Increasing Agility within the IV&V Process
Introduction and Overview

- Common Misuse of the IV&V Process
- Impacts of the OMB 25 Point IT Reform Plan on IV&V
- How Development Methodologies Influence IV&V
- Increasing Agility into IV&V
- External Programs
- Wrap Up
- Q&A
Common Misuse of the IV&V Process

- Programs often place IV&V at the end of the SDLC

- IV&V becomes a “Big Test” at the end
  - Slow
  - Expensive
  - Fails to maximize IV&V value added
Common Misuse of the IV&V Process Continued

- **Slow**
  - Requirements Review, Test Planning, Test Case Creation

- **Expensive**
  - Unsustainable levels of High defects uncovered

- **Failure to Maximize Value**
  - IV&V cannot do “V” and “V”
Use a modular approach with usable functionality delivered every six months

Develop flexible budget models that align with modular development

Modular development delivers functionality in shorter timeframes and has long been considered best practice in the private sector and in some areas of government

Successful organizations using modular development base releases on requirements they define at a high level and then refine through an iterative process, with extensive engagement and feedback from stakeholders

Moving forward, Federal IT programs must be structured to deploy working business functionality in release cycles no longer than 12 months, and, ideally, less than six months, with initial deployment to end users no later than 18 months after the program begins
Development Practices Influence IV&V

- **Plan-Driven\Predictive Methods**
  - Waterfall

- **Adaptive Methods**
  - Agile Unified Process
  - Scrum
Introducing Agility into IV&V

How can we implement an IV&V program that can:

– Assist in producing quality software
– Assist in reaching desired deployment deadlines
– Mold to fit variations in development practices across an organization
– Reduce development and operations costs
– Assist in ensuring customer satisfaction
Ending the ‘Final Exam’ Mentality
– IV&V needs to be engaged at every step in the Software Development Life Cycle

The Test-First Methodology

Supporting Varying Development Methodologies
Agility in IV&V Continued

- Proper IV&V Organizational and Team Structures can and will increase agility

- Integrated Program Teams (IPT)

- Staffing
External Programs

- Central Configuration Management
- Process Improvement Group
Recap

- The Big Test
- OMB 25 Point IT Reform Plan
- Variations in Development Practices
- Agility in IV&V
- External Programs
In a chart...

End-to-End IV&V Lifecycle Methodology
Q&A