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*ICT Project Management Framework*

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**Version 5.0**

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# 1. Introduction

Since its publish in 2009, this document has been updated to align its content with the current Secretariat-wide strategy on information and communications technology (ICT), the governing bodies and the decision-making process related to ICT initiatives. It continues to provide guidance on the methodologies and baseline tools that support the successful management of projects, from proposal stage through completion and benefits realization.

The framework clarifies what ICT projects constitute, defines the roles and responsibilities of OICT and the governance bodies in ensuring that approved projects are aligned with organizational goals and priorities. It also describes the role of the Enterprise Project Management Office (ePMO) as an organizational unit within OICT that centrally coordinates the review and management of ICT initiatives across the Secretariat.

The framework makes reference to historically published documents relevant to the management of information and communications technology initiatives in the Secretariat, such as follows:

- ST/SGB/2003/17 - defines the role of the Information and Communications Technology Board in ensuring coherent and coordinated usage of information and communications technology (ICT) across the Secretariat. It calls for the review of ICT projects and initiatives. The overall goal is to ensure that the ICT needs of the departments are identified and met, standardization of systems is maximized, duplication of efforts is avoided, and that projects and initiatives are aligned with the overall goals and priorities of the Secretariat.
- ST/AI/2005/10 - further defines the criteria of a business case for new ICT projects and initiatives, and the need to submit them for review and approval by the Project Review Committee (PRC).

## 2. EPMO Scope and Functions

To ensure alignment of ICT investments with organizational goals and priorities, a central project management office within OICT was established. Its scope and functions span the entire life cycle of a project, from business justification through completion and benefits realization.

### Enterprise Portfolio Management

The primary objective of Enterprise Portfolio Management (EPM) is to ensure that the Organization is ***doing the right projects***. Functions of EPM include:

- Business case development support
- Management of project investment review and approval process
- Development and maintenance of project investment assessment criteria
- Monitoring and reporting of ICT portfolio/business alignment
- Consolidated portfolio financial and status reporting
- Periodic portfolio status reviews
- Development and maintenance of portfolio management tools, templates and processes
- Compiling and managing the inventory of all significant ICT initiatives

### Project Management Support

The primary objective of Project Management Support is to warrant that the Organization is ***doing the projects right***. Functions of project management support include:

- Development and maintenance of best practice project management standards, methodology, processes, tools and templates
- Ensuring compliance with enterprise architectural standards and policies
- Identification of training needs and requirements
- Development of training programs, materials and workshops
- Project management assistance, coaching and mentoring for project managers
- Development and maintenance of a project management support website
- Organization of complex programs and projects
- Periodic project status reviews

### Project Benefits Assessment

Project Benefits Assessment ensures that the Organization optimize its ICT project investments – ***doing the projects for the right reasons***. Project assessment, including pre and post project benefit analysis and return on investment requires coordination with project business owners. Functions of Project Benefits Assessment include:

- Post implementation project evaluation, including monitoring and evaluation of actual results against projected budgets and plans; post-implementation benefits assessment and reporting
- Developing of tools and templates for post implementation project assessment and "lessons learned"
- Organizing and leading post-implementation "lessons learned" workshops with project teams

### 3. ICT Project Definition and Classification

#### Definition of an ICT Project

An ICT project is defined as a one-time effort undertaken to produce major products, services or results for the Secretariat over a specified period of time, and within defined resource constraints.

An ICT project has the following characteristics:

- Discrete start and end date
- Provides a new, differentiated product, service or result
- Has an identified business owner
- Has ICT as an integral part of the deliverable , or utilizes ICT resources to produce the deliverable

#### Project Classification and Submission

Projects are classified based on total cost. Total cost includes all one-time (non-recurrent) cost to implement the project, plus the cost to maintain the new product or service over a four-year period. All Departments, Offices and Programmes of the Secretariat are required to submit business cases for ICT projects estimated to cost more than \$200,000 in combined monetary and staff resources over a four-year period.

Classification	Required Document	Required Action(s) Prior to Project Start
Project more than \$200,000	Business Case (BC)	Submit ICTC-endorsed Business Case to ePMO/OICT for PRC review.
Project \$200,000 or less  Project cost unknown (initial idea, proof-of-concept)	Project Brief (PB)	Submit Project Brief to ePMO/OICT. If project is expected to cost more than \$200,000, submit the proposal as a business case.
Temporary initiative, less than 6 months of operation	N/A	Exempted from PRC review.

The official that is responsible for implementing the project and monitoring the realization of its benefits shall ensure that a business case is prepared prior to its commencement and is prepared in accordance with relevant ICT standards and under the guidance of his/her ICT committee. Any divergence from applicable ICT standards shall be noted and justified in the business case. Each business case shall document the reasonable options available for proceeding with the ICT initiative and shall include justification for preferring the selected option.

