Enterprise Performance Life Cycle Management

Guideline

Version 2.1

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MAY 2011

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DOCUMENT CONTROL

REVISION NUMBER	DATE	COMMENT
1.0	January 30, 2009	Original Publication[1]
2.0	January 2011	Consolidated and simplified guideline.
2.1	May 2011	Republished 2.0 with minor changes as official PSG "guideline"

1 This document is written and produced by the Georgia Technology Authority (GTA), Enterprise Program Management Office (EPMO) as part of the Enterprise Governance and Planning Division.

1 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to provide a guide to executive branch agencies in Georgia state government for Enterprise Performance Life Cycle (EPLC) management.
This guide provides a framework for state agencies to manage their technology investments[2] in order to achieve consistently successful outcomes that maximize alignment with enterprise-wide and agency specific goals and objectives.

1.2 BENEFIT

GTA approaches the management of IT initiatives with an enterprise perspective[3]. By managing and governing its investments from an enterprise perspective, Georgia will be in a better position to take advantage of economies of scale, common needs, data sharing and alignment to overall business strategies. State agencies manage and govern their IT investments using common practices and methods which support integration, accountability and transparency. The enterprise perspective also improves compliance with legislative and regulatory requirements.

1.3 SCOPE

The EPLC guideline is focused on the life cycle of information technology (IT) investments. The state of Georgia uses information technology (IT) investments to support multiple policies and programs across all executive branch agencies. The EPLC framework applies to all state agency technology investments and initiatives, including but not limited to new projects, major enhancements to existing applications, steady state systems, new Commercial Off-the-Shelf (COTS) product acquisitions, 'Hosted' or Software-as-a-Service (SaaS) solutions and infrastructure projects. IT investments include desktop and laptop computers, application software and computer systems interconnected through statewide networks.
This document describes the three (3) processes and seven (7) stages of the EPLC and the associated responsibilities, exit criteria, deliverables and reviews associated with each process and stage.
The EPLC framework supports the GTA standards, Performance Lifecycle Framework, SM-10-006 and Performance Lifecycle Management, SM-10-007.
With so many systems spread across the state enterprise, the state needs a comprehensive way to view these investments and to ensure they are being planned, built and run in a manner that best utilizes the scarce resources of the state on behalf of Georgia's citizens.

[2] A large technology investment may consist of a single project, or of several logically related projects. For the purposes of this document, an investment will be assumed to consist of a single project or the on-going implementation resulting from a project.
[3] The GTA authority for technology investment management is established by O.C.G.A Section 50-25-1(b)(15), 50-25-4(a)(12), 50-25-4(a)(22) and 50-25-5.1(b)(3).

2 THE EPLC FRAMEWORK

2.1 PRINCIPLES OF A SOUND FRAMEWORK

Agencies will select only sound, viable IT initiatives, projects and systems with **reasonable baselines** for funding and inclusion in the IT investment portfolio. IT investments will be managed and implemented in a structured manner using **sound management practices**, and ensure business **stakeholders involvement** throughout the investment's life cycle. IT investments will be **evaluated** for how they will achieve their business objectives. IT investment performance will be **measured** against established business expectations and outcomes, and will be subject to **controlled** change management, as appropriate.

> Every IT investment will have reasonable baselines established, sound management practices engaged, stakeholders involved and outcomes evaluated, measured and controlled.

2.2 INVESTMENT PROCESSES

In order to provide guidance for enterprise wide investments in technology, it is necessary to organize the investments at the key points of decision making. We start by segmenting investments into three key processes in their life cycle:

Plan – *Are we investing in the right things?*
In this process, we organize to determine whether to make the investment. The outcome of this phase is a determination of whether this initiative has the pre-requisites and the potential to make the investment of time, resources and funds worth the benefits that will be realized once it is complete.

Build – *Are we doing them the right way and doing them well?*
In this process, we organize to determine whether the investment is sufficiently ready to be deployed and whether it will generate the benefits defined in the Plan Process. The outcome of this process is a determination on whether this initiative has the pre-requisites and the ability to run and operate based on the services defined.

