Independent Verification and Validation (IV&V) Process

January 2016

What is IV&V?

❑ *Independent Verification and Validation (IV&V) is a set of Verification and Validation activities performed by a certified entity that is <u>not</u> under the control of the organization that is developing the software.*

    ❑ *<u>Verification: Ensuring the product is built right.</u>*
    ❑ *<u>Validation: Ensuring the right product is built.</u>*

❑ *IV&V services must be provided, managed and financed by organizations that are technically, managerially and financially independent of the development project.*

❑ *GTA is required to provide Project Assurance/Independent Verification and Validation Services for Executive Branch Agency IT Projects > $1M*

    ❑ *(O.C.G.A Section 45-12-70 et seq.; Section 50-5-51 (1), (2) and (11); Section 50-25-1(b)(14); Section 50-25-1(c); Section 50-25-4(a)(10); Section 50-25-5.1(b)(3). The authority for IV&V is provided from <u>House Resolution 1263</u> and <u>Senate Resolution 754</u>.*

When should IV&V be engaged?

❖ *Is your project large, complex, or mission-critical?*

❖ *Is your project manager and/or project team working with new technology or new methodologies?*

❖ *Do your customers expect a high level of accuracy and quality in the final product(s) of your project?*

❖ *Is your project of high visibility? Will it be scrutinized and used as a template for future projects?*

❖ *Do you require or desire validation of a project for your management or external group?*

What is the IV&V approach?

A high-level outline of the process followed includes:

1) *An in-depth review of the foundational project documents (charter, scope statement, business case justification, selection criteria)*

2) *A review of the project status document, meeting minutes, etc.*

3) *A review of the various planning documents (project plan, communication plan, risk management information, regulatory compliance plans, test plans and acceptance criteria, etc.)*

4) *Interviews with the project sponsor, stakeholders, and various team members*

What are the benefits of IV&V?

What are the benefits of performing Independent Validation and Verification (IV&V) on a software project? Though there are many, we routinely cite three primary benefits:

1) **Early detection:** IV&V identifies both problems and opportunities for improvement to processes and work products early on, so that corrections and improvements can be made before the consequences become major.

2) **Improved quality:** IV&V improves the quality of project work products and processes. These improvements come not only through early detection of errors, but through proactive prevention of errors.

3) **Lower cost:** By detecting errors, problems, and opportunities for improvement at the earliest possible points, IV&V can significantly reduce the overall cost of an IT project.

Who performs IV&V for Georgia?

- **GTA uses the Information Technology Project Assurance Services (ITPAS) contract and the Georgia Information Technology Project Assurance Services (GITPAS) to procure IV&V services. ITPAS is for projects with budgets higher than $100K. GITPAS is for projects with budgets under $100K.**

- **There are seven pre-qualified vendors on the ITPAS contract:**
    1) **The North Highland Company**
    2) **Grant Thornton United States LLP, Global Public Sector (GPS)**
    3) **First Data Government Solutions, LP**
    4) **KPMG, LLP**
    5) **CSG Government Solutions**
    6) **Cap Gemini Government Solutions, LLC**
    7) **Public Consulting Group**

Who performs IV&V? (cont.)

- **There are seven pre-qualified vendors on the GITPAS contract:**

    1) **CCCi**
    2) **CSG Government Solutions**
    3) **Ernst and Young, LLC**
    4) **HKA**
    5) **The North Highland Company**
    6) **Public Consulting Group**
    7) **The Prinzo Group**

How much does the IV&V cost?

- **The IV&V engagement is indirectly paid for by the agency.**
  - *IV&V invoices are paid by GTA, and GTA is reimbursed by the agency. This helps maintain the independence of the IV&V engagement.*

- **Historical cost estimates:**
  - **Project Budgets > $10M = about 2% to 3%**
  - **Project Budgets > $2.5M = about 4%**
  - **Project Budgets > $1M = about 8%**

In Conclusion

❑ **Independent Verification and Validation is a process that can identify issues in a project based on written requirements.**

❑ **It is more than just a simple checklist – when conducted properly, it helps ensure a project will be successful, delivering what is required (not just what is documented).**

❑ **It is a way to demonstrate progress to interested parties. And, it is a way to know for sure when things are really going well.**