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# Independent Verification and Validation [1]

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SM-06-001 Independent Verification and Validation

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## PURPOSE

To set forth Georgia Technology Authority's (GTA) standard for implementing Independent Verification and Validation (IV&V) methodology in accordance with SR 754 and HR 1263 adopted during the 2004 Legislative session. This standard is established in recognition of the fact that:

- IV&V is a service intended to provide Agencies with independent project assurance over the entire project lifecycle (from business case development through project closing).
- Engaging the services of GTA to engage an independent consulting firm to act as a third-party monitor at critical phases of the project life cycle can be of benefit to the state in ensuring that the best possible results are achieved for large, highly complex information technology projects; and
- Independent Verification and Validation (IV&V) will be used by GTA to meet its mandated responsibilities for project oversight.

## STANDARD

- For information technology projects having a total value of \$1 million or greater, all Agencies shall engage the services of the Georgia Technology Authority to hire an independent consulting firm to provide IV&V services.
- The development of the IV&V SON, SOW reviews and vendor selection will be a joint effort between GTA and the agencies. The cost of IV&V services will be the responsibility of the agency owning the project.
- GTA will release all IV&V solicitations, will select the IV&V vendor with the assistance of the agency responsible for the project, and execute the contract with the IV&V vendor.
- The IV&V vendor shall be engaged on the project prior to project plan development and prior to the issue of any RFP for services on the project.
- IV&V vendors are required to report jointly to the Agency Executive Sponsor and the GTA Executive Director or their designees.
- Responsibility for the IV&V effort rests with the GTA Executive Director.
- While information will be shared and recommendation response action plans developed at all levels, the typical flow of information will be upward and decisions will flow back down through the project organization. (See Terms and Definitions for an overview of the roles and responsibilities of

primary IV&V project stakeholders.)

- All IV&V reports, including the Dashboard Report, shall be submitted to the project's Executive Sponsor, the GTA Executive Director and the GTA Program Management Office.
- IV&V is in no way intended to replace the GTA oversight function.
- An Agency may request a waiver or an exception to the use of an IV&V vendor. Any such request must be formally made prior to or at the time of submission of the APR.

## GUIDELINES

### 1.0 Independent Verification & Validation (IV&V) as Best Practice

#### 1.1 What is IV&V?

1.1.1 IV&V is a service intended to provide agencies with independent project assurance over the entire project lifecycle (i.e., from project initiation through project closing). The origin of IV&V stems from independent project assurance efforts first used by NASA and the US Military for large systems to help ensure adherence to standards and practices such as ISO and SEI.

1.1.2 IV&V provides an independent and objective, vendor neutral, third-party view of the project with the intent of protecting the State's interests. Observations and recommendations are developed by the IV&V team and presented to Project Managers, Business Owners and Executive Leadership with unbiased information by which they can make decisions impacting the project.

1.1.3 The focus areas for IV&V are tightly aligned to the enterprise dashboard in the areas of: Schedule, Budget, Business Objectives, Risk, Issues and Organizational Readiness. Additional examples of areas typically assessed include: Project Management practices, Contract Compliance, Deliverable Quality Assurance and Knowledge Management.

#### 1.2 What is not IV&V?

1.2.1 Since the main objective of IV&V is to provide an independent view of the project to all levels of management, IV&V services must not get intermixed with the day-to-day Project/Program Management efforts of the project. The effectiveness of IV&V is greatly increased by the reviewer's ability to assess progress from an outsider's perspective.

1.2.2 The IV&V vendor cannot provide staffing to the project for non-IV&V activities. However, IV&V teams should consist of Subject Matter Experts to assess and make recommendations that will allow agencies to determine additional staffing needs with specific skills on the project.

1.2.3 IV&V should not be used to negotiate contracts on behalf of the State. Instead, IV&V will be best utilized by having business cases, RFP's and contracts reviewed to help ensure alignment between the business case, requirements and legal obligations.