Run – *Are we getting the benefits expected?*
In this process, we organize to determine whether the investment is sufficiently able to deliver on-going benefits as compared to the investment of time, resources and funds. The outcome of this process is a determination on whether this investment has a justifiable benefit for the costs of operation.

2.3 INVESTMENT STAGES

In each of the three processes, there are a number of steps or stages that an investment will go through. The stages within each process help guide the investment through the specific criteria, deliverables and outcomes that are necessary before the stakeholders and decision-makers can support moving from one stage to the next and ultimately to successfully exit the stage.

PLAN

- **Initiation –** Identify the high level business and functional requirements required to develop the product(s)/service(s) and the overall benefits of the proposed investment. Identify the business need, Rough Order of Magnitude (ROM) cost and schedule, and basic business and technical risks. The outcomes of this stage are the approval by Agency Stakeholders of the initial project benefits, scope, cost, schedule and performance rough order of magnitude estimates.
- **Planning –** Complete development of the Project Management Plan and refinement of project cost, schedule and performance baselines. Outcome of the Planning phase is a Project Management Plan, business, and resource requirements, and an acquisition plan for project resources, including vendor contracts, if needed.

BUILD

- **Design –** Finalize technical requirements and prepare the design for development based on the business & technical requirements. The outcome of this stage is completion of business product/service design and successful completion of preliminary and detailed design reviews.
- **Development –** Develop code/configuration and/or capabilities required to deploy the business product/service. The outcome of this stage is completion of all product(s)/service(s) and associated documentation; user, operator, security and maintenance documentation, and test planning.
- **Deploy –** Thorough audit and testing of the requirements, design, coding and documentation. Create and establish operational performance measures, operating manuals, customer service plans and baselines. The outcome of this stage is completed acceptance testing, training, establishment of full production capability and completion of the Post-Implementation Review.

RUN

- **Operations –** Operate and maintain the system and conduct annual operational analyses. The outcome of the Operations stage is successful operation of the investment against current cost, schedule and performance benchmarks. At some point in the lifecycle of the investment, when the annual operational analysis indicates that the investment should be terminated due to reduced cost-effectiveness in operations, changes in business requirements, changes in technology, or that the investment's planned retirement date arrives a decision is made to dispose of the investment. The Operations stage transitions to the Disposition stage.
- **Disposition –** The outcome of the Disposition Phase is the deliberate and systematic decommissioning of the business product(s)/service(s) with appropriate consideration of data archiving, security, migration of data or functionality to new assets, and incorporation of lessons learned over the investment life cycle.

2.4 EPLC Roles and Responsibilities

- **Business Owner (BO):** The person who serves as the primary stakeholder and advocate for the technology investment. The Business Owner is responsible and accountable for

ensuring the technology investment meets the business and regulatory requirements. The Stage Gate Review process is the business owner's mechanism to ensure the viability of the investment and the compliance with agency, state and federal laws and regulations, as required.

- **Key Stakeholders (SH):** Stakeholders are individuals with vested interests in the success of the technology investment. Certain stakeholders are considered critical partners because of their expertise and/or roles in the reviews and governance of the investment. Their purpose is to ensure compliance with policies, standards, practices, legislative requirements and environmental limitations. Their contributions are on behalf of and at the request of the Business Owner, as needed and based on their respective areas of expertise. Because organizational structures vary in the Agencies, the expertise for these roles may be fulfilled from a mixture of organizations, as appropriate. Key Stakeholder roles include:
    - Strategic Planner
    - Technology Architect
    - Information Security Officer
    - Procurement Officer
    - Budget/Finance Officer
    - Workforce/HR
    - And Federal authorities, Office of Planning & Budget (OPB), Georgia Technology Authority (GTA), Department of Administrative Services (DOAS), State Personnel Agency (SPA), and State Accounting Office (SAO).
- **Program Manager (PgM)**: The Program Manager is responsible for overall planning, execution and performance of the investment or initiative within approved cost, schedule and performance baselines. The program manager maintains information and reports on investment status, control, performance, risk, corrective action(s) and outlook. This person is accountable to the Business Owner for meeting business requirements and performance. This role provides a connectivity and guidance for the investment with the following roles during the lifecycle of the investment:
    - Investment Manager (Plan Process)
    - Project Manager (Build Process)
    - Operations Manager (Run Process)

2.5 EPLC Activities and Outcomes

The Enterprise Performance Life Cycle, as the name suggests, is performance or outcome based for each step or stage in the life of a technology investment. First one must define the outcome expected, then create the outcome or deliverable, and then test whether the outcome met expectations. This simple concept forms the basis for EPLC.

