approvals and decision-making: 4 respondents Poor responsiveness to unforeseen risks: 3 respondents Rigid planning: 2 respondents

QUESTIONNAIRE (SURVEY)		
Number	QUESTIONS SUMMARISED	RESPONSES SUMMARIZED
		Inefficient resource allocation: 2 respondents Limited stakeholder engagement: 1 respondent
7	Do stakeholders such as consultants and contractors cause project delays?	Yes: 5 respondents
8	How quickly can the project team respond to unexpected changes?	Slowly: 4 respondents Moderately fast: 1 respondent
9	What are the main obstacles to improving project flexibility?	Limited training on adaptive project management: 2 respondents Rigid approval processes: 1 respondent Lack of clear communication: 1 respondent Resistance to change: 1 respondent
10	Does BNTF currently have mechanisms for continuous feedback and iteration?	Yes, at all stages: 3 respondents Some, but inconsistent: 1 respondent None: 1 respondents
11	Have you previously worked with Agile or Scrum methodologies?	Familiar with concepts: 2 respondents Not familiar: 3 respondents
12	Which Scrum principles do you think would be most beneficial for BNTF? (select all that apply)	Continuous feedback and stakeholder involvement: 3 respondents Prioritizing tasks by urgency and value: 2 respondents Daily stand-ups: 1 respondent Clear roles: 1 respondent Sprints: 0 respondents
13	Would breaking down projects into smaller, iterative sprints (2-4 weeks) help improve execution and monitoring?	Yes: 2 respondents Maybe: 3 respondents

QUESTIONNAIRE (SURVEY)		
Number	QUESTIONS SUMMARISED	RESPONSES SUMMARIZED
14	What type of training or support would be needed to adopt Scrum successfully?	Workshops on Agile: 3 respondents Hands-on Scrum training: 2 respondents Guidance from expert: 0 respondents
15	How useful would standardized templates (issue tracking, risk log, etc.) be in improving efficiency?	Extremely useful: 2 respondents Somewhat useful: 3 respondents

In addition to the survey, an interview consisting of seven (7) questions was conducted with the CDB officer for BNTF Grenada during the same period, which can be observed in Table 7, along with a summary of the response.. The purpose of this interview, which was conducted via a MS Teams meeting, was to provide a deeper insight into the effectiveness of the current project management methodology. The following table gives an overview of the questionnaire and interview, with the responses.

Table 7

Interview Question Summary (source: Author)

INTERVIEW	
QUESTIONS SUMMARISED	RESPONSES SUMMARIZED
How long involved in BNTF?	7 years
Success of the 10th cycle vs the 9th cycle	Rating: 3/10
The main project management approach.	Waterfall
Project management approach impact on budget and timeline.	Delayed activities cause a cost increase
Key challenges	Planning and risk management
View on Scrum implementation	No improvement since there is not enough team cooperation
Lessons learned	Teamwork is weak; no cohesion and cooperation, even with the help of team-building activities in the past.

5.1 To develop a document that assesses the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.

To develop a document that assesses the current project management practices within the BNTF programme in Grenada, several key areas were assessed. These include the project management approach currently in use, areas requiring immediate improvement, common challenges, the root cause of limited flexibility, external contributors to project delays, and the overall responsiveness of the programme's 10th cycle.

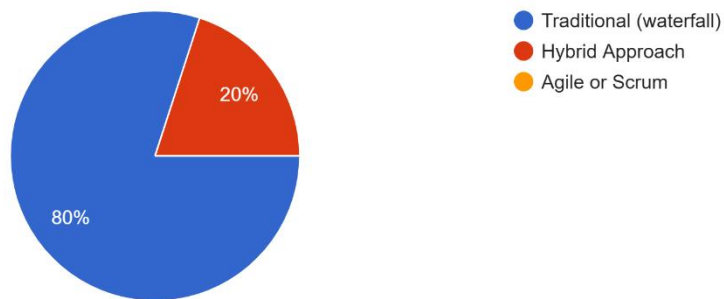
The data collected revealed that the BNTF programme in Grenada currently relies on the traditional (waterfall) approach to project management. According to 80% of the respondents, and supported by the interviewer's observation, this project management methodology remains in use, while 20% indicated that a hybrid approach is also being

employed, as depicted in Figure 8. This observation of the predominance of the traditional methodology indicates a significant gap in adaptive capacity within the programme.

Figure 8

Graph of methodology used in BNTF Grenada (Source: Author)

Which project management methodology does BNTF Grenada primarily use?
5 responses



As further evidence of this limitation, Figure 9 shows that 100% of the respondents agreed that the current project management method is only somewhat effective in meeting the evolving needs of the community. This confirms the traditional methodology limitation in terms of flexibility and adaptability, which is critical for projects with a dynamic nature.

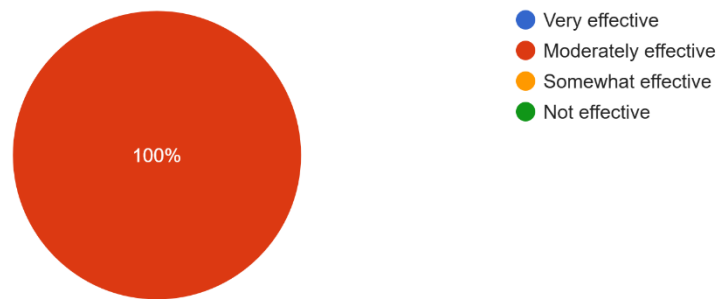
Figure 9

Graph of the response to the effectiveness of the current project management approach

(source: Author)

How effective is the current project management approach in responding to changing community needs?

5 responses



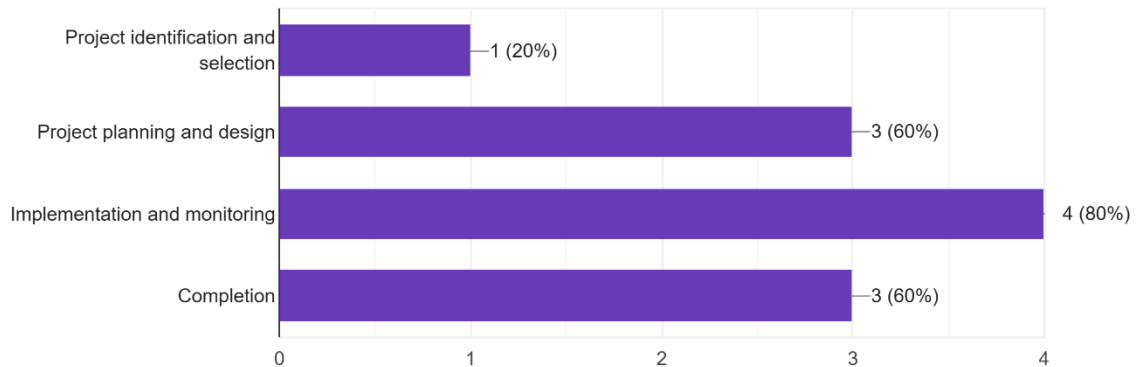
Regarding the improvements within the BNTF programme in Grenada, when asked about areas needing improvement, 80% of the participants pointed to implementation and monitoring needs, while 60% agreed that project completion needs to be improved (Figure 10). These findings suggest that delays and insufficient adaptability are recurring issues during project execution. The feedback from the interview confirmed that activities are frequently delayed, often resulting in project cost overruns. This is evidence of the ineffectiveness of flexibility in projects. These issues stem from the rigid structure of the traditional methodology, which does not allow for rapid adjustments once a project has commenced.

Figure 10

Response to areas that need the most improvement (Source: Author)

Which stages of the current process need the most improvement? (Select all that apply)

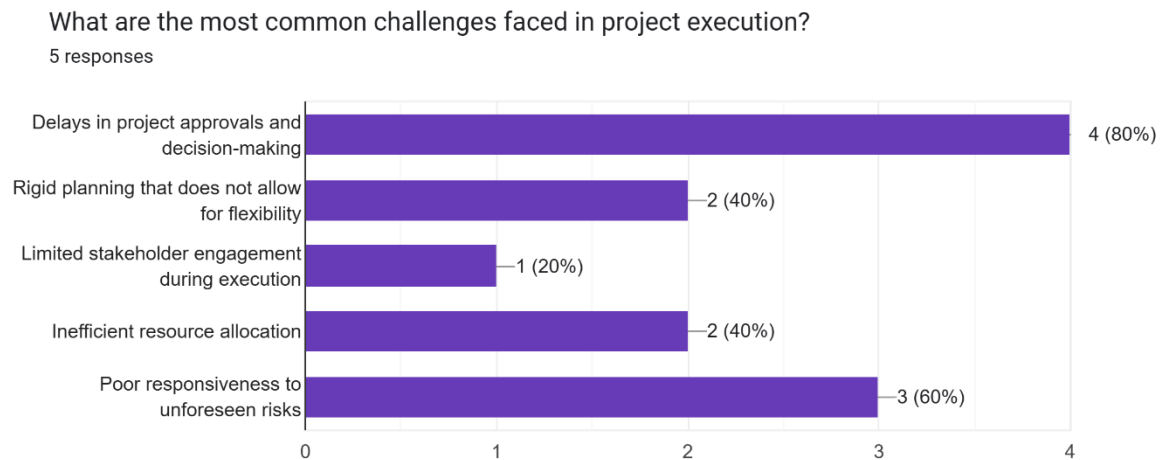
5 responses



Among the most commonly reported challenges were delays in project approvals and decision-making (80%) and insufficient response to unforeseen events (60%), as shown in Figure 11. Other issues that hinder flexibility included inefficient resource allocation, minimal stakeholder engagement during execution, and rigid planning processes. Additionally, 100% of the respondents agreed that consultants and contractors are the main external parties responsible for delays.

Figure 11

Response to common challenges faced in project execution (Source: Author)

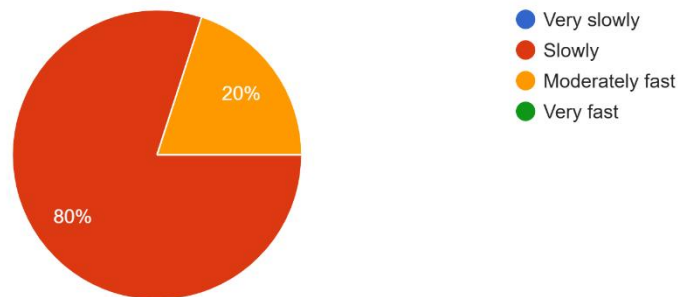


In terms of responsiveness, 80% of the respondents indicated that the team reacts relatively slowly to sudden changes. This lag is likely associated with the rigid structure of the traditional methodology, where processes are linear.

Figure 12*Response to unexpected changes*

How quickly can the project team respond to unexpected changes?

5 responses



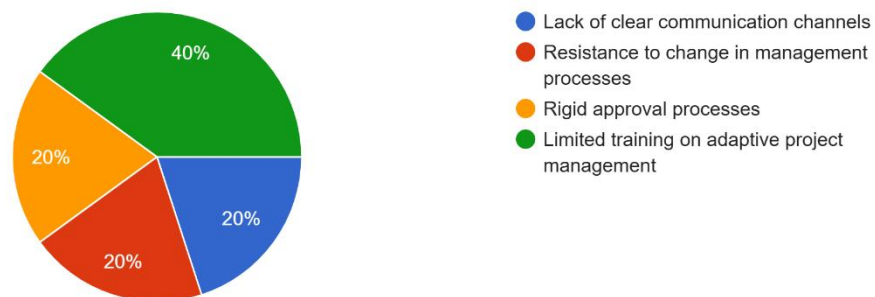
Additionally, the main barriers to increased project flexibility include a lack of clear communication channels (20%), resistance to change in management processes (20%), rigid approval procedures (20%), and limited training in adaptive project management methods (40%), depicted in Figure 13. This suggests that even when change is necessary, the traditional method does not allow for swift decision-making, reinforcing the potential value of adopting a Scrum-based methodology within the programme.

Figure 13

Response to the main obstacles to improving project flexibility

What are the main obstacles to improving project flexibility?

5 responses



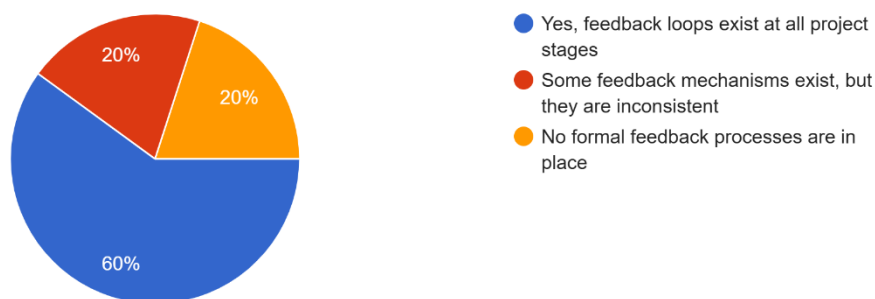
Furthermore, 60% of respondents noted the absence of consistent feedback systems (Figure 14), which restricts the programme's ability to quickly adjust during execution. A longstanding issue with team cohesion and collaboration was also mentioned, which is a key factor affecting responsiveness. This also reflects an organizational culture that may not fully embrace cross-functional teamwork, which is crucial in agile environments, and strengthens the interviewer's point that a defective project management approach will not be effective since there is no teamwork.

Figure 14

Response to the mechanism for continuous feedback and iteration

Does BNTF currently have mechanisms for continuous feedback and iteration?

5 responses



The following is a structured document of the assessment of the current project management practices in BNTF Grenada.

ASSESSMENT OF THE CURRENT PROJECT MANAGEMENT PRACTICES

IN BNTF GRENADA

Introduction

By providing financing and carrying out development projects to enhance community infrastructure and livelihood, the Basic Needs Trust Fund (BNTF) programme in Grenada significantly contributes to the alleviation of poverty in vulnerable areas throughout the tri-island states of Grenada, Carriacou, and Petite Martinique. Poor flexibility and adaptability are two prevalent issues with existing project management techniques that affect the project's outcome. Therefore, a more

efficient project management approach can guarantee on-time completion and minimize budget overruns, both of which are seen as advantageous project outcomes.

This report's primary goal is to analyze the BNTF programme's current project management practices in Grenada, pinpoint major issues, and offer suggestions for enhancement.

Overview of current project management practices

The following is the current structure of the project management approach for the BNTF programme in Grenada:

Project Identification and Selection: Through recognized community groups, a request for proposals is distributed to those who are poor and vulnerable populations in Grenada, Carriacou, and Petite Martinique. Requests for proposals are also addressed to various ministries and non-governmental organizations for ideas on initiatives that might take place in other communities but focus on the underprivileged and vulnerable. A prioritization method with predetermined criteria is used to create a shortlist of projects once all of the proposals have been delivered.

Project Planning – a consultant is selected for project execution through a short-listing evaluation method, and the budget is developed.

Project Design – The architecture and structural designs are performed, and detailed plans are developed.

Procurement and Contracting – Tender documents are issued, and a contractor is selected for project execution

Implementation and Monitoring – During the implementation, there is constant monitoring through regular site visits and monitoring of progress reports

Completion and Evaluation – The final project is evaluated, and the impact is measured.