## 4. Project Management in the UN Secretariat

### 4.1 Selecting the Methodology

Any project management methodology consists of various processes and controls that can be applied prior to, during, and after the project. A project management methodology identifies roles and responsibilities of people involved in a project, tasks assigned to each role as well as the sequence and timing of performed tasks/activities. Processes and controls used by the project management methodology help structure the work and identify the type of information needed for control purposes, by dividing the project into manageable and controllable stages.

As part of the transition activities in 2008, OICT evaluated PRINCE2 and PMBOK project management methodologies for their adaptability to the United Nations project environment.

PRINCE2 (PProjects IN Controlled Environments) is a process-based, prescriptive project management methodology. It has clearly defined processes, steps and templates. PRINCE2 is in the public domain, offering non-proprietary best practice guidance on project management and is a de facto standard used by the UK Government. It is also widely recognized and applied in the private sector, both in the UK and internationally.

PMBOK ("The Guide to the Project Management Body of Knowledge") is published by the Project Management Institute (PMI). It is accepted throughout North America and other parts of the world as the standard approach to performing various project management-related processes. PMBOK is a descriptive guide of "how things could be done". It is not intended to instruct on any of the techniques or use any of the tools described, it merely lays out processes, their relationships and the tools and techniques that can be invoked.

There is a high level of compatibility between PMBOK and PRINCE2. After consideration of both approaches, PRINCE2 was selected as the project management methodology that will be adopted for use in United Nations ICT project environment.

Over time, OICT has done its best effort to tailor the processes and controls according to what is suitable to the UN environment.

### 4.2 Overview of PRINCE2

PRINCE2 advocates the breaking down of the project in manageable elements, e.g. for easier planning and better control. Project stages recommended for use in United Nations ICT project environment are as follows:

- ICT Investment Review and Approval Process
- Initiating a Project
- Project Execution Stages– as many stages as needed, depending on applied software development life cycle, project size and business deliverables
- Closing a Project

A controlled project start is defined in the 'ICT Investment and Review Approval Process' stage. This stage specifies elements that need to be in place prior to project start, such as a viable business case and funding. A validated business case is the central component of PRINCE2. The business case, which provides the rationale and business justification for the project, drives all project management processes, from initial project set-up to successful finish. Project management controls confirm that a valid ongoing business case is reviewed and updated.

During 'ICT Investment and Review Approval Process', the business sponsor prepares and submits a business case to ePMO/OICT.

The approval of the business case is described in more detail in Section 5, ICT Investment Review and Approval Process.

**Project Board** - PRINCE2 defines standard project management team roles. The methodology suggests management oversight from those who are in the best position to make decisions about project viability – the project board. The project board is a temporary project control body with representation from the business, user and supplier side, accountable for the project outcome and the realization of forecast project benefits. It brings together major project stakeholders, transfers authority and allocates resources to the project manager required for successful completion of the project.

This oversight and approval managerial entity is essential for any sizeable project endeavor. The project board manages by exception, while the project manager carries the responsibility for day-to-day management activities of the project. Other synonym terms used in United Nations are: project steering committee, project executive committee, or senior working group. A project board is a vital control mechanism that reduces project risk. It is a critical component that balances the accountability between the project manager and senior management, clarifying project ownership and delegation of authority. The project board ensures the involvement of management and stakeholders at key times during the project life cycle.

For more information on the Project Board, refer to Appendix A.

'ICT Investment and Review Approval Process' is followed by 'Initiating a Project' stage, where a project board, project manager, and project resources are assigned to the project. In this stage a high level project plan, a change management/communication plan, as well as a benefits realization plan are produced and distributed to key project stakeholders. Furthermore, the business case is re-validated and funding is secured.

PRINCE2 processes, components and techniques are adaptable to any project environment and project size, allowing for flexibility in applying the methodology at the level appropriate to the project. For the development of non-project management products, any Software Development Life Cycle (SDLC) methodology can be used (Waterfall, Agile, Prototyping, etc.) by mapping it to 'Project Execution Stages'.

Project management products (as opposed to business products – the actual goal and deliverable of the project initiative) are written in the form of various reports following a pre-determined set of templates. Reports should be reviewed and approved by the project board in a timely manner and any requests for changes to the reports should be sent back immediately to the project manager.

All projects should go through a controlled end with 'Closing a Project' stage, whether they are prematurely terminated when the business justification for the investment ceases to be viable, or after the final project product has been delivered and accepted by the business.

