UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

FINAL GRADUATION PROJECT NAME (PROJECT MANAGEMENT PLAN FOR
THE IMPLEMENTATION OF A PROJECT MANAGEMENT OFFICE IN THE
GUYANA DEFENCE FORCE)

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DEDICATION

Dedicated to the memory of my late mother Ms Beverly J Daniels, who departed this mortal world a few short weeks after I commenced this journey towards a Master's in Project Management at UCI and whose never-ending love and support has been the main contributor to my successes thus far along life's pathway.

ACKNOWLEDGMENTS

Words cannot begin express my gratitude to my loving wife Rhonda and my children Imani and Amare for their love and support throughout this journey towards an MPM. Their patience and sacrifice during my long hours of study have not gone unnoticed.

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To the Colonel Administration and Quartering of the Guyana Defence Force, Captain (CG) Vernon Burnett, and to the former Chief of Staff, Brigadier Godfrey Bess, I remain thankful for your support in allowing me to use the GDF as a case study for this FGP.

I am grateful to my classmates who have made this my first online learning experience such a remarkable experience. Our continuous late-night feedback sessions and group work exemplifies the essence of project management in a professional setting, and I will miss that dearly.

Finally, I must mention the support received from my colleagues in the Projects Department at GWI, who formed a good sounding board for ideas and issues for which I needed a second opinion.

ABSTRACT

The study has, as its objective, the elaboration of a project management plan for the implementation of a Project Management Office (PMO) in the Guyana Defence Force, in order to standardise and bring normalcy to the design, supervision and implementation of infrastructure projects. Whilst under the current construct there is a Project Executing Unit (PEU), there is a notable absence of defined methodologies and processes for project management. Coupled with the absence of adequately capacitated personnel, project management is rendered haphazard and subject to the vagaries of individual project managers and unit Commanders.

In the development process a feasibility study is conducted, along with a determination of the value proposition of a PMO for the organisation. Those, coupled with a maturity analysis vis-à-vis the organisation's readiness for a PMO, are used to help to determine the right type of PMO for the organisation and the number and type of key personnel required, along with the inherent risks in its creation. The qualitative research method is used, and the guidance provided by the Project Management Institute is heavily relied on.

Consequent to the elaboration of this study, it is concluded that the necessity to carry out the project management plan for PMO implementation in the GDF is supported by the hierarchy of the organisation, given that it compiles the needs of the Force and positions it sufficiently to continue to benefit from Government subventions.

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ABBREVIATIONS AND ACRONYMS

AQ	Administration and Quartering
CMMI	Capability Maturity Integration
CO	Commanding Officer
FGP	Final Graduation Project
G4	General Four
GDF	Guyana Defence Force
GPM	Green Project Management
ICT	Information and Communications Technology
MOF	Ministry of Finance
MPM	Master's in Project Management
OPM	Organisational Project Management
OPM3	Organisational Project Management Maturity Model
P3M3	Programme and Project Maturity Model
P5	People, Planet, Prosperity, Processes and Products
PEU	Project Execution Unit
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project Management Office
PMP	Project Management Professional
SDG	Sustainable Development Goals
SO1	Staff Officer One

UCI	University for International Cooperation
US	United States
VUCA	Volatility, Uncertainty, Complexity and Ambiguity
WBS	Work Breakdown Structure

EXECUTIVE SUMMARY

The Guyana Defence Force, under this new Government, is on a mission to transform its security posture and improve the overall welfare of the troops, both those on coastal bases and deployed on the borders. A major part of that transformation is the investment in new and improved infrastructure, primarily buildings and pure water supply installations. Whilst there is some focus on streamlining the management of infrastructure projects via a dedicated project execution unit, there is a dire need for an overall Project Management Office to align all capital investments to the overall strategic direction of the Force and the Government, and to bring standardisation to the methodologies and processes applied.

The general objective was to develop a project management plan for the implementation of a Project Management Office in the Guyana Defence Force to allow for more efficiency and effectiveness in the execution of the Government's annual Public Sector Improvement Programme. The specific objectives were to:
- Determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation.
- Determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.
- Perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and actions needed for improvement.
- Determine the number of key personnel needed to form the PMO in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.
- Conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainability.

The methodology for this research was qualitative with the case study method used as the preferred approach. The guidance provided by the Project Management Institute was heavily relied on. In the use of the case study method, various interviews, focus groups and archival studies were used to examine and contextualise the problem and issues affecting the Guyana Defence Force, as it relates to its capacity to practice project management and the need for a PMO within the organisation.

The results indicated that the formation of a PMO in the GDF is technically, administratively, legally and economically feasible with a positive net present value. There were several opportunities for the PMO created from the myriad of challenges under the current construct, the implementation of which would bring value to the organisation. The results further showed that the organisation is at the lower level along the project management maturity spectrum with several deficient areas, improvement of which would allow for upward movement along the spectrum. It was determined that the organisation needs to focus on dichotomising the functionality into several categories such as, *inter alia*, project management standards, reports and documentation and project execution. Scope uncertainty,

complexities in estimating methodology and inadequate number of staff were deemed to be the high probability risks with high-catastrophic impact. All were deemed to have very positive mitigation risk assessments.

Amongst the key recommendations were the need to do a more detailed assessment of the organisation to determine/update its value proposition and to carry out a logical framework exercise to determine the specific role and function of the 4 Engrs Bn vis-à-vis project management.

1   INTRODUCTION

This section introduces the project: "Project Management Plan for Implementation of a Project Management Office in the Guyana Defence Force". Some background to the research will be provided, along with a clear identification of the problem at hand, the purpose of the research and the general and specific objectives that are to be achieved.

1.1.   Background

The Guyana Defence Force (GDF), under this new Government, is on a mission to transform its security posture and improve the overall welfare of the troops, both those on coastal bases and deployed on the borders. A major part of that transportation is the investment in new and improved infrastructure, primarily buildings and pure water supply installations. There is also a significant level of investment in recapitalising the air, marine and land assets of the Force to be able to meet extant and new threats, given the nascent oil and gas industry of Guyana. Whilst there is some focus in streamlining the management of infrastructure projects via a dedicated Project Execution Unit (PEU), there is a dire need for an overall Project Management Office (PMO) to align all capital investments to the overall strategic direction of the Force and the Government.

With an annual capital budget of approximately US$16 million and a maintenance budget of US$9 million, the Government of Guyana (GoG) continues to show its commitment to invest heavily in the welfare of the officers and other ranks of the GDF. It is therefore imperative that these investments are optimised to the benefit of all stakeholders. The Ministry of Finance (MOF) has been clear in their aversion to the piecemeal approach to project

implementation where infrastructure projects are financed and executed over multiple years, solely based on the availability of financing in the extant fiscal period, rather than on the time needed for execution. The MoF has adopted the posture that there needs to be a higher level of confidence reposed in the GDF to be able to effectively and efficiently execute the projects. It is therefore incumbent upon the GDF to find its niche position to be able to fulfil is fiduciary duty to the stakeholders in the MoF and, at the same time, achieve the objectives of its strategic mission.

1.2.   Statement of the problem

The GDF, like any other standing defence force, maintains a command-and-control environment. Essentially, the personnel in the armed forces are divided into two primary functions: line – those whose primary purpose is to achieve the strategic and tactical objectives of the service; and staff – those whose primary purpose is to provide support to the line functionaries. Troop welfare via investments in infrastructure falls under the responsibility of those designated as staff. There is an engineering battalion, the 4 Engineers Battalion (4 Engrs Bn), whose function is to provide field engineering services in the military sphere (demolition, fire trench construction, *inter alia*) – a line function. The battalion also engages in civil infrastructure works, both capitally funded and maintenance driven, which is a support function. The question arises then as to the best fit for the battalion.

To further compound the equation, the Colonel Administration and Quartering (Col AQ), the Branch Head and Accounting Officer of the Force, has the primary responsibility of providing financial and welfare support to the fighting troops. The Commander of the

engineering battalion reports to the Col AQ, quite a conundrum given that the battalion is considered a line unit. In order to execute the mandate and properly account for the resources provided by the MoF, a PEU was formed some years ago. This PEU's primary role is the design and implementation of infrastructure projects. The PEU also involves itself with actual construction works from time to time. The PEU is headed by a Captain or Major, who is a Grade 3 or Grade 2 Staff Officer. Under the current construct, the Officer Commanding the PEU reports to a Grade One Staff Officer, the Staff Officer One General Four – Engineer (SO1 G4 Engr). The SO1 G4 Engr functions as the principal engineering staff officer to the Col AQ and has the primary role of advising the Col AQ on all engineering matters. This also presents another conundrum because it brings into sharp relief the role of the CO 4 Engrs Bn vis-à-vis the role of the SO1 G4 Engr/PEU.

This problem needs to be juxtaposed within the context of an organisational PMO and the best approach to be used to plan, develop and execute projects within the GDF. There are projects which fall outside of the scope of the PEU because they are not hardcore infrastructure projects. However, these projects are still funded by GoG, and need to be reported on by the Col AQ. Two questions must be asked: "*In a command-and-control environment, what are the elements that would make for the successful implementation of a Project Management Office? Is it possible to successfully implement a Project Management Office in the Guyana Defence Force?*" These questions will be answered as this research document is further elaborated over the subsequent sections.

1.3.   Purpose

The purpose of this research is primarily to ensure that the right mechanisms exist to ensure that the resources acquired from the national coffers by the GDF, meant for infrastructure development and other projects, are properly spent towards the achievement of the strategic and tactical objectives of the Force. It must be stated that with a capital budget of US$16 million and growing and a maintenance budget of US$9 million and growing, it is incumbent upon the high command of the Force to ensure that sufficient measures are in place for accountability. With an already established PEU and the 4 Engrs Bn, there needs to be a reflective study on how best to streamline the project management operations of the Force to reflect best practices.

The design and formation of a modern PMO promises to provide some answers, if not all, to the issues that are plaguing successful project implementation within the GDF. The mere feasibility of the PMO must first be determined. That, coupled with the value proposition of a PMO, will answer the primary question and guide Defence Headquarters (DHQ) into making the best decision as it relates to its project management posture. This research will also answer the question of how mature the GDF is in terms of its project management capacity and any existing gaps in that regard, including the issue of personnel capacity of the Force. Obviously, any inherent risks must also be examined and appropriate mitigation plans formed.

All of the aforementioned dovetails into the creation of a project management plan for the implementation of the PMO in the GDF. This remains the primary and overarching purpose of this research and it seeks to bring improvement to the project management posture of the

Force and, hopefully, improve the level of confidence reposed in the Force by both the Defence Board and the MoF.

1.4. General objective

The general objective is stated below:

To develop a project management plan for the implementation of a Project Management Office in the Guyana Defence Force to allow for more efficiency and effectiveness in the execution of the Government's annual Public Sector Improvement Programme.

1.5. Specific objectives

The specific objectives are as follows:

1. To determine the feasibility of implementing a PMO in the GDF in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation.

2. To determine the value proposition of a PMO for the GDF in order to justify its suitability for implementation.

3. To perform a maturity analysis of the GDF in order to determine the existing project management gaps and needed improvement actions.

4. To determine the number of key personnel needed to form the PMO in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engrs Bn.

5. To conduct a risk assessment of implementing a PMO for the GDF in order to identify the key considerations to be taken to guarantee its attainability.

2 THEORETICAL FRAMEWORK

This chapter introduces the theoretical framework that is going to be applied throughout the development of this FGP. It introduces some background information on the organization under focus, as well as some discussion on the relevant theoretical concepts.

2.1 Company/Enterprise framework

Under this section, some background information on the GDF will be given to provide the context within which the FGP will be developed. It is important to have the organisational context in order to make the case for the implementation of a PMO.

2.1.1 Company/Enterprise background

The GDF is the military organisation of the Republic of Guyana. It was formed in 1965 as a precursor to the state achieving independence from Britain. On May 26, 1966, then British Guiana officially became newly independent Guyana. Members of the new Defence Force were first drawn from the British Guiana Volunteer Force, the Special Service Unit, the British Guiana Police Force and civilians. During the transition period, training assistance was provided by British instructors.

Constitutionally, the primary purpose of the GDF is to defend the Constitution of the Republic of Guyana, defend the territorial integrity of the country, assist the civil powers in the maintenance of law and order when required to do so and contribute to the economic development of Guyana.

2.1.2   Mission and vision statements

The GDF, by virtue of its creation under the Laws of Guyana (Chapter 15:01), and by virtue of it being the final defender of the Constitution of the Republic of Guyana, does not have the traditional mission and vision statements of other types of organisations. However, within the context of the elements of the FGP and the impact of the project management practices on the AQ Branch, there are clear mission and vision positions that need to be embraced. These are as follows:

(i)   Vision – to create the command climate within the Branch to allow for efficiency and effectiveness in meeting the fiduciary responsibilities laid down by the MoF.

(ii)   Mission – to provide for the highest quality of administrative and quartering support to the operational troops of the Guyana Defence Force.

2.1.3   Organizational structure

The GDF, like any other military organisation, is structured under the line and staff framework where line commanders are responsible for achievement of stated objectives and staff personnel are in place to support and assist commanders in achieving their objectives. The GDF merges the British/Commonwealth and the Continental Staff Systems in having Branch primacy against unit command primacy.

Figure 1 - Organisational Structure of the GDF (Source: Office of the Staff Officer 2 General 1)
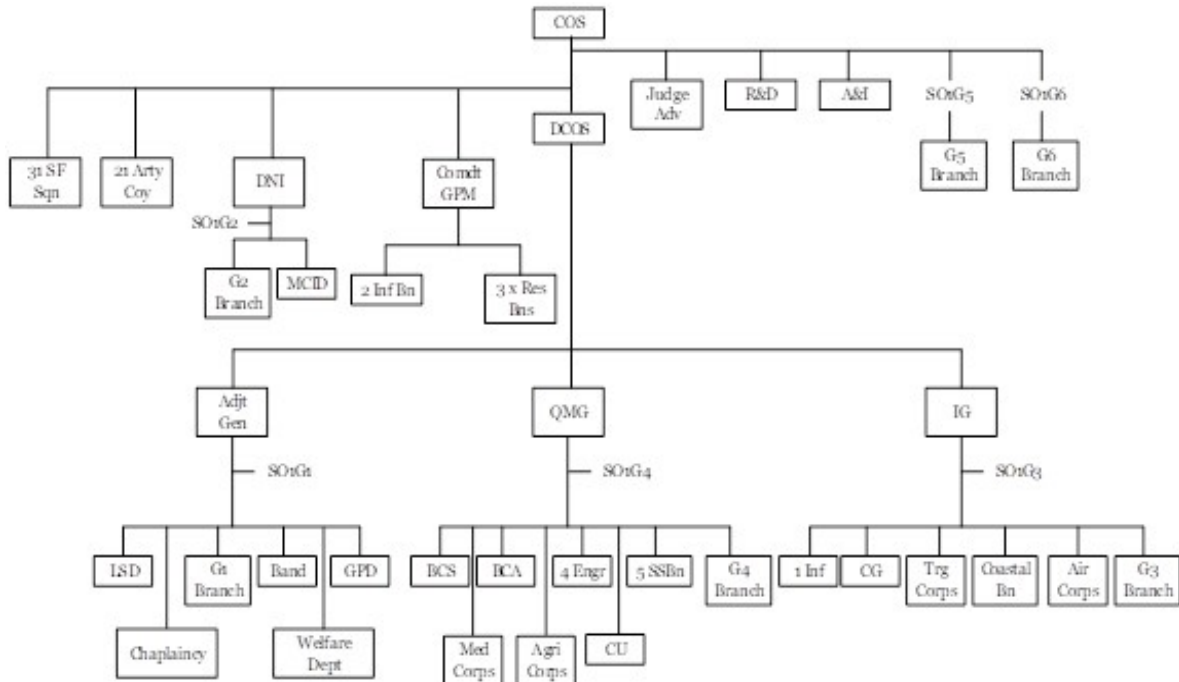
2.1.4 Products offered

The AQ Branch of the GDF offers a variety of services in support of the operational and frontline troops. The Branch is responsible for the provision of housing, food, clothing and general welfare of the Force.

2.2 Project Management concepts

In this section, basic project management concepts will be introduced and explained.

2.2.1 Project management principles

The twelve principles of project management, as defined in the PMBOK® Guide 7th Edition, are meant to be complementary to the PMI Code of Ethics and Professional Conduct and are well aligned with those values (Project Management Institute, 2021). They serve as a foundational guide for strategy, decision making and problem solving and are all relevant to the development of a project management plan for implementation of a PMO in the GDF. These principles are as follows:

1. **Be a diligent, respectful, and caring steward.** It is important for a steward to act responsibly and to carry out activities with care, integrity and trustworthiness. Within the context of the GDF, and especially considering the quantum of resources made available by Central Government in annual budgets, this particular principle resonates well and, once embraced, will instil greater confidence in the ability of the officers of the GDF to carry out their fiduciary responsibilities.

