

RESTRICTED

DEPARTMENT OF COMMUNITY SAFETY & TRANSPORT MANAGEMENT



ICT Portfolio Management Framework

ICTPMF-VERSION 1.4

This document outlines the scope and boundaries for managing ICT systems and projects, as well as the methods to be adopted and applied to each project undertaken.

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GLOSARY OF TERMS

TERM	DEFINITION
CLM	Collaborative Lifecycle Management
CSF	Critical Success Factor
DCS&TM	Department of Community Safety & Transport Management
EPMO	Enterprise Project Management Office
ICT	Information and Communication Technology
IT	Information Technology
IT/S	Information Technology/ Systems
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institution
PMO	Project Management Office
ROI	Return On Investment
WBS	Work Breakdown Structure

INTRODUCTION

Overview

ICT portfolio management is the application of systematic management to large classes of items managed by enterprise Information Technology (IT) capabilities. Examples of IT portfolios would be planned initiatives, projects, and ongoing IT services (such as application support). The promise of IT portfolio management is the quantification of previously informal IT efforts, enabling measurement and objective evaluation of investment scenarios. ICT portfolio management is an enabling technique for the objectives of IT Governance.

The DCS&TM has developed this framework so as to maintain a documented Project Portfolio Management which outlines the System and Methodology for use in all information technology and related projects. This document is designed to provide a guide on management of projects which aim to meet the needs of various departmental components /units including ICT, and to provide for the required oversight in a manner that is consistent with the PMI's *Guide on PMBOK*. It is recognized that the Project Management Methodology must be scalable to meet the requirements of both larger and smaller projects. Various templates have been created to support this Framework.

Purpose

The primary purpose of this document is to describe a systematic approach that is used by the DCS&TM in ICT portfolio management processes, project initiating, project planning, project managing (controlling and executing), and closing technology projects. This document describes the methodology and references other documents, templates, and outlines that are used in support of the methodology.

By defining the methodology, this document is intended to provide a common point of reference for talking and writing about the practice of project management for information technology and related projects within the DCS&TM. This common basis is intended to increase

the awareness and professionalism of those charged with the responsibilities defined in the methodology. The roles of the Executive Committee, Sponsor, Project Manager, Stakeholders, Technical and Business Leads and other team members are considered CSF. A common understanding of the requirements and the rationale behind those requirements are key factors for improving project results.

Benefits of this Framework

The agility of portfolio management is its biggest advantage over investment approaches and methods. Other benefits include central oversight of budget, risk management, strategic alignment of IT investments, demand and investment management along with standardization of investment procedure, rules and plans. ICT portfolio management allows the department to adjust the investments based upon the feedback mechanism built into the IT portfolio management.

ICT Portfolio Management

ICT portfolio management is distinct from IT financial management in that it has an explicit directive and strategic goal in determining what to continue investing in versus what to divest from. At its highest level of maturity, ICT portfolio management is accomplished through the creation of three portfolios:

1. Application Portfolio

Management of this portfolio focuses on comparing the spending on established systems based upon their relative value to the department. The comparison can be based upon the level of contribution in terms of IT investment's profitability. Additionally, this comparison can also be based upon the non-tangible factors such as department's level of experience with a certain technology, users' familiarity with the

applications, infrastructure, and external forces such as emerging new technologies and obsolescence of old ones.

- **BUSINESS APPLICATIONS:**

1. Basic Accounting System (BAS)
2. This is a financial management system that is designed to manage the finances in the Department.Walker System
3. This is a system designed to manage Departmental Financial System, the system is interfaced with BASPersonnel Salary (PERSAL)
4. This is a system that is designed to manage salaries in the DepartmentTraffic Management System (Traffman)
5. This is the system designed to manage traffic fines in the Department.National Traffic Information System (NaTis)
6. It is a system that is designed to register vehicles and for renewal of license disc, learner's/ drivers license Abnormal-Loads Vehicle System
7. It is a system that is designed to issues out permits for Abnormal Loads Vehicles.OLAS System
8. This system is designed to issue out public transport permits.MS Office Package is used for daily office activities.

- **Email Application:**

Novell groupWise is the application used for email services in the Department

- **Technical Application :**

Remedy System is used as a Desktop support system to administer reported computer related issues.

2. Infrastructure Portfolio

In the department Infrastructure Management (IM) shall consider management of essential operation components, such as policies, processes, equipments, data, human resources, and external contacts, for overall effectiveness. Infrastructure management is sometimes divided into categories of systems management, network management,

and storage management. The ability of the department to exploit IT infrastructure, operations and management sourcing/service solutions not only depends on the availability, cost and effectiveness of applications and services, but also with coming to terms with solution providers, and managing the entire sourcing process. In the quest to reduce costs, maximize IT quality of services and competitiveness by way of sourcing selective IT and services, the Department shall consider the management side of the equation to refrain from the risks of overpayments, cost overruns, unmet expectations and outright failures.

2.1 System Management:

- **Policies and Plans:**

- ❖ Corporate Governance of ICT Framework
- ❖ Governance and Management of ICT Framework
- ❖ ICT Security Policy
- ❖ ICT Charter
- ❖ ICT Continuity Plan
- ❖ ICT Portfolio Management Framework
- ❖ ICT Change Management Policy
- ❖ ICT User Account Management Policy

- **Equipments:**

- ❖ Personal Computers
- ❖ Laptops Printers
- ❖ Scanners (HP, Konica Minolta)
- ❖ Projectors and Screens (HP, Acer, Dell)
- ❖ External Hard Drives (Western Digital-WD Elements, Toshiba)
- ❖ Memory Sticks

- **External Contacts**

- ❖ Provincial IT
- ❖ Provincial Internal Audit
- ❖ State Information Technology Agency (SITA)
- ❖ Provincial Government Technology Officers Council (PGITOC)

3. Project Portfolio

This type of portfolio management specially addresses the issues with spending on the development of innovative capabilities in terms of potential ROI, reducing investment overlaps in situations where reorganization or acquisition occurs, or complying with legal or regulatory mandates. The management issues with project-oriented portfolio management can be judged by criteria such as ROI, strategic alignment, data cleanliness, maintenance savings, and suitability of resulting solution and the relative value of new investments to replace these projects.

Amongst others the following shall be considered as ICT Projects:

- Application Development
- Application Package Implementation
- Infrastructure
- Conversion
- Integration

- ❖ **Application Development.**

This type of project shall include the following:

- Business Logic

- User Interface
- Environment/Language
- Database
- Approaches- Waterfall, Iterative, and Agile

❖ **Application Package Implementation.**

- Customization Method
- Enterprise Resource Planning (ERP)- Brand and Components (Procurement etc.)
- Servers or Desktops
- Industry (Safety)

❖ **Conversion IT project**

- Data Clean up
- Data Mapping
- Staged vs. big-bang
- Audit checks

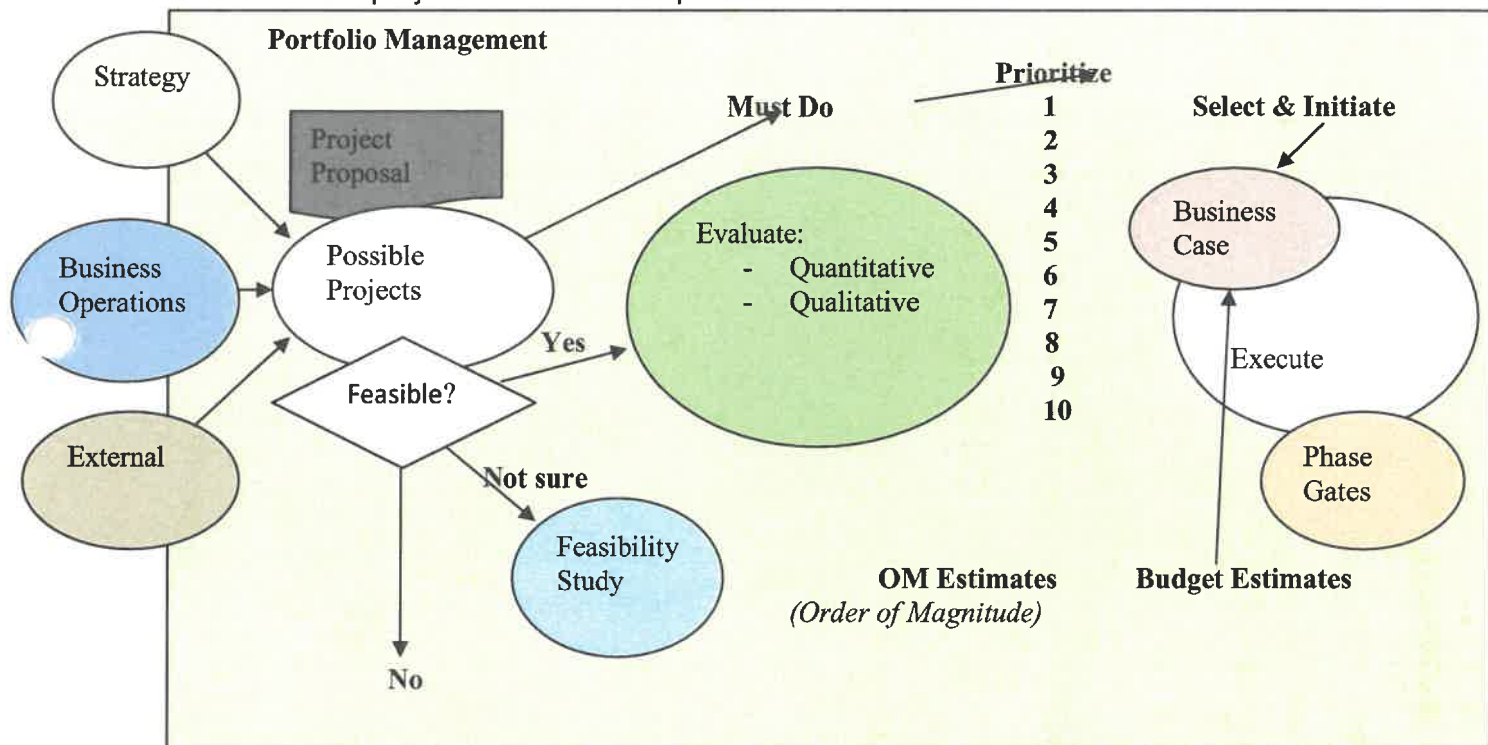
❖ **Infrastructure**

- Disaster Recovery
- Servers
- Network
- Middleware
- System Software
- Cloud Computing
- Performance
- Security
- High Availability

The above types of IT project shall be carried following the method as outlined in this document.

3.1 Project Selection Process:

The selection of project shall follow this process.



3.2 ICT Portfolio Management Process

The process in the IT portfolio management template includes capturing project proposals; creating estimations and business cases; and conducting reviews, high level planning, and capacity analysis before exporting the project to CLM. The project proposal must be endorsed by existing ICT Governance Structures as it moves through the process and finally be approved by the Accounting Officer. All ICT related project proposals from Business units shall be submitted to the Strategic Support Services for further processing. Later, the IT analyst can assign a submitter to be the proposal owner of the project proposal. As the proposal owner, the submitter is also responsible for

creating the project business case. A project can also be added through integration with IBM® Rational® System Architect.

The IT analyst determines whether the submitted proposal is actually a project before he or she completes the initial investigation and estimations. If a proposal is not accepted as a project, it can be transformed into a business need, such as an enhancement request against an existing application. A proposal that is not accepted can also be moved into a backlog; for example, if the proposal is really a defect in an existing application. The data in the backlog can be moved into other systems. Business needs can be included as scope items in the business case of the project. After the IT analyst finishes the initial investigation of the proposal, which might include high-level estimations of cost, scope, duration, and time of delivery, he or she can determine whether the proposal needs a business case. A project that is expected to have a low cost and short duration might not require a business case. Such proposals are moved directly to the prioritization phase. However, the majority of projects need business cases.

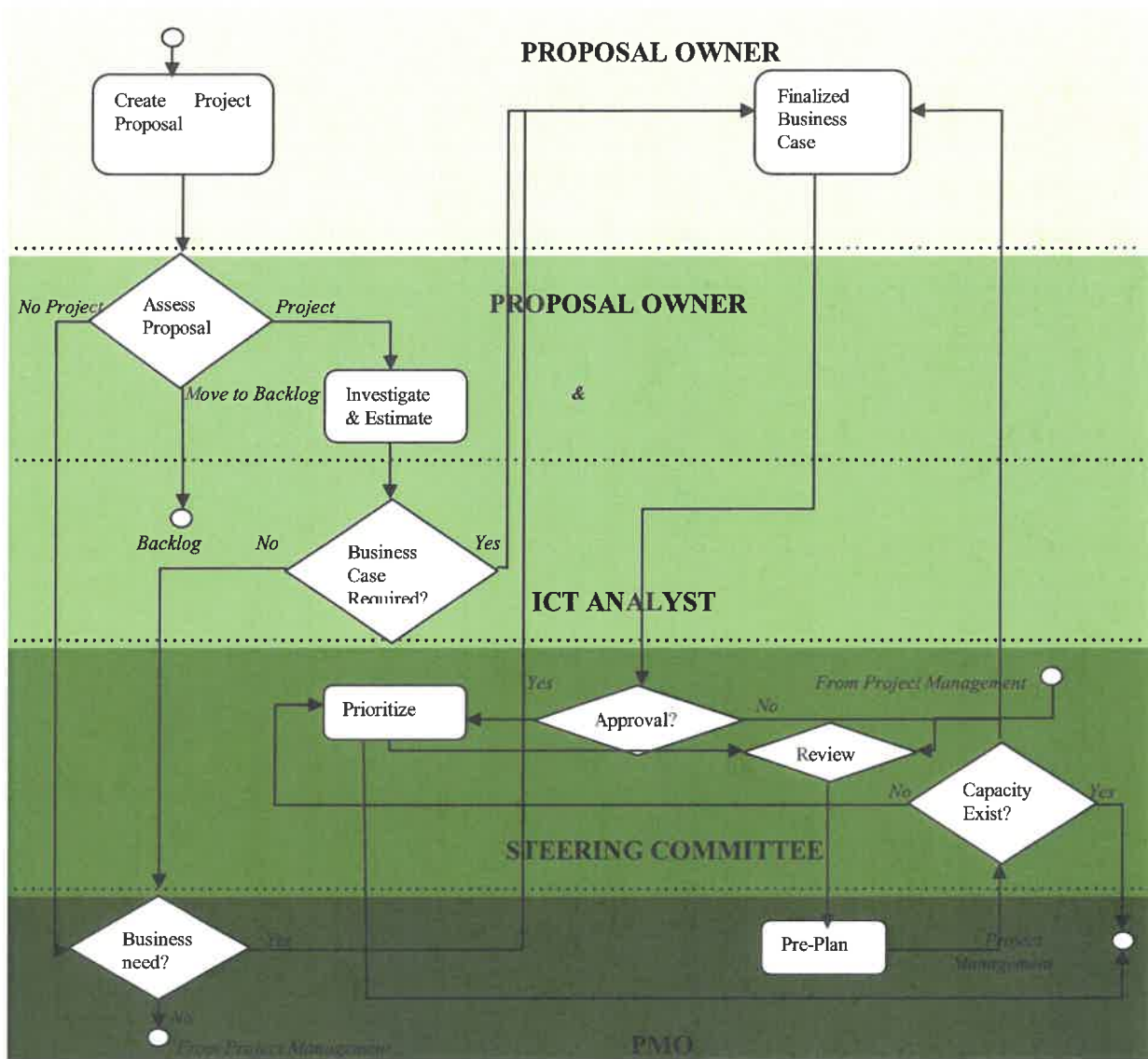
For a business case, the IT analyst selects a proposal owner. The proposal owner can be the same person as the project proposal submitter. The business case might include the financial plan for the project, a risk assessment, and an initial scope definition. The scope is refined during the pre-plan phase. The ICT Steering Committee decides on recommendation towards the approval of the project proposals that have business cases. If a proposal is approved, it moves into the list of project proposals to be prioritized. If it is not approved, it can either be rejected or be returned to the proposal owner for further elaboration on the business case. Prioritization is done on regular basis; for example, quarterly.