Overall, PRINCE2 methodology offers:

- Defined roles and responsibilities
- A controlled and organized start, middle and end
- Regular reviews of progress against plan
- Assurance that the project continues to have a business justification
- Flexible decision points
- A product-based planning technique
- Management control of any deviations from the plan
- The involvement of management and stakeholders at the right time and place during the project
- Good communication channels between the project team, project management, and the rest of the organization
- Means of capturing and sharing lessons learned
- A framework for realization of forecast project benefits

### **ICT Project Management Handbook**

A handbook based on PRINCE2 has been published as a guide or reference material for project managers. It breaks down the management of project in manageable stages for easier planning and better control.

The ICT Project Management Handbook is available for downloading through iSeek:

<https://iseek-newyork.un.org/department/project-management>

## 5. ICT Investment Review and Approval Process

### 5.1 ICT Governance Review Bodies

The primary objectives of the strategy relating to governance include affirming leadership and strengthening transparency and accountability, and ensuring value for money from investment in ICT. A governance framework to oversee ICT architecture, standards and investment choices, to allow for holistic analyses of costs and savings and ongoing support for existing and new initiatives has been established. The role of the Chief Information Technology Officer (CITO) is a crucial component of the governance framework in ensuring accountability to Member States for all ICT responsibilities and activities.

#### GOVERNANCE REVIEW BODIES

##### ICT Committee:

- local or internal committee, exists at departmental level or OAH
- reviews and approves project proposals prior to routing to ePMO/OICT and endorsing for PRC review, ensures projects align with departmental or office goals/objectives, and conforms to standards, policies and enterprise architecture

##### Project Review Committee:

- reviews project proposals, checks for duplication, applies uniformly the standards decided by ICTB, recommends if initiatives should proceed.
- meets every two months or as needed

##### CITO:

- most senior Officer responsible for leading all ICT activities globally in the Secretariat; creates and sustains a set of shared views, programmes and values, and implements innovative technologies to support and facilitates the work of the UN.
- responsible for meeting the objectives of the ICT strategy.

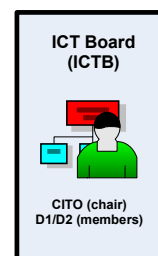
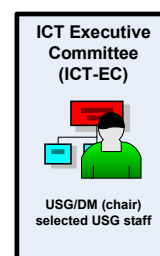
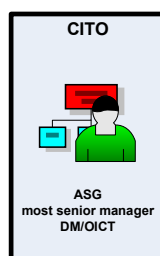
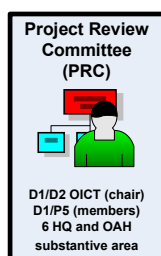
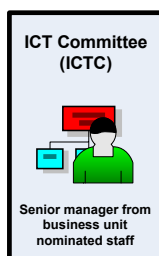
##### Advisory Groups:

##### ICT Executive Committee:

- highest level decision-making body on ICT, meets once a year or as needed
- reviews and decides on overall ICT strategy and priorities
- determines investment portfolio

##### ICT Board:

- advisory body on ICT matters, meets quarterly or as needed, chaired by the CITO
- ensures coherent and coordinated global usage of ICT across departments and duty stations
- provides advice on the implementation of the ICT Strategy and on Organization-wide ICT issues



Additionally, by mandate of ST/SGB/2003/17, internal or local ICT Committees are to be created at departments and offices away from Headquarters. They establish departmental strategies aligned with the Secretariat-wide ICT strategy and priorities, maintain and update information on departmental systems, resources and assets, and review existing systems to confirm their cost-effectiveness and ensure standard methodologies are consistently used for ICT projects at the departmental level. Only business cases endorsed by the internal or local ICT Committee will be accepted by the Project Review Committee.

### 5.2 ICT Project Review and Approval Process

An important objective of the ICT strategy is to ensure that ICT initiatives are centrally coordinated through OICT so they are aligned with organizational goals and priorities, synergies are achieved, and duplication is avoided.

The preparation of a business case prior to the start of the project is the central component of the project management methodology. The 'ICT Investment Review and Approval Process' serves as the starting point for all ICT projects in United Nations.



A project approval process and business case template have been developed for proposed ICT initiatives and major enhancements estimated to cost more than \$200,000 in combined monetary and staff resources over a four-year period. This includes infrastructure projects. Project cost includes one-time (non-recurrent) cost, plus operational cost over a four year period. Examples of one-time costs include software acquisition, hardware acquisition, application design, development, testing, etc. If additional centralized ICT services are required by a department in support of a new project (e.g. infrastructure hosting), these costs must be estimated and included in the initial cost in addition to the ongoing annual maintenance cost.