2. **Create a collaborative project team environment.** Military service is built on teamwork and there is no difference when it comes to teamwork in the project management environment. Project teams must work collaboratively to ensure that all activities are aligned with the organisational culture and the prevailing command climate.

3. **Effectively engage with stakeholders.** This is a particularly important principle within the context of the military environment. It is oftentimes difficult for an officer junior in rank, notwithstanding his/her seniority in the project hierarchy, to effectively

engage with stakeholders that are senior in rank. The GDF must change in this regard and the acceptance of the PMO concept may prove to be the catalyst to this change.

4. **Focus on value.** This is indeed important and the project team must always remember the ultimate objective of the interventions; that is, to ensure that the operational and frontline troops are always adequately supported. Invariably, this is ensuring that the project remains aligned with business objectives and intended benefits originally conceptualised.

5. **Recognise, evaluate and respond to system interactions.** One of the principles of war speaks about flexibility in command thinking and actions. Hence, this principle has direct applicability in the military environment. Within the project environment, team members must retain that fluidity of thought and action to revaluate and change course whenever necessary.

6. **Demonstrate leadership behaviours.** Military officers are natural leaders. Within the project environment in the military there is an expectation of leadership within the boundaries of promoting project success. Leadership is not to be confused with authority, something that can easily happen in the military environment.

7. **Tailor based on context.** Recognising that each project is unique and not applying a "one-fits-all" formula to every situation also is an indication of the flexibility and fluidity in thought and action that military leaders are known for. This is also expected in the project environment.

8. **Build quality in processes and deliverables.** If not for quality, then what would be the point of the intervention? In the GDF, this has been a bane in project management.

The implementation of a PMO will serve as a positive change factor in ensuring that quality is built into project deliverables and processes.

9. **Navigate complexity.** The navigation of complex problems is directly proportionate to the ability of the project manager to be flexible and adaptable. Every project will, from time to time, present complexities which have to be dealt with. In battle, there is a saying that "no plan survives the first bullet", adapted from the World War 2 era of Moltke, Eisenhower and Churchill, who all shared the view (or variants of it) that "plans are of little importance, but planning is essential" (Bergeson, n.d.). This is not exactly the case in the project world but the military officer, as part of a PMO, will be able to bring to bear that experience in navigating complex issues.

10. **Optimise risk responses.** Risk planning and risk response/mitigation is a weak area in the GDF. It is an area in which capacity building is lacking and much work needs to be done to arrest the situation.

11. **Embrace adaptability and resiliency.** We live in a changing world and our projects must be so designed and implemented to ensure that resilience, especially climate resilience, is built in. In the operational environment of the GDF, operational resilience must also be built into the projects to ensure that outcomes are met.

12. **Enhance change to achieve the envisioned future state.** Selection and maintenance of the aim is the first principle of war, and this particular principle resonates well in the military context as it dovetails beautifully with what military officers are taught on the first day of training. Maintaining focus on what the end/future state should be allows the process to remain mission focussed.

2.2.2 Project management domains

The PMBOK® Guide 7th Edition provides guidance in saying that a project performance domain is a group of related activities that are critical for the effective delivery of project outcomes. They are interactive, interrelated, and interdependent areas of focus that work in unison to achieve desired project outcomes (Project Management Institute, 2021). The following are the eight project performance domains:

1. **Stakeholders** – No project can perform well without effective stakeholder engagement. This resonates equally within the framework of the military environment, especially considering the challenges that may abound vis-à-vis the military rank structure and power-influence relationships. The implementation of a PMO is designed to erase those barriers to effective stakeholder engagement erected by military rank and give precedence to the project management hierarchy.

2. **Team** – Team performance, especially in an environment such as the GDF, is intricately linked to the level of remuneration. Due to the low level of remuneration, there has been a challenge in recruiting civilian personnel to form part of a high-performing team. Implementing a PMO in the GDF would need to include serious considerations into how best to ensure that a high-performance team is recruited and supported to design and implement projects.

3. **Development approach to life cycle –** The issues to be addressed under this domain relate to the approach that is consistent with the desired achievement of project deliverables. The extent of project implementation that the PMO in the GDF must be responsible for will determine the appropriate approach to be adopted. The maturity

analysis to be conducted will determine if the PMO will be limited to infrastructure-type project implementation or extended to ICT and other project types that are relevant to the agile approach.

4. **Planning** – Even though it has been established that plans are almost useless in the military environment once the first shot has been fired, *planning* is still essential--and success in project management, or even military operations for that matter, cannot be achieved without prior planning. Effective execution of projects, in particular within the context of a PMO, is highly dependent on holistic, organised, coordinated and deliberate planning. Said plans need to be adapted throughout the project life cycle as is needed.

5. **Project work** – The project work performance domain, as is explained by the PMBOK®   Guide 7th Edition, addresses activities and functions associated with establishing project processes, managing physical resources and fostering a learning environment. It assumes efficient and effective project performance, juxtaposed with efficient and effective project processes, appropriate communication with stakeholders, effective management of procurements, *inter alia*. Performance under this domain within the context of the GDF is premised on the successful implementation of a PMO.

6. **Delivery** – The delivery performance domain addresses activities and functions associated with delivering the scope and quality that the project was undertaken to achieve. Undoubtedly, the successful implementation of a PMO in the GDF will bear heavily on the success of this performance domain.

7. **Measurement** – The measurement performance domain addresses activities and functions associated with assessing project performance and taking appropriate actions to maintain acceptable performance. The proposed PMO will be supported by an Internal Audit Department (IAD), which reports to the Inspector General (IG) of the GDF. This is an effective mechanism to keep project implementation on track.

8. **Uncertainty** – the uncertainty performance domain addresses activities and functions associated with risk and uncertainty. Within the context of the GDF, once there is effective execution of this performance domain, then stakeholders and project officers will have an awareness of the environment in which projects occur, including the technical, social, political and economic environments, to name a few. Officers will also be expected to have the capacity to anticipate threats and opportunities and understand the consequences of issues.

2.2.3 Predictive, adaptative and hybrid projects

Project life cycles can be predictive or adaptive. In a predictive life cycle, the project scope, time and cost are determined in the early phases of the life cycle. Any changes to the scope are carefully managed. In adaptive live cycles (either iterative, incremental or agile), the detailed scope is defined and approved before the start of an iteration. Hybrid life cycles combine predictive and adaptive in that those elements of the project that are well known or have fixed requirements follow a predictive development cycle, and those elements that are still evolving follow an adaptive development life cycle (Project Management Institute, 2017).

In the GDF, it is more likely than not that the PMO will be focusing on predictive projects. At best, there may be some that will follow a hybrid life cycle. It is unlikely at this time that projects that follow a purely adaptive life cycle will be contemplated for implementation via the proposed PMO.

2.2.4 Project management

Project management is the application of knowledge, skill, tools and techniques to project activities to meet the project requirements. It is accomplished through the appropriate application and integration of the project management processes identified for the project (Project Management Institute, 2017). Project management can also be seen as the development and implementation of plans to achieve a specific scope that is driven by the objectives of the portfolio or program to which it is subjected and, ultimately, organisational strategies (Project Management Institute, 2018). Project management is both a science and an art. The science is the systematic process of managing project work efficiently and effectively to deliver planned results. The art of project management relates to how a project manager uses his or her skills such as influencing, organising, strategizing and other interpersonal and team skills (Mulcahy, 2020).

2.2.5 Project management knowledge areas and processes

There are ten knowledge areas in project management, as defined by the PMBOK® Guide Sixth Edition. These are listed below:

1. **Project integration management** – Project integration management is the all-encompassing process that covers all other project management knowledge areas. It

coordinates all the parts of a project, ensuring that different team members follow one overall plan, and helps to keep the project running smoothly and efficiently.

2. **Project scope management** – Upon completion of the scope process group, a management plan that defines, validates and controls scope will be created. This is important to ensure that scope creep does not occur during project execution.

3. **Project time management** – Project time management helps in ensuring that the project is managed within deadlines and schedules originally set.

4. **Project cost management** – Project cost management is critical to ensure that the project remains within budget.

5. **Project quality management** – Completing a project on time and within budget is meaningless if the project deliverables do not adhere to the quality standards that are required. Project quality management ensures that the project delivers a product or service to the quality standards that the client desires.

6. **Project resource management** – Project resource management is summed up to the benefit of knowing who and what is needed to for the project to be a success; that is, enough people material and equipment, the right people material and equipment and the right project team to ensure project success.

7. **Project communication management** – In its simplest form, project communication management is making sure that everyone involved is informed of changes, updates and issues arising at the right time. A breakdown in project communication can prove problematic in the project execution cycle.

8. **Project risk management** – Planning for risks is very important in project management as problems do arise from time to time. Project risk management flags upcoming problems and equips the project team with the means to work around or through those problems, instead of allowing them to cause major complications.

9. **Project procurement management** – There are times when the requisite resources to execute a project are not resident in the organisation. In those cases, resources--whether manpower, equipment, products or services--need to be procured externally. Project procurement management ensures that the resources to be procured are done so at the time that they are needed.

10. **Project stakeholder management** – Ultimately, the success or failure of a project depends on the delivery of the project deliverables to the stakeholders. Project stakeholder management is the process by which the requisite information is given to the stakeholders as it is needed through the project. Keeping project stakeholders satisfied can be a herculean task, but it remains the essence of what is meant by project stakeholder management.

Project management processes are grouped into five project management process groups (Project Management Institute, 2017). These are:

1. **Initiating process group** – These are the processes performed to define a new project or a new phase of an existing project by obtaining authorisation to start the project or phase.

2. **Planning process group** – These processes are required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve.

3. **Executing process group** – These processes are performed to complete the work defined in the project management plan to satisfy the project requirements.

4. **Monitoring and evaluating process group** – These are the processes required to track, review and regulate the progress and performance of the project, identify any areas in which changes to the plan are required, and initiate the corresponding changes.

5. **Closing process group** – These are the processes performed to formally complete or close a project, phase or contract.

Figure 2 – Project Management Process Groups. Source: (Mulcahy, 2020)
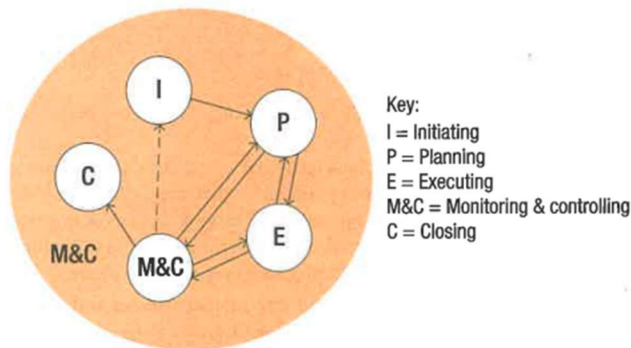
2.2.6   Project life cycle

The project life cycle is essentially how the work on the project is organised (Mulcahy, 2020).

A life cycle is a progression through a series of developmental stages.   The project

developmental life cycle reflects the performing organisation's methodology for managing a

project. It is a logical breakdown of what must be done to produce the project deliverables

and is selected based on factors such as the type of product being developed, industry,

organisation's preferences and development approach. A project life cycle can either be plan

driven, change driven or a hybrid of the two (Mulcahy, 2020).

Plan-driven projects have predictive development life cycles and are also referred to as

traditional, predictive or waterfall. They require scope, schedule and cost to be determined

in detail early in the life of the project. Change-driven projects use iterative and incremental

life cycles and are referred to as agile or adaptive. They have varying levels of early planning

for scope, schedule and cost. Incremental and iterative life cycles involve early planning of

high-level scope sufficient enough to allow for preliminary estimates of time and cost. Scope

is developed a little more with each iteration. A hybrid life cycle is a combination of a predictive and an adaptive development approach. With such an approach, a predictive life cycle is used to manage the project requirements that are well defined, while an adaptive life cycle is used to manage the requirements that are less clear (Mulcahy, 2020).

For the preparation of a project management plan for the implementation of a PMO for the GDF, the predictive approach is more relevant; granted that the PMO, once it becomes functional, may indeed be implementing projects using all of the life cycles, as it were.

2.2.7 Company strategy, portfolios, programs and projects

The AQ Branch of the Guyana Defence Force, within the context of this FGP, is responsible for the execution of infrastructure projects, funded by the GoG under the Capital Investment and Maintenance Portfolios. The Branch has a PEU that is responsible for the design and implementation of projects under the two portfolios. There is also an Engineering Battalion, the 4 Engrs Bn, that provides support in the execution of projects in a limited way. Most of the work in project implementation is outsourced to contractors.

With an annual capital budget of approximately $16 million and a maintenance budget of $9 million, the current construct of a project executing unit, coupled with the engineering battalion has proven ineffective for efficient and effective project implementation. Hence, the time to implement a PMO for the GDF is now.

The formation of a PMO will seek to ensure that the resources that the GDF acquires annually from the national coffers is well spent towards the achievement of the strategic objectives of

the Force, the Defence Board and the GoG. The project management plan will present the necessary blueprint to the High Command of the Force.

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

In this section, other concepts that are applicable to the FGP will be introduced. This section will also delve into the current situation vis-à-vis the extant opportunity to create an area of interesting research. Initial research done in the area will be explored and juxtaposed with the present opportunities.

2.3.1 Current situation of the problem or opportunity in study

With an annual budget of US$25 million dedicated to the execution of projects, the GDF is not currently set up organisationally to effectively execute its mandate in that regard. Even though there is a PEU, it lacks the technical capacity and experience in project implementation. The result is that the rate of project implementation remains problematic with projects frequently running over time and over budget. Of more importance is the fact that the GDF has been the subject of many adverse audit reports vis-à-vis its project implementation practices over the years. This situation causes a loss of confidence from the MoF in its ability to effectively execute the mandate and meet the fiduciary responsibilities that the organisation holds, as it relates to the Central Government.

Consequentially, there lies a great opportunity for betterment and improvement in the project management and implementation posture of the GDF, if due deference is given to the formation of a formal PMO, correctly staffed and appropriately authorised, to take command of project implementation.

2.3.2 Previous research done for the topic in study

A PMO is an organisational structure that standardises the project-related governance processes and facilitates the sharing of resources, methodologies, tools and techniques (Project Management Institute, 2017). The PMBOK® Guide Seventh Edition goes on to specify the various types of PMOs and the degree of control and influence each may have on the projects within the organisation, whether supportive, controlling or directive (in ascending order of influence and control).

Organisations create PMOs for a variety of reasons but one core benefit must be kept in mind: improvement in project management practices in terms of schedule, cost, quality and risk (Project Management Institute, 2021). This really is the value proposition of a PMO. The literature has shown that organisations still form and implement PMOs, even though they already have dedicated project teams. Research has shown that some 78% of PMOs were created after its members would have been working on projects via project teams (Taylor, 2011). This has led to interesting comparisons between the before and after experiences in PMOs created after project teams are in existence. In fact, the evidence suggests that 68% of newly formed PMOs with staff having worked previously on projects reported that things got better and much improved, with only 5% reporting that things had gotten worse or much worse (Taylor & Mead, 2016).

The relationship between portfolios, programmes, projects and PMOs can be summarised as follows: portfolio management has a focus on doing the right things, project management focusses on doing it the right way, programme management focusses on doing it in the right order and the PMO focusses on doing it all with the right team (Taylor, 2011). Hence, the

PMO does the right things, in the right way, in the right order and all with the right team. It is an interesting case to make in any organisation, the GDF included, that the PMO is not necessarily the panacea to all of the issues with project management and project implementation. Rather, the PMO adds that extra bit that justifies the existence of the various teams involved in portfolio, programme and project management.

Another point to note, and each organisation will decide for itself, is the focus on the PMO. Research has shown that 43% of newly formed PMOs prefer to focus on implementing internal projects, with 39% focusing on both internal and external projects (Taylor, 2011).

The roadmap to PMO implementation must commence with the organisation conducting a maturity analysis to ascertain its current position before coming up with implementation plans to transition to its future state; that is, PMO operation (Taylor & Mead, 2016). There are several model templates to choose from, ranging from Kerzner, to the Capability Maturity Integration (CMMI), to Organisational Project Management Maturity Model (OPM3) and the Portfolio, Programme and Project Maturity Model (P3M3). Whilst each has its unique flavour, they all allow the organisation to objectively assess its project management capabilities against key knowledge areas in the PMBOK® Guide.

Husser (2017) takes a very cynical approach to PMOs but does offer some hope in saying that the success of a PMO ultimately lies in the method used and the tenacity of the main players to see it through. Farid (2021) reminds us that for a PMO to be successful, a roadmap is essential to providing a needed sense of direction. This is obvious as any organisational department's mission must be aligned to the overall strategic business objectives of the organisation. Duggal (2018) concludes by saying that learning is the key to adaptive agility

and survival. He reminds us that the PMO should not be seen as a panacea to all the problems in project management but the players in the PMO must continue to learn in order to keep adapting to a changing environment and ultimately surviving.

