

Introduction to Integrated Program Management

International best practice and MCC's experience indicate that successfully implemented programs benefit greatly from a management framework used to gather, organize and share critical information. Once established, that framework provides managers with the timely, accurate data needed for informed decision-making and streamlines reporting requirements for staff.

The management framework for a compact or threshold program, known as Integrated Program Management (IPM), includes five basic systems: work planning, risk management, change management, project-level coordination, and contractor performance monitoring. MCC strongly encourages all MCAs to develop these five systems during the period before entry into force. Integrated Program Management allows MCAs to plan and monitor the progress and status of a compact's projects. It distills information from a variety of sources to provide a high-level and informative snapshot of a compact. MCAs that use IPM will be able to make decisions better and more quickly than they would without these practices.

While several MCAs have developed their own tools and systems to improve management of program implementation, doing so has required significant time and resources from their staff and consultants. Therefore, in 2017-2018, MCC developed the IPM guidelines and training program in response to requests from multiple MCAs for support to help them better manage their compact projects and activities.

The IPM guidelines are generally consistent with the global Project Management Body of Knowledge (PMBOK),¹ but are adapted to the particular context of compacts and based on the experiences of past and current MCAs. In addition to the guidelines, MCC provides training and coaching to MCAs who adopt IPM. The result is a customized approach to give an MCA the management framework it needs to successfully implement a compact or threshold program. While developing the components of IPM will take some significant effort in the early stages of compact implementation, it will greatly reduce the confusion and challenges inherent to large complex programs later on.

IPM is based on the principles of flexibility, decision support and integration.

First, IPM is flexible to the needs of a particular MCA. Compact programs and MCA structures vary greatly across MCC's portfolio, and what makes sense for one compact may not work for another. It is more important for an MCA to design systems that work for them – and use those systems – than it is to follow specific requirements for those systems. Therefore, the IPM Guidelines list only the basic and fundamental needs for each of the five systems to be successful, as well as some good practices and lessons learned from other MCAs. It also provides optional templates and examples that MCAs may

¹ More information on the PMBOK developed by the Project Management Institute (PMI) can be found at www.pmi.org. PMI is the world's leading project management organization. Their Global Standards are the most widely recognized in the profession and are a model for project management in business and government around the world.

choose to use if they meet their needs. The guidelines do not prevent an MCA from going further or customizing the guidelines to make the tools work in its specific situation.

Second, the information created and reported on through IPM is primarily for the use of MCA decision-makers and managers. IPM is a *high level management tool* – the systems developed through IPM do not include every bit of information about a compact. Instead, they make the information needed to get an accurate sense of priorities, risks, and upcoming decision points for a compact available to those who need it most. While IPM is primarily a tool for better management at MCAs, using IPM will also make coordination and information sharing between MCAs and MCC easier by providing a common reference point and objective data to inform discussions.

Lastly, the 5 IPM systems require staff from across MCAs to work together and provide a complete picture of what is going on in a compact or threshold program. While a Project Lead may have the primary responsibility of managing a risk management plan, he or she needs to include the perspective of everyone involved with the project (GSI, M&E, Procurement) in order for the system to work as designed. When working correctly, IPM will prevent information from being siloed by department or sector and encourage more productive conversations among MCA staff and management.

IPM Includes Five Key Systems

IPM includes five basic systems to create the management framework for MCC-funded programs. These systems together provide the timely and relevant information MCA executives need to manage and track compact projects.

Executive Work Plan (EWP). The executive work plan illustrates how compact activities fit together and how changes in the schedule of one component can impact the outputs and outcomes of a compact. It helps MCA identify linkages between various parts of the compact, highlights potential bottlenecks in upcoming work and compares planned achievements against actual achievements. The EWP allows MCA to plan work proactively to avoid lost time by addressing potential issues before they become crises.

Risk Management Plan (RMP). Compacts are inherently complex and will encounter a wide range of risks which will need to be managed to mitigate and limit their effect of the delivery of the project. The RMP will identify risks at the start of a project and throughout its development, it will track the status of each emerging risk, the actions required to mitigate its effect on the project and help MCA analyze potential impacts and develop responses early. Good risk management will help MCAs prevent fires instead of fighting them.

Change Management Plan (CMP). Even the best designed projects will undergo change during implementation due to the realities of the political, economic and physical environments in which we work. There are also many unknown factors: how complete is the design, how accurate are the bills of quantities which can impact on the final price, how protective and risk averse are the contract documents, plus many others which will become known during implementation. These changes can become overwhelming without a system for requesting, approving and monitoring them. The CMP establishes that system, delegates authority to the right people review and approve changes to the projects and ensures that any impacts those changes may have on time, budget or other aspects of the program are accounted for.

Project Coordination Plan (PCP). The PCP focuses on the day to day coordination with the consultants, contractors and technical staff at end user organizations (e.g. a power utility or education ministry) needed to make a project work. Developing a list of these implementation partners, their needs, interest level and power is critical to having an inclusive and effective approach to their involvement. A successful PCP will result in fewer miscommunications, misunderstandings and the loss of time they can cause.

Contract Performance Management Plan (CPMP). MCAs have a lot of financial and schedule tracking information available (i.e. MIS/SAP) but still have difficulty making decisions based on real time contract performance information. This plan outlines how to monitor contractor/consultant performance and develop a prescribed list of actions when thresholds are exceeded. For example, works contracts can be developed to provide easy to read objective performance indicators. When an indicator shows a project is 10% behind schedule, the plan will require further investigation into the reasons for delay, if an issue is intensifying and the CPMP outlines actions MCA might take with the contract parties for correction. This plan fills a gap in the collection and analysis of information and the use of that information to support on time performance.

IPM and Other Management Tools

Integrated Program Management includes the basic, fundamental elements of an effective management framework; however, MCAs may decide to incorporate other tools and resources to complement IPM. Together, they form a **macro-level framework** to get accurate and timely information about project progress in front of the right decision makers at the right time. It collects important project data at regular intervals so decision makers don't lose time looking for information. These other resources may include:

Program Manager (PM) – The PM is normally a firm that delivers all or part of the Compact program on the MCA's behalf. They have implementation responsibility and decision authority. MCA normally retains the strategic level decision making while the PM carries out the day to day decisions and tasks to complete the program.

- **Project Management Office (PMO)** – The PMO is a group of project management experts, either hired as MCA staff or contracted through the compact/threshold to support implementation of the program (in some instances this support can be directing implementation). The PMO will have many tasks, which should include maintaining and updating the IPM plans with information gathered from project teams. They could also be responsible for establishing and monitoring a Quality Assurance manual, working with Project Leads to monitor the budgets and contingencies, and installing a document management system. They normally do not have decision authority or implementation responsibility.
- **Project Management consultant²** – an individual or firm to support the development of project processes and organization at the MCA and/or to support the start-up of the PMO as relevant. The role of the PMC is passive support.
- **Quality Assurance (QA) tool** – QA processes are the **micro level framework** to carry out routine and repetitive functions (claims processing, document approvals, inspection reporting, etc.).

² The terms PMO and PMC have been used interchangeably within MCC and MCAs. Therefore, it is important to clarify with your organization what is intended when they use PMC or PMO while MCC moves towards consistent use of the internationally established definitions as noted in this document.

- **Management Assessment** – A diagnostic often planned once the PMO is up and running and the IPM systems adopted so they can take a holistic view on areas to improve and enhance within MCA’s management structure.

How to Introduce Integrated Program Management

MCC recommends that all compacts that are within their first year of Entry into Force apply the minimum requirements of IPM.³ To ensure all the relevant stakeholders are involved during the introduction and development of the IPM systems, an MCA would ideally have all key staff on board, along with any PMO or PMC staff before launching IPM for a compact.

There are several important steps MCAs can take to ensure they get the maximum benefits from IPM:

1. Set expectations early. MCA staff, Implementing Entities, contractors, and even the MCA Board should know about IPM and how it can be used to support the management of compact work. If MCA Management reinforces the importance of the IPM tools and uses them regularly, other stakeholders will adopt them as well. A good place to start is introducing IPM is right before or after the compact’s implementation workshop.
2. Define roles and responsibilities. The primary owners of IPM are the MCA CEO and the MCA leadership team. Effective IPM is a big task and MCC has learned that expecting project managers or a deputy CEO to coordinate the process is unreasonable given the other work they are responsible for. As a result, we recommend that the day to day work of developing and maintaining many of the IPM tools should be delegated by the CEO to a person or a small group of dedicated staff or consultants, often called the Project Management Office (PMO)⁴, which reports directly to the CEO or COO. Beyond the office of the CEO and PMO, most MCA staff will be expected to contribute to IPM. This should be defined in position descriptions and enforced through performance management systems.
3. Train staff. The style of project management used in IPM will likely be new to many staff and all will benefit from training. These trainings should be targeted to the level of involvement staff will have with IPM – for example, not everyone will need to know how to set milestones in the executive work plan using Microsoft Project, but everyone should be able to interpret what the executive work plan is telling them about the activities they work on. MCC can provide support and training for MCAs to introduce them to IPM on request. Another alternative is to have a project management consultant (if relevant) deliver the training using MCC’s materials.
4. Make IPM collaborative. The core concept of IPM is *integration* – MCA staff from all sectors, Implementing Entities, key consultants, and MCC should all be involved in the development and implementation of IPM systems. This allows all perspectives to be heard and reduces the likelihood of overlooking an important risk or missing an update on a key contract. Integration also ensures all stakeholders are on the same page about a project and act quickly to resolve urgent issues.

³ Compacts that are further on in implementation may choose to use some or all of the IPM systems at their discretion.

⁴ PMO is a generic term and defined by PMI as “An organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those projects under its domain.” While the roles and responsibilities of a PMO in the context of a compact may be fulfilled by an MCA, it may also be fulfilled by a Project Management Consultant.

5. Discuss with other MCAs. The IPM guidelines take international best practices in project management and adapts them to reflect experiences from many of MCC's compacts. Despite the diversity in MCC compacts, many of the problems MCAs face are the same. MCC strongly encourages consulting with MCA colleagues throughout compact implementation to build a community of practice around IPM.
6. Start small and build/adapt as needed. As stated above, the IPM guidelines lay out the minimum requirements for developing a useful set of program management practices. MCC recommends that MCAs start with those minimum requirements and wait to add more until there is a clear need to do so. Often, adding more features and steps to something like a work plan can seem like a great idea at first, but things quickly get out of control as the plan becomes thousands of lines long and becomes impossible to read or keep up to date. It is helpful to remember that IPM is a *high level management tool* – it isn't intended to include every bit of information about a compact. Instead, it is a way of making the information needed to get an accurate sense of priorities, risks, and upcoming decision points for a compact available to those who need it most.

Examples of IPM in Action

Whenever possible, the IPM guidelines include examples to illustrate how the tools will work in a actual setting. Below are some of the more compelling stories from past MCC programs that have benefited from using the different systems of IPM.

MCA-Namibia and Change Management: The Namibia Compact funded the renovation and expansion of 47 primary schools, 9 vocational training center and 5 veterinary clinics. Each school's headmaster had a wish list things they wanted to add onto the scope of the project (such as additional labs, non-standard room types, upgraded services) and approached MCA-Namibia with their requests. At first, these changes seemed small and feasible, but it wasn't long before the trickle of requests became a flood. To help manage the overwhelming number of requested changes, MCA-Namibia instituted a change management plan that asked the headmasters to work with MCA to justify their requests in context of the compact. That hurdle eliminated many requests; and the process established in the change management plan ensured that the remaining requests were reviewed by the right staff at appropriate levels and that only the requests necessary to accomplish a successful project were approved.

The change management plan also helped MCA-Namibia resolve an issue with a powerful government office. A new Chief took office at the Government of Namibia's Veterinary Service after the design of the veterinary clinics funded by the compact had been completed and construction awards were pending. The new Chief did not approve of his predecessor's design and requested another design that cost significantly more and did not satisfy MCC's Cost Principles. The change management plan required MCA to consider if the Chief's requests were necessary to meet the compact's stated scope. It was quickly determined that existing plans were sufficient, so MCA explored other approaches to keep costs down while giving the new Chief the design he wanted. In the end, MCC asked the Veterinary Service to pay the difference for their requested design keeping the project within the Cost Principles and delivering the end user's desired outcome.

MCA-Tanzania and Risk, Contract Performance Management: The Tanzania Compact funded an activity that expanded Dar Es Salaam's primary water treatment works; however, the success of the activity depended on the ability of the pipe that stretched from the works to the city to carry the additional water flow. While the pipe's condition had been a concern during compact development, no further action was planned because the pipe's original design was deemed sufficient by due diligence consultants. Later in compact implementation, MCA-Tanzania instituted a Risk Management Plan that led the MCA to identifying the pipe as a key risk requiring action. As a result, resources were mobilized and MCA-Tanzania confirmed the pipe was not sufficient. The rapid process of identifying and acting on an urgent risk allowed MCA-Tanzania to approach the government and donors with the information, who quickly mobilized the \$80M USD required to design and construct a new 50km pipe and ensure the success of the compact activity.

MCA-Tanzania also benefited from a cost and schedule performance plan. The onsite engineer for the expansion of a water treatment plant reported monthly on progress, but four months into the work engineer's report did not match the performance metrics provided by the contract's terms. The narrative expressed good progress while the metrics showed a project already three months behind. The objective lack of performance triggered further investigation according to the process outlined in the cost and schedule performance plan. As a result, MCA and MCC conducted a site visit and witnessed a general lack of organization and serious health safety conditions. MCA immediately shut down the site, issued Letters of Correction and called the contractor's management to the MCA CEO's office. The effect was a 180 degree change in performance three weeks later; the contractor was so pleased with their own turnaround they starting using the same metrics on other non-MCA projects. Without a cost and schedule performance plan the situation would have been able to deteriorate much further before being noticed.

MCC Integrated Program Management Guidance

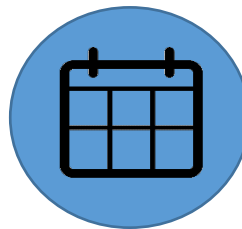
Managing Schedule



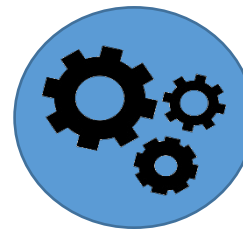
Contract
Performance
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Risk



Schedule



Change



Coordination

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1. Introduction

Integrated program management uses information across a variety of sectors to improve how teams manage five key factors of projects: contract performance, risk, schedule, change, and coordination.

This guide will focus on **schedule management** and lead MCAs through the development and use of an **Executive Level Work Plan (EWP)**.

EWPs are required for all compacts. They are essential tools for MCA managers in their decision making process and also help MCC provide support and oversight. EWPs can support MCA management by:

- Planning and prioritizing project activities, tasks and milestones
- Evaluating project progress compared to the project plan (baseline)
- Demonstrating the next key steps in implementation
- Helping demonstrate the effects of actual and potential changes on related activities through progress monitoring
- Identifying interim and final milestones, and logically integrating milestones with tasks and activities
- Focusing conversations and efforts on project outputs and outcomes¹
- Ensuring that MCA staff (and the Program/Project Management Office/PMO or Project Management Consultant/PMC) utilize effective schedule management

Regularly updating an EWP can decrease the confusion, misunderstandings and miscommunications that, to some degree, are normal to the implementation of projects. By using the EWP in their regular meetings, MCA managers can make better decisions about resource allocation and where to focus their time and effort. Additionally, regularly updating an EWP will reduce the frequency of information requests from MCC to MCA and from MCA leadership to the project teams.

An effective EWP is easy to understand and simple to maintain, and should contain only the summary tasks and key milestones necessary to accomplish the outputs and outcomes of the compact. EWPs serve a different purpose than work plans developed and used by project and activity leads, or other tools used to manage MCA administrative schedules. EWPs should neither go into detail about every contract signed nor include many of the everyday tasks required to keep an MCA running.

This guide has two major sections: Requirements and Guidance. The requirements are mandatory and represent the essential MCC expectations of an EWP. MCA can choose to enhance the EWP with additional features beyond the requirements but not to the degree that would make it difficult to understand or complicated to maintain.

The Guidance section is a presentation of lessons learned from previous compacts. The purpose of this section is to promote learning from the experience of others and provide suggested approaches that MCC and MCAs successfully applied in the past.

¹ The term *output* as used in this document refers to a project interim objectives, such as length of road built or number of farmers trained. The term *outcome* as used in this document refers to the effects of those outputs, such as increased commerce and crop yield. The difference between project outputs and administrative tasks will become clearer as you read this document and understand the requirements and guidance presented.

Additionally in this document, you will find reporting requirements and recommendations for maintenance and ownership of the EWP. Finally, we have provided a hypothetical work plan to aid the development of an EWP.

2. Ownership

The primary target audience for this EWP guide is the MCA CEO and the MCA leadership team. However, the day to day work of developing and maintaining an EWP should be delegated by the CEO to a person or a small group of dedicated staff or consultants, often called the Project Management Office (PMO² or PMC), which typically reports directly to the CEO or COO. The PMO objectives include:

- Support MCA Project Managers and staff to manage their projects, activities, tasks and risks with an appropriate and consistent level of control. This is accomplished by providing consultation processes, systems and tools;
- Ensure coordination, integration and the sharing of information across all technical sectors;
- Provide relevant and updated information to MCA leadership on project performance, including cost tracking. This includes developing and updating Executive Work Plan and related monitoring documents based on information provided by the project teams; and
- Ensure that the Executive Work Plan meets the requirements set out in this guidance document and is available for sharing with MCC.

Note: While establishing a PMO or PMC is not a requirement, it does serve a critical function and MCC recommends that MCAs consider establishing a program management staffing structure that includes a PMO or PMC, with delegated authority by MCA leadership.

3. Maintenance and Use

The EWP will only be useful if it is continuously used for monitoring compact progress and updated so that it can be used to support MCA leadership in timely decision-making.

Additionally, an updated and widely available EWP can minimize ad hoc requests for updates, status and progress of the compact. Some MCAs have contracted online dashboard services (e.g. ProjectManager.com) to more easily share information within MCA and with MCC. When these types of services are used, updates are easily made and shared with relevant audiences and the most recent version of the plan is always easily located and accessed.

The EWP connects to the other IPM tools. As MCAs review and update their EWP, they should pay attention to any major changes to project schedules and make any adjustments to other IPM tools required. For example if a change in one activity causes a delay in another activity this may create a new risk and would necessitate an update to the Risk Register. Additionally, changes to other IPM tools should be reflected in the EWP as needed – a major contract extension approved through the Change Management process should result in an update to the EWP.

² PMO is a generic term. While a PMO may be staffed by MCA hires, some MCAs hire a Project Management Consultant (PMC) that fills this role.

4. Requirements³

MCAs will develop an EWP during the implementation preparation phase (often known as the EIF period) of a compact and share the final version with MCC as part of the initial Quarterly Disbursement Request Package (QDRP). It is expected that MCAs will share the most recent version of the EWP with their MCC counterparts quarterly thereafter as part of the QDRP.

In compacts where an Implementation Plan is required as a condition to Initial Disbursement of Program Funding (and/or disbursement requests thereafter), the EWP will satisfy the requirement for the inclusion of a Work Plan in that set of documents.

Requirement 1 – Work Breakdown Structure

When developing a EWP, it is important to use one framework to consistently track compact components. This framework is commonly referred to as a **Work Breakdown Structure (WBS)**.

Management Value

Managers will benefit from being able to discuss the compact’s components in a common framework. This will reduce confusion and increase understanding of each other’s roles and responsibilities during the implementation period. Most importantly this will help to identify conflicts and efficiencies earlier and prevent delays that can be foreseen.

Description

The WBS provides the basic building blocks for the EWP. The WBS is a map of the compact projects, activities and sub-activities, contracts and deliverables. A good WBS ensures that all efforts directly resulting in the compact’s outputs⁴ are included in the EWP and that the linkages between related tasks are logical and correct. Below is an example of a compact Work Breakdown Structure. An additional level not shown here, “Contract Deliverables,” will be discussed in Requirement 3. An example of a WBS can be found in Annex 2.

³ All “requirements” in this document refer to necessities to make a EWP compliant with the Guide and only the Guide. At this time these are not MCC mandated requirements under terms of the Compact Agreement.

⁴ An example of common outputs are the length of road built, the volume of water produced, the number of farmers trained.

Compact	Project	Activity	Sub-Activity	Contract
WBS Level 0	WBS Level 1	WBS Level 2	WBS Level 3 (as required)	WBS Level 4 (contracts)
	1.0 Project	1.1 Infrastructure Activity	1.1.1 Infrastructure Sub-Activity	1.1.1.1 Contract
				1.1.1.2 Contract
				1.1.1.3 Contract
			1.1.2 Infrastructure Sub-Activity	1.1.2.1 Contract
			1.1.3 Infrastructure Sub-Activity	1.1.3.1 Contract
		1.2 Institutional Strengthening Activity	1.1.4 Infrastructure Sub-Activity	1.1.4.1 Contract
			1.1.5 Infrastructure Sub-Activity	1.1.5.1 Contract
				1.1.5.2 Contract
			1.2.1 IS Sub-Activity	1.2.1.1 Contract
			1.2.2 IS Sub-Activity	1.2.2.1 Contract
			1.2.3 IS Sub-Activity	1.2.3.1 Contract

Integrating Environmental and Social Performance (ESP) and Gender and Social Integration (GSI)

ESP (including resettlement) actions are vital to successful compact implementation. Therefore **it is important to include ESP actions that must be completed before a project, activity or sub-activity can move forward in the EWP**. Since ESP actions can vary greatly from compact to compact, MCAs should decide which method works best to display and track ESP actions for their particular compact.

At a minimum an MCA should consider inclusion of the following components as milestones (all tasks with a duration of zero days are automatically marked as milestones in MS Project):

- ESIA/ESMP complete and approved
- Environmental permits obtained
- Contractor's ESMPs complete and approved
- Contractor's HSMP complete and approved

Likewise, resettlement actions differ significantly by compact. MCAs should decide which method to use when incorporating resettlement in the EWP. At a minimum an MCA should consider inclusion of the following milestones (0 days):

- Final RAP

- Compensation Complete (sectionalized if necessary⁵)

Resettlement planning and implementation are often complex efforts and require greater elaboration in the EWP. In large or complex projects, it may be necessary to show resettlement tasks at either the Activity or Sub-Activity level to better illustrate linkages to other activities and highlight the impact resettlement timelines have on the whole compact.

An approved Social and Gender Integration Plan (SGIP) is a condition precedent for all compacts (see Requirement 4 below for more information on conditions precedent). The plan is reviewed and updated annually. To the extent possible, the activities in the SGIP should be aligned and coordinated with compact-level and project work plans as per the GSI handbook. By integrating the development of an SGIP and the annual review and update process within the EWP, MCA managers can easily see how it impacts progress and make better decisions regarding prioritization of resources and risk management.

At a minimum, an MCA should consider inclusion of the finalization of the SGIP expressed as a milestone (0 days) in the EWP. It should also consider including the annual reviews and updates for the plan for each year following the completion of the original plan through the final year of the compact.

Best Practices

- Only one WBS is used per compact.
- The WBS elements will collectively provide a complete description of the work resulting in compact outputs.
- The WBS may evolve as the compact changes and should be updated as needed.

Requirement 2 – Procurement

Management Value

The procurement of contracts and services for projects and their activities is a major effort. MCA project staff and the procurement team will spend most of the first 12 to 18 months of a compact procuring consultants, contractors and goods. **Including procurement in the EWP is important because MCA-management will be better able to make informed decisions regarding staffing and their assignments when they can visualize all the concurrent procurement activities.**

For example, MCA staff are often asked to participate in evaluation panels for procurements; however, scheduling panels simultaneously might mean that there are not enough qualified MCA staff to sit on all of them. This will then lead to delays in the procurement timeline which can have further downstream effects on the project timeline.

MCA should use the Procurement Agent's tracking tools to establish and update the procurement-related tasks in the EWP.

⁵ Sectionalization refers to completing compensation and providing a contractor access to site in segments. This is more typical on roads, drains and agriculture where a project affected person's property and/or livelihood is within a project boundary.

Description

Create one procurement task for each relevant consultant or works contract in level 4 of the WBS. Use the scheduling software's progress bar to indicate the status of the procurement task. Update the progress bar such that:

Consultant Contracts:

- 0%: No Actions Complete
- 5%: Terms of Reference in development
- 25%: Terms of Reference complete; PA developing Request for Proposals (RFP)
- 50%: Procurement launched
- 65%: Procurement evaluation underway
- 75%: Technical Evaluation Panel (TEP) Report approved by MCC
- 100%: Contract Award Complete

Works Contracts:

- 0%: No Actions Complete
- 5%: Construction Documents in Design
- 25%: Design Documents Complete; PA developing Invitations for Bid (IFB)
- 50%: Procurement Launched
- 65%: Bid Evaluation Panel underway
- 75%: Bid Evaluation Report (BER) approved by MCC
- 100%: Letter of Award Issued

Best Practices

- **All contracts that drive the compact outputs should be included in the EWP.** It is up to the MCA to determine which contracts fall into that category; however, it is recommended that administrative and other supporting procurements not be included to maintain usability.
- Each contract procurement will take no more than one line in the EWP.

Requirement 3 – Tracking Contract Management

Management Value

Compact performance is largely driven by contract deliverables – therefore, including important deliverables in the EWP is critical. The EWP helps MCA management quickly understand how contracts are performing to meet their objectives. Contract performance information for the EWP is found in the contract performance tracking documents established in the Contract Performance Management Plan. The use of this information in the EWP helps management not only focus on the large value contracts, but identify those small value contracts with significant impacts on outputs and outcomes.

Description

Consultant Contracts

All major deliverables should be included in the EWP as milestones.

To keep the work plan readable and useful to MCA management, it is not necessary to show deliverables such as inception reports and monthly reports. **Include in the EWP only those deliverables that have direct impact on the compact's outputs**, using the deliverables as stated in the contract as the baseline to assess contract performance and conduct earned value management calculations.

Note: Some consultant contracts provide an ongoing service, such as program or construction management, instead of a set of deliverables. One example is the Construction Supervisor (FIDIC Engineer). In this case the EWP can simply indicate a task that is the duration of the contract.⁶

Works Contracts

Construction, or works contracts, are already managed by a highly detailed contractor-generated work plan called the Construction Programme. It is unnecessary and ineffective to reproduce this in the EWP. However, the EWP should show the progress of large segments of work (e.g. percentage of roads sections complete, percentage of each school built, etc.) while the Construction Programme calculates expected completion and Earned Value indicators. It is more important that the EWP demonstrate overall progress of work and allow this to inform discussion with Project Managers.

Requirement 4 – Conditions Precedent

Management Value

All MCC compacts contain conditions precedent (CPs) which require a specific action to be taken or milestone met before progress on an activity, project, or the entire compact can continue. The EWP, in capturing the CPs that lie on the critical path⁷ for a compact project or activity, can help managers see how delays meeting a CP may impact the overall timeline and better allow them to plan ahead and anticipate issues before they materialize.

Description

Conditions precedent vary greatly between compacts. While it is necessary for CPs to be included in the EWP, the manner in which they are included and their level of detail is at the discretion of the MCA. It may only be necessary to include a subset of CPs which MCA management believes require additional scrutiny.