The ICT Steering Committee gathers the proposals and votes on them to understand their alignment with the strategic objectives, their value to the business, their cost, risk, and so forth. The result of the prioritization is a ranked list of projects, in which the projects that score the highest considering all criteria are those that the business will

focus on. Before the highest scoring proposals are approved, the proposals are reviewed against ongoing projects to balance the portfolio.

For projects that the ICT Steering Committee has voted as top priority, the Project Management Office (PMO) creates a pre-plan, or a high-level plan. In the pre-plan, the scope is defined in detail by associating business needs with the project, creating a financial plan, and determining the resource demand and the needed resources for the project. The proposal owner can also help to create the pre-plan. Before recommending projects for execution, the ICT Steering Committee reviews the pre-plan. If the pre-plan is approved, the PMO exports the project from Rational Focal Point to CLM. From that point, the project execution is monitored from Rational Focal Point. The project is measured to ensure that scheduled targets are met, the business needs are implemented on time, and the costs are within plan. When the project is complete in CLM, it is set as delivered in Rational Focal Point.

Figure 1. ICT Portfolio Management Process Flow Overview:



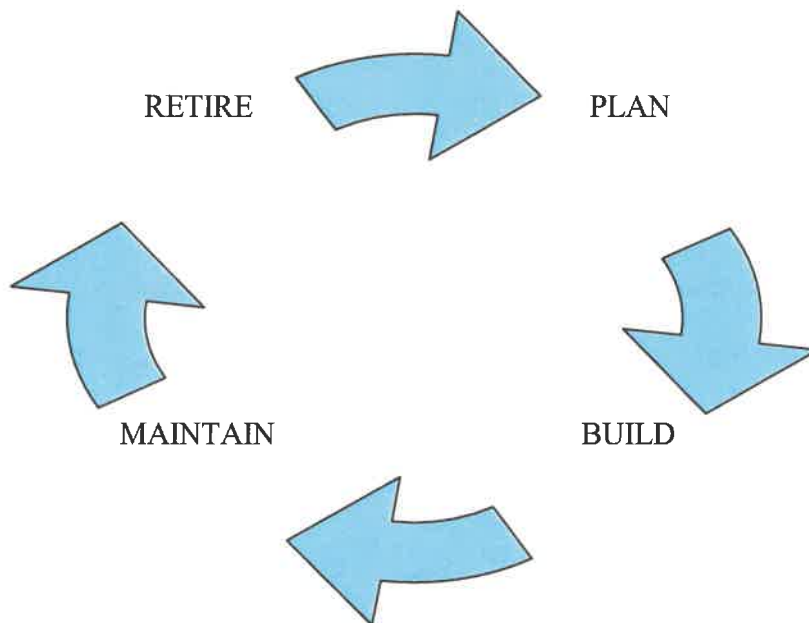
LEGENDS:

- PMO
- Steering Committee
- ICT Analyst & Proposal Owner
- Proposal Owner

4. Method of Implementing this Framework

This framework shall be implemented through the cycle below:

- Plan
- Build
- Maintain
- Retire



However any other different implementation method/ approach can still be applied if deemed necessary.

5. Project Methodology

Organization

Each Project Stage section of the document is organized as follows:

- Overview/description
- Critical Success Factors (CSF)
- Activities with CSF
- Action Plan Checklist (table)

- Deliverables

Underlined text refers to specific documents or templates.

5.1 STAGE I – PROJECT INITIATION

❖ Overview

Every project starts with an idea. That idea may be the result of a unique thought or design; it may respond to a regulatory mandate; it may answer a call for operational maintenance; or it may be as simple as providing scheduled updates. In essence, projects are generated for many different reasons; however, projects warrant special consideration for uniqueness, importance, cost, priority, and duration of effort. Accordingly, potential projects, in order not to underestimate their value-add and timing, need to be subjected to an assessment process that will allow the Sponsor, Stakeholders, Project Team, and other interested parties to validate the potential project benefits and timing. This assessment of potential projects occurs during the Initiation stage. During this stage, a potential project is conceptualized, justified, authorized, by the respective ICT Governance Committee(s) and funded by Finance Committee.

The purpose of the Initiation stage and the resulting deliverable, the Project Charter, is to help ensure the success of the DCS&TM's technology projects. The Project Charter documents the business case and other key facts. This process is designed to help guide thinking about technology projects, and to assist Project Managers and others in articulating and evaluating key aspects of a proposed project. The process of creating the project charter provides a basis for communication, understanding and agreement among Project Managers, departmental management, and other project Stakeholders regarding proposed technology projects. It allows for an evaluation of a proposed IT/S solution to a business problem or opportunity to help ensure that the solution is:

- Realistic

- A good investment
- Likely to improve operations
- Consistent with ICT investments/resources and DCS&TM strategies.

Projects will vary in terms of complexity, but all should have some level of a Project Charter. For some projects, it may take only a few hours or days to complete this document (Initiation phase); for others, it could take weeks. This document (Initiation phase) is critical to guaranteeing buy-in for a project. The goal during this stage, and specifically with the Project Charter, is not to generate a large document, but rather to provide information necessary to review, and thus determine whether the project should be initiated and carried into the Planning stage.

5.1.1 Critical Success Factors (CSF)

- Identification of the Sponsor
- Formal acceptance by the Sponsor of responsibility for the project, including achievement of the benefits and costs described in the Project Charter
- Acceptance of the Project Charter by the Sponsor
- Alignment with business and IT/S strategic plan/direction.

5.1.2 Activities

The following is a list of key activities necessary for successful development of a Project Charter and initiation of a project:

5.1.2.1 Assign a Project Champion/Leader

Although a Project Manager may not have yet been selected, a Project Champion/Leader should be assigned. The project champion (who may or may not be the eventual Project Manager) is responsible for defining the project purpose, establishing the CSFs, gathering strategic and background information, determining high-level planning data and developing estimated budgets and schedules for the life of

the project. The Project Champion will coordinate resources and activities to complete the necessary activities in order to develop the Project Charter.

Action Plan Checklist - Assign A Project Champion/Leader	
	Select a Project Champion or Leader
	Identify a team to assist with Initiation stage activities
CSF	Project Champion and Initiation stage team members are identified

5.1.2.2 Identify a Sponsor

The Sponsor is an executive responsible for the strategic direction of a project. A Sponsor should have the authority to define project goals, secure resources, and resolve Departmental and priority conflicts. Multiple studies indicate a direct correlation between the lack of project sponsorship and project failure. Well-meaning but costly mistakes include substituting a steering committee for a Sponsor, and assuming that a big-budget and highly visible project does not need a formal Sponsor.

The Sponsor's primary role is to:

- Champion technology projects from initiation to completion
- Participate in the development and selling of the project business case
- Present overall vision and business objectives for the project
- Assist in determining final funding and project direction
- Serve as executive liaison to key DCS&TM Stakeholders (i.e. Chief Directors and Directors)
- Support the Project Team.

Action Plan Checklist - <i>Identify a Sponsor</i>	
	Identify a Sponsor
	Obtain acceptance of project accountability from Sponsor
CSF	Sponsor is engaged

5.1.2.3 *Define the Business Need / Opportunity*

The need/opportunity statement should provide a general discussion, in business terms, of the needs or opportunities that are to be addressed. Typically, a need or opportunity relates to the need to:

- Provide necessary services more efficiently or effectively, or new services mandated by law
- Obtain needed information that is not currently available
- Reduce the costs of operations
- Generate more revenue
- Avoid unnecessary increase in a Department’s budget (e.g., “if a Department is required to file a Report by the fifth working day of each month, then an improvement in the reporting shall be realised.”)

The discussion of the need/opportunity should be stated in business terms and should provide an understanding of:

- What created the need, or how the opportunity was recognized
- The magnitude of the need/opportunity
- Contributing factors, such as workload increases or staff reductions, and fiscal constraints
- The extent to which the need/opportunity would be addressed if an appropriate alternative were implemented

- The consequences for the Department and its customers if the need or opportunity is not addressed.

By understanding the magnitude of the need or opportunity, the Department will be better able to estimate reasonable amounts of resources to expend in responding to it, and the extent to which a response will resolve it.

Action Plan Checklist - <i>Define the Business Problem/Opportunity</i>	
	Identify the Business Need/Opportunity
	Determine the magnitude of the Business Need/Opportunity
	Determine the extent to which the Business Need/Opportunity would be addressed if the project(s) were approved
	Determine the consequences for not addressing the Business Need/Opportunity
CSF	Business Need/Opportunity is documented in the <u>Project Charter</u>

5.1.2.4 *Identify Business Objectives and Benefits*

Business objectives define the results that must be achieved for a proposed solution to effectively respond to the need/opportunity. Objectives are the “success factors” against which the Department can measure how well the proposed solution addresses the business need or opportunity.

Each objective should be:

- Related to the problem/opportunity statement
- Stated in business and observable/measurable terms
- Realistically achievable.

In establishing objectives, decide whether the proposed solution will impact costs, Department operations, or both. Determine whether costs will be reduced /avoided, if timeliness or service quality will increase. If possible, the Department should

translate operational improvements into reduced costs. For example, a business objective could be to “reduce the average amount of overtime worked by 100 hours per month, thereby saving Rands (R) per year.”

Objectives should also identify:

- Cost savings and quality of service improvements
- Business process improvement opportunities.

Action Plan Checklist - <i>Identify Business Objectives and Benefits</i>	
	Determine Business Objectives and ensure that they relate to the Business Need/Opportunity
	Identify Business Process Improvement opportunities
	Determine benefits of meeting Business Objectives
	Ensure Business Objectives are achievable and measurable
	Determine Cost Savings and Quality of Service improvements
CSF	Business Objectives and Benefits are documented in the Project Charter

5.1.2.5 Define Overall Project Scope

Provide a concise, measurable statement of what the project will accomplish, and, where appropriate, what it will not try to accomplish. Project scope is documented at a high level in the Project Charter. Discuss the proposed solution and the business processes that will be used with the solution and describe their characteristics.

The level of detail in this section must be sufficient to allow for detailed scope and solution development in the Scope Statement, developed in the Planning stage.

Note: “Scope creep” – adding work without corresponding updates to cost, schedule and quality – may render original plans unachievable. Therefore, initial clarification of scope, and adherence to the plan throughout the project, are of the utmost importance.

Action Plan Checklist - Define Overall Project Scope	
	Determine what the project will accomplish
	Determine what the project will not accomplish
	Determine benefits of meeting Business Objectives
	Describe the proposed solution
CSF	Project Scope is documented in the <u>Project Charter</u>

5.1.2.6 Define Project Objectives

Define the objectives of the project as they relate to the goals and objectives of the department. Project objectives are used to establish performance goals – planned levels of accomplishment stated as measurable objectives that can be compared to actual results. Performance measures should be derived for each goal. These measures can be quantified to see if the project is meeting the department’s objectives. Project performance can then be traced directly to the Department’s goals, mission and objectives, enabling participants to correct areas that are not meeting those objectives.

Project objectives can be described in two ways:

- *Hard Objectives* – Relate to the time, cost and operational objectives (scope) of the product or process
- *Soft Objectives* – Relate more to how the objectives are achieved, and which may include attitude, behavior, expectations and communications.

Project objectives can also be seen as a set of objective statements, including:

- *Outcome* – Be specific in targeting an objective
- *Metrics* – Establish a measurable indicator(s) of the progress
- *Ownership* – Make the objective assignable to a person for completion
- *Time Frame* – State what can realistically be done with available resources.

Project objectives are communicated in the Project Charter to ensure that all Stakeholders understand the departmental needs that the project addresses.

Action Plan Checklist - Define Project Objectives	
	Define project objectives (hard and soft) as they relate to business objectives
	Define outcomes for each objective
	Define metrics for each objective
	Assign ownership for each objective
	Establish a time frame for each objective
CSF	Project Objectives are documented in the <u>Project Charter</u>

5.1.2.7 Identify Project Constraints and Assumptions

All projects have constraints, and these need to be defined from the outset. Projects have resource limits in terms of people, money, time, and equipment. While these may be adjusted up or down, they are considered fixed resources by the Project Manager. These constraints form the basis for managing the project. Similarly, certain criteria relevant to a project are assumed to be essential. For instance, it is assumed that a department will have the foresight to make the necessary budget appropriations to fund internal projects. Project assumptions need to be defined before any project activities take place so that time is not wasted on conceptualizing and initiating a project that has no basis for funding.

Describe the major assumptions and constraints on which this project is based.

Action Plan Checklist - Identify Project Constraints and Assumptions	
	Identify resource limits (people, money, time and equipment)
	Describe major project constraints
	Describe major project assumptions
CSF	Project Constraints and Assumptions are documented in the <u>Project Charter</u>

5.1.2.8 Ensure Alignment with Strategic Direction and Architecture

Occasionally, an organization will take on a project that does not have a clearly defined relationship to its business. To keep this from happening, the Department’s business strategy needs to be visible and understood so that the results of a project effort can be considered as a part of the Department’s strategic goals and business strategy. Using the Department’s business strategy and strategic objectives as a baseline for consideration for project initiation will save time and effort later.

Review the alignment of the proposed project with supporting documents such as:

- DCS&TM-Wide Strategic Plan
- ICT- Strategic Plan
- DCS&TM-Wide Enterprise Architecture
- ICT - Architecture
- DCS&TM-Wide Applications Portfolio
- ICT Applications Portfolio
- Current business and technical environment
- DCS&TM mandates.