Identified Challenges

The main challenges encountered by previous programmes are exclusively attributable to restricted adaptability and responsiveness. The capacity to adjust to changing community requirements is hampered by rigid project planning and execution since significant changes necessitate drawn-out approval procedures. Furthermore, despite their participation in the identification and selection process, communities are rarely or never involved in the project's implementation. This results in a lack of ongoing input, which limits the ability to make adaptive decisions. Additionally, responsiveness is hampered by the lengthy procurement process. Another challenge that was not anticipated is team cohesion and cohabitation.

Impact of identified Challenges

The challenges identified significantly impact the projects by causing delays. These delays usually lead to cost overruns and inefficient use of resources. Furthermore, community dissatisfaction is usually a result of the delays.

Recommendation

To enhance the general performance of BNTF Grenada projects, the following suggestion is made:

- Use a Scrum-based approach to provide feedback loops and interactive development.
- In order to adapt to evolving needs, implement flexible project planning with regular reassessments.
- Create digital tools for community feedback in real time.
- Review the project after completion and record the lessons learned for ongoing development.

Conclusion

The Grenada, Carriacou, and Petite Martinique tri-island states all benefit greatly from the BNTF programme's contributions to community development. Because traditional linear approaches lack iterative reviews and continual improvement, the projects' difficulties worsen by the poor use of waterfall project management principles. Therefore, BNTF Grenada can accomplish more effective, flexible, and significant project execution by implementing Agile approaches.

5.2 To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.

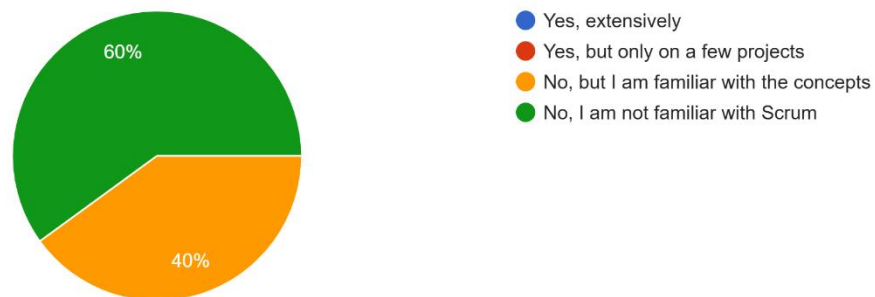
To develop a customized Scrum-based framework for the BNTF programme in Grenada, many key areas were assessed. These include employees' awareness and readiness for Scrum, the support needed to adopt Scrum, and potential barriers to the execution of projects.

The data revealed that none of the employees had extensive Scrum experience. In fact 60% were not familiar with Scrum, while the remaining 40% were only familiar with the basic concept, as can be seen in Figure 15. This suggests that there is an opportunity for building capacity in Scrum, as there is openness to learning, even though there is a low current readiness. This also indicates that capacity building is essential before full adoption of Scrum.

Figure 15 Response to familiarity with Agile methodologies

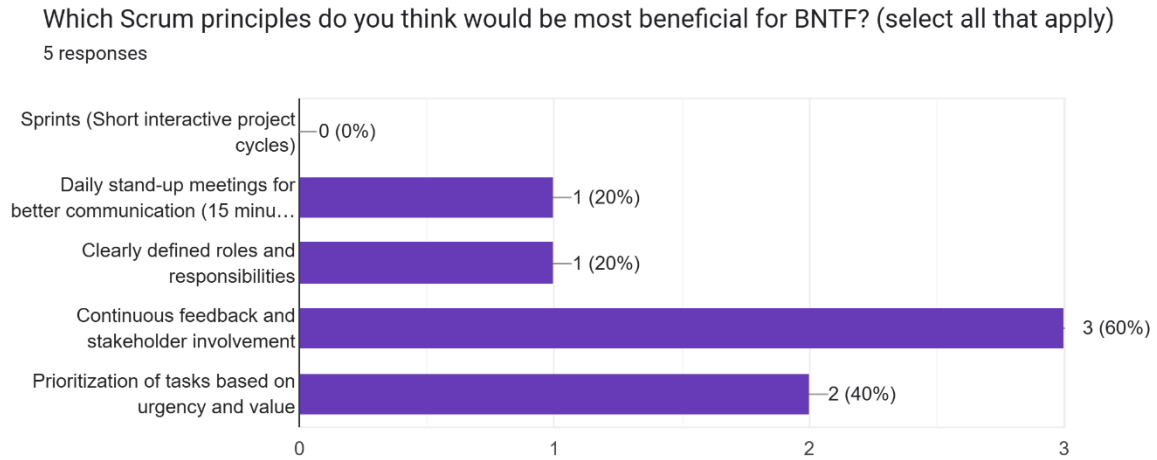
Have you previously worked with Agile or Scrum methodologies?

5 responses



Despite this limited exposure, it was agreed that the Scrum principles that would be most beneficial to BNTF Grenada are continuous feedback and stakeholder involvement (60%) and prioritization of tasks based on urgency and value (40%), which can be observed in Figure 16 below. The participants also believed that daily stand-up meetings and clearly defined roles and responsibilities can be beneficial. Finally, the participants recognized that adopting key Scrum principles could enhance project efficiency at BNTF Grenada.

Figure 16 Scrum principles that are most beneficial to BNTF Grenada



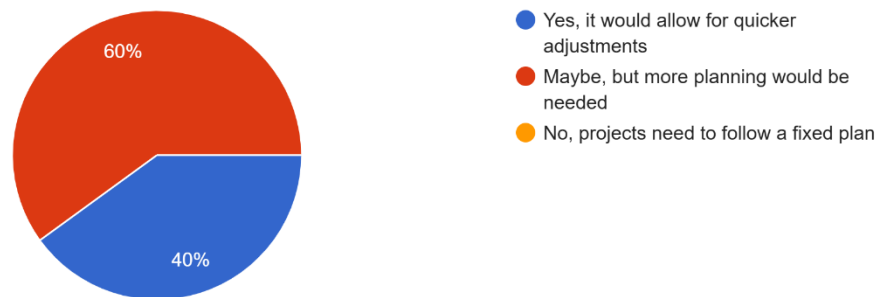
The data further indicated that 60% of the respondents supported the idea that breaking down projects into smaller iterative sprints could help with quicker adjustments, although 40% indicated that more planning would be needed (See Figure 16). Therefore, while a majority of the respondents see the benefit of iterative sprints, a high number of respondents still value the traditional approach through upfront planning, which indicates that Scrum will have to be slowly implemented into the programme.

Figure 17

Response to the methods or improving execution and monitoring

Would breaking down projects into smaller, iterative sprints (2-4 weeks) help improve execution and monitoring?

5 responses



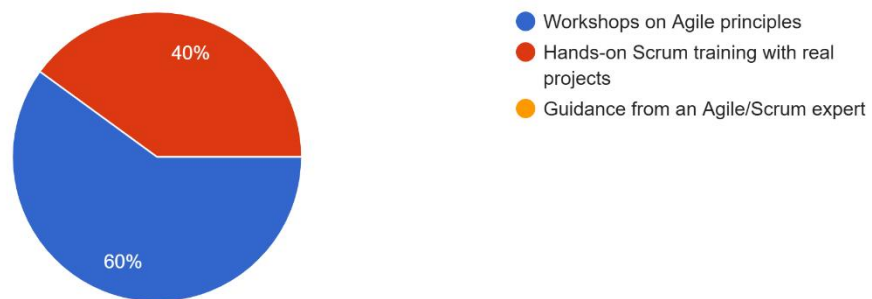
Regarding the support needed to adopt Scrum, 60% of the participants emphasized the importance of workshops on Agile principles, while 40% agreed that hands-on Scrum training with real projects is also needed. Notably, there was no interest in receiving guidance from an Agile expert. Figure 18 illustrates that the preference of the respondents is practical learning through workshops and hands-on training, which can help accelerate understanding of the Scrum principle.

Figure 18

Response to the type of support needed to adopt Scrum

What type of training or support would be needed to adopt Scrum successfully?

5 responses

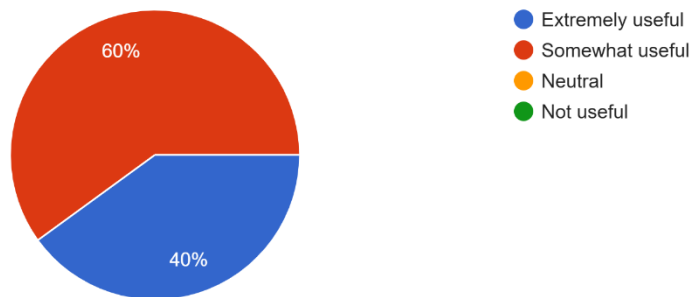


Additionally, 60% of the respondents indicated that standardized templates will be extremely useful and beneficial in improving efficiency as can be seen in Figure 19. This not only suggests that the team will welcome structured tools to manage the iterative Scrum process but also that the team values clear repeatable processes, which is key in Scrum as it has an iterative nature.

Figure 19

Response of how useful standardized templates will be in improving efficiency

How useful would standardized templates (issue tracking, risk log, etc.) be in improving efficiency?
5 responses



However, a key insight from the interview revealed some skepticism about Scrum's effectiveness at BNTF Grenada. This concern stemmed from existing issues with team cohesion and collaboration, which are factors that are critical to the success of Agile frameworks such as Scrum, since Scrum heavily relies on teamwork and collaboration. Addressing these challenges will be important to ensure the successful adaptation of Scrum practices.

The following is a customized Scrum-based framework for BNTF Grenada.

SCRUM-BASED FRAMEWORK FOR BNTF GRENADA

Introduction

By providing financing and carrying out development projects to enhance community infrastructure and livelihood, the Basic Needs Trust Fund (BNTF)

programme in Grenada significantly contributes to the alleviation of poverty in vulnerable areas throughout the tri-island state of Grenada, Carriacou, and Petite Martinique. The programme uses the traditional project management approach, which has been somewhat successful but lacks the adaptability and reactivity needed in a dynamic project environment. Therefore, the goal of the document is to adopt a Scrum-based management framework within the BNTF programme in Grenada, which will promote flexibility and responsiveness while improving overall project efficiency, adaptability, and stakeholder engagement.

Overview of Scrum and Its Benefits

Scrum is considered to be a lightweight framework that helps people, teams, and organizations generate value through adaptive solutions for complex problems (Schwaber & Sutherland, 2020). Originally developed for software development, this type of framework is increasingly being applied to complex projects in various sectors, including the construction industry. Scrum employs an iterative, incremental approach to optimize predictability and control risk. It structures work in cycles called sprints. These iterations are no more than one month each and take place one after the other without pause. The sprints are timeboxed, which means that they end on a specific date, whether the work has been completed or not, and are never extended. The Key roles in Scrum include the product owner, who will prioritize work based on stakeholder needs; the scrum master, who facilitates the process and removes obstacles; and the development

team, which is a cross-functional group of people who are responsible for delivering the work (Schwaber & Sutherland, 2020).

In a diverse range of projects, Scrum can offer several benefits, which can include improved flexibility and responsiveness, faster delivery, improved risk management, greater stakeholder satisfaction, etc. With iterative delivery, design, for example, can be completed and reviewed earlier, allowing for earlier detection of issues and more time for modification. Additionally, by breaking the project into manageable sprints, teams can quickly adjust to changes without derailing the entire project. Furthermore, daily stand-ups and sprint reviews not only promote open conversation but also assist in early identification of issues, help in quick decision making, and encourage continuous adaptation. The feedback loops not only allow risk to be identified early but also reduce the likelihood of major rework or failure. Finally, regular engagement with the community will improve community satisfaction (Schwaber & Sutherland, 2020).

Scrum Roles and Responsibilities in BNTF Projects

The following roles will be incorporated into the BNTF project lifecycle in order to successfully implement Scrum, as the roles and responsibilities of individuals (stakeholders) within a project are crucial:

Scrum Master – is accountable for establishing Scrum, which helps everyone understand Scrum theory and practice, both within the Scrum team and the organization. Among the roles of the scrum master to serve the Scrum team is to coach the team members in self-management and cross-functionality, help the scrum team focus on

creating high-value increments that meet the definition of done, cause the removal of impediments to the Scrum Team's progress, and ensure that all Scrum events take place and are positive, productive, and kept within the timebox (Schwaber & Sutherland, 2020).

To serve the product owner includes helping find techniques for effective product goal definition and product backlog management, helping the scrum team understand the need for clear and concise product backlog items, helping establish empirical product planning for a complex environment, and facilitating stakeholder collaboration as requested or needed (Schwaber & Sutherland, 2020).

To serve the organization by leading, training, and coaching the organization in its scrum adoption, planning, and advising Scrum implementations within the organization, helping employees and stakeholders understand and enact an empirical approach for complex work, and removing barriers between stakeholders and Scrum Teams (Schwaber & Sutherland, 2020).

Product Owner – is accountable for maximizing the value of the product resulting from the work of the Scrum team.

Development Team – are the people who are committed to creating any aspect of a usable increment each sprint.

Scrum Values

Scrum has five values: commitment, focus, openness, respect, and courage.

The team is committed to attaining the project's objectives and to supporting one

another. Their primary focus is on Sprint work in order to make the most progress toward the Sprint Goal. Furthermore, the team is open with stakeholders about their work, as well as any challenges or concerns that may arise. Scrum team members respect one another as capable, self-sufficient individuals, and their coworkers do the same. Finally, the team members have the courage to do the right thing and work on difficult situations.

These ideals guide the scrum team's work, activities, and behaviors. The decisions made, the activities taken, and the method Scrum is implemented should promote rather than decrease or undermine these ideals. Working with scrum events and artifacts allows scrum team members to learn and explore values. When the team and the people they work with embody these principles, the empirical Scrum pillars of transparency, inspection, and adaptation come to life, resulting in increased trust.

Scrum Events (Ceremonies)

Each event provides a formal chance to examine and adapt Scrum objects. These events are specifically intended to provide the required level of transparency. Failure to carry out any events as prescribed results in missed opportunity to inspect and adapt.

Events are used in Scrum to establish consistency and reduce the requirement for meetings that are not defined in Scrum. Ideally, all activities take place at the same time and location to reduce complexity.

Sprints - are fixed-length events lasting one month or less, with a new sprint beginning immediately after the previous one ends. During the sprint, no modifications

are made that would jeopardize the Sprint Goal, quality is not compromised, the Product Backlog is improved as needed, and the scope may be defined and renegotiated with the Product Owner as additional information is gained.

Sprint Planning - begins the sprint by outlining the work to be done for the sprint, which is developed by the collaborative efforts of the entire team. The sprint planning answers the following questions: why is this sprint valuable, what can be accomplished within this sprint, and how the chosen task will be completed.

Daily Scrum - the goal is to assess progress toward the sprint goal and alter the sprint backlog as needed, adjusting the forthcoming planned work. It's a 15-minute event for the Scrum Team. To reduce complexity, it is held at the same time and location on each working day of the sprint. The daily scrum enhances communication, identifies barriers, encourages speedy decision-making, and thereby minimizes the need for additional meetings.

Sprint Review - the objective is to examine the sprint's outcome and identify future modifications. The team presents the outcomes of their work to key stakeholders and discusses progress towards the Product Goal. Throughout this session, the team and stakeholders discuss what they accomplished throughout the sprint and what has changed in their environment. The sprint review is a working session, thus the team should avoid confining it to just a presentation. It is the second-to-last event in the sprint and has a time limit of four hours for a one-month sprint.