2.3.3 Other theory related to the topic in study

The formation of a PMO within the military is an endeavour that is ambitious as it is precipitous (Taylor & Mead, 2016). In direct reference to Professor Huntington's view on von Clausewitz's exploration of the nature of military phenomena, there is an analysis of the military and its proper relationship to the civil government. Huntington has posited that there is either subjective or objective civilian control of the military. Subjective control achieves its end by civilianising the military and making them a mirror of the state. Objective civilian control achieves its end by militarising the military and making them the tool of the state. The essence of objective civilian control is the recognition of the autonomous military profession. The essence of subjective civilian control is the denial of an independent military sphere (Huntington, 1957). The formation of a PMO in the GDF, within the construct of the current civilian power and their overall strategic vision of the GDF, will form an interesting question.

3 METHODOLOGICAL FRAMEWORK

In this chapter, the methodological framework for the FGP will be developed. The various information sources, research methods, tools and assumptions and deliverables will be presented.

3.1 Information sources

Mainly primary and secondary sources of information will be used. However, there will be references to tertiary sources of information also.

3.1.1 Primary sources

According to the University of Minnesota Crookston, the classification of primary sources of information is based on the originality of the material and the proximity of the source or origin. Hence, primary sources are records of events as they are first described or happened without any interpretation or commentary. It is information that is shown for the first time or original materials on which other research is based. Primary sources display original thinking, report on new discoveries, or share fresh information. These include theses, dissertations, scholarly articles (research based), some government reports, symposia and conference proceedings, or artwork, poems, photographs, speeches, letters, memos, personal narratives, diaries, interviews, autobiographies, and correspondence (University of Minnesota Crookston, 2023).

For this FGP, the primary sources used include interviews from key stakeholders in the GDF and the Ministry of Finance and articles and conference proceedings referenced from the Project Management Institute repository.

3.1.2 Secondary sources

According to the University of Minnesota Crookston, secondary sources offer an analysis or restatement of primary sources, oftentimes trying to describe or explain primary sources. Secondary sources tend to be works which summarise, interpret, reorganise, or otherwise provide an added value to a primary source. Secondary sources include textbooks, edited works, books and articles that interpret or review research works, histories, biographies, literary criticism and interpretation, reviews of law and legislation, political analyses and commentaries (University of Minnesota Crookston, 2023).

As secondary sources for this FGP, several books will be consulted, including the PMBOK® Guide 6th and 7th Editions. Official commentaries from officials of the Ministry of Finance will also be consulted.

Table 1 – Information Sources (Source: Self-generated)

Objectives	Information sources	
	Primary	**Secondary**
To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation	Interviews with the Finance Secretary, Ministry of Finance; the Deputy Finance Secretary, Ministry of Finance, the Director of Projects, Ministry of Finance; the Chief of Staff, GDF, the Colonel Administration and Quartering, GDF, the Commanding Officer, 4 Engineers Battalion, the Staff Officer One General Eight, the Staff Officer One General Four – Logistics; A Roadmap to PMO Excellence by Farid; Five Minds and One Hundred Languages: The Multi-Skill Challenge for	PMBOK Guide 6th and 7th Editions, the Standard for Organisational Project Management (OPM), Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business by Peter Taylor, The High-Impact PMO: How Agile Project Management Offices Deliver Value in a Complex World by Husser, The DNA of Strategy Execution: Next Generation Project Management and PMO by Jack Duggal, Rita Mulcahy's PMP Exam Prep, Leading Successful PMOs: How to Build the Best Project Management Office for your Business.

Objectives	Information sources	
	Primary	**Secondary**
	The Project Manager in the VUCA World by Setti.	
To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.	Interviews with the Finance Secretary, Ministry of Finance; the Deputy Finance Secretary, Ministry of Finance, the Director of Projects, Ministry of Finance; the Chief of Staff, GDF, the Colonel Administration and Quartering, GDF, the Commanding Officer, 4 Engineers Battalion, the Staff Officer One General Eight, the Staff Officer One General Four – Logistics; A Roadmap to PMO Excellence by Farid; Five Minds and One Hundred Languages:	PMBOK Guide 6th and 7th Editions, the Standard for Organisational Project Management (OPM), Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business by Peter Taylor, The DNA of Strategy Execution: Next Generation Project Management and PMO by Jack Duggal, Rita Mulcahy's PMP Exam Prep, Leading Successful PMOs: How to Build the Best Project Management Office for your Business.

Objectives	Information sources	
	Primary	**Secondary**
	The Multi-Skill Challenge for the Project Manager in the VUCA World by Setti.	
To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.	Interviews with the Finance Secretary, Ministry of Finance; the Deputy Finance Secretary, Ministry of Finance, the Director of Projects, Ministry of Finance; the Chief of Staff, GDF, the Colonel Administration and Quartering, GDF, the Commanding Officer, 4 Engineers Battalion, the Staff Officer One General Eight, the Staff Officer One General Four – Logistics; A Roadmap to PMO Excellence by Farid; Five Minds	PMBOK Guide 6th and 7th Editions, the Standard for Organisational Project Management (OPM), Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business by Peter Taylor, The High-Impact PMO: How Agile Project Management Offices Deliver Value in a Complex World by Husser, The DNA of Strategy Execution: Next Generation Project Management and PMO by Jack Duggal, Rita Mulcahy's PMP Exam Prep, Leading Successful PMOs: How to Build the Best Project Management Office for your Business.

Objectives	Information sources	
	Primary	**Secondary**
	and One Hundred Languages: The Multi-Skill Challenge for the Project Manager in the VUCA World by Setti.	
To determine the number of key personnel needed to form the PMO stakeholders to be involved in the project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.	Interviews with the Finance Secretary, Ministry of Finance; the Deputy Finance Secretary, Ministry of Finance, the Director of Projects, Ministry of Finance; the Chief of Staff, GDF, the Colonel Administration and Quartering, GDF, the Commanding Officer, 4 Engineers Battalion, the Staff Officer One General Eight, the Staff Officer One General Four – Logistics; A Roadmap to PMO	PMBOK Guide 6th and 7th Editions, the Standard for Organisational Project Management (OPM), Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business by Peter Taylor, The High-Impact PMO: How Agile Project Management Offices Deliver Value in a Complex World by Husser, The DNA of Strategy Execution: Next Generation Project Management and PMO by Jack Duggal, Rita Mulcahy's PMP Exam Prep, Leading Successful PMOs: How to Build the Best Project Management Office for your Business.

Objectives	Information sources	
	Primary	**Secondary**
	Excellence by Farid; Five Minds and One Hundred Languages: The Multi-Skill Challenge for the Project Manager in the VUCA World by Setti.	
To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainability.	Interviews with the Finance Secretary, Ministry of Finance; the Deputy Finance Secretary, Ministry of Finance, the Director of Projects, Ministry of Finance; the Chief of Staff, GDF, the Colonel Administration and Quartering, GDF, the Commanding Officer, 4 Engineers Battalion, the Staff Officer One General Eight, the Staff Officer One General Four –	PMBOK Guide 6th and 7th Editions, the Standard for Organisational Project Management (OPM), Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business by Peter Taylor, The High-Impact PMO: How Agile Project Management Offices Deliver Value in a Complex World by Husser, The DNA of Strategy Execution: Next Generation Project Management and PMO by Jack Duggal, Rita Mulcahy's PMP Exam Prep, Leading Successful PMOs: How to Build the Best Project Management Office for your Business.

Objectives	Information sources	
	Primary	**Secondary**
	Logistics; A Roadmap to PMO Excellence by Farid; Five Minds and One Hundred Languages: The Multi-Skill Challenge for the Project Manager in the VUCA World by Setti.	

3.2 Research methods

Research methods are the tools that one uses to do research. These can either be qualitative, quantitative or mixed (University of Pretoria, 2023). The research method is defined by Williams (2007) as the general approach the researcher takes in carrying out the research project. Hammarberg, Kirkman and Lacey (2016) explain that qualitative and quantitative research methods are often juxtaposed as representing two different world views. In fact, in quantitative circles, qualitative research is commonly viewed with suspicion and considered lightweight because it involves small samples, which may not be representative of the broader population.

Quantitative research involves the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute alternate knowledge claims (Williams, 2007). This type of research is classified into three broad categories: descriptive, experimental and causal comparative. Williams (2007) goes on to outline the descriptive approach as being a basic research method that examines the situation as it exists in its current state. It involves identification of attributes of a particular phenomenon based on an observational basis or the exploration of correlation between two or more phenomena. In the case of experimental research, Williams (2007) describes a scenario whereby the researcher investigates the treatment of an intervention into the study group, then measures the outcomes of the treatment using either of the three types of exploratory approaches: pre-experimental, true experimental and quasi-experimental. In the causal comparative research, the researcher examines how the independent variables are affected by the dependent variables and involves cause and effect relationships between the variables.

Qualitative research is a holistic approach that involves discovery and an unfolding model that occurs in a natural setting and enables the researcher to develop a level of detail from high involvement in the actual experiences (Williams, 2007). Williams (2007) further states that what constitutes qualitative research involves purposeful use for describing, explaining, and interpreting collected data. Of the several different methods of conducting qualitative research Williams (2007) identifies five of relevance: case studies, grounded theory, ethnography, content analysis and phenomenological.

Tinkler (2004) defines a case study as when a "researcher explores in depth a programme or even an activity, a process, or one or more individuals". Williams (2007) further requires a case study to have a defined time frame, being either a single case or a case bounded by time and place.

Ethnography is a qualitative method for collecting data often used in the social and behavioural sciences (University of Virginia, 2023). Williams (2007) explains the difference between an ethnography study and a case study as being that a case study studies a person or programme while ethnography studies an entire group that shares a common culture. In this case, the researcher must become immersed in the daily lives of participants in order to properly observe their behaviours and then interpret the culture of social group and systems.

Creswell (2003) defines a phenomenological study as having a purpose to understand an experience from the participants' point of view. The focus is on the participants' perceptions of the event or situation and the study tries to answer the question of the experience. The same author defines the content analysis study as a detailed and systematic examination of the contents of a particular body of materials for the purpose of identifying patterns, themes or biases (Creswell, 2003). According to Williams (2007), content analyses review forms of human communication,

including books, newspapers and films, as well as other forms in order to identify patterns, themes, or biases.

With the mixed methods approach to research, researchers incorporate methods of collecting or analysing data from the quantitative and qualitative research approaches in a single research study; that is, researchers collect or analyse not only numerical data, which is customary for quantitative research, but also narrative data, which is the norm for qualitative research in order to address the research question(s) defined for a particular research study (Williams, 2007).

This FGP will be a qualitative study using the Case Study as the preferred approach.

3.2.1 Case study method

For this project, the case study method is proposed where, via interviews, focus groups, and archival studies, the problem, context, issues and lessons learnt will be examined and presented. Significant time will be spent on-site to interact with the key stakeholders involved in the process.

Table 2 – Research Methods (Source: Self-generated)

Objectives	Research methods
To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation.	The qualitative research method will be used for this objective by doing a document analysis of various case studies that exist in similar organisations. Interviews with critical stakeholders will also be conducted using a structured or semi-structured approach.

Objectives	Research methods
To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.	The research method to be applied will be qualitative using mainly interviews of key stakeholders and possibly focus groups to get important and diverse viewpoints.
To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.	A document analysis will be sufficiently applied here to achieve this objective. On-site observations will also be made to ascertain whether or not the organisation is mature enough to implement a PMO.
To determine the number of key personnel needed to form the PMO, stakeholders to be involved in the project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.	Interviews with key stakeholders and focus groups will be used to achieve this objective.
To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainability.	The risk assessment is best conducted through structured interviews with key stakeholders to identify and prepare mitigation plans for each risk.

3.3   Tools

Tools are understood to be data collection tools used for gathering research data. Whilst some type of tools can be used in both quantitative and qualitative research, some are more specific to one method.

Table 3 – Tools Chart 3 (Source: Self-generated)

Objectives	Tools
To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation.	Interviews, document analyses
To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.	Interviews, focus groups
To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.	Document analysis, on-site observations
To determine the number of key personnel needed to form the PMO stakeholders to be involved in the	Interviews

Objectives	Tools
project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.	
To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainable.	Interviews.

3.4   Assumptions and constraints

An assumption is a factor that is considered to be true, real or certain, without proof or demonstration (Project Management Institute, 2021). the PMBOK®   Guide 7th Edition also defines a constraint as a factor that limits the options for managing a project, programme, portfolio or process.

Table 4 – Assumptions and Constraints (Source: Self-generated)

Objectives	Assumptions	Constraints
To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation	The Senior Officers of the GDF (stakeholders) will be accessible for interviews.	Absence of successful PMO examples mean absence of appropriate project management culture, lack of support from the Senior command and a resistance to the changes required to improve the organisation.
To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.	The Senior Command of the Force, in particular the Commanding Officer of the 4 Engineers Battalion will	There is a paucity of project management professionals in the GDF.

Objectives	Assumptions	Constraints
	support the concept of a PMO for the Force.	
To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.	The Colonel Administration and Quartering will continue to support the research into implementing a PMO in the GDF.	There is a paucity of project management professionals in the GDF.
To determine the number of key personnel needed to form the PMO stakeholders to be involved in the project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.	The permission initially granted by the Chief of Staff to form a PMO and, in so doing, transfer/recruit staff to the PMO	There is a paucity of project management professionals in the GDF.

Objectives	Assumptions	Constraints
	will not be rescinded.	
To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainability.	Enough time will be available to conduct the risk assessment within the framework of the FGP.	There are not many examples of PMOs in Guyana to learn from.

3.5   Deliverables

The key deliverable of the FGP, in accordance with the general objective, is the elaboration of a project management plan for implementation of a PMO in the GDF. Thereafter, each specific objective will be aligned with an appropriate deliverable, which are listed in the table below:

Table 5 – Deliverables (Source: Self-generated)

Objectives	Deliverables
To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation	A report on feasibility analysis of implementing a PMO for the GDF, which will inform the decision point as to whether or not the concept in itself will be successful.
To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.	A report on the all-encompassing benefits (technical, financial, economic) both tangible and intangible that the implementation of a PMO will bring to the GDF.
To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.	A report on the level of the organisational attributes and processes that will engender it to consistently and continuously reach its organisational and fiduciary objectives upon the implementation of a PMO.
To determine the number of key personnel needed to form the PMO stakeholders and be involved in the project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.	A proposed organogram and human resources recruitment and retainment plan to properly staff the proposed PMO.
To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainability.	A risk register and risk mitigation plan to ensure that the identified risks are properly mitigated.

4   RESULTS

4.1 Feasibility of implementing a PMO in the Guyana Defence Force

Legal Framework

The first aspect to be carefully examined in determining the feasibility of the establishment of a PMO in the GDF is the extant legal framework in place to facilitate its implementation. The Defence Act is catered for under Chapter 15:01 of the Laws of Guyana and clearly establishes the Guyana Defence Force. It also establishes how employment is to be governed in the Force and precisely charges the Force for the maintenance of order in Guyana and with other duties as may be ascribed by the Defence Board. The Defence Board is subject to the general authority of the Minister of Defence who, for all intents and purposes, is the Executive President of the Republic and Commander-in-Chief of the Armed Forces. Said Defence Board is responsible for the overall command, discipline and administration of all matters relating to the Force. However, the Defence Board is excluded from exercising overall operational command of the Force. The power for such use is devolved to the Chief of Staff, subject to the general or specific directions of the Commander-in-Chief. So, the legal framework for the establishment, employment within and operation of the Force is clear and sufficient.

Administrative Framework

In terms of the administrative feasibility of the establishment of the PMO, interviews were held with the Staff Officer One General One (responsible for personnel matters), the Staff Officer One General Eight (responsible for GoG financing) and the Colonel Administration and Quartering (the Accounting Officer of the Force) to ascertain the administrative framework within which such a PMO would operate. There is general agreement that over the years the extant Chief of Staff,

with guidance from the Defence Board, has caused an organogram to be established for the Force. Each appointment within that organogram is guided by Force Orders, which specifically set out the mission and tasks for each Branch and position within the organogram. It is that instrument, the Force Orders, that ascribe the power and authority to manage projects to the Colonel AQ, the SO1 G8 and the SO1 G4 Engr.

The authority to function as the Accounting Officer of the Force flows from the authority so ascribed by the Fiscal Management and Accountability Act of 2003 (FMAA). In fact, Clause 10 Part 1 of the FMAA makes specific provision for the designation and accountability of a budget agency. *Inter alia*, it reads "…*the Finance Secretary shall, on or before the time of the submission to the National Assembly of the annual budget proposal or thereafter if the need arises, designate an appropriate official as Head of that budget Agency for the purposes of this Act.*" Clause 11 Part 1 also sets out the responsibilities of a Head of a budget agency and makes provision for the proper use and accounting of public funds via the appropriate processes and procedures. It also makes provision for the protection of such public funds via the maintenance of effective internal audit capacity within the agency.