Action Plan Checklist - Ensure Alignment with Strategic Direction and Architecture	
	Review DCS&TM-wide Strategic Plan
	Review DEPARTMENTAL UNIT Strategic Plan
	Review Department IT strategic plan
	Review DCS&TM -wide Enterprise Architecture
	Review Department Architecture
	Review DCS&TM -wide Applications Portfolio
	Review Department Applications Portfolio
	Review Current Business and Technical Environment
	Review Project to ensure alignment with Strategic Direction and Architecture
CSF	Project is aligned with Department and DCS&TM -wide Strategic Direction and Architecture

5.1.2.9 Identify and Engage Key Stakeholders

Stakeholders are individuals and organizations that have a vested interest in the success of the project. The identification and input of Stakeholders help to define, clarify, drive, change and contribute to the scope and, ultimately, the success of the project.

To ensure project success, the project management team needs to identify Stakeholders early in the project, determine their needs and expectations, and manage and influence those expectations over the course of the project.

Action Plan Checklist - <i>Identify Key Stakeholders</i>	
	Identify internal Stakeholders
	Identify external Stakeholders
	Determine Stakeholder needs and expectations
	Manage Stakeholder needs and expectations. Revise project objectives or assist Stakeholders in setting realistic expectations.
CSF	Key Stakeholders are identified and documented in the <u>Project Charter</u>
CSF	Key Stakeholder needs and expectations are identified and managed

5.1.2.10 Identify Key Potential Risks

Projects are full of uncertainty. As such, it is advisable to perform and document an initial risk assessment to identify, quantify and establish mitigation strategies for high-level risk events that could adversely affect the outcome of the project.

A *risk* is any factor that may potentially interfere with successful completion of the project. A risk is not a problem – a *problem* has already occurred; a risk is the recognition that a problem or opportunity might occur. By recognizing potential problems, the Project Manager can attempt to avoid or minimize a problem through proper actions.

Action Plan Checklist - <i>Identify Key Potential Risks</i>	
	Identify high-level risks
	Assess impact and probability of risks occurring
	Establish mitigation strategies for identified risks
CSF	Key potential risks and mitigation strategies are documented in the <u>Project Charter</u>

5.1.2.11 Determine Cost and Schedule Estimates

- **Cost**

Estimate the one-time development and acquisition costs, as well as the ongoing maintenance and operations costs expected to be associated with the project. Articulate the anticipated benefits of the project, including tangible and intangible operational benefits, cost savings, cost avoidance and other benefits.

Explain how the proposed alternative is to be funded by fiscal year. If the project is to be funded from multiple sources, indicate the percentage from each source. Also indicate whether funds have been budgeted for this purpose. If a request for budget augmentation will be submitted, identify the fiscal year.

- **Schedule**

Identify the high-level tasks for the project. For example, tasks could include the typical steps of any project life-cycle, and the following: procurement, conversion, training for end-users, training for technical staff, post-implementation support, etc.

Provide a schedule that includes the duration of critical tasks, major management decision points and milestones. Milestones should be products or major events that may be readily identified as completed or not completed on a specified due date.

When planning for phased project implementation, specific phases should have an independent and substantial benefit, even if no additional components are acquired. Describe the phases planned for this project and what each phase will deliver, or explain why phasing is not appropriate.

Many late or over-budget projects deemed “failures” are actually only estimating failures. We recommend re-estimating when starting each major project phase; only with confidence in the relative accuracy of an estimate is time and cost tracking useful

for anything but historical purposes. When an estimate is expected to be 35 percent off, variances from it seem a minor concern. Estimating from flawed requirements increases the risk of scope creep or delivery of an ill-fitting application needing major rework. Even with accurate requirements, though, estimating duration without a reasonable knowledge of the application development team's productivity is a known risk. Finally, although application development projects tend mainly to incur labor expense, the costs of any additional servers, middleware, tools and temporary staff should be included.

Action Plan Checklist - Determine Cost and Schedule Estimates	
Cost	
	Estimate the one-time development and acquisition costs
	Estimate the ongoing maintenance and operations costs expected to be associated with the project
	Articulate the anticipated benefits of the proposal (including tangible and intangible operational benefits, revenue generation, cost savings, cost avoidance and other benefits)
	Explain how the proposed alternative is to be funded by fiscal year. If the project is to be funded from multiple sources, indicate the percentage from each source.
Schedule	
	Identify the high-level tasks for the project
	Develop a schedule that includes the duration of critical tasks, major management decision points and milestones
	Describe the phases planned for this project and what each phase will deliver, or explain why phasing is not appropriate
CSF	Project Cost and Schedule are documented in the <u>Project Charter</u>

5.1.3 Deliverables

Project Charter

The Project Charter is a high-level business evaluation of the planned technology project. Since projects of different levels of complexity and risk require different levels of evaluation, the Project Charter should be prepared at a level of detail appropriate for the scope and complexity of the proposed technical solution. Within the Project Charter:

- For small, less complex, less critical projects, a high-level Business Case is sufficient.
- More costly, more complex, and critical (high impact) projects may require an enhanced or expanded Business Case.
- Development of the Business Case may continue after acceptance of the Project Charter. For example, depending on the project, a Request for Information (RFI) or a Request for Proposal (RFP) may be necessary to obtain all of the information necessary to fully develop the Business Case.

The Project Charter is a point-in-time document that provides the Sponsor with adequate information to determine if the proposed project has enough merit to continue to the next stage. If the proposed project lacks sufficient merit to continue, the Sponsor does not approve the Project Charter. If the Sponsor approves the Project Charter, it authorizes the team to present the Project Charter to the Project Selection Team. If the project is given high enough priority by the Project Selection Team, the Project Team, including additional resources, should then create the Scope Statement.

Note: The Scope Statement is generally the next funding checkpoint. If other intermediate steps are required, this should be stated and tracked to ensure the project remains in control.

5.2 STAGE II – PROJECT PLANNING

Project Planning follows the Project Initiation stage and is considered to be the most important stage in project management. Project Planning is not a single activity or task. It is a process that takes time and attention. Project Planning defines the project activities and describes how the activities will be accomplished. Time spent up-front identifying the proper needs and structure for organizing and managing projects saves countless hours of confusion and rework in the Managing (Execution and Controlling) stage of the project.

The purpose of the Planning stage is to:

- More clearly define project scope
- Establish more precise cost and schedule of the project (including a list of deliverables and delivery dates)
- Establish the work organization
- Obtain management approval
- Provide a framework for management review and control.

Without planning, a project's success will be difficult, if not impossible. Team members will have limited understanding of expectations; activities may not be properly defined; and resource requirements may not be completely understood. Even if the project is finished, the conditions for success may not have been defined. Project Planning identifies several specialized areas of concentration for determining the needs for a project. Planning will involve identifying and documenting scope, tasks, schedules, risk, quality and staffing needs. The identification process should continue until as many of the areas as possible of the chartered project have been addressed.

Inadequate and incomplete Project Planning is the downfall of many high-profile, important projects. An adequate planning process and Project Plan will ensure that resources and team members will be identified so that the project will be successful.

The planning process includes the following steps:

- Estimate the size of the project
- Estimate the technical scope of the project
- Estimate the resources required to complete the project
- Produce a schedule
- Identify and assess risks
- Negotiate commitments.

Completion of these steps and others is necessary to develop the Project Plan. Typically, several iterations of the planning process are performed before a plan is actually completed.

5.2.1 Critical Success Factors

- Identification of Project Manager
- Project Manager with a track record of success on similar projects. Discrepancies between previous experience and the demands of the current project must be explained.
- Ensure that key resources are available as required by the Project Plan
- Ensure that major functional deliverables will arrive in six (6)-month to twelve (12)-month intervals.

5.2.2 Activities

The following is a list of key activities required to plan a project:

5.2.2.1 Assign Project Manager

Selection of a Project Manager is not easy, nor is it something that should be taken lightly. A Project Manager's skills and actions are a direct reflection of the Department's commitment and competence in project management. A Project Manager's daily responsibilities typically include some or all of the following:

- Provide day-to-day decision-making on critical project issues as they pertain to project scope, schedule, budget, methodology and resources
- Providing direction, leadership and support to Project Team members in a professional manner at project, functional and task levels
- Ensure project documentation is complete and communicated (e.g., Project Charter, Scope Statement, Project Schedule, Project Budget, Requirements, Testing and others)
- Identify funding sources and facilitate the prioritization of Project Requirements
- Manage the Planning and Control of Project Activities and Resources
- Develop and manage Project contracts with vendors
- Report project components status and issues to the project Sponsor and the Executive Committee
- Using, developing and improving upon the project management methodology within the department
- Providing teams with advice and input on tasks throughout the project, including documentation, creation of plans, schedules and reports
- Resolving conflicts within the project between resources, schedules, etc.
- Influencing Stakeholders and team members in order to get buy-in on decisions that will lead to the success of department projects
- Delegating responsibility to team members.

Taking these responsibilities into account, it is easy to see that a Project Manager should not necessarily be selected from a department based strictly on tenure or function, but rather

based on a combination of other strengths. A Project Manager should be selected based on the following skills and experience:

- Project management methods and tools skills
- Interpersonal and team leadership skills
- Basic business and management skills
- Experience within the project’s technical field
- Respect and recognition among peers within the department

Project Managers who are selected to lead a project but who were not involved in the Initiation stage (for whatever reason) should be reminded that it is critical to review the Project Initiation stage documentation. These documents are the agreed-upon foundation for which the project was created and the catalyst for the creation of the Project Plan.

Action Plan Checklist - <i>Assign Project Manager</i>	
	Assign Project Manager
	Project Manager reviews Project Charter and other Initiation stage outcomes
	Project Manager establishes a Project Planning team
CSF	Project Manager is assigned
CSF	Project Planning team is established

5.2.2.2 Refine Project Scope

The development of a Project Scope Statement provides the basis for future project decisions. This statement is of singular importance to the project because it sets the overall guidelines as to the size of the project. The content of this statement, at a minimum, will include the following:

- *Project Results/Completion Criteria:* What will be created in terms of deliverables (and their characteristics) and/or what constitutes a successful phase completion. A link to the Phase Exit Plan is useful here.
- *Approach to Be Used:* What type of processes or technology will be used
- *Content of the Project:* What is and is not included in the work to be done
- *Approval by Sponsor and Key Stakeholders.*

Action Plan Checklist - Refine Project Scope	
	Define all deliverables
	Define all milestones
	Develop a deliverable acceptance process
	Develop a process for acceptance of systems
	Describe the Technical Approach for the solution
	Describe the Business Approach for the solution
CSF	Project <u>Scope Statement</u> is a component of the <u>Project Plan</u>
CSF	Scope Statement is Approved by the Sponsor and Key Stakeholders

5.2.2.3 Determine Procurement and Sourcing Strategy

It is very uncommon for the department to be able to create or supply all the resources, materials, etc., necessary to complete a project internally. In those circumstances where it is necessary to go outside the department (or DCS&TM), the response is to purchase the product or service from an external source or enter into a contract with an outside vendor to perform a service or develop the product for the department.

Develop a Procurement and Sourcing Strategy that identifies those needs of the project that can be met by purchasing products or services from outside the department (or DCS&TM). Details of this strategy are entered into the Procurement Plan document. The Procurement and Sourcing Strategy deals with the following:

What to Procure

- How does this product serve the needs of the project and the department (or DCS&TM) as a whole?
- Does the product or something similar already exist somewhere else within the department (or DCS&TM)?
- Is there a service provider available in the marketplace for this product?
- Does the department (or DCS&TM) have the means (staff, money, contract, etc.) to produce or to acquire the product?

When to Procure

- *Make-or-Buy Analysis:* This is a simple method to determine the cost-effectiveness of creating a product in-house as compared to the cost of buying the product or having it produced outside the department. All costs, both direct and indirect, should be considered when performing a make or buy analysis. The costs should then be compared with each other with consideration given to any compelling argument on either side by the Project Team. Consideration should also be given to the potential of leasing vs. purchasing items. This could save money for the department if cost is applied correctly against the useful life of the product or service supplied. Many of the decisions will be based on the length of need for the item or service, as well as the overall cost.
- *Expert Judgment:* This process uses the expertise of people from within and outside the department who have knowledge or training in the area in question to determine what steps should be taken. These people review the needs and the costs and deliver their opinion for consideration in the procurement decision.

How to procure (contract types)

- *Fixed-Price/Lump-Sum Contract:* This is a contract that involves paying a fixed, agreed-upon price for a well-defined product or service. Special consideration must be given to

these contracts to ensure that the product is well defined to reduce risk to both the DCS&TM and the contractor.

- *Cost Reimbursement Contract:* This contract type refers to a reimbursement to the contractor for actual cost of producing the product or service. Costs within the contract are classified as direct (e.g., salaries to staff of the contractor) and indirect (e.g., salaries of corporate executives for the contractor). Indirect costs are normally based on a percentage of direct costs.
- *Unit Price Contract:* The contractor is paid a preset amount for each unit (e.g., R10 per widget produced) or unit of service (e.g., R50 per hour of service) produced. The contract equals the total value of all the units produced.

How Much to Procure

- Will there be need beyond the immediate project for this product?
- How much of the budget has been allocated for this product?
- Is the need for the product clearly defined enough for the department to know exactly how much of the product will be needed?
- Develop framework for contract/vendor administration.

Action Plan Checklist - Determine Procurement and Sourcing Strategy	
	Determine what to procure
	Determine when to procure
	Determine how to procure
	Determine how much to procure
CSF	The Procurement and Sourcing Strategy is a component of the <u>Project Plan</u>. Details can be found in the <u>Procurement Plan</u> document.

5.2.2.4 Refine Project Schedule

- **Determine Project Phasing**

When planning for phased project implementation, specific phases should have an independent and substantial benefit, even if no additional components are acquired. Describe the phases planned for this project and what each phase will deliver, or explain why phasing is not appropriate.

- **Develop a Work Breakdown Structure (WBS)**

The WBS provides the capability to break the scope into manageable activities, assign responsibility to deliver the project scope, and establish methods to structure the project scope into a form that improves visibility for management. The WBS also requires that the scope of the overall project be documented.

A WBS is a hierarchical representation of the products and services to be delivered on a project. Elements of scope are decomposed to a level that provides a clear understanding of what is to be delivered for purposes of planning, controlling and managing project scope. In its entirety, a WBS represents the total scope of a project.

A WBS is neither a schedule nor an organizational representation of the project; instead, it is a definition of what is to be delivered. Once the scope is clearly understood, the Project Manager must determine who will deliver it and how it will be delivered. This is the one planning tool that must be used to ensure project success on any size project.

- **Identify Activities and Activity Sequences Based On Project Scope and Deliverables**

The WBS reflects activities associated with overall project management, requirements, design, implementation, transition management, testing, training, installation and maintenance. The Project Manager is responsible for defining all top-level tasks associated with a project and then further decomposing them as planning continues.

WBS tasks are developed by determining what tasks need to be done to accomplish the project objective. The choice of WBS is subjective and reflects the preferences and judgment of the Project Manager. As levels of the WBS become lower, the scope, complexity and cost of each subtask become smaller and more accurate. The lowest-level tasks, or work packages, are independent, manageable units that are planned, budgeted, scheduled and controlled individually.