CPs can be shown embedded in the project WBS or as an additional section in a EWP with linkages into the Projects. They may be milestones (durations of 0 days) and/or be comprised of multiple tasks when necessary. See Annexes 3 and 4 for ideas.

Requirement 5 – Baseline

Management Value

The project's baseline is used to measure how performance deviates from the plan- it is essential to tracking and assessing performance. A project's baseline is defined as the expected scope, cost and schedule. The project's first baseline must be completely defined and documented before the project execution and control activities can begin. **The EWP will baseline the original project schedule** (the costs and scope will be baselined in other project performance documents). Baselineing should be used

⁶ The purpose of tracking on-going services is to ensure their durations continue to match related output-oriented activities. For example, does the construction supervision consultant's contract need an extension to match changes in the projected completion of a works contract?

⁷ A critical path is the sequence of events that if any are delayed, will delay the entire project.

by managers to track which parts of a project are having unforeseen changes, better estimate implementation times, and determine improved strategies moving forward.

Description

MCC's definition of a baseline is: Compact Project Plan at EIF +/- Approved Project Changes.

The EWP will be baselined when developed and approved by MCA management. All scheduling software has a baseline feature.

As implementation progresses, additional baselines can be developed as needed when changes to the project(s) are approved through the process outlined in the Change Management Plan.

It is normal for projects to slip off of baselines and it is not necessarily an indication of poor implementation. It primarily serves to begin a conversation about ways to improve performance and overcome obstacles.

5. Guidance

When Your Project's Implementation Strategy Does Not Fit in This Model

Sometimes a project's implementation strategy does not fit in this guidance. Managing contracts does not always achieve outputs and outcomes. Take the example of an MCA standing up a new government office. This MCA's strategy was to hire six individual experts. They discovered tracking these consultant contracts was not going to provide milestone or time sensitive information to understand how the office development was proceeding. They concluded to instead develop a series of milestones with the experts and use this in the EWP. Every MCA has the ability to adapt the structure of the EWP to their needs. If your MCA needs support with this type of adaptation please reach out to MCC and IPM4I to help you.

Lessons Learned and Best Practices

Many MCAs have attempted and some succeeded in the development and tracking of compact-wide work plans. A wide variety of ideas and lessons have been learned from these efforts:

Don't overcomplicate things.

Scheduling software comes with a lot of functions that can seem useful at first but in reality just make work plans more difficult to read and update. **MCC strongly recommends only using those functions that are absolutely necessary to develop the EWP.** In particular, we recommend NOT including:

- Resource loading. This function was developed for consultancies and contractors to manage costs related to labor, equipment and overhead. Since MCAs do not invoice clients on their tasks, resource loading is not useful. Some MCAs believe it is a way to track staff hours and their tasks. However, this does not work because resource loading has complicated and significant effects on the work plan's durations and dates. Instead, consider creating a "Text Column" and place names of responsible staff. This has no effect on the durations and dates.
- Earned Value Management (EVM). EVM is an essential way to track the progress of construction programs. Most scheduling software has an EVM component. However, similar to the reasons of resource loading, this does not work in the executive work plan. The responsibility of EVM

should be a part of construction and construction supervisor contracts. EVM then can be reported in regular cost performance tracking documents.

Know the difference between tasks and milestones.

While developing your work plan, you will need to distinguish between tasks (with set durations between a start and end date) and milestones (events that occur on one date). When tasks and milestones are confused then staff and leadership quickly dismiss the value of work plans.

For example consider the development of a Statement of Work (SoW). If we want to add the task *Develop Statement of Work*, then we will next guess how many days this might take - we use 'guess' since this SoW has never been developed before. If we guess 60 days yet we and our management are not sure, then the work plan appears less useful. Our assumptions are just guesses. Instead, a better approach is to set a milestone that is a date the SoW needs to be completed by to prevent delay to the project. It will then set an expectation among those responsible to work towards that goal.

Invest in real scheduling software

A spreadsheet program like MS Excel is not an acceptable substitute for project scheduling software.

Scheduling software quickly calculates the effects of project decisions by automatically showing how moving tasks and milestones affects the rest of the program. For example, if our SoW was due on April 5th but we know now we cannot complete it until April 20th, making the change in project scheduling software will update associated tasks, allowing us to see how this one delay will affect the date of the Contract Award many months from now. We can then decide if there are tasks in between where it may be possible to save time if the new award date is not acceptable. We do not get these benefits with MS Excel. All the calculations done automatically by software such as MS Project have to be done through tedious spreadsheet functions or worse, by hand. The time needed to update a spreadsheet-based work plan is significantly longer with greatly diminished benefits to decision makers.

Hire an expert (or several)

In the day to day activities and rush of compact implementation, project teams often do not take the time to update and adjust their work plans. This is complicated when work plans contain more than one project and there is more than one contributor. In order to have regular and updated work plans, the MCA should assign this task to one person attached to the executive office and/or a project management office. This person must have experience in using project scheduling software.

6. Annexes

1. Hypothetical Guyana Compact Description
2. Hypothetical Guyana Compact WBS
3. Hypothetical Guyana Compact Conditions Precedent
4. Hypothetical Guyana Compact Example Work Plan

MCC Integrated Program Management Guidance

Managing Risk



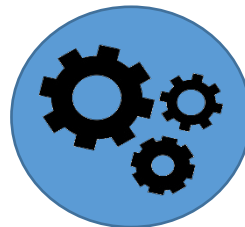
Contract
Performance
Per



Risk



Schedule



Change



Coordination

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1. Introduction

Integrated program management uses information across a variety of sectors to improve how teams manage five key factors of a project: contract performance, risk, schedule, change, and coordination.

This guidance will focus on **risk management** and lead MCAs through the development and maintenance of a Risk Management Process.

All projects involve uncertainty. Project risk management improves the likelihood that projects will achieve their desired objectives by reducing threats to schedule and budget while maximizing opportunities that arise. Effective project risk management both looks backwards by reviewing the lessons learned from past failures and successes from similar projects and looks forward through project planning.

At a minimum and as part of this guidance, it is expected that MCAs will 1) develop and manage a Risk Management Plan and Register in alignment with the compact, 2) monitor the status of risks and update the Risk Register no less than quarterly, or as changes occur, and 3) update the other relevant integrated program management tools to include any risks that have occurred and affect them.

2. Ownership

The policies and processes that are used to track the performance of projects, activities, tasks and risks are the responsibility of the MCA Chief Executive Officer (CEO) and his/her delegates. However, the day to day work of developing and maintaining a Risk Management Process should be delegated by the CEO to a person or a small group of dedicated staff or consultants, often called the Project Management Office (PMO2 or PMC), which typically reports directly to the CEO or COO. The PMO objectives include:

- Support MCA Project Managers and staff to manage their projects, activities, tasks and risks with an appropriate and consistent level of control. This is accomplished by providing consultation processes, systems and tools;
- Ensure coordination, integration and the sharing of information across all technical sectors;
- Provide relevant and updated information to MCA leadership on project performance, including the status of risks. This includes developing and updating the Executive Work Plan and related monitoring documents based on information provided by the project teams; and
- Ensure that the Risk Management Plan meets the Elements set out in this guidance document and is available for sharing with MCC.

While the PMO may support MCA management and project staff, the ultimate responsibility to identify and respond to a project's risk belongs to the Project Manager(s).

3. Maintenance and Use

Risk documents will only be useful if they include all applicable risks (including cross-cutting risks), are regularly updated and support MCA leadership in timely decision-making. Additionally, an updated and widely available Risk Register can improve efforts and build consensus to address emerging threats and opportunities.

4. Risk Management Integration

An MCA's development of a Risk Register and decisions on how they will respond to risk will affect the other parts of Integrated Program Management (IPM). For example, a risk response might include a new task that will change the work plan schedule or require amendments to contracts using a change management policy. The integration of risk management in the MCA project management scheme is essential to MCA's project delivery efforts.

5. Elements¹

To be effective, MCAs can develop a Risk Management Plan and Risk Register during the phase after signing and prior to EIF (also known as the EIF period) and share the final version with MCC as part of the initial Quarterly Disbursement Request Package (QDRP). MCAs will benefit most by working together across sectors to ensure that all relevant risks are captured, and share the most recent version of their Risk Register(s) with their MCC counterparts no less than quarterly. These can be and often are a part of monthly project update documents from a PMO.

Element 1 – Establish a Risk Management Plan

Management Value

A Risk Management Plan provides a comprehensive approach to risk management. It allows MCA leaders to contribute to and understand the efforts of staff to reduce compact risks. This plan is essential for organized and effective risk responses.

Process – Establish a Risk Management Plan

The plan follows a standard template provided with these Guidelines. If the MCA chooses to not use or enhance the template, **the following components are strongly recommended:**

1. Document Control. This includes version history, approvals and distribution.
2. Risk Categories. Categories are established in the risk plan and before any risk identification activities can begin.
3. Risk Analysis Methodology. This describes how risks will be evaluated qualitatively so they may be prioritized. MCAs may also choose to quantitatively evaluate the highest scoring risks².
4. Assumptions. High level actions and conditions that MCA assumes will support the outputs of the project with regards to risk management (e.g. the project budget is sufficient to complete the project).
5. Constraints. Actions and conditions that will constrain the ability to achieve the outputs of the project with regards to risk management (e.g. the compact period, project budget and associated contingency will remain fixed).
6. Activities. Actions that will accomplish and maintain the Risk Management Plan.
7. Roles. The team members and leaders and their responsibilities to accomplish and maintain the Risk Management Plan.

¹ All "Elements" in this document refer to necessities to make a Risk Management Plan and Register effective. These are not MCC mandated requirements under terms of the Compact Agreement.

² See Guidance Section for information on Quantitative Risk Analysis

8. Document Inventory. The specific risk-focused documents used to accomplish and maintain the Risk Management Plan (e.g. the Risk Register).

For more information please see **Annex 1- Risk Management Plan Template** and **Annex 2 –Sample Risk Management Plan**.

Element 2 – Establish Risk Register

The **Risk Register** is the comprehensive output of the Risk Management Plan. All significant risks that MCA is addressing and their status are presented on the Risk Register. MCA leaders can use this document in their discussions with Project Managers on progress to address risks.

A Risk Register will be developed and maintained as a means to manage the identified risks and responses to eliminate and/or reduce the threat (and/or probability) posed by the most severe risks.

Risk Registers include a list of prioritized risks and their probability and impact ratings, risks for additional analysis and response, a watch list of non-critical risks that need monitoring, and risk trends. The development of a Risk Register can be accomplished by following the steps below and should adhere to a compact's Risk Management Plan.

The Risk Register should contain the following information at a minimum to be effective (see Annexes 3 and 4 for a template and example):

1. Risk identification Number
2. Type
3. Date Identified
4. Risk Description
5. Impact Description
6. Probability Score
7. Impact Score
8. Priority Rating
9. Trend (same, worse of better than previous update)
10. Risk Response
11. Status / Effectiveness of response
12. Responsible Person (Owner) – who is managing the risk
13. Deadline for next action

Step 1 – Risk Identification

Management Value

Once a Risk Management Plan is developed, MCAs can then begin the process of filling out the Risk Register. The best risk response strategies begin with a comprehensive risk identification process that includes all project attributes (e.g., environmental, social, gender, legal, procurement, etc.). When project staff are included and believe their contribution will be valued then the risk identification process is more likely to be effective.

IPM Guidance: Managing Risk

Process – Risk Identification

One way to ensure an effective risk identification process is to conduct a dedicated workshop to provide project staff and other invested parties space to identify risks. This must include all relevant sectoral interests and is best facilitated by a person neutral to the project even if they are employed by either MCA or MCC.

Participants in the risk identification exercise will use a simple structure to identify risks, their causes and impacts. The risks themselves may be worded differently in the Risk Register later. The purpose of this is to prevent confusion between risks and the effects (or impacts³) of risks.

This guidance recommends the following structure to describe risks: *Because of a CAUSE then a RISK can occur and would result in an EFFECT to the project.*

For example: *“Because our organization has never done a project like this before (no previous experience = CAUSE), we might misunderstand its implementation Elements (misunderstanding/uncertainty = RISK), and our solution would not meet the performance targets (not meeting performance targets = EFFECT on the program objective).*

Once the initial risk identification process is complete, MCA will have a comprehensive list of risks and their assumed impacts or effects. For further suggestions on some techniques that can be used to identify risks please see the Guidance section below.

Step 2 – Risk Analysis

Risk Analysis

After identifying risks, participants will score them based on their probability and impact. There are many variations of numerical scoring; MCAs should come to agreement on the approach they’ll use and document their decision in the Risk Management Plan. Examples are provided below.

Probability Assessment

Probability is the likelihood a risk will happen and is determined by looking at the known causes during the Risk Identification phase, using criteria described in the Risk Management Plan. An example of a probability assessment guide is below:

Probability		
Score	Description	Criteria
20	Very Low	Unlikely to occur. Identified as a potential risk but no certainty about its occurrence; similar events have occurred in the industry.
40	Low -Medium	
60	Medium	Medium probability that the event will happen. A similar

³ This document will use “effects” and “impacts” interchangeably.

IPM Guidance: Managing Risk

		event has happened in similar projects.
80	High	Likely to occur. A similar event has happened several times in similar projects.
100	Very High	

Impact Assessment

Impact refers to the degree to which the risk will affect the project objectives. In the example below, the MCA's Risk Management Plan divides project objectives into five major types and three impact levels:

Project Objective	Impact		
	Low or Low-Medium 20 or 40	Medium 60	High or Very High 80 or 100
Time	• <5% schedule impact	• 5-10% schedule impact	• >10% schedule impact
Cost	• <5% cost increase	• 5-10% cost increase	• >10% cost increase
Scope	• Minor areas of scope affected	• Major areas of scope affected	• Scope or quality reduction unacceptable to sponsor
Quality	• Only non-critical areas are impacted	• Quality reduction requires sponsor approval	• Program / Project deliverable will not be usable / meet ordered specifications
Overall Project	<ul style="list-style-type: none"> • Benefits are not affected • Isolated complaints from stakeholders and community • Minimal impacts related to environmental, social, health & safety, issues • Impact can be addressed at the program level or with its knowledge 	<ul style="list-style-type: none"> • Benefits are not entirely realized • Potential for more widespread complaints from stakeholders and community • Environmental, social, health & safety concerns exist, but are being adequately managed • Impact can be addressed in the program level but with MCA/MCC awareness 	<ul style="list-style-type: none"> • Benefits originally planned are not realized • Serious complaints from stakeholders and community • Potential for significant environmental, social, health and safety impacts • MCA could face litigation or serious restructuring due to social, environment or fiduciary aspects • Impact requires Board and MCC involvement

Risk Rating

Once risks have been analyzed using the qualitative risk analysis process; a risk rating will be established by taking the average of these scores:

$$\frac{(Probability + Impact)}{2}$$

The risk score can then be used to prioritize each risk using set criteria such as:

Risk Score	Exposure Rating	Description
Less than 45	Low	No major planned changes; the risk has a very limited impact on the program objectives. Not addressed immediately, but should be monitored to ensure that the risk does not increase and impact objectives in the future.
Between 45 and 75	Medium	Project objectives can be met, but significant re-planning is required. Requires attention to avoid that risk effects don't spread over the program in the short / medium term.
Above 75	High	Project objective is at risk and mandatory change to one or more of scope, schedule, resources or quality. Risk could result in unacceptable levels or compromise the benefits. Requires urgent attention.

Once the risk analysis is complete, the Risk Register can be completed with risks prioritized by score (**see Annex 4 for a Sample Risk Register**).

Step 3 – Risk Response Planning

Process – Develop Risk Response Strategies

Once risks are identified and prioritized, the risk process moves on to Risk Response Planning - dealing with the causes or the effects of risk. There are several options for responding to each identified risk.

These include⁴:

- Avoidance
- Transfer
- Mitigate
- Exploit
- Enhance
- Accept

Specific action items to mitigate risks will be recorded in the Risk Register. Effective risk responses are appropriate for the severity of the risk, timely, address the root cause and, most importantly, are

⁴ See Guidance section for further discussion of risk action descriptions.

developed by the team, stakeholders and experts. **Information on risk responses in the Risk Register should contain at a minimum:**

- Type of Action (e.g. Avoidance, Transfer, Share, Mitigate, Exploit, Enhance or Accept);
- Description of the action;
- Responsibility: Person responsible for performing the action; and
- Due Date: Date by which the action will be performed. If it's an ongoing activity, periodic reviews will check that they are effectively applied.

Risk responses or actions outlined in the Risk Register may require the development of separate action plans, be incorporated into sector trackers, or become part of an updated work plan. Some responses require developing contingency plans that are designed to be used only if the risk event occurs and developing a fallback plan if the contingency plan fails.

At a minimum MCA should establish risk responses for the 15 highest ranked risks on their Risk Register.

6. Guidance

Risk Workshop Agenda

To help ensure effective identification of a broad spectrum of potential risks, workshop participants should include all project staff and relevant staff from cross-cutting sectors (ESP, GSI, procurement, fiscal, legal, etc.).

The workshop agenda should include the following (in accordance with the Risk Management Plan):

1. An introduction to the purpose and benefits of risk management
2. A presentation of the Risk Management Plan
3. An overview of the workshop activities:
 - a. Risk Identification
 - b. Risk Analysis
 - i. Qualitative
 - ii. Quantitative
 - c. Risk Response Planning
 - d. Develop initial Risk Register
4. Use of multiple techniques (see Guidance Section below) to comprehensively identify risk.
5. Conduct Risks Analysis
6. Conduct Risk Response
7. Fill out Risk Register

Managing a Large Number of Risks

It is recommended that MCA choose between 15 and 20 of the highest ranked risks for the register. MCA managers can use a subset of those to present to MCA management. The remaining lower order risks can be moved to another tab called the "Watch List". This will be reviewed less frequently (every six months, or as necessary given changing project circumstances). The purpose of this recommendation is to focus MCA's efforts on a manageable amount of key risks and not overwhelm management or project staff.

Effective Sharing of Risk Information

Some MCAs have contracted online dashboard services (e.g. ProjectManager.com) to more easily share information within MCA and with MCC. When these types of services are used, updates are easily made and shared with relevant audiences.

Methods to Capture Risk

Capturing specific issues, concerns and risks is usually straightforward once the program scope, Work Breakdown Structure, technical Elements and other project data are defined. The initial risks are normally associated with scope, schedule, cost and quality. However, some risks are not so easily identified. These risks may require introspection and highlight limitations by the stakeholders. For example, the key players may understand that the end user doesn't have the capacity to manage the completed facility; however, it's not comfortable for any one person to present this problem. The Risk Management Process cannot be effective unless these issues are raised and resolved. Fortunately, **a variety of methods exist to assist in the identification of risks** associated with the program, some of which include the following:

1. Brainstorming – A group creativity technique by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members.
2. Delphi Technique – A technique used to build consensus by experts who participate anonymously. A request for information is sent to the experts, their responses are compiled, and the results are sent back to them for further review until a consensus is reached.
3. Interviewing – The Project Manager interviews project participants, stakeholders and experts to identify risks to the project or a specific element of work.
4. Root Cause Analysis – Ask why a problem has happened or could happen and then continue to ask why it happened until you reach the fundamental element that failed. Use the fishbone diagram technique to visually display the components of an issue and narrow it down to the root cause.
5. Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis – This analysis works by evaluating strengths, weaknesses, opportunities and threats to identify risks.
6. Lessons Learned Review – These are experiences distilled from previous projects that should be actively taken into account in future projects.
7. Progress Status Meetings – Status review meetings are regularly scheduled events to exchange information about the project. Effective status meetings benefit the Project Manager and the entire team by providing a venue for timely task updates, recognizing milestone achievements, sharing information, and bringing problems/issues to the team. New risks may be identified or existing risks may be removed during these meetings.
8. Risk Management Workshops – Risk workshops are used to assess program and project risks in a format that enables participants to both contribute and learn in a natural environment. The result is not only a ranked list of key risks, but stakeholders understand business operations, program objectives and challenges and they are better equipped with the knowledge to make improved business decisions.
9. Pre-Mortem Analysis – This technique is used to help prevent having to complete a post-mortem on a failed project. The purpose is to identify vulnerabilities or risks in the plan,

program or projects. A Pre-Mortem Analysis is a forward looking process rather than the backward looking process of a post-mortem.

10. Risk Impact Areas or Work Breakdown Structure (WBS) – This is an hierarchical representation of risks based on the WBS, starting from higher levels and going down to finer level risks. The WBS is described in the Integrated Program Management Guidance for Accountable Entities⁵.

Common Risk Categories

This is an example list of risk categories (also known as typology). The following can be used to identify project-level risks:

- Time / Schedule
- Cost / Financial
- Quality
- Results / Program or Project Objectives
- Political or Policy
- Regulatory
- Market Related
- Fiduciary
- Capacity / Management
- Environmental
- Social
- Resources (other than financial)
- Stakeholders
- Supervision
- Technical
- Sustainability

Definition of Risk Actions

- **Avoidance** - Risk can be avoided by removing the cause of the risk or executing the project in a different way while still aiming to achieve project objectives. Not all risks can be avoided or eliminated, and for others, this approach may be too expensive or time-consuming. However, this should be the first strategy considered. Example: A company shuts down a construction site in bad weather to avoid the risk that someone will get hurt.
- **Transfer** - Transferring risk involves finding another party who is willing to take responsibility for its management, and who will bear the liability of the risk should it occur. The aim is to ensure that the risk is owned and managed by the party best able to deal with it effectively. Risk transfer usually involves payment of a premium, and the cost-effectiveness of this must be considered when deciding whether to adopt a transfer strategy. Example: An insurance policy transfers a specific set of risks such as the fire and flood risk for a particular asset.
- **Share** - Allocate risk ownership of a threat or opportunity to another party who is best able to minimize or maximize, respectively, its probability of occurrence and minimize the potential harm/increase the potential benefits if it does occur. Transferring threats and sharing opportunities are similar in that a third party is used. Those to whom threats are transferred

⁵ See MCC Integrated Program Management Guidance for Accountable Entities for the definition of Executive Work Plans

take on the liability and those to whom opportunities are allocated should be allowed to share in the potential benefits. Example: Resource risks shared between multiple teams may provide opportunities to share resources and reduce risk.

- Mitigate - Risk mitigation reduces the probability and/or impact of an adverse risk event to an acceptable threshold. Taking early action to reduce the probability and/or impact of a risk is often more effective than trying to repair the damage after the risk has occurred. Risk mitigation may require resources or time and thus presents a tradeoff between doing nothing versus the cost of mitigating the risk.
- Exploit - The aim is to ensure that the opportunity is realized. This strategy seeks to eliminate the uncertainty associated with a particular upside risk by making the opportunity definitely happen. Exploit is an aggressive response strategy, best reserved for those “golden opportunities” having high probability and impacts.
- Enhance - This response aims to modify the “size” of the positive risk. The opportunity is enhanced by increasing its probability and/or impact, thereby maximizing benefits realized for the project. If the probability can be increased to 100 percent, this is effectively an exploit response.
- Accept - This strategy is adopted when it is not possible or practical to respond to the risk by the other strategies, or a response is not warranted by the importance of the risk. When the project manager and the project team decide to accept a risk, they are agreeing to address the risk if and when it occurs. A contingency plan, workaround plan and/or contingency reserve may be developed for that eventuality. Example: Projects are an investment that an organization makes to achieve its goals. Projects involve risks such as the potential for cost overruns.

Quantitative Risk Analysis

There are many ways to quantitatively analyze high impact/probability risks. Two common methods include Expected Value and Monte Carlo Simulations. There exists many web based resources to understand the methodology and use of these tools.

Updating the Risk Register

It is recommended that MCA update their Risk Register at least every quarter. However, it will be more useful to update monthly so the project team can discuss the responses to risks and any risks that need to be downgraded or prioritized based on a project’s current status.

7. Lessons Learned

Create a Watch List

A compact program can generate dozens of risks. It is overwhelming to attempt to manage all of these; therefore, **MCC recommends that only the top 15 risks are assigned and tracked**. The remaining risks are placed on a watch list which can be reviewed less frequently (at most once a quarter) to see if any risks should be removed or promoted. New risks identified may also be placed on the watch list for future consideration.

Make key risk review a normal part of project updates

Risk management works when there is a demand, and this demand often comes from MCA leadership. As stated above in this document, the use of risk in project updates is essential for leadership to best

use their time towards furthering a project. MCA management should request and receive updates on risks and responses during every regular project update meeting.

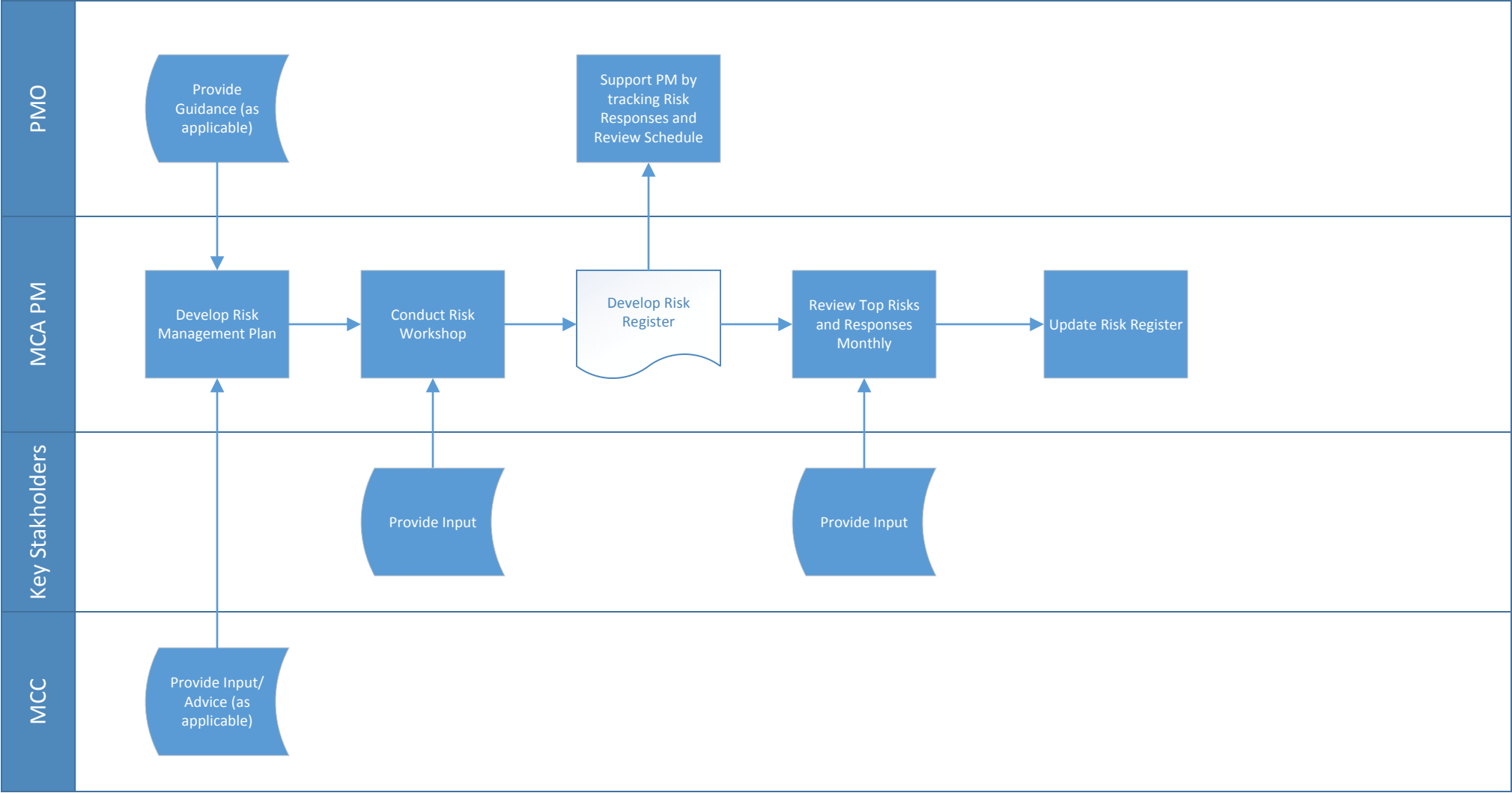
Make risk management a core assignment and not an additional duty

MCAs are managing large and complex issues every day. In the day to day, there will always be issues and actions more urgent than managing future unrealized risks. Nonetheless, the management of risk today will mitigate and reduce the issues of tomorrow. In order to be successful, risk management administration needs to be a core assignment of an MCA staff member or PMO/PMC staff. It makes sense that most of MCA is focused on today's issues; yet, MCA will be at great advantage if others are assigned on tomorrow's potential issues now.

