

***Understanding and Leveraging a Supplier's
CMMI Efforts:
A Guidebook for Acquirers***



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Briefing Outline

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Background

- NDIA hosted “Use of CMMI in Acquisition: Summit & Workshop” in Sep 05
- Purpose of the Summit was to look at a set of existing issues (representative):
 - Background on how organizations approach CMMI appraisal and why
 - Use of the Appraisal Disclosure Statement
 - Formal Guide for CMMI Usage for DoD
 - Training for DoD Acquisition Organizations in the use of CMMI
- Findings (Action Items) resulting from the Summit included (not comprehensive):
 - Complete Guidebook for use of CMMI in Acquisition
 - Recommendation for Guidebook topic coverage
 - Generate suggested input to RFP section L & M



Background - 2

- The Summit Results suggested the following Guidebook topics:
 - Interpreting the Appraisal Disclosure Statement (ADS)
 - List sources for help (FFRDCs, DCMA, others)
 - Generate suggested content for RFP Sections L & M
 - Background/description of CMMI esoteric content/issues
 - Getting processes transitioned/implemented rapidly on new programs
 - Processes in the IMP/IMS/SOW (achieving contractual commitment to execute)
 - Offeror approach to verifying compliance to proposed processes
 - Past performance measures to provide evidence of process performance
 - Appendices:
 - Checklists
 - Contract Language
 - RFP language



Content Authors

- OSD and the CMMI Steering Group (CMMI-SG) identified this gap
- The CMMI-SG chartered a committee of Government, Industry, and Academic contributors to develop guidance for acquirers
 - Hal Wilson (Northrop Grumman Corp)
 - Linda Rosa (Mitre)
 - Mike Nicol (ASC/EN)
 - Jeff Dutton (Jacobs Engineering)
 - Gene Miluk (SEI)
 - Joe Wickless (SEI)
 - Mike Phillips (SEI)
 - Brian Gallagher (SEI)
 - Joe Elm (SEI)
- Government Team is coordinating the final effort
 - taking this body of work and structuring it in Guidebook format for use by Program Managers



Issues

CMMI-DEV in an acquisition environment

- Intended Use:** CMMI (the original CMMI model) is designed for use within development organizations for internal process improvement, not from acquirers perspective
- Size:** CMMI is a comprehensive process model that exceeds 700 pages. Just another tome the PM must have knowledge on how to implement
- Training:** CMMI training focuses on the use of CMMI-DEV for process improvement, not leveraging the activities from an acquirer's perspective
- Marketing:** "level-mania" too often has defeated desired behavior of deploying process improvement at program startup and throughout the development life cycle