The Procurement Act of 2003 also provides the Col AQ with the authority and administrative coverage to enter contracts for the use of monies voted from the public purse. Whilst Clause 16 makes provision for the creation of a National Procurement and Tender Administration Board, Clause 22 makes provision for the creation of Departmental and Agency Tender Boards. Coupled with and subject to the provisions of the Regulations to the Act, it is these two Tender Boards that facilitate the procurement of goods and services and the award of contracts to ensure that the AQ Branch can provide the services necessary to the officers and soldiers of the Guyana Defence Force.

From the foregoing, it can be easily concluded that the GDF is possessed with the administrative capacity to facilitate the creation of a PMO.

Technical Feasibility

On the technical side, all the legislation referenced makes provision for the GDF to possess itself with the necessary skills to fulfil its obligations to the various pieces of legislation. Definitively, there is no paucity of skills on the financial management and procurement side. However, on the engineering side there is an issue. To properly dichotomise the adequacy of the engineering posture of the GDF to facilitate the implementation of a PMO, a determination of the type of PMO to be implemented will have to be made. However, this does not prevent the GDF from acquiring the necessary skills to be able to so position itself. Hence, the conclusion is that the organisation is technically, administratively and legally sound to position itself to facilitate its implementation. The question of the feasibility of implementation must now be addressed.

According to Martins (2022), feasibility studies should critically examine four major areas: technical feasibility, financial feasibility, market feasibility and operational feasibility. Given that market feasibility is an evaluation of how the team expects the project's deliverables to perform in the market, it is not applicable to the GDF. Therefore, the market feasibility component will be substituted with organisational feasibility, an examination of the organisational readiness for a PMO.

The technical feasibility of implementing a PMO is directly proportional to the ability of the GDF to provide technical resources for the office and, by extension, all projects and programmes in the portfolio. Given the historic commitment of the Chief of Staff, the Colonel AQ and all other supporting Staff Officers to the successful design and implementation of the the annual public

sector investment programme, especially considering the efforts made to attract and retain the necessary human resources and administrative support for the PEU, there is no doubt that equal support will be given to graduate the unit to a full fledged PMO. It therefore means that PMO implementation is technically feasible. The extent of staffing and other administrative support needed will be examined further into the chapter. Listed in the table below are the current available human resources and their competencies that potentially form the PMO resource pool:

Table 6 – List of Resources and Competencies (self-generated)

Description	Resources	Competencies
Financial Management	Staff Officer One General Eight	ACCA Level 3 trained and Diploma in Accountancy
	Financial Analysts (3)	ACCA Level 2 trained
	Officer Commanding Finance Department	ACCA trained
	Subtreasury Department	ACCA trained
Procurement Management	Staff Officer One General Four - Logistics	BSc in Logistics and Supply Chain Management
	Staff Officer Two General Four - Logistics	BSc in Logistics and Supply Chain Management
	Procurement Specialists (4)	BSc in Logistics and Supply Chain Management
	Officer Commanding Stores and Inventory	BSc in Logistics and Supply Chain Management

Description	Resources	Competencies
Engineering	Staff Officer One General Four – Engineer	Meng – Civil Engineering, BEng – Civil Engineering, MPM (prospective), PMP, GPM-b
	Staff Officer Two General Four – Engineer	BEng – Civil Engineering
	Engineers (2)	Diploma in Civil Engineering
	Architect (1)	BSc – Architecture
	Technician Engineers (8)	High School Diploma
Internal Audit	Audit Engineer	BEng – Civil Engineering
	Financial Auditor	ACCA Trained

Hence, from a technical standpoint, the GDF possesses sufficient human resources from which to potentially form a PMO.

Economic Feasibility

A discussion on economic feasibility must commence with an insight into the costs to develop the PMO versus the benefits to be derived from same. In that regard, a cost benefit analysis becomes necessary.

Amounts were estimated based on the cost to develop the PMO (including salaries, internal expenses, consulting costs and capital expenditures) and other support costs (operational, non-recurring and recurring). The basis of these estimates were derived after dicussions with the senior

officers in the AQ Branch.   These costs were programmed over a 5-year implementing period.

The breakdown of these costs is illustrated in the figure below:

Figure 3 – Breakdown of PMO Development Costs – US$ (self-generated)
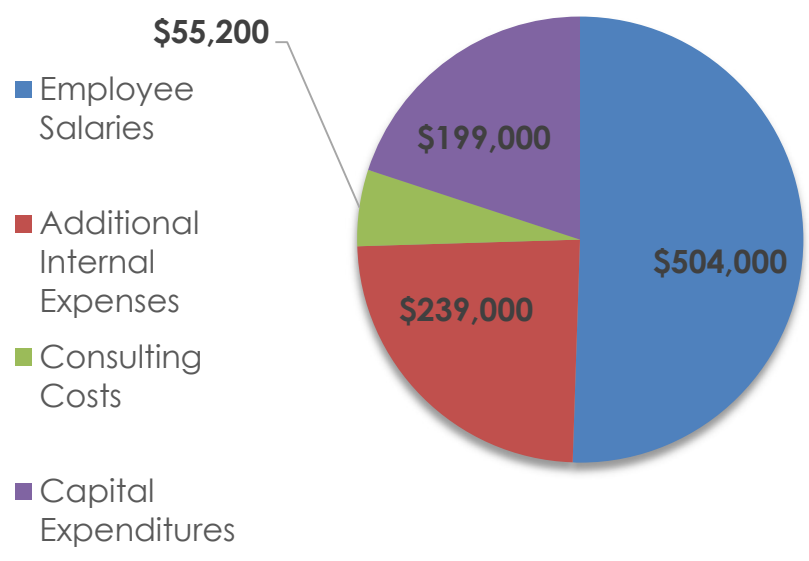
Figure 4 – Breakdown of Project Support Costs – US$ (self-generated)

PROJECT SUPPORT COSTS PER FISCAL YEAR
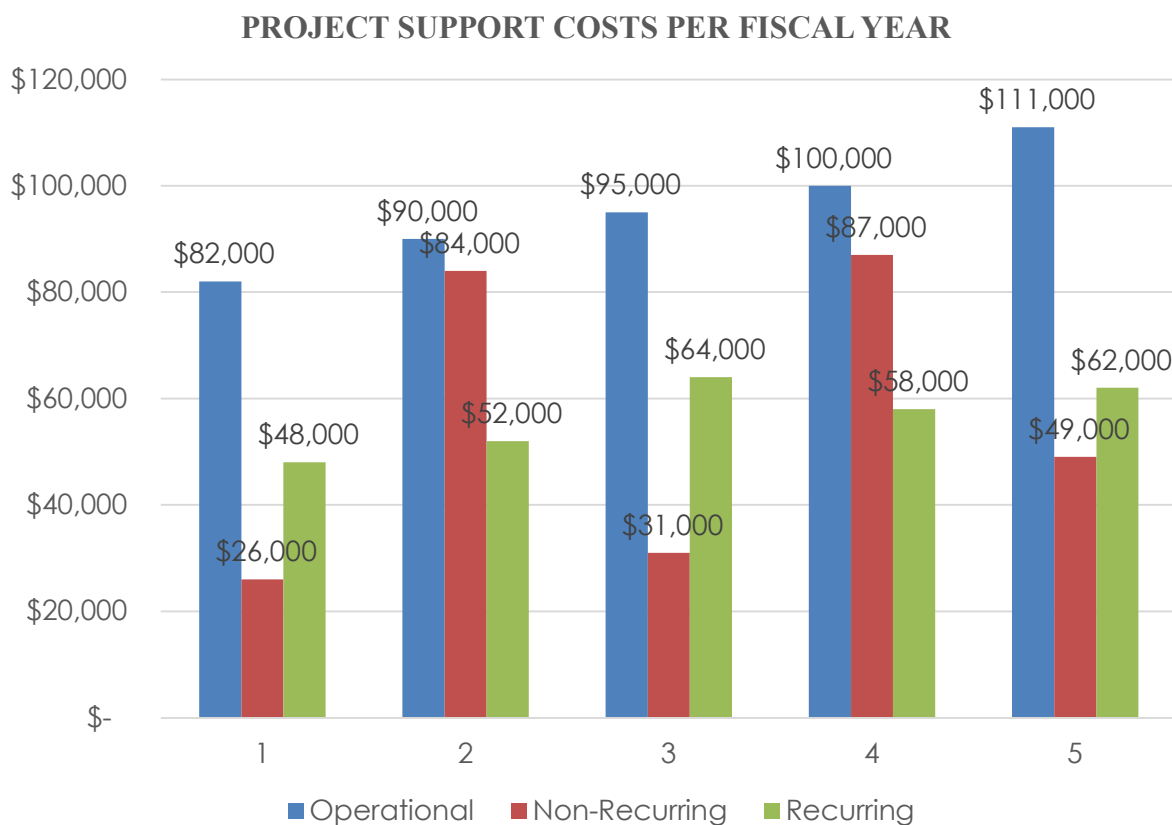
Carrying through with the computation of the benefits/savings and the net present value (with a nominal interest rate of 6% (Ministry of Finance), the results show that the project for the implementation of a PMO for the GDF has a positive net present value of $5.2 million and is therefore feasible. The benefits/savings were computed using the difference between the current price and the new price, both singularly and cumulatively. The details of the computation are illustrated in the table below.

Table 7 – Cost Benefit Analysis and Net Present Value Calculation

PROJECT COSTS						
DESCRIPTION	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**TOTAL**
DEVELOPMENT						
Employee Salaries	$ 87,000	$ 92,000	$ 100,000	$ 125,000	$ 100,000	$ 504,000
Additional Internal Expenses	$ 50,000	$ 68,000	$ 42,000	$ 31,000	$ 48,000	$ 239,000
Consulting Costs	$ 18,000	$ 2,200	$ 14,000	$ 12,500	$ 8,500	$ 55,200
Capital Expenditures	$ 42,000	$ 53,000	$ 52,000	$ 41,000	$ 11,000	$ 199,000
TOTAL DEVELOPMENT COSTS	$ 197,000	$ 215,200	$ 208,000	$ 209,500	$ 167,500	$ 997,200
SUPPORT						
Operational	$ 82,000	$ 90,000	$ 95,000	$ 100,000	$ 111,000	$ 478,000
Non-Recurring	$ 26,000	$ 84,000	$ 31,000	$ 87,000	$ 49,000	$ 277,000
Recurring	$ 48,000	$ 52,000	$ 64,000	$ 58,000	$ 62,000	$ 284,000
TOTAL SUPPORT COSTS	$ 156,000	$ 226,000	$ 190,000	$ 245,000	$ 222,000	$ 1,039,000
TOTAL COSTS	$ 353,000	$ 441,200	$ 398,000	$ 454,500	$ 389,500	$ 2,036,200

BENEFITS / SAVINGS						
PROCESS	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**TOTAL**
CURRENT						
TOTAL ANNUAL PRICE	$ 353,000	$ 441,200	$ 398,000	$ 454,500	$ 389,500	$ 2,036,200
NEW						
TOTAL ANNUAL PRICE	$ 441,200	$ 398,000	$ 454,500	$ 389,500		$ 1,683,200
ANNUAL SAVINGS	$ (88,200)	$ 43,200	$ (56,500)	$ 65,000	$ 389,500	$ 353,000

CUMULATIVE SAVINGS	$ (88,200)	$ (45,000)	$ (101,500)	$ (36,500)	$ 353,000	$ 706,000
CUMULATIVE COSTS	$ 353,000	$ 794,200	$ 1,192,200	$ 1,646,700	$ 2,036,200	$ 4,072,400
CUMULATIVE TOTAL NET SAVINGS	$ (441,200)	$ (839,200)	$ (1,293,700)	$ (1,683,200)	$ (1,683,200)	$ (3,366,400)

FUTURE VALUE			
PRESENT VALUE	**INTEREST RATE**	**YEARS PROJECT WILL LAST**	**FUTURE VALUE**
$3,500,000	6%	5	$4,683,790

NET PRESENT VALUE		
FISCAL YEAR	**FISCAL YEAR RETURN**	**PRESENT VALUE**
1	$968,000	$987,360
2	$1,200,000	$1,224,000
3	$1,100,000	$1,122,000
4	$1,500,000	$1,530,000
5	$2,300,000	$2,346,000
TOTAL	$7,068,000	$7,209,360
	PROJECT DEVELOPMENT TOTAL	$2,036,200
	NET PRESENT VALUE	$5,173,160

From a financial standpoint, and with direct reference to the powers of the Chief of Staff via the Defence Board to employ personnel, providing the financial resources to support PMO implementation is not in doubt. Given the quantum of resources made available annually, it would be incumbent upon the Branch to ensure that the management structure is in place to properly support project implementation.

Based on the foredoing, it is deemed that the PMO implementation is economically feasible.

Operational Readiness and Organisational Feasibility

Operational readiness and organisational feasibility are both best examined via the identification of the value proposition for PMO implementation and the performance of a maturity analysis to determine the readiness of the GDF to implement a PMO. However, given the foregoing, a preliminary conclusion can be drawn that the GDF is technically, administrative and legally positioned to successfully implement a PMO.

4.2. Determining the value proposition of a PMO in the GDF
Establishing Organisation Value

The first step towards establishing the value of a PMO to the GDF would be to formulate a concise mission statement that informs on the intent for establishing the PMO. Given that the stated mission of the AQ Branch is "to provide for the highest quality of administrative and quartering support to the operational troops of the Guyana Defence Force", the mission of the PMO needed to capture the same essence that the Branch is aiming to achieve. Together with the Col AQ, the CO 4 Engr Bn, the SO1 G8 and the SO1 G4 – Engr, the following was proposed as the mission of the PMO to be implemented:

"To create a functional Programme and Project Management Office that establishes and implements best practices in project management for the benefit of the GDF, in a way that encourages collaboration, standardisation and overall improvement in results, both at the project and programme levels."

Establishing Meaningful Value Measures

This clear delineation of what the mission of the proposed PMO will be then caused the senior Branch officers to exercise their minds along the lines of what key challenges of the GDF the PMO will be addressing. This led to a discussion of what would be the meaningful value that the PMO would bring to the organisation. In that regard, deference was given to the PMO value triangle of knowledge, standards and consulting, as was proposed by Letavec (2007). A list of the current challenges and the opportunities to correct same via a PMO was prepared. This is illustrated in the table below:

Table 8 – Challenges and PMO Opportunities in the GDF

Curent Challenge	PMO Opportunity	Priority
Inability of Chief of Staff (COS) and Branch Heads to have a consolidated view of project statuses across the organisation	1. Provide consolidated reporting on projects. 2. Establish project reporting standards. 3. Implement project management reporting software	High

Curent Challenge	PMO Opportunity	Priority
Lack of approved methodology for authorising projects	1. Define standards for project iniation and chartering. 2. Assist with organising and prioritising potential projects across the Force	Medium – High
Inability to effectively manage human resources utilisation of the 4 Engrs Bn for project efforts	Track and report resources utilisation at the level of the unit	High

After obtaining an understanding of what the PMO needs to do to provide value to the GDF (via the elaboration of the opportunities), the senior officers in the Branch then attempted to determine what the objectives of the PMO would be. In this regard, the following table was developed:

Table 9 – PMO Objectives

PMO Opportunity	Current Challenges	PMO Objectives	Timeframe
Provide consolidated reporting on projects and establish project reporting standards	Lack of consistent reporting with standardised measures leads to potentially troubled projects gaining the	Implement Earned Value Management (EVM) for all projects over US$ 4,000[1]	Short term

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[1] This represents the project value that needs to obtain a "no objection" from the Cabinet of Government Ministers before a contract can be awarded and signed.