8. Annexes:

1. Risk Management Plan Template
2. Sample Risk Management Plan
3. Risk Register Template
4. Sample Risk Register – MCA-Namibia
5. Alternative Qualitative Risk Assessment Method (ISO 31000)

Development and Maintenance of the Risk Management Plan and Register



MCC Integrated Program Management Guidance

Managing Change



Contract
Performance



Risk



Schedule



Change



Coordination

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1. Introduction

Integrated program management uses information across a variety of sectors to improve how teams manage five key factors of a project: contract performance, risk, schedule, change, and coordination.

This guide will focus on **change management** and lead MCAs through the development and use of a Change Management Plan (CMP).¹

Projects are typically undertaken within changing environments, so it is inevitable that during the life of a project some element of change will be required. Common changes include adjusting deliverable schedules for a consultant after unforeseen delays, increasing the budget for a construction contractor due to an increase in the cost of materials, or modifying the design of a building to accommodate a request from the end user. A change management process provides the framework for requesting, logging, reviewing, approving, coordinating, implementing, and monitoring those changes.

Change Management Plans are essential tools for MCA managers and leaders in their decision making process and also help MCC provide support and oversight. CMPs can:

- Reduce the impact of changes to the project (e.g. cost, time, quality)
- Identify new issues and risks as a result of proposed changes
- Ensure that changes do not affect the project's ability to achieve its objectives
- Ensure that transparent and accountable decision-making, including consultation with all relevant stakeholders, occurs and is documented

This guide has two major sections: Elements and Guidance. The elements are those things MCC considers essential to an effective CMP – the fundamental elements of success. The Guidance section is a presentation of lessons learned from previous compacts and can be followed or adapted as necessary so that MCAs can benefit from the experience of others. This document also provides directions on reporting and recommendations for maintenance and ownership, as well as samples and templates to aid the development of a CMP.

2. Ownership

The policies and processes that are used to track the performance of projects, activities, tasks and risks are the responsibility of the MCA Chief Executive Officer (CEO) and his/her delegates. However, the day to day work of developing and maintaining an EWP should be delegated by the CEO to a person or a small group of dedicated staff or consultants, often called the Project Management Office (PMO or PMC), which typically reports directly to the CEO or COO. The PMO objectives include:

- Support MCA project directors and staff to manage their projects, activities, tasks and risks with an appropriate and consistent level of control. This is accomplished by providing consultation processes, systems and tools;
- Ensure coordination, integration and the sharing of information across all technical sectors;

¹ Note that this guidance may not be applicable for Grants Facilities. Compacts that contain projects or activities of that nature should consult with their MCC counterparts on how to proceed in adapting this guidance or requesting a waiver for that portion of the program.

- Provide relevant and updated information to MCA leadership on project performance, including cost tracking. This includes developing and updating Executive Work Plan and related monitoring documents based on information provided by the project teams; and
- Ensure that the Change Management Plan includes the elements set out in this guidance document and is available for sharing with MCC.

While the PMO may support MCA management and project staff, the project manager (the person responsible for delivering the project) will be responsible for managing and reporting on the project's changes throughout the duration of the project. This includes ensuring that change is decided upon and implemented in consultation with relevant stakeholders and in compliance with MCA set standards, MCC policies, existing contracts, and all applicable laws. Given the differences that can exist between projects, MCC recommends either establishing separate CMPs for each project or indicating in the compact-level CMP how change may be handled differently in each project.

There should be a mechanism to communicate changes that impact the output and/or objectives of the compact to MCA management built into the CMP; this will most easily be achieved by setting clear approval thresholds for certain types of change, as well as establishing a **RACI Matrix for change management**.

3. Elements²

To be effective, MCAs should develop their Change Management Plan or plans during the phase after signing and prior to EIF (also known as the EIF period)) and follow that plan as changes are requested throughout implementation. Acknowledging that some level of project design is often still occurring even through the early months of implementation, Project Teams should plan to begin following the CMP once key implementing entity agreements are signed and the primary contracts for a project have been awarded.

MCAs should also be prepared to share the change register with MCC counterparts as needed or requested during regular project and management meetings or field missions.

See Annex 1 for a sample Change Management Plan.

Linkages to other Requirements, Policies and Guidance:

MCC policies and procedures require MCAs to report out on change at certain points. The CMP will help MCA fulfill those requirements by capturing the relevant information in a simple format. These policies and procedures include:

- **Quarterly Disbursement Request:** During compact implementation, MCA should report out on major changes made to projects impacting budgets via **the narrative report in the quarterly disbursement request package**.
- **MCC's Policy on the Approval of Modifications to MCC Compact Programs** requires MCC to evaluate proposed changes in scope and cost that affect the Economic Rate of Return (ERR) or number of beneficiaries prior to approval.

All "Elements" in this document refer to necessities to make a Change Management Plan effective. These are not MCC mandated requirements under terms of the Compact Agreement.

- **MCC's Program Procurement Guidelines** require MCAs to submit any contract amendments or change orders that increase the value of a contract by 10 percent or more. Supporting documentation for these changes will be generated by the change management process and should be shared with MCC as part of the request for approval of any change in scope or cost/contract amendment or change order.

Additionally, approved changes should be reflected in the Executive Work Plan, Cost Performance Plan, Risk Register and other project documents as relevant and shared with project stakeholders according to the Project Coordination Plan.

The CMP does not interfere with the change processing tasks of the fiscal agent, procurement agent, design contract or FIDIC Engineer.

Detailed directions on how to develop a Change Management Plan are provided in the sections that follow, along with a clear description of the elements necessary for a successful plan.

Element 1: Create MCA Change Request Process and Develop Change Request Form

A CMP starts by **establishing a process** for formally identifying the need for change and collecting a standard set of information on all change requests. This allows managers to ensure consistency in the way decisions about changes are made and to analyze trends over time. This information is captured in a **Change Request Form**.

To be effective, each CMP must outline the process for documenting a change request and include a CRF template with the following information (at a minimum):

1. A unique identifier (change number)
2. The name and title of the person(s) requesting the change
3. A description of the requested change
4. A list of the factors driving the need for change – i.e. the financial, technical, environmental/social /health and safety (ESHS) justifications for the change.
5. Any impact the change might have on risks, contingency, schedule, and budget.
6. Any impact the change might have on program logic, ERRs, M&E plan, SGIP, ESMS, ESMP, or any impact that these documents might have on the proposed change
7. A list of who has reviewed the CRF and verified the information on the form
8. Space for signatures of the submitter and approver

A sample CRF is below:

PROJECT DETAILS	
Project Name:	<i>Name of the project for which the change is being requested</i>
Project Manager:	<i>Name of the Project Manager responsible for implementing the change</i>
CHANGE DETAILS	

IPM Guidance: Managing Change

Change Number: <i>Unique identifier for the change per Change Register</i> Change Requester: <i>Name of person requesting the change</i> Change Request Date: <i>Date of completion of this form</i> Change Urgency: <i>Level of urgency for undertaking the change</i>			
Change Description: <i>Provide a complete description of the requested change</i>		Change Drivers: <i>List any project, business, market and/or ESHS factors that necessitate a specific time limit for this change</i>	
Change Benefits: <i>Describe the benefits associated with implementing this change, including any expected ESHS benefits</i>		Change Costs: <i>Describe the costs associated with implementing this change, including any potential negative ESHS impacts</i>	
	Original Contract	Existing Contract	Change Order
Budget (\$)			
Duration			
Expiry date			
IMPACT DETAILS			
Project Impact: 1. Any impact the change might have on risks, contingency, schedule, and budget 2. Any impact the change might have on program logic, ERRs, M&E plan, SGIP, ESMS, ESMP, or any impact that these documents might have on the proposed change			
APPROVAL DETAILS			
Supporting Documentation such as: a. Engineer's technical justification for the Change Note. b. Contractor's Program implications and the Engineer's comments to it. c. Revised Contractors cash flow and the Engineer's comments to it.			
CRF Reviewed by:			
Name	Department	Initials	Date

Submitted by		Approved by	
Name: _____		Name: _____	
Signature: _____	Date: ____/____/____	Signature: _____	Date: ____/____/____
Any documentation to support this change should be attached to this document.			
PLEASE FORWARD THIS FORM TO THE PROJECT MANAGER FOR APPROVAL			

Element 2: Establish MCA Decision-making processes for changes

Once a change request is documented, MCAs will need a clear process for ensuring the right people receive the request and evaluate it using consistent standards.

The CMP therefore should include **a process for reviewing, evaluating and approving change requests**. The process will indicate **who is responsible** for making decisions about change and **what criteria they should consider** when doing so. It should also indicate **who should be consulted** during the decision-making phase.

A clear and efficient decision-making process for change requests that includes set thresholds will reduce bottlenecks and ensure management is using its time wisely by:

1. Only involving managers in decisions regarding change requests that could have the greatest impact on the program (including from perspectives of cost, scope, schedule, ESHS, etc.),
2. Ensuring the relevant and appropriate parties participate in the decision-making process, and
3. Empowering project-level staff with decision-making authority on smaller changes to avoid delays in project implementation.

The CMP decision-making process **should include thresholds** for the level of approval a change requires. For example, a 1% increase in cost for a construction contract could be approved by the Project Director; however, cost changes above 10% must receive approval from the MCA Deputy CEO. Thresholds should be set for budgetary, schedule, and risk levels (for example, a change in the design for a transmission line may not necessarily increase the cost or construction but would require compensation of an additional 50 PAPs which may increase the resettlement budget and time and resources required to complete resettlement implementation). Projects vary widely, so MCAs should determine what thresholds work best for their particular needs, keeping in mind that the decision-making process should be efficient, be inclusive of the necessary stakeholders (such as ESP, GSI, M&E), and be transparent. An example of budgetary decision-making thresholds is below:

Role	Decision-Making Authority
Project Manager	Can approve changes valued up to \$ 10,000, in consultation with relevant stakeholders

Project Director	Can approve changes valued up to \$ 50,000, in consultation with relevant stakeholders
Project Board (Deputy CEO, Project Director, ESP Director, GSI Director, M&E Director)	Approves all changes above \$50,000, in consultation with relevant stakeholders
Procurement Director	Must approve all changes that exceed contract amount
MCA Board and MCC	Must approve all changes that exceed 10% of contract amount

MCAs might find it useful to use a **RACI Matrix for change management**. The RACI Matrix is a project management tool that helps define roles and responsibilities for key actions and decisions.

The project manager can use the RACI Matrix when analyzing a CRF to determine whether the relevant stakeholders (Designer, FIDIC Engineer, User, Contractor, ESP and GSI Directors, M&E specialist, etc.) have been consulted on or informed of a specific change request. Instructions for developing RACI matrix can be found in Annex 2.

During the decision-making process, the project manager should review the CRF and ask:

1. Is the change critical to achieving project objectives?
2. Do the benefits of the change measurably outweigh the costs?
3. Does the change present any high priority issues or risks? If so, are mitigation strategies presented and feasible?
4. Are there any ESHS issues that need to be considered, and have they been taken into account?
5. Is there the necessary budget, time and means to execute the change?

If the relevant stakeholders have been consulted, the necessary resources are available and the change is deemed critical or beneficial to success, the project manager then considers the thresholds for approval in the change management plan. As appropriate, he or she either approves the request or presents it to the relevant official or officials for approval. If the change is approved, all relevant stakeholders are informed according to the Project Coordination Plan and the change implementation, monitoring and evaluation stage begins.

Element 3: Change Implementation, Monitoring and Evaluation

The project manager's responsibilities do not end with the approval of a project change – he or she must follow-up to ensure appropriate application of the change and its documentation and monitoring, including ensuring that all relevant parties are sufficiently informed of changes. This process includes the following steps:

1. Documenting the Change

All CMPs should include a way to document and track requested changes. This should take the form of a **Project Change Register**. Change Registers must include the identification number from the CRF, a brief description of the change, the approver and date of approval/rejection, a record of who

was informed of the change and when, and record of implementation status. A Project Change Register template is attached in Annex 3.

2. Modifying Contracts

If an approved change requires modifying contracts, MCAs must either issue a change order or negotiate a contract amendment.

Change Orders and Construction Contracts:

Construction contracts differ from other contracts since they involve an important intermediary called the Construction Supervisor (or FIDIC Engineer). The Construction Supervisor is typically a firm contracted by MCA to administer the construction contract on their behalf. They often review potential changes and provide technical opinion on a change's adherence to the contract terms and its feasibility. The Engineer is not in a position to determine if a change is going to meet the client's needs outside the contract documents.³

It is normal to have frequent minor changes in a construction contract; therefore clear thresholds are required to issue changes and prevent delay. Normally, MCA delegates some authority for minor changes to the Construction Supervisor. When the value and/or significance of a change reaches the thresholds set in the contract (as well as in the Change Management Plan), it will be reviewed by MCA and occasionally MCC. When a change to a construction contract is approved, a Variation Order (VO) is issued by the Construction Supervisor after agreement between the parties. Please refer to the CMP, FIDIC Form of Contract and the Appendix to Bid for further details on thresholds and processes.

Contract Amendments and Consultant Contracts:

Consultant contracts are managed directly by MCA. Issuing a contract amendment is a more straightforward process requiring an approved internal request for the change to the terms of reference, scope or value, a negotiated agreement between the contract parties and then processing by the Procurement Agent.

3. Updating Project Management Plans

Once a change is approved and, if necessary, contracts are modified, MCA must update the project budget, work plan, and other project-related documents such as performance indicators as necessary to reflect the change. Approved changes should also be reflected in the Executive Work Plan, Cost Management Plan, Risk Register and other project documents as relevant and shared with project stakeholders according to the Project Communications Plan.

4. Monitoring Impact

Finally, MCA should also monitor and document whether or not the change had the intended effect, and/or if the change had any unforeseen impacts on the project.

³ Some simple examples to demonstrate this point: If a contract does not specify a color of paint for a room, the contractor may propose a type and color of paint in coordination with the architect. The Engineer will ensure the type of paint is appropriate but not if the color is the preference of the user. Another example is a brand of pump. An Engineer can determine if a substitute pump meets the specifications; however, the user may want to purchase a brand of pump they are already familiar with.

4. Guidance

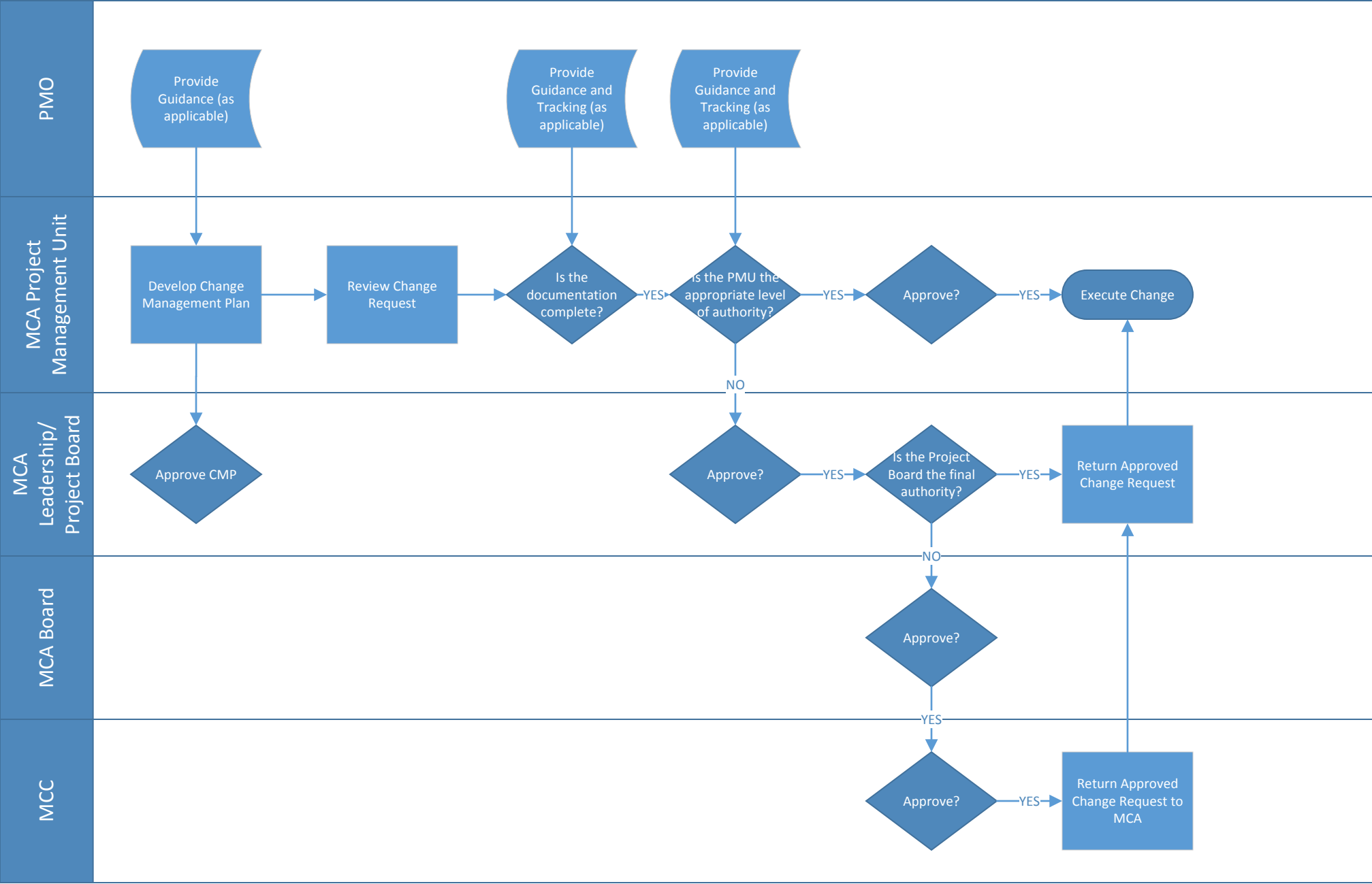
The following are some recommendations on change management based on MCA experiences

- **Pick the right type of CMP for your compact.** Since compact projects can differ greatly, MCC recommends developing one CMP per project, with decision-making thresholds designed to fit the specific needs of each investment. Alternatively, an MCA can use one general CMP for the compact with separate decision-making thresholds for each project.
- **Enforce the CMP from the highest level of management.** To ensure buy-in and encouraged continued use of the CMP, the MCA DCEO and/or CEO should approve the CMP, including the thresholds for decision-making.
- **Use the CMP to simplify other reporting requirements.** The CMP, when used consistently, should help MCAs fulfill other reporting requirements. For example, all contract changes or project modifications submitted to MCC for approval require accompanying justification. Instead of generating a separate document, MCA should use the CRF and supplementary documents from the CMP.
- **Consider forming a Project Board or Project Change Panel.** Project boards have three senior MCA members. One member is the DCEO or senior manager responsible for all compact projects. The other two members are chosen by the DCEO and are from the sectors most involved with the decision. For example, for a Road Project, other two members may be the Infrastructure Director and the ESP Director. The board may also contain non-voting members to provide guidance to voting members such as the MCA General Counsel or the MCC Resident or Deputy Resident Country Director. Used a Project Board or Change Panel will help ensure the relevant stakeholders have a say in decision-making. The Project Board should be incorporated into the decision-making thresholds in the CMP.
- **Delegate authority to the appropriate level.** Small changes can be approved at lower levels. This creates more efficiency in decision making and better time use by senior managers. When authority is not delegated, delays will occur as decisions become backlogged at senior levels, and these delays can result in contractor claims. All changes regardless of size, however, must be documented.
- **Clearly identify which stakeholders must be consulted and/or informed about which types of change.** In order to have an efficient and effective change management process, it is important that project teams have a clear and common understanding of the types of decisions that are important for different stakeholders to be aware of and/or consulted on. Having this clearly delineated will help avoid engaging stakeholders on changes that are not relevant to them, but also ensure that relevant stakeholders receive pertinent information and are consulted on those decisions that are relevant.

5. Annexes

1. Sample Change Management Plan – MCA-Namibia
2. RACI Matrix Overview
3. Project Change Register Template

Development and Execution of Typical Change Management Process



ANY "NO" DECISION NOT LISTED ON THIS CHART REQUIRES THE CHANGE REQUEST TO BE RETURNED TO THE SUBMITTING AUTHORITY WITH COMMENT

MCC Integrated Program Management Guidelines

Project Coordination



Contract
Performance



Risk



Schedule



Change



Coordination

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1. Introduction

Integrated program management uses information across a variety of sectors to improve how teams manage five key factors of a project: contract performance, risk, schedule, change, and coordination.

This guide will focus on **project coordination** and lead MCAs through the development and use of an internal **Project Coordination Plan (PCP)**, an important tool to manage **project-level coordination** between a Project Manager and the project’s implementing partners.

PCPs are essential tools for MCA Project Managers to identify and engage with relevant implementing partners in order to share information regarding the status of the project. The PCP helps project managers identify 1) who needs what information; 2) when they need the information; 3) who delivers the information; and 4) how the information is delivered.

Developing a list of implementing partners, their needs and interest level is critical to having an inclusive and effective approach to their involvement in the project. A successful Project Coordination Plan will result in fewer miscommunications and misunderstandings.

Linkages to Other Requirements: As part of compact implementation, MCAs are required to develop a compact-wide Stakeholder Engagement Plan (SEP) as part to the Environmental and Social Management System (ESMS). The SEP will define general principles on stakeholder engagement for the compact. It is expected that the PCP will be created in advance of the development of the SEP. In this way, the PCP can serve as a valuable input to the Stakeholder Engagement Plan, outlining methods of coordination that can be utilized by MCA Project Managers with implementing partners.

This guide outlines the elements that represent the minimum needed to create a useful PCP. Additionally, this document outlines recommendations for maintenance and ownership. Finally, an example and template are provided to aid the development of a PCP.

2. Ownership

Given the differences that can exist between projects, MCAs should establish separate PCPs for each project. The PCP will be managed by the Project Manager.

While an MCA Communications Office is responsible for external relationships such as high level government agencies, beneficiary populations and the media, the PCP focuses instead on the day to day coordination internally within MCA and externally with consultants, contractors and technical staff at end user organizations (e.g. the power utility or education ministry) who are directly involved in project implementation.

Where there is overlap with external entities, the Project Manager should coordinate closely with the MCA Communications Office, which is responsible for managing the compact-level communications plan, and the MCA staff responsible for the stakeholder engagement plan (if different from the Communications Office). This will ensure collaboration and reduce duplicative or confusing communications.

There will likely be instances when both the MCA Communications Office and Project Manager speak with individuals from the same external organization (such as the water utility); however, any high level or strategic messaging should be done by the MCA Communications Office (i.e. with the CEO of the water utility), while project level coordination can be done by the Project Manager (i.e. with a water utility technical staff member).

Moreover, the Project Manager should inform the MCA Communications Office if any external organizations are part of the implementing partners list for their PCP. The Project Manager should also contact and consult with the MCA Communications Office prior to any engagement with the following organizations:

- National ministries and government leaders;
- Civil society organizations;
- High-level representatives of international development institutions, private philanthropic organizations and academic institutions; and

- Media.

Likewise, the Project Manager should consult with the Environment and Social Performance directorate before engaging with Project Affected Communities and Persons.

3. Elements¹

Management Value

By identifying who implementing partners are and how and when to engage with them, the PCP will give managers a clear plan to solicit input for project planning and gain support as the project progresses. Regular, targeted communication and coordination will help build strong, constructive and responsive relationships over the life of a project, which can then be used to gain support for a project and anticipate resistance, conflict or competing objectives.

For each project, MCA should complete a Project Coordination Plan during the phase after signing and prior to EIF (also known as the EIF period). The Project Manager should review the PCP on a quarterly basis and when significant changes to the project occur. MCAs should also be prepared to share the most recent version of the PCP with MCC counterparts as needed or requested during regular project and management meetings or field missions.

A PCP template, along with sample PCP, is attached to this guidance for reference. Detailed directions on how to develop a PCP are provided in the sections that follow, along with a clear description of the minimum components required for a successful plan.

Element 1 – Identify Project Implementing Partners

The first step in developing a PCP is to create a comprehensive list of the implementing partners who should be consulted and coordinated with, and/or require regular information regarding the status of the project. This should be developed collaboratively, with input from all relevant project team members, i.e. Environmental and Social Performance (ESP), Gender and Social Inclusion (GSI), Infrastructure, Procurement, Finance and Administration, Legal, Communications, etc.

Process

An implementing partner is any individual, group or organization that is directly involved in project implementation. As project teams develop their list, they should consider several common types of implementing partners:

- The MCA CEO and relevant MCA directorates, i.e. ESP, GSI, Procurement, Finance and Administration, Legal, Communications, Monitoring and Evaluation, and Information Technology;
- The MCC Resident Country Mission and relevant MCC directorates;
- Contracted entities, such as consultants, contractors, engineers and designers;
- Technical staff (below management level) at implementing entities;
- Technical staff (below management level) at permitting agencies;
- Technical staff (below management level) at public entities; and
- Technical staff (below management level) at applicable donor organizations that require coordination.

¹ All “Elements” in this document refer to necessities to make a Project Coordination Plan effective. These are not MCC mandated requirements under terms of the Compact Agreement.

The chart below is a short example of a project implementing partner list.

