Independent Verification and Validation (IV&V) Process
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 not under the control of the organization that is developing the software.
  - **Verification**: Ensuring the product is built right.
  - **Validation**: Ensuring the right product is built.
- 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 **House Resolution 1263** and **Senate Resolution 754**.)
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 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.