PMO Opportunity	Current Challenges	PMO Objectives	Timeframe
	attention of the COS and Branch Heads too late to allow for effective responses.	Develop and implement standardised templates for monthly project reporting.	Short term
		Establish reports repository for historical reporting and tracking	Short term
Implement project management reporting software	Inconsistent tracking of large projects leads to inaccurate reporting and schedule misses	Implement enterprise project management software for tracking and resources utilisation	Medium term
Define standards for project iniation and chartering and assist with organising and prioritising potential projects across the Force	No defined authority for reviewing and authorising projects occasionally leads to duplication of efforts and requests for changes in scope	Review and document current processes for project authorisation within units	Short term
		Define workflow and documentation	Short term

PMO Opportunity	Current Challenges	PMO Objectives	Timeframe
	during implementation. Lack of consistent project review for large capital projects causes occasional significant misunderstanding regarding project scope and required resources.	standards for chartering projects and implement in the shortest possible time. Establish project authorisation board for all projects over US$ 4,000	Short term

Several goals have been accomplished by the elaboration of the table above. Firstly, the summarisation of the current challenges and opportunities presented has reaffirmed the conviction that the higher echelons of the GDF are serious about high-level focus of the proposed PMO. Secondly, there is a clear indication of the indicative timelines for accomplishment of the objectives. The value of the PMO is therefore best demonstrated via a process where the proposed benefits are examined alongside the effects of maintaining the status quo. This is illustrated in the table below:

Table 10 – PMO Value – Benefits vs Maintaining Status Quo (self-generated)

PMO Opportunity	Implementation Timeframe	Expected Benefits/Returns	Effect of Maintaining Status Quo
Define standards for project iniation and chartering.	Within 90 days of PMO implementation	Increased scrutiny of potential projects reduces risk of undertaking projects with low return potential	Possibility of projects being implemented which do not contribute to the achievement of the strategic objectives of the Force, thereby costing the Force at minimum US$4,000 per project.
Define standard project management training roadmap for new project managers in consolidated project reporting	Within 90 days of PMO implementation	Standardisation of curriculum that facilitates implementing standardised project methodologies. Knowledgeable project management staff increases	Individual focus on project management training by new project managers would be inimical to the need for standardisation and potentially affect the success of the PMO.

PMO Opportunity	Implementation Timeframe	Expected Benefits/Returns	Effect of Maintaining Status Quo
		likelihood of project success	
Implement enterprise project management software for tracking resource utilisation	Within 12 months of PMO implementation	Elimination of single use project scheduler would lead to potential savings of appr US$60,000 per year	Continuation of purchase of single user project management packages costing the organisation more than US$60,000 annually per user.

Proposed Value Proposition

According to Coleman (2023), the value proposition is the core to having a competitive advantage. In the case of the GDF, there is an option to outsource services that are currently being offered by the PEU. Any PMO, therefore, must present the unit commanders with solutions that solve their core problems.

Having regard to the primacy of purpose of the AQ Branch in the provision of administrative support and quartering services to the fighting/frontline troops, by extension the value proposition of the proposed PMO is as follows: **Implementing timely solutions to your daily problems.**

4.3. Maturity Analysis of the GDF

The PMO is considered to be an indispensable foundation of any complex project, programme or portfolio and without it, a high-quality experience would be lost (Husser, 2017). The question of whether or not the GDF needs to have a PMO formally implemented is not in doubt. So far, in sections 4.1 and 4.2, it has been established that the PMO implementation is feasible and that not implementing same would cause the organisation to lose several benefits that would have been otherwise derived. This section addresses the organisational maturity as it relates to its readiness to implement a PMO. In so doing, project management gaps and actions to be taken to guarantee improvement were identified.

The analysis commenced within the framework of the existing project and programme management structure and the mechanisms currently in place to execute projects. In this regard, interviews were held with several personnel representing the PEU, the Procurement Office, the Finance Office and the Internal Audit Office and the Col AQ himself. During the interviews, participants were asked to fill-out a project management maturity assessment questionnaire. This questionnaire was purchased from www.demandmetric.com. This model follows the Project Management Maturity Model (PMMMSM) methodology and was chosen because it provides a quick but robust self-assessment of the organisation. It uses the PMBOK® 10 knowledge areas to create a standardized method for maturity assessment and assigns five maturity levels to each knowledge area. These levels are the following: initial process, structured process and standards, organization standards and institutionalized process, managed process, and optimizing process. Given the time available for the FGP process, it was considered better to use such a model in the first instance, instead of a more detailed model such as OPM3, which requires considerable effort

and time. Essentially, all of the 29 existing project management maturity models deliver the same result via slightly different processes based on the organisational complexities and other factors. The analysis of the project management maturity of the GDF was therefore first performed using PMMMSM. The importance of having a multiplicity of views as it relates to the project management maturity assessment was seen in the variety of viewpoints coming from the respondents. This was expected as the respondents came from different departments and played different roles in the project cycles and, hence, have seen the issues through different lenses. The table below illustrates the results obtained from the self-assessment done by various officers/members of the AQ Branch:

Table 11 – Results of Project Management Maturity Assessment (Self-Assessments) for the GDF (self-generated)

Project Management Competencies	Results						
	Col AQ	Finance Office	SO1 G4 Engr	PE U	Procure ment		Internal Audit
Scope Management	3	2	2	3	2	4	1
Time Management	5	3	1	3	3	4	4
Cost Management	2	3	2	2	3	3	2
Quality Management	2	4	1	2	2	3	2
Human Resources Management	2	2	1	2	3	2	4

Project Management Competencies	Results						
	Col AQ	Finance Office	SO1 G4 Engr	PE U	Procure ment		Internal Audit
Integration Management	3	3	2	3	3	3	1
Communications Management	4	5	1	2	3	3	4
Risk Management	2	1	1	1	1	2	2
Procurement Management	3	4	3	3	3	3	3
Overall Project Management Maturity	**2.9**	**3.0**	**1.6**	**2.3**	**2.6**	**3.0**	**2.6**
Process Maturity Levels							
1 - Initial/Ad Hoc							
2 - Repeatable/Intuitive							
3 - Defined							
4 - Managed & Measured							
5 - Optimised							

With the exception of the SO1 G4 Engr, all of the respondents hold the view that the GDF is reasonably mature in its project management practices and has repeatable/intuitive or defined practices. This means that, for those who scored the organisation at Level 2, they view the organisation as having repeatability or standardisation in the processes.

The work that is required to move the Branch to a managed or optimised position would require a firm commitment to move in the direction of a PMO. It can therefore be argued that the creation

of a PMO will allow the organisation to achieve optimisation in the medium to long term. The fact that the SO1 G4 Engr scored the organisation at the initial/ad hoc stage is interesting. As a point of fact, the SO1 G4 Engr is the only trained and certified project manager in the entire grouping. It is likely, therefore, that he holds the organisation to a far higher standard than the others do.

A further analysis was done, considering the existing PEU as possessing the basic foundation of the proposed PMO. Using a tool obtained from www.onewayforward.com, the maturity assessment of the PEU (as a PMO) was conducted. This model is a close adaptation of the P3M3® and takes a wide-angle view of the entirety of the company's interdependent processes to make an accurate maturity assessment. The figure below illustrates the questions asked in the assessment and the answers provided.

Figure 5 – PMO Maturity Assessment (www.onewayforward.com)

Question	Yes	No
Governance		
Level 1: Ad-Hoc		
Do you track progress of projects and programs?	◉	○
Level 2: Managed		
Does the PMO require progress status tracking report of projects and programs?	◉	○
Level 3: Defined		
Does the PMO provide a process to be followed to report projects and programs status?	◉	○
Does the PMO provide a reporting tool for KPIs dashboards?	○	◉
Level 4: Measured		
Does the PMO conduct audits on project performance?	◉	○
Does the PMO reflect consolidated project and program status reports at the portfolio level?	○	◉
Level 5: Optimized		
Does the PMO take corrective actions and change requests based on analysis of performance reports?	○	◉
Does the PMO carry out Post-Implementation-Review on projects and programs?	○	◉
Development		
Level 1: Ad-Hoc		
Do you conduct project management training at the project level?	◉	○
Level 2: Managed		
Does the PMO encourage project management education in the organization?	◉	○
Level 3: Defined		
Does the PMO provide support in planning and arranging project management training?	◉	○
Does the PMO make institutionalize a project management methodology across the organization?	○	◉
Level 4: Measured		
Does the PMO evaluate effectiveness of project management training programs conducted?	○	◉
Does the PMO review and evaluation effectiveness of the istitutionalized project management methodology?	○	◉
Level 5: Optimized		
Does the PMO plan improvements to the training and education programs based on past evaluations?	○	◉
Does the PMO improve the project management methodology continually based on feedback from practitioners?	○	◉
Direct Management		
Level 1: Ad-Hoc		
Does the PMO provide supportive guidance, processes, and templates to project and program managers in other departments?	○	◉
Level 2: Managed		
In the organizational chart, do all project and program managers report to the PMO unit directly?	○	◉
Level 3: Defined		
Is the PMO responsible for authorizing project and programs?	○	◉
Is the PMO responsible for assigning project and program managers?	◉	○
Level 4: Measured		
Is the PMO responsible for executing and monitoring to closure?	◉	○
Does the PMO assess completence and skills of project and program managers?	○	◉
Level 5: Optimized		
Does the PMO plan comptenece improvements for the internal project and program managers?	○	◉
Does the PMO evaluate project and program delivery success rate to continually enhance it?	○	◉
Strategic		
Level 1: Ad-Hoc		
Is there a portfolio management function in the organization?	◉	○
Level 2: Managed		
Is the PMO represented on the portfolio management board?	○	◉
Level 3: Defined		
Does the PMO own the portfolio management function and performs it as one of the PMO function?	○	◉
Does the PMO develop the portfolio strategic plan, as a basis for initiatives evaluation and selection?	○	◉
Level 4: Measured		
Does the PMO hold regular portfolio review activities?	○	◉
Does the PMO track the portfolio status for rebalancing and resources allocation?	○	◉
Level 5: Optimized		
Does the PMO adapt the portfolio composition to enhance the overall portfolio performance?	○	◉
Does the PMO manage benefits realization through the initiative included in the portfolio to achieve organizational strategic objectives?	○	◉
Knowledge Management		
Level 1: Ad-Hoc		
Do you collect lessons learned and share knowledge at the individual project and program level?	○	◉
Level 2: Managed		
Does the PMO promote the culture of knowledge management, lessons learned collection, and document archiving?	○	◉
Level 3: Defined		
Does the PMO provide knowledge management processes, tools, and templates?	○	◉
Does the PMO mandate lessons learned collection and document archiving for all projects and programs?	○	◉
Level 4: Measured		
Does the PMO review and analyze lessons learned collected from projects and programs?	○	◉
Does the PMO evaluates effectiveness of project and program management practices based on lessons learned and reported feedback?	○	◉
Level 5: Optimized		
Does the PMO plan for improvements of the organizational project management capability based on lessons learned review and evaluation?	○	◉
Does the PMO enhance the knowledge management capability for the organizational growth?	○	◉

The results were further dichotomised, as illustrated in the figure below:

Figure 6 – Results of PMO Assessment (www.onewayforward.com)
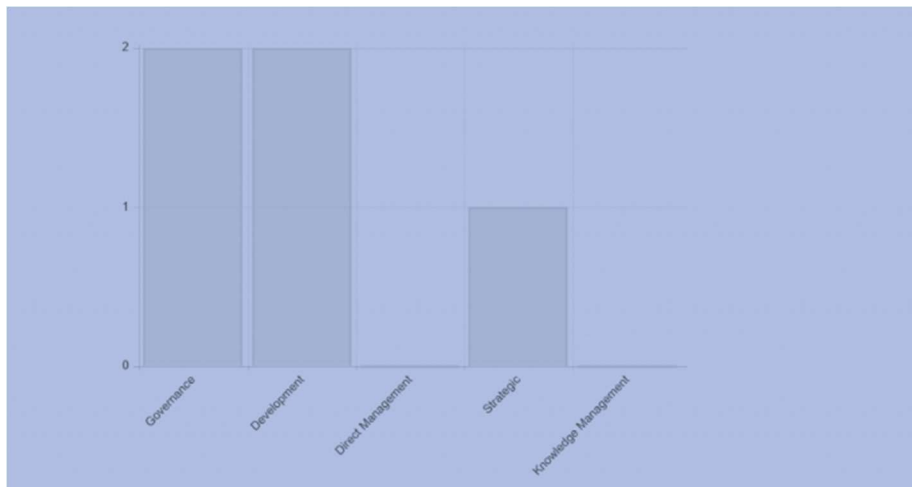
The results show that the PEU has Level 2 achievements in governance and development and level one achievements in strategic planning. However, in the areas of direct management and knowledge management, the PEU scored zero respectively.

Figures 4 and 5 below illustrate the overall PMO level of the PEU and the work that needs to be done for improvement:

Figure 7 – PMO Overall Level: Undefined (www.onewayforward.com)
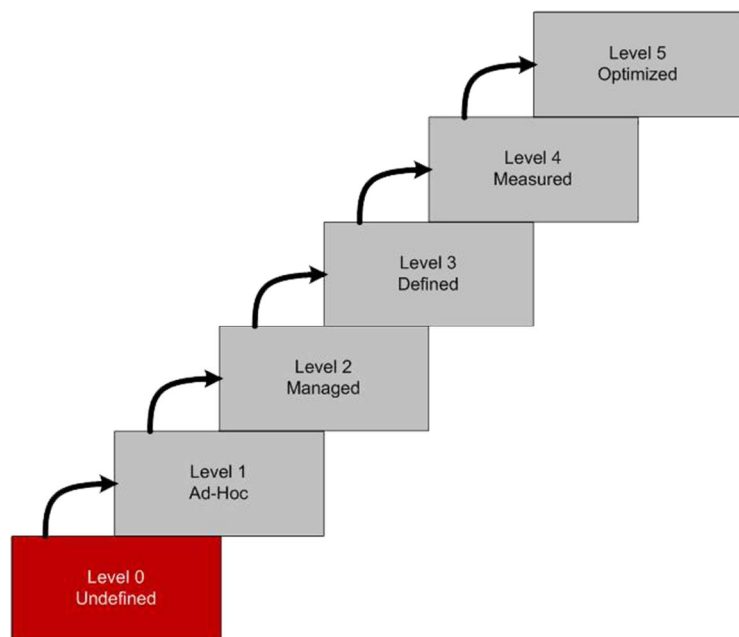
This clearly illustrates that the overall level of the PEU as a PMO is "Undefined".

Figure 8 – Components of PMO Maturity Analysis of the GDF (www.onewayforward.com)

Category	Level	Description	Improvement Steps
Governance	Managed	A PMO exists, carrying out partial support functions, with no governance or guidance roles.	Perform requirements of the following level: Defined
Development	Managed	A PMO exists, carrying out partial support functions, with no governance or guidance roles.	Perform requirements of the following level: Defined
Direct Management	Undefined	A PMO doesn't exist, or exists in a very minor, invisible capacity.	Perform requirements of the following level: Ad-Hoc
Strategic	Ad-Hoc	Some PMO functions are performed on a single-project basis, a project office. No unified practices across the organization.	Perform requirements of the following level: Managed
Knowledge Management	Undefined	A PMO doesn't exist, or exists in a very minor, invisible capacity.	Perform requirements of the following level: Ad-Hoc

From Figure 5 above, it is clear that the PEU, in order to become a PMO, needs to improve drastically in the areas of direct management, knowledge management and strategic planning.

The final assessment of the maturity of the GDR was performed using a radar chart, closely adapted from the Kerzner Project Management Maturity Model (KPM3). The comparative results of all three models are illustrated below:

Table 12 – Comparison amongst Maturity Models

Assessment Domain	Maturity Model Score		
	PMMMSM	P3M3®	KPM3
Project-Based Organization			3
Strategic Alignment			3
Top Leadership Support			4
Project Team Support			2
Learning Organization			1
Organization Support			1
Information Systems			1
PMO			2
Project Management Culture			1
Scope Management	2		
Time Management	3		
Cost Management	2		
Quality Management	2		
Human Resources Management	2		
Integration Management	3		
Communications Management	3		
Risk Management	1		
Procurement Management	3		
Governance		2	
Development		2	
Direct Management		0	
Strategic Alignment		1	
Knowledge Management		0	
Levels	Model Maturity Score Key		
	PMMMSM	P3M3®	KPM3
Level 1	Initial/Ad Hoc	Ad Hoc	Common Language
Level 2	Repeatable/Intuitive	Managed	Common Processes
Level 3	Defined	Defined	Singular methodology
Level 4	Managed & Measured	Measured	Benchmarking
Level 5	Optimised	Optimised	Continuous Improvement

It was important for the GDF to perform maturity analyses using all three of these models to ensure that the results of the assessment were presented from different viewpoints. For instance, strategic alignment (*from the KPM3 and P3M3® models*), scope and risk management (*from the PMMMSM model*) and governance (*from the P3M3® model*) are considered priorities by the high command

of the Force. The organisation will therefore weigh these aspects and prioritise implementation activities accordingly. The conclusion therefore, is that the organisation has adopted a combination of models to assess its overall project management maturity posture.

The final point to be made is one of organisational rigor versus responsiveness. Rigidity can be defined by a heavy emphasis on formal structures and control, standard methods and processes, top-down governance with dictated authority, responsibility and decision making (Duggal, 2018). The GDF, by its nature, is such an organisation. In contrast, responsiveness means that the project management practices of the PMO is responsive to the stakeholder and business needs. It emphasises flexibility, adaptable and customised processes and self-regulating governance with shared authority, responsibility and decision making (Duggal, 2018). A responsive PMO is tuned to the shifting business environment and can respond to changing priorities. This is the goal of the GDF and the "heavy lifting" needs to be done to cause the organisation to adopt this posture.