Sprint retrospective: the goal is to plan measures to improve quality and effectiveness. The team evaluates how the last sprint went in terms of persons, interactions, procedures, tools, and their Definition of Done. The team determines the most beneficial improvements to increase its effectiveness. The sprint retrospective marks the end of the race. It is timeboxed to a maximum of three hours for a one-month sprint.

Scrum Artifacts

Scrum artifacts are intended to increase the transparency of essential information. Each artifact includes an obligation to give information that increases transparency and focus, against which progress may be monitored.

Product Backlog - is an emergent, ordered list of what is required to improve the product, and it may also be regarded as the team's sole source of workload. Its elements that can be completed by the team in one sprint are considered ready for selection during the Sprint planning event.

Sprint Backlog consists of the sprint Goal (why), the collection of Product Backlog items chosen for the sprint (what), and an executable plan for delivering the Increment (how). It is a highly visible, real-time representation of the work that will be completed during the Sprint in order to meet the Sprint Goal.

Increment is a concrete stepping stone toward the Product Goal. Each increment is added to all previous increments and extensively tested to ensure that they all operate together. The increment amount is presented at the Sprint Review, which supports

empiricism. Work cannot be considered part of an increment unless it satisfies the definition of done.

Scrum Adaptation to BNTF Project Lifecycle

At the commencement of the project, the project owner, together with stakeholders, will identify the project documents based on community needs as project backlog items. During that initiation, prioritization tools will also be used to select projects based on impact and urgency. Additionally, a clear project vision and expected outcomes will be determined.

During the sprint planning, the top priority backlog items will be broken down into smaller manageable sprints (2-4 week duration) by the product owner, scrum master, and developers. Additionally, sprint planning meetings will also be held and will involve all Scrum roles. Here, progress is tracked with a daily stand-up meeting, and obstacles are addressed.

During the sprint review, the completed works are presented to the team, community, and funding agency for validation and feedback. Additionally, the backlog is adjusted and reprioritized.

Finally, during the sprint retrospective, the sprint performance is analysed and the area for improvement is identified. Also, lesson learned is captured and knowledge is shared with the team to enhance future sprints.

Implementation Strategy and Pilot Phase

To successfully implement Scrum within BNTF Grenada, the following steps are necessary:

- Conduct Scrum training and coaching for project teams and relevant stakeholders.
- Add agile measures alongside the traditional method to help with a smooth transition.
- Launch a pilot project to test the framework's effectiveness for broader adoption.
- Monitor and evaluate performance through key success metrics.
- Scale Scrum methodology across BNTF projects based on the pilot project outcome.

Conclusion

The BNTF programme in Grenada plays a substantial and vital role in community development throughout the tri-island state of Grenada, Carriacou, and Petite Martinique, and the adoption of Scrum-based methodology will eradicate many deficiencies within the programme. Scrum in BNTF Grenada will not only transform project management processes but will also improve flexibility, responsiveness, and overall efficiency.

5.3 To create key templates that will ensure consistency, reduce errors, and save time.

This section gives a list of Scrum standard templates that will act as a guide for introducing the BNTF programme in Grenada. This template represents the core Scrum artifacts that will support flexibility and responsiveness.

5.3.1 Product Backlog Template

Product Backlog is a central list of all the prioritized tasks to be done. This is essential because it not only ensures transparency about what needs to be done but also allows new tasks to be added at any time and provides a clear basis for what needs to be done next.

Table 8 shows a product backlog template which is designed to capture and prioritize user stories for the project. Each entry provides a clear and structured framework to manage work items effectively.

Table 8

Product Backlog Template (Source: Author)

PRODUCT BACKLOG TEMPLATE			
Project:			Date:
Task ID	User Story	Priority	Criteria
Prepared by: <i>[Insert full name]</i> <i>[Insert role]</i> <i>[Insert unit of operation]</i>		Date: _____	

5.3.2 Sprint Planning Template

Sprint Planning gives tasks to achieve the backlog items. These are basically short-term goals allowing for quick adaptation in Sprints.

Table 9 shows a sprint planning template, which is designed to organize and assign tasks for each sprint within the project. Additionally, it ensures that the work is distributed effectively across multiple sprints for timely project delivery.

Table 9

Sprint Planning Template (Source: Author)

SPRINT PLANNING TEMPLATE				
<u>Project:</u>			<u>Date:</u>	
Sprint 01				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Sprint 02				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Sprint 3 –				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Prepared By:			Date:	

SPRINT PLANNING TEMPLATE	
<u>Project:</u>	<u>Date:</u>
<i>[Insert full name]</i>	_____
<i>[Insert role]</i>	_____
<i>[Insert unit of operation]</i>	

5.3.3 Definition of Done (DoD)Template

Definition of Done (DoD) helps the team to understand what it means for a task to be completed. This not only prevents misunderstandings but also improves quality by ensuring that each sprint delivers understandable results.

Table 10 shows the DoD template, which establishes clear criteria for determining when a user story is completed.

Table 10

Definition of Done Template (Source: Author)

DEFINITION OF DONE (DoD) TEMPLATE		
<u>Project:</u>		<u>Date:</u>
User Story	Description	Status
<u>Prepared by:</u>		<u>Date:</u>

DEFINITION OF DONE (DoD) TEMPLATE	
<u>Project:</u>	<u>Date:</u>
..... <i>[Insert full name]</i> <i>[Insert role]</i> <i>[Insert unit of operation]</i>	_____ _____

5.3.4 Sprint Review Template

Sprint Review provides a forum for the team to present their completed work and gather feedback. This not only keeps stakeholders informed but also ensures that the project remains on track.

Table 11 shows the sprint review template, which is designed to capture the outcomes of each sprint and ensure that the sprints align with the project goals.

Table 11

Sprint Review Template (Source: Author)

SPRINT REVIEW TEMPLATE			
<u>Project:</u>			<u>Date:</u>
Sprint 01		Sprint Duration:	
<u>Sprint Goal:</u>			
Sprint ID	Task Name	Demo	Status
Sprint 02		Sprint Duration:	
<u>Sprint Goal:</u>			

SPRINT REVIEW TEMPLATE				
<u>Project:</u>			<u>Date:</u>	
Sprint ID	Task Name	Demo	Status	
Sprint 3		Sprint Duration:		
<u>Sprint Goal:</u>				
Sprint ID	Task Name	Demo	Status	
<u>Key Outcomes:</u>				
<u>Sprint Metrics</u>				
	Matric	Target	Actual	Status
<u>Stakeholder Feedback</u>				
	Prepared By: <i>[Insert full name]</i> <i>[Insert role]</i> <i>[Insert unit of operation]</i>		Date: _____ _____	

5.3.5 Sprint Retrospective Template

Sprint Retrospective allows the team to reflect on the sprint process and ways to improve. Its purpose is to also provide ways to increase quality and effectiveness.

Table 12 shows the sprint retrospective template, which provides a structured format for the team to reflect on each sprint by identifying successes, areas for improvement, and actionable steps. This template also provides continuous learning and helps enhance team performance in future sprints.

Table 12*Sprint Retrospective Template (Source: Author)*

SPRINT RETROSPECTIVE TEMPLATE	
<u>Project:</u>	<u>Date:</u>
Sprint 01	
<u>What went well?</u>	
<u>What Could Be improved?</u>	
<u>Action Items for Improvement:</u>	
Sprint 02	
<u>What went well?</u>	
<u>What Could Be improved?</u>	
<u>Action Items for Improvement:</u>	
Sprint 3	
<u>What went well?</u>	
<u>What Could Be improved?</u>	
<u>Action Items for Improvement:</u>	
Prepared by: <i>[Insert full name]</i> <i>[Insert role]</i> <i>[Insert unit of operation]</i>	Date: _____ _____

5.3.6 Daily Stand-Up Meeting Template

The daily scrum is a 15-minute event for the team, and its purpose is to inspect the progress of the sprint activities. To reduce complexity, it is held at the same time and place every working day.

Table 13 show a daily stand-up meeting template, which is used to capture team members’ progress together with planned tasks and blockers on a daily basis. In addition, it not only facility transparency and collaboration, but also ensures that the team is focused on the sprint goals.

Table 13

Daily Stand-Up Meeting Template (Source: Author)

DAILY STAND-UP MEETING TEMPLATE			
<u>Project Name:</u>		<u>Date:</u>	
Attendees			
<u>Name</u>		<u>Role</u>	
Team member	Yesterday’s Work	Today’s Work	Blockers
<u>Additional Information:</u>			
.....			
.....			
.....			
.....			
.....			
.....			
<u>Prepared by:</u>		<u>Date:</u>	
.....			

DAILY STAND-UP MEETING TEMPLATE	
<u>Project Name:</u>	<u>Date:</u>
<i>[Insert full name]</i> <i>[Insert role]</i> <i>[Insert unit of operation]</i>	

5.4 To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.

This section will apply the Agile (Scrum-based) project management methodology to an actual BNTF project and will explain how the methodology is being applied at each phase.

5.4.1 Initiation Phase

The initial stage, which marks the beginning of a project, sets the foundation for all activities. Once the project is approved by CDB, the team will meet and develop the Project Charter, the stakeholder register, and the product backlog, which are the key documents that will guide the execution of the project.

Table 14 shows project charter outlines a clear vision and goal of the project, together with other key details of the project. This document serves as the foundation that formally authorizes the project.

, while the stakeholder register will ensure transparency, and the initial product backlog will outline priorities. This will allow to project to adapt quickly to changes.

Table 14*Project Charter (Source: Author)*

PROJECT CHARTER			
Project Name	Construction of Victoria School for Special Education		
Project Location	Bonair, St. Mark		
Project Sponsor	Caribbean Development Bank (CDB)		
Project Manager	John Doe		
Organizational Unit	Rural Development Unit		
Expected Start Date	July 01, 2022		
Expected Duration	July 01, 2024		
Estimated Cost	XCD 1,600,000.00		
Purpose of the project	The main purpose of this project is to provide a safe learning environment for children with special education needs within the immediate and neighbouring communities of Victoria in Grenada.		
Goals	It is to successfully plan, manage, and construct a		
Expected Deliverables	To design a state-of-the-art school facility for students with special needs.		
Schedule			
Key milestone	Duration (months)	Start date	End Date
Selection of a consultant	5	November 01, 2022	March 01, 2023
Preparation of architectural and structural drawings for the facility	7	March 01, 2023	September 01, 2023
Selection of a Contractor	3	September 01, 2023	November 01, 2024
Construction of the foundation.	2	November 01, 2024	January 01, 2025
Construction of the ground floor slab	1	January 01, 2025	February 01, 2025

PROJECT CHARTER			
Construction of the roof slab	1	February 01, 2025	March 01, 2025
Installation of block work and rendering	1	March 01, 2025	April 01, 2025
Installation of windows and doors.	0.5	April 01, 2025	April 15, 2025
Installation of plumbing fixtures	0.5	April 15, 2025	May 01, 2025
Installation of electrical fixtures	0.5	May 01, 2025	May 15, 2025
Installation of finishes (tiles, painting, etc.)	1.5	May 15, 2025	June 01, 2025
Installation of cupboards and shelves	1	June 01, 2025	July 01, 2025
External works (septic tank, drainage, landscaping, etc.)	2	May 01, 2025	July 01, 2025
Completion – end of defect liability period	12	July 01, 2025	July 01, 2026
Resources			
Project Team	Project coordinator - BNTF Grenada Design and supervision – FDDL Consultant Inc. Construction – H. A. Lewis Construction Ltd.		
Support Resource	CDB Operations Officer for Grenada		
Risks, Constraints, and Assumptions			
Risks	The project is delayed due to poor planning by the contractor, resulting in the structure not being ready for use by the new school term.		
Constraints	Due to the increase in construction activities on the island, certain materials may not be available locally.		
Assumptions	All construction activities will go as planned, and the project will finish within the stipulated timeframe.		
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>	Date: 29 April 2025		

Table 15 which is the stakeholder register identifies the key parties involved in the project and outlines their roles and responsibilities, is tied to the level of interest and

influence. This serves as a tool to ensure effective communication and collaboration throughout the life cycle of the project.

Table 15

Stakeholder Register (Source: Author)

STAKEHOLDER REGISTER				
<u>Project Name:</u> Construction of the Victoria School for Special Education Project.				<u>Date:</u> June 12 2025
Group/ Organization	Role	Interest	Influence	Engagement Strategies
Caribbean Development Bank (CDB)	Grants approvals and other no-objections to the use of the funds on the project.	High	High	Provide reports (quarterly, annual, progress, etc.), updated on budget.
BNTF Grenada	Administers and coordinates all functions related to the project.	High	High	Participates in key decision-making and site inspections, ensures monthly reports are delivered, and signs off on deliveries.
Ministry of Education	Guides the design of the facility for students with special education needs.	High	High	Participate in design alignment meeting to ensure that the facility is designed to standard curriculum needs, space, etc.

STAKEHOLDER REGISTER				
<u>Project Name:</u> Construction of the Victoria School for Special Education Project.				<u>Date:</u> June 12 2025
Consultant	Provides design and technical supervision of the project.	High	Medium	Set regular checkpoints for review.
Contractor	Implement (construct) the project.	High	Medium	Hold bi-weekly site meetings.
Parents and Teachers Association (PTA)	Provide information on challenges faced by students using school facilities.	High	Low	Early and regular sessions to explain the timeline and design.
Local Community	Monitor construction progress and report concerns regarding delays, safety, etc.	Medium	Low	Participate in town hall meetings.
	<u>Additional Information:</u>			
<u>Prepared by:</u> <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>		<u>Date:</u> 29 April 2025		

Table 16 is the product backlog outlines prioritized tasks for the successful execution of the project. This document serves as a dynamic guide for managing the project requirements and deliverables.

Table 16*Product Backlog (Source: Author)*

PRODUCT BACKLOG			
Project: Construction of the Victoria School for Special Education Project.			Date:
Task ID	User Story	Priority	Criteria
PB01	We want to publish an expression of interest (EOI) for regional construction consultants.	High	EOI should be posted on all major platforms.
PB02	We want to shortlist applicants based on experience.	High	Atleast three (3) qualified candidates should be identified.
PB03	We want to request financial and technical proposals from shortlisted applicants.	High	Each candidate should be evaluated and scored based on the criteria met and the proposed cost.
PB04	We want to select and onboard the consultant.	High	Contract signed and onboarding completed.
PB 05	We want the consultant to prepare the inception report, environmental and social plan, maintenance plan, and design report.	High	Reports should meet the standard requirements of the CDB.
PB06	We want the consultant to prepare detailed architectural and structural designs for a facility that meets standards and the requirements for special education needs	High	Design should align with special needs standards while staying within budget.
PB07	We want to prepare the bidding documents for tendering to the contractors.	High	Requirement to be met will attract medium and small firms.
PB08	We want the consultant to evaluate the contractor's bid and select the lowest substantial bidder.	High	Atleast three (3) bidders evaluated.
PB09	We want the consultant to supervise the construction works so that quality	High	Meetings to be held on a monthly basis, and reports

PRODUCT BACKLOG			
	standards and timelines are maintained.		should also be delivered every month.
PB10	We want a consultant to inspect the completed works during the defect liability period.	medium	Monthly inspections should be held.
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>		Date: 29 April 2025	

5.4.2 Planning Phase

In this phase, Scrum is applied to improve flexibility and responsiveness because the work will be broken into short sprints, so that the team can quickly adjust prioritized tasks. The sprint planning is used to assign tasks with an agreed-upon timeline, while the Definition of Done (DOD) is used to ensure all outputs meet quality and compliance before moving to the next stage.