All Activities and Outcomes are
Defined, Created and Tested against
Performance Expectations

At each stage, there are defined, specific deliverables expected for technology investments. The business owner is responsible to test and assure the deliverables meet the business needs. The business owner relies upon the key stakeholders and subject matter experts to advise on the quality of those deliverables. The program manager is responsible to provide the deliverables to the key stakeholders and business owner, ready for sign-off.
By decomposing the investment into these simple stages or steps, we are able to iteratively work towards a successful outcome and manage the risks involved.

A. STAGE DELIVERABLES

All deliverables are created in support of the investment objectives. Their purpose in each stage is to provide the supporting material for the business owner to have confidence in achieving the benefits of the investment. The specific deliverables outlined in the EPLC come from industry standards and independent research. In general, each deliverable will be evaluated and measured by the relevant stakeholder for completeness, accuracy and adequacy.

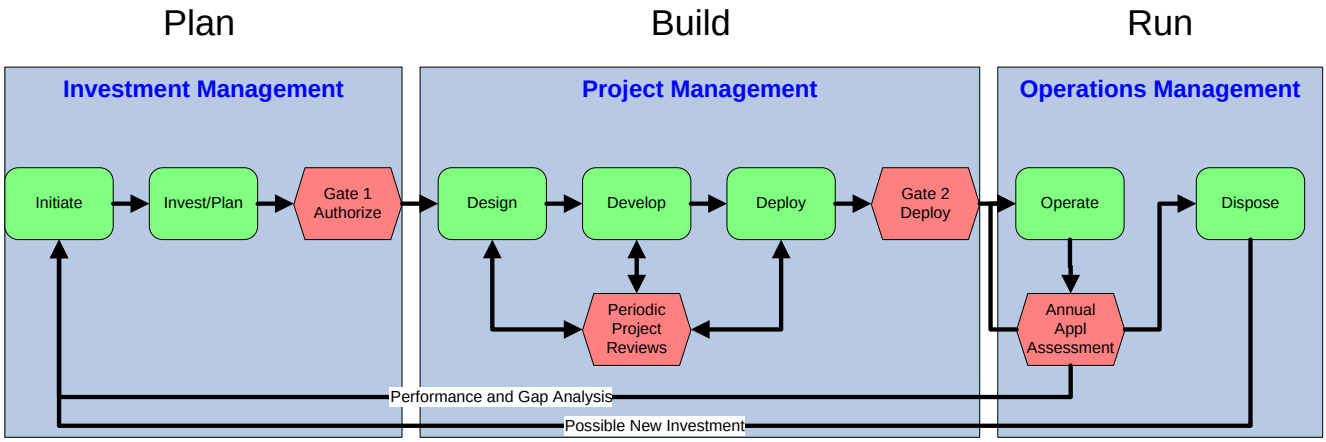
A. STAGE EXIT CRITERIA

Exit Criteria are established as Stage 'fitness' measures that must be attained to successfully complete a given stage. This creates a defined measure of performance at key points in the life of an investment and provides the Business Owner with a means of gauging progress or performance. Exit criteria can be documents, deliverables or specific actions that must be accomplished.
Generic Exit criteria are set to monitor the overall status of the investment. Stage Exit Criteria can include any necessary corrective actions needed to bring the project into alignment with the original goals, objectives and performance requirements.

A. STAGE GATE REVIEWS

Stage Gate Reviews are required at the end of the Plan and Build processes to provide a formal review of the Stage Exit Criteria. Periodic Project Reviews may be required during the Build stage depending on the complexity and criticality of the investment. In addition, annual Application Assessments will be required to revalidate the operational investment, depending on the complexity and criticality of the investment (see figure 1 for additional detail).