In this regard, the GDF must find that balance between the need for rigour and freedom because they are opposing forces that will cause friction between the PMO and its stakeholders. The figure below demonstrates this quite well, in that the organisation must seek the balance between the extremes of rigidity and responsiveness to varying degrees. This is called the "arc of fire" in military parlance and allows the leadership of the organisation freedom to operate within pre-set boundaries. The very purpose of implementing project management and PMOs is to achieve discipline but this does not mean that the organisation should choose either of the extremes. Neither rigid process nor flexibility with no standards is desirable and it therefore becomes imperative for the organisation to optimise the balance between these two opposing forces. This has been the primary goal of the GDF through its AQ Branch over the last two years.

Figure 9 – How to Achieve Balance (Duggal, 2018)
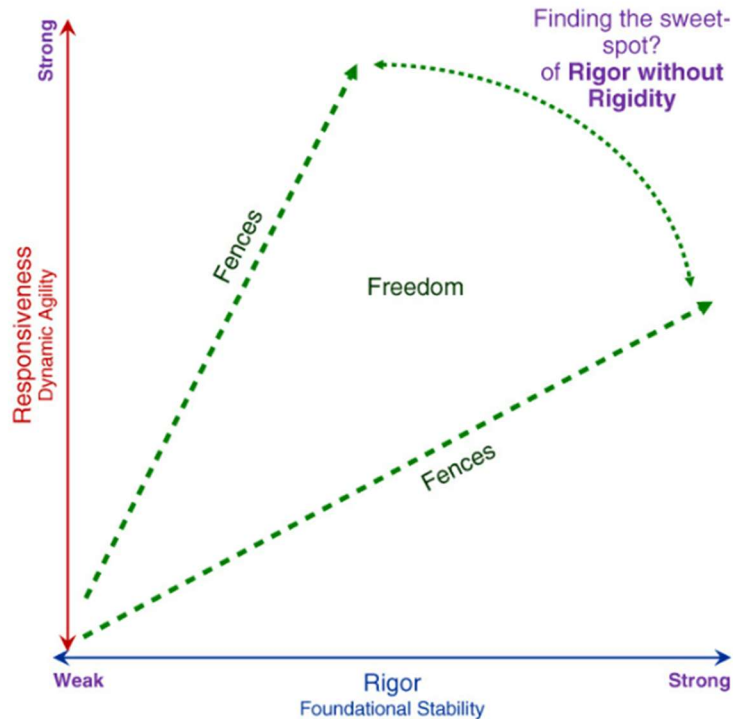
4.4. Number of Key Personnel Needed to Form PMO

The AQ Branch retains overall responsibility for the implementation of infrastructure projects for the Force as this is in line with its mission and tasks. However, the 4 Engrs Bn, even though a line unit, is a part of the AQ Branch and has as its mission "to improve the tactical mobility and physical infrastructure of the Force and to contribute resources to national development". So, intrinsic in that mission is the execution of projects to improve the infrastructure of the Force. Whilst the Battalion has several tasks, some or the pertinent ones are listed below:

(i)   Undertake and monitor all construction and maintenance programmes.

(ii)   Construct roads, airstrips, water points, ammunition depots, bridges, and other civil works, in support of other units.

(iii)   Provide engineering advice and support to DHQ and other units of the Force.

It is therefore clear that the 4 Engrs Bn does have a formal role to play in the project management fabric of the Force. The question then arises as to how the role of the supporting staff officers of the Col AQ is dichotomised with the command function, mission and tasks of the 4 Engr Bn. From the collective standpoint of the Col AQ, the CO 4 Engr Bn, the SO1 G8 and the SO1 G4 Engr, the primacy in function of the Branch is what matters. The principal staff officers (the two SO1s) are to support the Col AQ and to project his authority outwards to the line commanders under his command. Hence, there is no conflict with the 4 Engrs Bn becoming involved in direct project management so long as the command can be so organised. The standing order of battle [2]for the command will now be discussed.

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[2] Order of Battle refers to the military jargon for Organogram.

Figure 10 – Orbat for 4 Engr Bn (CO 4 Engr Bn)
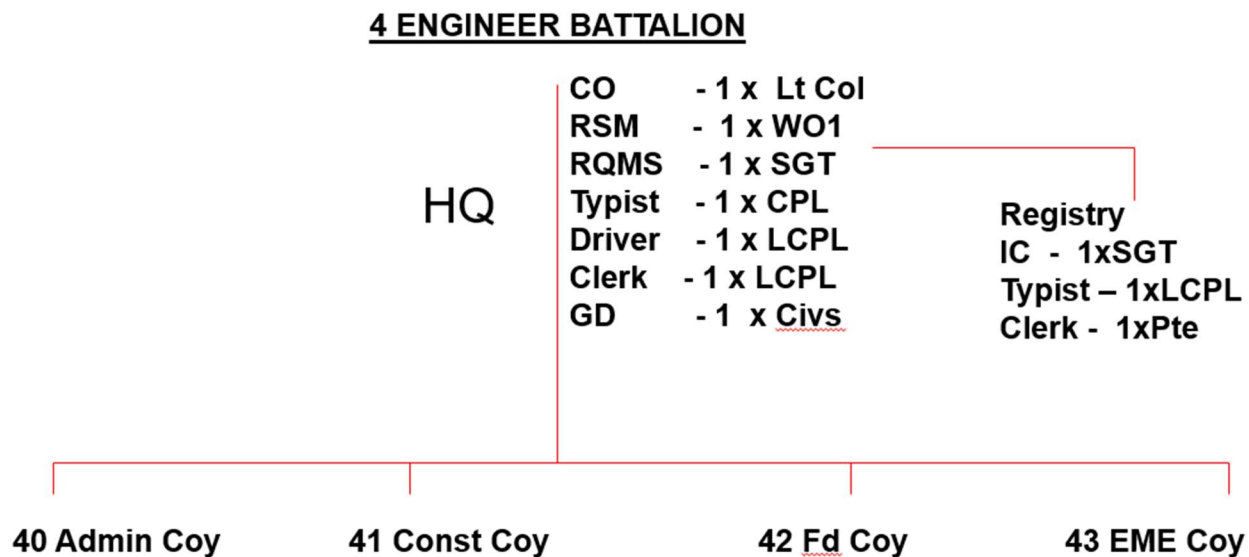
The figure above illustrates the organogram of the 4 Engrs Bn. The 41 Const Coy and the 42 Fd Coy are the two sub-units that are directly responsible for project-related work. However, these subunits are mainly involved in executing works, rather than supervising. It therefore stands to reason that there must be a unit that does the planning and supervising. This makes the argument for a PMO. Recall that there already is a PEU doing what the PMO is intended to do.

There is a school of thought that the primacy of command of the 4 Engr Bn should be the focus and that the battalion should be the basis of the PMO. However, this is fraught with issues as the battalion, by virtue of being a line unit, will not be able to effectively function in a staff capacity. The burning issue remains that the portfolio manager is the Col AQ and he or she has a primary reporting responsibility to the Ministry of Finance. Hence, the need to retain staff functionality via a PMO is without question.

Interviews with Brigadier Beaton, a former CO of the 4 Engr Bn and a senior civil engineer, provided some interesting insights. Coupled with the discussions with the incumbent Col AQ and the CO 4 Engr Bn, it was agreed that the PMO needed some key ingredients. These include the following:

- A section to deal with project management standards.

- A section to hold responsibility for project planning.

- A section to record and archive reports and documentation.

- A section to exclusively execute projects.

In this regard, the following organogram was proposed:

Figure 11 – Proposed organogram for PMO for the GDF ((Udoagwu, 2022)
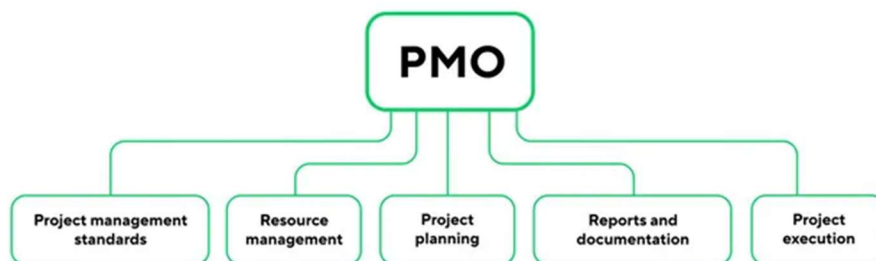
In terms of the key personnel required, it is proposed that the head of the PMO be at the rank of at least a Lieutenant Colonel and must be trained and certified in project management. Each section head thereafter can be at the rank of a Captain, certified and trained in the relevant area. However, the head of the project planning and project execution units needs to be at the rank of Major with specific training and certification in project management.

The details of the command and organogram of the 4 Engr Bn is a distinct and separate discussion. Suffice it to say that the battalion should and will have a role in the project execution arm, not dissimilar to the role played by contracted third parties. Hence, the battalion will have to be subject to the general and specific control of the PMO and the head of project execution.

4.4. Risk Assessment of the GDF

A key decision point arose in the selection of the relevant risk categories to conduct this risk assessment. In this regard, the PMI Standard for Risk Management was consulted and various aspects of the PESTLE (*political, economic, social, technological, legal and environmental factors*), TECOP (*technical, environmental, commercial, operational, political*) and SPECTRUM (*socio-cultural, political, economic, competitive, technology, regulatory/legal, uncertainty/risk, market*) examples were selected as appropriate. After much brainstorming with the key personnel in the Branch, risks were identified in the following categories:

(i)   External

(ii)   Technical

(iii)   Operational

(iv)   Organisational

As a result, the risk breakdown structure (RBS) is presented below:

Figure 12 – Risk Breakdown Structure for PMO Formation in the GDF (generated using WBS Schedule Pro)
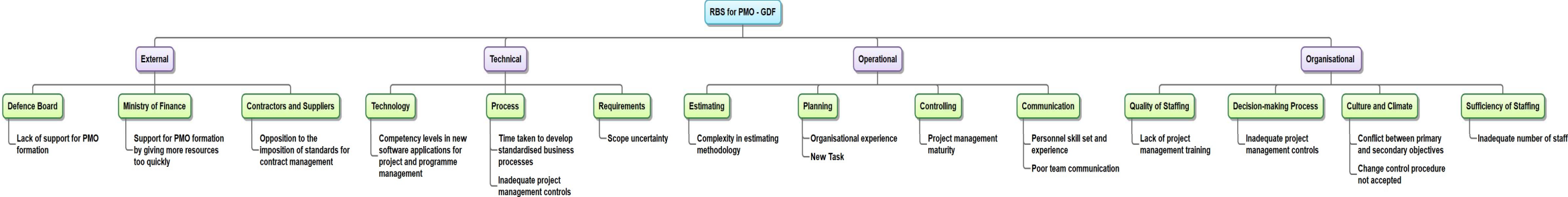
Probability and Impact Scales

After identifying and categorising the possible risks, they were then prioritised to properly allocate resources towards risk mitigation. The PMI suggests a risk-scoring method based on probability (P) and impact (I) using the following formulas and rankings (McAbee, 2022):

- Probability (P) of risk occurrence:

    - High probability ($80\% \leq x \leq 100\%$)

    - Medium-high probability ($60\% \leq x$

    - Medium-low probability ($30\% \leq x$

    - Low probability (0%

- Risk impact:

    - High: catastrophic (rating A - 100)

    - Medium: critical (rating B - 50)

    - Low: marginal (rating C - 10)

Once each risk was analysed, the risk score was found by multiplying the impact rating (I) by the probability (P). This is illustrated in the table below:

Table 13 – Probability and Impact Scales (adapted from PMI)

		Probability			
		1 = High probability (80% ≤ x ≤ 100%)	2 = Medium- High (60% ≤ x <80%)	3= Medium-low probability (30% ≤ x 60%)	4= Low (0% < x < 30%)
Impact	High: catastrophic (rating A - 100)	**Scope uncertainty (Score 99)**	**Opposition to the imposition of standards for contract management (Score 80)**	**Inadequate project management controls in decision-making (Score 55)**	**Lack of support for PMO formation (score 20)**
		Complexity in estimating methodology; Inadequate number of staff **(Score 99)**	**Competency levels in new software applications for project and programme management (Score 80)**	**Project management maturity; Inadequate project management controls (Score 58)**	**Support for PMO formation by giving more resources too quickly (Score 25)**
	Medium: critical (rating B - 50)	**Organisational experience in planning (Score 49)**	**Poor team communication (score 60)**	**Time taken to develop standardised business processes (score 30)**	Personnel skill set and experience (score 15)
			Lack of project management training (60)	**Change control procedure not accepted (score 30)**	
	Low: marginal (rating C - 10)			**Conflict between primary and secondary objectives (Score 8)**	

Key:

	Exposure: Low
	Exposure: High
	Exposure: Moderate
	Exposure: Very High

The identified risks that are colour coded red have a very high exposure rating and are a cause for immediate concern. The assessment indicates that *scope uncertainty, complexities in estimating methodology and inadequate number of staff* all have a risk score of 99. These results indicate an honest assessment of the extant state of affairs in the GDF and require a concerted effort to mitigate same. *Opposition to the imposition of standards for contract management and competency levels in new software applications for project and programme management* have a risk score of 80 and also indicate a very high-risk exposure. Hence, immediate risk mitigation measures were discussed and proposed.

Thereafter, a risk register was prepared, taking great care to ensure that the mitigation measures were properly elucidated. This is illustrated in the table below. Of importance also is the mitigation risk assessment. A colour code of red, amber or green was used to indicate the state of the risk as it relates to the stated mitigation measure.

Table 14 – Risk Register (adapted from PMI)

List of items	Risk Description	Likelihood (Low, Medium, High)	Description of impact	Level of Impact (Low, Medium, High)	Mitigation	Mitigation Risk Assessment (Red, Amber, Green)
			External			
1	Lack of support for PMO formation from Defence Board	Low	GDF will be unable to proceed with the establishment of a PMO for effective project planning and execution	High: Catastrophic	Galvanise support from Chief of Staff, Branch Heads and Central Management Committee in order to better justify the PMO formation to the Defence Board	Green
2	Additional Resources given by MoF	Low	Absorptive capacity of the GDF needs to be increased, else ineffective and inefficient project execution will result	High: Catastrophic	Presentation of a Strategic Plan with Roadmap to better guide infrastructure investments over the short, medium, and long term	Amber-Green
3	Opposition to imposition of contract Management Standards by Contractors	Medium - High	Poor project implementation rate, poor quality of work, overall poor project management	High: Catastrophic	Proper screening and prequalification of Contractors, in collaboration with the tender board	Green

List of items	Risk Description	Likelihood (Low, Medium, High)	Description of impact	Level of Impact (Low, Medium, High)	Mitigation	Mitigation Risk Assessment (Red, Amber, Green)
			Technical			
1	Competency levels in software applications	Medium - High	Inability to properly use available tools for effective project management practices	High: Catastrophic	Targeted training in essential project management applications	Green
2	Time taken to develop standardised business practices	Medium - Low	Haphazard application of technical work resulting in poor work quality	Medium_ Critical	Development of detailed and logical business processes	Red
3	Inadequate project management controls	Medium - Low	Delinquency in project implementation protocols	High: Catastrophic	Application of documented implementation processes	Green
4	Scope uncertainty	High	Proliferation of scope creeping, gold-plating and unauthorised and undocumented changes to scope	High: Catastrophic	Clear and detailed scope definition, including project charting at commencement of project (only applicable to projects following traditional methodology)	Amber-Green
			Operational			

List of items	Risk Description	Likelihood (Low, Medium, High)	Description of impact	Level of Impact (Low, Medium, High)	Mitigation	Mitigation Risk Assessment (Red, Amber, Green)
1	Complexity in estimating methodology	High	Poor cost and time estimates resulting in cost and time over-runs	High: Catastrophic	Training in quantity surveying of staff, hiring of appropriately qualified consultants to perform estimating functions	Amber-Green
2	Organisational experience in planning	High	Poor implementation of the programme cycle resulting in incorrect projects in the wrong order	Medium: Critical	Training in project cycle management	Green
3	Project management maturity in controlling	Medium - Low	Immaturity in project management concepts and principles results in an inability to proper control the project execution cycle	High: Catastrophic	Take the necessary steps in establishing a PMO to improve project management maturity	Green
4	Personnel skill set and experience in communication	Low	Inadequate stakeholder management processes	Medium: Critical	Training of personnel in various aspects of project management, including stakeholder communication	Green
5	Poor team communication	Medium - High	Ineffective internal communication amongst team members leads to ineffective execution of the entire project cycle	Medium: Critical	Capacity building sessions to improve internal team communication	Green

List of items	Risk Description	Likelihood (Low, Medium, High)	Description of impact	Level of Impact (Low, Medium, High)	Mitigation	Mitigation Risk Assessment (Red, Amber, Green)
			Organisational			
1	Staff lack project management training	Medium - High	Lack of appropriate project management training translates to an inability to properly implement the various aspects of the project management cycle, to the eventual detriment of the project	Medium: Critical	Implement measures to ensure that staff receive training and certification in project management, preferably from the PMI	Green
2	Inadequate project management controls in decision making process	Medium - Low	Inadequacy in the decision-making protocols negatively affects the project, especially as it relates to the change control process	High: Catastrophic	Establishment of a change control board, coupled with enforcement of its mandate	Red
3	Conflict between primary and secondary objectives	Low	Unclear objectives translate to lack of clarity in extent of scope, which results in scope creep and gold-plating of projects, poor programme management and ineffective portfolio implementation	Low: Marginal	Development and enforcement of project charter at the commencement of each project	Green
4	Change control procedure not accepted	Medium - Low	Haphazard changes implemented to the project scope resulting in time and cost over-run and also possible breaches to the FMAA	Medium: Critical	Grant full authority to the Project Manager and the Change Control Board to implement changes	Green

List of items	Risk Description	Likelihood (Low, Medium, High)	Description of impact	Level of Impact (Low, Medium, High)	Mitigation	Mitigation Risk Assessment (Red, Amber, Green)
5	Inadequate number of staff	High	Inability to effectively design and supervise projects and effectuate programme management, resulting in very poor implementation of project and loss of confidence in the GDF as an implementing agency for the GoG's PSIP	High: Catastrophic	Hiring of sufficient number of personnel to properly staff the PMO, in accordance of the size and requirements of the portfolio	Green

Of the identified risks with a very high risk score, it was determined that mitigating the issue of *scope uncertainty* via *clear and detailed scope definition and elaboration of a project charter at the commencement* of a project had a mitigation risk assessment of amber-green, indicating that the probability of achieving same in the short term is relatively high. Mitigating the *complexities in estimating methodology* via *training in quantity surveying and hiring appropriately qualified consultants to perform estimating functions* also has a mitigation risk assessment of amber-green. Significantly, it was determined that the mitigation risk assessment for both *opposition to imposition of contract management standards* and *improving the competency levels of staff in project and programme management software applications* via *proper screening and prequalification of contractors and targeted training of staff*, respectively, were green. This indicates that the organisation believes that it is in full control of these mitigation measures and can take sufficient measures in the short term to mitigate these risks.