Guidance in the effective use of CMMI-DEV by Acquirers does not exist



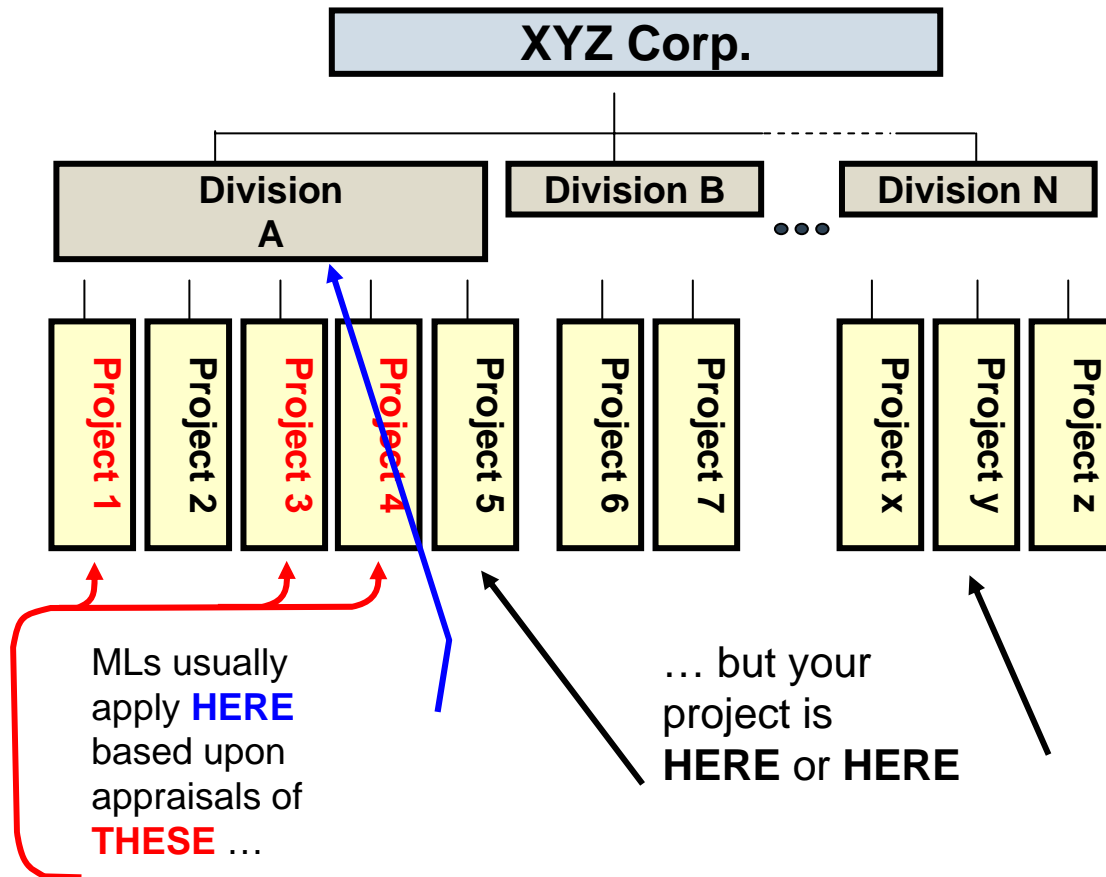
Issues -2

- These Issues lead to difficulty in:
 - understanding what specific benefits CMMI provides for the acquiring program office
 - understanding how CMMI reduces program risk
 - determining what to ask for regarding process capability
 - interpreting developer's claims regarding maturity level ratings
 - discriminating between the process capability of competing suppliers
 - separating the "practitioners in the marketing department" from the "practitioners on the shop floor"
 - monitoring developer's process capability and their implementation as applied to current programs
 - understanding how broadly the rating applies to the organization of interest to the acquirer
 - belief in the myth that CMMI is the "silver bullet"



Published Maturity Levels

- Published Maturity Levels may be based on a single Division or location



The new ADS will help clarify these claims



Executive Summary

- This Guidebook intends to help acquisition organizations understand and apply CMMI-DEV in three ways:
 - to provide guidance on how to request, interpret, and use the results of CMMI appraisals
 - during source selection, to help identify and evaluate strengths, weaknesses, and risks that may be associated with a particular offeror/team approach
 - throughout the execution of an acquisition program, to gather and interpret information for effectively monitoring contractor processes

