

Project Management Manual for ICT Projects

For the Government of Mauritius

This manual provides an overview of the Project Management Methodology applicable to ICT Projects recommended for the Government of Mauritius and outlines an implementation framework

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List of Abbreviations

Abbreviation	Description
CIB	Central Informatics Bureau
CISD	Central Information Systems Division
CPB	Central Procurement Board
CPPM	Capital Project Process Manual (formerly known as Investment Project Process Manual)
DPO	Data Protection Office
ESD	Energy Services Division of the Ministry of Energy and Public Utilities
ICT	Information and Communication Technologies
ITSU	IT Security Unit
MOFED	Ministry of Finance and Economic Development
MTCI	Ministry of Technology, Communication and Innovation
OGC	Office of Government of Commerce, United Kingdom
PMBOK	Project Management Body of Knowledge
PMMI	Project Management Manual for ICT projects
PMI	Project Management Institute
PRINCE2	Projects In Controlled Environments
SDA	Software Development Agreement
SDD	Software Design Description
SRS	Software Requirements Specifications
UAT	User Acceptance Testing

1 INTRODUCTION

The importance of computerisation in the Civil Service for improvement of service delivery makes it necessary to have a well-defined project management methodology for ICT projects. In this context, this document describes the Project Management Methodology for the implementation of ICT projects (PMMI) within the Civil Service.

1.1 CHARACTERISTICS OF PROJECTS IN THE CIVIL SERVICE

ICT Projects in the Civil Service have certain characteristics that have to be taken into consideration and properly dealt with in the Project Management Methodology viz.:

- ICT Projects in the Civil Service are usually wide in scope, complex in nature and have high project values and their impact can be gauged at national level.
- The large number of stakeholders involved with extensive dependencies and influences, i.e. from public bodies, citizens, external funding agencies etc.
- Budget for ICT projects decentralised at each Ministry/Department rather than controlled by a central body.
- The high degree of bureaucratic processes of projects approval, funds release, reporting, and monitoring.
- The large percentage of goods and services including procurement of ICT systems, outsourced to external vendors.
- Because of the involvement of public funds in the procurement of goods and services, measures for efficacy and transparency are required. Procurement guidelines as per the Public procurement Act need to be followed in order to properly account for the public funds involved.
- Most of Government purchases are based on tender procedures and involve rigorous procurement activities such as collecting user requirements, budget estimation and project planning, preparation of tender documents, floating of tender, pre-bid conferences and demonstrations, evaluation of proposals and contract management.
- High degree of communication between all the stakeholders including users, public bodies and vendors.
- Timely completion of project milestones, deliverables as well as reviews and acceptance when dealing with vendors.

1.2 OBJECTIVES OF THE PROJECT MANAGEMENT MANUAL FOR ICT PROJECTS

Recognising the fact that the complexity associated with managing projects on a government-wide level poses a significant challenge, the Project Management Manual for ICT projects (PMMI) has been prepared by the Ministry of Technology, Communication and Innovation through the Central Informatics Bureau to describe the project management methodology to be adopted for implementation of ICT projects in the Civil Service.

The PMMI should not be confused with the existing Capital Project Process Manual (CPPM) from the Ministry of Finance and Economic Development. The CPPM is used for seeking approval for projects whereas the PMMI is used for managing implementation of ICT projects after necessary approval has been obtained.

The Project Management Manual for ICT projects:

- Defines the processes involved to manage the implementation of ICT projects
- Outlines the roles of the stakeholders involved in the formulation of ICT-related policies, implementation of ICT projects and operation of Government systems (Appendix A).
- Provides project document templates to be used throughout all the phases of the implementation of ICT projects (Appendix B).

1.3 BENEFITS OF THE PROJECT MANAGEMENT MANUAL FOR ICT PROJECTS

The Project Management Manual for ICT projects supports the existing e-Government Strategy and aims to bring Government-wide benefits viz:

- Increase efficiency of implementing projects
- Reduce variances in project results including cost overruns and schedule slippage
- Provide a harmonised understanding of steps, roles and approach in the implementation of all ICT projects
- Improve maturity of project management processes through the use of proven methodologies
- Build a common base of project management document templates to be used in practice

2 PROJECT MANAGEMENT FRAMEWORK APPLICABLE TO ICT PROJECTS IN GOVERNMENT

Each country and organization has a different local and organizational context. Standard methodologies and frameworks are not recommended to be applied in their entirety but need to be customised to take into consideration local situations.

To this end, a project management framework derived from leading international methodologies like *A Guide to the Project Management Body of Knowledge* (PMBOK) (PMI 2013) and *PRINCE2* (OGC 2005) (a literature review of PMBOK and PRINCE2 is found at Appendix C) has been customised to fit the local context taking into consideration the unique characteristics of the Civil Service as introduced earlier in this manual. The framework uses the management phases and activities as depicted in Figure 1 below:

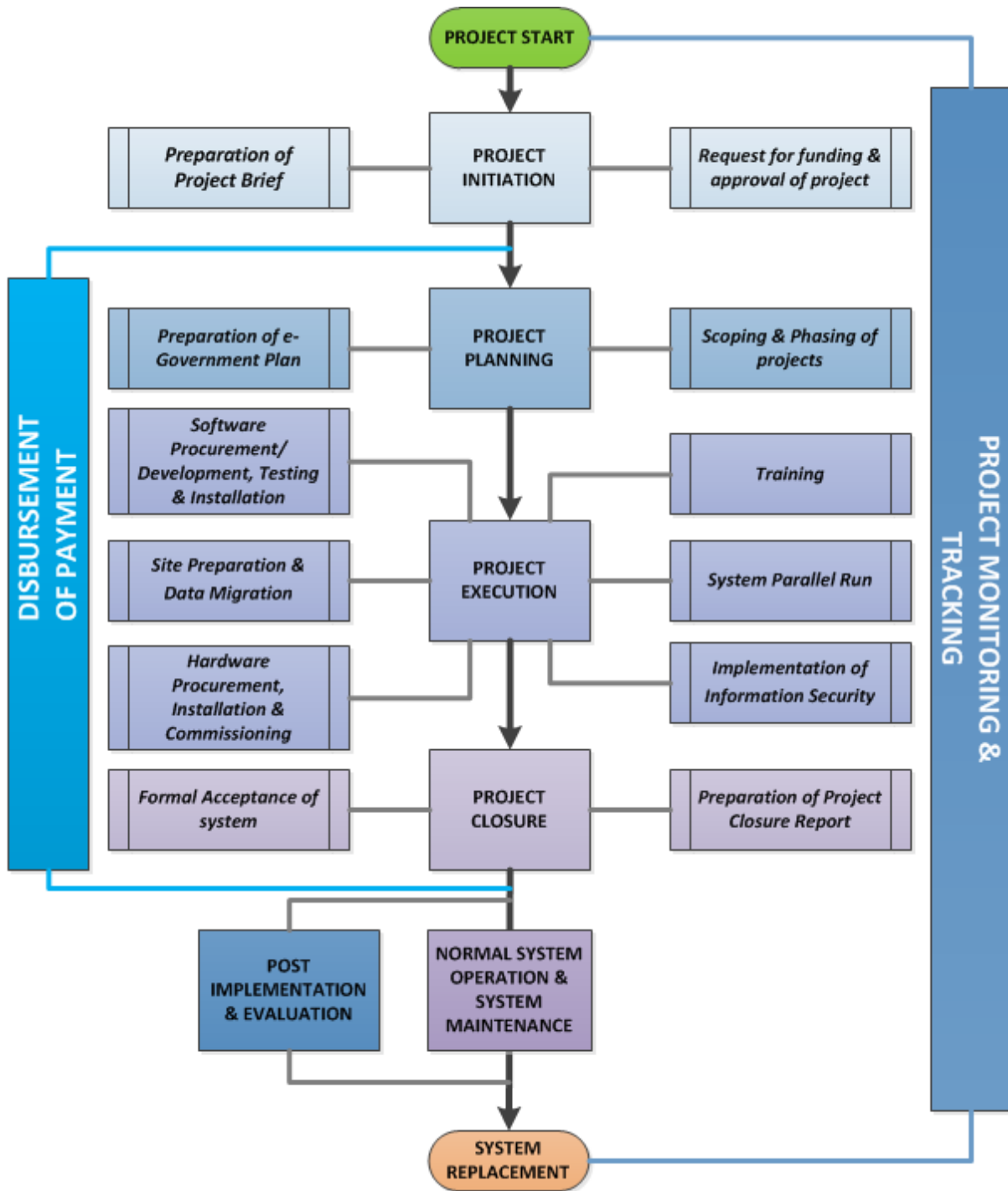


Figure 1 - Project Management Framework applicable to ICT Projects for the Civil Service

2.1 PROJECT INITIATION

Every project is initiated by the preparation of a project brief, which includes a high level scope and a budget estimate. The user Ministry/Department in collaboration with the CIB usually carries out this work.