One of the most important parts of the Project Planning process is the definition of activities that will be undertaken as part of the project. Activity sequencing involves dividing the project into smaller, more-manageable components (activities) and then specifying the order of completion. Much of this has already been done within the process of creating the WBS. No matter how the WBS has been broken down, by the time the Project Manager gets to the activity level, the activities should represent the same level of effort or duration.

- **Estimate Activity Duration, Work Effort, and Resource Requirements**

There is no simple formula to define how detailed a work breakdown needs to be. There are, however, some helpful guidelines for completion:

- ❖ Break down the work until accurate estimates of cost and resources needed to perform the task are provided.
- ❖ Ensure that clearly defined starting and ending events are identified for the task. These may be the production of a deliverable or the occurrence of an event.
- ❖ Verify that the lowest-level tasks can be performed within a reasonable period of time. Each project must define “reasonable.” If the time period to complete a task is too long, an accurate project status in the Managing (Execution and Controlling) stage may not be possible. An industry-standard rule of thumb is to make work packages that can be completed within time frames of two weeks (80 effort hours).
- ❖ Verify that people assigned to the project are all assigned a WBS task.

- **Determine Activity Dependencies**

The WBS denotes a hierarchy of task relationships. Subtask completion eventually rolls up into task completion, which ultimately results in project completion. There can, however, also be relationships between tasks that are not within the outlined hierarchy (perhaps from other projects). These relationships need to be noted. If the tasks are not organized efficiently, it becomes difficult to schedule and allocate resources to the tasks.

- **Develop Project Schedule**

Following the definition of project activities, the activities are associated with time to create a project schedule. The project schedule provides a graphical representation of predicted tasks, milestones, dependencies, resource requirements, task duration and deadlines. The project's master schedule links all tasks on a common time scale. The project schedule should be detailed enough to show each work breakdown structure task to be performed, name of the person responsible for completing the task, start and end date of each task, and expected duration of the task.

Action Plan Checklist - Refine Project Schedule	
	Determine Project Phasing
	Develop a Work Breakdown Structure (WBS)
	Identify activities and activity sequences based on project scope and deliverables
	Estimate activity duration, work effort and resource requirements
	Determine activity dependencies
	Develop Project Schedule
CSF	Detailed Project Schedule is completed

5.2.2.5 Define Project Organization and Governance

Every department has a limited number of resources to perform tasks. A Project Manager's primary role is to find a way to successfully execute a project within these resource constraints. Resource planning is comprised of establishing a team possessing the skills required to perform the work (labor resources), as well as scheduling the tools, equipment and processes (non-labor resources) that enable completion of the project.

- **Identify the Project Sponsor**

The Sponsor acts as the principal decision-making authority regarding the strategic direction of the entire project. The Sponsor also provides executive project oversight and conduct regular decision-making on critical project issues as they pertain to project scope, schedule, budget, methodology, resources, etc.

- **Identify Required Skill Sets by Role**

It is helpful in the planning process to develop a list of skills required, first for execution of the project and then for execution of each task. This skills list may then be used to determine the type of personnel required for the task.

- **Develop Project Organization**

Project organization is used to coordinate the activity of the team and to define the roles and responsibilities of team members. Project organization is needed for every project, and the Project Manager must always be identified.

The optimal size of the Project Team is driven by three principal factors; the total number of tasks to be performed, the effort needed to perform the tasks, and time frame for the project's completion.

The larger the project, the more critical the organizational structure becomes. In a small project, a single team member may be responsible for several functions, whereas in a large project, each function might require full-time attention. A very large project, for instance, often requires a deputy Project Manager. A small project might have the

senior technical staff member serving as a Project Manager. Definition of the project organization is a critical part of the planning process.

Confusion and lack of productivity are the result of poor project organization. This is where many projects run into trouble. A good organization facilitates communication and clearly defines roles and responsibilities.

- **Assign/Acquire Project Team Members**

A project needs to establish its pool of available resources. The resource pool typically specifies the type, level (e.g., skill and experience), and time period that the resource is available.

The Project Manager pragmatically assesses the skills of the available people on the project. The Project Manager's job is to determine the risks associated with the available skills and to build a plan that realistically accounts for those skills. Unfortunately, skill level is not a yes/no factor. People have varying degrees of skill, and the Project Manager needs to determine the level of schedule adjustment that should be made based on the staff skill level.

Where staff with the necessary skills is largely unavailable for assignment on the project, the Project Manager has an option to hire the necessary talent or contract services to perform the work.

- **Backfill Roles for Assigned Team Members (depending on resource requirements)**
- **Update Project Schedule (e.g., load resources)**
- **Create a Resource Plan Document (have it reviewed and gain acceptance)**

Action Plan Checklist - Define Project Organizations and Governance

	Identify the Project Sponsor
	Identify required skill sets by role
	Develop project organization
	Assign/acquire Project Team members
	Backfill roles for assigned team members (depending on resource requirements)
	Update project schedule (e.g., load resources)
	Create the <u>Resource Plan</u> document
CSF	Project Sponsor is committed to project
CSF	Project Organization and Reporting Structure are documented
CSF	Project Roles and Responsibilities are documented
CSF	Resource Plan is documented
CSF	Project Team members are assigned and committed to the project
CSF	Project Schedule is loaded with actual resources
CSF	Resource Plan is accepted

5.2.2.6 Identify Other Resource Requirements

All Project Teams require the tools to successfully perform the tasks assigned. In scheduling resources, the Project Manager must ensure that both people and the equipment necessary to support those people are available simultaneously. The Project Manager will:

- **Determine Facility Needs**

The need for adequate workspace is often overlooked when planning a project. If a 15-member Project Team is going to start work, there must be a facility to house the team. Ideally, the team should be placed in contiguous space (co-located) to facilitate interaction and communication. Team spirit and synergy is enhanced and chances for

project success are increased when everyone is close together. While this may not always be feasible, it is a goal worth striving toward.

- **Determine infrastructure, equipment and material needs**

In addition to workspace, equipment for the team should be included in the Resource Plan. Ensuring the availability of equipment at critical points in the project is key in planning a successful project. Efficiency and morale are negatively affected by unavailability of equipment needed to perform a task. When considering equipment, it is also important to remember to give each team member the right tools (for example computer software) they need to do the job. Also, it is essential that information exchange and communications tools are provided for Project Team members and project Stakeholders.

Update the Resource Plan Document

<i>Action Plan Checklist - Identify Other Resource Requirements</i>	
	Determine facility needs
	Determine infrastructure, equipment and material needs
	Update the <u>Resource Plan</u> document
CSF	<u>Resource Plan</u> is updated
CSF	All resource requirements are identified

5.2.2.7 Establish Project Life-Cycle Phase Checkpoints

To ensure that the project progresses satisfactorily, management checkpoints or milestones should be clearly defined with planned dates to measure progress. Checkpoints are high-level milestones. Senior management uses them to approve the completion of a phase or milestone and as go/no-go decision points to proceed with the project. The checkpoints ensure that the products and services delivered meet the project objectives in the time frame established by senior management. Project milestones are recorded in the Project Milestones document.

- *Phase Exit Criteria* are deliverables, approvals or events that must have occurred in each phase before the Project Team is allowed to declare that phase complete.
- *Phase Entrance Criteria* are materials, personnel, approvals or other matters that must be available before the Project Team can begin the next Phase. The Phase Exit Plan document records this information.

Action Plan Checklist - Establish Project Life-Cycle Phase Checkpoints	
	Establish management checkpoints or milestones with clearly defined planned dates to measure progress
	Establish entrance criteria for each phase
	Establish exit criteria and associated deliverables for each phase
	Determine funding requirements for each phase
	Prepare the Phase Exit Plan document, have it reviewed and gain acceptance
CSF	Project Life-Cycle Phase Checkpoints are established (including entrance and exit criteria)
CSF	<u>Phase Exit Plan</u> is accepted
CSF	Phased Funding Requirements are determined

5.2.2.8 Refine Project Cost Estimate and Budget

Budget planning is done in parallel with project schedule development. Budgeting, performed at the initial stages of Project Planning, is the determination of costs associated with the defined activities. The steps associated with budgeting are highly dependent on both the estimated lengths of tasks and the resources assigned to the project.

Initial budgetary estimates are often based on availability of funds or may be dictated by legislation or grant size. These parameters may or may not coincide with the actual funds

needed to perform the project. For this reason, budget estimates are refined in the Planning stage until they are baselined at the beginning of the Managing stage.

Budgeting serves as a control mechanism where actual costs can be compared with and measured against the budget. The budget is often a firmly set parameter in the execution of the project. When a schedule begins to slip, cost is proportionally affected. When project costs begin to escalate, the Project Manager should revisit the Project Plan to determine whether scope, budget or schedule needs adjusting.

To develop the budget, the applicable cost factors associated with project tasks are identified. The development of costs for each task should be simple and direct and consist of labor, material and other direct costs. Cost of performing a task is directly related to the personnel assigned to the task, the duration of the task, and the cost of any non-labor items required by the task.

Budget estimates are obtained from the people responsible for managing the work efforts. They provide the expertise required to make the estimate and provide buy-in and accountability during the actual performance of the task. These team members identify people or labor categories required to perform the work and multiply the cost of the labor by the number of hours required to complete the task. Determining how long the task performance takes is the single most difficult part of deriving a cost estimate. The labor costs should factor in vacation time, sick leave, breaks, meetings and other day-to-day activities. Not including these factors jeopardizes both scheduling and cost estimates.

Non-labor charges include such items as material costs, reproduction, travel, and cost of capital (if leasing equipment), computer center charges and equipment costs.

All of this information is captured in the Project Budget document.

Action Plan Checklist - Refine Project Cost Estimate and Budget	
	Identify the applicable cost factors associated with project tasks. The development of

Action Plan Checklist - Refine Project Cost Estimate and Budget	
	costs for each task should be simple and direct and consist of labor, material and other direct costs.
	Identify people or labor categories required to perform the work and multiply the cost of the labor by the number of hours required to complete the task
	Include non-labor charges such as material costs, reproduction, travel, cost of capital (if leasing equipment), computer center charges, and equipment costs
CSF	Budget includes costs for all one-time and recurring costs
CSF	Budget includes labor costs for all resources (e.g., contractors and DCS&TM employees)
CSF	The <u>Project Schedule</u> has been updated with cost factors
CSF	The <u>Project Budget</u> document is accepted and baselined

5.2.2.9 Identify Potential Project Risks

A risk is any factor that may potentially interfere with successful completion of the project.

A risk is not a problem: *a problem* is a situation that has already occurred; *a risk* is the recognition that a problem might occur. By recognizing potential problems, the Project Manager can attempt to avoid or minimize a problem through proper actions.

It is important to plan for the risk management process to ensure that the level, type and visibility of risk management are commensurate with both the risk and importance of the project to the organization.

This activity should define the approach, tools, and data sources used to perform risk management on this project. Different types of assessments may be appropriate, depending

upon the project stage, amount of information available, and flexibility remaining in risk management.

The Project Team should identify potential project risks in addition to key risks identified during the initiation stage. For each identified risk, the team should:

- Assess impact and probability of risk occurring
- Assign a risk priority
- For high-priority risks, determine a risk response approach including any contingency plans.

The Project Team’s approach to risk is documented in the:

- Risk Management Schedule – A detailed schedule for risk-related activities
- Risk Management Plan – How the team will manage risk throughout the project.

Actual data regarding identified risks can be found in the Risk Response Plan document (details all identified risks, risk priorities, contingency plans, etc.).

Action Plan Checklist - <i>Identify Potential Risks</i>	
	Define the approach, tools and data sources used to perform risk management on this project. Record this in the <u>Risk Management Plan</u> . Have it reviewed and gain acceptance.
	Develop a <u>Risk Management Schedule</u> document
	Identify potential project risks
	Assess impact and probability of risks occurring
	Assign a risk priority

Action Plan Checklist - Identify Potential Risks	
	Determine a risk response approach, including any contingency plans
	Record risk data in the <u>Risk Response Plan</u> document
CSF	Risk Management Approach is a component of the <u>Project Plan</u> (including ongoing risk assessments)
CSF	Project Risks and Mitigation Strategies are components of the Project Plan

5.2.2.9.1 Determine Process for Issue Identification and Resolution

The purpose of the issue management process is to provide a mechanism for organizing, maintaining and tracking the resolution of issues that cannot be resolved at the individual level. The approach consists of issue control mechanisms and a well-defined process that enables the Project Team to identify, address and prioritize problems and issues.

- The Project Team records all details related to issues and issue resolution in the Issue Document.
- The Issue Log serves as a reference to all Project Issues.

Action Plan Checklist - Determine Process for Issue Identification and Resolution	
	Determine Issue Management approach.
	Define Issue Documentation procedures (e.g., <u>Issue Document</u> and <u>Issue Log</u>)
	Define Issue Accountability and Resolution procedures
	Define Issue Escalation procedures
CSF	Issue Management Approach is a component of the <u>Project Plan</u>

5.2.2.9.2 Determine Process for Managing Scope Change

Project scope management can be just as important to scope planning as the Scope Statement itself. This effort describes how the project scope will be managed and how scope changes will be integrated into the project.

The scope change management process:

- Defines a process for identifying and documenting potential changes to scope
- Defines a process for review and approval of scope change
- Describes which planning documents need to be revised due to scope change.

Action Plan Checklist - Determine Process for Managing Scope Change	
	Define process for identifying and documenting (e.g., <u>Change Request</u> and <u>Change Request Log</u>) potential changes to scope
	Define process for review and approval of scope change
	Describe which planning documents need to be revised due to scope change
CSF	Scope Change Management Approach is a component of the <u>Project Plan</u>

5.2.2.9.3 Develop Departmental Change Management Approach

Some of the details related to Departmental change management will not become apparent until the completion of detailed design of the solution. The expectation during the Planning stage is to develop a high-level understanding of the impact of the project in the Department.

The Project Team will:

- Identify potential Departmental changes and impact
- Refine business process improvement opportunities
- Identify training needs (e.g., magnitude)
- Determine knowledge transfer resources and processes

- Document all of this in the Departmental Change Management Plan.

Action Plan Checklist - <i>Develop Departmental Change Management Approach</i>	
	Identify potential Departmental changes and impact
	Refine Business Process Improvement opportunities
	Identify training needs (e.g., magnitude)
	Determine Knowledge Transfer resources and processes
CSF	Departmental Change Management Plan is a component of the <u>Project Plan</u>

5.2.2.9.4 *Develop Quality Management Approach*

The quality management process is the application of quality theory, methods and tools to focus on business and project requirements and to manage work processes with the objective of achieving continuous improvements or radical redesign.

The purpose of using quality management is to improve products and services while achieving cost reductions throughout the project. Quality management requires broadening the scope of the quality concept to a systems approach. Because the three processes (quality planning, assurance and control) interact with each other, as well as other processes within project management, quality management must be regarded as a system.