Implementing Partners
MCC RCM
MCC ESP
MCC Infra
MCA CEO
MCA GSI
Water and Sewerage Company technical staff
Environmental Management Agency technical staff
City Council technical staff
Contractors
Consultants
FIDIC engineers
World Bank technical staff ²

Element 2 – Complete Implementing Partner Analysis Matrix

After drafting the list, the MCA project team will then analyze those implementing partners to determine their interests and the level of influence they might have over the project. That analysis will help the team develop strategies for the most effective ways to coordinate and engage with different groups. The analysis will be reflected in the PCP's **Implementing Partner Analysis Matrix**. This matrix outlines information to better understand the interests that should be taken into account throughout the project and the level of effort that is required for each implementing partner.

Process

The MCA project team should start the implementing partner analysis by identifying the interests each individual and group has in the project. For example, the MCC Resident Country Mission is usually most concerned with project timelines, the budget, the quality of the work and adherence to MCC policies, while a construction contractor worries about meeting expectations of MCA and the Construction Supervisor and being paid on time.

Once the interests are entered in the matrix, project teams must then determine the level of effort they should exert when communicating with each implementing partner. One way to do so is by using a tool such as **the Power/Interest Matrix**.

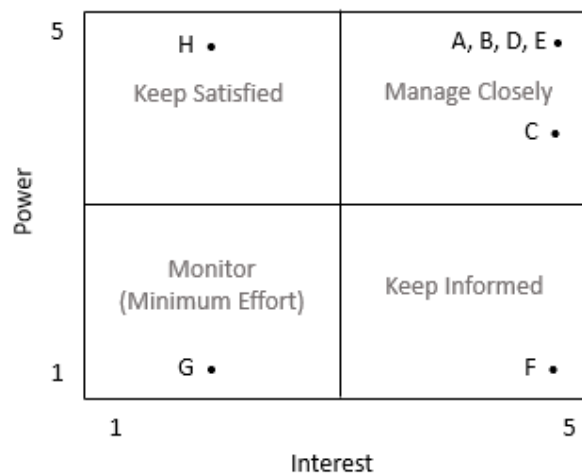
A Power/Interest Matrix creates a numerical score to identify the potential impact or support each implementing partner may generate. In the example below, the chart assigns a score for each using a scale of 1 to 5 with 5 holding the most interest or power. One with a high power score will have a significant amount of influence over the project. One with a high interest score will have a strong desire to be engaged and kept apprised of new developments or progress of the project.

Power/Interest Matrix				
Key	Organization	Name	Power (1-5)	Interest (1-5)

² In this example, World Bank technical staff are included as a type of implementing partner as coordination is required as a result of project implementation, i.e. the project is constructing a road that will intersect with a World Bank road being constructed.

A	MCC RCM	A. Smith	5	5
B	MCA management	M. Bwalya	5	5
C	MCA ESP	A. King	4	5
D	Water and Sewerage Company technical staff	D. Hill	5	5
E	Contractors	G. Ngoma	5	5
F	City Council technical staff	R. George	1	5
G	World Bank technical staff	B. Senkwe	1	2
H	Environmental Management Agency technical staff	A. Gregg	5	2

Once the level of power and interest has been identified for each, a **Power/Interest Grid**, such as the one below, can be developed to understand the level of effort recommended for each. The grid can help the Project Manager prioritize the level of effort necessary for each implementing partner.



Based on the position in the Power/Interest Grid an implementing partner with:

- High power, high interest must be fully engaged and consulted and the greatest effort should be made to satisfy them.
- High power, low interest should be engaged but not so much that they are tired of hearing about the project.
- Low power, high interest should be adequately informed and engaged with to ensure that no major issues are arising.
- Low power, low interest should be monitored but not with excessive outreach.

With these inputs, the MCA project team can complete the **Implementing Partner Analysis Matrix**. Below is an example of the matrix using some of the implementing partners identified in the Power/Interest Matrix:

Implementing Partner Analysis Matrix		
Implementing Partner	Implementing Partner Interest in the Project	Level of Effort
A – MCC RCM	Time, Quality, Budget, adherence to MCC policies	High
C – MCA ESP	Ensuring the projects are implemented in accordance with MCC’s Environmental Guidelines, the IFC Performance Standards and national laws related to environmental, social, health and safety issues	High
D – Water and Sewerage Company technical staff	Timely Completion of Project	Medium
E – Contractors	Profit, Time of Completion, Relationship with Engineer and Employer	Medium

Element 3 – Develop Project Coordination Strategy

Finally, once the interests and level of effort are defined, the MCA project team can use that information to develop **project coordination strategies** to best fit the needs of each implementing partner. Those strategies will outline how and when the project team will engage with implementing partners so that project teams have a clear plan to communicate most efficiently and effectively in the right format and at the right time. The strategies can be beneficial at the outset of new projects to help Project Managers establish regular outreach or receive feedback and should be referenced any time there is a major change in a project. In addition to outlining strategies to share documentation and project updates, the project team should consider when to hold reoccurring meetings with implementing partners to discuss the work, resolve issues, etc. Project teams may determine that a standing monthly meeting is necessary or that meetings will be held on an ad hoc basis when either the project team or implementing partner request time to meet with a specific purpose and agenda.

Process

This section of the PCP should clearly lay out who needs what information, when they will need it, how it will be given to them, and by whom.

MCA project teams should use the list of interests and level of effort from the implementing partner analysis matrix to help them determine the best strategies for coordination. For example, an implementing partner, such as the MCC Resident Country Mission, that is interested in project schedule and budget and is listed as “high” under level of effort, should receive regular project reports via email, as well as in-person updates on any major changes to the project work plan or budget.

All PCPs should include project coordination strategies that list:

- What will be shared;
- With whom it will be shared;
- How the information will be shared;
- When/how often the information will be shared; and
- Who is responsible for coordination.

MCAs may choose to expand on the Implementing Partner Analysis Matrix or create a separate coordination strategy table depending on their project needs. Examples of both approaches are provided below. At a minimum, all implementing partners with a high level of effort should be included in the project coordination strategies.

Project Coordination Strategy Example 1:

Implementing Partner	Implementing Partner Interest in the Project	Level of Effort	Information	Timeframe	Methods	Responsible
A – MCC RCM	Time, Quality, Budget, adherence to MCC policies	High	General Update	Monthly	Status Meeting	Project Manager
			MCA Work Plan	Monthly	Email by PDF	Project Manager
			Major Variation Orders	As necessary but timely	Email	Project Manager
			Project Monthly Report	Monthly	Email	Project Manager
C – MCA ESP	Ensuring the projects are implemented in accordance with MCC's Environmental Guidelines, the IFC Performance Standards and national laws related to environmental, social, health and safety issues	High	Proposed design changes	As necessary but timely	Email	Project Manager
D – Water and Sewerage Company	Timely Completion of Project	Medium	Major Variation Orders	As necessary but timely	Email	Project Manager
			Project Monthly Report	Monthly	Email	Project Manager
E – Contractors	Profit, Time of Completion, Relationship with Engineer and Employer	Medium	Major Variation Orders	As necessary but timely	Email	Project Manager
			Project Monthly Report	Monthly	Email	Project Manager
			Contract specifications	As necessary but timely	Email	Project Manager

Project Coordination Strategy Example 2:

Information (what)	Implementing Partners (who)	Timeframe (when)	Methods (how)	Responsibility
MCA Workplan	MCA and MCC Leadership and Counterparts	Monthly	Email by PDF	Project Manager
Major Variation Orders	MCA and MCC Leadership and Counterparts, Implementing Entities, ESP, GSI, M&E	As necessary but timely	Email	Project Manager
Project Monthly Report	MCC, Implementing Entities, MCA Directorates	Monthly	Email	Project Manager
Monthly Status Meetings	MCC Leadership	Monthly	Meeting	Project Manager

4. Annexes

1. Sample Project Coordination Plan
2. Project Coordination Plan Template

MCC Integrated Program Management Guidelines

Contract Performance Management



Contract
Performance



Risk



Schedule



Change



Coordination

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1. Introduction

Integrated program management uses information across a variety of sectors to improve how teams manage five key factors of a project: contract performance, risk, schedule, change, and coordination.

This guidance will focus on **contract performance management** and lead MCAs through the development and maintenance of a Contract Performance Management Plan.

MCAs manage many large and often complex contracts. MCAs will be more effective at managing these contracts if they have a clear and objective process to monitor performance and make sure they are getting what they are paying for. A Contract Performance Management Plan gives MCAs the framework for doing just that by alerting them to performance issues early on and providing guidance to inform quicker and better solutions.

2. Ownership

The policies and processes that are used to track the performance of projects, activities, tasks and risks are the responsibility of the MCA Chief Executive Officer (CEO) and his/her delegates. However, the day to day work of developing and using a contract performance management plan should be delegated by the CEO to a person or a small group of dedicated staff or consultants, often called the Project Management Office (PMO or PMC), which typically reports directly to the CEO or COO. The PMO's objectives include:

- Support MCA project directors and staff to manage their projects, activities, tasks and risks with an appropriate and consistent level of control. This is accomplished by providing consultation processes, systems and tools;
- Ensure coordination, integration and the sharing of information across all technical sectors;
- Provide relevant and updated information to MCA leadership on project performance, including cost tracking. This includes developing and updating Executive Work Plan and related monitoring documents based on information provided by the project teams; and
- Ensure that the Contract Performance Management Plan meets the requirements set out in this guidance document and is available for sharing with MCC.

While the PMO may support MCA management and project staff, the ultimate responsibility to identify and respond to a project's contract performance issues is with the project director.

3. Maintenance and Use

Contract performance policy and data will only be useful if it supports MCA leadership in timely decision-making. An effective Contract Performance Management Plan can quickly and easily convey a project's health using easy-to-understand contract performance tracking documents with which decision makers can proactively flag issues and determine their effects as the project progresses. These trackers can also be collected and shared via monthly reports provided by the consultant, FIDIC Engineer and/or MCA. Refer to the diagram below, **Development and Maintenance of the Contract Performance Management Plan**, for an illustration of the process and roles of key actors in it.

Sharing this information in real time is critical to its effectiveness. Some MCAs have contracted online dashboard services (e.g. ProjectManager.com) to more easily share this information within MCA and

with MCC. When these types of services are used, updated information is quickly shared with relevant audiences.

4. Elements¹

To be effective, MCAs can develop a **Contract Performance Management Plan** during the phase after signing and prior to EIF (also known as the EIF period) and share the final version with MCC as part of the initial **Quarterly Disbursement Request Package (QDRP)**. Furthermore, MCAs should update the plan as new contracts requiring contract performance are signed. Lastly, MCAs should plan to make the resulting contract performance tracking documents available to MCC (recommended on a monthly basis).

The Contract Performance Plan clearly defines how the schedule and costs on an important contract will be monitored and managed throughout the contract's lifecycle. It sets the format and standards by which the contract's performance is measured, reported and controlled. The Contract Performance Plan:

- Identifies who is responsible for monitoring/managing contract performance
- How performance is quantitatively measured and reported upon
- Report formats, frequency and to whom they are presented

The contract performance management plan template in Annex 4 can be populated using the instructions and examples provided to complete the initial plan.

Element 1: Develop a Contract Performance Management Plan

MCAs and MCC need to know if the funds being dispersed are being used effectively in the day to day work of contractors and consultants. **The Contract Performance Management Plan helps project staff identify performance issues that may not be obvious otherwise.** Many of the issues MCAs face go unnoticed for long periods of time and are costly to correct when they are finally identified. A Contract Performance Management Plan enables managers to identify these issues at an earlier stage and thus apply fewer resources in addressing them.

Once the plan is in use, the actual monitoring will be facilitated by contract performance trackers. Each contract considered for performance management will have its own tracker updated monthly by the responsible party listed in the plan. It is normally most effective to have the tracker updated by the consultant or in the case of large works, the construction supervisor.

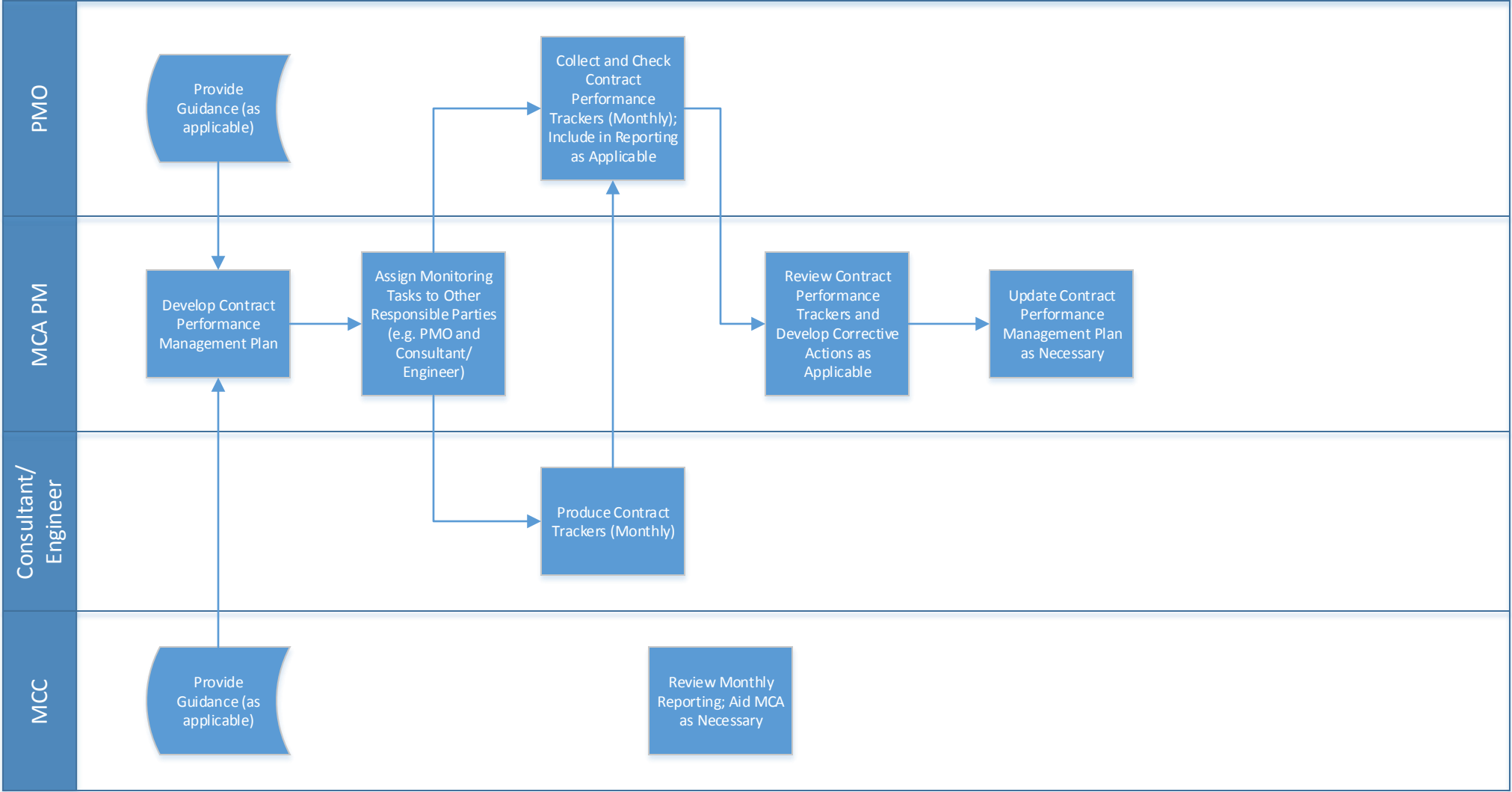
The attached Contract Performance Management Plan Template in Annex 4 has instructions to help MCAs develop their plans. Example language is shown in black while instruction and commentary is shown in green. It is recommended that the responsible party at MCA follow the instructions in the template provided to develop the initial Contract Performance Management Plan.

¹ All "elements" in this document refer to necessities to make a Contract Performance Tracker compliant with the Guide and only the Guide. At this time these are not MCC mandated requirements under terms of the Compact Agreement.

5. Annexes

1. Earned Value Management Resources
 - a. EVM Resources
 - b. EVM Language for Contracts
 - c. EVM Example Cash Flow for Engineer
 - d. EVM Example Project Calculations
 - e. EVM Calculation Worksheet
 - f. EVM Example Contractor Performance Sheet
2. Deliverable Based Contracts Resources
 - a. Example Gantt for Discrete Deliverables
 - b. Example Gantt Commentary
 - c. Example Tracker for Discrete Deliverables
3. Time Based Contracts Resources
 - a. Example Time-based Contracts Tracker
4. Contract Performance Management Plan Template and Instructions

Development and Maintenance of the Contract Performance Management Plan



Executive Work Plan Guidance Annex 1: Hypothetical Guyana Compact Description

This is a fictitious compact developed using elements from actual Compacts. It demonstrates both an infrastructure project and a reform/technical assistance project. It is intended to serve an example in supporting MCAs develop their own EWP.

Program Overview

MCC's constraints analysis identified two main binding constraints to economic growth currently exist in Guyana: quality of human capital and reliable access to affordable electricity. The compact aims to relax both constraints through targeted investments in the education and energy sectors. The compact will consist of two projects, each of which consists of three activities, as outlined in the table below.

Compact Elements and Budget

Guyana Compact		Millions USD
		\$260
Education and Skills Quality Project		\$110
	Training Educators for Excellence Activity	\$15
	Improving Skills for Employability Activity	\$25
	Improving Learning Environment Activity	\$70
Electricity Access and Reliability Project		\$150
	Organizational Assessment Activity	\$5
	Institutional Reform Activity	\$15
	Electricity Transmission Infrastructure Activity	\$130

Characteristics to note:

- (1) The structure of tasks follow the Compact/Project/Activity/Sub-Activity/Contract outline as shown in requirement No.1
- (2) Percentages have been used on a few procurement tasks to demonstrate their use.
- (3) ESIA and RAP are integrated in the Design and Construction of the Activity.
- (4) The Progress Line is shown on today's date. This will fall outside the time bound of the example but will be useful for a MCA's EWP.
- (5) All but the first task is automatically scheduled. This is preferred over manual scheduling of tasks and allows the software to be using to maximum benefit.
- (6) Select Conditions Precedent have been used and placed as close to the affected task as is logical.

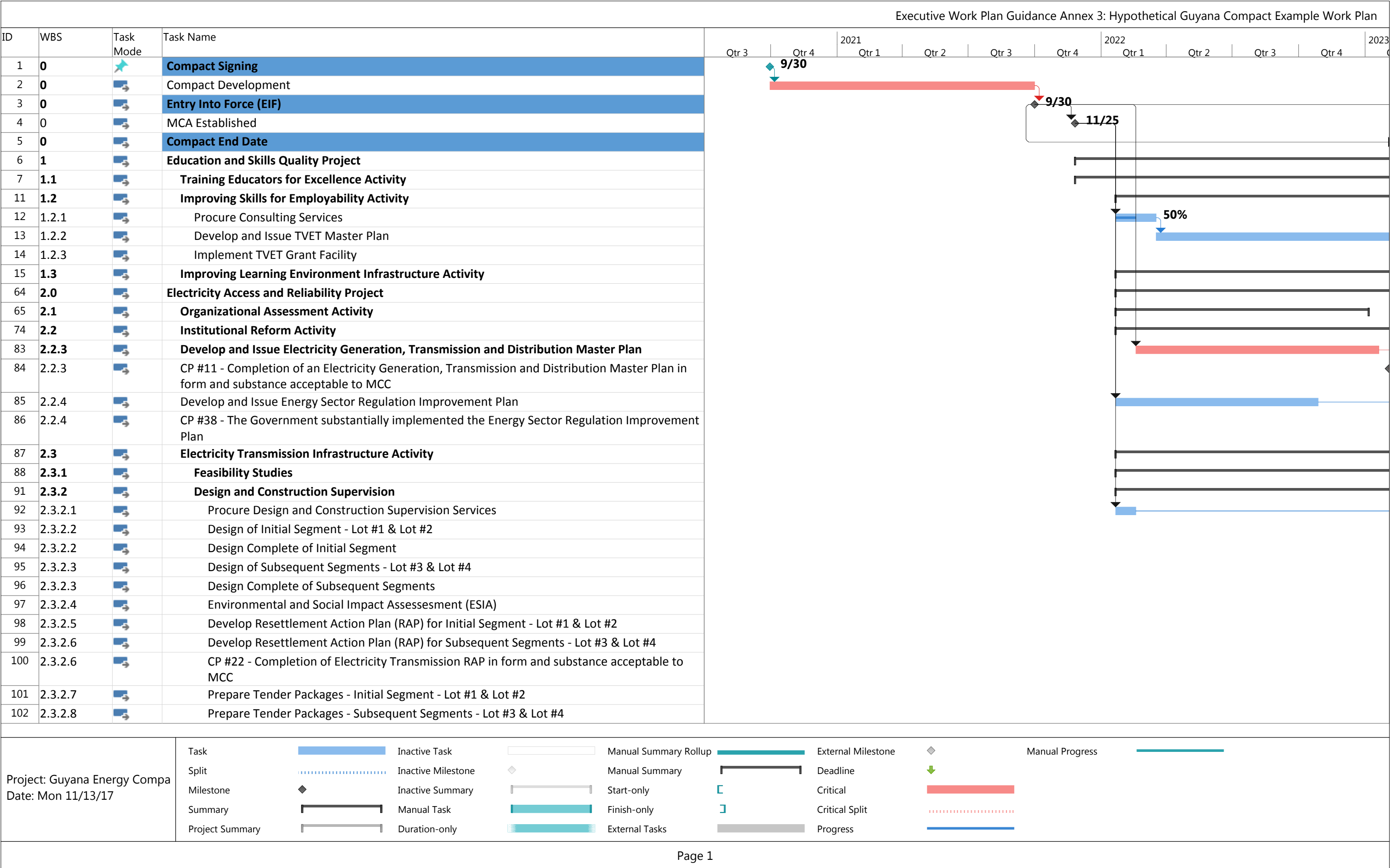
Hypothetical Guyana Compact WBS- Example for Illustration Only

WBS Level					Estimated Duration (Months)	MYFP Budget (Millions USD)	Applicable CPs		
Compact	Project	Activity	Sub-Activity	Sub-Sub-Activity					
0	1	2	3	4					
	1.0	Education and Skills Quality Project				\$110	32, 35		
		1.1	Training Educators for Excellence Activity			\$15			
			1.1.1	Pedagogy Assessment and Improvement			8		
			1.1.2	Teacher Professional Development Framework and Program			36		
			1.1.3	School Management			36		
		1.2	Improving Skills for Employability Activity			\$25			
			1.2.1	Procure Consulting Services			2		
			1.2.2	Develop and Issue TVET Master Plan			12		
			1.2.3	Implement TVET Grant Facility			40		
		1.3	Improving Learning Environment Infrastructure Activity			\$70			
			1.3.1	Feasibility Studies					
				1.3.1.1	Procure Consulting Services			1	
				1.3.1.2	Perform Site Evaluation for New Schools - Lot #1 through Lot #5			6	
				1.3.1.3	Perform Condition Assessments of Existing Schools - Lot #1 through Lot #5			6	
				1.3.1.4	Perform Condition Assessments of Existing Schools - Lot #6 through Lot #10			6	
				1.3.1.5	Final Site Selection for New Schools			1	
				1.3.1.6	Final Site Selection for Rehabilitated Existing Schools			1	
			1.3.2	Design and Construction Supervision					
				1.3.2.1	Procure Design Services - New Schools			1	
				1.3.2.2	Procure Design Services - Rehabilitated Existing Schools			1	
				1.3.2.3	Design of New Schools			18	
				1.3.2.4	Develop Environmental and Social Impact Assessment (ESIA) - New Schools			4	
				1.3.2.5	Develop Resettlement Action Plan (RAP) - New Schools			4	
				1.3.2.6	Design of Rehabilitation of Existing Schools			20	
				1.3.2.7	Develop Environmental and Social Impact Assessment (ESIA) - Existing Schools			6	
				1.3.2.8	Develop Resettlement Action Plan (RAP) - Existing Schools			6	
				1.3.2.9	Prepare Tender Packages - New Schools			2	
				1.3.2.10	Prepare Tender Packages - Rehabilitated Existing Schools			4	
				1.3.2.11	Construction Supervision - New Schools			16	
				1.3.2.12	Construction Supervision - Rehabilitated Existing Schools			12	
			1.3.3	Construction Works					
				1.3.3.1	Procure Construction Works - New Schools			1	
				1.3.3.2	Procure Construction Works - Rehabilitated Existing Schools			2	
				1.3.3.3	Construction Works - New Schools				
					Lot #1 - 5 New Schools			16	
					Lot #2 - 5 New Schools			16	
					Lot #3 - 5 New Schools			16	
					Lot #4 - 5 New Schools			16	
					Lot #5 - 5 New Schools			16	
					Implement Resettlement Action Plan (RAP) for New Schools - Lot #1 through Lot #5				
				1.3.3.4	Defects Liability Periods - New Schools			12	
				1.3.3.5	Construction Works - Rehabilitated Existing Schools				
					Lot #1 - 5 Existing Schools			12	
					Lot #2 - 5 Existing Schools			12	
					Lot #3 - 5 Existing Schools			12	
					Lot #4 - 5 Existing Schools			12	
					Lot #5 - 5 Existing Schools			12	
					Lot #6 - 5 Existing Schools			12	
					Lot #7 - 5 Existing Schools			12	
					Lot #8 - 5 Existing Schools			12	
					Lot #9 - 5 Existing Schools			12	
					Lot #10 - 5 Existing Schools			12	
					Implement Resettlement Action Plan (RAP) for Existing Schools - Lot #1 through Lot #10				
				1.3.3.6	Defects Liability Periods - Rehabilitated Existing Schools			12	
	2.0	Electricity Access and Reliability Project				\$150	32, 35		
		2.1	Organizational Assessment Activity			\$5	9, 10		
			2.1.1	Organizational Assessment of MoE			12		
				2.1.1.1	Procure Consulting Services			1	
				2.1.1.2	Develop and Issue Assessment Report			11	
			2.1.2	Organizational Assessment of GP&L			12		
				2.1.2.1	Procure Consulting Services			1	
				2.1.2.2	Develop and Issue Assessment Report			11	
		2.2	Institutional Reform Activity			\$15			
			2.2.1	Technical Assistance to MoE			52		
				2.2.1.1	Procure Consulting Services			2	
				2.2.1.2	Implement Technical Assistance			50	
			2.2.2	Technical Assistance to GP&L			52		
				2.2.2.1	Procure Consulting Services			2	
				2.2.2.2	Implement Technical Assistance			50	
			2.2.3	Develop and Issue Electricity Generation, Transmission and Distribution Master Plan			12	11	
			2.2.4	Develop and Issue Energy Sector Regulation Improvement Plan			12		