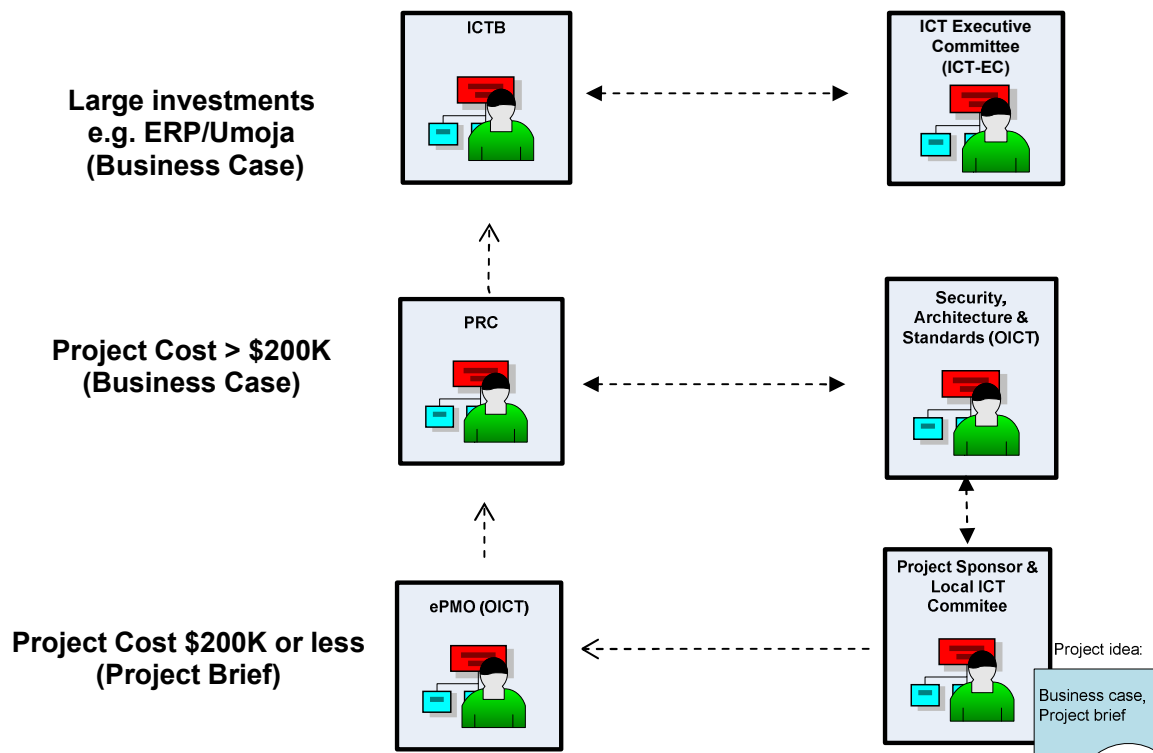
Project proposals are to be channeled through the enterprise Project Management Office in OICT (ePMO/OICT) whose coordinating role includes first-pass review of business cases and liaising with the appropriate reviewing bodies.

The extent of the governance review will depend on the cost of the project. Proposed projects estimated to cost \$200,000 or less will require the submission of a Project Brief (short form) to ePMO/OICT for review and addition to the registry of enterprise-wide ICT projects.

New projects proposed at mid-biennium are also subject to project approval.

The business case approval process is explained through the diagram below.

## ICT Investment Review and Approval Process



<b>Function</b>	<b>Participants</b>
<b>Develop the Business Case</b>	Business Sponsor ICT Project Lead Local ICT Committee
<b>Submit the Business Case for departmental review</b>	Business Sponsor Local ICT Committee
<b>Review and endorse the Business Case</b>	Local ICT Committee
<b>Review and approve the Business Case</b>	ePMO/OICT Project Review Committee (PRC) ICT Board (ICTB)
<b>Present approved projects to Controller for funding approval</b>	Business Sponsor
<b>Present approved projects to UN financial review committees (ACABQ, etc.)</b>	Business Sponsor Controller
<b>Maintain portfolio of projects</b>	ePMO/OICT Business Sponsor

As part of the review process, ePMO/OICT will review the proposed investments to ensure that information is complete and consistent, that cost estimates are inclusive and realistic, benefits are quantifiable as possible, major risks are identified, and architecture standards and principles are adhered to. If additional centralized ICT services are required by a department in support of a new project (for example infrastructure hosting), these costs must be estimated and included in the initial cost plus ongoing annual maintenance costs.

Standard templates for developing Business Cases and Project Briefs, including tools for calculating project cost and benefits are available for downloading through iSeek:

[https://iseek-newyork.un.org/webpgdept1630\\_1](https://iseek-newyork.un.org/webpgdept1630_1)

Staff from ePMO/OICT will be available to provide assistance by guiding technical staff and business sponsors in the development of their business cases.

### 5.3 ICT Funding Approval

The business sponsor is responsible for securing funding for all ICT investment proposals. The approval of an ICT investment by the governance bodies does not imply availability of funding.