From the foregoing risk assessment, the GDF has identified all of the main risks vis-à-vis its current project and programme management posture and has identified clear measures to be taken to mitigate same.

5   CONCLUSIONS

The development of a PMO for the GDF will allow for more effectiveness and efficiency in the organisation's ability to execute the Government of Guyana's Public Sector Improvement Programme. Within the command-and-control environment of the GDF, it is possible to successfully implement a PMO, providing that the necessary steps are taken to improve the organisations project management maturity level, the necessary and appropriate staffing is provided, and high probability and high-catastrophic risks are mitigated. Specifically, the following are the conclusions of this research:

1. In the first instance, it was determined that the creation of a PMO in the GDF is feasible and the organisation is technically, administratively and legally positioned to support its implementation.

2. It was determined that the current challenges in project management in the GDF have created several opportunities for a PMO, the majority of which are of high priority and must be delivered within the short term. It was further determined that the value proposition of the PMO lies in the ability of the PMO to achieve the objectives that arose from mitigation of the challenges and value or loss to the organisation in either implementation or maintenance of the status quo.

3. It is concluded that, even though the GDF has repeatable/intuitive and defined project management practices its overall PMO maturity level is **Level 0 - undefined**. The main opportunities for improvements in the PMO maturity level are in the areas of direct management and knowledge management.

4. The proposed PMO needs to be established with speciality sections focussing on project management standards, resource management, project planning, reports and documentation and project execution, in order to dichotomise its role with that of the 4 Engrs Bn.

5. Scope uncertainty, complexity in estimating methodology, inadequate number of staff, contractor opposition to imposition of project management standards and competency in software applications are the risk elements with a high to medium-high probability of occurrence with a high-catastrophic level of impact. Measures to be taken to mitigate these risks all have a green or amber-green score vis-à-vis the mitigation risk assessment.

6 RECOMMENDATIONS

The recommendations are as follows:

1. A more detailed organisational assessment following the IADB's logical framework should be carried out by the Colonel AQ within the next 2 years.

2. The Inspector General of the Force should perform a performance audit annually to assess/update the value proposition of the AQ Branch.

3. Within the next three years, the organisation should perform a maturity assessment using the OPM3 model.

4. The specific role and function of the 4 Engrs Bn vis-à-vis its project implementation role should be determined by an exercise commissioned by the Col AQ.

5. Mitigation measures should be immediately developed and implemented to mitigate the risks associated with the time taken to develop standardised business practices and the inadequate controls in the decision-making process. Even though these are low likelihood risks, they have a mitigation risk assessment of red and are an area of creeping concern. Careful consideration should be given to the allocation of costs associated with implementing these mitigation plans.

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

According to the International Institute for Sustainable Development, sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. On the other hand, the University of Melbourne School of Design defines regenerative development as an approach that encourages communities to support and create positive relationships that will benefit society and our environments by allowing the system to evolve and adapt to changing circumstances.

As an organisation, the GDF fully supports sustainable development and supports the achievement of the Sustainable Development Goals (SDGs) within the framework of the national context. Because of the crosscutting associations with every national institution, all of the SDGs hold relevance to the operation of the GDF--Goal 1 through 17 are fully supported. Within the context of the proposed PMO, Goal 6 – Clean Water and Sanitation, Goal 9 – Industry, Innovation and Infrastructure and Goal 12 – Responsible Consumption and Production hold direct relevance. All of the projects executed by the AQ Branch fit into the achievement of one of those 3 SDGs and, in their execution, the GDF is directly contributing to the national effort in attaining same.

The University of Melbourne School of Design lists six regenerative development dimensions: environmental, social, economic, political, cultural and spiritual.   The expectation is that each project, either through its design and execution or as a part of its deliverables, will support and achieve one or more of the stated regenerative dimensions. It must be recalled that regenerative development takes us a step further than sustainable

development in that ecosystems are encouraged to be regenerated, rather than being sustainably exploited.

Under the current construct, each project that is executed indirectly meets the requirements under each dimension, with the possible exception of the spiritual dimension. However, it must be admitted that the environmental is not entirely met in that the projects do not necessarily support the regeneration of ecosystems, even though there is an adherence to environmental protocols. In the implementation of a PMO for the GDF, it must be incumbent that there is adherence to the concepts of regenerative development. It therefore means that the projects that are executed must be given consideration to be in compliance with the concepts of regenerative development, albeit the paradigm has not reached the shores of Guyana as yet.

With the implementation of a PMO in the GDF, the opportunity exists for the organisation to commence practising the P5 Impact Analysis. According to the Green Project Management (GPM) website, the GPM Global Prism methodology advocates for the usage of the GPM P5 (People, Planet, Prosperity, Processes and Products) Model, which allows for a facilitated exercise initiated during the initiation phase of a project and throughout the project at key milestones (The GPM P5 Standard for Sustainability in Project Management, n.d.). If every project conceived and implemented by the PMO follows through with this P5 Impact Analysis, then the GDF will have a much stronger change of being in compliance with the SDGs and the concept of regenerative development.

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APPENDICES

Appendix 1: FGP Charter

CHARTER OF THE PROPOSED
FINAL GRADUATION PROJECT (FGP)

1. Student name

Marlon Nelzin Daniels

2. FGP name

Project Management Plan for the Implementation of a Project Management Office in the Guyana Defence Force

3. Application Area (Sector or activity)

Project Management

4. Student signature

Marlon Daniel

5. Name of the Graduation Seminar facilitator

Roger Valverde Jimenez

6. Signature of the facilitator

7. Date of charter approval

February 26, 2023

8. Project start and finish date

January 9, 2023	July 9, 2023

9. Research question

> In a command-and-control environment, what are the elements that would make for the successful implementation of a Project Management Office?

10. Research hypothesis

> Is it possible to successfully implement a Project Management Office in the Guyana Defence Force?

11. General objective

> To develop a project management plan for the implementation of a Project Management Office in the Guyana Defence Force to allow for more efficiency and effectiveness in the execution of the Government's annual Public Sector Improvement Programme.

12. Specific objectives

> 1. To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation.
> 2. To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.
> 3. To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.
> 4. To determine the number of key personnel needed to form the PMO stakeholders to be involved in the project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.
> 5. To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainable.

13. FGP purpose or justification

> The Guyana Defence Force, under this new Government, is on a mission to transform its security posture and improve the overall welfare of the troops, both those resident on coastal bases and those deployed on the borders. A major part of that transportation is the investment in new and improved infrastructure, primarily buildings and pure water supply installations. There is also a significant level of investment in recapitalising the air, marine and land assets of the Force to be able to meet extant and new threats, given the nascent oil and gas industry of Guyana. Whilst there is some focus in streamlining

the management of infrastructure projects via a dedicated project execution unit, there is a dire need for an overall Project Management Office to align all capital investments to the overall strategic direction of the Force and the Government.

With an annual capital budget of approximately $16million and a maintenance budget of $9million, the time to implement a PMO for the GDF is now. Even though an argument can be made that maintenance can be considered routine, the fact remains that the majority of the maintenance budget of the Force is expended via projects. It is imperative that these investments are optimised to the benefit of all stakeholders.

The formation of a PMO will seek to ensure that the resources that the GDF acquires annually form the national coffers is well spent towards the achievement of the strategic objectives of the Force, the Defence Board and the Government of Guyana. The creation of a project management plan for its implementation will present to the High Command of the Force, the necessary blueprint needed.

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.

1. Project Management Plan for the Implementation of a Project Management Office
   1.1 Final Graduation Project Deliverables
       1.1.1   Introduction
       1.1.2   Theoretical Framework
       1.1.3   Methodological framework
       1.1.4   Annexes (Preliminary Bibliographical Research, FGP Schedule, FGP WBS, FGP Charter)
   1.2 FGP Development
       1.2.1 Development of Project Management Plan for Implementing a PMO in the GDF.
            1.2.1.1 Determination of the Feasibility of a Implementing a PMO in the GDF.
            1.2.1.2 Determination of the Value Proposition of a PMO for the GDF.
            1.2.1.3 Performance of Maturity Analysis of GDF.
            1.2.1.4 Determination of Number of Key Personnel Needed to Form PMO.
            1.2.1.5 Performance of Risk Assessment
       1.2.2 Conclusions
       1.2.3 Recommendations
       1.2.4 Validation of the FGP in the Field of Regenerative and Sustainable Development
       1.2.5 Reference lists
       1.2.6 Annexes
       1.2.7 Tutor approval for reading.
   1.3 Reader's review.
   1.4 Adjustments
   1.5 Board of examiners evaluation.

15. FGP budget

No	Activity	Estimated Cost
1	Software Purchase (WBS Schedule Pro)	$370
2	Books - The DNA of Strategy Execution: Next Generation Project Management and PMO, Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business	$99
	TOTAL	**$469**

16. FGP planning and development assumptions

(i)	Permission granted by the Chief of Staff to conduct this research will not be rescinded by the Defence Board.
(ii)	The Senior Officers of the GDF (stakeholders) will be accessible for interviews.
(iii)	The Colonel Administration and Quartering will continue to support the research into implementing a PMO in the GDF.
(iv)	The researcher will have at least 20 hours per week to dedicate to the FGP during the development process.

17. FGP constraints

(i)	There is a paucity of project management professionals in the GDF.
(ii)	The GDF is essentially a command-and-control environment and offers little flexibility to deviate from that posture.
(iii)	The maximum time frame to finalize the FGP is 12 weeks.
(iv)	There are not many examples of PMOs in Guyana to learn from.

18. FGP development risks

(i)	Given the imminent change in the leadership of the GDF, the impending command climate may not support the new paradigm of a PMO for the GDF and impede the progress of this research.
(ii)	Untimely feedback during the tutoring process.
(iii)	Differences of opinion leading to irreconcilable differences during the tutoring process.

19. FGP main milestones

Deliverable	Finish estimated date
1.1 FGP Deliverables	February 19, 2023
1.1.1 Introduction	February 19, 2023
1.1.2 Theoretical Framework	February 5, 2023
1.1.3 Methodological Framework	February 12, 2023
1.1.4 Annexes	February 19, 2023
1.2 FGP development	May 30, 2023
1.2.1 Development of Project Management Plan for Implementing a PMO in the GDF	May 23, 2023
1.2.2 Conclusions	May 30, 2023
1.2.3 Recommendations	May 30, 2023
1.2.4 Validation of the FGP in the Field of Regenerative and Sustainable Development	February 19, 2023
1.2.5 Reference lists	May 30, 2023
1.2.6 Annexes	May 30, 2023
1.2.7 Tutor approval for reading	May 30, 2023

| 1.3 Readers review | June 14, 2023 |
| 1.4 Board of examiners evaluation | June 31, 2023 |

20. Theoretical framework

20.1 Estate of the "matter"

With an annual budget of US$25 million dedicated to the execution of projects, the GDF is not currently set up organisationally to effectively execute its mandate in that regard. Even though there is a Project Execution Unit (PEU), it lacks the technical capacity and experience in project implementation. The result is that the rate of project implementation remains problematic with projects frequently running over time and over budget. Of more importance, is the fact that the GDF has been the subject of many adverse audit reports vis-à-vis its project implementation practices over the years. This situation causes a loss of confidence from the Ministry of Finance in our ability to effectively execute the mandate and meet the fiduciary responsibilities that the organisation holds, as it relates to the Central Government.

Consequentially, there lies a great opportunity for betterment and improvement in the project management and implementation posture of the GDF, if due deference is given to the formation of a formal PMO, correctly staffed and appropriately authorised, to take command of project implementation.

A PMO is an organisational structure that standardises the project-related governance processes and facilitates the sharing of resources, methodologies, tools and techniques (Project Management Institute, 2017). PMBOK® Guide Seventh Edition goes on to specify the various types of PMOs and the degree of control and influence each may have on the projects within the organisation, whether supportive, controlling or directive (*in ascending order of influence and control*). Organisations create PMOs for a variety of reasons, but one core benefit must be kept in mind, that is, improvement in project management practices in terms of schedule, cost, quality and risk (Project Management Institute, 2021). This really is the value proposition of a PMO. The literature has shown that organisations still chose to form and implement PMOs, even though they have already dedicated project teams. Research has shown that some 78% PMOs created have been done so after its members would have been working on projects via project teams (Taylor, Leading Successful PMOs: How to Build the Best Project Management Office for Your Business, 2011). This has led to interesting comparisons between the before and after experiences are also created after project teams are in existence. In fact, the evidence suggests that 68% of newly formed PMOs with staffed having

worked previously on projects reported that things got better and much improved, with only 5% reporting that things had gotten worse or much worse.

The relationship between portfolios, programmes, projects and PMOs can be summarised as follows: portfolio management has a focus on doing the right things; project management focusses on doing it the right way, programme management focusses on doing it in the right order and the PMO focusses on doing it all with the right team (Taylor, Leading Successful PMOs: How to Build the Best Project Management Office for Your Business, 2011). Hence, the PMO does the right things, in the right way, in the right order and all with the right team. This is an interesting case to make in any organisation, the GDF included, that the PMO is not necessarily the panacea to all of the issues with project management and project implementation, but rather, the PMO adds that extra bit, that justifies the of the various teams involved in portfolio, programme and project management.
Another point to note, and each organisation will decide for itself, is the focus on the PMO. Research has shown that 43% of newly formed PMOs prefer to focus on implementing internal projects, with 39% focusing on both internal and external projects (Taylor, 2011).

The roadmap to PMO implementation must commence with the organisation conducting a maturity analysis to ascertain its current position before coming up with implementation plans to transition to its future state, that is, PMO operation (Taylor & Mead, 2016). There are several model templates to choose from, ranging from Kerzner, to the Capability Maturity Integration (CMMI), to Organisational Project Management Maturity Model (OPM3) and the Portfolio, Programme and Project Maturity Model (P3M3). Whilst each has its unique flavour, they all allow the organisation to objectively assess the project management capabilities of the organisation against key knowledge areas in PMBOK® Guide.

Husser (2017) takes a very cynical approach to PMOs but does offer some home in saying that the success of a PMO ultimately lies in the approach used and the tenacity of the main players to see it through. Farid (2021) reminds us that for a PMO to be successful, a roadmap is essential to providing a needed sense of direction. This is obvious as any organisational department's mission must be aligned to the overall strategic business objectives of the organisation. Duggal (2018) concludes by saying that learning is the key to adaptive agility and survival. He reminds us that the PMO should not be seen as a panacea to all the problems in project management but the players in the PMO must continue to learn in order to keep adapting to a changing environment and ultimately surviving.