		2.3	Electricity Transmission Infrastructure Activity		\$130	20, 21, 22, 23, 24, 25
		2.3.1	Feasibility Studies	12		
		2.3.1.1	Procure Consulting Services	1		
		2.3.1.2	Develop and Issue Feasibility Studies	8		
		2.3.2	Design and Construction Supervision	20		
		2.3.2.1	Procure Design and Construction Supervision Services	1		
		2.3.2.2	Design of Initial Segment Lot #1 & Lot #2	12		
		2.3.2.3	Design of Subsequent Segments - Lot #3 & Lot #4	18		
		2.3.2.4	Develop Environmental and Social Impact Assessment (ESIA)	6		
		2.3.2.5	Develop Resettlement Action Plan (RAP) for Initial Segment - Lot #1 & Lot #2	6		
		2.3.2.6	Develop Resettlement Action Plan (RAP) for Subsequent Segments - Lot #3 & Lot #4			
		2.3.2.7	Prepare Tender Packages - Initial Segment - Lot #1 & Lot #2	1		
		2.3.2.8	Prepare Tender Packages - Subsequent Segments - Lot #3 & Lot #4	2		
		2.3.2.9	Construction Supervision - Initial Segment - Lot #1 & Lot #2	16		
		2.3.2.10	Construction Supervision - Subsequent Segments - Lot #3 & Lot #4	30		
		2.3.3	Construction Works			
		2.3.3.1	Procure Construction Works - Initial Segment - Lot #1 & Lot #2	1		
		2.3.3.2	Construction Works - Initial Segment - Lot #1 & Lot #2	16		24
			Initial Substation - Lot #1	8		
			Initial Transmission Line - Lot #2	10		
			Implement Resettlement Action Plan (RAP) for Initial Segment - Lot #1 & Lot #2	16		
		2.3.3.3	Defects Liability Period - Initial Segment - Lot #1 & Lot #2	12		
		2.3.3.4	Procure Construction Works - Subsequent Segments - Lot #3 & Lot #4	2		
		2.3.3.5	Construction Works - Subsequent Segments - Lot #3 & Lot #4	30		25
			Subsequent Substations - Lot #3	12		
			Subsequent Transmission Lines - Lot #4	24		
			Implement Resettlement Action Plan (RAP) for Subsequent Segments - Lot #3 & Lot #4	24		
		2.3.3.6	Defects Liability Period - Subsequent Segments - Lot #3 & Lot #4	12		
		2.4	Project Critical Conditions Precedent (CPs)	60		20,21,22,23,24,25,32,35

Guyana Energy Compact Conditions Precedent - Example for Illustration Only

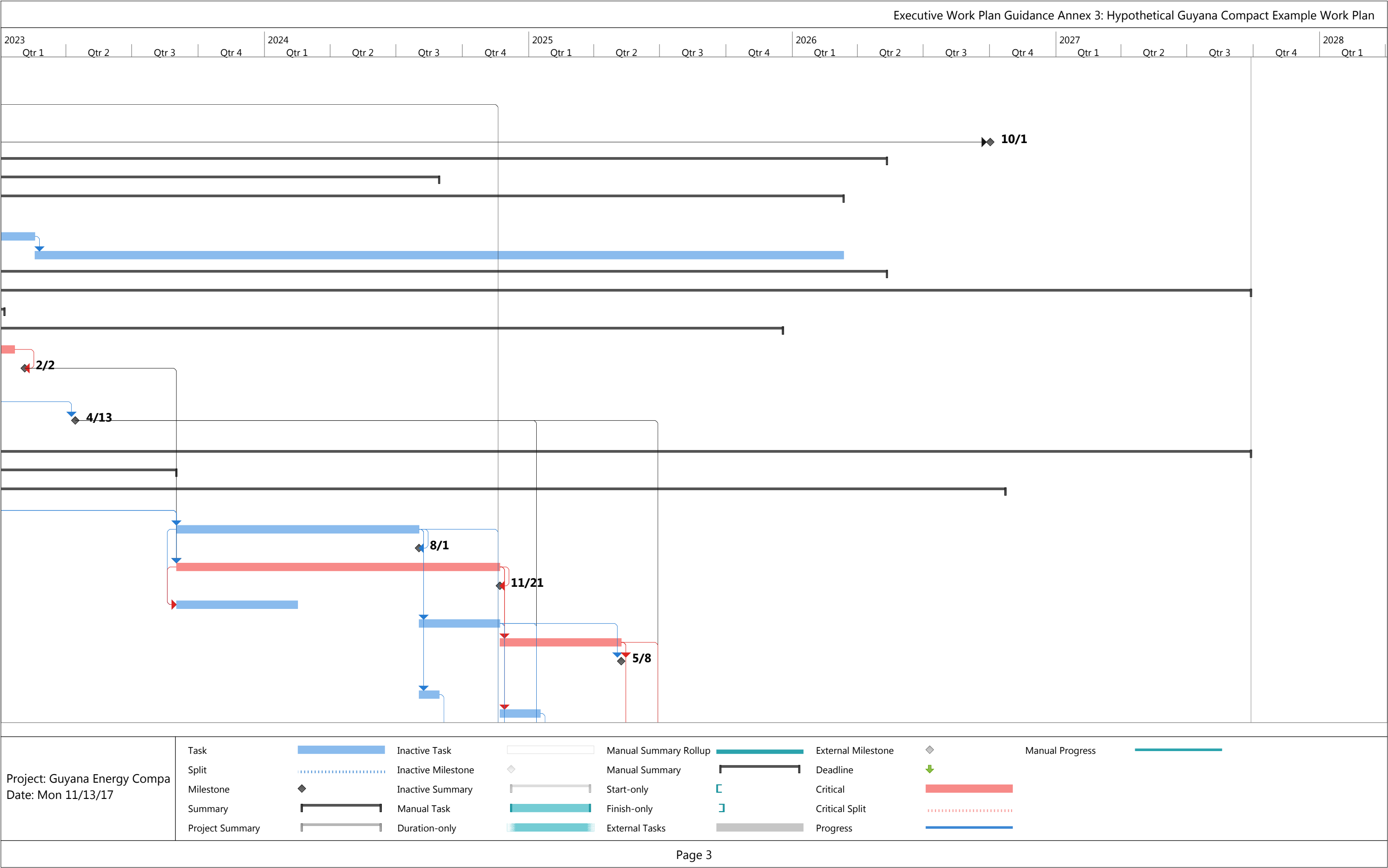
CP No.	WBS Level Milestone	EWP Critical CP?	Condition Precedent Description
1	0	Yes	Annex IV CIF Funding Disbursement Request including narrative Quarterly Financial Report, detailed Financial Plan, Procurement Performance Report, CP Report and Indicator Tracking Table
2	0	No	Government submits executed MDA Certificate, Fiscal Agent Certificate and Procurement Agent Certificate
3	0	No	PIA signed by all parties
4	0	No	Certificate signed by Government by the Principle Representative confirming the Government completed all domestic requirements to EIF and EIF-related CPs
5	0	No	Government legal opinion in form and substance acceptable to MCC
6	0	No	Complete and certified copies of all decrees, legislation relating to domestic requirements necessary to EIF
7	0	No	Certification by MCC that the Government has not engaged in a pattern of actions inconsistent with the Compact eligibility criteria.
8	0	No	There is no evidence of a material default or breach of any covenant, obligation or responsibility of the Ministry of Energy or other Government entity subject to the Compact, PIA or IEA
9	1.1	Yes	Completion of an Organizational Assessment of the Ministry of Energy in form and substance acceptable to MCC
10	1.1	Yes	Completion of an Organizational Assessment GP&L in form and substance acceptable to MCC
11	1.3	Yes	Completion of an Electricity Generation, Transmission and Distribution Master Plan in form and substance acceptable to MCC
12	1.2	No	Evidence of tariff structure reform in form and substance acceptable to MCC
13	1.2	No	Evidence of initial tariff setting and wholesale electricity ratemaking in form and substance acceptable to MCC
14	1.2	No	Evidence of sound electricity production and purchase subsidy policies in form and substance acceptable to MCC
15	1.3	No	Framework to monitor and regulate electric utility performance in form and substance acceptable to MCC
16	1.4	No	Framework for the regulator and implement recommended changes to increase the independence of the agency in form and substance acceptable to MCC
17	1.4	No	Evidence of acceptance by the Government in a Energy Sector Regulation Improvement Plan
18	1.4	No	Completion of an Implementing Entity Agreement (IEA) between the MCA and the Ministry of Energy
19	2.1	No	Completion of feasibility studies for the Electricity Transmission Project
20	2.1	Yes	Prior to initial Disbursement of funding for Electricity Transmission Project engineering design, MCA complied with the Procurement Plan in selecting the design firm
21	2.1	Yes	Final engineering designs for Electricity Transmission Project acceptable to MCC
22	2.1, 2.2	Yes	Completion of Electricity Transmission Project RAP in form and substance acceptable to MCC
23	2.1	Yes	Prior to initial Disbursement of funding for transmission works, MCA complied with the Procurement Plan in tendering works for the Electricity Transmission Project
24	2.1, 2.2	Yes	Prior to initial Disbursement of funding for transmission works, the Government substantially implemented the RAP for the initial transmission line segment
25	2.1, 2.2	Yes	Prior to subsequent Disbursement of funding for transmission works, the Government implemented the RAP for subsequent transmission line segments
26	3.1	No	MCA has submitted a Procurement Agent Certificate
27	3.1	No	Prior to initial Disbursement, the Compact has entered into force as provided in Article 7 of the Compact
28	3.1	No	MCA has developed the RAP in form and substance acceptable to MCC
29	3.1	Yes	MCA has developed an ESMS in form and substance acceptable to MCC
30	3.1	No	MCA has developed a Gender and Social Inclusion Plan in form and substance acceptable to MCC
31	3.1	Yes	MCA has developed a Compact Implementation Plan that includes an Executive Level Work Plan in form and substance acceptable to MCC
32	3.1	Yes	Prior to initial Disbursement, the Compact has entered into force as provided in Article 7 of the Compact
33	3.1	No	MCA has submitted a draft Compact Closure Plan in form and substance acceptable to MCC
34	3.1	No	The Government has identified key staff members of MCA with qualifications acceptable to MCC
35	3.1	Yes	Prior to each Disbursement, the Government submits a Disbursement Request
36	3.2	No	MCA has developed an M&E Plan in form and substance acceptable to MCC
37	3.2	No	The Government substantially implemented sound tariff and wholesale electricity ratemaking
38	3.2	Yes	The Government substantially implemented the Energy Sector Regulation Improvement Plan
39	3.2	No	The Government collected, synthesized and analyzed data on electric utility performance
40	3.2	No	MCA has submitted a draft Post-Compact M&E Plan in form and substance acceptable to MCC

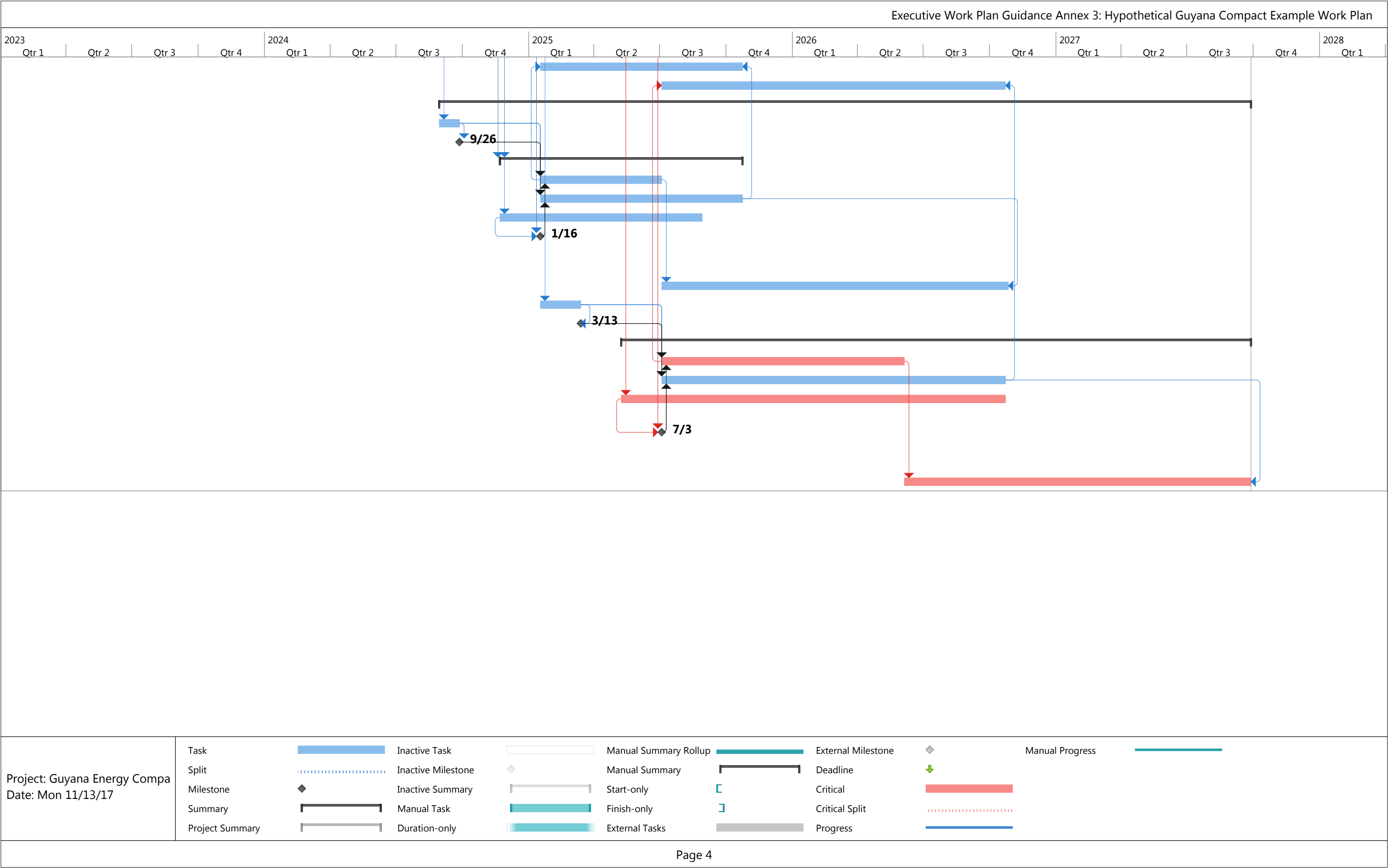


Page 1

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Project: Guyana Energy Compa Date: Mon 11/13/17	Task		Inactive Task		Manual Summary Rollup		External Milestone		Manual Progress	
	Split		Inactive Milestone		Manual Summary		Deadline			
	Milestone		Inactive Summary		Start-only		Critical			
	Summary		Manual Task		Finish-only		Critical Split			
	Project Summary		Duration-only		External Tasks		Progress			





Risk Plan

For [Project Name]

Document Control

Document Information

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Role	Name	Signature	Date
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Project Manager			
Procurement Manager <i>[if applicable]</i>			
Communications Manager <i>[if applicable]</i>			
Project Office Manager <i>[if applicable]</i>			

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1 Risk Identification

Document the potential risks involved with undertaking the project by identifying each of the risk categories and listing the potential risks within each category.

1.1 Categories

List each of the categories of risk which are relevant to your particular project.

1.2 Risks

For each category, list the risks likely to affect the project's ability to achieve the stated objectives in the risk register. Assign a unique identification (ID) number to each risk.

2 Risk Quantification

Identify the Priority of each risk by determining its Likelihood and its Impact on the project should it eventuate. Follow the MCC Risk Management Guidance for further instruction.

2.1 Likelihood

Describe in this section, the scoring system to be used to rate the likelihood of each risk. Follow the MCC Risk Management Guidance for further instruction.

2.2 Impact

Describe in this section, the scoring system to be used to rate the impact of each risk. Follow the MCC Risk Management Guidance for further instruction.

2.3 Priority

Describe in this section, how the project team will assign the Likelihood and Impact scores for each risk. The Priority Score may be calculated as the average of the Likelihood and Impact scores.

3 Risk Plan

Plan the mitigation of each project risk by following the MCC Risk Management Guidance and documenting in the Risk Register.

3.1 Planning

Briefly explain how MCA will develop the preventative and contingent actions required to reduce the level of overall risk to the project.

3.2 Assumptions

List any assumptions made during this risk planning process. See example MCA plan for help.

3.3 Constraints

List any constraints identified during this risk planning process. See example MCA plan for help.

4 Risk Process

Describe the process for monitoring and controlling the level of risk within the project.

4.1 Activities

List the activities required to manage risk within the project. See example MCA plan for help.

4.2 Roles

List the roles and responsibilities required to manage risk within the project. See example MCA plan for help.

4.3 Documents

List the documents used to manage risk within the project.

5 Appendix

Attach any documentation you believe is relevant to this Risk Plan, such as:

- *Other project documentation (Business Case, Feasibility Study, Project Charter, Project Plan, Resource Plan, Financial Plan, Quality Plan)*
- *Organizational Risk Management Policies, Standards, Guidelines or Procedures*
- *Risk documentation from other related projects*
- *Other relevant information or correspondence*

Risk Plan Example

After an independent enquiry into the state of the rail sector, the New State Government has decided to upgrade the rail network in the local region. This upgrade will provide local coastal communities with a fast rail service, enabling more rail users to access the rail network, more frequently and more cheaply than before. This extensive project will enable an additional 500,000 users to access the rail network per day and it will provide a major boost to the coastal economy, population, employment and quality of life.

On June 7, the Department of Transportation established a formal project to undertake this extensive network upgrade, and shortly thereafter I was appointed Project Manager. The project will result in the:

- ✓ Reopening of several coastal rail lines
- ✓ Linking of coastal towns to the metropolitan area
- ✓ Re-development of the Main Street Station
- ✓ Upgrade of the existing rail infrastructure
- ✓ Creation of a new transit link to the airport

Customer Profile

Project Name:	<i>Fast Rail Project</i>
Project Organization:	State Government
Project Type:	Rail Network
Project Manager:	Robert Brown
Project Activity:	Create a Risk Plan

This Example describes the Risk Plan used within this project. The project, people and organizations described are fictional but provide a realistic scenario to help you.

By providing a new fast rail link to coastal areas and upgrading the existing rail infrastructure, the benefits will be realized:

- Travel times on existing routes will be reduced
- More train routes will be available for the public
- A larger number of new users will be able to use the rail network
- Rail users will have safer, more convenient, comfortable and affordable rail services
- The Government will receive a substantial increase in rail patronage

The first step in this project will be to upgrade the existing rail infrastructure to handle train speeds of at least 160 kilometers per hour. Next, we will upgrade the Main Street Station to accommodate more rail users. We will then establish the coastal and airport high speed transit links and refurbish and reopen old coastal stations. Not only will this project allow for faster passenger services, but rolling stock services will also benefit from the new infrastructure.

This three-year engineering project will involve the coordination of a large number of suppliers to construct the deliverables on time, within budget and to specification. As the overall Project Manager, I initiated this project by documenting a Business Case, undertaking a Feasibility Study, defining the Project Charter, recruiting a core team of skilled specialists and creating a Project Office environment. I then created detailed *project, resource, financial and quality plans* to provide the project team with a clear and unambiguous direction.

This three-year project was identified as high risk. With many political careers at stake, a multitude of sizeable deliverables, and very tight timescales, the key to success for this project resided in our ability to effectively manage the overall level of project risk.

To enlist help with setting out a plan for managing risk, I undertook a suite of Risk Workshops to identify, categorize, and prioritize risks pertinent to this project. The following Risk Plan summarizes the results of those risk workshops, by listing the key risks identified and the actions required to resolve them.



Risk Plan for New Baja Fast Rail Project

Project Manager: Robert Brown

1 Risk Identification

The Fast Rail Project was initiated on January 15, to upgrade the rail infrastructure and its associated rail assets in our local region. The successful delivery of this project will mean a fast, comfortable, reliable and more accessible rail transport service for the local public. Yet, this project is subject to a high level of risk. To ensure that all medium and high priority risks have been identified up front before we begin the project execution phase, five Risk Workshops were undertaken with government staff, engineering specialists and rail transport staff. This report documents the risks identified during these Risk Workshops and schedules the suite of actions needed to avoid, transfer and/or mitigate them.

1.1 Categories

The following general categories of risk were identified for this Fast Rail Project:

- Political
- Return on Investment
- Delivery Timeframe
- Logistical
- Planning
- Execution

1.2 Risks

The following key risks have been identified under each risk category:

Risk Category	Risk Description	Risk ID
Political	A change in government in the upcoming elections leads to a reduction in project funding, scope or sponsorship	1.1
	Changes in Project Board membership during the Project Lifecycle lead to a change in scope or priorities	1.2
Return on Investment	Passenger numbers do not meet forecasts, thereby lengthening the time required for a return on investment	2.1
	Unforeseen project costs (such as an increase in loan interest rates, an increase in the price of raw materials or weakening of U.S. currency) lead to budget over-runs	2.2
Delivery Timeframe	The overall delivery timeframe is insufficient to produce all of the project deliverables	3.1
	The required project delivery dates are brought forward	3.2

	There is insufficient time for the project team to make a complete assessment of the existing rail infrastructure	3.3
Logistical	The large numbers of required staff, suppliers, deliverables, equipment and materials place this project's overall delivery at risk	4.1
	There is an insufficient number of skilled resources in the market to undertake this project	4.2
	Suppliers contracted to this project do not produce the required deliverables on time, within budget or to the level of specification required	4.3
Planning	Infrastructure data (describing such assets as rail fixings, sleepers and ballast) is outdated and inaccurate, making it difficult to know which assets require upgrading	5.1
	Planning consents may be denied or may be subject to conditions that increase project costs	5.2
	Land availability issues (such as required access to non-City land) may lead to project delays	5.3
	The recent high rate of train accidents causes the Government to implement new rail safety rules and procedures, leading to project delays	5.4
	The windows of time available in the rail schedule may be insufficient to perform the work needed to upgrade the infrastructure	5.5
Execution	Unanticipated site conditions (such as earth instabilities or prior contamination) lead to increased construction costs	6.1
	Rail Maintenance Teams stage a strike, leading to project delays	6.2



2 Risk Quantification

Each of these risks identified has been quantified below as to its likelihood and its impact on the project should it occur.

2.1 Likelihood

The following table describes the scoring mechanism used to identify the *likelihood* of each project risk stated above:

Title	Score	Description
Very Low	20	The risk is highly unlikely and will be recorded but not monitored.
Low	40	The risk is unlikely but will be monitored throughout the project.
Medium	60	The risk is likely as it is clear that the risk may occur.
High	80	The risk is very likely , based on the circumstances of the project.
Very High	100	The risk is highly likely , as the circumstances that will cause this risk to occur are also very likely to occur.

2.2 Impact

The following table describes the scoring mechanism used to identify the *impact* on the project, should the risk actually eventuate.

Title	Score	Description
Very Low	20	The risk will have an insignificant impact on the project.
Low	40	The risk will have a minor impact on the project (<5% deviation in scope, scheduled end-date or project budget).
Medium	60	The risk will have a measurable impact on the project (5%-10% deviation in scope, scheduled end-date or project budget).
High	80	The risk will have a significant impact on the project (10%-25% deviation in scope, scheduled end-date or project budget).
Very High	100	The risk will have a major impact on the project (25%+ deviation in scope, scheduled end-date or project budget).

2.3 Priority

During the Risk Workshops undertaken, each risk identified was assigned a *Likelihood* and *Impact* Score using the scoring mechanisms listed above. The overall *Priority* score was calculated as the average of the *Likelihood* and *Impact* scores (i.e. $\text{Priority} = [\text{Likelihood} + \text{Impact}] / 2$). The following table lists the scores assigned to each risk identified for this *Fast Rail Project*).

Risk ID	Likelihood Score	Impact Score	Priority Score	Priority Rating
1.1	80	100	90	Very High
1.2	20	40	30	Low
2.1	80	40	60	Medium
2.2	60	80	70	High
3.1	60	20	40	Low
3.2	60	80	70	High
3.3	60	80	70	High
4.1	80	80	80	High
4.2	20	40	30	Low
4.3	40	80	60	Medium
5.1	80	100	90	Very High
5.2	60	40	50	Medium
5.3	60	80	70	High

5.4	40	60	50	Medium
5.5	80	100	90	Very High
6.1	80	40	60	Medium
6.2	60	80	70	High

Color-Code Key

Priority		
Score	Rating	Color
0 - 20	Very low	White
21 - 40	Low	Green
41 - 60	Medium	Yellow
61 - 80	High	Orange
81 - 100	Very High	Red



3 Risk Plan

To ensure the success of this Fast Rail Project, we will need to implement a suite of actions to avoid, transfer and/or mitigate the risks we've identified. This section lists such actions and provides a schedule for their completion.

3.1 Schedule

The following table itemizes the *preventative actions* to be taken to reduce the likelihood of each risk occurring, as well as the *contingent actions* to be taken should the risk actually occur. The person assigned to complete each action is specified, as well as the dates upon which the action needs to be completed.

Risk Rating	Risk ID	Preventative Actions	Action Resource	Action Date	Contingent Actions	Action Resource	Action Date
Very High	1.1	Secure project sponsorship from leaders of other political parties likely to come into power	Project Manager	Feb 5	Structure the project so that the scope can be reduced without having to close the project	Project Manager	Feb 20
Low	1.2	Approve a mandate to maintain the project scope	Project Board	Feb 17	Enforce the approved Project Board mandate when required	Project Sponsor	As required
Medium	2.1	Assign a marketing	Project	Feb 20	Create a	Project	March

Risk Management Guidance Annex 2: Sample Risk Management Plan

		budget to promote the new route for increased passenger numbers	Leader for Passenger Services		contingency marketing plan to promote the new route in the event of low passenger numbers	Leader for Passenger Services	31
High	2.2	Fix the price of raw materials, interest rates and other costs up front	Project Procurement Manager	Feb 15	Obtain contingency funding of 5% above contract prices	Project Sponsor	May 15
Low	3.1	Request an extension in the overall delivery timetable	Project Manager	Feb 7	Allocate 5% of elapsed time in the project schedule as contingency	Project Manager	Feb 18
Medium	3.2	Request that the Project Board approve a high level schedule of deliverables and delivery dates, before project execution begins	Project Manager	Mar 7	Prioritize the deliverables, so that key items can be produced within the required dates	Project Sponsor	Mar 7
High	3.3	Allocate additional time to assess the existing infrastructure	Project Manager	Mar 7	Utilize the 5% of elapsed time in the project schedule, allocated as contingency	Project Manager	As required
High	4.1	Recruit a senior team of leaders for the project, experienced at managing such quantities of resources	Project Manager & HR Manager	April 5	Sign <i>backup contracts</i> for additional managerial resource from overseas should it be needed	Project Manager & HR Manager	April 21
Low	4.2	Recruit additional skilled resource from overseas markets to assist with the completion of this project	Project HR Manager	April 15	Sign <i>backup contracts</i> for the supply of skilled resource from overseas should it be needed	Project HR Manager	April 21
Medium	4.3	Negotiate formal contracts with all project suppliers, to include penalties for non-delivery	Project Procurement Manager	May 2	Sign <i>backup contracts</i> with alternative suppliers, in case a preferred supplier fails to perform	Project Procurement Manager	May 15
Very High	5.1	Allocate time in the project schedule for the review of all rail assets	Project Asset Manager	Mar 7	Obtain asset information from Rail Maintenance Companies	Project Asset Manager	Mar 20

Medium	5.2	Fully research the planning consent process to identify requirements and initiate the consent process early	Project Manager	Mar 15	Allocate additional funds in the budget to gain consent for site works	Project Manager	Mar 7
High	5.3	Investigate land ownership and develop expropriation packages	Project Planning Manager	June 5	Identify alternative routes in case it is impossible to acquire the land needed	Project Planning Manager	June 30
Medium	5.4	Ensure that all existing safety regulations are adhered to. Appoint a full-time Safety Advisor	Project Safety Advisor	July 17	Implement compliance actions immediately to prevent project delay	Project Safety Advisor	As required
Very High	5.5	Request increased route capacity at peak times. Communicate route interruptions well in advance	Project Logistics Manager	Aug 1	Implement <i>disruption management procedures</i> (e.g. alternative road transport and ticket refunds in the event of a disruption to service)	Project Logistics Manager	As required
Medium	6.1	Conduct geological surveys well ahead of construction	Project Site Works Manager	May 21	Identify alternative routes in case land along the planned route is not suitable	Project Planning Manager	Aug 15
High	6.2	Resolve Rail Maintenance Team issues ahead of potential strike action	Project Logistics Manager	June 1	Take legal action where necessary	Project Logistics Manager	Aug 1

3.2 Assumptions

This Risk Plan makes the following key assumptions:

- The project team will be able to obtain the required project budget available as required.
- All relevant bylaws and statutory legislation will remain unchanged during this project.
- The land expropriation plan will be approved by City officials with property-owner penalties for obstruction
- There are no critical logistical issues with the establishment of the rail transit link to the airport.
- The project team has the full support of the Rail Regulator.

