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Customer Success Is Our Mission

Class “B” Appraisal Implemented Lessons Learned

Presented to National Defense Industrial Association
3nd Annual CMMI Technology Conference and User Group
Denver, Colorado

Adrio DeCicco
Space and Airborne Systems
Raytheon El Segundo, CA
November 17-20, 2003

Space And Airborne Systems (SAS) Engineering Appraisal Strategy

- Use The CMMI Model To Measure Process Maturity
  - Selected The Staged Representation And Maturity Level 3
  - Include Systems Engineering (SE), Software Engineering (SW), Configuration/Data Management (CM/DM), Quality Assurance (QA), And Supply Chain Management (SCM)
- Form An Integrated Process Group To Develop And Implement CMMI Based Process And Product Improvements
  - SAS Enterprise Process Group (EPG)
- Conduct A Series Of Both Formal And Informal Appraisals

Lessons Learned – Executive Management

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- First And Foremost, An Organization Needs A Dedicated And Committed Executive Management Team
  - Provide Leadership And A Vision
    - Identify The Need
      - Measurable Process And Product Improvement
      - Customer Requirements
      - Future Business Opportunities
    - CMMI Representation (Staged Or Continuous) And Rating Level
  - Identify The Scope
    - Entire Or Part Of The Organization
    - SE And/Or SW; Other Disciplines
  - Identify Resources
    - Funding, Resources, Time Frame, Etc.
  - Be The Driving Force

Lessons Learned – Need A Highly Skilled Process Group

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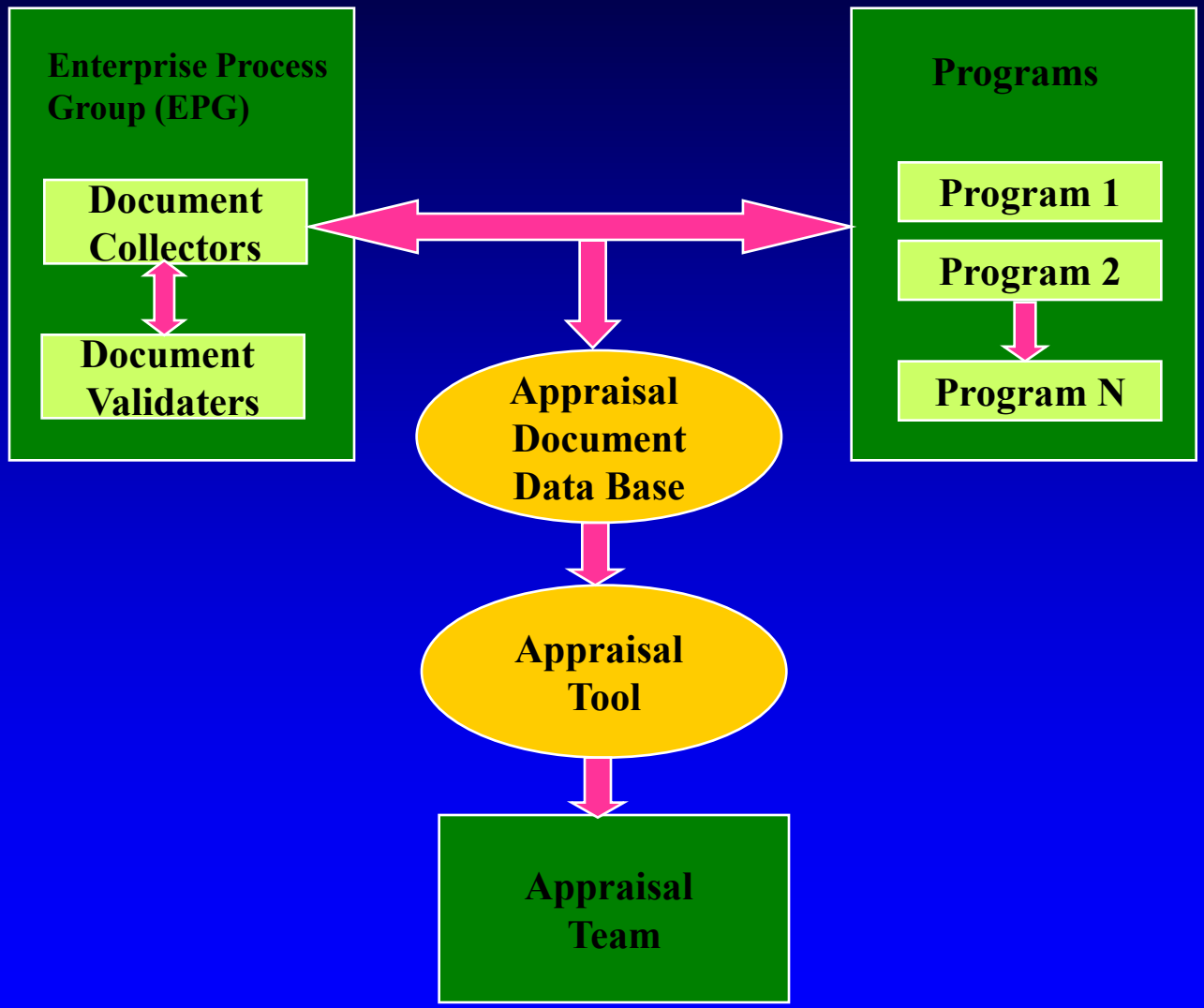
- Come From Various Engineering And Support Disciplines
  - Does Not Necessarily Depend Upon The Organizations/Disciplines Involved In The Appraisal
    - The "I" In CMMI
      - For Instance, PM Activities Are Spread Throughout The Model
      - Supplier Agreement Management (SAM) Process Area, Etc.
    - Depends Upon How You Are Organized
      - Engineering Make Up (SE, SW, CM/DM, QA, Etc.)
- Trained In, And Understand, The CMMI Model And The Standard CMMI Assessment Method For Process Improvement (SCAMPI)
- Possess Skills And Years Of Experience In Their Discipline (s)
  - Also Have Organizational, Planning, Team, And Communication Skills