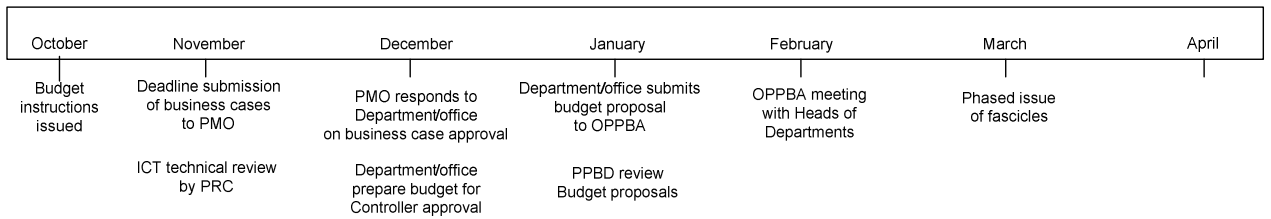
The investment approval process will be synchronized with the UN budget cycle. All new ICT projects will require technical review from OICT and clearance of projects over \$200,000 from the Project Review Committee prior to submission of budget to the Controller.

For planning purposes, ePMO publishes a project submission calendar that is aligned with the budget approval cycle.

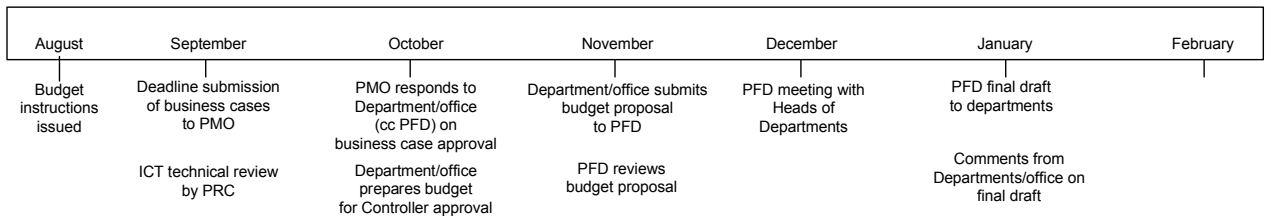
### 5.4 PMO Calendar - ICT Budget Preparation

The project approval process is distinct from the funding approval process. During the budget cycle, the project and funding approval process will be synchronized, ensuring that only approved investment proposals are presented to the Controller and ultimately to the ACABQ and Fifth Committees.

#### PMO CALENDAR – PREPARATION FOR ICT BUDGET (REGULAR BUDGET) BUSINESS CASE SUBMISSION (biennial, even year)



#### PMO CALENDAR – PREPARATION FOR ICT BUDGET (SUPPORT ACCOUNT) BUSINESS CASE SUBMISSION (annual)



## Project Life Cycle

# 6. Project Initiation, Execution and Closing

## Project Initiation

Projects estimated to cost more than \$200,000 (over a four-year period) require formal approval from the Project Review Committee prior to commencement. The Committee will notify ePMO/OICT and the business sponsor if additional information is needed before its final recommendation.

While projects estimated to cost \$200,000 or less (over a four-year period) do not requiring formal approval from the Project Review Committee, a Project Brief should be submitted to ePMO/OICT prior to start, to ascertain that project information provided are complete and consistent, and to record the new project into the central project portfolio (project registry).

In accordance with the project management methodology, the business sponsor nominates a project board and a project manager, and secures funding. The business sponsor is responsible for ensuring project compliance to ICT architectural, security and disaster recovery/business continuity standards prior to project start.

The business sponsor should relay basic project information, such as project manager, project board, planned start and end dates and information security requirements to ePMO/OICT. Refer to Appendix C for the more on Information Security Requirements, including link to standard forms managed by OICT.

## Project Execution

During project execution, the business case becomes a living document, re-visited as necessary during the implementation and re-adjusted at major milestones. After project completion, the business case provides the basis for post project benefits evaluation and assessment.

Based on required Information Security Requirements, the project manager is responsible for liaising with the Security, Architecture and Standards Section in OICT, to warrant correct implementation of security standards.