Table 17 is the sprint planning document breaks down the user stories into specific tasks and assigns responsibility and estimated time to complete. This tool provides a structured guide to task execution and supports the timely delivery of project milestones.

Table 17*Sprint Planning (Source: Author)*

SPRINT PLANNING				
<u>Project:</u> Construction of the Victoria School for Special Education Project.			<u>Date:</u>	
Sprint 01 – Creating EOI document				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Publish an expression of interest (EOI) for regional construction consultants.	S01	Create the EOI document and submit it to the project manager.	Procurement	0.25
	S02	Review of the EOI document and submit to CDB for review and approval.	Project manager	0.25
	S03	Upload to platforms.	Procurement	0.05
Sprint 02 – Creating a matrix for shortlisting applicants				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Shortlist applicants based on experience.	S04	Create the evaluation matrix and submit it to the project manager for review.	Procurement	0.25
	S05	Review the evaluation matrix and submit it to CDB for review and approval.	Project manager	0.25
Sprint 3 – Shortlisting of the applicants				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Shortlist applicants based on experience.	S06	Evaluate the applicants.	Procurement, engineering	0.05
	S07	Prepare an evaluation for the shortlisting of applicants.	engineer	0.50
	S08	Review the evaluation report and submit it to CDB.	Project manager	0.25
Sprint 04 – Evaluation of shortlisted applicants				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)

SPRINT PLANNING				
Request financial and technical proposals from shortlisted applicants.	S09	Create an official letter requesting proposals.	Procurement and Administration	0.05
	S10	Review and submit the letter to CDB for review and approval.	Project manager	0.05
Select and onboard the consultant.	S11	Evaluate the proposals submitted	Procurement	0.05
	S12	Prepare the evaluation report and submit it to the project manager for review.	Engineering	0.50
	S13	Review the evaluation report.	Project manager	0.15
	S14	Submit the evaluation report to PPB for approval.	Project manager	0.05
	S15	Submit the evaluation report to CDB for approval.	Project manager	0.05
Sprint 05 – Onboarding the consultant				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Select and onboard the consultant.	S16	Prepare the contract document.	Procurement	0.50
	S17	Review and submit to CDB for review and approval.	Project manager	0.25
Sprint 06 – Review of planning documents				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
The consultant to prepare the inception report, environmental and social plan, and maintenance plan.	S18	Review of Inception Report	Engineering and Project Manager	0.20
	S19	Submit the inception report to CDB for approval.	Project Manger	0.05
	S20	Review of the environmental and social plan.	Engineering and Project Manager	0.20
	S21	Submit the environmental and social plan to CDB for approval.	Project Manger	0.05
	S22	Review of maintenance plan	Engineering and Project Manager	0.20

SPRINT PLANNING				
	S23	Submit the maintenance plan to CDB for approval	Project Manger	0.05
	S24	Review of design report	Engineering	0.20
	S25	Submit design report to CDB for approval.	Project Manger	0.05
Sprint 07 – Review and approval of Drawings				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
The consultant to prepare detailed architectural and structural designs for a facility that meets standards and the requirements for special education needs	S26	Review of the architectural floor plan.	Engineering, MoE, CDB, community	0.10
	S27	Submit to CDB for approval.	Project manager	0.05
	S28	Review of all other architectural drawings.	Engineering, MoE, CDB	0.25
	S29	Submit to CDB for approval.	Project manager	0.05
	S30	Review of all structural drawings.	Engineering, CDB	0.25
	S31	Submit to CDB for approval.	Project manager	0.05
	S32	Prepare drawings and submit to the Planning Development Authority of Grenada	Engineering	0.25
Sprint 08 – Preparation of tender documents				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
Prepare the bidding documents for tendering to a contractor.	S33	Review of the bidding document prepared by the consultant.	Procurement	0.25
	S34	Submission of the bidding document to CDB for approval.	Project manager	0.05
Publish the tender for local contractors.	S35	Upload documents to procurement platforms.	Procurement	0.05
	S36	Prepare and schedule a bid meeting	Engineer	0.05
Sprint 09 – Selection of the contractor				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)

SPRINT PLANNING				
The consultant to evaluate the contractor's bid and select the lowest substantial bidder.	S37	Review the evaluation report.	Engineering	0.25
	S38	Submit the evaluation report to PPB for approval.	Project manager	0.05
	S39	Submit the evaluation report to CDB for approval.	Project manager	0.05
	S40	Prepare the contract document.	Procurement	0.50
	S41	Review and submit to CDB for review and approval.	Project manager	0.25
Sprint 10 – Implementation (monitoring)				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
The consultant to supervise the construction works so that quality standards and timelines are maintained.	S42	Review the progress report and submit to CDB.	Engineering, Monitoring and Evaluation, and Project Manager	0.50 per month
Sprint 11 – Implementation (payments)				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
The consultant to supervise the construction works so that quality standards and timelines are maintained.	S43	Process the consultant's payment.	Engineering and finance	0.50 per month
	S44	Process the contractor's payment	Engineering and finance	0.50 per month
Sprint 12 – Completion				
User story	Sprint ID	Task	Task Owner	Planned Effort (month)
The consultant to inspect the completed works during the defect liability period.	S45	Review the inspection report	Engineering, and Monitoring and Evaluation,	0.50 per month
	S46	Review and approve the completion report.	Engineering, Monitoring and Evaluation, and Project Manager	0.45
	S47	Submit competition report to CDB for approval	Project manager	0.05

SPRINT PLANNING	
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>	Date: 29 April 2025

Table 18 shows the definition of done (DoD), which outlines the criteria that must be met for each user story for the project to be considered completed. This tool ensures consistency and accountability throughout the lifecycle of the project.

Table 18

Definition of Done (Source: Author)

DEFINITION OF DONE (DoD)		
Project: Construction of the Victoria School for Special Education Project.	Date:	
User Story	Description	Status
Publish an expression of interest (EOI) for regional construction consultants.	-Post on atleast 3 local platforms and CDB. -Confirmation sent to the project manager and other team members.	completed
Shortlist applicants based on experience.	-Evaluation matrix prepared. -Atleast three (3) qualified candidates identified. -The shortlist was approved by the Public Procurement Board (PPB) and the Caribbean Development Bank (CDB). -Shortlist file sent to Administration for filing.	Completed
Request financial and technical proposals from shortlisted applicants.	-Request sent to the shortlisted candidate through email, together with the deadline for submission. -Acknowledgments of receipt received. -Copies of financial and technical proposals received.	Completed
Select and onboard the consultant.	-Completed evaluation report and proposed a winner. -Submit the evaluation report to the PPB and the CDB for no objection.	Completed

DEFINITION OF DONE (DoD)		
	-Prepare the contract and submit to the CDB for no objection. -Contract signed by all parties.	
The consultant to prepare the inception report, environmental and social plan, and maintenance plan.	Ensure that the reports have the necessary information. Submit reports to CDB for no-objection. File approved documents.	Completed
The consultant to prepare detailed architectural and structural designs for a facility that meets standards and the requirements for special education needs	Ensure that drawings are to standard. Submit drawings to CDB for no-objection. Submit to the Planning Development Authority of Grenada for approval. File approved documents.	Completed
Prepare the bidding documents for tendering to a contractor.	-Prepare the bidding document and submit to PPB and CDB for no-objection. -File approved documents.	Completed
Publish the tender for local contractors.	-Post on atleast 3 local platforms and CDB. -Confirmation sent to the project manager and other team members.	Completed
The consultant to evaluate the contractor's bid and select the lowest substantial bidder.	-Review the evaluation report. -Submit the report to PPB and CDB for no-objection. -File approved documents. -Contract signed by all parties.	Completed
The consultant to supervise the construction works so that quality standards and timelines are maintained.	-Review monthly progress reports. -Attend monthly progress meetings. -Process payment certificates for the consultant and the contractor.	In progress
The consultant to inspect the completed works during the defect liability period.	-Attend sight inspection. -Review completion report.	Pending
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>	Date: 29 April 2025	

5.4.3 Execution Phase

In this phase, the sprint review, retrospective, and burndown chart are developed and used. The sprint review provides opportunities for the team to demonstrate the completed work to stakeholders and other members and gather feedback, and determine whether the work meets expectations. The sprint retrofit focuses on what went well and what needs to be improved. This helps the team become better equipped to respond to challenges. Additionally, the sprint burndown chart helps monitor whether the team is on track to finish the planned work within the sprint or project timeline.

Table 19 shows the sprint review, which is the document that summarizes the outcomes of each sprint for the project. It is a tool that not only tracks tasks but also records feedback to evaluate progress and guide improvements in subsequent sprints.

Table 19

Sprint Review (Source: Author)

SPRINT REVIEW			
<u>Project:</u> Construction of the Victoria School for Special Education Project.		<u>Date:</u>	
Sprint 01 - Creating EOI document		Sprint Duration: 0.55 months	
<u>Sprint Goal:</u> To successfully create an EOI document and upload it on at least 3 advertising platforms.			
Sprint ID	Task Name	Demo	Status
S01	Create the EOI document and submit it to the project manager.	Yes	Completed – existing EOI template helped speed up the process.
S02	Review the EOI document and submit it to CDB for review and approval.	No	Completed

SPRINT REVIEW			
S03	Upload to platforms.	Yes	Completed – the team member was on sick leave; therefore, this took longer to complete.
Sprint 02 – Creating a matrix for shortlisting applicants		Sprint Duration: 0.50 month	
<u>Sprint Goal:</u> To successfully prepare the matrix document and get it approved by CDB.			
Sprint ID	Task Name	Demo	Status
S04	Create the evaluation matrix and submit it to the project manager for review.	Yes	Completed – this was completed on time since there were samples from previous cycles.
S05	Review the evaluation matrix and submit it to CDB for review and approval.	No	Completed
Sprint 3 – Shortlisting of the applicants		Sprint Duration: 0.80 month	
<u>Sprint Goal:</u> To successfully shortlist atleast 3 applicants.			
Sprint ID	Task Name	Demo	Status
S06	Evaluate the applicants.	Yes	Completed
S07	Prepare an evaluation for the shortlisting of applicants.	No	Completed
S08	Review the evaluation report and submit it to CDB.	No	Completed
Sprint 04 – Evaluation of shortlisted applicants		Sprint Duration: 0.90 month	
<u>Sprint Goal:</u> To successfully select the most suitable consultant.			
Sprint ID	Task Name	Demo	Status
S09	Create an official letter requesting proposals.	No	Completed
S10	Review and submit the letter to CDB for review and approval.	No	Completed
S11	Evaluate the proposals submitted	No	Completed – got 5 persons from different ministries to assist with the evaluation.
S12	Prepare the evaluation report and submit it to the project manager for review.	Yes	Completed – samples from previous cycles helped in the preparation of the document.
S13	Review the evaluation report.	No	Completed

SPRINT REVIEW			
S14	Submit the evaluation report to PPB for approval.	No	Completed – PPB required additional information, which extended the evaluation period.
S15	Submit the evaluation report to CDB for approval.	No	Completed
Sprint 05 – Onboarding the consultant		Sprint Duration: 0.75 month	
<u>Sprint Goal:</u> To successfully sign a contract with a consultant and get him/her onboard.			
Sprint ID	Task Name	Demo	Status
S16	Prepare the contract document.	Yes	Completed – was completed on time.
S17	Review and submit to CDB for review and approval.	No	Completed
Sprint 06 – Review of planning documents		Sprint Duration: 1 month	
<u>Sprint Goal:</u> To successfully review and approve submittals from the consultant.			
Sprint ID	Task Name	Demo	Status
S18	Review of Inception Report	No	Completed
S19	Submit the inception report to CDB for approval.	No	Completed
S20	Review of the environmental and social plan.	No	Completed
S21	Submit the environmental and social plan to CDB for approval.	No	Completed
S22	Review of maintenance plan	No	Completed
S23	Submit the maintenance plan to CDB for approval	No	Completed
S24	Review of design report	No	Completed
S25	Submit design report to CDB for approval.		
Sprint 07 – Review and approval of Drawings		Sprint Duration: 1 month	
<u>Sprint Goal:</u> To successfully review and approve the architectural and structural drawings.			
Sprint ID	Task Name	Demo	Status
S26	Review of the architectural floor plan.	Yes	Completed – the layout was rearranged several times.
S27	Submit to CDB for approval.	No	Completed

SPRINT REVIEW			
S28	Review of all other architectural drawings.	Yes	Completed – details and other mission drawings were requested.
S29	Submit to CDB for approval.	No	Completed
S30	Review of all structural drawings.	Yes	Completed
S31	Submit to CDB for approval.	No	Completed
S32	Prepare drawings and submit to the Planning Development Authority of Grenada	Yes	Completed
Sprint 08 – Preparation of tender documents		Sprint Duration: 0.40 months	
<u>Sprint Goal:</u> To successfully create the bidding document and upload it on at least 3 advertising platforms.			
Sprint ID	Task Name	Demo	Status
S33	Review of the bidding document prepared by the consultant.	Yes	Completed – the consultant was requested to make a few changes.
S34	Submission of the bidding document to CDB for approval.	No	Completed
S35	Upload documents to procurement platforms.	Yes	Completed
S36	Prepare and schedule a bid meeting	No	Completed – the meeting was held in the RDU office, and a site visit was held right after the meeting.
Sprint 09 – Selection of the contractor		Sprint Duration: 0.65 months	
<u>Sprint Goal</u> To successfully get all parties to sign the contract document and onboard the contractor.			
Sprint ID	Task Name	Demo	Status
S37	Review the evaluation report.	Yes	Completed
S38	Submit the evaluation report to PPB for approval.	No	Completed
S39	Submit the evaluation report to CDB for approval.	No	Completed
S40	Prepare the contract document.	Yes	Completed
S41	Review and submit to CDB for review and approval.	No	Completed
Sprint 10 – Implementation (monitoring)		Sprint Duration: 0.50 months	
<u>Sprint Goal</u> To ensure that the report aligns with the activities for the period.			

SPRINT REVIEW				
Sprint ID	Task Name	Demo	Status	
S42	Review the progress report and submit to CDB.	No	Completed	
Sprint 11 – Implementation (payments)		Sprint Duration: 1 month		
<u>Sprint Goal</u> To successfully make on-time and fair payments.				
Sprint ID	Task Name	Sprint ID	Task Name	
S43	Process the consultant’s payment.	Yes	Completed	
S44	Process the contractor’s payment	Yes	Completed	
Sprint 12 – Completion		Sprint Duration: 1 month		
<u>Sprint Goal</u> To successfully close the project.				
Sprint ID	Task Name	Sprint ID	Task Name	
S45	Review the inspection report	No	Completed	
S46	Review and approve the completion report.	Yes	Completed	
S47	Submit the competition report to CDB for approval	No	Completed	
<u>Key Outcomes:</u> EOI published on 3 platforms. Received 7 applications, which were shortlisted to 3 qualified firms for the consultancy. All three (3) consultant firms submitted financial and technical proposals on time. The evaluation report was completed and no objection was given by both PPB and CDB. The contract document was approved by CDB and signed within fourteen (14) days of approval. The inception report, Environmental and Social Management plan, and maintenance plans were submitted as one draft since they met the requirements of the CDB. The architectural and structural drawings were completed within the seven-month period and were approved by CDB. The tender documents were prepared within the stipulated period and were advertised on at least three (3) platforms. Received five (5) tenders. The lowest substantial bidder met most of the requirements. All the construction works were not completed within the stipulated timeframe.				
<u>Sprint Metrics</u>				
	Matric	Target	Actual	Status
	Number of EOI Platforms	3	3	met
	Qualified firms shortlisted	3	3	met
	Proposals received from shortlisted firms	3	3/3	met

SPRINT REVIEW				
	Contract signing	28 days after no objection	15 days	met
	Approval of reports (inception, ESMP, Maintenance plan)	3 months after the start date	4 months after the start date	Not met
	Completion and approval of architectural and structural drawings	7 months	8 months	Not met
	Preparation of Tender document	1 month	1.5 months	Not met
	Number of platforms to advertise	3	4	met
	Number of bidders	10	7	Not met
	Contract signing	28 days after no objection	35 days after no objection	Not met
	Construction of the facility	12 months	13 months and going	Not met
	Process Payment Certificates	24	5	met
	<u>Stakeholder Feedback</u> No stakeholder feedback			
	Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>	Date: 29 April 2025		

Error! Reference source not found. shows the sprint retrospective is a document that captures reflection from each sprint in terms of improvements, actionable steps, and achievements. This tool also promotes continuous learning and process enhancements for future sprints.