Enterprise Process Group (EPG) Appraisal Documentation Collection Flow



Lessons Learned – Build A Mature Appraisal Team

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- Interview And Select A Knowledgeable And Compatible Lead Appraiser
  - Understanding Of Your Business/Organization And The Model And SCAMPI
- Needs To Have The Expertise To Cover All Of The Process Areas Being Considered For The Appraisal
  - Have Same/Similar Team Make Up, Skills And Knowledge As The Process Group
- The Team Should Consist Of Members Who Have Prior CMMI Appraisal Experience
  - Note: Persons With Less Experience May Participate If They Have Participated In The Previous Set Of Appraisals To Gain Knowledge And Experience
- Have Members From Within And Outside Of Your Organization
  - Internal Members Can Explain The Organization And Process And Product Development
  - External Members To Provide Their Knowledge Of Other Organizations And An Unattached And Different Viewpoint

Lessons Learned – Organize The Appraisal Team

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- The Lead Appraiser Should Manage The Appraisal Like A Project
  - Organize Sub-teams That Best Align Each Appraisal Member With His Or His Skills To Particular Process Areas
    - QA Member Be Part Of The PPQA Process Area
    - Consider The Pros And Cons Of Having A Local Appraiser Appraise A Program They Are Working
  - It Is Also Beneficial To Move Appraisers Among Sub-teams
    - Provide A Different Perspective
    - Gain Knowledge And Become A More Diversified Appraiser
    - If A Team Member Cannot Support A Future Appraisal, Other Team Members Will Be Familiar With The Process Area
  - Have An Appraisal Schedule And Work To The Schedule
    - In/Out Brief, Interview Sessions, Team Consolidation, Etc.
    - Especially During The First Week, Sub-teams Should Work Late To Complete Document Reviews Ahead Of Schedule
      - Team Consolidation, Observations, Findings, Etc. Will Consume Time Later