During “Quality Planning” the Project Team:

- Identifies those quality standards relevant to the project
- Determines how best to meet those standards. The activities within the quality planning process basically translate existing quality policy and standards into a Quality Plan through a variety of tools and techniques.

“Quality Assurance” requires that the Project Team evaluate overall project performance on a regular basis to provide confidence that the project will meet the relevant quality standards.

This involves the use of quality audits to ensure that quality standards and the business and project requirements are met.

The Project Team conducts “Quality Control” by:

- Monitoring specified project results to determine relevant quality standards have been met
- Discovering and implementing ways to eliminate the causes of unsatisfactory performance.

Successful quality processes always strive to see quality through the eyes of the end user (customer). Customers are the ultimate judges of the quality of the product they receive. They will typically judge a project by whether or not their requirements are met. To ensure delivery of a quality product, the Project Team should ensure that requirements are addressed at each phase of the project.

It is important to include a process that validates that the currently defined requirements will be satisfactory to the customer. It is counterproductive to develop a system that meets a documented requirement if you and the customer know that the requirement has changed. The change management process helps to control the number of such changes, but quality processes must be in place in order to make changes when they are necessary.

- Define quality standards
- Define quality management processes
- Document these in the Quality Plan.

Action Plan Checklist - <i>Develop Quality Management Approach</i>	
	Define the Quality Standards that pertain to this project
	Describe how the Project Team is to meet those Quality Standards

	Define the audit process and schedule that will be used in this project to evaluate overall project performance.
	Define the process that will ensure that customer requirements are met
	Describe the Quality Control procedures that the Project Team will use to monitor project results. Define which project results will be monitored.
	Define how the Project Team will identify ways to eliminate the underlying causes of unsatisfactory performance
	Document all of the above in the <u>Quality Plan</u>
CSF	Quality Plan is a component of the <u>Project Plan</u>

5.2.2.9.5 Develop a Project Communication Approach

Communications planning involves defining the information needs of project Stakeholders and team members, as well as identifying which people need what information, when it will be needed, and how they will get it. Communication is the cornerstone of how work gets done among different parties within a project. Communications planning is a process that overlays all other parts of Project Planning as well as the other project management stages. It addresses the way in which we transfer/share information about what needs to be done, how it will be done, when it needs to be done, who will do it, status reporting, issues management, problem resolution, etc. This information is documented in the Communication Plan.

Action Plan Checklist - <i>Develop Project Communication Approach</i>	
	Determine who needs what information
	Determine when information is needed
	Determine how to communicate information (memo, e-mail, weekly/monthly meetings, etc.)
	Document the above in the <u>Communication Plan</u> document

5.2.2.9.6 Develop a Configuration Management (CM) Approach

Configuration Management is a formal change control system applied to the product of the project. It ensures that:

- Functional and physical characteristics are fully described
- Any changes to plans or implementation are recorded and reported
- Audits are performed to assure the product specifications are under adequate control.

Implementation of CM processes should be carried out on all projects, especially large or complex projects. In short, CM is a necessity whose processes should be implemented at the department level to ensure a consistent general approach, with consideration given to the special functions or needs of the project itself. The complexity or size of the configuration system is less important than its functionality and intent.

Effective CM requires an effective and well-defined effort. The following are CM functions:

- Defining who will be responsible for and have authority over configuration management
- Setting standards, procedures, and guidelines for the full Project Team to follow
- Defining tools, resources, and facilities to be used for configuration management

The Configuration Management document could range from a few pages to hundreds of pages (for very large software development activities with extensive procedures and control items). The size depends, of course, on the complexity of the project and the need for detailed control.

Action Plan Checklist - <i>Develop Configuration Management Approach</i>	
	Assign Configuration Management authority and responsibility for the project
	Ensure that Configuration Management is implemented throughout the project by setting standards, procedures, and guidelines that are produced and distributed to the full Project Team
	Ensure that project management has a repository for storing configuration items and associated Configuration Management records
	Ensure that quality assurance reviews the baselines and Configuration Management activities on a regular basis
CSF	Configuration Management Approach is a component of the <u>Project Plan</u>

5.2.2.9.7 *Develop a Project Plan*

The Project Plan is completed in the Planning stage of a project. For large projects, this stage may be run as a mini-project with a team of people dedicated to performing the effort. For very small projects, the plan may be developed by a group of people as a part-time job. Because various skill sets are required to complete a successful Project Plan, it is a difficult task for one person to develop the entire plan. During this project stage, details of the plan are determined and an approach is defined. The full Project Plan is then developed.

Even during the Planning stage, the development of the Project Plan is an iterative process. Each element of the plan is regularly revisited for changes and refinements, based on further analysis and decisions made in developing other plan elements. This refinement also develops buy-in from the Project Team and Stakeholders. Note, however, that project baselines (i.e. Schedule, Budget, Scope and Quality) should only be changed through a formal Change Control process.

It is critical to get buy-in to the Project Plan from the involved parties prior to actually starting the project. Approval of the plan commits the resources needed to perform the work.

Action Plan Checklist - Develop Project Plan	
	Consolidate outcomes from Planning stage activities
	Develop the <u>Project Plan</u> document. Have it reviewed and gain approval.
	Distribute the Project Plan according to the Communication Plan
CSF	<u>Project Plan</u> completed and approved

5.2.3 Deliverables

Project Plan

The Project Plan is a formal, approved document used to manage and control project execution. The Project Plan is a compilation of text and stand-alone deliverables created during the Initiation and Planning stages. The level of detail should be appropriate for the scope, complexity and risk of the project.

The following is a list of key common components that are likely to be included in a Project Plan:

- Project Charter
 - Project Overview
- Scope Statement
 - ❖ Business Objectives
 - ❖ Project Objectives
 - ❖ Assumptions and Constraints
 - ❖ Project Deliverables and Milestones
- Work Breakdown Structure (WBS)
- Project Procurement and Sourcing Strategy
- Project Schedule

- Project Organization and Governance
 - ❖ External Interfaces
 - ❖ Internal Structure
 - ❖ Roles and Responsibilities
 - ❖ Resource Plan
 - ❖ Staffing Plan

- Phase Exit Criteria (Systems Development Life-Cycle Phase Checkpoints)
- Project Cost Estimate and Budget
- Risk Management Approach
- Issue Management Approach
- Scope Management Approach
- Organizational Change Management Approach
- Quality Management Approach
- Stakeholder and Team Communication Approach
- Configuration Management Approach.

While each of these areas should be discussed within the Project Plan, it is still imperative to develop documents and processes that describe each of these in detail.

Once the Project Manager completes the Project Plan, it should be reviewed (i.e., using the Project Planning Review Checklist) and approved by department management and the Executive Committee. The level and extent to which the plan will be reviewed is based on the size of the project as stated in Rands or period of time. Ultimately, the review process allows for executive management buy-in and approval of the plan. Once the Project Plan is approved and signed, the Project Manager is given the authority to complete the current project efforts and enter into the Execution stage.

5.3 STAGE III – PROJECT MANAGING (EXECUTION AND CONTROLLING)

A Project Manager's responsibilities do not stop once the planning of the project is done. Because a Project Manager is responsible to internal and external Stakeholders, the Project Team, vendors, executive management and others, the visibility of the position is intensified because many of these people will now expect to see and discuss the resulting deliverables that were detailed in the Planning stage. As a Project Manager, it is important to keep oneself from getting "down in the weeds," especially on large projects. This will allow him/her to focus attention on enabling the Project Plans and processes and managing the expectations of customers and Stakeholders.

Once a project moves into the Managing stage, the Project Team and the necessary resources to carry out the project should be in place and ready to perform project activities. The Project Plan should have been completed and base-lined by this time as well. The Project Team, and specifically the Project Manager's focus, now shifts from planning the project efforts to participating in, observing and analyzing the work being done.

The Project Plan managing process ensures that planned project activities are carried out in an effective and efficient way while ensuring that measurements against Project Plans, specifications, and the original project feasibility concept continue to be collected, analyzed and acted upon throughout the project life-cycle. Without a defined project managing process, each Project Team would execute projects using its own best practices, experience, and methods, while certain control, tracking and corrective action activities would be missed.

It is important to note that project execution and control relies heavily on the plans developed in the Planning stage. There is already enough work to do within the Managing stage of the project; therefore, having to reinvent ways of dealing with risk, change requests, training and resource issues, and other such obstacles to progress is impractical and undesirable at this point.

Particular attention must be paid to keeping interested parties up-to-date with project status, dealing with procurement and contract administration issues, helping manage quality control, and monitoring project risk.

It is also critical during the Managing stage that the Project Manager support and monitor the implementation of other important aspects of the project such as the Communications Approach, Risk Management Approach, and Procurement Plan via periodic interaction with the Project Team and Stakeholders.

The Managing stage also includes project control activities. Project control involves the regular review of metrics and status reports in order to identify variances from the planned project baseline. The variances are determined by comparing the actual performance metrics from the Managing stage against the baseline metrics assigned during the Planning stage. These variances are fed into department control processes to evaluate their meaning. If significant variances are observed (i.e., variances that jeopardize the completion of the project objectives), adjustments to the plan are made by repeating and adjusting the appropriate Project Planning strategies and documents. A significant variance from the plan does not explicitly require a change, but should be reviewed to see if preventive action is warranted. For example, a missed activity finish date may require adjustments to the current staffing plan, reliance on overtime, or trade-off between budget and schedule objectives. Project control also includes taking preventative action in anticipation of possible problems.

5.3.1 Critical Success Factors

- Major functional deliverables arrive in six(6)- to twelve (12) months intervals (e.g., immediate business value achieved)
- Stakeholder communication
- Proactive project governance process
- Stakeholder buy-in of key deliverables and milestones – they are committed

DCS&TM ahead of the technology curve, Project Managers will have to engage their teams in projects that may have limited budgets, tight schedules and high customer expectations.

The other risk issue is the development and implementation of technology equipment and software that might become obsolete very quickly. Technology is moving at an alarming rate with its increases in speed and capabilities. Accordingly, risk is increased when implementing high-costs (rands) or homegrown technology systems. To alleviate this issue, the Project Manager must make sure that the efforts of the Project Team are aligned with the technology and business strategy of the department. Researching future needs, capabilities, and integration requirements of the products will be helpful.

Action Plan Checklist - <i>Manage Risk</i>	
	Create a central repository for risk information and associated documentation of risk items and resolution strategies
	Summarize information on a risk form – the <u>Risk Response Plan</u>
	Assign a risk manager, who should be either the Project Manager or a member of the status tracking/reviewing team (this assignment should have been done at project baseline, but definitely by the early days of the Managing stage)
	Include a risk summary in the regular status meetings – <u>Monthly Status Report</u>
	Providing a consistent and ongoing evaluation of risk items and development of risk strategies
	Identify new risks (e.g. Risk Assessment)
	Evaluate new and existing risks (e.g., Potential Project Risks)
	Define/refine risk response strategies
	Select and obtain approval (from Executive Committee) for selected risk response strategies
	Implement approved risk response strategy

Action Plan Checklist - <i>Manage Risk</i>	
	Revise any related or impacted planning documents
	Conduct regular follow-up risk assessments based on magnitude of the project
CSF	Project Risks are documented (e.g., according to the <u>Risk Management Plan</u>) and addressed

5.3.2.2 *Communicate Information*

The project Communications Plan is an important factor in the Managing stage. A large part of a Project Manager’s responsibility during this stage of the project is keeping the Stakeholders informed of project status. There are many facets to project communications. Some examples follow:

- *Joint project reviews* are a good way to bring visibility to all areas of the project. They provide an opportunity to discuss important issues and make management decisions on the project with input from several sources. Joint project reviews may involve the Project Manager, Project Team members, project Stakeholders and department management, depending on the issues being discussed. The frequency and topics covered at these meetings should be outlined in the Communications Plan.
- The Project Manager may be requested to make monthly reports to the Executive Committee or other management group
- The Project Plan should be accessible to all Stakeholders. This may be accomplished by placing an electronic copy of the plan in shared storage, publication on a project web site or other means. The Communication Plan may specify that particular Stakeholders receive portions of the Project Plan in varying format, depending on their communication needs.
- Meeting minutes should be made available to Stakeholders along with any “to-do” lists that may have been generated during the meetings.

- The Project Manager should stay in constant communication with the Project Team, both formally and informally. Informal discussion is sometimes the best way to determine team morale, true project status, looming difficulties, etc.

Action Plan Checklist - <i>Communicate Information</i>	
	Ensure that the <u>Communication Plan</u> is being executed as planned
	Review and approve external project messages
	Revise the Communication Plan based on feedback received from Stakeholders and Project Team members
CSF	Stakeholders and Project Team members are informed and aware of project activities and status

5.3.2.3 *Manage Schedule*

It is important for the Project Team to understand at all times exactly where the project stands with respect to project schedule (i.e., Is the project ahead of, or behind, schedule?). The procedures used to determine status and then update schedules to depict current work efforts are key to ensuring that accurate schedules are maintained. Without these procedures, invalid data may cause inaccurate schedule performance reporting.

Data collection and validation involves the following steps:

- Validate *schedule status*; ensure that task *start* and *end* dates, and task relationships, still reflect the reality of the project.
- Validate *data attributes and associations* used to report schedule information; for example, ensure that relationships are correct between tasks and the work breakdown structure, functional organization or integrated master schedule.

- Validate *work effort* to ensure that the schedules accurately depict the way work is being accomplished and reported. For example, obtain accurate start and finish dates of completed tasks or estimates to complete work for ongoing tasks.

The validation technique will improve management control by improving the quality of the information reported. The implementation of specific techniques should provide this benefit without burdening those responsible for project delivery.

Schedule control is one of the most difficult but important activities within project control. The project schedule can be affected by any number of issues from resources to funding, vendors, weather, and anything in between. The ability of a Project Manager to manage the schedule of a project and deliver it on time is a high-visibility concern for project success from a customer point of view.

Attributes of Schedule Control include:

- Influencing the factors that create schedule changes to ensure that changes are beneficial
- Determining that the schedule has changed
- Managing the actual changes when and as they occur.

Schedule issues come from a variety of sources but there should be a single, focused method for dealing with schedule changes. If a potential schedule problem is discovered, the problem must be investigated and the cause uncovered as soon as possible. Once the problem is discovered, a plan should be created for correcting the problem in the shortest allowable time with the least impact. It is also advisable to bring forward alternatives and associated costs.

Schedule control is something that typically is managed at the project level by the Project Manager. However, it is very important to make the customer aware that a schedule change

has occurred. Furthermore, the customer needs to be made aware of what is being done to fix the issue and the impact it will have on the project’s performance and deliverables.

It is standard practice to baseline the schedule at the start of the project. This allows all schedule changes to be displayed against the original project schedule. If schedule slippage becomes severe it may be advisable to re-baseline the project. As this involved change to one of the project baselines, it should only be done through a formal Change Control Process.