Approval for the project (including funding) is then sought by the user Ministry/Department.

Once approval is obtained for the project, the users may proceed to the next phase (Project Planning).

For projects of national importance and/or high complexity, it is advisable that a Memorandum of Understanding or an agreement between the user Ministry/Department and key project stakeholders be signed so as to ensure full commitment of human resources from each party for smooth implementation of the project.

2.2 PROJECT PLANNING

Planning activities include the following:

- Project scoping
- Fact finding exercise
- Preparation of e-Government Plan

2.2.1 E-GOVERNMENT PLAN

When a Ministry/Department embarks on ICT projects, an e-Government Plan is usually prepared either by the CIB or an external consultant in collaboration with the user Ministry/Department, depending on the scale of the project and the expertise required.

The e-Government Plan is a definition of an IT strategy to improve work processes of the user Ministry/Department. It provides an assessment of the current state of services being delivered and a gap analysis between the current state and the desired state of services being delivered. The plan also provides reliable information as to the IT needs of the user Ministry/Department and the cost and time scale for the implementation of the computerization projects.

2.2.2 SCOPING & PHASING OF PROJECTS

Priority of systems/projects to be implemented has to be established and incorporated in the e-Government Plan.

2.3 PROJECT EXECUTION

The user Ministry/Department in collaboration with CIB monitors activities carried out during the Project Implementation phase. Other parties, namely, the software/hardware vendors, Central Information Systems Division (CISD), Energy Services Division (ESD), IT Security Unit (ITSU), Government Online Centre (GOC) and Central Procurement Board (CPB) may be involved during this phase.

2.3.1 SYSTEM PROCUREMENT

Systems may be procured either on a turnkey basis (which includes both the application software and the hardware required to run the proposed software) or through the separate acquisition of application software (package or tailor-made software) and/or hardware.

For each system/project, the following activities will have to be carried out:

- Definition of requirements by user Ministry/Department;
- Preparation of technical specifications (hardware/software) by CIB based on user requirements (defined either in the e-Government Plan or User Document);
- Incorporation of IT Security considerations worked out by ITSU in the technical specifications;
- Completion and approval of bidding document by the user Ministry/Department;
- Floating of tender documents by user Ministry/Department/CPB;
- Evaluation of proposals (technical and financial)
- Approval of evaluation report by CPB in case of major contracts (i.e. project with contract value greater than prescribed amount specified in the Public Procurement Act/legislations);
- Award of contract by user Ministry/Department [*Note: The standard contract forms (Contract Agreement, Conditions of Contract, among others) from the tender documents must be used by the user Ministry/Department. However, the contract agreement may be tailored to cater for specificities of projects and subsequently, advice of the Attorney General's Office may be sought regarding adapted contractual clauses*];
- Signature of Software Development Agreement (SDA) (in case of tailor-made software);
- Site preparation by user Ministry/Department;
- Delivery of equipment and installation; and
- System Commissioning by CISD together with user Ministry/Department and vendor.

2.3.2 SOFTWARE DEVELOPMENT ACTIVITIES

In case of tailor-made software, the following activities have to be carried out:

- Preparation/amendment of Software Requirement Specifications (SRS) and Software Design Description (SDD) by software vendor;

- Approval of SRS and SDD by user;
- Preparation of User Acceptance Test by software vendor;
- Software development/full-fledged testing and correction of defects/issues by software vendor;
- Software installation by software vendor;
- User training on application by software vendor; and
- Acceptance testing by user.

2.3.3 OTHER PROJECT RELATED ACTIVITIES

Business Process Reengineering: Prior to the application of technology, business processes should be reengineered and streamlined by the Supplier in consultation with the Client to align with best practices. This results not only in simpler, leaner and more productive processes but also in better e-Readiness of organisations, less customisation of systems and subsequently, reduced costs and overhead associated with maintenance and support operations.

Disbursement of Payment: Disbursement of payment is effected according to the terms of the contract (payment terms for software and/or hardware) by the user Ministry/Department upon advice of the Programme Manager.

Site Preparation: Various tasks need to be carried out regarding site preparation, for example electrical works, provision of telecommunications facilities, air-conditioning, review of office lay-out and infrastructure including the setting up of computer room. The supplier will communicate any specific site requirement to the Ministry/Department concerned for appropriate action. The above activities are carried out under the supervision of the Programme Manager of CIB.

Data Preparation/capture/migration: During system implementation, data may have to be collected and prepared to facilitate input into the system. This sometimes involves transcription from files to predefined forms prior to capture into the computer system. Data capture is often a lengthy process. In some cases, the services of Data Entry operators of the CISD may be made available.

In case of an existing computer system, data from the existing computer system has to be migrated to the new system. Data migration is an issue that demands careful planning and preparation. The involvement of the software developer, user Ministry/Department, CIB and

CISD is crucial during data migration to ensure consistency between data of the old system and the new system.

Training: Training is an important component during project implementation. At least two types of user training should be considered, namely computer awareness training and application-specific training. Other types of training may be required depending on the nature of the project.

Parallel-run: Prior to change-over from the existing system to the new one, both systems may have to run in parallel for a given period to ensure a smooth transition and to ascertain that the new system is working correctly. Any problem identified during this period will have to be attended to before complete migration to the new system.

Information security & system control: With a view to implementing and monitoring information security, the user Ministry/Department will have to develop/review an appropriate Information Security Management System (ISMS) with the assistance of the IT Security Unit of the MTCL. Moreover, the user Ministry/Department has a major role to play during system development/implementation to ensure that appropriate controls are established within the system.

Change Management: The implementation of projects may entail numerous changes at user Ministry/Department level which should be dealt with both from the perspective of the organisation and that of an individual. Change management is not done by a single individual, or a team dedicated to change management. Management and executives must fulfil the role of "sponsors of change" in support of the project demonstrating their authority, commitment and support. They have to put in place an appropriate coaching/training mechanism so that each individual staff is aware of the need for change, is willing to participate and is supportive of the change.

2.4 PROJECT MONITORING AND TRACKING

2.4.1 MINISTERIAL COMMITTEE

For a project of national importance and/or high complexity, it is advisable that the project be monitored by a committee chaired by the Hon. Minister of the user Ministry/Department implementing the project.

2.4.2 PROJECT STEERING COMMITTEE

A Project Steering Committee (PSC) is setup at the level of the user Ministry/Department to track, review and monitor the progress and performance of the project. The PSC is normally chaired by the Head of the user Ministry/Department (project sponsor) and comprises CIB Programme Managers, solution providers and other stakeholders.

This PSC identifies any areas in which changes to the plan are required and initiates the appropriate changes.