Lessons Learned – Develop An Appraisal Strategy With The Lead Appraiser

- Selection Of Appraisal Team Members
  - Within And Outside Of Your Organization And Company
  - Skills And Expertise Required
- Selection Of Programs/Projects
  - Consider Life Cycle, Program/Project Availability, Etc.
- Determine In Brief Topics To Provide An Understanding Of The Organization, Processes, And Programs
- Determine The Level Of Data Review
  - Goal, Some Sub-practices, All Sub-practices, Etc.
  - Approximate Number Of Direct And Indirect Documents To Achieve Compliancy

Lessons Learned – Select An Appraisal Tool

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- Select An Appraisal Tool That Is CMMI Based And Easy To Use
  - Has CMMI Process Area And Sub-practice Descriptions
  - Has The Capability To Contain Links To Soft Copies Of Documents
    - In General, It Is Easier For Appraisers To Access And View Large Quantities Of Documents Electronically
    - Places To Add Comments, Observations, Findings, Classify Documents As Direct/Indirect, Enter Results, Etc.
  - Note: This Is A Short List To Provide Some Ideas Regarding Tool Features, Which Are Beyond The Scope Of This Presentation

Lessons Learned – Documentation Collection Team

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- Map Out A Strategy For Document Collection
  - Collect Documents To Satisfy Goal, Some Sub-practices, Or All sub-Practices Level
  - Coordinate The Documentation Strategy With Programs And Develop A Document Collection Strategy With Programs
    - ☐ Process And Program Points Of Contact For Each Process Area
    - ☐ How Documents Will Be Collected
      - ☐Hard Copies/Soft Copies/Sensitive/Etc.
      - ☐Program E-mails Or Process Document Collector Has Access To Program Server And Who Will Provide URL Addresses For “Hot Links”

Lessons Learned – Document Validation

- The Document Validation Team Should Work Very Closely With The Document Collectors
  - Prior To Document Collection, Validaters Identify The Types Of Documents Expected For Each Goal And Or Sub-practice
    - Presentation Material Should Also Include Attendee List, Meeting Minutes, And Action Items
      - In General, Attendee List, Meeting Minutes, And Action Items Serve As Indirect Evidence
  - Generate A List Of Expected Documents For Each Sub-practice Months Prior To The Appraisal
  - Document Validation Should Result In Documents That “Tell The Story” Of How The Organization Or Program Is Performing Its Activities
    - Show A Thread From The Initial Activity To The Final Activity Of A Process
      - Program Plans Provided As Evidence In The Project Planning Process Area Should Be The Same Plans That Are Shown Being Monitored And Controlled In GP 2.8 And Objectively Evaluated In GP 2.9
  - Document Collectors Validate The “Hot Links” If Using An Appraisal Tool The Week Prior To The Appraisal

Lessons Learned – Document Collection And Support Team

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- Team Is Needed To Produce Documents Prior To The Appraisal And Comply With Data Requests During The Appraisal
- Document Collectors Should Be Trained In The CMMI Model
  - Understand What Is Expected For Direct, Indirect, What Is Relevant, Compliancy, Etc.
  - Better Understanding Between Document Collectors And Validaters

- Train Document Collectors On How To Enter Data Into Electronic Spreadsheets If A Tool Is Used
- Be Aware That Friction Can Develop Between The Document Collectors And The Document Validaters
  - Collectors May Produce In Excess Of 7,000 Documents
    - Collectors Believe They Already Produced Documents Requested By Validaters Or Appraisers
      - May Not Be Relevant
      - May Be Shown In One Process Area But Also Applies In Other Process Areas

In Summary

- Need To Have A Dedicated And Committed Executive Management Team
- Need A Highly Skilled Process Group
- Design And Implement A Documentation Collection Process
- Build A Mature Appraisal Team
- Manage And Organize An Appraisal As If It Were A Project
  - Plan Early And Often Over The Appraisal Life Cycle
  - Develop An Appraisal Strategy With The Lead Appraiser
- Select An Appraisal Tool
- Be Prepared To Work Hard And Often, And Be Flexible
- Enjoy The Results – You Earned It!