Figure 1 - Enterprise Performance Life Cycle

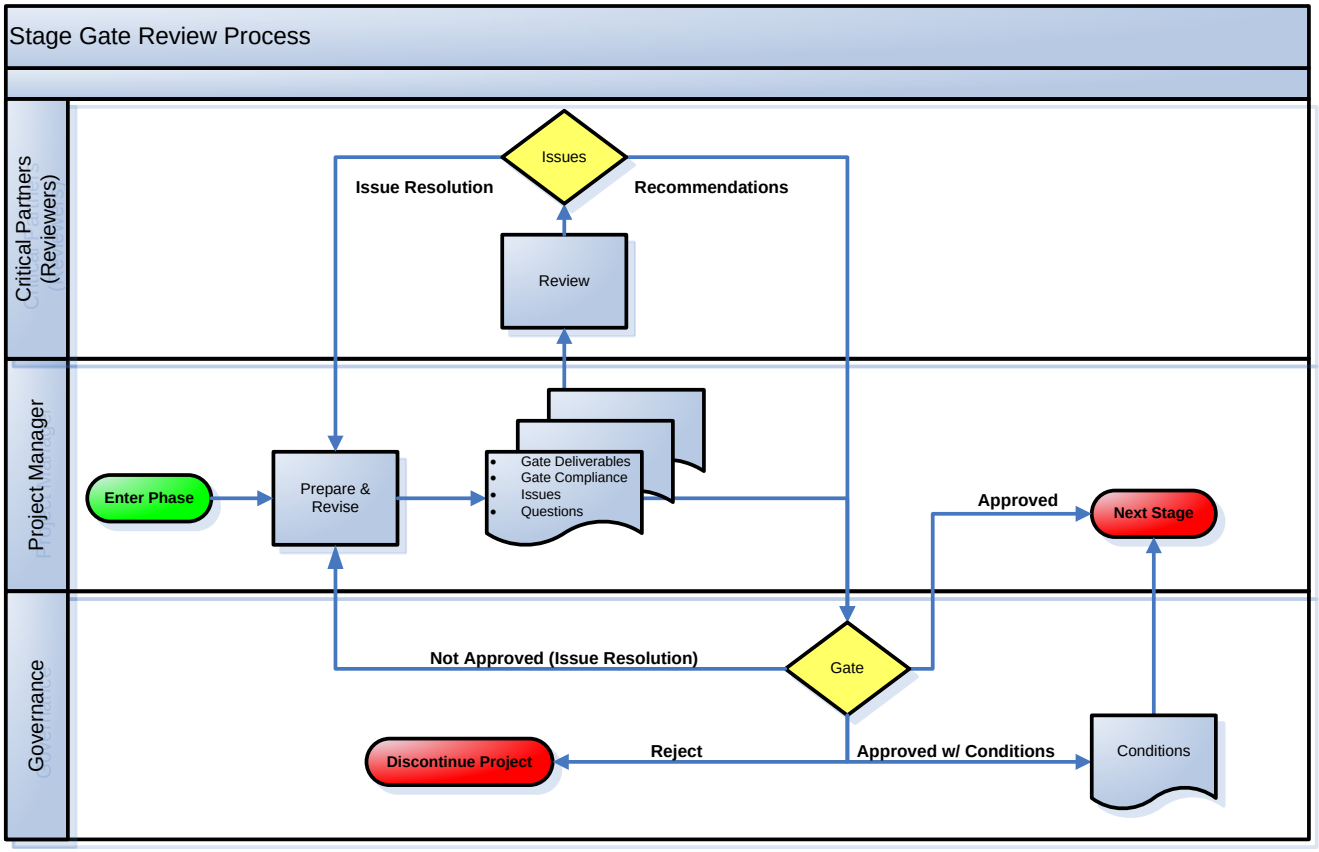


Stage Gate Reviews consist of an independent confirmation by Key Stakeholders that the Program Manager has satisfactorily met the Stage Exit Criteria to the satisfaction of the Business Owner. Stage Gate Reviews also address the availability of resources to execute the subsequent life cycle stages. The results of the review by the Stakeholders are provided with recommended action(s) to the Business Owner.
The emphasis of the Stage Gate Review is on:

- The successful accomplishment of the stage objectives.
- The plans for the next life cycle stage.
- The risks associated with moving into the next life cycle phase.