3.3 Constraints

During the creation of this Risk Plan, the following key constraints were identified:

- Once set, the project budget will remain fixed, allowing very little additional contingency.
- Current passenger numbers cannot be affected by the implementation of this project.
- The project can only perform infrastructure upgrade activities on the live rail network during the available time slots allocated by the Rail Operator.
- Disturbance to residents within a two-kilometer radius of each work site must be minimal.
- The three-year delivery date set by the government cannot be changed



4 Risk Process

In addition to the risks identified by this document, new risks may arise during the Project Lifecycle. The following activities, roles and documents describe how each new risk will be managed, to ensure that it has a minimal impact on the project.

4.1 Activities

The following activities will be undertaken to identify, review and control risks on this Fast Rail Project. These activities together form the "Risk Management Process." For the purpose of this project, a risk is defined as *"any event that is likely to adversely affect our ability to achieve our project objectives"*

- ✓ Any stakeholder on the project (including staff, team leaders and the project management team) can raise a risk.
- ✓ A Risk Form will be used to document each risk. With this form, the stakeholder will describe the risk, rate its likelihood and impact on the project and recommend preventative and contingent actions. All Risk Forms will be distributed to the Project Leader or Manager for review.
- ✓ The Project Manager will review all project risks and determine their risk *priority*. The Project Manager will usually act on low and medium priority risks immediately, and communicate high priority risks to the Project Board for action.

4.2 Roles

While any member of the project team may identify a project risk, the following staff will have key responsibilities for the ongoing risk management within the project:

Team Members will be responsible for:

- Identifying project risks and completing Risk Forms
- Forwarding all Risks Forms to their Project Leader for review

Team Leaders will be responsible for:

- Reviewing all Risk Forms to determine whether they are "likely" to adversely affect the project
- Working with the team member to approve a set of preventative and contingent actions
- Forwarding a prioritized set of Risk Forms to the Project Manager for action

The Project Manager will be responsible for:

- Confirming the priority level of Risk Forms received
- Taking immediate actions to resolve all low and medium priority level risks
- Making the Project Board immediately aware of new high priority risks
- Implementing actions approved by the Project Board to resolve High Priority Risks

4.3 Documents

The following documents will be used to identify, monitor and control risks within this project:

- ✓ A **Risk Form** will be used to describe and rate each risk identified, and list the preventative and contingent actions needed to resolve it.
- ✓ A **Risk Register** will be used to record the key details of each risk and to monitor its current status, until it is resolved.



5 Appendix

The following documents are related to this Risk Plan:

- Business Case, Feasibility Study, Project Charter, Project Plan, Resource Plan
- State Government Risk Management Policies, Standards, Guidelines and Procedures
- Risk documentation from other similar projects
- Other relevant information and correspondence

Risk Plan
For the MCA Namibia Infrastructure Program

Date Raised					Risk Description		Risk Priority								
ID	Date Raised	Raised By	Received by		Description of Risk	Description of Impact	Likelihood Rating	Impact Rating	Priority Rating	Preventative Actions	Owner	Date	Contingnecy Actions	Owner	Date
4.17	Apr-13	MCC/MCA	N Hibbert		Client Interface at Site	Risk of misdirecton of Contractor by mis-involvement of client (e.g. end user)	100	100	100	Add MCA liason officer with MET; enforce communication and change procedures	Nick Hibbert	5/1/2013			
1.05	Aug-10	MCA	N Hibbert		San Population: Degradation in Quality of Life due to relocation of staff from Okaukueio	Bad Publicity; Burdensome ESA requirements	100	80	90	Timed intervention from Executive Committee and GRN	CEO & ESA	TBD			
4.02	Aug-09	MCC/MCA	N Hibbert		Abnormal weather events	Delays in completion, increase in costs	80	100	90	Covered in Contract Language and 4.16 below	Nick Hibbert	As necessary			
4.03	Aug-09	MCC/MCA	N Hibbert		Construction Industry Saturation	Delay in works on some sites	80	100	90	Follow Procurement Phase Planning and Adapt Lessons Learned Scope modification Enhanced Supervision and Monitoring, Contrtact Incentives, Contract Closing Language, Mid Contract Review and Rescoping, Acceleration Plan	Nick Hibbert/Marc Tkach/Johan Botha	On-going and prior to each pkg procurement	Investigate different forms of contract / phasing configurations		
4.16	Apr-13	MCC/MCA	N Hibbert		Works Completion Risk	Risk of Works extending beyond the end of Compact	80	100	90	Dilligent Contract Management/Stakeholder Control	Nick Hibbert/Marc Tkach	1/28/2011			
4.12	Jan-11	MCC/MCA	N Hibbert		Poor execution of ESA deliverables (e.g. RAP, EMPs, PHPSAPs)	Poor PR	100	70	85	Scope Management Plan/ DC Prioritisation Plan MCA develop and manage DC via a prioritization process; expect to hold some reserve for unknown unknowns	ESA/ Contract Managers/ N. Hibbert		Request Cure Plan from Contractor		
4.13	Jan-11	MCC/MCA	N Hibbert		Poor execution of the HAAPP	HAAPP has a CP; failure to meet CP results in withholding of pavment	100	70	85	Close supervision/ quick corrective actions with the Engineer's Project Director	ESA/ Contract Managers/ N. Hibbert		Request Cure Plan from Contractor		
4.09	Aug-10	MCC/MCA	N Hibbert		Cost Overruns due to higher than estimated prices for Works Contracts	De-Scoping/ Change Orders	60	100	80	Covered in Contract Language/ Added schedule	Nick Hibbert/ Marc Tkach				
4.18	Apr-13	MCC/MCA	N Hibbert		Critical Items Indentified Late Are Unfunded	DC is allocation does not leave reserve for critical items identified later in program	60	100	80	Scope Management Plan/DC Prioritisation Plan	Nick Hibbert	5/1/2013			
4.14	Jan-11	MCC/MCA	N Hibbert		Ineffective Engineer/Engineer errors	Quality/Delay and Completion Risks	60	90	75	Add MCA liason officer and use Independent Engineer to track critical information requests and aid in resolution	Nick Hibbert/ Contract Managers	Ongoing	Cure Notice to the Engineer		
4.04	Aug-09	MCC/MCA	N Hibbert		General strike and labor disputes	Delay in work completion and inscrease in costs	60	80	70		Nick Hibbert	As necessary			
4.15	Jan-11	MCC/MCA	N Hibbert		Excessive Change Requests/Scope Creep	Increase in time and cost of program incl. time relared costs	50	90	70		Nick Hibbert/Marc Tkach	1/28/2011			
4.19	Apr-13	MCC/MCA	N Hibbert		End User Decision Making at Etosha	Late decision making can produce Employer owned delay to works; resulting in scope reduction	60	80	70		Nick Hibbert/Marc Tkach	5/1/2013			
4.01	Aug-09	MCC/MCA	N Hibbert		Unanticipated site conditions	Delays in completion, increase in costs	60	60	60		Nick Hibbert	As necessary			

3.12	Jan-11	MCC/MCA	N Hibbert	Works Defects Liability Period (DLP) on some projects exceeds the Compact Term	None noted	70	40	55	Develop DLP action plan	Nick Hibbert/Marc Tkach/ Fiscal Accountability			
1.03	Aug-09	MCC/MCA	N Hibbert	Elections	Scope & Priority Changes	80	20	50	Inform and gain support of political office bearers.	CEO	As necessary	CEO's engagement with board for central gov't support	CEO / MCA-N Board Chair
3.07	Aug-09	MCC/MCA	N Hibbert	47 Schools: Land titling not settled	Delay in works on some sites	80	20	50	Initiate/ track land ownership/titling research	Nick Hibbert	Continuing		
3.08	Aug-09	MCC/MCA	N Hibbert	RSRCs: Land titling not settled	Delay in works on some sites	60	40	50	Initiate/ track land ownership/titling research	Nick Hibbert	Continuing		
1.02	Aug-09	MCC/MCA	N Hibbert	Change of Board Members	Change in Priorities	50	40	45	Inform and gain support of new members	CEO / MCA-N Board Chairperson/Nick Hibbert	Ongoing	Ongoing information & intervention	CEO / MCA-N Board Chair

The following general categories of risk were identified for the Infrastructure Program:

- 1. Political
- 2. Logistical
- 3. Planning
- 4. Execution

ISO 31000 – Qualitative Ranking Chart

Risk Matrix

Probability	Very High (Highly Probable)	5 Moderate	10 Major	15 Major	20 Severe	25 Severe
	High (Probable)	4 Moderate	8 Moderate	12 Major	16 Major	20 Severe
	Medium (Possible)	3 Minor	6 Moderate	9 Moderate	12 Major	15 Major
	Low (Unlikely)	2 Minor	4 Moderate	6 Moderate	8 Moderate	10 Major
	Very Low (Rare)	1 Minor	2 Minor	3 Minor	4 Moderate	5 Moderate
		Very Low	Low	Medium	High	Very High

Impact



Millennium Challenge Account Namibia • Atlas House • 117 Sam Nujoma Drive Windhoek • P.O. Box 23005 Windhoek, Namibia
Telephone +264.61.410400 • Fax +264.61.410415 • Email info@mcanamibia.org

Change Management Plan For the MCA Namibia Infrastructure Program

Change Management Guidance Annex 1: Sample Change Management Plan

Document Control

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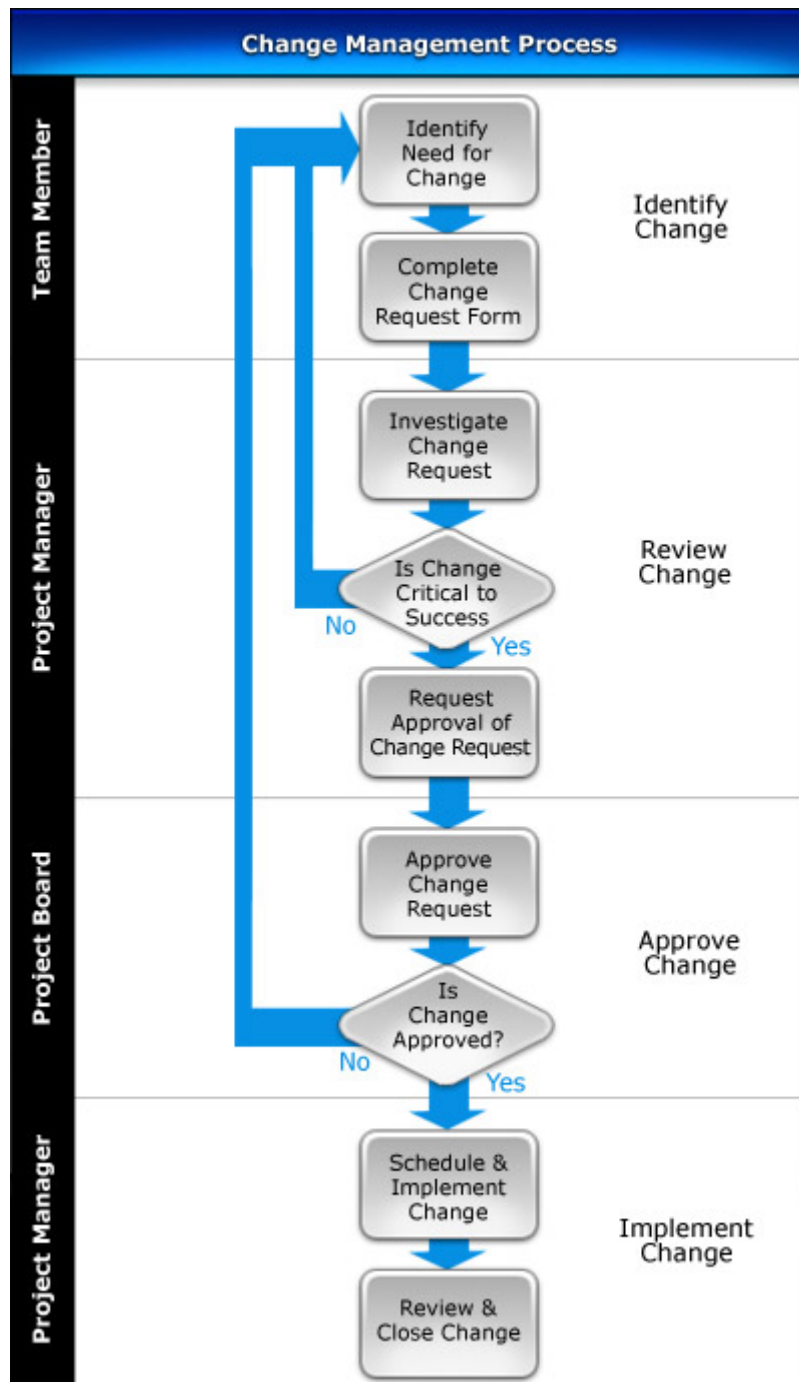
Document Approvals

Role	Name	Signature	Date
Deputy CEO	Drs. Eline van der Linden		
Infrastructure Director	Nick Hibbert		

1 Change Process

1.1 Overview

The Change Management Process is generally as follows:



1.2 Identify Change

The first step in the change process is to identify the need for change. The change need is then documented using a Change Request Form and submitted to the Contract Manager for the approval process. A more detailed description of this process follows:

This "need for change" must be formally recognized in order to ensure that the change can be controlled through the change process. To ensure that the project is not diverted from producing its deliverables and products on time, to cost and to specification, the following guidelines will be used to validate each change for approval:

- Changes must be critical to the project achieving its objectives
- The benefits of each change must measurably outweigh the costs or comply with value engineering principles.
- The change should have minimal high priority issues or risks associated with it. When such issues or risks exist mitigations will also be presented.

Only when the above guidelines are met is the change considered valid and will be considered for approval.

Complete Change Request Form

Once a change has formally identified and determined through the above guidelines to be valid, it will then be submitted for consideration via a Change Request Form (CRF). All parties are obligated to use the CRF. This form allows the entity proposing to thoroughly describe of the change requested, as well as its drivers, benefits, costs and impact on the project.

Once complete, the CRF is forwarded to the Contract Manager for the approval process.

1.3 Review Change

In the second step in the change process the Contract Manager reviews the CRF. If the change is considered critical or beneficial to the project success, the contract manager will follow the change roles process. A detailed description of this process follows:

Investigate Change Request

The Contract Manager will investigate the change submitted, to understand why it is required and determine its impact on the project if it is or is not implemented. The Contract Manager will then decide whether it is critical or beneficial to the successful delivery of the project. Changes that are not critical or beneficial to project delivery will be avoided whenever possible to prevent "scope creep" (i.e. the gradual increase in scope throughout the Project Lifecycle).

Request Approval of Change Request

If the change is deemed critical or beneficial to success, the Contract Manager either approves the request or seeks approval for the CRF raised. In some cases, the Contract Manager has the direct authority to approve minor change requests; however, in most cases the Contract Manager will need to seek CRF approval from the Infrastructure Director or Project Board.

1.4 Approve Change

The third step in the change process is the approval of the CRF via the change roles process. If the change is approved, then the Contract Manager will schedule the change for implementation.

1.5 Implement Change

The change will be implemented in accordance with the contract *en force*. For example the Contractor Manager will make written instruction to the Engineer to implement, track and report the progress of approved changes. Changes will be tracked in the Change Register.

2 Change Roles

The End User: The End User will channel CRF through the MCA-Namibia Contract Manager. The End User will not direct either the Contractor or the Engineer.

Contractor: The Contractor may propose changes that change scope which includes value engineering. The process will be in accordance with the contract *en force*.

The Engineer: The Engineer can propose changes to scope, implement approved changes and receive proposals from the Contractor. The process will be in accordance with the contract *en force*. Change requests approved by the Engineer will be followed by a CRF retro-actively submitted to the Contract Manager for inclusion in Change Register.

MCA-N: MCA can propose, approve and direct changes.

MCC: MCC can propose and approve changes.

All changes will be in accordance with the contract *en force*, the MCC Procurement Guidelines and the Compact Agreement. E.g. a) Changes (or cumulative) that exceed the contract amount will be submitted to the Director; Procurement for approval, b) MCA-Namibia will request to MCA Board and MCC approval for changes (or cumulative) that exceed 10% of the contract amount.

All significant scope changes (regardless of value) will be approved by MCA-Namibia Board and MCC.

2.1 All CRF Requestors

The Requestor is responsible for:

- Recognizing and/or verifies the need for a change to the project
- Completes and/or verifies that a CRF fully describes the change, its drivers, benefits, costs and impact on the project
- Forwarding the CRF to the Contract Manager for review

2.2 MCA-Namibia Contract Manager

The Contract Manager is responsible for:

- Can approve changes valued up to N\$ 20,000
- Investigating each CRF to determine whether the change is critical to project success
- Requesting approval of each CRF from the Infrastructure Director or Board

- Scheduling and Implementing approved changes
- Reviewing all implemented changes to ensure that they have had the desired effect on the project

2.3 MCA-Namibia Infrastructure Director

The Infrastructure Director is responsible for:

- Can approve changes valued up to N\$ 50,000
- Verify that each CRF determines whether the change is critical to project success
- Requesting approval of each CRF from the Project Board

2.4 MCA-Namibia Project Board

The Project Board is responsible for:

- Reviewing each CRF to determine the risks, issues, costs and benefits associated with the change
- Deciding on the approval of the change or identifying alternative actions if necessary
- Identifying the specific actions needed to implement each CRF

The Project Board is comprised of:

Voting Members:

The Infrastructure Director

The Deputy CEO: Implementation

The Relevant Project Director (or delegate manager)

Non-Voting Members:

The MCA Legal Advisor (or delegate)

The Project Board reaches approval by:

- Consensus
- If consensus is not reached, then by majority vote

2.5 Process Timeframes

The following table lists the key steps undertaken within the Change Management Process and their regular timeframes for completion:

Role	Process	Procedure	Timeframe
All CRF Requestors	Identify Need for Change	Investigate the drivers, benefits, costs and impact of the change	Immediately after identification of the need for change
	Complete Change Request Form	Fill in the standard project Change Request Form (CRF)	Immediately after identification of the need for change

Change Management Guidance Annex 1: Sample Change Management Plan

Contract Manager	Investigate Change Request	Review the CRF to determine whether it the change is critical to the success of the project	Within five working days of receiving the CRF
	Request Approval of Change	Forward the CRF to the Project Board for approval	
Infrastructure Director	Investigate Change Request	Review the CRF to determine whether it the change is critical to the success of the project	Within three working days of receiving the CRF
	Request Approval of Change	Forward the CRF to the Project Board for approval	
Project Board	Approve Change Request	Review the CRF and approve the set of actions required to implement the change	At the next Project Board meeting
Contract Manager	Schedule and Implement Change	Schedule and implement the actions needed to effect the change	Within five working days after the Project Board meeting
	Review and Close Change	Determine the impact of change actions and whether they have had the desired effect	Within five working days after implementation of the change

Note: The timeframes described above relate to non-urgent changes identified within the Project Lifecycle. If an **urgent** change is identified, then the change request, approval and implementation actions will need to occur more quickly.

3 Change Documents

Two key documents are required to successfully perform the Change Management Process: the Change Request Form and the Change Register. The following sections provide a description and template for each of these documents:

3.1 Change Request Form

The purpose of the Change Request Form is to allow MCA to document a request for a change to the project. All requestors proposing a change will fill out this form in its entirety, to enable the Contract Manager to understand the nature of the change as well as its drivers, benefits, costs and impact.

The following form will be used to document requests for a change to the project.

PROJECT DETAILS	
Project/Contract Name: Contract Manager:	
CHANGE DETAILS	
Change Number:	<i>Unique identifier for the change (determined by Contract Manager)</i>
Change Requester:	<i>Name of person requesting the change</i>

Change Management Guidance Annex 1: Sample Change Management Plan

Change Request Date: *Date of completion of this form*

Change Urgency: *Level of urgency for undertaking the change*

Change Description:

Provide a complete description of the requested change

Change Drivers:

List any project, business, market or environmental factors that necessitate a specific time limit for this change

Change Benefits:

Describe the benefits associated with implementing this change

Change Costs:

Describe the costs associated with implementing this change

IMPACT DETAILS

Project Impact:

Describe the impact on the project if this change is / is not implemented

APPROVAL DETAILS

Supporting Documentation:

Reference any supporting documentation used to substantiate this change

CRF Reviewed by:

Name	Department	Initials	Date

Submitted by

Name:

Signature:

Date:

_____/____/____

Approved by

Name:

Signature:

Date:

_____/____/____

Any documentation to support this change should be attached to this document.

PLEASE FORWARD THIS FORM TO THE CONTRACT MANAGER FOR APPROVAL

3.2 Change Register

The purpose of the Change Register is to record the current status of all change requests for the project, thereby enabling the Infrastructure Director to monitor and control the effects of the change throughout the Project Lifecycle.

The project team will use the following register to monitor and record the status of changes within the project.

[illegible]

Change Management Guidance Annex 1: Sample Change Management Plan

The following table describes the columns included within the Change Register above.

Column	Description
ID	Unique identifier for each change
Date Raised	Date the Change Request Form was submitted for approval
Raised By	Name of the person/entity who raised the change request
Received By	Name of the person who received the Change Request (typically the Contract Manager)
Description of Change	Full description of the proposed change
Description of Impact	Summary of the impact on the project (e.g. scope, deliverables, timescales, resources)
Impact Rating	Assessment of the level of the change's impact on the project: <ul style="list-style-type: none">■ L = "Low" (i.e. low level of impact on the project)■ M = "Medium" (i.e. medium level of impact on the project)■ H = "High" (i.e. high level of impact on the project)
Change Approver	Name of the person or group responsible for approving the change (typically the Project Manager or Project Board)
Approval Status	Current status of the change approval: <ul style="list-style-type: none">■ A = "Submitted" (i.e. the change has been submitted for approval)■ P = "Pending" (i.e. further information has been requested by the Approver)■ C = "Approved" (i.e. the change has been approved)
Approval Date	Date when the Approval Status was determined
Implementation Resource	Name of the person or group responsible for implementing the change (typically the Project Manager)
Implementation Status	Status of the change implementation: <ul style="list-style-type: none">■ I = "Implementation Scheduled"■ C = "Implementation Completed"■ R = "Implementation Reviewed"■ S = "Implementation Successful"
Implementation Date	Date when the Implementation Status was determined

This completes the description of the processes, roles and documents required to implement Change Management within MCA Namibia Infrastructure Program. By following each of the steps listed, we will be able to carefully monitor and control change, thereby increasing our chances of meeting the project objectives agreed to by the Project Board.

RACI Matrix

A RACI Matrix is a project management tool that clarifies roles and responsibilities for completing project tasks. It lists tasks, identifies all parties (individuals and groups) that have a role to play in their completion, and designates each party's level of involvement using the following classifications:

- **R**esponsible (a party that performs the task)
- **A**ccountable (the one party with authority over the task)
- **C**onsult (a party providing guidance and feedback on the task)
- **I**nform (a party that must be notified about the task)

RACI Matrices offer a comprehensive overview of all parties and actions required to complete a project's tasks. They help ensure that:

- All necessary roles for a task have been assigned;
- No roles are inadvertently assigned to multiple parties;
- All parties are correctly participating in the completion of each task.

RACI Matrices can be utilized at many different levels of work; MCAs can use them to manage entire compacts, individual projects or activities, or specific initiatives or groups of tasks. They can also be used for a variety of MCA activities (for one example see [the MCC IPM Guidance document for Managing Change](#)).

What does a RACI Matrix look like?

A RACI Matrix is a chart that provides tasks along a vertical axis, parties horizontally across the top, and level of involvement (R-A-C-I) within the corresponding space. See below for a sample RACI Matrix:

RACI Matrix	Person			
Task	David	Kate	Alex	Joan
Draft document	R	A	I	
Submit document for review	A		R	I
Finalize document	A	R		C
Translate document		I	R	A
Publish document	C		A	R

Best practices

- Ensure there is exactly one Accountable party for each task.
- Make sure your RACI Matrix includes all parties that have any role to play (big or small) in a task's completion.
- Think carefully about the most appropriate role for each party. Who needs to contribute directly to a task? Who has a vested interest but does not need to take an action to complete it? Who needs to only weigh in on a task?