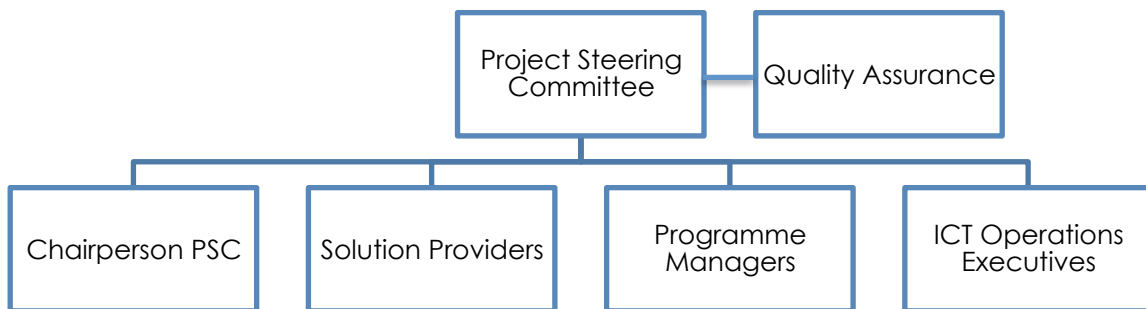


Figure 2 - Project Steering Committee

2.4.3 PROJECT MONITORING COMMITTEE

A Project Monitoring Committee (PMC) is also set up and chaired by the user Ministry/Department. Senior management personnel from User Ministry/ Department, solution providers, and the CIB shall form part of the Committee. Additional members may co-opt onto the Committee as and when required.

The PMC participates in the planning process, monitors the project and ensure adequate user commitment. The PMC is also responsible for undertaking follow-up on decisions taken by the PSC and monitors the progress of the project. The CIB Programme Manager forms part of the Project Monitoring Committee.

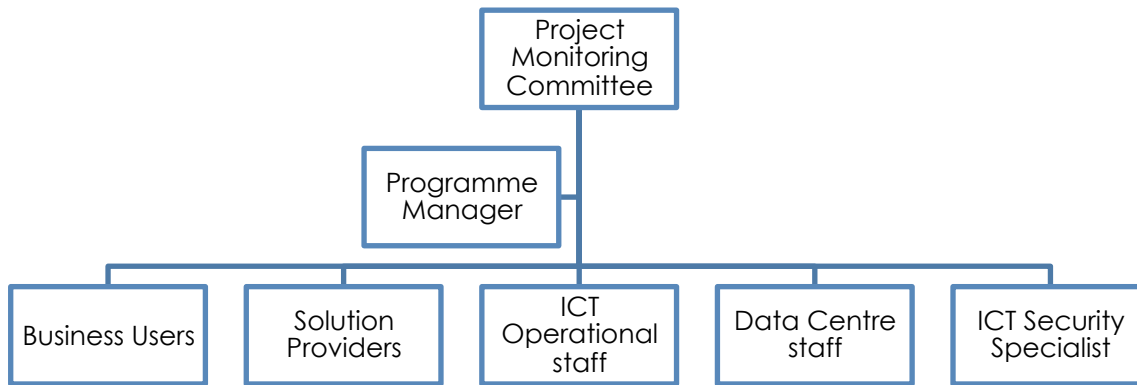


Figure 3 - Project Monitoring Committee

2.5 PROJECT CLOSURE

Project closure marks the end of a project and is documented in a Project Closure Report. The main objective of closing a project is to ascertain the extent to which all expected products and services have been handed over and obtain formal acceptance of the deliverables. Project closure also aims at confirming that maintenance and operation arrangements are in place, recommendations for follow-up actions made and lessons learnt from the project noted. Closure of a project is confirmed by the PSC.

Note: *The PSC may also elect to close the project prematurely. This may happen when the environment has changed to such an extent that the project objectives set initially are no longer in line with the new business objectives. Premature closure may also take place if the project implementation keeps dragging on and the PSC feels that the benefits to be obtained in completing the project are not worth the effort and investment.*

2.6 POST-IMPLEMENTATION EVALUATION

Following project closure and subsequent follow-up actions, a post-implementation evaluation exercise will be performed. Such an exercise will normally be carried out 6-12 months after a project is closed. The purpose of the post-implementation evaluation exercise is to evaluate the extent to which the initial objectives or aims have been met.

3 CONCLUSION

This document should be used as a reference document for effective and efficient project management methodology for the implementation of ICT projects in the Civil Service.

4 REFERENCES

1. OGC 2009, *Managing Successful Projects with PRINCE2*, 5th ed., TSO (The Stationery Office), London, Published on behalf of the Office of Government Commerce (OGC).
2. PMI 2013. *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*, 5th ed. Project Management Institute, Inc.

APPENDICES

This section provides the following information categorised into appendices:

Appendix	Description	Page
Appendix A	Appendix A outlines the roles of the stakeholders involved in the formulation of ICT-related policies, implementation of ICT projects and operation of Government systems.	17
Appendix B	Appendix B provides project management document templates that can be used in the execution of projects.	20
Appendix C	Appendix C provides background information concerning project management best practices followed in this manual.	56

APPENDIX A – ORGANISATIONS AND ROLES

This section outlines the roles of the stakeholders involved in the formulation of ICT-related policies, implementation of ICT projects and operation of Government systems.

1. STAKEHOLDERS IN GOVERNMENT ICT PROJECTS

Major players in ICT projects within the Civil service are:

- Ministry of Technology, Communication and Innovation (MTCI);
- User Ministries and Departments;
- Central Informatics Bureau (CIB);
- Central Information Systems Division (CISD);
- IT Security Unit (ITSU);
- Data Protection Office (DPO);
- Government Online Centre (GOC) of the National Computer Board (NCB); and
- Solution Providers

2. MINISTRY OF TECHNOLOGY, COMMUNICATION AND INNOVATION

The Ministry of Technology, Communication and Innovation (MTCI) is responsible for the formulation and implementation of Government policies in the ICT sector. The following departments that operate under the aegis of the Ministry are directly involved in the implementation of e-Government projects in the Civil Service:

- Central Informatics Bureau (CIB);
- Central Information Systems Division (CISD);
- IT Security Unit (ITSU);
- Data Protection Office;
- Government Online Centre (GOC) of the National Computer Board (NCB);

3. USER MINISTRIES AND DEPARTMENTS

The ownership and responsibility of implementing ICT projects and managing contracts rests with user Ministries/Departments. In view of various problems encountered in project implementation, mainly due to lack of commitment and to frequent transfers of staff, it is common practice for Ministries/Departments to designate dedicated officers to drive the computerisation process. These dedicated officers should preferably come from a departmental grade on the establishment of the Ministries/Departments and be well versed with the operations and activities of the institution concerned.

The main responsibilities of the dedicated officers are as follows: -

- Drive ICT projects at his/her Ministry or Department;
- Participate in the elaboration of the organisation's e-Business plan and its subsequent implementation;
- Liaise with stakeholders involved in the implementation of ICT projects;
- Administer ICT contracts;
- Enforce corporate Information Systems policies and standards;
- Collect and filter information for the update of websites; and
- Chair ICT-related committees like the Project Steering Committee (refer to Section 2.4 of this document) and the Web Development Committee.

4. CENTRAL INFORMATICS BUREAU

The main function of the Central Informatics Bureau is to promote e-Governance through the provision of project management, consultancy and advisory services to Ministries and Departments for the successful implementation of e-Government projects and on ICT matters. It has a pool of Programme Managers who work in collaboration with officers dedicated to projects at the user-side at Ministries/Departments for the implementation of e-Government projects.

More information is available on the CIB website (cib.govmu.org).

5. CENTRAL INFORMATION SYSTEMS DIVISION

The Central Information Systems Division (CISD) is responsible for providing ICT Support Services to Ministries/Departments and is mainly concerned with the operational aspects of ICT projects.

The support services include, among others:

- Technical support for operational systems through the secondment of Database Administrators and Computer Support Officers to Ministries/Departments;
- Data capture for certain Ministries and Departments by Data Entry Operators;
- First level technical support on personal computers, printers and office automation software by its Technical Support unit;
- Commissioning of IT equipment;
- Maintenance of the Government Intranet System;
- Monitor networks to ensure security and availability to users; and
- Administration of email accounts.
- Technical support by webmasters for creating and maintaining the websites of Ministries and Departments;

More information is available on the CISD website (cisd.govmu.org).