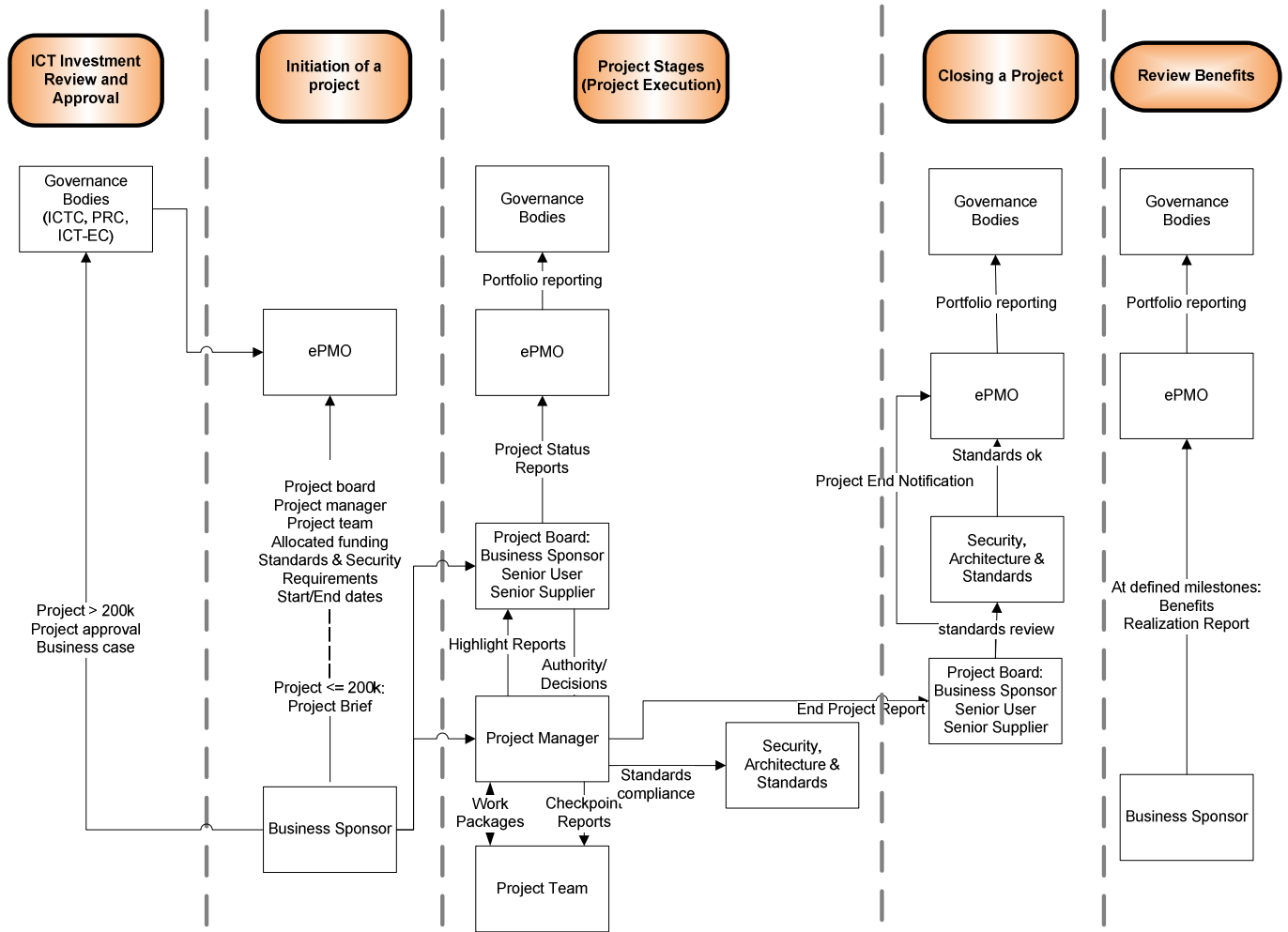
The project board should provide periodic project status updates to ePMO/OICT. The project board may delegate the authority to the project manager to provide ePMO/OICT with the project status. Project status updates are the basis for portfolio reporting to governance bodies. Portfolio reporting includes evaluation of proposed projects, status of ongoing investments, as well as post mortem analysis of completed projects.

## Project Closing

At project end, a project end notification is sent to ePMO/OICT. Before the project is closed, Security, Architecture and Standards Section in OICT may request and facilitate a project review, ensuring that specified standards have been upheld.

The business sponsor is responsible for achieving the benefits forecast in the business case. Post project reviews may be carried out by ePMO/OICT at predefined milestones, as defined in the benefits realization plan, or when requested by governance bodies.