Additional Guidance:

Websites:

- <https://www.projectsmart.co.uk/raci-matrix.php>
- <https://www.smartsheet.com/comprehensive-project-management-guide-everything-raci>

- <http://racichart.org/>

Videos:

- <https://www.youtube.com/watch?v=1U2gngDxFkc>
- <https://www.youtube.com/watch?v=MhowzImvhll>
- https://www.youtube.com/watch?v=9_ouLSg9RYg

PROJECT CHANGE REGISTER

Project Name:

Project Manager:

[illegible]

Annex I: Sample Project Coordination Plan

Coordination Plan for the Zambian Infrastructure Project

Implementing Partner List

- | | |
|---|---|
| <ul style="list-style-type: none"> • MCC RCM and Directorates <ul style="list-style-type: none"> ○ MCC ESP ○ MCC Infrastructure ○ MCC Procurement ○ MCC Program Financial Services ○ MCC GSI ○ MCC Monitoring and Evaluation ○ MCC Legal ○ MCC Econ ○ MCC Finance, Investment and Trade • MCA CEO & Directorates <ul style="list-style-type: none"> ○ MCA DCEO ○ MCA ESP ○ MCA SGA ○ MCA Procurement ○ MCA Finance and Administration ○ MCA Information Technology ○ MCA Monitoring and Evaluation ○ MCA Communications ○ MCA Legal • Lusaka City Council • Lusaka Water and Sewerage Company • Tetra Tech – Resettlement Action Plan/Implementation Consultant • Gauff Engineers – detailed design engineer • U.S. Army Corps of Engineers – design contract administrator • UWP – FIDIC engineer • Stantec – MCC independent engineer • Contractors | <p>Any contact with the following entities should be done in coordination with the MCA Communications Office and/or as outlined in the Stakeholder Engagement Plan:</p> <ul style="list-style-type: none"> • Zambia Revenue Authority • Relevant Port Authorities • ZEMA • Ministry of Local Government and Housing • WASH Forum • USAID • Landowner at Ponds • NWASCO – Regulator • Ministry of Finance and Economic Planning • Ministry of Lands • Ministry of Health • Ministry of Works, Supply, Transport and Communication • Ministry of Water, Energy and Mines • World Bank • Africa Development Bank • European Investment Bank • Development Bank of Southern Africa • JICA • GiZ • UNICEF • Danish International Development Agency |
|---|---|

Power/Interest Matrix

Organization	Name	Power (1-5)	Interest (1-5)
MCC RCM	R. Kaul	5	5
MCC ESP	S. Drew	4	5
MCC Infrastructure	M. Tkach	4	4
MCC Procurement	J. Meyer	4	3
MCC Program Financial Services	A. Brown	4	3
MCC GSI	R. Chaudhry	3	5
MCC Monitoring and Evaluation	N. Cassirer	2	5
MCC Legal	B. Polin	2	2
MCC Econ	S. Osborne	3	5
MCC Finance, Investment and Trade	T. Heimur	2	2
MCA CEO	P. Bwalya	5	5
MCA DCEO	I. Banda	4	5
MCA Infra	C. Chikamba	4	5
MCA ESP	P. Chipango	4	5
MCA SGA	M. Mungule	2	5
MCA Procurement	C. Mwelwa	4	3
MCA Finance and Administration	B. Imakando	2	2
MCA Information Technology	G. Mulenga	1	1
MCA Monitoring and Evaluation	C. Kasonka	3	5
MCA Communications	J. Kunda	1	5
MCA Legal	L. Mulima	2	2
Lusaka City Council	G. Ngoma	5	5
Lusaka Water and Sewerage Company	W. Shane	5	5
Tetra Tech	C. Wakefield	5	5
Gauff Engineers	S. Doerner	5	5
U.S. Army Corps of Engineers	W. Uhl	1	5
UWP	D. Fort	5	5
Stantec	M. Jackson	2	5
Contractors		5	5
Zambia Revenue Authority*	J. Williams	3	3
Relevant Port Authorities*	C. Mulambo	3	3
ZEMA*	W. Daul	5	2
Ministry of Local Government and Housing*	C. Mulambo	5	5
WASH Forum*	M. Mukumba	1	5
USAID*	M. Munkonge	1	5
Landowner at Ponds*	H. George	5	5
NWASCO – Regulator*	P. Mutale	1	3
Ministry of Finance and Economic Planning*	F. Yamba	5	5

Ministry of Lands*	P. Smith	4	2
Ministry of Health*	H. Jack	1	3
Ministry of Works, Supply, Transport and Communication*	L. Black	5	2
Ministry of Water, Energy and Mines*	D. White	5	1
World Bank*	B. Senkwe	1	2
Africa Development Bank*	H. Chinokoro	1	2
European Investment Bank*	M. Leistner	1	2
Development Bank of Southern Africa*	D. Pwele	1	2
JICA*	Z. Lee	1	2
GiZ*	S. Uwe	1	2
UNICEF*	Zulu	1	2
Danish International Development Agency*	G. George	1	2

*Again, any contact with the starred entities should be done in coordination with the MCA Communications Office and/or as outlined in the Stakeholder Engagement Plan.

Implementing Partner Analysis Matrix (key implementing partner – highest power and interest only listed, i.e. both power and interest were listed as a 4 or 5)

Key Implementing Partner	Concerns	Level of Effort
MCC RCM	Time, Quality and Budget	High
MCA CEO	Time, Budget, Staff Resource and Scheduling, Political concerns, Public Relations	High
MCA DCEO	Time, Budget, Staff Resource, Quality, Cash Flow	High
MCA Infra	Time, Budget	High
MCA ESP	Time, Budget, Ensuring the projects are implemented in accordance with MCC's Environmental Guidelines, the IFC Performance Standards and national laws related to environmental, social, health and safety issues	High
Lusaka City Council (LCC)	Timely Completion of Project	High
Lusaka Water and Sewerage Company (LWSC)	Timely Completion of Project	High
Tetra Tech	Profit, Unpaid additional work requirements, relationship with client	High
Gauff Engineers	Profit, Unpaid additional work requirements, relationship with client	High
UWP	Profit, Unpaid additional work requirements, relationship with client	High
Contractors	Profit, Time of Completion, Relationship with Engineer and Employer	High
Ministry of Local Government and Housing	Project Progress and Completion, Major Issues and Major Risks	High

Treatment Pond Land Owner*	Keeping her land	High
Ministry of Finance and Economic Planning	Project Progress and Completion, Major Issues and Major Risks	High

*Again, any contact with the starred entities should be done in coordination with the MCA Communications Office and/or as outlined in the Stakeholder Engagement Plan.

Project Coordination Strategy

Coordination Strategy¹				
Information <i>(what)</i>	Implementing Partners <i>(who)</i>	Timeframes <i>(when)</i>	Methods <i>(how)</i>	Responsibility
MCA Workplan	MCA and MCC Leadership, Infra, ESP, M&E, SGA, Procurement, Communications, MLGH	Monthly	Email by PDF	Infrastructure Manager
Contractors Construction Programs	MCC, Infra, ESP, LWSC, LCC, MLGH	Initial, Revisions and Updates	Email by PDF	Infrastructure Manager
Project Manager's Comprehensive Monthly Report	MCA and MCC Leadership, LWSC, LCC, MCA Directorates, MLGH	Monthly	Email by PDF	Infrastructure Manager
Monthly Engineers' Reports (see guidance requirements)	MCA and MCC Leadership, LWSC, LCC, M&E	Monthly	Email	Infrastructure Manager
Signed Contracts	MCC, LWSC, LCC, Infra, ESP, Legal, Procurement	After signing	Email, Hardcopy	Infrastructure Manager
Contract Deliverables	As required	At delivery	Email	Infrastructure Manager
Major Variation Orders	MCA and MCC Leadership, LWSC, LCC, Infra, ESP, Legal, Procurement, Finance	As necessary	Email	Infrastructure Manager

¹ In this example the Infrastructure Director is the Project Manager. In instances where this is not the case, the Infrastructure unit can be included in the list of Implementing Partners as needed.

Major Variation Communications	MCA and MCC Leadership, LWSC, LCC, Infra, ESP, SGA, M&E	As necessary but timely	Email	Infrastructure Manager
Issues Register	MCA and MCC Leadership, LWSC, LCC, Infra, ESP, SGA	At least monthly	Email	Infrastructure Manager
Risk Register	MCA and MCC Leadership, LWSC, LCC, Infra, ESP, SGA	At least quarterly	Email	Infrastructure Manager
ESMPs	MCC, Infra, ESP, LWSC, LCC	At delivery	Email	ESP Manager
HSMPs	MCC, Infra, ESP, LWSC, LCC	At delivery	Email	ESP Manager
Annual Budget Projections	MCA and MCC Leadership, Procurement, Finance	Annual	Email	Infrastructure Manager
Disbursement Requests	MCA and MCC Leadership, Procurement, Finance	Quarterly	Email	Infrastructure Manager

Annex II: Project Coordination Plan Template

Coordination Plan for the XX Project XXX Compact

Implementing Partner List

Implementing Partners

Power/Interest Matrix

Power/Interest Matrix				
Key	Organization	Name	Power (1-5)	Interest (1-5)
A				
B				
C				
D				
E				
F				

Implementing Partner Analysis Matrix

Implementing Partner Analysis Matrix		
Implementing Partner	Implementing Partner Interest in the Project	Level of Effort

--	--	--

Project Coordination Strategy

[illegible]

Annex 1a: Earned Value Management Learning and Integration Resources

Note: These resources are provided for informational purposes only and do not imply endorsement by the Millennium Challenge Corporation.

Videos that explain EVM:

Defense Acquisition University (EVM demonstration):

Part 1 = <https://youtu.be/W1aW7HAgRSs>

Part 2 = <https://youtu.be/rGNDFjoBBho>

Part 3 = <https://youtu.be/Hr9wMKYQifg>

Development and Analysis of EVM Data

Playlist =

<https://www.youtube.com/playlist?list=PLbVkMBz6MHWLJ0pcroh0I5RCCd8y9YML>

Detailed Online Resources:

1. *Department of Defense Earned Value Management Interpretation Guide*. (2015, February 18). Retrieved November 6, 2017, from <https://www.acq.osd.mil/evm/docs/DoD%20EVMSIG.pdf>
2. *Earned Value Management Guidelines*. (2009). Retrieved from State of Washington, Department of Transportation website: http://www.wsdot.wa.gov/publications/fulltext/PMRS/Guidance_Desktop_Procedures/EarnedValueGuidelines.pdf
3. Learning | Project Management Institute. (n.d.). Retrieved from <https://www.pmi.org/learning>
4. Reichel, C. W. (2006). *Earned value management systems (EVMS): "you too can do earned value management"* Paper presented at PMI® Global Congress 2006—North America, Seattle, WA. Newtown Square, PA: Project Management Institute. <https://www.pmi.org/learning/library/earned-value-management-systems-analysis-8026>

Books and Literature:

1. Fleming, Q. W., & Koppelman, J. M. (2010). *Earned Value Project Management*. Pennsylvania: Project Management Institute.
2. *A Guide to the Project Management Body of Knowledge: PMBOK Guide*. (2013). Newtown Square, PA: Project management Institute.
3. *Construction extension to the PMBOK guide*. (2016). Newtown Square, PA: Project Management Institute, Inc.

Annex 1b: Earned Value Management Language for Contracts

Design-Build (Yellow Book)

For the Contractor (this section must be customized to the project):

The contractor will provide a detailed, resource and cost loaded schedule for the work, using Prima Vera (P6 enterprise) or a similar approved software system. This schedule, to be finalised and agreed between client and contractor, will be used to measure Earned Value to enable the contractor and client to monitor the progress of the project in terms on integrated cost, schedule and technical performance measures. In order for Earned Value to be implemented the contractor will provide a system that can accurately and demonstrably measure the following three fundamental factors:

- The **planned value cost** also know as the Budgeted Cost of Worked Scheduled (BCWS)
- The **actual cost** of the progress made, known as the Actual Cost of Work Performed (ACWP)
- The **earned value**, known as the Budgeted Cost of Work Performed

Payment within the contract will be based on the achievement of earned value agreed between client and contractor, independently assessed, in accordance with the value achieved for each of the deliverables and milestones agreed at contract commencement.

The project will be broken down using a Work Breakdown Structure (WBS) the highest level of which will be the completed operational and operator accepted treatment plant. The required breakdown will be;

- Level 1 Completed Treatment Plant
- Level 2 Start Up; Site Clearance; Foundations; Civil Work; Mechanical; Electrical; Chemical; Commissioning; Landscaping and Completion

Subsequent Levels will allow the contractor some flexibility depending on his method of working but as an example might contain the information below;

- Level 2 Mechanical
- Level 3 Inlet; Primary treatment; Secondary treatment; Tertiary treatment; sludge treatment; chemical storage and injection;

There may be levels 4, 5, 6 etc..... below this to whatever level the contractor will normally provide a detailed schedule. The cost and resource loading of schedule activity must show

clearly how progress against, for instance, the Mechanical work for primary treatment will be measured.

For the Engineer:

- Establish a Project Management and Control System (PMCS) to plan, monitor and report the physical and financial progress of the Project implementation in accordance with the principles of Earned Value Management. The PMCS shall be able to establish and manage goals for the Project and comprise I:
 - Definition and authorization of the project scope of work;
 - Development of a baseline against which cost, schedule and technical performance can be measured;
 - Objective performance measurement;
 - Variance analysis and corrective action reporting;
 - Disciplined and timely incorporation of baseline changes.

The Earned Value Management shall show:

- If the project is ahead of or behind schedule;
- If the project is spending money efficiently;
- If the money has been spent on the right things;
- If the schedule and /or cost performance is improving or deteriorating with time.

The Consultant shall produce as a minimum on a monthly basis the information given in Table 3.1 both in a tabular and graphical form.

Annex 1b: Earned Value Management Language for Contracts

Table 3.1 Earned Value Management Calculation

Earned Value Statistic	Earned Value Description/Formula	Answer
Actual Cost (AC)	How much money has been spent for work that is completed?	
Budget at Completion (BAC)	How much is budgeted for total project?	
Earned Value (EV)	What is the value of the work already performed?	
Planned Value (PV)	What is the value of the work expected to be done?	
Cost Variance (CV)	$EV - AC$	
Schedule Variance (SV)	$EV - PV$	
Cost Performance Index (CPI)	$EV \div AC$	
Schedule Performance Index (SPI)	$EV \div PV$	
Estimate at Completion (EAC)	<p>$BAC \div CPI$ used if no variance has occurred or expect to continue at the same rate as currently:</p> <p>Or</p> <p>$AC + ETC$ used if original estimate was flawed and you developed a new one</p> <p>Or</p> <p>$AC + (BAC - EV)$ used when current variances won't be continued into the future</p> <p>Or</p> <p>$(AC + (BAC - EV)) \div CPI$</p>	

Annex 1b: Earned Value Management Language for Contracts

Estimate To Complete (ETC)	EAC - AC	
Variance at Completion	BAC - EAC	

Design-Bid-Build (Red Book)

For the Contractor (this section must be customized to the project):

The contractor will provide a detailed, resource and cost loaded schedule for the work, using Prima Vera (P6 enterprise) or a similar approved software system. This schedule, to be finalised and agreed between client and contractor, will be used to measure Earned Value to enable the contractor and client to monitor the progress of the project in terms on integrated cost, schedule and technical performance measures. In order for Earned Value to be implemented the contractor will provide a system that can accurately and demonstrably measure the following three fundamental factors:

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Annex 1b: Earned Value Management Language for Contracts

Estimate To Complete (ETC)	$EAC - AC$	
Variance at Completion	$BAC - EAC$	

Contract Performance Management Annex 1c: Example Cash Flow for Engineer

BUDGET BREAKDOWN

	Notes	Estimated number of working days to end of Original Contract	Original fee rate (€ per working day)	Amount (€)	Estimated number of working days from end of Original Contract	Original fee rate (€ per working day)	Amount (€)
FEES (including overheads):	1						
<i>Key experts</i>	2						
- Team leader		420.34	1,180	495,995	120.00	1,180	141,600
- Resident Engineer		1017.00	380	386,460	460.00	380	174,800
- Construction/Sanitary Engineer		785.00	230	180,550	60.00	230	13,800
- Sanitary Engineer 1		1040.00	230	239,200	60.00	230	13,800
- Sanitary Engineer 2		856.38	260	222,658	0.00	260	0
- Sanitary Engineer 3		1059.00	260	275,340	430.00	260	111,800
- Road Engineer		902.00	230	207,460	430.00	230	98,900
- Electrical Engineer		301.00	260	78,260	204.00	260	53,040
- Mechanical Engineer		0.00	230	0	0.00	230	0
- Quantity Surveyor		898.50	260	233,610	460.00	260	119,600
- ISPA Procurement Expert		221.00	549	121,329	0.00	549	0
- Financial Expert		1.00	475	475	0.00	475	0
- Procurement Expert		124.00	354	43,896	0.00	354	0
<i>Non key experts</i>							
- Telecommunication Engineer		0.00	330	0	0.00	330	0
- Pool of non-key / short term experts		393.69	920	362,193	18.00	920	16,560
- Quantity Surveyor		595.00	260	154,700	80.00	260	20,800
- Expert 1		566.00	230	130,180	160.00	230	36,800
- Expert 2		549.00	230	126,270	100.00	230	23,000
- Expert 3 (Road Inspector)		273.00	230	62,790	80.00	230	18,400
- Assistant 1		586.50	175	102,638	0.00	175	0
- Assistant 2		559.00	175	97,825	0.00	175	0
- Assistant 3		595.00	175	104,300	0.00	175	0
Total fees (including overheads)		11743.40		3,626,128	2662.00		842,900
PROVISION FOR INCIDENTAL EXPENDITURE:	6			50,000			50,000
- Audit							
CONTRACT VALUE				3,676,128			892,900

#REF!

4,569,028

NOTES:

- All fee rates must comprise:
 - the remuneration actually paid to the experts concerned per working day
 - administrative costs of employing the relevant experts, such as relocation and repatriation expenses, accommodation, expatriation allowances, leave, medical insurance and other employment benefits accorded to the experts by the Consultant
 - the margin, covering the Consultant's overheads, profit and backstopping facilities
 - Experts based outside the beneficiary country working for more than 6 consecutive months on the contract
 - Experts based in the beneficiary country working for more than 6 consecutive months on the contract
 - Experts based outside the beneficiary country working for less than 6 consecutive months on the contract
 - Experts based in the beneficiary country working for less than 6 consecutive months on the contract
- 6 All incidental expenditure incurred in the course of the contract as required by the Terms of Reference is to be invoiced at actual cost. Supporting documentation need not be submitted at the time interim invoices are presented for payment but must be retained for five years after completion of the contract. An audit certificate will be required before the final payment is made. This audit certificate must be provided by a suitably qualified auditor and the costs of this audit must be included within the actual costs invoiced.**
- Additional notes relating to the provision for incidental expenses:**
- the provision for incidental expenditure does not cover travel to/from the beneficiary country for international experts (other than for missions within the contract)
 - the annual leave entitlement of experts must not exceed 60 calendar days
 - long distance air travel must be by economy class while long distance train travel may be by 1st class
 - the subsistence paid to experts on missions requiring an overnight stay away from the base of operations in the beneficiary country must be a maximum of the per diem rate published on the Web site http://europa.eu.int/comm/europeaid/index_en.htm for each night away
- The financial evaluation of tenders only considers the fee rates, since the provision for incidental expenses is determined in the Terms of reference**

Annex 1c: Example Cash Flow for Engineer

ESTIMATED WORKING DAYS PER MONTH																				
				2003	2004															
				Part Nov Month 1	Dec Month 2	Jan Month 3	Feb Month 4	Mar Month 5	Apr Month 6	May Month 7	June Month 8	July Month 9	Aug Month 10	Sep Month 11	Oct Month 12					
1452				20	21	21	20	23	21	20	21	22	22	22	21					
Contract No. 2001/PL/16/P/PE/025 - 0.21																				
Contract No. 2001/PL/16/P/PE/025 - 0.22																8/5/2004				
Contract No. 2001/PL/16/P/PE/025 - 0.22/ii																				
Contract No. 2001/PL/16/P/PE/025 - 0.23 / I																5/18/2004				
Contract No. 2001/PL/16/P/PE/025 - 0.23/ii																				
Contract No. 2001/PL/16/P/PE/025 - 0.23/iv																				
Contract No. 2001/PL/16/P/PE/025 - 0.23/v																				
Contract No. 2001/PL/16/P/PE/025 - 0.24/i																				
Contract No. 2001/PL/16/P/PE/025 - 0.24/ii																				
Contract No. 2001/PL/16/P/PE/025 - 0.26/i																				
Contract No. 2001/PL/16/P/PE/025 - 0.26/ii																				
Contract No. 2001/PL/16/P/PE/025 - 0.26/iii																				
Contract No. 2001/PL/16/P/PE/025 - 0.27																				
Contract No. 2001/PL/16/P/PE/025 - 0.28																				
				2003	2004															
				Part Nov Month 1	Dec Month 2	Jan Month 3	Feb Month 4	Mar Month 5	Apr Month 6	May Month 7	June Month 8	July Month 9	Aug Month 10	Sep Month 11	Oct Month 12	Year 1	Cumulative total	To End of Contract	Cumulative total	
Addendun No.2	Addendum No.1			Key experts	20	21	21	20	23	21	20	21	22	22	22	21	0	0	30	540.335
25	540.335	15	419.25	#REF!	4	0	14.5	10	7	5	9	7	5	0	8.5	5	75	75	120	1,477
67	1,477	53	1017	#REF!	4	20	20	20	23	21	20	20	22	22	22	21	235	235	0	845
38	845	54	836	#REF!										11	22	21	54	54	0	1,100
50	1,100	53	1009	#REF!		13	20	20	23	21	20	20	22	22	22	21	224	224	90	1,489
39	856	53	896	#REF!							14	21	22	22	22	21	122	122	60	505
68	1,489	53	1018	#REF!	3	18	20	20	20	21	20	19	22	16	22	21	222	222	0	1,359
61	1,332	30	917	#REF!				18	16	19	20	22	22	12	21		150	150	0	221
23	505	30	222	#REF!										5	5		10	10	0	1
0	0	30	87	#REF!													0	0	0	124
62	1,359	20	890	#REF!			4	15	21	20	18	16.5	16	16	20	15	161.5	161.5	0	596
10	221	25	514	#REF!	1	15	19	14	20	10	17	14	15	8	14	4	151	151	0	596
0	1	25	15	#REF!	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	596
6	124	6	129	#REF!	4	22	20	19	0	4	0	0	0	0	0	0	69	69	0	596
				Non key experts																
0	0	6	34	#REF!	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	412	6	323.507	#REF!	0	0	2	1	1	0	1	2	0	1	0	0	8	8	6	412
31	675			#REF!													0	0	0	675
33	726			#REF!													0	0	0	726
30	649			#REF!													0	0	0	649
16	353			#REF!													0	0	0	353
27	587			#REF!													0	0	0	587
25	559			#REF!													0	0	0	559
27	596			#REF!													0	0	0	596

CASHFLOW FORECAST

CASHFLOW FORECAST

	2003		2004												2005												2010				
	Part Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Year 1	Cumulative	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Year 2	Cumulative	To End of Contract	Cumulative	
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12			Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24					
	€	€	€	€	€	€	€	€	€	€	€	€			€	€	€	€	€	€	€	€	€	€	€	€					€
Key experts																															
- Team leader	4,720	0	17,110	11,800	8,260	5,900	10,620	8,260	5,900	0	10,030	5,900	88,500	88,500	10,620	9,440	7,670	9,440	14,160	10,030	4,720	20,060	12,980	8,260	10,620	12,390	130,390	218,890	35,400	637,595	
- Resident Engineer	1,520	7,600	7,600	7,600	8,740	7,980	7,600	7,600	8,360	8,360	8,360	7,980	89,300	89,300	7,600	5,700	6,460	7,220	7,220	6,460	8,360	7,980	8,360	4,560	7,600	82,840	172,140	45,600	561,260		
- Construction/Sanitary Engineer	0	0	0	0	0	0	0	0	0	2,530	5,060	4,830	12,420	12,420	4,370	3,910	4,830	2,070	3,450	4,600	4,600	5,060	4,830	5,060	5,060	4,600	52,440	64,860	0	194,350	
- Sanitary Engineer 1	0	2,990	4,600	4,600	5,290	4,830	4,600	4,600	5,060	5,060	5,060	4,830	51,520	51,520	4,600	4,830	4,830	4,600	5,060	4,600	4,600	5,060	4,830	5,060	5,060	4,600	57,730	109,250	0	253,000	
- Sanitary Engineer 2	0	0	0	0	0	0	3,640	5,460	5,720	5,720	5,720	5,460	31,720	31,720	5,200	5,460	3,900	4,420	5,720	5,200	5,200	5,720	5,460	5,720	5,720	4,160	61,880	93,600	0	222,658	
- Sanitary Engineer 3	780	4,680	5,200	5,200	5,200	5,460	5,200	4,940	5,720	4,160	5,720	5,460	57,720	57,720	5,200	5,460	5,460	2,860	5,720	5,200	4,940	5,720	5,460	5,720	5,720	5,200	62,660	120,380	23,400	387,140	
- Road Engineer	0	0	0	0	4,140	3,680	4,370	4,600	5,060	5,060	2,760	4,830	34,500	34,500	4,600	3,910	4,830	1,610	5,060	4,600	4,140	5,060	4,600	5,060	3,910	3,450	50,830	85,330	20,700	306,360	
- Electrical Engineer	0	0	0	0	0	0	0	0	0	0	1,300	1,300	2,600	2,600	780	780	1,040	520	520	520	260	1,820	2,600	2,860	3,900	3,900	19,500	22,100	15,600	131,300	
- Mechanical Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Quantity Surveyor	0	0	1,040	3,900	5,460	5,200	4,680	4,290	4,160	4,160	5,200	3,900	41,990	41,990	4,420	3,120	5,200	3,120	5,460	4,940	3,900	5,200	4,940	2,860	5,200	3,120	51,480	93,470	31,200	353,210	
- ISPA Procurement Expert	549	8,235	10,431	7,686	10,980	5,490	9,333	7,686	8,235	4,392	7,686	2,196	82,899	82,899	0	0	0	1,647	0	0	0	1,098	549	0	0	1,098	4,392	87,291	0	121,329	
- Financial Expert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	475	0	0	0	0	0	475	475	0	475	
- Procurement Expert	1,416	7,788	7,080	6,726	0	1,416	0	0	0	0	0	0	24,426	24,426	0	0	0	0	0	0	0	354	0	0	3,540	6,018	9,912	34,338	0	43,896	
Non key experts																															
- Telecommunication Engineer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
- Pool of non-key / short term experts	0	0	1,840	920	920	0	920	1,840	0	920	0	0	7,360	7,360	7,360	6,440	11,960	12,880	20,240	21,160	21,160	42,320	34,960	34,673	46,920	28,520	288,593	295,953	5,520	378,753	
- Quantity Surveyor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175,500	
- Expert 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166,980	
- Expert 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149,270	
- Expert 3 (Road Inspector)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81,190	
- Assistant 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102,638	
- Assistant 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97,825	
- Assistant 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104,300	
Total fees (including overheads)	8,985	31,293	54,901	48,432	48,990	39,956	50,963	49,276	48,215	40,362	56,896	46,686	524,955	524,955	54,750	49,050	56,180	50,387	70,710	68,070	60,455	105,832	89,189	83,633	100,210	84,656	873,122	1,398,077	177,420	4,469,028	
EXPENDITURE:																															
- Audit		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50,000	50,000
TOTAL CASH OUTFLOWS	-8,985	-31,293	-54,901	-48,432	-48,990	-39,956	-50,963	-49,276	-48,215	-40,362	-56,896	-46,686	-524,955	-524,955	-54,750	-49,050	-56,180	-50,387	-70,710	-68,070	-60,455	-105,832	-89,189	-83,633	-100,210	-84,656	-873,122	-1,398,077	-227,420	-4,519,028	
B/F	0	513,616	482,323	427,422	378,990	330,000	290,044	471,638	422,362	374,147	333,785	276,889	0	0	230,203	467,851	418,801	362,621	312,234	241,524	173,454	462,146	356,314	267,125	183,493	83,283	230,203	0	-256,774		
Cash inflows	522,601						232,557						755,158	755,158	292,398						349,147						641,545	1,396,703	484,194	4,519,028	
C/F	513,616	482,323	427,422	378,990	330,000	290,044	471,638	422,362	374,147	333,785	276,889	230,203	230,203	230,203	467,851	418,801	362,621	312,234	241,524	173,454	462,146	356,314	267,125	183,493	83,283	-1,374	-1,374	-1,374	0	0	