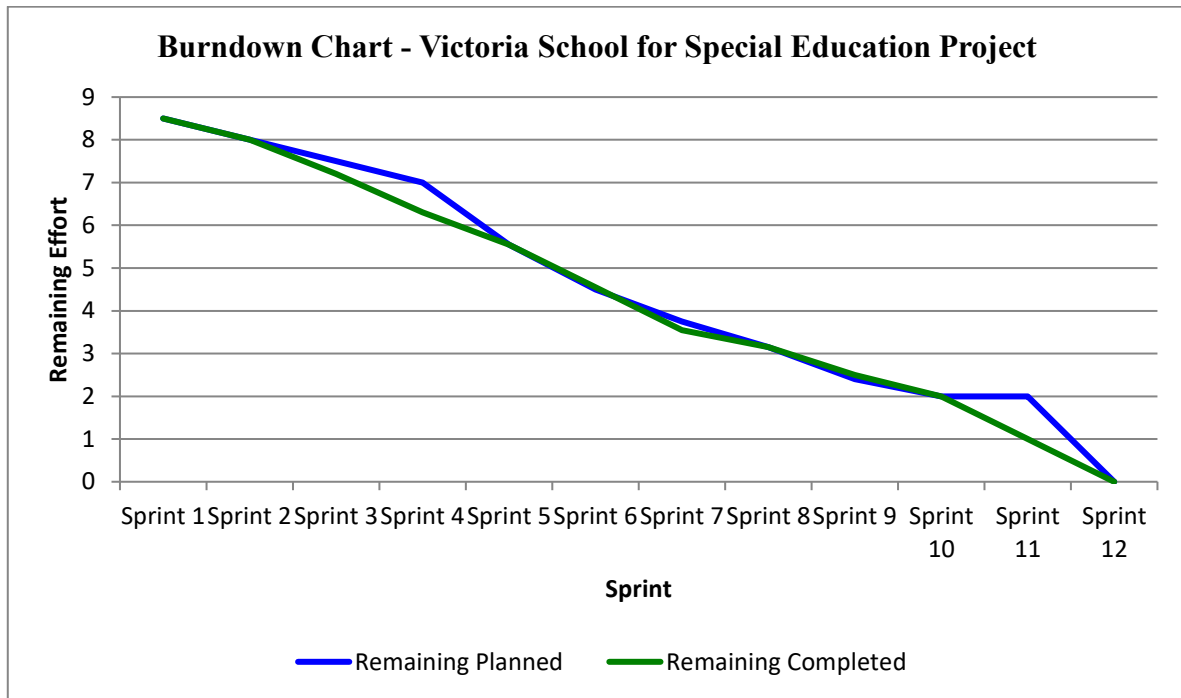
Table 20*Sprint Retrospective (Source: Author)*

SPRINT RETROSPECTIVE	
<u>Project:</u> Construction of the Victoria School for Special Education Project.	<u>Date:</u>
Sprint 01 - Creating EOI document	
<u>What went well?</u> Publishing the EOI very early helped attract enough qualified firms.	
<u>What Could Be improved?</u> N/A	
<u>Action Items for Improvement:</u> N/A	
Sprint 02 – Creating a matrix for shortlisting applicants	
<u>What went well?</u> The use of a simplified scoring matrix made the evaluation process a lot faster and reduced debates.	
<u>What Could Be improved?</u> N/A	
<u>Action Items for Improvement:</u> N/A	
Sprint 3 – Shortlisting of the applicants	
<u>What went well?</u> The email was sent before the time.	
<u>What Could Be improved?</u> A follow-up call could be made to shortlisted firms to ensure that the request for proposal was delivered.	
<u>Action Items for Improvement:</u> Add auto-reminder emails in procurement communication.	
Sprint 04 – Evaluation of shortlisted applicants	
<u>What went well?</u> Involving cross-department evaluators brought diverse perspectives, enhancing the fairness of the selection process.	
<u>What Could Be improved?</u> A list of vetted persons could be prepared in advance to speed up the process of recruiting evaluators.	
<u>Action Items for Improvement:</u> Add auto-reminder emails in procurement communication.	
Sprint 05 – Onboarding the consultant	

SPRINT RETROSPECTIVE
<u>What went well?</u> The contract was signed early because there was a template that expedited the preparation of the document.
<u>What Could Be improved?</u> N/A
<u>Action Items for Improvement:</u> Prepare an onboarding checklist to streamline the consultant induction process.
Sprint 06 – Review of planning documents
<u>What went well?</u> The consultant submitted high-quality documents that required minimal revisions.
<u>What Could Be improved?</u> The internal review took longer than expected due to an overworked team member.
<u>Action Items for Improvement:</u> Set up internal deadlines ahead of CDB submission dates to allow buffer time.
Sprint 07 – Review and approval of Drawings
<u>What went well?</u> The use of shared folders allowed for collaboration during drawing revisions.
<u>What Could Be improved?</u> Feedback cycles were prolonged because comments were not always put together before sending to the consultant.
<u>Action Items for Improvement:</u> Assign a person to track drawing feedback timelines.
Sprint 08 – Preparation of tender documents
<u>What went well?</u> The consultant used an existing template; therefore, minimal revision was required.
<u>What Could Be improved?</u> N/A
<u>Action Items for Improvement:</u> N/A
Sprint 09 – Selection of the contractor
<u>What went well?</u> Templates for evaluation existed, which helped expedite the process.
<u>What Could Be improved?</u> Advertising outside of the platforms, since limited contractor visits the platforms.
<u>Action Items for Improvement:</u> Create a list of vetted contractors to whom the documents can be sent.
Sprint 10 – Implementation (monitoring)
<u>What went well?</u> Regular site meetings kept stakeholders informed and allowed for real-time issue resolution.
<u>What Could Be improved?</u> Meeting minutes were sometimes delayed, affecting follow-up actions.
<u>Action Items for Improvement:</u>

SPRINT RETROSPECTIVE	
Introduce a task-tracking board to monitor follow-ups from site meetings.	
Sprint 11 – Implementation (payments)	
<u>What went well?</u> The payments were delivered the first week of every month, which reduced the need for constant emails requesting payments.	
<u>What Could Be improved?</u> N/A	
<u>Action Items for Improvement:</u> N/A	
Sprint 12 – Completion	
<u>What went well?</u> The third Wednesday of each month was scheduled for site inspection, which reduced confusion and the need for constant scheduling of emails.	
<u>What Could Be improved?</u> N/A	
<u>Action Items for Improvement:</u> N/A	
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>	Date: 29 April 2025

Figure 20 is a visual project management tool used to track the amount of work remaining against time. It plots the total effort against the sprint duration, which allows the team to quickly see whether they are on track to meet their goal. The tool improves flexibility and responsiveness by highlighting deviations early, enabling the team to re-prioritize tasks and solve blockers promptly. It also enhances transparency for all stakeholders as the chart clearly communicates progress and expected completion trends.

Figure 20*Burndown Chart*

5.4.4 Risk management

The risk management plan is developed and is used to identify risk early with predefined mitigation strategies, which can allow the team to respond swiftly to unexpected changes without disrupting the schedule (**Error! Reference source not found.**). This tool not only helps minimize delays but also reduces cost overruns and prevents disruptions to the project schedule. Additionally, it helps the team to respond to unexpected changes at a quick rate with confidence, maintaining project continuity.

Table 21*Risk Management Plan (Source: Author)*

RISK MANAGEMENT PLAN				
<u>Project:</u>				<u>Date:</u>
Sprint 01 - Creating EOI document				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R01	Less than 3 qualified firms responded to the EOI.	Low	High	Inform a vetted local consultant.
Sprint 02 – Creating a matrix for shortlisting applicants				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R02	Incomplete evaluation criteria	Low	Medium	Double-check with the previous cycle's approved matrices before submission.
Sprint 3 – Shortlisting of the applicants				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R03	Delays due to team availability.	Medium	Medium	Schedule evaluation sessions in advance with confirmed availability.
Sprint 04 – Evaluation of shortlisted applicants				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R04	Disagreement among evaluators	Medium	Medium	Hold a consensus meeting before the evaluation.
Sprint 05 – Onboarding the consultant				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R05	Contract negotiation delays	Medium	High	Prepare a contract draft in advance and clearly define the terms early.
Sprint 06 – Review of planning documents				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R06	Consultant delays in the submission of the documents	High	High	Include penalties for delays in submission deadlines in the contract.

RISK MANAGEMENT PLAN				
R07	Multiple rounds of revision required	High	Medium	Hold pre-submission meetings to align expectations.
Sprint 07 – Review and approval of Drawings				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R08	Frequent layout changes	High	High	Lock design decisions after CDB sign-off.
R09	PDA requests additional information	Medium	High	Engage with PDA early for preliminary feedback.
Sprint 08 – Preparation of tender documents				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R10	Delay in the consultant making the requested changes	Medium	Medium	Agree on revision deadlines with the consultant.
Sprint 09 – Selection of the contractor				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R11	Delay in signing by the contractor	Medium	Medium	Set clear deadlines and follow up daily if needed.
Sprint 10 – Implementation (monitoring)				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R12	Delay in reporting from the consultant	Medium	Medium	Send monthly email reminders 1 week before the submission deadline.
Sprint 11 – Implementation (payments)				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R13	Payment disputes	Low	High	Maintain detailed records of deliverables and approvals.
Sprint 12 – Completion				
ID	Risk	Probability of Risk	Impact	Mitigation plan
R14	Discrepancies in the completion report	Medium	Medium	Cross-verify the report with records, which include progress reports and inspection results.
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>			Date: 29 April 2025	

5.4.5 Communication Management Phase

In this phase, the communication management plan is developed and used to ensure the clear flow of information among the project stakeholders. Table 22 outlines how information is shared among key stakeholders on the project. This improves responsiveness because it enables rapid feedback and quick decision-making.

Table 22

Communication Management Plan (Source: Author)

COMMUNICATION MANAGEMENT PLAN			
<u>Project:</u> Construction of the Victoria School for Special Education Project.			<u>Date:</u>
Stakeholder	Information Type	Frequency	Channel;
CDB officials	Progress update	monthly	Presentation
BNTF Team	Progress update	Weekly	Email
Ministry of Education	Milestone reports	Bi-weekly	Report
Community and school	General project update	Monthly	Site meeting
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>		Date: 29 April 2025	

5.4.6 Closing Phase

This is the final stage of the project, where information about the project is gathered in order to improve future projects, as depicted in Table 23. The information gathered includes lessons learned, challenges, and opportunities.

Table 23*Project Closure (Source: Author)*

PROJECT CLOSURE	
<u>Project:</u> Construction of the Victoria School for Special Education Project.	<u>Date:</u>
Sprint 01 - Creating EOI document	
<u>Key Achievement:</u> The EOI was published early, which attracted a strong pool of qualified firms.	
<u>Challenges:</u> None Identified.	
<u>Opportunities:</u> Maintain an early publication strategy in the future to maximize the number of responses.	
<u>Lessons Learned:</u> Early visibility is critical for attracting quality applicants.	
Sprint 02 – Creating a matrix for shortlisting applicants	
<u>Key Achievement:</u> Introduced a simplified scoring matrix, which accelerated the evaluation process and reduced debates among evaluators.	
<u>Challenges:</u> None Identified.	
<u>Opportunities:</u> Use this simplified matrix as a guide for future projects.	
<u>Lessons Learned:</u> Clear and concise scoring tools improve decision-making efficiency.	
Sprint 3 – Shortlisting of the applicants	
<u>Key Achievement:</u> Emails were sent ahead of the scheduled time.	
<u>Challenges:</u> None Identified.	
<u>Opportunities:</u> Use follow-up calls to improve communication reliability.	
<u>Lessons Learned:</u> None identified.	
Sprint 04 – Evaluation of shortlisted applicants	
<u>Key Achievement:</u> The use of evaluators in different departments enhanced fairness.	
<u>Challenges:</u> The lack of a vetted evaluator list slowed the process.	
<u>Opportunities:</u> Create and maintain a pool of vetted evaluators.	

PROJECT CLOSURE
<u>Lessons Learned:</u> Prepared evaluators are key to efficiency.
Sprint 05 – Onboarding the consultant
<u>Key Achievement:</u> The use of existing templates helps with early preparation and signing of the contract document..
<u>Challenges:</u> None identified.
<u>Opportunities:</u> None identified.
<u>Lessons Learned:</u> Existing templates save time and ensure consistency.
Sprint 06 – Review of planning documents
<u>Key Achievement:</u> Consult’s document was of high quality, requiring minimal revision.
<u>Challenges:</u> Internal review is delayed due to the workload on a single team member.
<u>Opportunities:</u> Build an internal buffer into the timeline to accommodate workloads.
<u>Lessons Learned:</u> None identified.
Sprint 07 – Review and approval of Drawings
<u>Key Achievement:</u> The shared folder helped with faster review of the documents.
<u>Challenges:</u> None Identified.
<u>Opportunities:</u> None identified.
<u>Lessons Learned:</u> Tools such as shared folders improve efficiency.
Sprint 08 – Preparation of tender documents
<u>Key Achievement:</u> The use of an existing template minimized revisions.
<u>Challenges:</u> None identified.
<u>Opportunities:</u> Continue to maintain and update templates for similar projects.
<u>Lessons Learned:</u> The use of well-developed templates improves efficiency.
Sprint 09 – Selection of the contractor
<u>Key Achievement:</u> Evaluation templates expedited contractor selection.
<u>Challenges:</u>

PROJECT CLOSURE	
Limited contractors' reach due to reliance on a few advertising platforms.	
<u>Opportunities</u> Build a vetted contractor list and expand advertising channels.	
<u>Lessons Learned:</u> Wider outreach ensures greater competition and better selection.	
Sprint 10 – Implementation (monitoring)	
<u>Key Achievement:</u> The monthly site meeting keeps all relevant stakeholders updated.	
<u>Challenges:</u> None identified.	
<u>Opportunities</u> None identified.	
<u>Lessons Learned:</u> Timely submission of meeting minutes is critical for resolving issues.	
Sprint 11 – Implementation (payments)	
<u>Key Achievement:</u> Payment delivery in the first week of each month helps with efficiency by dedicating that week for payment processing.	
<u>Challenges:</u> None identified.	
<u>Opportunities</u> None identified.	
<u>Lessons Learned:</u> None identified.	
Sprint 12 – Completion	
<u>Key Achievement:</u> The fixed inspection schedule reduced confusion and scheduling conflicts.	
<u>Challenges:</u> None identified.	
<u>Opportunities</u> Apply fix scheduling to other recurring project activities.	
<u>Lessons Learned:</u> Fixed scheduling improved efficiency.	
Prepared by: <i>John Doe</i> <i>Project Manager</i> <i>RDU</i>	Date: 29 April 2025

6 CONCLUSION

1. After analyzing the results of this final graduation project, it was possible to reach the conclusion that a Scrum-based methodology can be applied to the BNTF programme in Grenada, which would improve flexibility, responsiveness, and overall project performance.
2. After doing an in-depth analysis of the existing methodology used in BNTF Grenada, it is clear and evident that BNTF Grenada continues to rely on the traditional (waterfall) project management approach, this proved to be the fundamental constraint within the programme as it limited the programme's ability to adapt to the evolving community needs and adapt to changes.
3. The analysis of the results provided a precise conclusion that resistance to change and poor team collaboration were the main contributors to the inability to respond swiftly to project demands.
4. The employees expressed low familiarity with Scrum, which indicated a significant gap in readiness; however, the willingness to learn provides a strong foundation for capacity building.
5. The lack of communication and team cohesion was further exacerbated with low levels of collaboration which created challenges that could negatively impact the implementation of the Scrum-based methodology.
6. The results also identified implementation and monitoring as the stage most in need of improvement, since at this stage, there were frequent delays and limited responsiveness to facilitate changes.