6. IT SECURITY UNIT

IT Security Unit acts as a key contact point for IT Security in Government and is responsible for:

- Implementing Government policies with regard to IT Security
- Assisting Ministries/Departments in the implementation of security standards
- Disseminating information on IT security
- Carrying out security audits

More information is available on the ITSU webpage (<http://mtci.govmu.org/English/Dept-Bodies/DeptUnit/Pages/IT-Security-Unit.aspx>)

7. GOVERNMENT ONLINE CENTRE

The Government Online Centre (GOC) under the management of the National Computer Board (NCB) is the key infrastructure to enable e-Government. It is the data centre which hosts e-Government and back office applications of Ministries and Departments, the Government Web Portal (websites of Ministries and Departments), Government email services as well as all Government services provided online. The GOC hosts IT infrastructure such as servers and networking to ensure that online Government services are available round-the-clock to citizens, businesses and government.

The Government Intranet System (GINS) is the networking infrastructure which interconnects Ministries and Departments into an Intranet through which public institutions communicate and collaborate. This intranet has been designed based on the GOC as a hub. As such telecommunications links (SHDSL or Optical Fibre) have been installed between Ministries and Departments to the GOC, which acts as the focal point.

8. DATA PROTECTION OFFICE

The Data Protection Office aims at protecting privacy rights of individuals by ensuring that the principles of data protection are observed. For e-Government projects that deal with personal data, the Data Protection Office is involved to ensure that the projects are implemented as per the Data Protection Act so that issues of data protection can be identified and resolved at the implementation stage.

More information is available on the DPO website (<http://dataprotection.govmu.org/>).

9. SOLUTION PROVIDERS

Solution providers, i.e., software and hardware vendors, are important stakeholders in ICT projects. They are responsible for supply, installation and maintenance of computer systems in Ministries and Departments.

APPENDIX B - TEMPLATES

This section provides templates for the following documents:

Document	Applicable Stage	Description	Page
Project Brief	Initiation OR Project Status Reporting	Document provides an executive overview of the project, key objectives, scope, benefits, key functions, assumptions, estimation and target duration.	22
Project Document	Initiation	Project Document is prepared at Project Initiation stage to motivate the reasons for carrying out the project.	24
E-Government Plan	Planning	It is a definition of an IT strategy to improve work processes of the user Ministry/Department	28
Communication Plan	Planning	Document defines the communication requirements for the project and how information will be distributed	33
Template for Documenting Comments on Proposals	Procurement	Template to be used when providing feedback on proposals submitted by Suppliers	36
Software Requirements Specifications (SRS)	Implementation	Document which helps: a) Software customers to accurately describe what they wish to obtain; b) Software suppliers to understand exactly what the customer wants;	38
Software Design Description (SDD)	Implementation	Document which shows how the software system will be structured to satisfy the requirements identified in the Software Requirements Specifications (SRS)	40
User Acceptance Test Plan	Implementation	Document listing the test cases that would have to be run during the User Acceptance Tests	42
User Acceptance Test Script	Implementation	Each test case defined in the User Acceptance Test Plan is executed by the user and the results are filled in this document	44
User Acceptance Certificate	Implementation	Certificate issued by user to certify acceptance of Application Software	47
Project Status Report	Monitoring and Controlling	Document which gives the overall health and quick executive overview of the status of a project	48
Issue Tracker	Monitoring and Controlling OR	Log where all issues are consolidated and tracked	51

Implementation			
Project Closure Report	Closure	Final document to assess the success of the project, identify best practices for future projects, resolve all open issues, and formally close the project.	53

NOTE: The above templates may be customised to fit the needs of projects.

Project Brief

Ministry/Department:

Project Title:

Date:

1. PROJECT DESCRIPTION:

In this section you should provide an overview of project and its objectives. It can be an executive summary of the project.

2. PROJECT VALUE/CONTRACT VALUE

A high-level estimate of the project can be provided in this section. Estimates may be broken down into project components e.g. hardware, software, etc. if required.

3. EXPECTED COMPLETION DATE:

The target dates for completion as well as for other milestones can be provided in this section.

4. STATUS:

In this section, the current status of the project may be provided.

5. KEY FUNCTIONS/RECOMMENDATIONS:

In this section, the key highlights of the project functions or recommendations in case of a consultancy work can be provided.

6. CONSTRAINTS/LIMITATIONS:

The constraints, limitations and risks associated with the project can be provided in this section.



Project Document

Ministry/Department:

Project Title:

Date:

1. BACKGROUND

- *What is the project's background?*
- *What are the problems and/or requirements that initiated the project?*
- *What does the project encompass?*
- *What is the business problem to be solved?*
- *What is the type of work that is to be done?*
- *What are the initial costs?*
- *What benefits will be derived from the project?*
- *How important are these benefits?*
- *Are the benefits cost justified?*
- *What is the political alignment of groups supporting/not supporting project?*

2. CONTEXT

- *Which business functional areas are involved?*
- *Which business functional areas are not involved?*

3. PROGRAMME FRAMEWORK

3.1. Objectives

- *What are the sponsor's primary objectives?*
- *What future objectives are dependent on this project?*
- *What are we trying to achieve?*
- *What new business opportunities are created by this project?*

3.2. Activities

- *How will the project be accomplished?*
- *What are the factors that must be understood to do the work?*
- *What are the phases and activities into which the work effort will be divided?*
- *What are the milestones related to the major deliverables?*

3.3. Key Performance Indicators

4. BENEFICIARIES

5. ASSUMPTIONS AND CONSTRAINTS

5.1. Assumptions

5.2. Constraints

- *What are the "Go/No-Go" reevaluation points in the project?*
- *When will we not proceed until some activity is done?*
- *Are there points when the project might be ended, or at least totally re-evaluated?*

6. EXPECTED OUTCOME

6.1. Expected Results

Enhancing e-government efforts is valuable to decision-making, planning and management support in all public sector activities. It has the potential to enhance decentralization, accountability and transparency, and can improve the efficiency and effectiveness of the public sector in Mauritius. In order to succeed, e-government involves not only the mastery of new technologies, but also requires a new paradigm concerning government and managing. In this regard, e-government can lead to the reorientation of services and public officials to the needs of the citizen. In particular, the project is expected to achieve the following results in relation to the specific proposed activities:

6.2. Expected Impact

Some possible impacts:

- *Alternative, more cost-effective delivery of services*
- *Reduction of transaction expenditures*
- *Promotion of internal and foreign investments*
- *Increased economic cooperation*
- *Integrated development planning capacity*
- *Improved revenue collection on taxes and service levies*
- *Integration and coordination of social and economic policy*
- *Improved public safety and security*
- *Move to development-oriented and people-centered service delivery culture*
- *Improved environmental management capacity*
- *Greater accountability and transparency in public administration*
- *Better coordination and cooperation between government agencies*
- *Better coordination and cooperation between the different levels of government*
- *Alliances and partnerships with private sector and non-governmental organizations*

- *Improved communications and public relations*
- *Increased awareness of rights of civil society and obligations of government*
- *Streamlined government structure and business processes*
- *Enabling policy and regulatory frameworks*
- *Promotion of regional integration of countries*

7. PROGRAMME MANAGEMENT

7.1. Management Arrangements

Given the national dimension of the project and its financial implications, it is proposed to set up a Steering committee to look into the different aspects of the project and make appropriate recommendations for its implementation.