The Stage Gate Review process is illustrated in Figure 2.

Figure 2 - Stage Gate Review Process



3 ENTERPRISE GOVERNANCE

The Georgia Technology Authority (GTA) has responsibility for enterprise technology management and enterprise portfolio management[4]. Part of GTA's responsibilities include oversight and reporting on technology investments[5]. The EPLC provides a framework to accomplish these responsibilities by providing a consistent approach for agencies to demonstrate secure, reliable and effective technology investments.
The following areas enable agency business owners to plan, build and run technology investments.

3.1 POLICIES, STANDARDS AND GUIDELINES

The Official Code of Georgia Annotated, O.C.G.A. §50-25-04(a)(10), vests GTA with authority to "set technology policy for all agencies except those under the authority, direction or control of the General Assembly or statewide elected officials other than the Governor." The GTA Board of Directors has implemented technology policies pursuant to state statute through the policy on Information Technology Policies, Standards and Guidelines, PM-04-001.03.
The Official Code of Georgia Annotated, O.C.G.A. §50-25-4(a)(21), related to **security policies, standards and guidelines** is broader than the general statutory authority granted GTA with respect to technology policies. It authorizes GTA to establish statewide security policies and standards that are binding on all agencies. The GTA Board of Directors has implemented security policies pursuant to state statute through the Enterprise Information Security Charter, PS-08-005.01.
Agency Business Owners are required to follow the policies and standards as defined by GTA. Guidelines provide additional support by articulating best practices in the industry.

3.2 PROJECT ASSURANCE

Project Assurance is a structured review of technology projects to evaluate and determine how they can be successful. Project Assurance looks at project organization, sponsorship, plans, risks, issues, change, dependencies, resources, and processes, among other things, to determine how well they are being executed in context of the specific project, and then makes recommendations to mitigate risks. It does not conduct 'Quality Assurance'[6] of project deliverables but is concerned with the way projects are being managed. It provides line management with an independent view of the project status and makes recommendations as needed.

Some projects that are large and complex represent a critical risk to the business of the state and require extra care in their project assurance. In these cases we use Independent Verification and Validation (IV&V). The key difference with IV&V is the emphasis on 'Independent'. GTA procures independent, 3rd party assurance services to perform project assurance for the largest and most critical technology projects.

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[4] O.C.G.A. 50-25-1(b)(13) & (15)
[5] O.C.G.A. 50-25-4(a)(12) & (13)
[6] **Quality assurance**, or **QA** for short, is the systematic monitoring and evaluation of the various aspects of a project, service or facility to maximize the probability that minimum standards of quality are being attained by the production process

3.3 ENTERPRISE CRITICAL PROJECT REVIEWS

Industry research[7] has shown that one of the most significant contributors to technology project success is executive involvement. In the state of Georgia, the Critical Project Review Panel has the primary objective of understanding and responding to the business implications and issues associated with critical technology projects. Technology issues are not addressed in the panel review, only business issues. These can involve agency priorities, vendor relations, inter-agency dependencies, and budget and schedule challenges. The Panel provides a forum for the agency head to ensure they have the commitments and resources needed to deliver on their initiative successfully. GTA facilitates this forum and discussion through a disciplined approach.

The criteria to become a critical project are one or more of the following:

- Technology product and/or services that significantly impact the State of Georgia;
- Project budget is greater than $5 million;
- Critical to meeting agency business objectives; and
- Duration is one year or more.

On a monthly basis, GTA conducts a preliminary review of all critical projects and highlights issues or concerns for the panel to consider. These are presented to the panel in a summary report with key project measures, issues and risks identified, and any recommendations. Where follow-up is deemed necessary, GTA facilitates a meeting with the panel and with the agency head, business owner, project manager, vendor manager and project assurance. The panel then interviews, questions and evaluates the project team on the relevant business issues, and takes appropriate actions or decisions on behalf of the agency.

[7] S*tandish CHOAS Report, Gartner, Forrester, and Project Management Institut*e.