Schedule control is an important aspect of project management that is often overlooked during technology projects. Technology projects may have several different dependencies or factors that can influence product delivery dates, and ultimately, customer satisfaction. These factors and dependencies may include, but may not be limited to, the following:

- Availability of staff or resources
- Delivery of equipment or software
- Unexpected events
- Deliverables from other projects or personnel.

Because customers sometimes see meeting the schedule as the most important part of a project, it is a good idea for Project Managers to hold regular project schedule reviews. Large or complex technology projects may have several schedules being managed at a deliverable or functional level. Therefore, having the “owners” of these schedules meeting at regular intervals is of great benefit to the Project Manager. The Project Manager is responsible for integrating these project schedules and making them understandable for all of the project’s Stakeholders.

<i>Action Plan Checklist - Manage Schedule</i>	
	Collect and validate schedule status; for example, data that reflects start, finish and estimates to complete work

Action Plan Checklist - *Manage Schedule*

	Validate data attributes and associations used to report schedule information; for example, task relationship to the WBS, project life-cycle phase, functional organization or integrated master schedule
	Validating work effort to ensure that the schedules accurately depict the way work is being accomplished and reported
	Conduct regular project schedule review meetings. Large or complex projects may require more frequent meetings
	Identify potential schedule problems; consider common scheduling factors such as availability of staff or resources (e.g., ability to meet <u>Resource Plan</u>), delivery of equipment or software, unexpected events, deliverables from other projects or personnel
	Investigate potential schedule problems and uncover the cause as soon as possible
	Develop a plan for correcting the problem in the shortest allowable time with the least impact. Provide alternatives and associated costs
	Make the customer aware that a schedule change has occurred. The customer needs to be made aware of what is being done to fix the issue and the impact it will have on the project's performance and deliverable
	In the event of severe schedule slippage, re-baseline the project schedule if all project Stakeholders agree that there is benefit to the project to do so
CSF	Schedule tasks are closely tracked for timely completion
CSF	Schedule problems are identified and addressed

5.3.2.4 Document the Work Results

Results are the outcomes of the activities performed to accomplish the project. Information on work results consists of input on:

- Which deliverables have been completed and which have not
- To what extent quality standards are being met
- To what extent contractual obligations are being met
- What costs have been incurred or committed.

These valuable data need to be collected and fed into a project performance reporting process.

Action Plan Checklist - Document Work Results	
	Create a central repository for all project deliverables and work products
	Maintain an inventory for all project deliverables and work products
	Update inventory with deliverable, status and quality comments
CSF	Project deliverables are produced and work products are tracked

5.3.2.5 Manage Departmental Change

During the development and execution of projects, existing departmental policies shall be taken into consideration. Project execution may also lead to the realization of the need for new policies or alteration of existing policies. Any consideration for new departmental policies and procedures should be documented during the Managing stage and reviewed for implementation.

Action Plan Checklist - Manage Departmental Change	
	Ensure that Departmental Change Plan is being executed as planned
	Participate and endorse Departmental Change activities
	Revise Departmental Change Plan based on feedback received from Stakeholders and Project Team members
CSF	The department is ready to accept the new system

5.3.2.6 Manage Scope

Scope control is a straightforward concept. The intent of implementing a scope control process is to identify and manage all elements (e.g., people and requirements) inside and outside of the project that increase or decrease the project scope beyond the required or defined need of the original, agreed-upon project Scope Statement.

Attributes of scope control include:

- Influencing the factors that create scope changes to ensure that the changes are beneficial
- Determining that a scope change has occurred
- Managing the actual changes when and if they occur.

Scope changes will come from the perceived need for a change in a project deliverable that may affect its functionality and in most cases the amount of work needed to perform the project. A scope change is a very crucial occurrence.

A scope change most likely will require a change in project funding, resources and/or time. All scope change requests should be submitted in writing. A committee that consists of Stakeholders from all areas of the project should be willing to convene and discuss the potential change and its anticipated impact on the project and the department. This group of Stakeholders should be a predefined cross section of people that will have the ability to commit their interests at a strategic management level. Once a decision is made to increase or reduce scope, the change must be authorized by all members of the committee. Any changes that are agreed upon must be documented and signed as a matter of formal scope control.

In addition, the impact of the scope change will be felt throughout the Planning stage processes and documents. Documents such as the WBS and Project Schedule will have to be re-evaluated and updated to include the scope change impacts. Scope changes need to be

communicated clearly and effectively to the Project Team by the Project Manager. Team members will want, and need, to understand how the scope change affects their area of responsibility.

Scope control is extremely important within technology projects. It is not uncommon when team members are doing their development testing or implementation work for them to try to get creative or give the customer something other than, or in addition to, the original stated requirements. Doing any work that is outside or beyond the stated work, as called out in the original requirements, is considered “scope creep” or “expansion of scope”. Expansion of scope is much more subtle within technology projects because adding additional features (e.g., adding an extra icon or function to an application) does not appear to be as significant as adding something to a normal project (e.g., adding an extra mile of road to a highway construction project).

In both cases, the additional scope of work has a tremendous impact on other control mechanisms within the project. The scope creep (unnoticed additions or changes to the project from the agreed-upon requirements or specifications that increase the scope of the project) will most likely not be budgeted or scheduled, which means that any small scope change could have a large cost and schedule effect.

Action Plan Checklist - <i>Manage Scope</i>	
	Identify potential scope change (e.g., Formal Change Request and Change Request Log)
	Evaluate impact of potential scope change
	Determine if additional project funds, resources and time will be required
	Ensure that the scope change is beneficial
	Convene a committee that consists of Stakeholders from all areas of the project to discuss the potential change and its anticipated impact on the project and the department (this group of Stakeholders should be a pre-defined cross-section of

Action Plan Checklist - <i>Manage Scope</i>	
	people that will have the ability to commit their interests at a strategic management level)
	Once a decision is made to increase or reduce scope, the change must be authorized by all members of the committee; any changes that are agreed upon must be documented and signed as a matter of formal scope control
	Update planning documents with scope change impacts: documents such as the WBS and Project Schedule will have to be re-evaluated and updated to include the scope change impacts
	Scope changes need to be communicated clearly and effectively to the Project Team by the Project Manager
	Educate Project Team on the impacts of "Scope Creep"
CSF	Scope Changes are identified and addressed
CSF	Planning documents are updated with impact of improved Scope Changes
CSF	"Scope Creep" is minimized

5.3.2.7 Manage Quality

Quality assurance incorporates a process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards. Accordingly, while it is important that each team member be responsible for the quality execution of tasks, a quality team is typically included in the Project Team and plays an integral role in the execution of quality throughout the project. This team ensures that the quality plan is executed as planned. As and department's quality processes mature, the need for the external quality unit decreases. This quality team reports functionally to the Project Manager, but must also have a reporting chain outside the project to facilitate problem escalation. Problem escalation is the process of moving a problem to a higher management level if

sufficient attention is not given by the Project Manager. The independent reporting chain provides a check and balance on the project.

Quality control involves monitoring specific project results to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory results. Quality control should be performed throughout the project. Project results include both product results, such as deliverables, and management results, such as cost and schedule performance. Quality control is often performed by a quality control unit, or a similarly titled department unit, although this is not a requirement.

The project management team should be aware of the following concepts:

- *Prevention* (keeping errors out of the process) and *inspection* (keeping errors out of the hands of the customers)
- *Attribute sampling* (the result conforms or it does not) and *variables sampling* (the result is rated on a continuous scale that measures degrees of conformity)
- *Special cases* (unusual events) and *random causes* (normal process variation).

Unfortunately, whenever any of the other control mechanisms (e.g., schedule or cost) get off their baseline, it is normally the quality control of a technology project that suffers. As noted previously, technology projects require a lot of attention to schedule and cost. Likewise, instituting quality control within a project is a very important variable. Setting up quality control audits and management processes that are carried out continually during the development and testing phases of the project's life-cycle is absolutely critical for delivering acceptable technology projects.

Quality is a valuable commodity in all projects, but even more so with technology projects. Today's customers have high expectations for the availability and reliability of the systems they use. Expectations for dynamic, high-quality systems have become commonplace. Therefore, it

is essential for projects to provide quality products to their end users by using a demanding quality program.

Action Plan Checklist - Manage Quality	
	Establish a quality team that plays an integral role in the execution of quality throughout the project. This team ensures that the <u>Quality Plan</u> (e.g., Quality Management Approach) is executed as planned.
	Establish a problem escalation process to move a problem to a higher management level if sufficient attention is not given by the Project Manager (e.g., Sponsor or Steering Committee). This independent reporting chain provides a check and balance on the project.
	Monitor specific project results to determine if they comply with relevant quality standards and to identify ways to eliminate causes of unsatisfactory results. Project results include both product results, such as deliverables, and management results, such as cost and schedule performance.
	Establish a Quality Management awareness and training program
CSF	Project Team members accept responsibility for quality
CSF	Quality products are developed

5.3.2.8 Manage Costs

Projects may fail to control costs, or go over budget, for many reasons. Often it is not a single problem but a series of small problems that combined, permit cost control to be sacrificed and prevent the project from being completed successfully.

Cost control contains the following attributes:

- Influencing the factors that create changes to the Project Budget to ensure that the changes are beneficial

- Determining that the Project Budget has changed
- Managing the actual changes when and as they occur.

Cost control includes the following:

- Monitoring cost performance to detect variances from the Project Plan
- Ensuring that all appropriate changes are recorded accurately in the Project Budget
- Preventing incorrect, inappropriate or unauthorized changes from being included in the Project Budget
- Informing appropriate Stakeholders of authorized changes.

Cost control is not simply a reporting process. It includes the searching out of the “why” for both positive and negative variances between the scheduled and actual costs. It must be thoroughly integrated with the other control processes (scope change control, schedule control, quality control and others). For example, inappropriate responses to cost variances can cause quality or schedule problems or produce an unacceptable level of risk later in the project.

Cost control is a process highly valued by technology project Stakeholders. This is also an area where the unpredictability of technology can wreak havoc on the plans laid out within a project. A Project Manager must be able to monitor the actual budgets of labor and resources against the baselines as laid out in the Project Budget Estimate. This is especially true of new technology areas in which the cost of labor or resources is especially high. Furthermore, the length and complexity of a project will have a direct impact on its potential to go over budget.

Setting budget limits and monitoring variances on budgets must be done early and often. Budget problems tend to compound themselves if left unattended. On a technology project, more money could be spent trying to fix budget, scope or schedule issues near the end of a project than should have been spent on the entire project. In many cases the budget is a fixed

amount. In those cases, if other actions fail to bring the project's costs into budget alignment, the scope must be reduced.

Action Plan Checklist - <i>Manage Costs</i>	
	Monitoring cost performance to detect variances from the <u>Project Plan</u>
	Explain both positive and negative variances between the scheduled and actual costs
	Ensure that all appropriate changes are recorded accurately in the <u>Project Budget</u>
	Prevent incorrect, inappropriate or unauthorized changes from being included in the Project Budget
	Inform appropriate Stakeholders about authorized changes
CSF	Project costs are understood and controlled

5.3.2.9 *Manage Issues*

The purpose of the issues management process is to provide a mechanism for organizing, maintaining and tracking the resolution of issues that cannot be resolved at the individual level. The approach consists of issue control mechanisms and a well-defined process that enables the Project Team to identify, address and prioritize issues.

The Issue Management process should give everyone involved with, or affected by, the project a way to report issues or problems. The Issue Document format provides fields for documenting the problem, assessing the impact of the problem, making recommendations and determining the cost (people and assets) and time required for resolving the problem.

To have the process work requires individuals to submit information on the issues to be considered. Any of the Project Team members, customers, or Stakeholders can submit an issue. This must be done in writing through use of the Issue Document. All issues are recorded in the Issues Log.

All issues need to be reviewed on a regular basis (e.g., the project status meetings, since this group will typically meet on a weekly or biweekly basis).

Typically, when the issue or problem has been resolved and verified, recording the actual date the problem was resolved and the approval authority closes the issue. Some issues may need executive management approval. The appropriate processes will be followed to update contracts and baseline documents.

Action Plan Checklist - Manage Issues	
	Create a central repository of project issues and use an Issue Document template (e.g., <u>Issue Document</u> and <u>Issue Log</u>)
	Project Team members, customers, or Stakeholders submit issues in writing in electronic format
	Review issues on a regular basis (e.g., at the project status meetings since this group will typically meet on a weekly or biweekly basis)
	Track all issues until they are resolved.
	Update issue with resolution and status
	Depending on the issue, obtain executive management approval
	Update the appropriate processes and documents impacted by issue resolution
CSF	Issues are identified and resolved

5.3.2.10 Conduct Status Review Meetings

While the Project Manager is responsible for relaying project status to parties outside the Project Team, the Project Team is, in turn, expected to report status to the Project Manager. This includes communicating information on both a formal and informal basis. Formal mechanisms such as status reports, status meetings, and action item reviews can be very specific. Informal processes, such as hallway conversations, can be very helpful as well.

A standard requirement of all projects is to provide reports to both executive management and the Project Team. Although the frequency of the reports may sometimes vary, they should correspond with the executive meetings or when the Project Manager deems necessary. For executive management reports, this is typically on a monthly basis and major project life-cycle phase or milestone completion. Another key in status reporting is to keep the report due date consistent (e.g., every Monday by 1:00 p.m.). This makes it easier for the team members to complete their reporting.

Status reporting is an integral part of the project management process. It is the means by which the Project Team and executive management stay informed about the progress and key activities required to successfully complete the project. The purpose of the Status Report is to provide a standard format for the formal exchange of information on the progress of the project.

The information shared in the Status Report should be in a consistent format throughout the project. The Project Team should prepare Status Reports detailing activities, accomplishments, milestones, identified issues and problems. Some level of recovery plans should be prepared for activities that are not on schedule, and mitigation strategies should be prepared for anticipated problems.

Status meetings are conducted to discuss project status and to set direction and priorities for the project. The level of detail and objective of status reports and status meetings vary based upon the audience, project size and impact, and the risk associated with a project.

The three primary status audiences are:

- *Project Team*– The Project Status Report and Status Meeting includes the lowest level of detail. This is a forum for the Project Manager to discuss project progress and status with the team and to implement project direction and priorities as set by

the Sponsor (and possibly the ICT Committee). Larger projects, which are divided into teams, will also develop team status reports and conduct team status meetings. Project Status Meetings are typically conducted every week.

- *Sponsor* – The Sponsor Status Meeting is a venue for the Project Manager and Project Champion to discuss key project issues. The Sponsor will assist the Project Manager in resolving key issues and help set project direction and priorities. The Project Status Report is also provided to the Sponsor. At a minimum, Sponsor Status Meetings should be conducted once a month. Typically, these meetings will occur more frequently for large complex projects with high risks.
- *ICT Governance Committee(s)* – The respective ICT Governance Committee(s) Meeting is intended to be a forum for the committee to evaluate the overall progress of the project. In addition, the ICT Strategic Committee sets strategic direction and project priorities. An Executive Status Report, which discusses high-level status, issues and risks, is provided to the respective ICT Committee(s) by Project Managers and serves as the basis for the meeting discussion. ICT Committees Meetings are conducted per quarter.