It is proposed that the Project Steering Committee be set up with representatives of the following Ministries and Departments:

- (i) Ministry (Chair)*
- (ii) Central Informatics Bureau*
- (iii)*
- (iv)*

7.2. Implementation Arrangements

7.2.1. Time plan

7.2.2. Payment Schedule



E-Government Plan

Ministry/Department:

Project Title:

Date:

1. EXECUTIVE SUMMARY

1.1. Scope and Objectives

1.2. Overview of the Proposed System

1.3. Costs, Time Frames and Benefits

2. LIST OF ABBREVIATIONS

3. STRUCTURE OF DOCUMENT

4. INTRODUCTION

4.1. Purpose and Objectives

4.2. Scope

4.3. Management Concerns and Expectations

- *Vision/Mission statement by the Minister/CEO*
- *Higher level concerns and expectations*

5. OVERALL METHODOLOGY

5.1. Project Initiation

5.2. Current State Assessment

5.3. Business Plan Development

5.4. Project Acceptance

6. CURRENT STATE ASSESSMENT

6.1. Organisation Chart

6.2. Functional Hierarchy

- *Activities of all levels using procedure flow charts*

6.3. Technology

6.4. Existing Infrastructure and Communication setup

6.5. Existing Application Systems and status of implementation

6.6. Volume of Transactions and Data

6.7. Challenges

7. PROPOSED E-GOVERNMENT STRATEGY

7.1. Overview

7.2. Approach

7.3. Stakeholder Information Requirements - Internal

- *Information needs (top, middle and operational level)*

7.4. Stakeholder Information Requirements - External

- *Information exchange with other Ministries/Departments*

7.5. Application System Architecture

- *Proposed application system architecture (with a block diagram) for all projects*
- *Integration within the system*
- *Links with external departments*

7.6. Project Components

7.6.1. <Project Component 1>

7.6.1.1. Application Processing Description

- *User community addressed with respective functionality*
- *Flow chart/data flow diagrams*

7.6.1.2. Assumptions

- *Locational, volumes of data/transactions, functional*

7.6.1.3. Proposed Changes in environment, operations, procedures

- *Expected Benefits*
- *Tangible : cost reduction, productivity gains, inventory reduction, cash flow improvement, etc. (these must be quantified)*
- *Intangible: customer satisfaction, quality of service, improved information availability, etc.*

7.6.2. <Project Component 2>

7.6.3. <Project Component n>

8. PROPOSED SYSTEM ARCHITECTURE

8.1. Proposed Computer Environment

- *Proposed system architecture (with a block diagram)*
- *Integration within the system*
- *Links with external departments*

8.2. Hardware, System Software and Communication Requirements

8.2.1. Hardware Requirements

- *PC/printer distribution*
- *hardware configuration (diagrams and details)*
- *alternatives and comparison*

8.2.2. System Software Requirements

- *DBMS and 4GL alternatives, if any*
- *comparative analysis*
- *OS environment (and alternatives, if any)*

8.2.3. Communication Requirements

9. PROJECT IMPLEMENTATION PLAN

9.1. Change Management Plan

9.2. Phases and Prioritisation

9.3. Time Frames using Gantt charts

9.4. Risk and Mitigation Strategies

10. PROJECT BUDGETARY REQUIREMENTS

10.1. Capital Expenditure

10.2. Operational Expenditure

10.3. Cost for alternatives

11. PROJECT MONITORING AND TRACKING

11.1. Project Steering Committee

11.1.1. Role

- *Participate in the planning process*
- *Monitor the project*
- *Ensure adequate user commitment*

11.1.2. Structure

- *Senior management personnel (PS,PAS, Heads of Divisions)*
- *Senior Management, Solution Provider*
- *Programme Manager, CIB*

11.1.3. Frequency of Meeting

- *At least Monthly.*

11.2. Project Monitoring Committee

11.2.1. Role

- *Monitor the progress and direction of the project*
- *Ensure user participation in the decision-making process*

11.2.2. Structure

- *Project Coordinators from user Ministry/Department*
- *Officers from each section of Ministry/Department*
- *Programme Manager, CIB*
- *Project Manager, Solution Provider*

11.2.3. Frequency of Meeting

- *At least fortnightly.*



Communication Plan

Ministry/Department:

Project Title:

Date:

1. INTRODUCTION

[The purpose, objectives, scope and responsibility of the strategy]

2. COMMUNICATION PROCEDURE

[A description of (or reference to) any communication methods to be used. Any variance from corporate or programme management standards should be highlighted, together with a justification for the variance]

3. TOOLS AND TECHNIQUES

[Any communication tools to be used, and any preference for techniques that may be used, for each step in the communication process]

4. RECORDS

[What communication records will be required and where they will be stored (for example, logging of external correspondence)]

5. REPORTING

[Any reports on the communication process that are to be produced, their purpose, timing and recipients (for example, performance indicators)]

6. TIME OF COMMUNICATION ACTIVITIES

[States when formal communication activities are to be undertaken (for example, at the end of a stage) including performance audits of the communication methods]

7. ROLES AND RESPONSIBILITIES

[Describes who will be responsible for what aspects of the communication process, including any corporate or programme management roles involved with communication]

8. STAKEHOLDER ANALYSIS

[Identification of the interested party (who may include accounts staff, user forum, internal audit, corporate or programme quality assurance, competitors etc.)

- *Current relationship*
- *Desired relationship*
- *Interfaces*
- *Key messages*
- *Information needs for each interested party:*
 - *Information required to be provided from the project*
 - *Information required to be provided to the project*
 - *Information provider and recipient*

- *Frequency of communication*
- *Means of communication*
- *Format of the communication]*

Template for Documenting Comments on Proposals

Ministry/Department:

Project Title:

Document Name/Version:

Date:

Reference Document: <Enter Document name>

Document Version : <Enter Version of Document>

SN	Page	Section/reference	Comments	Action	Comments by
1.	xxx	Section yy :	Comments ABCD	ABCD should be written as XYZ	Mr. John Doe (Ministry of EFGH)
2.					



Software Requirements Specifications (SRS)

Ministry/Department:

Project Title:

Date:

One of the most important project deliverable from the supplier to the customer is the Software Requirements Specifications which helps:

- a) Software customers to accurately describe what they wish to obtain;
- b) Software suppliers to understand exactly what the customer wants;

The SRS should follow the model and adhere to the guidelines described in the "IEEE Recommended Practice for Software Requirements Specifications". Submitted SRS should cover the topics, among others, listed below:

1. Introduction

1.1 Purpose

1.2 Scope

1.3 Definitions, acronyms, and abbreviations

1.4 References

1.5 Overview

2. Overall description

2.1 Product perspective

2.2 Product functions

2.3 User characteristics

2.4 Constraints

2.5 Assumptions and dependencies

3. Specific requirements

Appendixes

Index

Details on each of the above topics are available from **IEEE Std 830-1998(R2009)** or latest documentation.

Software Design Description (SDD)

Ministry/Department:

Project Title:

Date:

One of the most important project deliverables submitted by the supplier to the customer is the Software Design Descriptions (SDD) document which shows how the software system will be structured to satisfy the requirements identified in the Software Requirements Specifications (SRS).

The SDD should follow the model and adhere to the guidelines described in the "IEEE Standard for Information Technology--Systems Design--Software Design Descriptions". Submitted SDD should cover the following, among others:

- *Decomposition description - Partition of the system into design entities*
- *Dependency description - Description of the relationships among entities and system resources*
- *Interface description - List of everything a designer, programmer, or tester needs to know to use the design entities that make up the system*
- *Detail description - Description of the internal design details of an entity*

Details on each of the above topics are available from **IEEE 1016-2009** or latest documentation.