Project Life Cycle

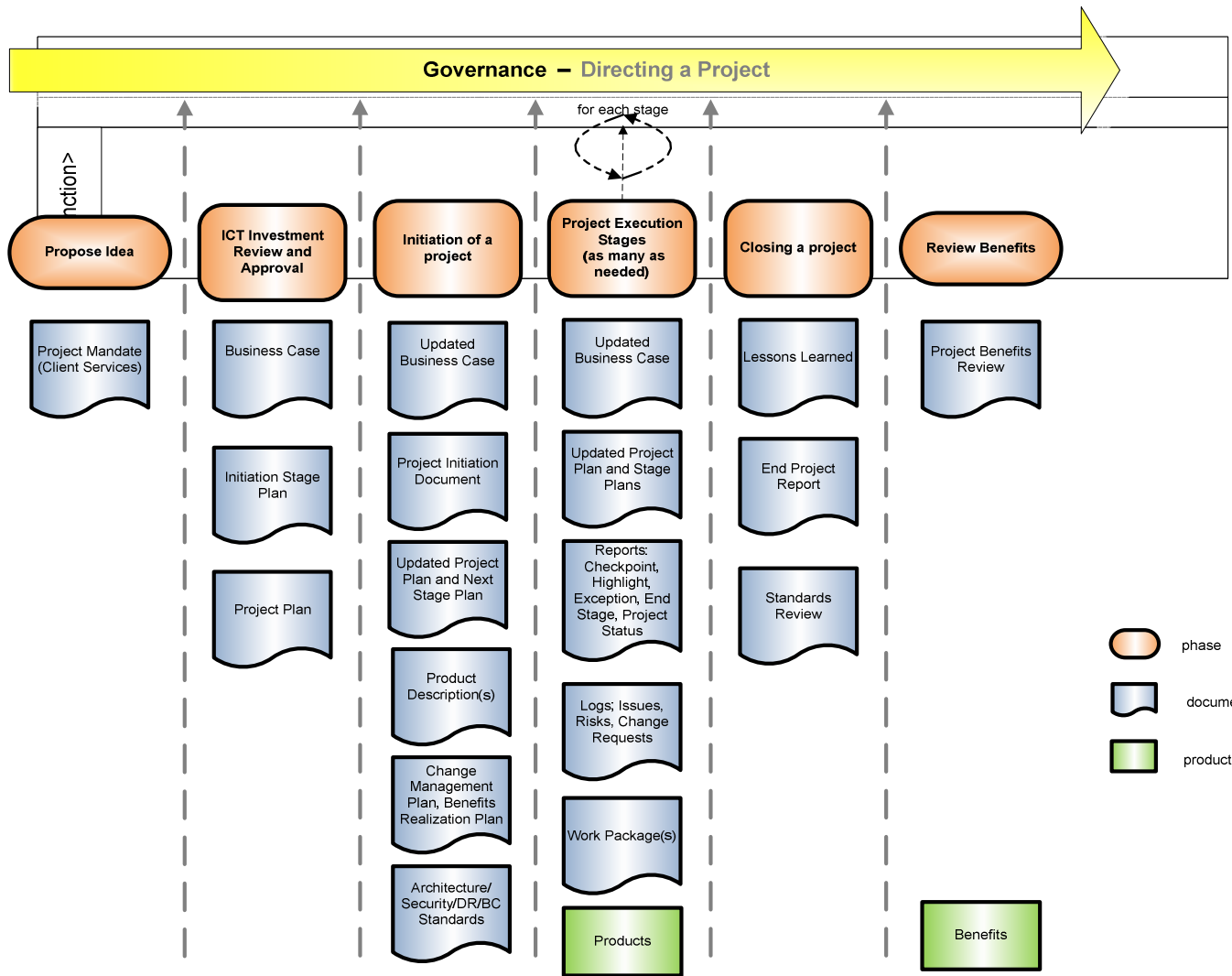


## **7. Standard Project Management Templates**

As part of best practices, OICT recommends the use of standard templates that support the management of projects throughout their life cycle. They can be used prior to undertaking the project, during project execution, and upon completion of the project to document lessons learned.

Project management templates managed by ePMO/OICT are available for downloading through iSeek:

<https://iseek-newyork.un.org/department/project-management>



## 8. Benefits Realization

The objective of the benefits realization framework is to ensure that investments deliver the forecasted benefits to the organization. A clear understanding of envisioned benefits and the plan for warranting their delivery is prepared during project start up and project initiation.

The mindset underlying benefits realization is based on the following premises:

- **Benefits do not just happen.** Benefits do not automatically appear when a new technology is delivered. Benefits flow and evolve over time, as people learn to use it.
- **Benefits rarely happen according to plan.** A forecast of benefits to support the business case for an investment is just an early estimate. It is unlikely to turn out as expected.
- **Benefits realization is a continuous process** of envisioning results, implementing, checking intermediate results and dynamically adjusting the path leading from investment to business results. Benefits realization is a process that must be managed, just like any other business process.