Action Plan Checklist - <i>Conduct Project Team Status Meetings</i>	
	Individual team members submit a status report to their team leader
	Each Project Team leader produces a weekly status report for his/her team
	Each Project Team leader conducts a weekly status meeting with his/her team
	Team status reports should be used as input into a Project Status Report
	The Project Manager conducts weekly status meetings with team leaders
	The Project Manager conducts monthly meetings with all Project Team members
CSF	Project progress and status are documented and communicated to the Project Team

Action Plan Checklist - Conduct Sponsor Meetings

	Conduct biweekly or weekly meetings for high-visibility and high-risk projects
	Provide a copy of the weekly Project Status Reports to the Sponsor
	Identify key issues that impact the organization and require action on the part of the Sponsor
	Provide status and discuss key issues with Sponsor
	Implement issue resolution plans as discussed with Sponsor
	Revise any related or impacted planning documents
CSF	Sponsor is informed of project status and key issues
CSF	Sponsor provides direction and support for resolving key issues

Action Plan Checklist - Report at Quarterly ICT Committee(s) Meetings

	Identify key issues, which impact the Department and require action on the part of the respective ICT Governance Committee(s)
	Provide a copy of the Executive Status Report to the respective ICT Governance Committee(s) on a quarterly basis
	Provide status and discuss key issues with the respective ICT Governance Committee(s)
	Implement issue resolution plans as discussed with the respective ICT Committee(s)
	Revise any related or impacted planning documents
CSF	The respective ICT Committee(s) is informed of project status and key issues
CSF	The respective ICT Committee(s) sets project direction and supports the issue resolution process
CSF	The respective ICT Committee(s) sets project priorities

5.3.2.11 Review Project Life-Cycle Phases Checkpoints

Project Champion ensures that the project is progressing satisfactorily by reviewing management checkpoints or project milestones. Project Champion uses them to approve the completion of a phase or milestone and as go/no-go decision points to proceed with the project. Depending on the size and complexity of the project, the checkpoint review will be linked to project funding. The checkpoints ensure that the products and services delivered meet the project objectives in the time frame established by Project Champion.

Action Plan Checklist - Review Project Life-Cycle Phases Checkpoints	
	Review exit criteria and associated deliverables of concluded phase as described in the <u>Phase Exit Plan</u>
	Review entrance criteria for subsequent phase (<u>Phase Exit Plan</u>)
	Review risk assessments and issue logs
	Evaluate project progress and ability to meet objectives
	Determine funding status (e.g., approve or shutdown project)
CSF	Project checkpoints are evaluated
CSF	“Failing” projects are stopped or corrective action is taken
CSF	“On track” projects are authorized to continue

5.3.2.12 Execute the Procurement Plan

As indicated in the Planning stage of this methodology, there will be times within the Managing stage when a department may have to go outside its resource pool to purchase products or services needed to deliver the project. In these cases, the project Procurement Plan will be put into action. The DCS&TM and each of its departments will have a defined set of guidelines and policies that provide the infrastructure for project purchasing that should be integrated within the Procurement Plan. These guidelines will outline the policy for solicitation, source selection and contract administration. Although the solicitation and contracting responsibilities may not

always be managed by the Project Manager, it is still important that the Project Manager have a fundamental understanding of the department’s contracting and procurement policies.

The Project Manager’s responsibility in the Managing stage is to provide input into new product requirements for the services or products that were not planned for in the Planning stage.

Action Plan Checklist - <i>Execute the Procurement Plan</i>	
	Develop solicitation documents
	Conduct proposal evaluation and selection
	Conduct contract negotiations
CSF	Project services and/or resources have been procured

5.3.2.13 Administer Contract/Vendor

The Project Manager will be responsible for ensuring that the vendors, once contracted to do the work, meet the contractual agreements specified within their contracts. Project Managers will also be responsible for tracking, reviewing and analyzing the performance of contractors on a project. This performance reporting will be the basis for any contractual changes that need to be made during the life of the contract. Finally, Project Managers will play an important role in oversight and review of any contract changes that will affect the project.

Contract administration is the process of ensuring that the vendor’s performance meets contractual requirements. This is accomplished through the use, and monitoring, of a Project Plan from the vendor, periodic progress reports and the completion of deliverables as delineated in a project statement of work.

Project Managers within technology projects tend to manage more contracts than non-technology projects. This is primarily because of the need to bring in contractors who have expertise in particular technology areas. Therefore, monitoring status and metrics set for the

different contractors can become a greater responsibility. The Project Manager is to ensure that the vendors follow appropriate application development and project management methodologies.

Setting up procedures for contract control and contract change is vital to dealing with unexpected situations during project, development, testing and implementation. Without procedures in place, contract issues could go unresolved or result in project delays. It is important to have on-going, two way communications with the vendors (partnership).

Action Plan Checklist - Administer Contract/Vendor	
	Ensure that the vendors, once contracted to do the work, meet the contractual agreements specified within their contracts
	Project Managers will also be responsible for tracking, reviewing and analyzing the performance of contractors on a project (e.g., Deliverable Review)
	Approve and monitor the vendor's: Project Plan, periodic progress reports and the completion of deliverables as delineated in a project statement of work
	Participate in oversight and review of any contract changes that will affect the project
	Ensure vendor adherence to application development and project management methodologies
	Ensure that the department is fulfilling its contractual obligations
CSF	Contractual obligations are met
CSF	A sense of partnership is created and maintained

5.3.2.14 Update Project Planning Documents

During the Managing stage, the Project Plan is implemented and modified as necessary. Project Plan modifications may result from such things as the following:

- New estimates of work still to be done (generated as more detailed information is known about outstanding work)
- Changes in scope/functionality of end product(s)
- Resource changes
- Unforeseen circumstances.

Changes to Project Baselines (i.e. Budget, Schedule, Quality and Scope) must be done through use of a formal Change Management Process. The Project Manager may change other Project Plan components (e.g., Risk Response, Communication Plan) as needed.

Action Plan Checklist - Update Project Planning Documents	
	Revise <u>Project Plan</u> baselines (through formal Change Control process)
	Revise other Project Plan components as needed
	Revise other planning documents impacted by change
CSF	Project Planning documents are revised to reflect the current status of the project

5.3.3 Deliverables

- **Project Status Reports**

Monthly Status Reports are used to communicate the following key information:

- ❖ Current activity status (schedule)
- ❖ Significant accomplishments for the current reporting period
- ❖ Planned activities for the next reporting period
- ❖ Financial status
- ❖ Present Issues, Concerns/Risks.

Along with the status report form, the following may be attached:

- ❖ Updated Gantt charts
- ❖ Recovery plans for activities not on schedule—defined by the Project Team as being late (e.g., slippage in the critical path activities)
- ❖ Corrective action plans for expected problems
- ❖ Resolution to assigned action items (including the issues and action process)
- ❖ Issues Log
- ❖ Others, as appropriate.

The team may choose to create Executive Status Reports as well if they will enhance communication with management.

- ***Updated Planning Documents***

Deliverables in this stage include consistent and updated planning documents such as the project schedule, work plan, communication approach, etc. There should be a formal review and approval process for updated planning documents.

- ***Project-Specific Deliverables***

These deliverables depend on the nature of the project and the selected systems development life-cycle (e.g., waterfall, rapid application development, RUP, etc.). Most of these deliverables should have been identified during the Planning stage.

Examples of these project-specific deliverables might include functional design documents, test plans, a training plan, and a requirements traceability matrix.

5.4 STAGE IV – PROJECT CLOSEOUT

The last major stage of a project's life-cycle is project closeout. Project closeout is completed once all defined project tasks and milestones have been completed and the customer has accepted the project's deliverables.

Project closeout includes the following key elements:

- Verification of formal acceptance by Stakeholders and the respective ICT Committee(s)
- Re-distributing resources (staff, facilities, equipment and automated systems)
- Closing out any financial issues such as labor charge codes and contract closure
- Documenting the successes, problems and issues of the project
- Documenting "lessons learned"
- Celebrating project success
- Producing an Outcomes Assessment Report
- Completing, collecting and archiving project records.

These activities are particularly important on large projects with extensive records and resources.

5.4.1 Critical Success Factors

- Pre-defined User Acceptance criteria
- Pre-defined Final Acceptance Process
- End-user acceptance
- Business objectives and anticipated benefits are achieved
- Project objectives are achieved
- Knowledge transfer is achieved
- Project materials are archived.

5.4.1.1 Activities

The following is a list of key activities required to close-out a project:

5.4.1.1.1 Conduct Final Systems Acceptance Meeting

The issue of primary importance with project closure is the acceptance of the product or project deliverables by the customer for which they were created. The best way to ensure this is to convene a final meeting with all necessary Stakeholders to review the product delivered against the baseline requirements and specifications. By this time, any deviations from the established baseline will have been documented and approved, but it is still good policy to make the Stakeholders aware of the baseline deviations, justifications, and future action plans. Furthermore, any open action items or program level issues can be officially closed or reassigned to the support organization.

By drawing all of the Stakeholders together in a single meeting, the Project Manager avoids clearing up open issues on an individual basis. The final deliverable of this meeting should be a statement created by the Project Manager describing the project's final deliverables in comparison with the authorized project baseline documents. Approval is verified via the signature of a project closure document by all of the Stakeholders who signed the original project baseline documentation (i.e., the Project Plan). This document will be customized to the particular project to include pertinent deliverables, key features and important information about final product delivery.

Action Plan Checklist - Conduct Final System Acceptance Meeting	
	Establish a Final Acceptance Process (this should be started during the Managing stage)
	Develop a Requirements Traceability Matrix (this should be started during the Planning stage) that will be used later to validate that all requirements were delivered
	Participate in User Acceptance Testing (UAT)

	Ensure that Stakeholders responsible for accepting the system have high-level participation during UAT. Stakeholder representatives and end users should have hands-on participation during UAT
	After the system is deployed and fully functional in a production environment for a specified period of time (the specific amount of time should be identified in the Final Acceptance Process), requirements should be validated
	Review results with Stakeholders and the respective ICT Committee(s)
	Obtain formal acceptance from Stakeholders and the respective ICT Committee(s)
CSF	The project is evaluated to determine if business and project objectives and benefits were achieved
CSF	New system is formally accepted by the organization

5.4.1.1.2 Conduct Final Contract Review

Contract closure is the process of terminating contracts that outside organizations or businesses have with the DCS&TM department as part of the project being performed. These contracts may be vehicles for providing technical support, consulting, or any number of services supplied during the project that the department decided not to perform itself.

Contracts can be brought to closure for a variety of reasons, including contract completion, early termination or failure to perform. Contract closure is a typical but important part of project management. It is a simple process, but close attention should be paid so that no room is left for liability of the department.

Action Plan Checklist - Conduct Final Contract Review	
	Review contract and related documents
	Validate that the contractor has met all of its contractual requirements
	Document any contractor variances

Action Plan Checklist - Conduct Final Contract Review	
	Resolve contractor variances and issues
	Validate that the department has met all of its contractual requirements
	Document any department variances and issues
	Resolve department variances
	Ensure that all vendor responsibilities have been transferred to the department or another vendor
	Terminate current contract
CSF	All contractual obligations have been met or formally waived

5.4.1.1.3 Conduct Outcomes Assessment Meeting

In conducting the outcomes assessment meeting, the Project Manager provides a forum to discuss the various aspects of the project focusing on project successes, problems, issues, “lessons learned”, and future process improvement recommendations. Using the information and documentation from the Final System Acceptance Meeting as a basis for discussion, some typical questions to answer in this meeting include the following:

- To what extent did the delivered product meet the specified requirements and goals of the project?
- Was the customer satisfied with the end product?
- Were cost budgets met?
- Was the schedule met?
- Were risks identified and mitigated?
- Did the project management methodology work?
- What could be done to improve the process?

The Outcomes Assessment Meeting typically includes the following people:

- Project Team
- Stakeholder representation—including external project oversight and ICT Steering Committee
- Executive management
- Maintenance and operations staff.

The Outcomes Assessment Report documents the successes and failures of the project. It provides a historical record of the planned and actual budget and schedule. It is important to include in this report, new ideas that were successful in the project and make recommendations on how these processes might be adapted for other projects. Parts of this report may be used to share project successes with other organizations, both within the department and with other departments. In the same way that problem identification can lead to improvements, successes must be shared so they can be repeated. Where possible, successes should be translated into procedures that can be followed by future projects. Other selected metrics on the project can also be collected, based on documented procedures. The report may also contain recommendations for future projects of similar size and scope.

Action Plan Checklist - <i>Conduct Outcomes-Assessment Meeting</i>	
	Evaluate the project
	Document project successes and failures
	Determine the extent that business and project objectives, and benefits were achieved
	Compile “lessons learned”
	Complete the Outcomes-Assessment Report
	Revise project management procedures and templates based on “lessons learned”
CSF	The Outcomes-Assessment Report is candid and balanced
CSF	“Lessons learned” are identified and used to improve processes for future projects

5.4.1.1.4 Conduct Knowledge Transfer

All documentation that has anything to do with the product itself (including design documents, schematics, technical manuals) that have not already been turned over to the operations and maintenance organizations must be completed and turned over to the Project Manager.

Following preparation of the Outcomes Assessment Report, the project information is archived. Historical project data is an important source of information to help improve future projects.

The specific information archived for a project will vary between DCS&TM components. Typically, the following project data are archived:

- Project Charter
- Project Plan, including the Project Scope Statement, Risk Management Plan, etc.
- Financial Records
- Correspondence
- Meeting notes
- Status reports
- Contract file
- Technical documents
- Files, programs, tools, etc., placed under configuration management
- Other documents/information.

All hard-copy records should be stored following standard DCS&TM record-retention guidelines. Many of the technical records and automated versions will be turned over to DCS&TM personnel responsible for maintenance and operation of the system. Summary technical information should be electronically stored for historical reference to facilitate later review. The project archive includes a description of the files being submitted, the application (including version) used to create the archived materials, and a point of contact if further information is needed.

The summary project management information includes information such as a description of the project, a project organization chart, budgeted and actual cost, and schedule baseline(s) and actual schedule. Assumptions associated with the project budget amounts and budget changes documented throughout the project are included in the archive.

Action Plan Checklist - Conduct Knowledge Transfer	
	Ensure that all documentation that has anything to do with the product itself (including design documents, schematics, technical manuals) has been turned over to the operations and maintenance organizations
	Ensure that all project documentation has been updated and is complete
	Ensure that all end users have been adequately trained and that the organization is capable of training new end users
	Ensure that operations and maintenance organizations have been sufficiently trained to support, administer and maintain the new system
	Create an archive for project documentation. Include a project summary document.
	Ensure that record retention conforms to standard DCS&TM and Department record retention guidelines
CSF	Project documentation is complete and has been transferred to the operations and maintenance organizations and/or has been archived
CSF	End-users, operations and maintenance organizations have been adequately trained

5.4.1.2 Deliverables

- **Project Closure Document**

The Project Closure document summarizes the Final System Acceptance meeting. This includes, but is not limited to:

- ❖ The results of the review of the product delivered against the baseline requirements and specifications
- ❖ List of deviations, documented, and approved; with justifications and future action plans
- ❖ Action items closed or reassigned to the support organization
- ❖ References to other deliverables, key features and pertinent information about final product delivery
- ❖ Approval of project closure via signatures of the Sponsor and key Stakeholders.