User Acceptance Test Plan

Ministry/Department:

Project Title:

Date:

Test Case No	<Test Case No should follow a nested numbering style>		Module/Functionality under Test	<Enter summary of module or functionality being tested>	
S.No	Steps to be carried out (User Scenario)	Expected Result	Actual Result	Pass or Fail	Remarks
1.1					
1.2					
1.3					
1.4					
1.5					



User Acceptance Test Script

Ministry/Department:

Project Title:

Date:

USER ACCEPTANCE TEST SCRIPT FOR <PROJECT TITLE>		
Module: <MODULE or FUNCTIONALITY UNDER TEST>	Priority: <PRIORITY: HIGH, MEDIUM OR LOW>	Script ID: <SCRIPT ID>
Scenario: <Enter Use Case or User Flow Scenario to be tested here>		
Assumption Made: <List any assumption made>		

To be filled by <Customer>

Name of Tester: _____	Date Tested: ____/____/____	Test Status: Pass/Fail
Comments/Observation:		

Test Case 1: <Enter Test Case Name, test case should be similar as in Test Plan>

No	Steps	Expected Result	Actual Result	Outcome (Pass or Fail)	Remarks (Link to screenshots or PPT to describe error (if any))
1.1					
1.2					
1.3					
1.4					



User Acceptance Certificate

Date: *<Date of user acceptance>*

To: *<The Supplier Name and Contact>*

User Acceptance for Application Software

The application software *<name/title of application software>* has been tested successfully and the following have been addressed to the satisfaction of the *<Ministry/Department>*:

- (i) All requirements (including IT Security requirements) have been catered for;
- (ii) All bugs identified during UAT have been dealt with;
- (iii) Trainings on system administration and application software have been delivered
- (iv) All documentations have been provided

<Signature>

<Name of User Representative>

<Role>

<Ministry/Department>

Project Status Report

Project Name:

Ministry/Department:

Month Ending:

Date:

PROJECT STATUS SUMMARY

Percent Complete: **xx%**

Scope	Schedule	Cost	Risks	Quality
-------	----------	------	-------	---------

This section provides a quick executive overview of the status of the project. It is intended for high level management so it should not get too much into the details of the project. However, it should highlight anything specific which should be brought to their attention. The Scope/Schedule/Cost/Quality table above is a quick way to present a color coded dashboard for the status report.

1. WORK PLANNED FOR LAST WEEK

For this section you can copy the "Worked Planned for Next Week" section from last week's status report and paste it into this section.

2. WORK COMPLETED LAST WEEK

In this section you should provide a highlight of work performed and milestones and/or deliverables met during the past week.

3. WORK PLANNED FOR NEXT WEEK

Provide an overview of the work being performed during the next week and any milestones or deliverables you expect to meet.

4. OPEN ISSUES

This section should contain a list of open issues along with their status.

5. OPEN RISKS

This section should contain a list of all open risks (risks which have occurred, or are on the verge of occurring).

6. DELIVERABLES AND MILESTONES

This section is a quick table which shows the status of the project milestones and deliverables.

The first column is for the name of the Milestone or Deliverable as it's in the project plan. Planned is the planned date according to the approved project plan and actual is the actual date the milestone was met or deliverable was delivered. The status is a simple one or two word status such as; completed, on schedule, behind schedule, accepted, etc.

Milestone/Deliverable	Planned	Actual	Status



Issue Tracker

Ministry/Department:

Project Name:

Date:

Issue Identifier	Issue Type	Issue Description	Date Raised	Raised By	Severity	Status	Closure Date
<i>[Unique reference e.g. 0001]</i>	<i>[e.g. Request For Change, Off-specification, Problem or Concern]</i>	<i>[A statement describing the issue]</i>	<i>[Date issue originally raised]</i>	<i>[Individual or team who raised the issue]</i>	<i>[In terms of project's chosen scale]</i>	<i>[Current status and date of last update]</i>	<i>[Date issue closed]</i>
0001							
0002							
0003							



Project Closure Report

Project Name:

Ministry/Department:

Date:

1. PROJECT CLOSURE REPORT PURPOSE

Project Closure Report Purpose

[Replace this text with your own statement of purpose, or use the following sample.]

The Project Closure Report is the final document produced for the project and is used by senior management to assess the success of the project, identify best practices for future projects, resolve all open issues, and formally close the project.

2. PROJECT CLOSURE REPORT SUMMARY

A. PROJECT BACKGROUND OVERVIEW

Project Background Overview

[Replace this text with a brief description of the project background.]

- *What were the original goals, objectives, and success criteria?*
- *Refer to project overview statement and/or project charter for this information.*

B. PROJECT HIGHLIGHTS AND BEST PRACTICES

Project Highlights and Best Practices

Project Highlights:

- *[Highlight]*
- *[Highlight]*

Best Practices:

- *[Best practice]*
- *[Best practice]*

3. PROJECT PERFORMANCE

Project Performance

- *[Were all deliverables achieved with high quality and customer acceptance?*
- *If not, what were the reasons?*
- *Is achievement anticipated at a later date?]*

4. LESSONS LEARNED

Lessons Learned

[Replace this text with a list of successes and shortcomings to remember for the future.

- *Which activities and processes worked well?*
- *Which could have been improved, and how?]*

5. POST-PROJECT TASKS

Post-project Tasks

[Replace this text with a list of outstanding issues for this project.

- *What actions are not yet completed? Who is responsible for them?*
- *Which success criteria are not yet met? Which deliverables are not yet achieved?*
- *Which training requirements are still outstanding?*
- *This information can be summarized from details in the preceding sections.]*

6. PROJECT CLOSURE RECOMMENDATIONS

Project Closure Recommendations

[Replace this text with a list of recommendations arising from review of closure tasks.

- *The main recommendation would usually be to gain project closure approval from the Project Sponsor, including agreement that the project has fulfilled all of the requirements as documented and that the Project Sponsor is satisfied that all outstanding items have been satisfactorily addressed.]*

APPENDIX C – BACKGROUND INFORMATION

This section provides background information concerning project management best practices followed in this manual.

1. A GUIDE TO THE PROJECT MANAGEMENT BODY OF KNOWLEDGE (PMBOK)

A Guide to the Project Management Body of Knowledge (PMBOK Guide) (PMI 2013) is a recognized standard for the project management profession. The *PMBOK Guide* is the standard for managing most projects across many types of industries. This standard describes the project management processes, tools and techniques used to manage a project toward a successful outcome.

As per PMBOK Guide, a standard is a formal document that describes established norms, methods, processes and practices. The increasing adoption of project management indicates that the application of appropriate knowledge, processes, skills, tools and techniques can have a significant impact on project success in terms of cost, quality and time. The PMBOK Guide identifies that subset of the project management body of knowledge generally recognized as good practice.

1.1. Project Management Processes

The standards for Project Management define the project management processes and define the inputs and outputs for each process.

PMBOK Guide defines **forty-seven (47) project management processes** (Figure 1) for a project into **five (5) process groups**:

1. **Initiating** - Those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.
2. **Planning** – Those processes required to establish the scope of the project, refine the objectives and define the course of action required to attain the objectives that the project was undertaken to achieve.
3. **Executing** – Those processes performed to complete the work defined in the project management plan to satisfy the project specifications.
4. **Monitoring and Controlling** – Those processes required to track, review and regulate the progress and performance of the project and identify any areas in which changes to the plan are required and initiate the corresponding changes.
5. **Closing** - Those processes performed to finalise all activities across all Process Group to formally close the project or phase.

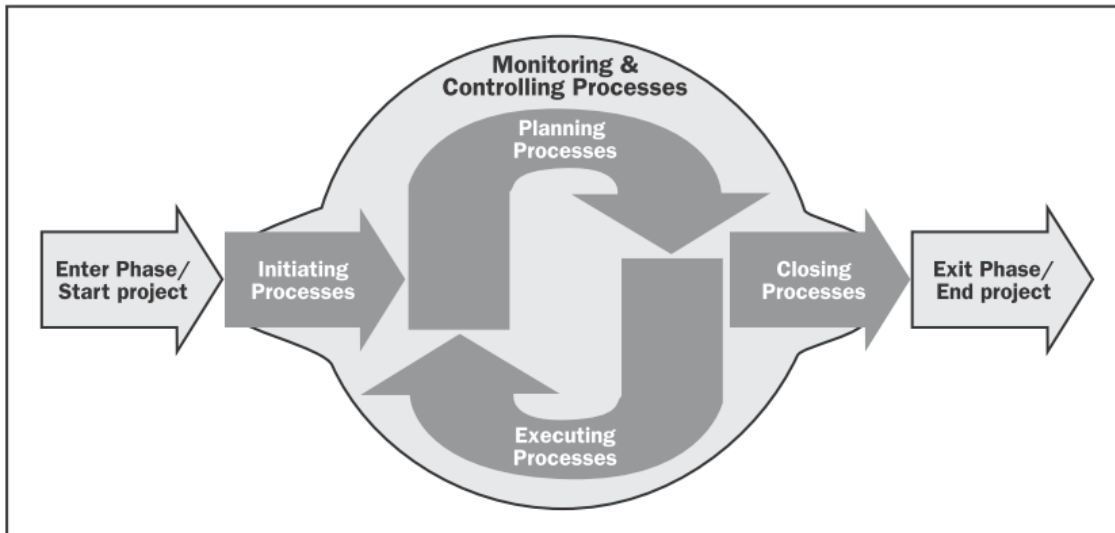


Figure 1 – PMBOK Guide - Project Management Process Groups¹

1.2 Knowledge Areas and Process Groups

PMBOK Guide defines the following **ten (10) Knowledge Areas** and the knowledge areas are mapped to the **five (5) Project Management Process Groups**. The knowledge areas regroup the **forty-seven (47) Project Management Processes** as follows:

- 1) **Project Integration Management** defines the processes and activities that integrate the various elements of project management. It includes the following:
 - Develop Project Charter
 - Develop Project Management Plan
 - Direct and Manage Project Work
 - Monitor and Control Project Work
 - Perform Integrated Change Control
 - Close Project or Phase
- 2) **Project Scope Management** shows the processes involved in ensuring that the project includes all the activities required for completing the project successfully. It includes the following:
 - Plan Scope Management
 - Collect Requirements
 - Define Scope
 - Create Work Breakdown Structure (WBS)
 - Validate Scope
 - Control Scope
- 3) **Project Time Management** focuses on the processes that are used to help ensure the timely completion of the project. It includes the following:

¹ Source: PMI 2013

- Plan Schedule Management
 - Define Activities
 - Sequence Activities
 - Estimate Activity Resources
 - Estimate Activity Durations
 - Develop Schedule
 - Control Schedule
- 4) **Project Cost Management** describes the processes involved in planning, estimating, budgeting and controlling costs so that the project can be completed within approved budget. It includes the following:
- Plan Cost Management
 - Estimate Costs
 - Determine Budget
 - Control Costs
- 5) **Project Quality Management** describes the processes involved in planning, monitoring, controlling and assuring the quality requirements of the project. It includes the following:
- Plan levels of Quality to be achieved
 - Perform Quality Assurance
 - Perform Quality Control
- 6) **Project HR Management** describes the processes involved in the planning, acquisition, development and management of the project team. It includes the following:
- Plan Human Resource Management
 - Acquire Project Team
 - Develop Project Team
 - Manage Project Team
- 7) **Project Communications Management** identifies the processes involved in the ensuring timely and appropriate generation, collection, dissemination, storage and ultimate disposition of project information. It includes the following:
- Plan Communications Management
 - Manage Communications
 - Control Communications
- 8) **Project Risk Management** describes the processes involved with identifying, analyzing and controlling risks for the project. It includes the following:
- Plan Risk Management
 - Identify Risks
 - Perform Qualitative Risk Analysis
 - Perform Quantitative Risk Analysis

- Plan Risk Responses
 - Control Risks
- 9) **Project Procurement Management** describes the processes involved with purchasing or acquiring products, services, or results for the project. It includes the following:
- Plan Procurement Management
 - Conduct Procurements
 - Control Procurements
 - Close Procurements
- 10) **Project Stakeholder Management** includes the processes required to identify the stakeholders, analyze their expectations and impact on the project, and engage stakeholders in project decisions and execution. It includes the following:
- Identify Stakeholders
 - Plan Stakeholder Management
 - Manage Stakeholder Engagement
 - Control Stakeholder Engagement

The process flow diagram (Figure 2) depicts an overall summary of the basic flow and interactions between Process Groups and specific stakeholders.

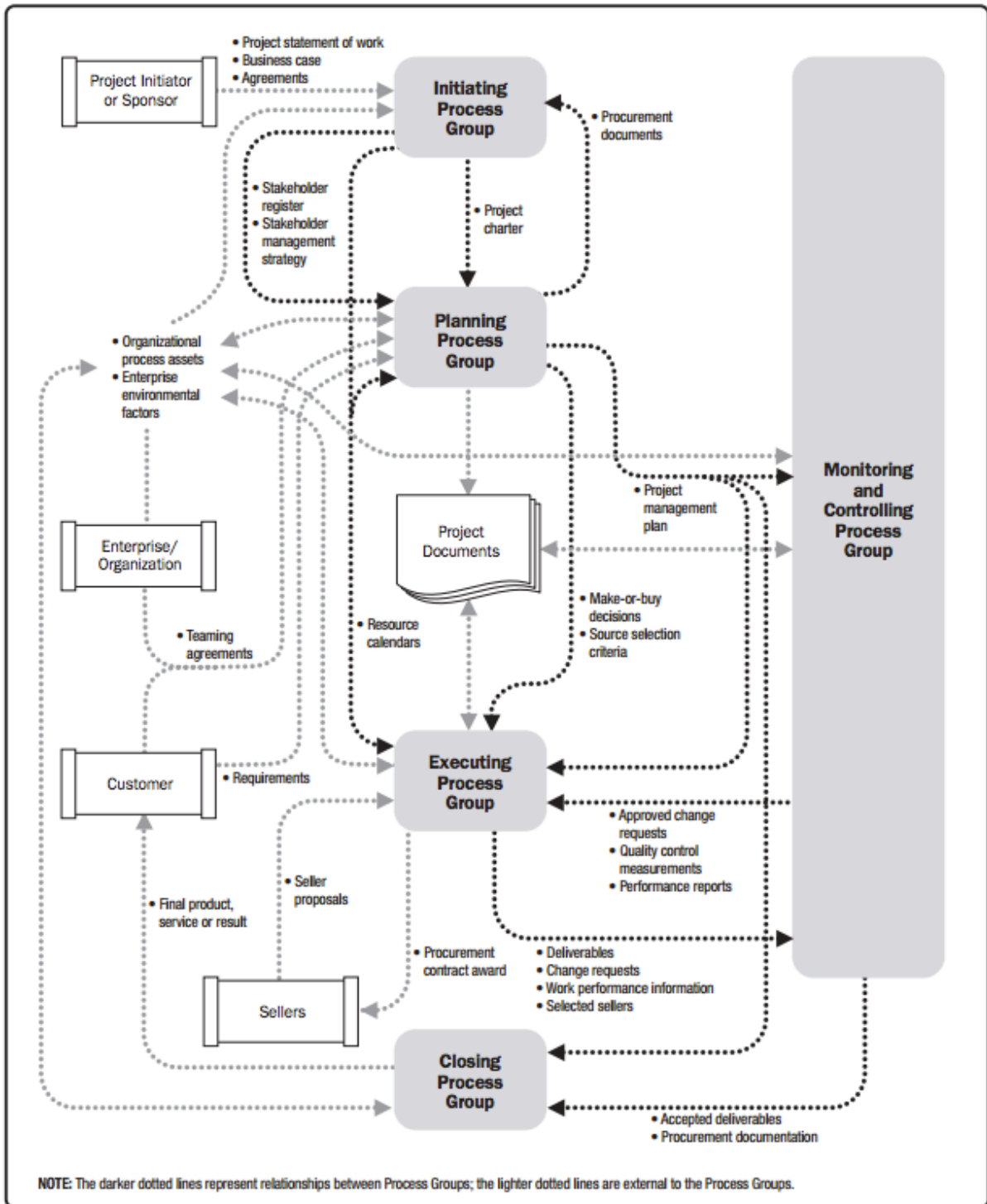


Figure 2 – PMBOK Guide - Interaction between Process Groups and Stakeholders²

² Source: PMI 2013

1.3 Mapping of 47 Project Management Processes into 5 Project Management Process Groups and 10 Knowledge Areas of PMBOK Guide