7. It can be concluded that the most common challenges faced by BNTF Grenada include delays in approvals, slow responsiveness to unforeseen risks, and external delays caused by consultants and contractors.
8. It was also analyzed that the programme was weak in responding to change. Due to rigid approval procedures and a lack of feedback loops which also contributed to slow reaction to evolving needs.
9. The results also indicated that the team displayed a willingness to learn and adapt to Scrum despite the team's limited exposure to its fundamentals and principles. As a result, this would provide a foundation for gradual implementation.
10. The analysis indicated that the majority of the respondents emphasized the need for workshops on Agile principles, which confirms that structured training would be key to a successful adaptation of the Scrum-based methodology.
11. Scrum templates have been developed in an effort to address the lack of flexibility and responsiveness. This will serve as the first step towards the implementation of Scrum into the BNTF Grenada programme.
12. The Scrum-based methodology was applied to an existing BNTF construction project to illustrate how effective it could be for the BNTF projects.

7 RECOMMENDATIONS

1. In order to support the introduction of a Scrum-based methodology in BNTF Grenada, a pilot project would have to be introduced using the Scrum principles such as sprints review and retrospective, which will allow the team to test adaptability before introducing it to the entire programme.
2. Since the traditional method is experiencing critical challenges, BNTF should integrate the traditional method with Scrum methodology to address some of the major challenges described and gradually move away from the traditional method.
3. Change management strategies should also be introduced to the programme to overcome resistance to change and poor collaboration. These strategies should include the introduction of leadership, awareness sessions and team-building activities.
4. Before introducing a Scrum-based methodology to the programme, addressing the low familiarity with Scrum through training and educating employees about Scrum fundamentals and principles would be proactive and essential.
5. Team building and collaboration activities should be implemented and prioritized before implementing Scrum in the programme. Since Scrum highly depends on team collaboration, the lack of team collaboration must be addressed to ensure effective adaptation of the methodology.

6. A digital project management tool should be introduced and fully utilized to strengthen implementation, compliance and monitoring, which will allow for iterative adjustments during execution.
7. In order to reduce execution challenges, strategies such as striker performance monitoring for both consultants and contractors, together with fast-track approval mechanisms should be introduced within the programme.
8. The willingness to learn can be leveraged by gradually introducing Scrum to BNTF with Scrum sessions every month, and having the team share what they have learned through team activities.
9. BNTF Grenada can partner with a recognized or certified Agile trainer to facilitate training using real BNTF projects as case studies.
10. The implementation and use of standardized templates across all BNTF projects will ensure that all team members are familiar with and can use them.
11. The case study can be used as a pilot to scale Scrum across other projects within the BNTF programme in Grenada.

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

8.1 Relationship of the project to the Sustainable Development Goals.

In the year 2015, hope for a better future was bursting across the globe. Leaders from 193 nations work together to set the Sustainable Development Goals (SDGs). This plan has 17 targets aimed at eradicating poverty, hunger, and combating climate change. This FGP took into account the following sustainability goals: quality education, decent job and economic growth, industrial innovation and infrastructure, and sustainable cities and communities.





The quality education sustainability aim assures inclusive and equitable quality education while also encouraging lifetime learning opportunities for all. The BNTF Grenada Programme finances and supervises infrastructure projects, including schools, and provides training. Agile practice encourages constant learning. Furthermore, the use of a Scrum-based approach helps improve project delivery, ensuring that educational infrastructure is finished on time, under budget, and to quality standards. Decent labor and economic growth encourage long-term, inclusive, and sustainable economic growth, full and productive employment, and decent jobs for all. The BNTF Grenada Programme promotes job development by hiring local workers and fostering entrepreneurship in construction and related services. One of the primary goals of Scrum is flexibility and responsiveness, which can help to optimize job prospects by eliminating project delays. Furthermore, implementing the Scrum-based methodology will increase project success rates, boosting economic growth by ensuring financing is used properly to provide











sustainable development prospects.

Industry innovation and infrastructure contribute to robust infrastructure, promote inclusive and sustainable industrialization, and encourage innovation. Many BNTF projects include infrastructure construction, such as school buildings, roads, etc. Agile project management improves stakeholder collaboration, ensuring that infrastructure projects are designed to meet the demands of the community and be sustainable. The Scrum technique promotes innovation by allowing teams to swiftly adapt to changes and apply new solutions to infrastructure concerns.

Sustainable cities and communities help to make cities and human settlements more inclusive, safe, resilient, and sustainable. The BNTF Programme intends to fund critical initiatives that will help to build resilient, inclusive, and sustainable communities. Agile approaches, particularly Scrum, foster stakeholder participation and feedback loops, ensuring that projects are suited to local needs and promoting sustainable urban and rural development.

8.2 Analysis of the project according to Standard P5

People Impacts									
Subcategory	Labor Practices and Decent Work	Lens	Scored?	Description (Cause)	Potential Sustainability Impact	Initial Impact Score	Proposed Response	New Impact Score	Change
Element	Definition								
 Employment and Staffing	Employment and staffing is the process of obtaining the personnel needed to carry out the project. It includes identifying the skills required for successful completion of the project, recruiting potential individuals	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
 Labor Management Relations	Labor/management relations in the project context means building trust, understanding, and cooperation among project and other managers, organizational staff, and project team members. It involves respecting each other's opinions, resolving conflicts proactively, communicating clearly, and ensuring that everyone is aware of their roles and responsibilities.	Lifespan		Labour-management relations evolve throughout the project lifecycle, from initiation to closure. Inconsistent engagement strategies can lead to misunderstandings and conflicts at various stages of a project.	Poorly managed relations can result in decreased team cohesion, project delays, and reduced quality of outcomes, ultimately affecting the programme's sustainability.		Implementation of a structured engagement plan that includes regular communication, collaborative decision-making, and conflict resolution mechanisms throughout all project phases.		
		Servicing		Inadequate support systems for addressing labour-management issues can lead to unresolved conflicts and dissatisfaction among team members.	Lack of effective servicing mechanisms may cause high turnover rates, loss of institutional knowledge, and diminished project performance.		Established comprehensive support structures, such as clear grievance procedures, regular feedback sessions, and access to mediation services, to address and resolve issues promptly.		
		Effectiveness							
		Efficiency							
		Fairness							
 Project Health and Safety	Project health and safety is the practice of creating safe working conditions for personnel involved in the project. It involves implementing measures such as hazard assessment, risk management, training,	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Training and Qualifications	Training and qualifications is the process of ensuring that project team members have the necessary skills to effectively complete their work. It involves providing instruction, assessing proficiency, monitoring performance, and offering guidance.	Lifespan	yes	Training programs that are not aligned with the project may lead to skill gaps at critical phases, resulting in decreased team performance and project delay.	Implementing training that evolves with the project ensures that team members possess relevant skills at each stage, enhancing adaptability and long-term project success.	2	Develop a continuous learning framework that aligns training initiatives with the project's phase, ensuring that team members acquire and update skills pertinent to each stage.	3	1
		Servicing	yes	Insufficient support and resources for training can hinder the practical application of new skills, leading to underperformance and decreased morale among team members.	Providing adequate support services, such as mentoring and access to learning materials, facilitates the effective application of skills, leading to improved project outcomes and employee satisfaction.	3	Establish comprehensive support structure, including mentorship programs and readily accessible training resources, to assist team members in applying their skills effectively.	4	1
		Effectiveness	yes	Generic training programs that do not address the specific needs of the project can result in inefficiencies and lack of preparedness among team members.	Tailoring training to the project's unique requirements enhances team competency, leading to higher-quality deliverables and increased stakeholder confidence.	2	Customize training content to reflect the specific challenges and objectives of the BNTF Programme, ensuring that team members are equipped with relevant skills and knowledge.	3	1
		Efficiency	yes	Inefficient training delivery methods can lead to wasted resources, such as time and funds, without achieving the desired competency levels among team members.	Efficient training methods optimized resource utilization, enabling team members to acquire necessary skills promptly and cost-effectively, thereby enhancing overall project performance.	2	Utilize modern training techniques, such as e-learning and interactive workshops, to deliver content effectively while minimizing costs and time commitment.	3	1
		Fairness	yes	Unequal access to training opportunities can create disparities in skill levels, leading to tensions within the team and potential project inefficiencies.	Ensuring equitable access to training promotes an inclusive environment, fostering collaboration and a cohesive team dynamic that supports project success.	3	Implement policies that guarantee all team members have equal opportunities to participate in training programs, thereby promoting fairness and inclusivity within the project team.	3	0
 Organizational Learning	Organizational learning is a form of knowledge management in which organizational components and individual employees are encouraged to capture, share, and apply their knowledge. This	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Equal Opportunity	Equal opportunity is the practice of providing individuals with access to jobs, opportunities, and responsibilities based on their qualifications regardless of gender	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							

 Community Engagement	<p>Community engagement is the practice of treating local residents as stakeholders in the project. This is essential as it ensures that local needs and perspectives are taken into consideration when taking any action that affects the community. It also requires a two-way exchange of information and ideas between the project team and the community to make the project more effective, efficient, and beneficial for all involved.</p>	Lifespan	yes	Limited community involvement throughout the project lifecycle can lead to a disconnect between project objectives and the evolving needs of the community.	Engaging the community at all stages ensuring that projects remain relevant and sustainable, forecasting long-term support and adaptability to changing circumstances.		Implement a structured engagement plan that involves community stakeholders from initiation to closure, ensuring their insights and feedback shape project evolution.		
		Servicing	no	N/A	N/A	N/A			
		Effectiveness	yes	Project designed without substantial community input may overlook critical local factors, leading to solutions that are impractical or unsustainable.	Incorporating community knowledge and preferences enhances project relevance and effectiveness, leading to higher success rates and community satisfaction.		Conduct participatory workshops and consultations during the planning phase to integrate community insights into project design and implementation.		
		Efficiency	yes	Lack of community engagement can lead to resource misallocation, as projects may invest in areas that are not prioritized by the community.	Engaging the community helps identify priority areas, ensuring that resources are utilized effectively and efficiently, maximizing project impact.		Collaborate with community representatives to identify and prioritize needs, ensuring resource allocation aligns with actual community priorities.		
		Fairness	yes	Excluding certain community groups from the engagement process can result in inequitable project benefits and exacerbate existing social disparities.	Inclusive engagement promotes equitable distribution of project benefits, fostering social cohesion and reducing inequalities.		Develop inclusive engagement strategies that ensure representation from all community segments, particularly marginalized or vulnerable groups.		
 Public Policy and Compliance	<p>Public policy and compliance includes the steps taken by the project team to ensure that the project complies with all relevant laws and regulations. This involves researching relevant laws and regulations,</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Protection for Indigenous and Tribal Peoples	<p>Protection for indigenous and tribal peoples includes the measures taken to ensure the rights and wellbeing of affected populations over the course of the project. This includes protection of their culture, land use rights,</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Customer Health and Safety	<p>Customer health and safety includes the measures taken to ensure the physical and mental wellbeing of the end users of the project's results. This includes providing information about risks and hazards, proper</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Product and Service Labeling	<p>Product and service labeling includes procedures used to ensure that goods and services are accurately labeled according to legal and ethical standards. This includes properly disclosing potential risks, hazards,</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Customer Privacy and Data Protection	<p>Customer privacy and data protection encompasses the measures taken to safeguard customer data such as personal information or financial details. It includes providing secure storage facilities and</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
Subcategory	Human Rights								
Element	Description	Lens	Scored?	Description (Cause)	Potential Sustainability Impact	Impact Score Before	Proposed Response	Impact Score After	Change
 Harassment and Discrimination	<p>Harassment and discrimination involves the measures adopted to ensure a safe, respectful, and non-discriminatory workplace environment. This includes developing policies that protect employees from unjust treatment, creating an inclusive environment, implementing effective reporting procedures for instances of inappropriate behavior, and providing sufficient training for management on how to handle such issues.</p>	Lifespan	yes	Persistent harassment and discrimination can lead to high staff turnover, disrupting project continuity and institutional knowledge retention.	A high turnover rate can compromise project timelines and outcomes, leading to increased recruitment and training costs.		Implement comprehensive anti harassment and anti-discrimination policies from the project's inception, ensuring they are upheld throughout its duration.		
		Servicing	no						
		Effectiveness	yes	A workplace culture tolerating harassment and discrimination can lower employee morale and productivity.	Decreased productivity can hinder project milestones, leading to delays and subpar deliverables.		Establish clear reporting mechanisms and support systems for victims, promoting a culture of accountability and support.		
		Efficiency	yes	Addressing incidents of harassment and discrimination reactively can divert resources and attention from core project activities.	Reactive measures can lead to increased operational costs and project inefficiencies.		Conduct regular training sessions on diversity, equity, and inclusion to proactively prevent incidents and foster a respectful workplace.		
		Fairness	yes	Unaddressed harassment and discrimination can create an inequitable work environment, favoring certain groups over others.	Perceived or actual inequities can lead to grievances, legal challenges, and reputational damage.		Develop and enforce a zero-tolerance policy for harassment and discrimination, ensuring fair treatment and equal opportunities for all team members.		
 Age-Appropriate Labor	<p>Age-appropriate labor means ensuring that children are not put in dangerous or exploitative situations while still allowing them to develop essential job skills. It is used to describe work suitable for a</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Forced and Involuntary Labor	<p>Forced and involuntary labor means any work or service that is extracted from a person under the menace of punitive action against themselves or their families. It includes work where the payment is below</p>	Lifespan							
		Servicing							
		Effectiveness							
		Efficiency							
		Fairness							
 Dignity, diversity, equity, and inclusion (DDEI)	<p>Dignity, diversity, equity, and inclusion (DDEI) is a set of values, principles, and</p>	Lifespan							
		Servicing							

8.3 Relationship of the project to the dimensions of Regenerative Development

Regenerative development focuses on creating systems that restore and revitalize their own energy and material sources, fostering a harmonious relationship between human activities and the natural environment. The development dimensions are environmental, social, economic, political, cultural, and spiritual.