- ***Outcomes Assessment Report***

The Outcomes Assessment Report documents the successes and failures of the project. It provides a historical record of the planned and actual budget and schedule. Other selected metrics on the project can also be collected, based on documented procedures. The report also contains recommendations for future projects of similar size and scope. Information within the report should include, but not be limited to, the following:

- ❖ Project sign-off
- ❖ Staffing and skills
- ❖ Project organizational structure
- ❖ Experience with and recommendations for:
 - Schedule management
 - Cost management
 - Risk management
 - Quality management
 - Configuration management
 - Customer expectations management
- ❖ Lessons learned
- ❖ Recommendations for process improvement and/or template modifications.

5.4.1.3 KEY PROJECT ROLES AND RESPONSIBILITIES

A successful project requires the Project Team to participate (at some level) in the planning process, buy-in to the Project Plan, and be responsible for completion of assignments. It is important to have a defined formal structure for the project and for the project staff. This provides each individual with a clear understanding of the authority given and responsibility necessary for the successful accomplishment of project activities.

Project Team members need to be accountable for the effective performance of their assignments. Project organizations come in many forms. On a large project, individual role assignments may require full-time attention to the function. On smaller projects, role assignments may be performed part-time, with staff sharing in the execution of multiple functions.

5.4.1.3.1 Sponsor

The project Sponsor is usually the most senior member of the department's management team, which will ultimately be the recipient of the project's end result. The Sponsor is an important Stakeholder, usually head of Department and not a day-to-day staff person. This is the person who makes the business argument for the project to exist and usually controls the overall funding of the project.

General Functions

- Articulates program or DCS&TM department requirements.
- Provides business direction to the Project Team.
- Ensures that requirements are met.
- Provides necessary funding and resources as appropriate.
- Champions the project to provide exposure and buy-in from DCS&TM executives.
- Communicates views on project progress and success factors to the Project Team and other Stakeholders.

Initiation Stage

- Provides strategic plans and guidance to correctly identify the relevance and value of the project both today and in the future.
- Defines Sponsor needs.
- Obtains funding for project when necessary.
- Assigns sponsorship personnel as points of contact.
- Approves Project Charter and champion it before the respective ICT Committee.

Planning Stage

- Appoints a Project Manager
- Attends kick-off meeting.
- Participates in planning sessions.
- Appoints personnel through the Project Manager.
- Approves funding along with the respective ICT Committee(s).
- Reviews and approves Scope Statement and Project Plan.

Managing Stage

- Attends executive requirement reviews.
- Provides written agreement to requirements and qualifying criteria.
- Helps resolve requirements problems.
- Helps resolve issues, as appropriate
- Attends and participates as needed at Project Status Reviews and the respective ICT Committee(s) meetings.

Closeout Stage

- Attends Final System Acceptance meeting
- Provides representatives to attend Outcomes Assessment meeting.
- Attends Outcomes Assessment meeting.
- Signs-off on project completion.

5.4.1.3.2 Project Manager

The Project Manager has total responsibility for the overall project and its successful completion. To succeed in this responsibility, the Project Manager must work closely with the Sponsor to ensure that adequate resources are applied. The Project Manager also has responsibility for planning and ensuring that the project is successfully completed on time, within budget, and at an acceptable level of quality. The Project Manager must be assigned early in the Planning stage so the plan will be owned by the person responsible for its execution.

General Functions

- Implements project policies and procedures.
- Acquires resources required to perform work.
- Manages the Project Team
- Maintains staff technical proficiency and productivity, and provides training where required.
- Maintains excellent communication with all Stakeholders
- Establishes and maintains quality in the project.
- Identifies and procures tools to be used on the project.

Initiation Stage

- Defines project success criteria.
- Documents project constraints.
- Documents project assumptions.
- Conducts cost-benefit analysis.
- Develops Project Charter

Planning Stage

The Project Manager assigned during the Planning stage may be someone other than the Project Champion/ Leader who carried the project through the Initiation stage. In these cases

the Project Manager must thoroughly review all of the materials previously created or assembled.

- Develops detailed Project Plan with the assistance of the Project Team, tailoring methodology to reflect project needs.
- Creates a WBS and an Organizational Breakdown Structure with the assistance of the Project Team.
- Develops, or assists in the development of, a Scope Statement, Project Schedule, Communications Plan, Risk Management Plan (which includes a Contingency Approach), Cost Benefit Analysis, Procurement Plan, Project Budget, and a Project Transition Checklist.
- Ensures that management, users, affected DCS&TM components, and contractors agree to project commitments.
- Ensures that the Project Plan is approved and baselined.
- Assigns resources to project and assign work packages (Resource Plan).
- Approves Project Quality Management Approaches.

Managing Stage

- Manages day-to-day tasks and provide direction to team members performing work on the project.
- Reviews regularly the project status, comparing budgeted to actual values.
- Reviews regularly the project schedule, comparing baseline schedules to actual work completed.
- Ensures that the Project Plan is updated and signed-off as needed.
- Updates budgets and schedules and makes recommendations as needed.
- Reviews the results of quality assurance reviews.
- Participates in Change Control Board to approve product/project changes.
- Reviews project risks and establish mitigation procedures.

Closeout Stage

- Develops an action plan for any product deficiencies, open issues, etc.
- Obtains customer and management approval of completed project.
- Closes-out open action items.
- Conducts Final System Acceptance meeting.
- Creates Project Closure document
- Closes-out any financial accounts or charge codes.
- Conducts Outcomes Assessment meeting
- Creates Outcomes Assessment Report
- Assists as needed with any post-project delivery audits.
- Assists purchasing contract administrator(s) in contract closeout.
- Archives all project data.
- Celebrates success with Stakeholders and the Project Team.

5.4.1.3.3 Executive Committee

The Executive Committee (ICT Strategic Committee) – together with its subcommittees (ICT Steering Committee) identifies the need for projects, assesses project risk, and approves project commitments. It is responsible for establishing the strategic technology plans and for ensuring that projects are consistent with the DCS&TM and overall DCS&TM technology plans. It is also responsible for developing the procedures to ensure that Information System policies are followed.

General Functions

- Prioritizes technology needs and includes them in DCS&TM strategic plans.
- Ensures that sufficient resources are available to conduct projects.
- Reviews/approves commitments to external entities (e.g., vendors, other agencies).
- Ensures that staff is properly trained.

Initiation Stage

- Assists in staffing effort in cooperation with the Sponsor.
- Reviews/approves Project Charter
- Reviews/validates Risk Analysis.
- Ensures that funding is available.

Planning Stage

- Reviews/approves the Project Plan
- Reviews/validates and approve risk analysis.
- Budgets and establishes financial reserves based on Risk Analysis Worksheet.
- Ensures project staff availability.
- Ensures that funding is available.

Managing Stage

- Reviews projects at regular Executive Committee (ICT Strategic Committee Meetings).
- Approves changes to the Project Plan baselines.
- Reviews risk-mitigation plans and acts on Project Manager's recommendations.
- Reviews/approves changes in contract commitments.
- Reviews/approves project deliverables.
- Approves project/phase completion.

Closeout Stage

- Ensures customer and Sponsor acceptance.
- Participates in Final System Acceptance meeting.
- Signs-off on Project Closure document, if key Stakeholder
- Ensures closing of accounting/financial files.
- Sends representatives to participate in the Outcomes Assessment meeting.

5.4.1.3.4 Project Team

The Project Team has responsibility for conducting project activities. Project Team members, as necessary, assist the Project Manager in planning the development effort and help construct commitments to complete the project within established schedule and budget constraints. The Project Team may include the subject matter experts responsible for implementing the project solution. Customers and/or Stakeholders should interact with the Project Team to ensure that requirements are properly understood and implemented.

General Functions

- Identifies technical solution alternatives.
- Implements solution within budgeted cost and schedule.
- Coordinates with quality assurance organization.
- Supports Project Planning and tracking.

Initiation Stage

- Provides estimates for developing products.
- Ensures that requirements are feasible and appropriate for available resources.
- Analyzes requirements for completeness, consistency, and clarity.

Planning Stage

- Develops technical approach.
- Partitions and assigns development tasks.
- Assists in development of estimates and schedules.
- Assists in development of a Quality Assurance Plan.
- Identifies tools needed for the project.
- Ensures that all members of the Project Team understand the Project Plan.
- Identifies staff training needs.
- Ensures that project execution staff fully understands requirements.

Managing Stage

- Creates product and process solutions.
- Tracks the project execution effort and submit status reports.
- Conducts internal and external reviews and walkthroughs.
- Creates configuration control and baseline documents.
- Creates testing plan and coordinates test activities.
- Executes assigned project tasks.
- Identifies problems and schedule fixes.
- Coordinates with quality assurance, review quality assurance results, and corrects any deviations.
- Identifies and reacts to risks as they are found.
- Participates in change reviews.

Closeout Stage

- Participates in Final System Acceptance meeting, as appropriate.
- Participates in Outcomes Assessment meeting, as appropriate
- Identifies ways to improve project processes.
- Turns over all project-related documentation to the Project Manager for archiving.

6. Review of the framework

This framework shall be reviewed after a period of three (3) years or as and when there is a major change.

7 Recommended/ Not Recommended

Applicable protocols for policy completion
be adhere to



MS B. MOFOKENG
HEAD OF DEPARTMENT

15/04/2021
DATE

8. Approval

This framework is agreed to by the Accounting Officer.

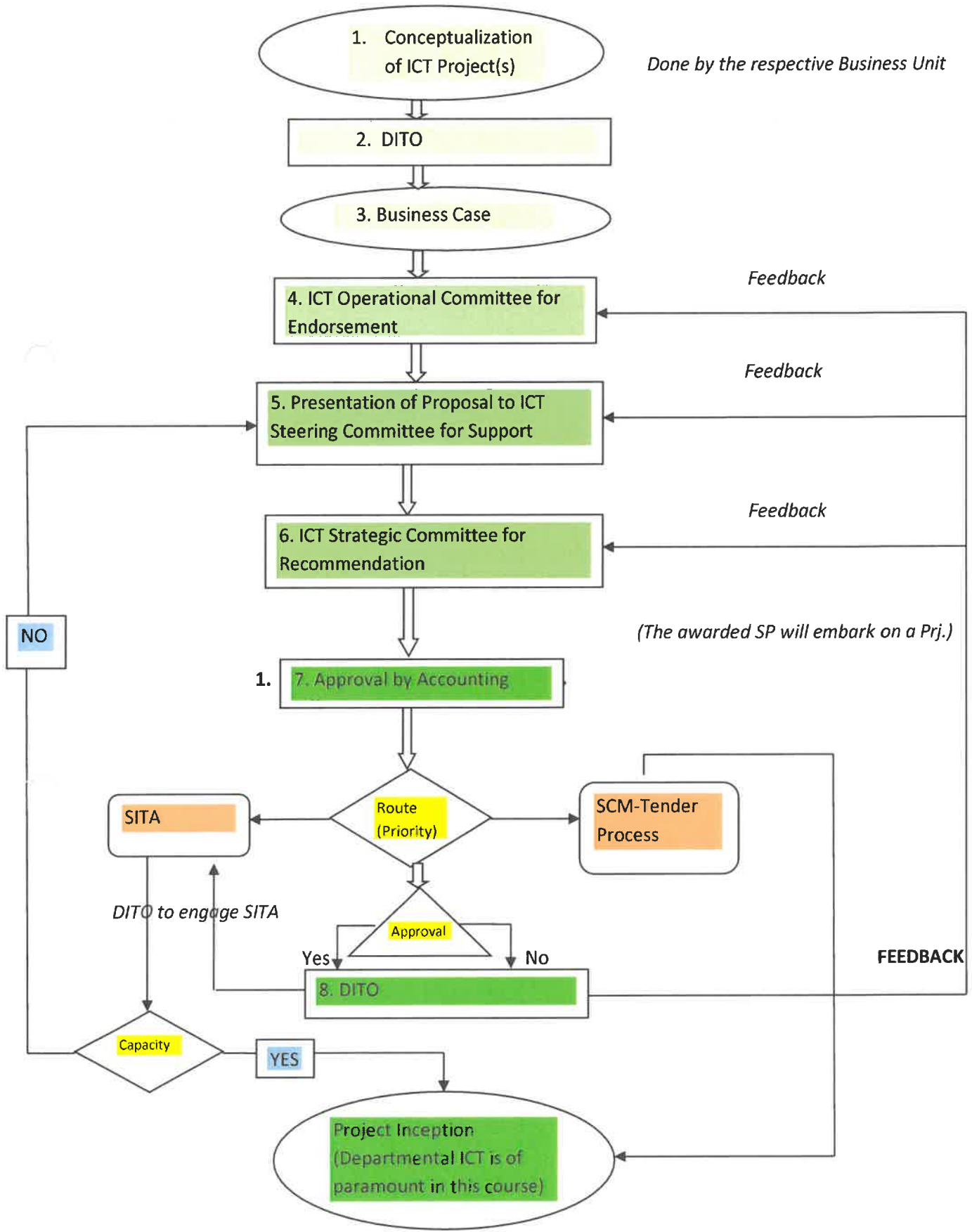


MR M. MOKONYAMA
ACCOUNTING OFFICER

30/04/2021
DATE

ANNEXURE A

ICT PROJECT FLOW



1. **Conceptualization of a Project:** The Program Manager of the respective Business Unit will firstly *document a Problem Statement* outlining exact problem and engage ICT Component for the attention of Departmental Information Technology Officer (DITO).

Activity: Benchmarking, Research and /or advice

Deliverable: Report

2. ICT Component/DITO will then assist the Business unit to build a *Business Case*.

Activity: Engage Risk management unit to conduct assessment relating to the identified risks.

Deliverable: Drafted Business Case.

3. Business Case to be presented to ICT Operational Committee for inputs.

Activity: Business Case presentation for inputs.

Deliverable: Signed document of a Business Case by Chairperson.

4. **ICT Steering Committee:** Business Case to be presented by the Project Manager to the committee for support.

Activity: Presentation of Business Case by the Project Manager for recommendation.

Deliverable: Signed document with recommendation.

5. Approval of Business Case by the Accounting Officer

Activity: Approval by Head of Department

Deliverable: Approved Business Case

6. **DITO:** Departmental Information Technology Officer (DITO) will provide feedback to the all Committees and engage Project Management Office (PMO) i.e. SITA or the awarded Service Provider.

Activity: Draft a Letter of engagement to PMO signed by DITO.

Deliverable: Letter of engagement.