CMMI®-Based Improvement: The View from the Project

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The Project

- Large-scale Ground System that fits into larger, Space-based program providing sensor data to military users
  - Software-intensive, net-centric environment
  - Part of larger, system of systems
The Organization

• Lockheed Martin Integrated Systems & Solutions, which achieved CMMI® Version 1.1, SE/SW/IPPD/SS Maturity Level 5, October 2005

• IS&S has rigorous CMMI® maintenance methodology
  – All programs visited
    • 6 – 9 months after ATP with SCAMPISM C
    • One year after initial benchmark, SCAMPISM B or C depending on value and/or risk
  – Depending on process risks identified in previous benchmarks, revisited at least every two years
The Project Process History

- Awarded in late 1990’s
- Troubled with cost and schedule problems
- In 2001, initial SCAMPI SM C held to assess process risk – declared “red”
- Process Action Team formed and improvement strategy defined
  - Process initiatives managed like a project
  - Benchmark at least annually, until “blue” risk rating achieved
Project Improvement Strategy

- **Generate How’s and What’s, Then Assess**
- **Repeat until Blue**
- **Maintain**

**Generate The How:**
- Update program processes
- Resolve benchmark AI's
- Conduct process training

**Generate The What:**
- Assemble Evidence

**Assess the How and the What:**
- Evidence Validation & Readiness Review
- Resolve and Incorporate AI's

**Benchmark Assessment:**
- SCAMPI C
- SCAMPI B
- SCAMPI B
- SCAMPI B

**Process Risk Assessment**
- Red
- Yellow
- Green
- Blue
What Did We Do?

- Aligned project processes with organization’s standard processes
- Provided adequate resources (training, tools, labs)
- Instituted quantitative management and causal analysis
- Benchmarked program process maturity annually, beginning in 2002, following IS&S CMMI® maintenance methodology
- In 2006, participated in IS&S SCAMPI® A
Process Improvement Results

- Better and better benchmarks
- Measurable improvement in project execution
Productivity

- Substantial improvement in software productivity as a result of process improvement efforts
- Cost savings realized by project
• Product A delivered around time of initial SCAMPI-C
• Product B delivered very recently
• By fixing problems earlier in the product lifecycle, defect resolution costs have been reduced by 60-70%
What We’re Doing Now

• Continuing to understand and improve process performance capabilities
• Generating innovation for organizational deployment
Questions?