Knowledge Areas	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Project Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Work	Monitor and Control Project Work Perform Integrated Change Control	Close Project or Phase
Project Scope Management		Plan Scope Management Collect Requirements Define Scope Create WBS		Validate Scope Control Scope	
Project Time Management		Plan Schedule Management Define Activities Sequence Activities Estimate Activity Resources Estimate Activity Durations Develop Schedule		Control Schedule	
Project Cost Management		Plan Cost Management Estimate Costs Determine Budget		Control Costs	
Project Quality Management		Plan Quality Management	Perform Quality Assurance	Control Quality	
Project HR Management		Plan Human Resource Management	Acquire Project Team Develop Project Team Manage Project		

Knowledge Areas	Project Management Process Groups				
	Initiating	Planning	Executing	Monitoring & Controlling	Closing
			Team		
Project Communication Management		Plan Communications Management	Manage Communications	Control Communications	
Project Risk Management		Plan Risk Management Identify Risks Perform Qualitative Risk Analysis Perform Quantitative Risk Analysis Plan Risk Responses		Control Risks	
Project Procurement Management		Plan Procurement Management	Conduct Procurements	Control Procurements	Close Procurements
Project Stakeholder Management	Identify Stakeholders	Plan Stakeholder Management	Manage Stakeholder Engagement	Control Stakeholder Engagement	

Table 1 - Mapping of project management processes into Project Management Process Groups and Knowledge Areas of PMBOK Guide³

2. PRINCE2

PRINCE (**P**rojects **I**n **C**ontrolled **E**nvironments) established in 1989 by CCTA (the Central Computer and Telecommunications Agency), now the Office of Government Commerce (UK), is a structured method primarily intended for effective project management of government information system projects.

PRINCE2 (OGC 2009) was launched in 1996 in response to user requirements for improved guidance on project management on all projects, not just information systems. PRINCE2 is based on the experiences of scores of projects, project managers and project teams, who have contributed, some from their mistakes or omissions, others from their successes. PRINCE2 is a *de facto* standard used extensively by the UK government and is widely recognised and used in the private sector, both in the UK and internationally.

³ Source: PMI 2013

Processes, components and their relationship

PRINCE2 has a process-based approach to project management whereby processes define management activities to be carried out during the project. The processes are briefly outlined below:

1. **Starting up a Project:** It is a pre-project process, designed to ensure that the prerequisites for initiating the project are in place.
2. **Directing a Project:** This process runs from Starting up a Project (SU) until the project's closure.
3. **Initiating a Project:** The key product of this process is the Project Initiation Document, which defines the what, why, who, when and how of the project.
4. **Managing Stage Boundaries:** This process produces the information on which the Project Board will take key decisions on whether to continue with the project or not.
5. **Controlling a Stage:** This process describes the monitoring and control activities of the Project Manager involved in allocating work, ensuring that a stage stays on course and reacting to unexpected events.
6. **Managing Product Delivery:** The objective of this process is to ensure that planned products are created and delivered by the project.
7. **Closing a Project:** The purpose of this process is to execute a controlled close to the project.
8. **Planning:** Planning is a repeatable process and plays an important role in other processes

In addition, PRINCE2 describes a number of components that are applied within the appropriate activities. The relationship between the processes and components is depicted at figure 3.

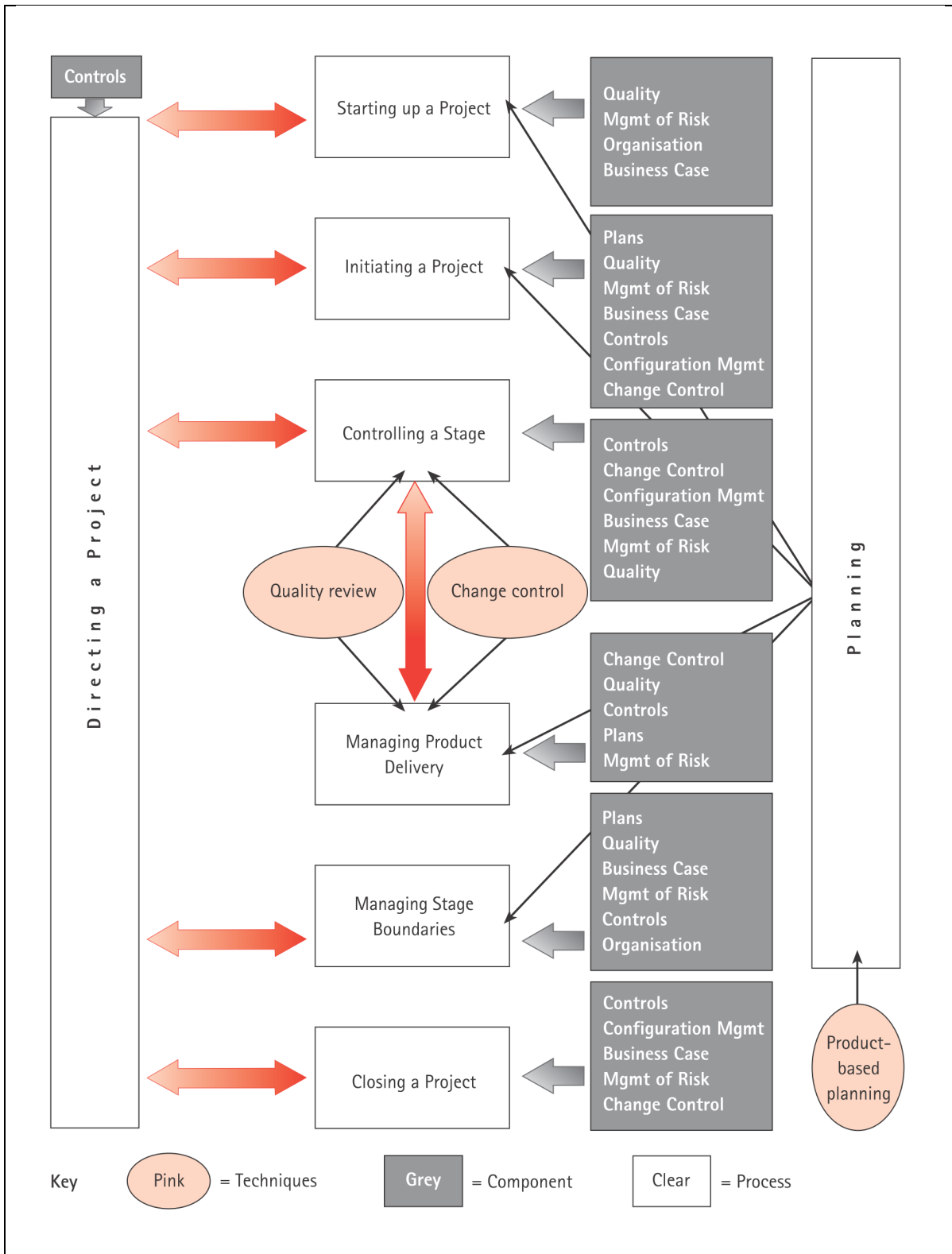


Figure 3 - PRINCE2 - Relationship between Processes and Components of Prince2⁴

⁴ Source: OGC 2009

Applicability

PRINCE2 may be used on any type of project in any environment. However, the way in which PRINCE2 is applied to each project varies considerably, and tailoring the method to suit the circumstances of a particular project is critical to its successful use.

What PRINCE2 does not cover?

PRINCE2 is not intended to cover all subjects relevant to project management. There are also certain aspects of project management that are well covered by existing and proven methods and are therefore excluded from PRINCE2. Examples of these aspects are:

- People management techniques such as motivation, delegation and team leadership
- Generic planning techniques such as Gantt charts and critical path analysis
- The creation and management of corporate quality management and quality assurance mechanisms
- Budgetary control and earned value analysis techniques.

PRINCE2 covers the management of the project and the management of the resources involved in carrying out the activities of the project. It does not cover the specialist techniques involved in the creation of the products. This is the job of other methods, although PRINCE2 must interface with them to enable information on such areas as estimating to be provided for project management.