The environmental dimension of regenerative development focuses on the restoration and enhancement of natural systems. The BNTF Grenada Programme can increase project management efficiency by using a Scrum methodology, resulting in better-planned and performed infrastructure projects. This efficiency can help to reduce resource waste and environmental damage, so contributing to the long-term viability of natural systems. As projects become more adaptable, there is more opportunity to incorporate environmentally friendly practices, including sustainable material choices, energy-efficient designs, and waste reduction techniques (PMI, 2021). By aligning the regenerative development principles with the BNTF Grenada Programme, the programme can ensure that its construction projects meet community needs while actively protecting the environment.

The social dimension aims to build egalitarian and resilient communities. Scrum encourages cooperation and continual stakeholder engagement, ensuring that community members are actively involved throughout the project's lifecycle. This participative strategy strengthens communities by incorporating their views and effectively resolving local issues, resulting in increased social cohesiveness. Scrum's iterative process enables ongoing modification, which is crucial for sustaining inclusivity and creating confidence between

project teams and the community (Schwaber & Sutherland, 2020). Increased social participation not only boosts project acceptance, but it also builds community resilience over time.

Economic sustainability in regenerative development entails building financially feasible structures that promote long-term prosperity. Scrum's iterative nature enables adaptive planning and efficient resource allocation, thereby lowering costs and increasing economic advantages for the BNTF Grenada Programme. Projects can provide considerable economic returns by selecting high-impact activities and constantly optimizing resource allocation. This strategy also allows for better administration of public funds, ensuring that investments are maximized to produce long-term growth in local areas (Kerzner, 2017).

The political dimension includes governance, transparency, and accountability in project management. Implementing Scrum-based approaches in BNTF projects promotes open communication channels and participatory decision-making processes, which are critical for good governance. Regular sprint reviews and stakeholder meetings ensure that choices are public, lowering the possibility of political meddling and corruption. As a result, these approaches serve to foster trust among government entities, donors, and the community, resulting in better policy alignment and more resilient project outcomes (PMI, 2021). By incorporating Scrum concepts into its operations, the BNTF can enhance transparency, thereby guaranteeing that development initiatives are reliable and sustainable over the long term.

Thus embedding Scrum principles into its processes, the BNTF can strengthen political accountability and transparency, ensuring that development projects are both trustworthy and sustainable in the long term.

The political dimension includes governance, transparency, and accountability in project management. Implementing Scrum-based approaches in BNTF projects promotes open communication channels and participatory decision-making processes, which are critical for good governance. Regular sprint reviews and stakeholder meetings ensure that choices are public, lowering the possibility of political meddling and corruption. As a result, these approaches serve to foster trust among government entities, donors, and the community, resulting in better policy alignment and more resilient project outcomes (PMI, 2021). By using Scrum as part of its project Management framework, the BNTF programme can promote good governance by making the process transparent. This will also help long-term development.

Cultural sustainability focuses on respecting and incorporating local traditions, values, and norms into project development and execution. A Scrum-based strategy, with an emphasis on iterative feedback and localized adaptation, enables project teams to tailor approaches to specific cultural situations. For example, including local leaders in sprint reviews ensures that project outcomes are consistent with cultural expectations and traditions. This integration not only enhances project relevance but also develops a sense of ownership among community members, which is critical for long-term success.

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10 APPENDICES

Appendix 1: FGP Charter

CHARTER OF THE PROPOSED FINAL GRADUATION PROJECT (FGP)

1. Student name

Lee Phillip


2. FGP name

The Development of an Agile (Scrum-based) Methodology for managing projects in the Basic Needs Trust Fund (BNTF) Programme Grenada.

3. Application Area (Sector or activity)

Construction

4. Student signature



5. Name of the Graduation Seminar facilitator

Carlos Brenes Mena

6. Signature of the facilitator

7. Date of charter approval

8. Project start and finish date

18 th February, 2025	07 th April, 2025
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9. Research question

How can Agile project management principles be adapted to enhance the flexibility, responsiveness, and enhanced performance of BNTF Grenada projects.

10. Research hypothesis

Does the application of Agile project management principles, such as Scrum, improve the flexibility, responsiveness, and performance of BNTF projects when compared to traditional project management approaches?

11. General objective

To develop a Scrum-based methodology which can be applied to the BNTF programme Grenada to improve flexibility, responsiveness, and overall project performance.

12. Specific objectives

1. To develop a document that assesses the current project management practices within the BNTF programme in Grenada to identify challenges that hinder flexibility and responsiveness.
2. To develop a customized Scrum-based framework for BNTF Grenada to improve the flexibility, responsiveness, and performance of projects.
3. To create key templates that will ensure consistency, reduce errors, and save time.
4. To generate a case study to highlight the advantage of implementing a scrum-based methodology within BNFT Grenada.

13. FGP purpose or justification

- a. The public sector resources are not being used to their full potential; this problem will be addressed by implementing a scrum-based methodology.
- b. Since BNTF Grenada lacks standard project management templates, using one will guarantee uniformity among team members, which will ultimately boost productivity and project results.
- c. By developing an agile (Scrum-based) methodology specifically for BNTF Grenada projects, it will offer a framework that is both structured and flexible, allowing it to be scaled and copied across programmes of a similar nature.

- d. Agile is extensively utilized in IT and private sector projects, but its utilization in the public sector is not as well-known. By doing this, the gap in the public sector's knowledge base on agile will be filled.

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 (FGP)
- 1.0 FGP Charter
 - 1.1 Appendix 1 FGP Charter (Items 1 to 12)
 - 1.2 Appendix 4 Bibliographical research
 - 1.3 Deliverable 1: Submit for review
 - 1.4 Adjustment 1 (if necessary)
 - 1.5 Appendix 1 FGP Charter (Items 13 to 20)
 - 1.6 Appendix 2 FGP WBS
 - 1.7 Appendix 3 FGP Schedule
 - 1.8 Deliverable 2: Submit for review
 - 1.9 Adjustment 1 (if necessary)
 - 2.0 Theoretical framework
 - 2.1 Company/Enterprise Framework
 - 2.1.1 Mission and vision statement
 - 2.1.2 Organizational structure
 - 2.1.3 Product offer
 - 2.2 Project Management Concepts
 - 2.2.1 Project management principles
 - 2.2.2 Knowledge area and processes
 - 2.2.3 Project life cycle
 - 2.3 Deliverable 3: Submit for review
 - 2.4 Adjustment 3 (if necessary)
 - 2.5 Other applicable theories related to Scrum
 - 2.5.1 Current situation of problem
 - 2.5.2 Previous research done
 - 2.6 Deliverable 4: Submit for review
 - 2.7 Adjustment 4 (if necessary)
 - 3.0 Methodological framework
 - 3.1 Identify information sources
 - 3.1.1 Primary Sources
 - 3.1.2 Secondary Sources
 - 3.2 Define research methods
 - 3.3 Selection of research tools

- 3.4 Assumptions and constraints
- 3.5 Deliverable 5: Submit for review
- 3.6 Adjustment 5 (if necessary)
- 4.0 Results and Discussion
 - 4.1 Gather information on specific objectives.
 - 4.2 Development of Scrum-based methodologies
 - 4.3 Creation of templates
 - 4.4 Development of Case Study
 - 4.5 Assess research impact on regenerative and sustainable development
 - 4.6 Conclusion
 - 4.7 Recommendation
 - 4.8 Deliverable 6: Submit for review
 - 4.9 Adjustment 6 (if necessary)
- 5.0 Documentation and Final Submission
 - 5.1 Introduction
 - 5.1.1 Background
 - 5.1.2 Method Statement
 - 5.1.3 General objective
 - 5.1.4 Specific objective
 - 5.2 Abstract
 - 5.3 Executive Summary
 - 5.4 Reference List
 - 5.5 Annexes
 - 5.6 Other relevant information
 - 5.7 Deliverable 7: Submit for final review
 - 5.8 Adjustment 6 (if necessary)
 - 5.9 Tutor approval for reading
- 6.0 Reder Review
 - 6.1 Reader reviews document in its entirety
 - 6.2 Reader approves document
- 7.0 Board of Examiner Evaluation
 - 7.1 Final review by board
 - 7.2 FGP Grade Report.

15. FGP budget

Hardware fees (computer) - USD 300.00
 MS Suite (Word, Excel, Project)–USD 50.00
 Printing of documentation (Questionnaire) – USD 2.00
 Traveling fees – USD 10.00
 Contingency – USD 18.00

TOTAL FOR BUDGET – USD 380.00

16. FGP planning and development assumptions

<p>There is enough information for the development of the methodology for public sector projects.</p> <p>The chosen research methods will produce reliable information for the development of the FGP.</p> <p>An Agile (Scrum-based) methodology can be adapted to fit the structure of BNTF Grenada projects.</p> <p>The research time for the FGP will be at least 15 hours per week during the FGP development process.</p>
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17. FGP constraints

<p>Some information may be restricted due to organizational policies.</p> <p>The FGP's seven-week completion period may restrict the scope of data collecting and analysis.</p> <p>Due to their hectic schedules, key stakeholders from whom information is needed might not have much time for interviews.</p> <p>It's possible that important stakeholders are unfamiliar with the company structure due to them being fairly new members of the organization.</p>
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FGP development risks

<p>Key stakeholders are not yet previewed to the necessary information for the development of the FGP which can limit the analysis.</p> <p>Important information may be delivered late due to work commitments from key stakeholders.</p> <p>The organization may revoke the authorization given.</p> <p>Unforeseen event disrupts BNTF operation and as a result, key stakeholders become unavailable during the FGP duration causing delays in the deliverables.</p>
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18. FGP main milestones

Deliverable	Finish estimated date
1.0 FGP Charter	03 rd March 2025
1.1 Appendix 1 FGP Charter (Items 1 to 12)	19 th February 2025
1.2 Appendix 4 Bibliographical research	21 st February 2025
1.3 Deliverable 1: Submit for review	24 th February 2025
1.4 Adjustment 1 (if necessary)	04 February 2025
1.5 Appendix 1 FGP Charter (Items 13 to 20)	26 th March 2025
1.6 Appendix 2 FGP WBS	27 th March 2025
1.7 Appendix 3 FGP Schedule	28 th March 2025
1.8 Deliverable 2: Submit for review	03 rd March 2025
1.9 Adjustment 2 (if necessary)	10 th March 2025
2.0 Theoretical framework	21 st March 2025
2.1 Company/Enterprise Framework	04 th March 2025
2.2 Project Management Concepts	07 th March 2025
2.3 Deliverable 3: Submit for review	10 th March 2025
2.4 Adjustment 3 (if necessary)	14 th March 2025
2.5 Other applicable theories related to Scrum	14 th March 2025
2.6 Deliverable 4: Submit for review	17 th March 2025
2.7 Adjustment 4 (if necessary)	21 st March 2025
3.0 Methodological framework	28 th March 2025
3.1 Identify information sources (primary and secondary)	18 March 2025
3.2 Define research methods	19 th March 2025
3.3 Selection of research tools	20 th March 2025
3.4 Assumptions and constraints	21 st March 2025
3.5 Deliverable 5: Submit for review	24 th March 2025
3.6 Adjustment 5 (if necessary)	28 th March 2025
4.0 Results and Discussion	04 th April 2025
4.1 Gather information on specific objectives.	25 th March 2025
4.2 Development of Scrum-based methodologies	28 th March 2025
4.3 Creation of templates	28 th March 2025
4.4 Development of Case Study	28 th March 2025
4.5 Assess research impact on regenerative and sustainable development	27 th March 2025
4.6 Conclusion	28 th March 2025
4.7 Recommendation	28 th March 2025
4.8 Deliverable 6: Submit for review	31 st March 2025
4.9 Adjustment 6 (if necessary)	04 th March 2025
5.0 Documentation and Final Submission	11 th April 2025
5.1 Introduction	01 st April 2025
5.2 Abstract	01 st April 2025
5.3 Executive Summary	02 nd April 2025

5.4 Reference List	03 rd April 2025
5.5 Annexes	03 rd April 2025
5.6 Other relevant information	04 th April 2025
5.7 Deliverable 7: Submit for final review	07 th April 2025
5.8 Adjustment 6 (if necessary)	11 th April 2025
5.9 Tutor approval for reading	21 st April 2025
6.0 Readers review	28 th April 2025
6.1 Reader reviews document in its entirety	25 th April 2025
6.2 Reader approves document	28 th April 2025
7.0 Board of Examiners Evaluation	05 th May 2025
7.1 Final review by board	02 nd May 2025
7.2 FGP Grade Report.	05 th May 2025

19. Theoretical framework

19.1 Estate of the “matter”

In Grenada, the Basic Needs Trust Fund (BNTF) Programme is in charge of numerous educational and community advancements across the tri-island state. The BNTF Grenada culture uses the traditional waterfall approach, which has resulted in several delays and cost overruns over the years. According to recent research, despite the fact that client requirements and expectations are constantly changing, there has been no discernible improvement in the way construction projects are managed over the past few decades. As a result, the traditional management approach is unable to meet the demands of the rapidly changing market (Liu, 2018 #7). Instead of implementing a complete agile transformation, BNTF Grenada's initiatives concentrate on little, gradual changes, which results in a lack of efficiency and overall project performance improvement. This served as the impetus for this FGP, which suggested creating an Agile (Scrum-based) methodology for BNTF Grenada projects. This methodology would incorporate stakeholder participation, standardized templates, iterative planning, etc. Reduced delays and uncertainty, improvement in risk management, better resource allocation and use, increased beneficiary satisfaction, etc. are among the expected outcomes. In summary, this FGP will outline the benefits of applying Agile methodology to public sector project management and predict the potential future growth of an Agile framework for Grenada's public sector projects.

19.2 Basic conceptual framework

Project management Traditional versus Agile Project management

Project management knowledge area
 Project management processes
 Scrum framework
 Scrum roles
 Scrum artifacts
 Scrum events
 Project charter
 Risk management plan
 Scope management plan

20. Methodological framework

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
To develop a report on the current project management practices in BNTF Grenada.	Report on the current project management practices in BNTF Grenada.	Primary: survey, BNTF operational manual Secondary: Journals, Reports, etc.	Qualitative: Written information Analytical, survey, and case study	Questionnaire Interviews	Limited information available online.
To develop a Scrum-based methodology.	Scrum-based methodology.	Primary: Scrum guide Secondary: Reports, thesis	Qualitative: Written information Analytical, survey, and case study	Questionnaire Interviews	Information available is not on construction projects within the public sector.
Develop templates to be used in the Scrum-based methodology.	Templates	Primary: PMBok Guide 7 th Edition Secondary: Reports, thesis	Qualitative: Review of current templates Analytical, and survey	Questionnaire Interviews	Templates may differ from existing policies.