20.2 Basic conceptual framework

The basic concepts to be included in this document are as follows:

1. Project Management Plan
2. Project Management Office
3. Maturity Model
4. Organisational Project Management
5. Project Manager
6. PMO Leader

21. Methodological framework

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
To determine the feasibility of implementing a PMO in the Guyana Defence Force in order to ensure that the organisation is technically, administratively and legally positioned to facilitate its implementation	A report on feasibility analysis of implementing a PMO for the GDF, which will inform the decision point as to whether or not the concept in itself will be successful.	Secondary: books, Primary: articles, field interviews.	Qualitative. Written information analysis.	Interviews, document analysis.	There are not many examples of PMOs in Guyana to learn from.
To determine the value proposition of a PMO for the Guyana Defence Force in order to justify its suitability for implementation.	A report on the all-encompassing benefits (technical, financial, economic) both tangible and intangible that the implementation of a PMO will bring to the GDF.	Secondary: books, Primary: articles, field interviews.	Qualitative. Written information analysis.	Interviews, focus groups	There is a paucity of project management professionals in the GDF.
To perform a maturity analysis of the Guyana Defence Force in order to determine the existing project management gaps and needed improvement actions.	A report on the level of the organisational attributes and processes that will engender it to consistently and continuously reach its organisational and fiduciary objectives upon the	Secondary: books, Primary: articles, field interviews.	Qualitative. Written information analysis.	Document analysis, on-site observations	There is a paucity of project management professionals in the GDF.

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
	implementation of a PMO.				
To determine the number of key personnel needed to form the PMO stakeholders to be involved in the project management plan in order to properly dichotomise the different roles, responsibilities and competencies vis-à-vis the role of the standing command of the 4 Engineers Battalion.	A proposed organogram and human resources recruitment and retainment plan to properly staff the proposed PMO.	Secondary: books, Primary: articles, field interviews.	Qualitative. Written information analysis.	Interviews	There is a paucity of project management professionals in the GDF.
To conduct a risk assessment of implementing a PMO for the Guyana Defence Force in order to identify the key considerations to be taken to guarantee its attainable.	A risk register and risk mitigation plan to ensure that the identified risks are properly mitigated.	Secondary: books, Primary: articles, field interviews.	Qualitative. Written information analysis.	Interviews.	There are not many examples of PMOs in Guyana to learn from.

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

As an organisation, the GDF fully supports sustainable development and supports the achievement of the Sustainable Development Goals (SDGs) within the framework of the national context. Because of the crosscutting associations with every national institution, all of the SDGs hold relevance to the operation of the GDF – Goal 1 through 17 are fully supported. Within the context of the proposed PMO, Goal 6 – Clean Water and Sanitation, Goal 9 – Industry, Innovation and Infrastructure and Goal 12 – Responsible Consumption and Production hold direct relevance. All of the projects executed by the AQ Branch fit into the achievement of one of those 3 SDGs and, in their execution, the GDF is directly contributing to the national effort in attaining same. The University of Melbourne School of Design lists six regenerative development dimensions: environmental, social, economic, political, cultural and spiritual. The expectation is that each project, either through its design and execution, or as a part of its deliverables, will support and achieve one or more of the stated regenerative dimensions. It must be recalled that regenerative development takes us a step further than sustainable development in that ecosystems are encouraged to be regenerated, rather than being sustainably exploited. Under the current construct, each project that is executed indirectly meets the requirements under each dimension, with the possible exception of the spiritual dimension. However, it must be admitted that the environmental is not entirely met in that the projects do not necessarily support the regeneration of ecosystems, even though there is an adherence to environmental protocols. In the implementation of a PMO for the GDF, it must be incumbent that there is adherence to the concepts of regenerative development. It therefore means that the projects that are executed must be given consideration to be in compliance with the concepts of regenerative development, albeit the paradigm has not reached the shores of Guyana as yet. With the implementation of a PMO in the GDF, the opportunity exists for the organisation to commence practising the P5 Impact Analysis. According to the Green Project Management (GPM) website, the GPM Global Prism methodology advocates for the usage of the GPM P5 (People, Planet, Prosperity, Processes and Products) Model, which allows for a facilitated exercise initiated during the initiation phase of a project and throughout the project at key milestones (The GPM P5 Standard for Sustainability in Project Management, n.d.). If every project conceived and implemented by the PMO follows through with this P5 Impact Analysis, then the GDF will have a much stronger change of being in compliance with the SDGs and the concept of regenerative development.

Appendix 2: FGP WBS

1
Project Management Plan for the Implementation of a Project Management Office in the Guyana Defence Force

1.1 Grad Seminar

1.1.1 Final Graduation Project Deliverables

1.1.1.1 Charter

1.1.1.2 Work Breakdown Structure

1.1.1.3 Chapter 1: Introduction

1.1.1.4 Chapter 2: Theoretical Framework

1.1.1.5 Chapter 3: Methodological Framework

1.1.1.6 Annexes

1.1.1.6.1 Bibliography

1.1.1.6.2 Schedule

1.1.2 Graduation Seminar Approval

1.2 Tutoring Process

1.2.1 Tutor

1.2.1.1 Tutor Assignment

1.2.1.2 Communication

1.2.2 Adjustments of previous chapters if needed

1.2.3 Chapter 4: Development of Project Management Plan for PMO in the GDF

1.2.3.1 Determine Feasibility of Implementing a PMO in the GDF

1.2.3.2 Determine Value Proposition of PMO for the GDF

1.2.3.3 Perform Maturity Analysis of GDF

1.2.3.4 Determine Number of Key Personnel needed to form PMO

1.2.3.5 Conduct Risk Assessment

1.2.3.6 Develop Project Management Plan for Implementation of PMO

1.2.4 Chapter 5: Conclusions

1.2.5 Chapter 6: Recommendations

1.2.6 Chapter 7: Validation of the FGP in the Field of Regenerative and Sustainable Development

1.3 Reading by Reviewers

1.3.1 Reviewers Assignment Request

1.3.1.1 Assignment of two Reviewers

1.3.1.2 Communication

1.3.1.3 FGP submission to Reviewers

1.3.2 Reviewers Work

1.3.2.1 Reviewer 1

1.3.2.1.1 FGP Reading

1.3.2.1.2 Reader 1 Report

1.3.2.2 Reviewer 2

1.3.2.2.1 FGP Reading

1.3.2.2.2 Reader 2 Report

1.4 Adjustments

1.4.1 Report for Reviewers

1.4.2 FGP Update

1.4.3 Second Review by Reviewers

1.5 Presentation to Board of Examiners

1.5.1 Final Review by Board

1.5.2 FGP Grade Report

Appendix 3: FGP Schedule

ID	Task Mode	Task Name	Duration	Start	Finish
1		**Project Management Plan for the Implementation of a Project Management Office in the Guyana Defence Force**	140 days	Mon 09/01/23	Fri 21/07/23
2		**Start**	0 days	Mon 09/01/23	Mon 09/01/23
3		**Grad Seminar**	75 days	Mon 09/01/23	Fri 21/04/23
4		**Final Graduation Project Deliverables**	75 days	Mon 09/01/23	Fri 21/04/23
5		Charter	35 days	Mon 09/01/23	Sun 26/02/23
6		Work Breakdown Structure	5 days	Mon 16/01/23	Sun 22/01/23
7		Chapter 1: Introduction	5 days	Mon 13/02/23	Sun 19/02/23
8		Chapter 2: Theoretical Framework	5 days	Mon 30/01/23	Fri 03/02/23
9		Chapter 3: Methodological	5 days	Mon 06/02/23	Sun 12/02/23
10		Chapter 7: Validation of the FGP in the Field of Regenerative and	5 days	Mon 13/02/23	Fri 17/02/23
11		**Annexes**	50 days	Mon 13/02/23	Fri 21/04/23
12		Bibliography	40 days	Mon 27/02/23	Fri 21/04/23
13		Schedule	5 days	Mon 13/02/23	Sun 19/02/23
14		Graduation Seminar Approval	5 days	Mon 20/02/23	Sun 26/02/23
15		**Tutoring Process**	37 days	Mon 24/04/23	Tue 13/06/23
16		**Tutor**	2 days	Mon 24/04/23	Tue 25/04/23
17		Tutor Assignment	1 day	Mon 24/04/23	Mon 24/04/23
18		Communication	1 day	Tue 25/04/23	Tue 25/04/23
19		Adjustments of previous chapters if needed	5 days	Wed 26/04/23	Tue 02/05/23
20		**Chapter 4: Development of Project Management Plan for PMO in the GDF**	30 days	Wed 26/04/23	Tue 06/06/23
21		Determine Feasibility of Implementing a PMO in	5 days	Wed 26/04/23	Tue 02/05/23
22		Determine Value Proposition of a PMO for	5 days	Wed 03/05/23	Tue 09/05/23
23		Perform Maturity Analysis	5 days	Wed 10/05/23	Tue 16/05/23
24		Determine Number of Key Personnel Needed to	5 days	Wed 17/05/23	Tue 23/05/23
25		Conduct Risk Assessment	5 days	Wed 24/05/23	Tue 30/05/23
26		Develop Project Management Plan for	5 days	Wed 31/05/23	Tue 06/06/23

Project: WBS_FGP_Marlon Dani
Date: Thu 23/02/23

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

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ID	Task Mode	Task Name	Duration	Start	Finish
27		Chapter 5: Conclusions	5 days	Wed 07/06/23	Tue 13/06/23
28		Chapter 6: Recommendations	5 days	Wed 07/06/23	Tue 13/06/23
29		**Reading by Reviewers**	10 days	Wed 14/06/23	Tue 27/06/23
30		**Reviewers Assignment Request**	3 days	Wed 14/06/23	Fri 16/06/23
31		Assignment of two Reviewers	1 day	Wed 14/06/23	Wed 14/06/23
32		Communication	1 day	Thu 15/06/23	Thu 15/06/23
33		FGP submission to Reviewers	1 day	Fri 16/06/23	Fri 16/06/23
34		**Reviewers Work**	7 days	Mon 19/06/23	Tue 27/06/23
35		**Reviewer 1**	7 days	Mon 19/06/23	Tue 27/06/23
36		FGP Reading	6 days	Mon 19/06/23	Mon 26/06/23
37		Reader 1 Report	1 day	Tue 27/06/23	Tue 27/06/23
38		**Reviewer 2**	7 days	Mon 19/06/23	Tue 27/06/23
39		FGP Reading	6 days	Mon 19/06/23	Mon 26/06/23
40		Reader 2 Report	1 day	Tue 27/06/23	Tue 27/06/23
41		**Adjustments**	12 days	Wed 28/06/23	Thu 13/07/23
42		Report for Reviewers	1 day	Wed 28/06/23	Wed 28/06/23
43		FGP Update	6 days	Thu 29/06/23	Thu 06/07/23
44		Second Review by Reviewers	5 days	Fri 07/07/23	Thu 13/07/23
45		**Presentation to Board of Examiners**	6 days	Fri 14/07/23	Fri 21/07/23
46		Final Review by Board	5 days	Fri 14/07/23	Thu 20/07/23
47		FGP Grade Report	1 day	Fri 21/07/23	Fri 21/07/23
48		End	0 days		09/01

Project: WBS_FGP_Marlon Dani
Date: Thu 23/02/23

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

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Appendix 4: Preliminary bibliographical research

(i)   Avery, G. (2016). Leading High-Risk Projects: Servant Leadership Lessons from the 1953 Mount Everest Expedition. *Paper presented at PMI® Global Congress.* Barcelona, Pennsylvania : Project Management Institute.

Examining lessons in servant leadership in high-risk projects is entirely relevant to the military context. The military is in itself a high-risk environment with high-risk activities. However, the main interest of this article is the context of service leadership, something that the military is not necessarily known for. This could be an interesting nexus.

(ii)   Department of Veterans Affairs Realizes Benefits through Improved Healthcare for Veterans. (2019). Project Management Institute.

Project management within the military context can be complex, as well as complicated. This is due to the fact that, from the purist's perspective, military operations are governed by a command-and-control doctrine. Shifting from that command-and-control doctrine to a more collaborative posture requires an examination of the appropriate literature to garner experiences from others. It is for this reason that this particular bibliographic source has been selected as relevant to the discussion.

(iii)   Duggal, J. (2018). *The DNA of Strategy Execution: Next Generation Project Management and PMO.* Wiley.

Jack Duggal presents the next generation of project management and Project Management Office in this interesting book and seeks to illuminate better ways to organize and manage in an increasingly dynamic, ambiguous, non-linear, complex and emergent world. This posture can be seen to be quite relevant to the nascent project management posture of the Guyana Defence Force, as it seeks to develop better ways to execute its projects.

(iv)   Farid, S. (2021). A Roadmap to PMO Excellence. *Paper presented at PMO Symposium: Where Leaders Meet.* Denver, Colarado: Project Management Institute.

The presentation of a roadmap for excellence in Project Management Office, as is presented by Farid, presents an alternative perspective as attempts are made to develop a PMO for a military in a developing country with newfound wealth in oil and gas, constantly facing a myriad of ever-changing security challenges.

(v)   Fewell, J. (2021). La certeza de la incertidumbre: La disrupción no va a desaparecer:Estos tres consejos ayudarán a los equipos ágiles a adaptarse mejor. *PM Network*, 35, 44-45.

The examination of life post-pandemic could offer some insights into out-of-the-box and innovative thinking. Designing of a PMO for the Guyana Defence Force will require much innovation, if one should consider the local context and juxtaposes it to the nascent oil and gas industry and the security threats expected therefrom.

(vi)   Husser, P. (2017). *The High-Impact PMO: How Agile Project Management Offices Deliver Value in a Complex World.* CreateSpace Independent Publishing Platform.

The distance between theory and practice as it relates to project management and the role of the Project Management Office is expected to be closed by the concrete solutions presented in this book. Of particular interest is the expectation of an understanding of the importance of human dynamics, communities of allies and postures in the face of different situations and cultures, all relevant to the complexities of project management within the military context.

(vii)   Peter Taylor, R. M. (2016). *Delivering Successful PMOs: How to Design and Deliver the Best Project Management Office for your Business.* Routledge.

Written by an expert in the industry, this book is touted to present to the reader a clear framework on how to conceive, design and build a PMO. It would be interesting to examine the state of the art from the business context and endeavour to transfer same to the military context as appropriate.

(viii)   Project Management Institute. (2018). *The Standard for Organisational Project Management (OPM).* Pennsylvania: Project Management Institute.

Organisational project management is meant to move an organisation in the direction that aligns the management of its projects, programmes and portfolios with the organisational strategy and objectives. As the Guyana Defence Force prepares to exist in a national

environment that is changing due to the advent of the oil and gas sector in Guyana, it must be able to adapt to the new and emerging security threats. It therefore has the potential to be asked to execute many more projects to ensure that its operations become so aligned as to enable it to respond positively to those emerging threats. Hence, an examination of this standard as a bibliographical reference is certainly appropriate.

    (ix)   Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge PMBOK Guide Seventh Edition and the Standard for Project Management.* Pennsylvania: Project Management Institute.

PMBOK®   Guide is considered the gold standard for Professional Project Managers who subscribe to the methodologies as proposed by the Project Management Institute. One of the appendices in this guide is dedicated to discussion on the Project Management Office. It is therefore considered a very relevant and fit bibliographic source for information on the setting up of a Project Management Office.

    (x)   Project Management Institute. (2023). Five Ways Future PMOs Will Support Organizations. Project Management Institute .

The Guyana Defence Force needs to prepare for the future. It therefore means that the organisation must remain at the cutting edge of the sector. In this day of the nascent oil and gas sector in the country and the new role the Force must play vis-à-vis the national security threats, the dependence on projects to guide it towards this new strategic readiness will

become paramount. The PMO will be a part of that new paradigm embraced by the Force and, hopefully, supported by the Government.

(xi)   Setti, S. (2016). Five Minds and One Hundred Languages: The Multi-Skill Challenge for the Project Manager in the VUCA World. *Paper presented at PMI® Global Congress*. Barcelona, Pennsylvania: Project Management Institute.

 Within the context of project management in the military presenting a different perspective, this bibliographic reference is relevant as it presents the need for the modern project manager to have a vision of different approaches in a multi-skill and multi-knowledge framework.

Appendix 5: Other relevant information

JOT &
TITTLE

Look **better** in writing.

June 2, 2023

Academic Advisor
Masters Degree in Project Management
Universidad para la Cooperacion Internacional (UCI)

Dear Academic Advisor,

Re: **Thorough Review and Proofreading of Final Graduation Project submitted by**
Marlon N Daniels in partial fulfillment of the requirements for the Masters in
Project Management (MPM) Degree

I hereby confirm that Marlon N Daniels has made all the corrections to the Final Graduation Project document as I have advised. In my opinion the document does now meet the literary and linguistic standards expected of a student for a degree at the Masters level.

Tirshatha Jeffrey
Forensic Linguist

✉ contact@jotandtittle.co   🌐 www.jotandtittle.co   📱 246.850.0681