Provide insight to what CMMI is... and is not



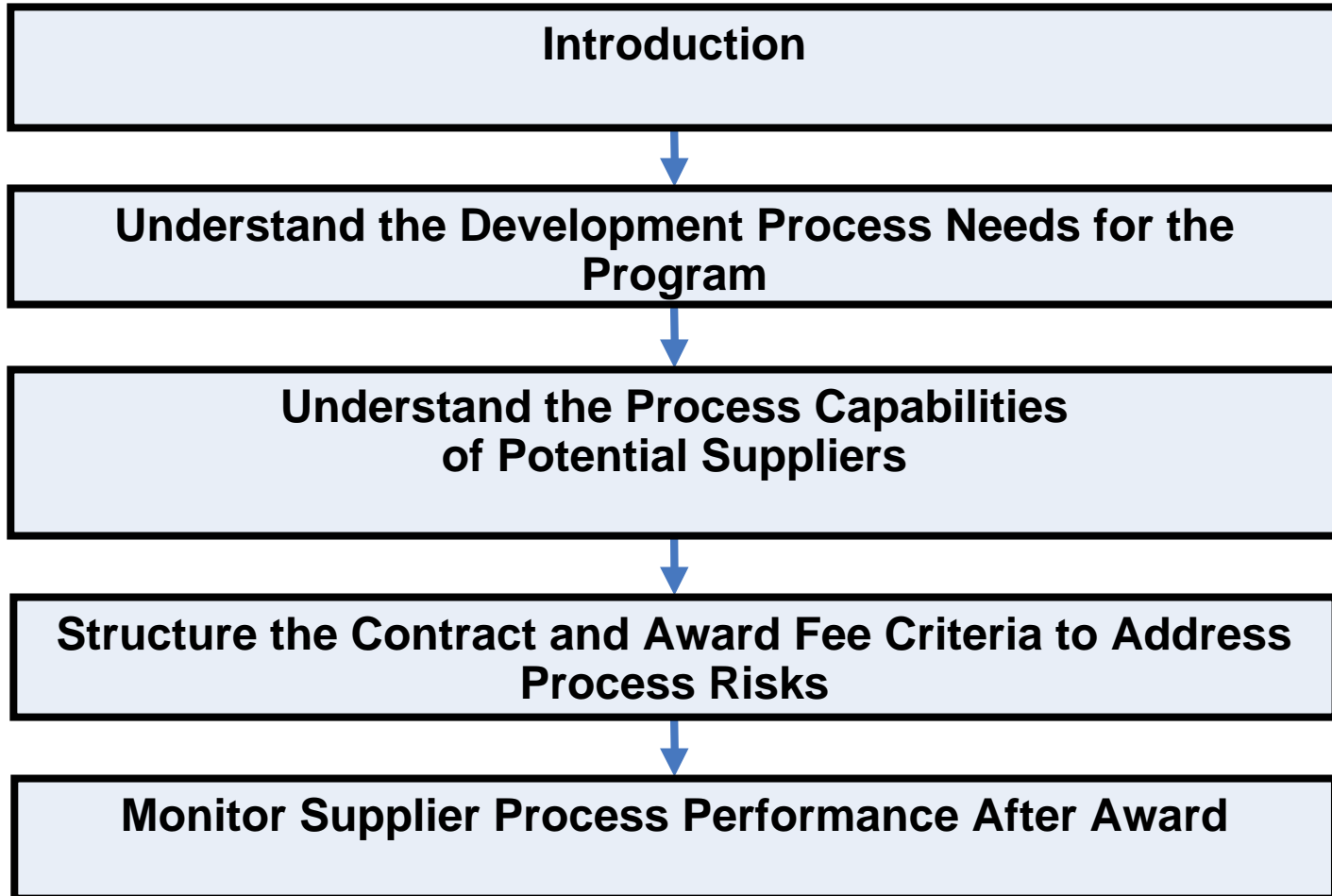
Guidebook Contents

- The guidebook provides the basic information that acquirers need in order to understand CMMI use by suppliers
 - explanations of capability and maturity levels
 - differences between continuous and staged model representations
 - high maturity/capability levels (levels 4 & 5)
 - addresses obscure elements of CMMI, such as equivalent staging
- Cautions that high capability and maturity level ratings do not of themselves guarantee program success
- This Guidebook intends to help clarify what high capability and maturity ratings can and cannot do for a program

Guidebook intends to demystify these terms



Guidebook Chapters (draft)





Guidebook Chapter 1 (draft)

- Introduction
 - CMMI Fundamentals
 - CMMI Appraisals
 - Interpreting CMMI Ratings
 - The Structure of the Guidebook



Guidebook Chapter 2 (draft)

- Understand the Development Process Needs for the Program
 - Estimate Exposure to Process Risk
 - Build Process Capability into the Program
 - Relate Processes to the Program Life Cycle
 - Assess the Process Needs of the Program



Guidebook Chapter 3 (draft)

- Understand the Process Capabilities of Potential Suppliers
 - Request Recent Appraisal Results
 - Request Integrated Master Plan Documentation of Proposed Processes
 - Request Process Proposals in Critical Areas
 - Request Approach to Integration with Subcontractor Processes
 - Request Approach to Integration with Acquirer Processes
 - Request Historical Data on Process Performance
 - Evaluate Compliance of CMMI Process Deployment to ISO 9001-2000
 - Use Recent Post Award Appraisal Data from other Programs
 - Request Incorporation of Process Reviews into Proposed Program Schedules
 - Enable Process Compliance Evaluation During Execution
 - Perform Pre-Award Process Appraisals



Guidebook Chapter 4 (draft)

- Structure the Contract and Award Fee Criteria to Address Process Risks
 - Incorporate Process Reviews into the Program Schedule
 - Specify Post Award Appraisal
 - Specify Process-Based Award Fee Determinants
 - Require Risk Mitigation Plans and Activities
 - Specify Reporting of Process Statistics
 - Specify Access to Selected Process Artifacts
 - Approaches when Process Capability not Addressed in the Solicitation



Guidebook Chapter 5 (draft)

- Monitor Supplier Process Performance After Award
 - Process Monitoring through Artifact Review
 - Process Monitoring through Review of Process Metrics and Audits
 - Contractor Team Process Reviews



Guidebook Appendices (draft)

- Appendix A - Questions & Checklists
- Appendix B - Understand the Development Process Needs of the Program (Implementation Guidance)
- Appendix C – Understand the Process Capabilities of Potential Suppliers (Implementation Guidance)
- Appendix D – Structure the Contract and Award Fee Criteria to Address Process Risks (Implementation Guidance)
- Appendix E – Monitoring Supplier Process Performance after Award (Implementation Guidance)
- Appendix F – SCAMPI-A Appraisal Disclosure Statement (ADS) Example Template
- Appendix G - Acronyms



Format for the Guidebook

- Readable (small) 40 pages for the PM
- Electronic delivery of additional material designed for implementation
- Linked appendices for online version
- Printed version (40 pages) with CD or with linked appendices

- Part of the CMMI Product Suite
- Incorporate into DAU training
- Update as our learning occurs



Current Status

- Committee chartered by CMMI Steering Group
- First draft completed and submitted for Steering Group review (Jul 06)
- Second draft completed and submitted for government review (Aug 06)
- Government team assumes leadership role for Guidebook completion (Oct 06)
- Guidebook content being restructured based on Government reviews on the initial drafts (Oct 06)



Path Forward

- Implement remaining set of comments from Government Review Team (Nov 06)
- Government review team to comment on restructured and revised Guidebook content (Nov 06)
- Incorporate Government Review Team comments (Dec 06)
- Quality, Integrity Checks (Jan 07)
- Public review (end of Jan 07)



Summary

- The Guidebook intends to provide information in three areas:
 - guidance on how to request, interpret, and use the results of appraisals
 - identify and evaluate strengths, weaknesses, and risks that may be associated with a particular offeror/team approach
 - gather and interpret information for effectively monitoring contractor processes
- The Guidebook provides the basic information to apply CMMI-DEV on acquisition programs
 - explanations of capability and maturity levels
 - differences between continuous and staged model representations
 - defines equivalent staging & high maturity/capability levels (levels 4 & 5)
- The Guidebook designed for use by the Program Manager as a ready source of information and by the Program Management Staff by including detailed implementation guidance in referenced Appendices



Open Discussion