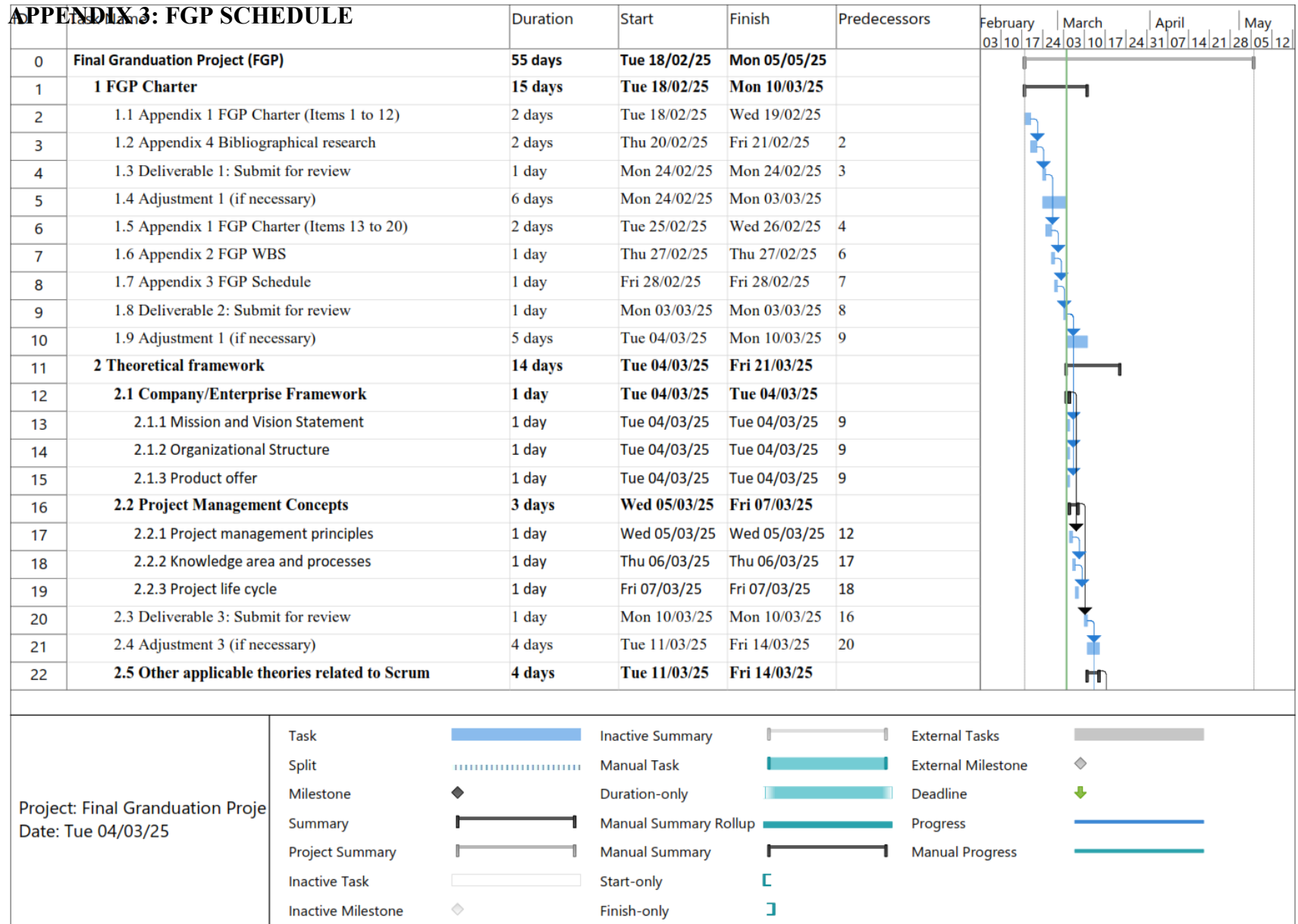
To develop a case study to show the advantage of the implementation of a Scrum-based methodology in BNTF Grenada.	Case Study showing the implementation of a Scrum-based methodology in BNTF Grenada	Primary: Interview and survey for the project team. Secondary: Previous case study, reports.	Case study	Interviews and feedback, kanban boards	Limited case study of similar nature.
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21. Validation of the work in the field of regenerative and sustainable development.

This FGP took into account the following sustainability goals: quality education, decent jobs and economic growth, industrial innovation and infrastructure, and sustainable cities and communities. Additionally, this FGP focuses on the five (5) development dimensions, which are environmental, social, economic, political, cultural, and spiritual.

Final Graduation Project (FGP)
0.00





ID	Task Name	Duration	Start	Finish	Predecessors	February	March	April	May
						03 10 17 24	03 10 17 24	31 07 14 21 28	05 12
23	2.5.1 Current situation of problem	2 days	Tue 11/03/25	Wed 12/03/25	20				
24	2.5.2 Previous research done	2 days	Thu 13/03/25	Fri 14/03/25	23				
25	2.6 Deliverable 4: Submit for review	1 day	Mon 17/03/25	Mon 17/03/25	22				
26	2.7 Adjustment 4 (if necessary)	4 days	Tue 18/03/25	Fri 21/03/25	25				
27	3 Methodological framework	9 days	Tue 18/03/25	Fri 28/03/25					
28	3.1 Identify information sources	1 day	Tue 18/03/25	Tue 18/03/25					
29	3.1.1 Primary Sources	1 day	Tue 18/03/25	Tue 18/03/25	25				
30	3.1.2 Secondary Sources	1 day	Tue 18/03/25	Tue 18/03/25	25				
31	3.2 Define research methods (quantitative, qualitative, or mix	1 day	Wed 19/03/25	Wed 19/03/25	28				
32	3.3 Selection of research tools	1 day	Thu 20/03/25	Thu 20/03/25	31				
33	3.4 Assumptions and constraints	1 day	Fri 21/03/25	Fri 21/03/25	32				
34	3.5 Deliverable 5: Submit for review	1 day	Mon 24/03/25	Mon 24/03/25	33				
35	3.6 Adjustment 5 (if necessary)	4 days	Tue 25/03/25	Fri 28/03/25	34				
36	4 Results and Discussion	9 days	Tue 25/03/25	Fri 04/04/25					
37	4.1 Gather information on specific objectives.	1 day	Tue 25/03/25	Tue 25/03/25	34				
38	4.2 Development of Scrum-based methodologies	3 days	Wed 26/03/25	Fri 28/03/25	37				
39	4.3 Creation of templates	3 days	Wed 26/03/25	Fri 28/03/25	37				
40	4.4 Development of Case Study	3 days	Wed 26/03/25	Fri 28/03/25	37				
41	4.5 Assess research impact on regenerative and sustainable development	2 days	Wed 26/03/25	Thu 27/03/25	37				
42	4.6 Conclusion	1 day	Fri 28/03/25	Fri 28/03/25	41				
43	4.7 Recommendation	1 day	Fri 28/03/25	Fri 28/03/25	41				
44	4.8 Deliverable 6: Submit for review	1 day	Mon 31/03/25	Mon 31/03/25	43				
45	4.9 Adjustment 6 (if necessary)	4 days	Tue 01/04/25	Fri 04/04/25	44				

Project: Final Graduation Proje
Date: Tue 04/03/25

Task		Inactive Summary		External Tasks	
Split		Manual Task		External Milestone	
Milestone		Duration-only		Deadline	
Summary		Manual Summary Rollup		Progress	
Project Summary		Manual Summary		Manual Progress	
Inactive Task		Start-only			
Inactive Milestone		Finish-only			

APPENDIX 4: PRELIMINARY BIBLIOGRAPHICAL RESEARCH

This is the process of compiling resources, both primary and secondary, which is relevant to the project. The primary sources include original data published, while secondary sources are summarized information based on the primary resources. The following are the list of primary and secondary sources.

Aroral, H. K. (2021). Waterfall Process Operations in the Fast-paced World: Project Management Exploratory Analysis

Banerjee, R. (2024). Scrum - Agile Project Management.

This document offers insights into Agile transformation across sectors, which will assist in guiding the transition process for BNTF's adoption of Scrum. Overall, it will assist in the development of the methodology.

Burger, M., & Zulch, B. (2018). A Construction Project Management Knowledge Model: The Type and Level of Knowledge Required.

This document identifies essential knowledge areas for effective project management in construction projects. Therefore, it will help develop standardized Scrum templates for the projects.

CDB. (2021). Basic Needs Trust Fund - Operations Manual. In.

This document will provide the official guidelines and framework for managing BNTF projects to date. Additionally, it provides the background and objectives of BNTF, which will help understand the purpose. Furthermore, it will assist in analyzing the current project management practices in BNTF.

Cristóbal, S., Fernández, & Diaz. (2018). An analysis of the Main Project Organizational Structures: Advantages, disadvantages, and factors affecting their Selection.

Gaur, S. (2023). Importance of Moving from Waterfall Methodology to Agile Methodology in Indian Construction Industry.

This demonstrates real-world benefits of transitioning to Agile and also provides a comprehensive example for a case study on BNTF projects.

Krishna, G., & Nisha, S. (2020). Implementation of Agile Management in Construction of Different Infrastructure Projects.

This document discusses Agile strategies for infrastructure projects and informs on creating templates for Scrum key elements. Overall, providing evidence of enhanced flexibility and responsiveness with agile methodology adaptation.

Liu, Y. (2018). Scrum in Construction Industry to Improve Project Performance in Design Phase.

This highlights Scrum roles that will enhance the performance of construction projects. It will also assist in demonstrating how Scrum can be used early in project planning. Therefore, assisting in the development of the Scrum-based framework.

Marques, J. A. L., Morais, J. J. B. d. R., Alves, J., & Gonçalves, M. (2023). Effectiveness Analysis of Waterfall and Agile Project Management Methodologies: A Case Study from Macau's Construction Industry.

This will provide comparable evidence of traditional waterfall versus agile methodology in the construction industry and also support the transition from

traditional methods to scrum-based project management. Overall, it will assist in analyzing the current project management practices in BNTF and develop the scrum-based framework for the organization.

Pacana, A., & Czerwińska, K. (2023). Analysis Of The Use Of Agile Methods, Tools And Techniques In Foundry Enterprises

This document highlights the key tools and techniques used in Agile methods, which is helpful for the development of the scrum-base methodology.

Rana, J., Brahmhatt, D. K., & Pitroda, D. J. R. (2021). Agile Application in Construction Industry.

This document provides a review on Agile implementation in construction; therefore will assist in the development of a case study to support Agile adaptation in BNTF projects.

Sassa, A. C., Almeida, I. A. d., Pereira, T. N. F., & Oliveira, M. S. d. (2023). Scrum: A Systematic Literature Review

This document synthesizes the best practices in Scrum application; therefore, will assist in refining Scrum-based documentation and standard operating procedures for BNTF projects.

Schwaber, K., & Sutherland, J. (2020). The Scrum Guide

This guide defines key scrum principles and framework and will also form the basis for customizing Scrum to fit BNTF's project needs regarding flexibility, responsiveness, and performance.

Silvius-Zuchi, D., & Silvius, G. (2024). Predictive, Adaptive and Hybrid Project Approaches.

Sudiarno, A., Abdillah, O., Yusdin, H. D., Ummatin, K. K., & Murti, I. W. (2024).

Effectivity analysis of the Scrum Framework Adaptation in Safety performance improvement: A system Dynamics Approach.

This document examines Scrum's impact on safety and operational efficiency.

Additionally, it provides evidence of Scrum's advantages in risk management.

Therefore, it will assist in creating key templates.

APPENDIX 5: OTHER RELEVANT INFORMATION

QUESTIONNAIRE FOR BNTF STAFF

1. How long have you been involved in BNTF projects?
 - Less than 1 year
 - 1 – 3 years
 - 4 – 6 years
 - More than 6 years
2. Which project management methodology does BNTF Grenada primarily use?
 - Traditional (waterfall)
 - Hybrid Approach
 - Agile or Scrum
3. How effective is the current project management approach in responding to changing community needs?
 - Very effective
 - Moderately effective
 - Somewhat effective
 - Not effective
4. Which stages of the current process need the most improvement? (Select all that apply)
 - Project identification and selection
 - Project planning and design
 - Implementation and monitoring
 - Completion
5. What are the key performance indicators (KPIs) used to measure project success?
 - Timely completion of projects
 - Budget adherence
 - Community satisfaction
 - Quality of deliverables
6. What are the most common challenges faced in project execution?
 - Delays in project approvals and decision-making
 - Rigid planning that does not allow for flexibility
 - Limited stakeholder engagement during execution
 - Inefficient resource allocation
 - Poor responsiveness to unforeseen risks
7. Do stakeholders such as consultants and contractors cause project delays?
 - Yes
 - No
 - Maybe
8. How quickly can the project team respond to unexpected changes?
 - Very slowly
 - Slowly

- Moderately fast
 - Very fast
- 9. What are the main obstacles to improving project flexibility?
 - Lack of clear communication channels
 - Resistance to change in management processes
 - Rigid approval processes
 - Limited training on adaptive project management
- 10. Does BNTF currently have mechanisms for continuous feedback and iteration?
 - Yes, feedback loops exist at all project stages
 - Some feedback mechanisms exist, but they are inconsistent
 - No formal feedback processes are in place
- 11. Have you previously worked with Agile or Scrum methodologies?
 - Yes, extensively
 - Yes, but only on a few projects
 - No, but I am familiar with the concepts
 - No, I am not familiar with Scrum
- 12. Which Scrum principles do you think would be most beneficial for BNTF? (select all that apply)
 - Sprints (Short interactive project cycles)
 - Daily stand-up meetings for better communication (15 minutes maximum allotted time)
 - Clearly defined roles and responsibilities
 - Continuous feedback and stakeholder involvement
 - Prioritization of tasks based on urgency and value
- 13. Would breaking down projects into smaller, iterative sprints (2-4 weeks) help improve execution and monitoring?
 - Yes, it would allow for quicker adjustments
 - Maybe, but more planning would be needed
 - No, projects need to follow a fixed plan
- 14. What type of training or support would be needed to adopt Scrum successfully?
 - Workshops on Agile principles
 - Hands-on Scrum training with real projects
 - Guidance from an Agile/Scrum expert
- 15. How useful would standardized templates (issue tracking, risk log, etc.) be in improving efficiency?
 - Extremely useful
 - Somewhat useful
 - Neutral
 - Not useful

INTERVIEW QUESTIONS

1. How long have you been involved in the BNTF Grenada programme?
2. How successful is the BNTF 10 program compared to the BNTF 09 programme? (Rate on a scale of 1 to 5, one being not successful and 10 being very successful.)
3. What project management methodology do you think BNTF Grenada currently uses?
4. How does the current project management approach impact budget and timeline?
5. What are the key challenges BNTF Grenada faces during the planning and implementation of a project?
6. Do you believe that the implementation of a Scrum-based approach will improve project efficiency?
7. What lessons have been learned from past projects that could inform future improvement?

REVISION DICTUM

Martha Marrast

Address: Springs St. George, Grenada

Phone: (473) 404-8264

Email: marthakim92@gmail.com

22nd August 2025

Academic Tutor

Master's Degree in Project Management (MPM)

Universidad para la Cooperación Internacional (UCI)

Dear Academic Tutor,

Re: Through Review and Proofreading of Final Graduation Project Submitted by Lee Phillip in partial fulfilment of the requirements for a Master's Degree in Project Management (MPM)

With this letter, I confirm that I have reviewed the Final Graduation Project (FGP) submitted by MPM candidate, Lee Phillip.

I hereby confirm that Lee Phillip has made all the corrections to the FGP as I have advised as philologist. It is my professional opinion that the document meets the literary and linguistic standards in written English as required for the MPM by the Universidad para la Cooperación Internacional.

Warm Regards,



Martha Marrast

Philologist