-4,519,028
90%
← -4,067,125

Contract Performance Management Annex 1d - Example Project EVM Calculations**Project Earned Value Analysis**

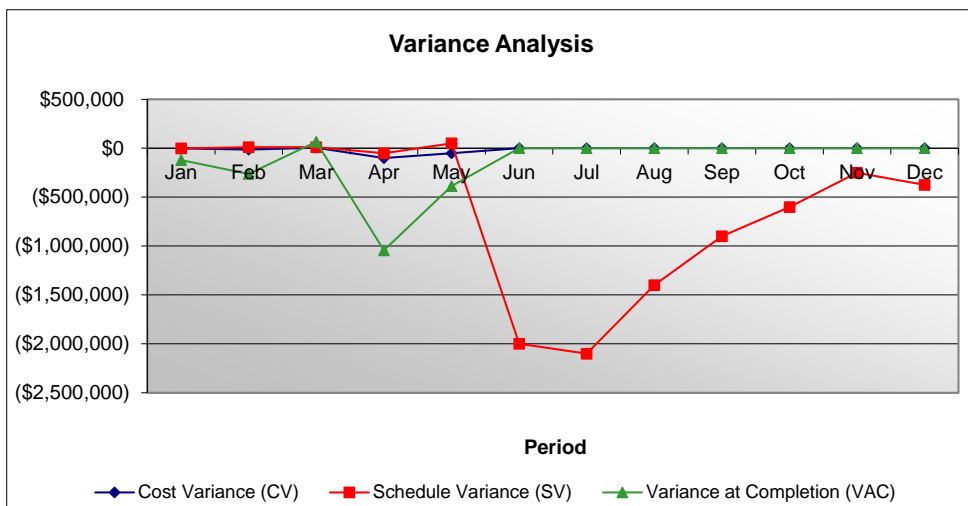
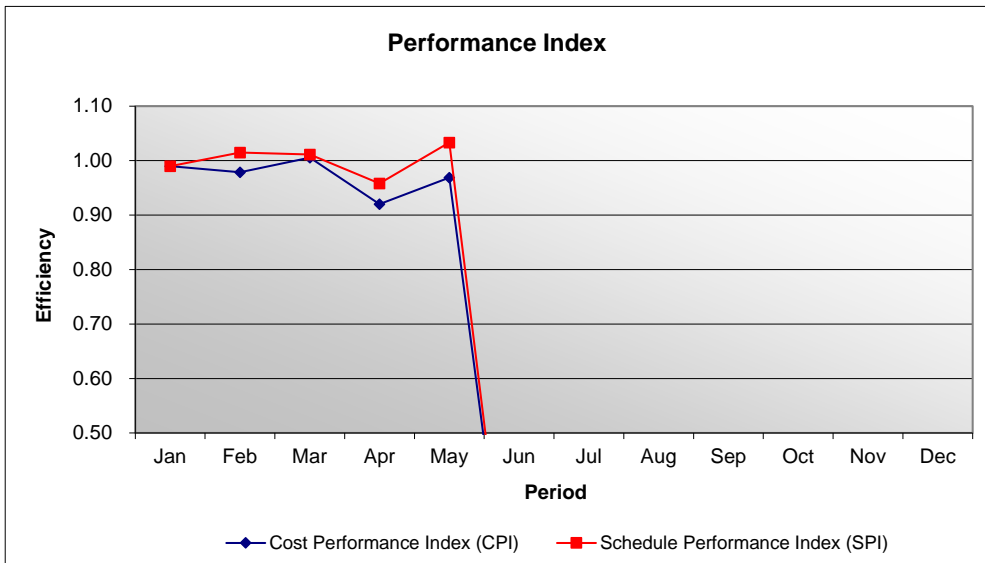
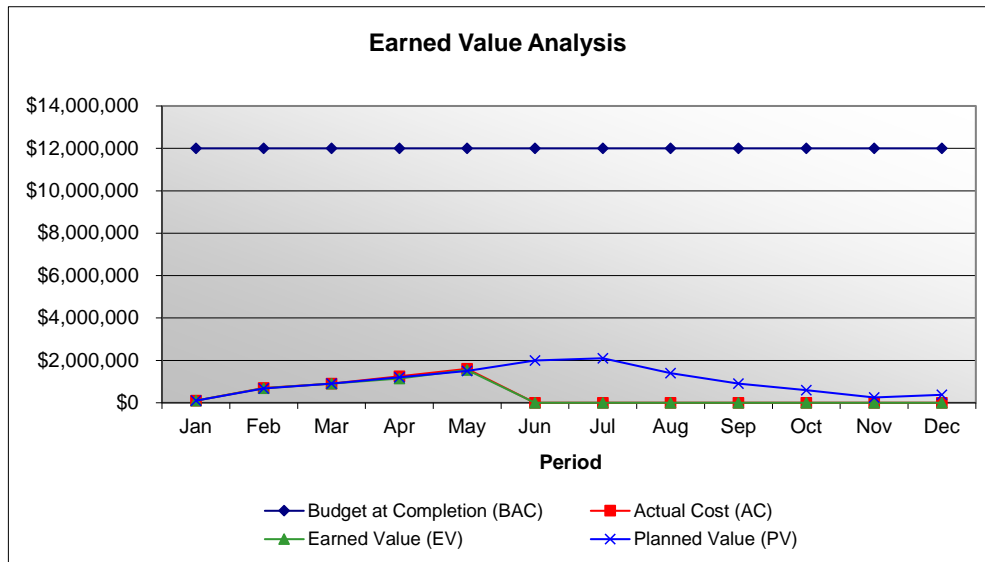
Project Earned Value Analysis measures the health of a project by looking at cost information and schedule information concurrently. It tells you whether the project is on schedule and on budget, as well as whether the project is on budget for the amount of work done so far.

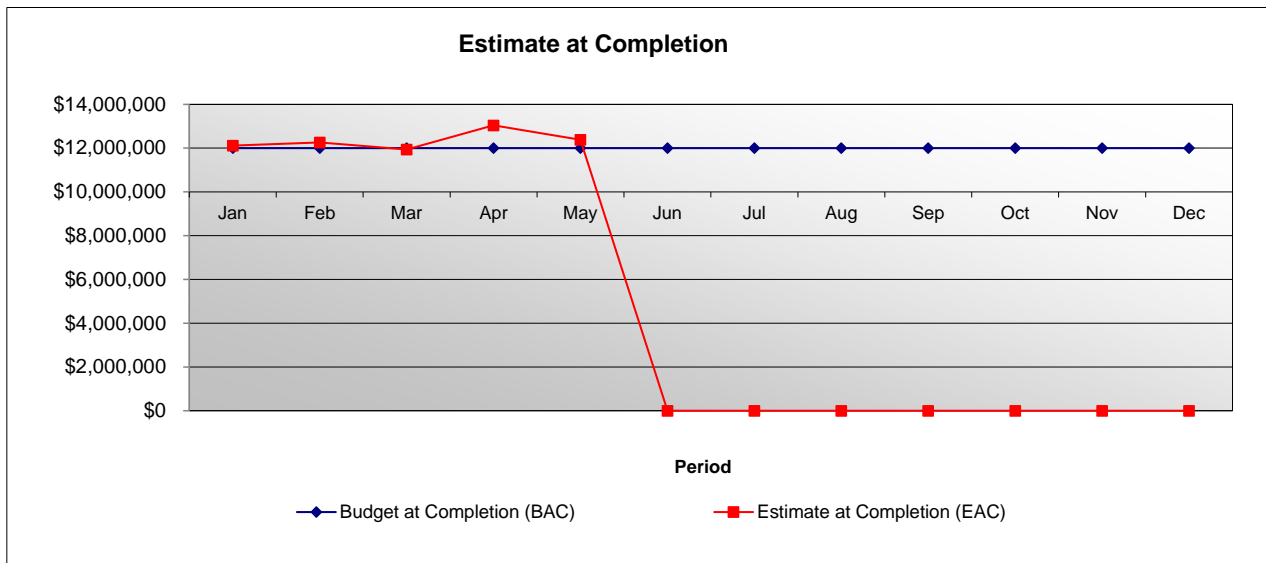
Metric	Abbrev.	Description	Formula/Value
Budget at Completion	BAC	Baseline cost for 100% of project.	N/A
Actual Cost	AC	Total costs actually incurred so far.	N/A
Earned Value	EV	Amount of budget earned so far based on physical work accomplished, without reference to actual costs.	N/A
Planned Value	PV	The budget for the physical work scheduled to be completed by the end of the time period.	N/A
Cost Variance	CV	Measure of cost overrun. The difference between the budget for the work actually done so far and the actual costs so far.	Earned Value–Actual Cost EV–AC
Cost Performance Index	CPI	Cost efficiency ratio. A CPI of 1.00 means that the costs so far are exactly the same as the budget for work actually done so far.	Earned Value/ Actual Cost EV/AC
Schedule Variance	SV	Measure of schedule slippage. The difference between the budget for the work actually done so far and the budgeted cost of work scheduled.	Earned Value–Planned Value EV–PV
Schedule Performance Index	SPI	The schedule efficiency ratio. An SPI of 1.0 means that the project is exactly on schedule.	Earned Value/Planned Value EV/PV
Estimate to Completion	ETC	The expected additional cost to complete.	Estimate at Completion–Actual Cost EAC–AC
Estimate at Completion	EAC	Expected total cost based on the current cost efficiency ratio.	Budget at Completion/Cost Performance Index BAC/CPI
Variance at Completion	VAC	Estimated cost overrun at the end of project.	Budget at Completion–Estimate at Completion BAC–EAC
Status		CPI and SVI	EV/CPI and EV/SVI
		GREEN = On track	>.98
		YELLOW = Slightly behind schedule or budget	>0.95
		RED = Needs immediate attention	>0.90
		BLACK = Killed or Restore	<0.85

Project Earned Value Analysis -
Monthly
Road Project

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Budget at Completion (BAC)	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000	\$12,000,000
Earned Value (EV)	\$99,000	\$685,000	\$910,000	\$1,150,000	\$1,550,000	\$0	\$0	\$0	\$0	\$0
Actual Cost (AC)	\$100,000	\$700,000	\$905,000	\$1,250,000	\$1,600,000	\$0	\$0	\$0	\$0	\$0
Planned Value (PV)	\$ 100,000	\$ 675,000	\$ 900,000	\$ 1,200,000	\$ 1,500,000	\$ 2,000,000	\$ 2,100,000	\$ 1,400,000	\$ 900,000	\$ 600,000
Cost Variance (CV)	(\$1,000)	(\$15,000)	\$5,000	(\$100,000)	(\$50,000)	\$0	\$0	\$0	\$0	\$0
Schedule Variance (SV)	(\$1,000)	\$10,000	\$10,000	(\$50,000)	\$50,000	(\$2,000,000)	(\$2,100,000)	(\$1,400,000)	(\$900,000)	(\$600,000)
Cost Performance Index (CPI)	0.99	0.98	1.01	0.92	0.97					
Schedule Performance Index (SPI)	0.99	1.01	1.01	0.96	1.03	0.00	0.00	0.00	0.00	0.00
Estimate to Completion (ETC)	\$12,021,212	\$11,562,774	\$11,029,066	\$11,793,478	\$10,787,097					
Estimate at Completion (EAC)	\$12,121,212	\$12,262,774	\$11,934,066	\$13,043,478	\$12,387,097					
Variance at Completion (VAC)	(\$121,212)	(\$262,774)	\$65,934	(\$1,043,478)	(\$387,097)					
Status based on CPI	GREEN	YELLOW	GREEN	RED	YELLOW					
Status based on SVI	GREEN	GREEN	GREEN	YELLOW	GREEN					
Comments										

Annex 1d - Example Project EVM Calculations





Earned Value Calculation Worksheet and Exercise









Earned Value Statistic	Earned Value Description/Formula	Answer
Actual Cost (AC)	How much money has been spent for work that is completed?	
Budget at Completion (BAC)	How much is budgeted for total project?	
Earned Value (EV)	What is the value of the work already performed?	
Planned Value (PV)	What is the value of the work expected to be done?	
Cost Variance (CV)	$EV - AC$	
Schedule Variance (SV)	$EV - PV$	
Cost Performance Index (CPI)	$EV \div AC$	
Schedule Performance Index (SPI)	$EV \div PV$	
Estimate at Completion (EAC)	<p>$BAC \div CPI$ used if no variance has occurred or expect to continue at the same rate as currently:</p> <p>Or</p> <p>$AC + ETC$ used if original estimate was flawed and you developed a new one</p> <p>Or</p> <p>$AC + (BAC - EV)$ used when current variances won't be continued into the future</p> <p>Or</p> <p>$(AC + (BAC - EV)) \div CPI$</p>	
Estimate To Complete (ETC)	$EAC - AC$	
Variance at Completion	$BAC - EAC$	





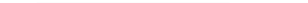













Contract Performance Management Annex 1f: Works Contractor Performance

Select List of Approved Contractors - Performance Monitoring Form													
Please complete the form below for each contractor working on a project, using the scoring criteria below. Please leave blank if no comment / not applicable.													
Project	Contractor	Time Management	Financial Management	Health and Safety	Management of Sub-contractors	Quality of Workmanship	Progress in Making Good Defects	Collaborative Approach	Contractor Performance	Contractor Design (If Applicable)	Customer Satisfaction	Total Project Score	Overall Project Percentage
												22	100%
												0	0%
Project	Contractor	Comments / justification for low scoring											
Form completed by:			Quarter:							Date:			

Performance Measure	Definition		Scoring Criteria
Time Management	How well did the contractor plan and progress the works? Was the contractor proactive in resolving or minimising programme issues or delays?	5	Excellent; significant savings in time realised by contractor
		4	Good; proactive approach, potential delays minimised by contractor
		3	Average; delays neither caused nor minimised by contractor
		2	Below Average; minor programme issues/delays possibly caused by contractor
		1	Poor; programme issues/delays caused or exacerbated by contractor
		0	Unacceptable; major programme issues/delays caused by contractor
Financial Management	How well did the contractor manage costs? Was cost reporting timely and accurate? Was change agreed expeditiously? Was there prudent management of the provisional sums and/or risk?	5	Excellent; contractor was proactive, identified major cost savings through innovation
		4	Good; contractor was proactive in managing all cost issues
		3	Average; contractor was fairly proactive in managing cost issues
		2	Below Average; cost management was neither proactive nor reactive
		1	Poor; cost management was reactive and at times antagonistic
		0	Unacceptable; cost management was antagonistic resulting in major cost issues
Health and Safety	How well did the contractor manage health and safety? Consider quality of H&S documentation, management of H&S on site, compliance with H&S plan, accidents and incidents, site safety checks and audits.	5	Excellent; H&S management was exemplary with no issues or concerns throughout the project
		4	Good; only very minor issues or concerns
		3	Average; few minor incidents not caused by contractor
		2	Below Average; few minor incidents due to poor site management
		1	Poor; reportable incident resulting in contractor being placed on additional monitoring
		0	Unacceptable; contractor suspended following major incident
Management of Sub-contractors	Were sub-contractors appointed at the right time, did the contractor manage performance and quality of work and co-ordinate different sub-contractors?	5	Excellent; sub-contractors involved early, mostly through established supply chains. Excellent co-ordination and management.
		4	Good; sub-contractors involved at right time; well co-ordinated/managed
		3	Average; on-time appointments with adequate coordination/management
		2	Below Average; some issues due to late appointments and/or lack of co-ordination/management
		1	Poor; several issues due to late appointments and lack of co-ordination/management
		0	Unacceptable; major issue(s) due to late appointments and/or lack of co-ordination/management
Quality of Workmanship	Did the contractor achieve a high quality of work first time or was a need for re-work prompted by other parties?	5	Excellent; workmanship, 'right first time'
		4	Good; workmanship, minor snagging required
		3	Average; workmanship, but some isolated areas requiring re-work
		2	Below Average; workmanship, but several minor issues requiring re-work
		1	Poor; workmanship, some significant issues requiring re-work
		0	Unacceptable; workmanship, major re-work required.
Progress in Making Good Defects	How quickly did the contractor resolve defects after practical completion?	5	Excellent; all defects resolved within 1 week of practical completion
		4	Good; all defects resolved within 1 month of practical completion
		3	Average; all defects resolved within 3 months of practical completion
		2	Below Average; majority of defects resolved within 3 months of practical completion
		1	Poor; some defects outstanding after 3 months; contractor reluctant to attend site
		0	Unacceptable; major defects outstanding after 3 months; contractor unwilling to resolve
Collaborative Approach	Did the contractor take on their responsibilities as a team player enthusiastically? Were they an active participant in the decision making or issue resolution processes throughout the project, or did they prefer to wait to be instructed?	5	Excellent; contractor took the lead in collaborative team working
		4	Good; contractor was a positive, proactive member of the team
		3	Average; contractor worked well with the team but did not add value
		2	Below Average; contractual approach
		1	Poor; required instruction in collaborative team working
		0	Unacceptable; adversarial approach resulting in ongoing dispute or claim
Contractor Performance	Consider the contractor's communication, planning and organisation; site management; consideration for other site users.	5	Excellent; contractor performance was exemplary in all these areas
		4	Good; contractor performance was good in all these areas
		3	Average; contractor performance was average in all these areas
		2	Below Average; issues/room for improvement in some areas
		1	Poor; several issues due to poor performance in one or more of these areas
		0	Unacceptable; major issue(s) due to poor performance in one or more of these areas
Contractor Design	How well did the contractor fulfil their responsibilities, including the quality and timeliness of information? For design and build projects - how well did the contractor manage and co-ordinate the design contractors? How good was the quality of the design information?	5	Excellent; quality, contractor was proactive and design provided well in advance of construction
		4	Good; quality, design provided in accordance with agreed programme
		3	Average; quality, design provided in sufficient time to avoid delay to construction
		2	Below Average; quality, design provided on time but putting pressure on programme
		1	Poor; quality, design provided late putting pressure on programme
		0	Unacceptable; quality, design information only provided when pressure applied by other parties with subsequent delays to programme
Customer Satisfaction	Customer satisfaction.	5	Excellent
		4	Good
		3	Average
		2	Below Average
		1	Poor
		0	Unacceptable

Contract Performance Management Annex 2a_Example Gantt for Discrete Deliverables

ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors	Actual Start	Actual Finish												
1			Feasibility Study	153 days	Mon 7/10/17	Wed 2/7/18		Mon 7/10/17	NA												
2			Deliverable 1	33 days	Mon 7/10/17	Wed 8/23/17		Mon 7/10/17	Wed 8/23/17												
3			Deliverable 2	45 days	Thu 8/24/17	Wed 10/25/17	2	Thu 8/24/17	NA												
4			Deliverable 3	30 days	Thu 10/26/17	Wed 12/6/17	3	NA	NA												
5			Deliverable 4	45 days	Thu 12/7/17	Wed 2/7/18	4	NA	NA												

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

Example Gantt for Discrete Deliverables

ID	Task Mode	Task Name	Duration	Start	Timeline (June to March)											
1		Feasibility Study	153 days	Mon 7/10/17												
2		Deliverable 1	33 days	Mon 7/10/17												
3		Deliverable 2	45 days	Thu 8/24/17												
4		Deliverable 3	30 days	Thu 10/26/17												
5		Deliverable 4	45 days	Thu 12/7/17												

Black Bar is the Baseline Plan

Colored Bar is Actual.

Red Circles indicate tasks that are behind schedule.

Progress Line
indicates expected
level of completion
today.

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

Contract Performance Management Annex 2c: Example Spreadsheet for Discrete Deliverables

MCA-XX	Contract Value:	\$ 4,321,345.00	Date Updated:
Contractor: RIC Ltd	Expected Completion:		MCA POC:
Contract Number: MCAG/443/3556	Contract Signed (NTP):	4/23/2022	

TASK	DUE DATES				SCHEDULE DELTA (DAYS)	PLANNED VALUE	EARNED VALUE
	Days Plus NTP	PLANNED	EXPECTED	ACTUAL			
Kick Off Meeting	10	5/3/2022	N/A	6/1/2022	29		
Detailed Report on Payment Process	30	5/23/2022		7/6/2022	44		
Inception Workshop and Report	45	6/7/2022		7/15/2022	38		
Livelihood Restoration Plan Status Update	80	7/12/2022		9/4/2022	54		

This spreadsheet must be filled out by the Consultant. They will need to indicate the impact of delays on downstream deliverables and invoicing.

The Consultant in agreement with the Client may choose to use another format or method, so long as the information above is presented clearly.

Contract Performance Management Annex 3: Example Time Based Contracts Tracker

Select List of Approved Engineers - Performance Monitoring Form													
Please complete the form below for each Engineer working on a project, using the scoring criteria below. Please leave blank if no comment / not applicable.													
Project	Consultant	Time Management	Financial Management	Health and Safety	Quality of Inspection	Collaborative Approach	Engineer Performance	Customer Satisfaction				Total Project Score	Overall Project Percentage
												0	100%
												0	0%
Project	Consultant	Comments / justification for low scoring											
Form completed by:				Quarter:					Date:				

Performance Measure	Definition		Scoring Criteria
Time Management	How well did the Engineer receive and respond to correspondance? Was the consultant proactive in resolving or minimising issues or delays?	5	Excellent; significant savings in time realised by Engineer
		4	Good; proactive approach, potential delays minimised by Engineer
		3	Average; delays neither caused nor minimised by Engineer
		2	Below Average; minor programme issues/delays possibly caused by Engineer
		1	Poor; programme issues/delays caused or exacerbated by Engineer
		0	Unacceptable; major programme issues/delays caused by Engineer
Financial Management	How well did the Engineer manage costs? Were IPC submittals timely and accurate? Was change agreed expeditiously? Was there prudent management of the provisional sums and/or risk?	5	Excellent; Engineer was proactive, identified major cost savings with Engineer through innovation
		4	Good; Engineer was proactive in managing all cost issues
		3	Average; Engineer was fairly proactive in managing cost issues
		2	Below Average; cost management was neither proactive nor reactive
		1	Poor; cost management was reactive and at times antagonistic
		0	Unacceptable; cost management was antagonistic resulting in major cost issues
Health and Safety	How well did the Engineer provide health and safety oversight and reporting? Consider quality of H&S documentation, management of H&S on site, compliance with H&S plan, accidents and incidents, site safety checks and audits.	5	Excellent; H&S management was exemplary with no issues or concerns throughout the project
		4	Good; only very minor issues or concerns
		3	Average; few minor incidents not caused by Engineer
		2	Below Average; few minor incidents due to poor site management
		1	Poor; reportable incident resulting in Engineer and Consultant(s) being placed on additional monitoring
		0	Unacceptable; Engineer suspended following major incident
Quality of inspection	Did the Engineer inspect works to achieve a high quality of workmanship?	5	Excellent; workmanship, 'right first time'
		4	Good; workmanship, minor snagging required
		3	Average; workmanship, but some isolated areas requiring re-work
		2	Below Average; workmanship, but several minor issues requiring re-work
		1	Poor; workmanship, some significant issues requiring re-work
		0	Unacceptable; workmanship, major re-work required.
Collaborative Approach	Did the Engineer take on their responsibilities as a team player enthusiastically? Were they an active participant in the decision making or issue resolution processes throughout the project, or did they prefer to wait to be instructed?	5	Excellent; Engineer took the lead in collaborative team working
		4	Good; Engineer was a positive, proactive member of the team
		3	Average; Engineer worked well with the team but did not add value
		2	Below Average; contractual approach
		1	Poor; required instruction in collaborative team working
		0	Unacceptable; adversarial approach resulting in ongoing dispute or claim
Engineer Performance	Consider the Engineer's communication, planning and organisation; site management; consideration for other site users.	5	Excellent; Engineer performance was exemplary in all these areas
		4	Good; Engineer performance was good in all these areas
		3	Average; Engineer performance was average in all these areas
		2	Below Average; issues/room for improvement in some areas
		1	Poor; several issues due to poor performance in one or more of these areas
		0	Unacceptable; major issue(s) due to poor performance in one or more of these areas
Customer Satisfaction	Customer satisfaction.	5	Excellent
		4	Good
		3	Average
		2	Below Average
		1	Poor
		0	Unacceptable

Contract Performance Management Annex 3: Example Time Based Contracts Tracker

Select List of Approved Consultants - Performance Monitoring Form													
Please complete the form below for each Consultant working on a project, using the scoring criteria below. Please leave blank if no comment / not applicable.													
Project	Consultant	Time Management	Financial Management	Health and Safety	Collaborative Approach	Consultant's Performance	Customer Satisfaction					Total Project Score	Overall Project Percentage
												0	100%
												0	0%
Project	Consultant	Comments / justification for low scoring											
Form completed by:				Quarter:					Date:				

Performance Measure	Definition		Scoring Criteria
Time Management	How well did the Consultant meet the contractual deliverables schedule? Was the Consultant proactive in resolving or minimising issues or delays?	5	Excellent; significant savings in time realised by Consultant
		4	Good; proactive approach, potential delays minimised by Consultant
		3	Average; delays neither caused nor minimised by Consultant
		2	Below Average; minor programme issues/delays possibly caused by Consultant
		1	Poor; programme issues/delays caused or exacerbated by Consultant
		0	Unacceptable; major programme issues/delays caused by Consultant
Financial Management	How well did the Consultant manage costs?	5	Excellent; Consultant was proactive, identified major cost savings with MCA through innovation
		4	Good; Consultant was proactive in managing all cost issues
		3	Average; Consultant was fairly proactive in managing cost issues
		2	Below Average; Consultant's cost management was neither proactive nor reactive
		1	Poor; Consultant's cost management was reactive and at times antagonistic
		0	Unacceptable; Consultant's cost management was antagonistic resulting in major cost issues
Health and Safety	How well did the Consultant manage their responsibilities and a healthy and safe manner?	5	Excellent; H&S management was exemplary with no issues or concerns throughout the project
		4	Good; only very minor issues or concerns
		3	Average; few minor incidents not caused by Consultant
		2	Below Average; few minor incidents due to poor management
		1	Poor; reportable incident resulting in Consultant being placed on additional monitoring
		0	Unacceptable; Consultant suspended following major incident
Collaborative Approach	Did the Consultant take on their responsibilities as a team player enthusiastically? Were they an active participant in the decision making or issue resolution processes throughout the project, or did they prefer to wait to be instructed?	5	Excellent; Consultant took the lead in collaborative team working
		4	Good; Consultant was a positive, proactive member of the team
		3	Average; Consultant worked well with the team but did not add value
		2	Below Average; contractual approach
		1	Poor; required instruction in collaborative team working
		0	Unacceptable; adversarial approach resulting in ongoing dispute or claim
Consultant Performance	Consider the Consultant's communication, planning and organisation; task management; consideration for other functions.	5	Excellent; Consultant performance was exemplary in all these areas
		4	Good; Consultant performance was good in all these areas
		3	Average; Consultant performance was average in all these areas
		2	Below Average; issues/room for improvement in some areas
		1	Poor; several issues due to poor performance in one or more of these areas
		0	Unacceptable; major issue(s) due to poor performance in one or more of these areas
Customer Satisfaction	Customer satisfaction.	5	Excellent
		4	Good
		3	Average
		2	Below Average
		1	Poor
		0	Unacceptable