Forecasted benefits are recorded in the business case. The business sponsor (Executive) is responsible for identifying all benefits to be derived from the project. He is also accountable for the creation of a benefits realization plan during project initiation, for the update of the forecasted benefits and realization plan during project execution, and for the tracking of realization of benefits after the delivery of the project.<sup>1</sup>

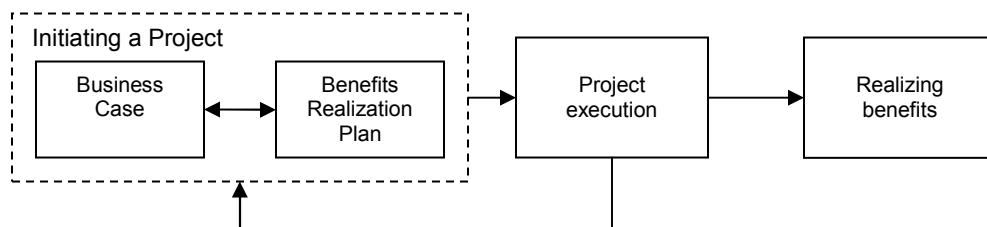
A sample of a Benefits Realization Plan template is included in Appendix B.

To determine if a project should be undertaken, United Nations uses the return on investment (ROI) metric. ROI is calculated based on the Total Cost of Ownership of an investment and quantifiable benefits expected from the investment. Unquantifiable benefits do not flow into the calculation of the ROI, however they complement the ROI metric by providing an additional view of the value of an investment for the organization.

During project execution, forecast benefits and the benefits realization plan may be affected by changes in scope, time and cost. As part of the project management methodology, forecasted benefits and the benefits realization plan should be reviewed and updated after the completion of each stage.

At the end of the project, the Benefits Realization Plan provides milestones at which realized benefits are reviewed, documented and reported to OICT, who then reports the results on benefits realized to the appropriate governance body.

A simplified benefits realization flow is shown below:



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<sup>1</sup> Managing Successful Projects with Prince2, Office of Government Commerce, 2005 ed.



## Appendix A – Project Board TOR

### Terms of Reference (ToR) Project Board

#### Goal

The goal of the Project Board is to grant authority to the project manager by explicitly committing resources to the project. The Project Board manages the project by exception.

#### Scope

The Project Board owns the project and is responsible to the governance bodies for the overall direction and management of the project.

The Project Board is the project's 'voice' to the outside world and is responsible for the dissemination of information about the project at the senior level. It consists of three roles: Executive, Senior Supplier, and Senior User.

- The Executive is ultimately responsible for the project and for ensuring that benefits have been realized. The Executive authorizes project expenditures.
- The Senior User represents the interests of all those who will use the final product(s) of the project. The Senior User role commits user resources and signs off project deliverables against specified requirements.
- The Senior Supplier represents the interests of those designing, developing, facilitating, procuring, implementing, and possibly operating and maintaining project deliverables. This role is accountable for the quality of products delivered by the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required.

#### Primary Functions

- Authorize of the Project Initiation Stage based on the Business Case
- Commit resources to the project
- Monitor the project via highlight reports
- Undertake project end stage assessment and authorize subsequent project stages
- Review of project business benefits
- Manage by exception (authorize exception plans, monitor risk, advise the project manager, approve changes, etc.)
- Authorize project closure

#### Rules of Procedure

- Each PRINCE2 project will have a Project Board made up of the Executive (sponsor), the Senior User (someone who can represent the user side) and the Senior Supplier (someone to represent the supplier or specialist input)
- The authority levels required of the Project Board members should match the needs of the project
- Project Board manages by exception
- There should only be one Executive in a Project Board, who is the key decision maker and ultimately responsible for benefits realization of the investment
- A Senior Manager can assume up to two Project Board roles.

#### Relationship to other bodies

- The Project Manager reports regularly to the Project Board, keeping them informed of progress and highlighting any foreseen problems.
- The Project Board is responsible for providing the Project Manager with the necessary resources and decisions needed to proceed or overcome problems.

## **Membership**

Executive: A senior manager with ultimate project accountability.

Senior User: A senior manager from the substantive area accountable for information supplied by the users, and for appropriate user participation.

Senior Supplier: A senior manager who is accountable for the quality of all products delivered by the supplier.

## Appendix B – Benefits Realization Plan Template

<b>Benefits Realization Plan</b>				
Description/Objective of Business Benefit	Annual Estimated Value (USD)	Measure Activity	Planned Date	Owner
Total Forecast Project Benefit				

## **Appendix C – Information Security Requirements Form**

During the initiation phase of a project, specific information security requirements for each ICT resource must be defined (including system/applications). These are business requirements that are defined with respect to confidentiality, integrity, availability, and auditability or accountability. In addition, the exposure or accessibility of a system/application must be specified.

Information Security Requirements Forms prescribed by Security, Standards and Architecture Section in OICT are available for downloading through iSeek:

[https://iseek-newyork.un.org/webpgdept1630\\_22](https://iseek-newyork.un.org/webpgdept1630_22)