CMMI: Does it Help Us Perform?

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Mission Systems Sector

- A leading integrator of complex, mission-enabling systems
- 2004 Sales - ~$5.0B
- 18,500 employees in 50 states and in 23 countries
- 1500 active contracts
- Domain expertise in priority, high-growth segments
- Premier provider of mission critical end-to-end solutions

Focused on program performance
Does CMMI Help Programs Perform?

- **CMMI is necessary but, alone, is not sufficient**
- **Programs must also have**
  - Management and Customer commitment
  - Reasonable and stable requirements
  - Adequate and trained, talented resources
  - Experienced organizations with domain knowledge

- **BUT ...**
  - Even with all of these, program organizations don’t have the time to invent best practices
  - Employment of good process is essential to success

- **AND ...**
  - Using CMMI is the best means we’ve found to repeatedly deploy our best processes and practices to new programs
What We Have Learned -
It’s Not What You Do, But When You Do It!

- Programs need to apply key basic processes early (even prior to award)
  - Integrated Project Management (IPM)
  - Program Planning (PP)
  - Program Monitoring and Control (PPMC)
  - Risk Management (RSKM)
  - Requirements Management (RM) and Requirements Development (RD)
  - Measurement and Analysis
  - Decision Analysis and Resolution

- Good processes enhance good decision making
- Builds the discipline needed for success under ‘start up stress’

*We concentrate on putting proven processes in place before program kick off!*
Mission Systems Emphasizes ‘Early Start’

These processes are mandatory although they can be tailored or waived as to the unique circumstances of each particular program

- Process / Waiver Checklist
  - Every project is required to identify the processes that it will adopt and which it intends to request to be waived – during the proposal phase

- Project kick off
  - Every project is required to report on its adoption of process and progress towards execution in a kick-off Process Review

- Project Process CMMI Guidance
  - Every project is provided with guidelines on which process areas should be in place early and what activities should be included
Does It Work?

- **Post award SCAMPI Bs**
  - Successfully demonstrates that programs were operating at expected maturity within 6 months of project kick off
    - Naturally, some work products that are created later in the project life cycle won’t be available
  - Two SCAMPI Bs in the last few months demonstrate our early process focus results in executing Mission Systems processes from start up

- **Internal SCAMPI C appraisals ensure projects are ready before we formally appraise them for public release**

- **Use of PIIDs “on-line” has made electronic verification of process deployment simple and effective in a multi-site organization**
Mission Success Requires
Multiple Approaches

- Risk Management
- Systems Engineering
- Independent Reviews
- Training, Tools, & Templates
- Dashboards for Enterprise-Wide Measurement
- Communications & Best-Practice Sharing
- Robust Governance Model (Policies, Processes, Procedures)
- Process Effectiveness
- Mission Assurance
- Operations Effectiveness
- CMMI Level 5 for Software, Systems, and Services
- ISO 9001 and AS-9100 Certification
- Six Sigma

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Early Starts Result in Proven Maturity

- Mission Systems has made a major investment in process improvement
- We believe that our emphasis on early start is a large contributor to these results

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Source: Software Engineering Institute Publicly Reported CMMI Appraisals website
- http://seir.sei.cmu.edu/pars/pars_list_iframe.asp

* 4 other appraisals not yet listed