### 2.0 GTA's Independent Verification & Validation Life Cycle Model

GTA's IV&V processes are directly aligned with the GTA project management life cycle model described in the [Technology Project Management Standard](#). [7]

**2.1 Business Justification/Project Initiation Phase** ? The objective of this process is to confirm that the Business Case and high-level requirements are clear and the documented benefits are obtainable prior to

the establishment of a project. Business Justification occurs during the Initiation Phase of the project. Early involvement by a third-party IV&V vendor to assist in strengthening the overall direction and expected outcome of the project will have a positive impact to the overall project success. Questions addressed by this process include the following:

2.1.1 Does the Business Case align with strategies and objectives of the agency?

2.1.2 Are benefits, costs, risks and assumptions described with adequate details?

2.1.3 Have alternative solutions been evaluated?

2.1.4 Are high-level requirements adequate to clearly define project scope?

**2.2 Procurement/Project Planning Phase** ? The objective of this process is to ensure that a consistent procurement process is followed and to confirm that the RFP/SON and supporting contract documents contain a concise request for services in accordance with the requirements of the project. Procurement occurs during the Planning Phase of the project. Questions addressed by this process include the following:

2.2.1 Is the procurement process defined?

2.2.2 Are templates and standards being used?

2.2.3 Are the appropriate parties involved?

2.2.4 Are the requirements and contract clearly defined?

2.2.5 How will vendor progress and acceptance be measured?

**2.3 Implementation/Project Execution & Control Phases** ? The objective of this process is to provide independent, objective reviews and ongoing oversight of Project Management fundamentals and project execution as well as provide recommendations based on experience and ?best practices? to address the potential and actual risks to the project. Implementation occurs during the Execution and Control Phases of the project. Questions addressed by this process include the following:

2.3.1 Is the project executing in alignment with the business case, requirements and contract?

2.3.2 Are project management fundamentals and tools being used to track status?

2.3.3 Does the project team have the appropriate skills?

2.3.4 Is the project on schedule and within budget?

**2.4 Benefit Realization/Project Closing Phase** - -The objective of this process is to measure the end results of the project in the form of benefits realized against the original Business Case as well as document ?lessons learned? for future similar efforts in the agency and/or State. Benefits Realization occurs during the Closing Phase of the project and beyond. Questions addressed by this process include the following:

2.4.1 Did the project provide measurable results?

2.4.2 Are these results consistent with the Business Case?

2.4.3 Should the project/program continue?

# TERMS AND DEFINITIONS

- Deliverable ? any measurable, tangible, verifiable outcome, result or item that must be produced to complete a project or part of a project.
- IV&V Team ? includes the IV&V Project Manager and supporting team members and Subject Matter Experts that conduct assessments and present findings and recommendations to all of the other IV&V stakeholders
- Oversight ? the term used by GTA that represent the methods and procedures used by GTA to ensure that state IT projects, as defined in SR 754 and HR 1263, are successfully completed. IV&V serves as one of those methods but should not be viewed as a substitute for GTA oversight.
- Project ? a temporary endeavor undertaken to create a new or unique product or service. Major revisions or modifications to existing technology systems or resources may also be deemed to be a project.
- Project Management -- a discipline that involves people applying appropriate processes to meet business/program goals within time, cost, technical and quality requirements.
- Project Response Plan ? a plan of action developed by the project team to address correction actions recommended by the IV&V vendor.
- Stakeholders (IV&V) ? individuals or organizations that are actively involved in the project or whose interests may be positively or negatively affected as a result of project execution or project completion. The main IV&V stakeholders can be defined as follows:
  - Executive Level ? includes the Agency Executive Sponsor/Management, Boards, Steering Committees and the GTA Executive Director/CIO that are responsible for hearing and making final decisions on IV&V recommendations and project response plans as well as providing final approval of IV&V deliverables. This group may also include the Enterprise Critical Project Review Panel for designated projects.
  - Business Owner(s) ? includes the Agency Leadership or Direct Reports that are responsible for interpreting the IV&V recommendations, approving the project?s Recommendation Response Action Plan and supporting the presentation of both to the Executive Level.
  - GTA Program Management Office ? includes the GTA Program Management Office Director and/or an approved representative that is responsible for working in conjunction with the Business Owners to interpret, approve and support the presentation of IV&V recommendations and the Project?s Recommendation Response Action Plan to the Executive Level. Involvement by this group will be used to satisfy the legislative requirement for oversight by the GTA.
  - Project Managers ? includes the Agency designated Project Manager and the GTA Program Management Consultant (PMC) that are responsible for providing information and deliverables to the IV&V team for assessments, receive the assessment findings and recommendations and develop a Recommendation Response Action Plan to address the IV&V recommendations identified during these assessments. The GTA PMC will also serve to monitor the interim progress of the implementation of the action plan.
  - Project Team ? includes the Content Delivery, Subject Matter Experts and Team Leads that are responsible for providing subject matter expertise and assisting the Project Manager in developing the Recommendation Response Action Plans for recommendations that impact their level of responsibility.
  - Legal and Procurement ? includes the Agency (and if applicable, GTA) attorneys and procurement officers that are responsible for reviewing and responding to contract and

vendor compliance recommendations provided by the IV&V team.

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