Practical Software and Systems Measurement

A foundation for objective project management

Interpreting Measurement and Analysis in CMMI®

17 July, 8:30am - noon

PSM 7th Annual Users' Group Conference

Dennis Goldenson

Workshop Participants -1

- Molly Campbell mmcampbell@pica.army.mil
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Workshop Participants -2

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Workshop Participants -3

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Workshop Format & Agenda

- *Modified to exclude breakouts into small groups*
- *Insufficient space to accommodate separate groups*
- *Attendees preferred to review issues in roundtable fashion*

Attendee Background

- CMMI Knowledge
  - Almost all used CMMI at least occasionally or regularly
- Appraisal experience
  - 1 SCAMPI Lead Appraiser
  - 2 CMMI appraisal team members
  - 2 CMM Lead Assessors
  - 10 CMM assessment team members
- Decision made to adopt CMMI?
  - 22 yes
  - 1 other model
- (8 arrived after introductions were made)

Conclusions, Recommendations, and Results

- Issues that require additional guidance in interpreting CMMI
  - Not limited to measurement & analysis
- Areas where the treatment of measurement & analysis has been improved by CMMI

Issues that require additional guidance in interpreting CMMI -1

- Concerns about consistency among appraisers
  - Especially measurement and other "new" model content (DAR, Validation)
  - Need more, better training and quality control
- Applying the GP's
  - How much measurement is enough? GP's 2.8 and 3.2
  - Not just for measurement
- Distinguishing expected from required practices

Issues that require additional guidance in interpreting CMMI -2

- Understanding the "new" PA's
  - Measurement
  - The engineering PA's
- Integrating software and systems engineering
- Especially examples of what has worked well and poorly

Issues that require additional guidance in interpreting CMMI -3

- Organizing direct and indirect artifacts in a way that is useful for process improvement and appraisals
- Helping organizations decide on and clarify their information needs and business goals
  - How can you get management to participate in selecting their measurement objectives, instead of asking the measurement folks to take care of it for them?
- The level 4 and 5 PA's, especially:
  - Process performance modeling
  - QPM
  - OID

Improvements in CMMI

- CMMI is more explicit about requirements for measurement and analysis
  - Will lead to more consistency of interpretation by appraisers
- Measurement and Analysis Goal 1 emphasizes the reasons for doing measurement
  - Don't measure without a reason
  - Clarify business objectives
- Measurement and Analysis prepares organizations for easier transition to higher maturity
  - And provides useful objective results earlier
- CMMI has helped attendees' organizations integrate software and systems engineering

Next Steps/Action Items

- Organize existing measurement guidance and create new guidance where necessary
  - Need to recruit volunteers and resources
- Make guidance more accessible to the community, e.g., online
- Develop measurement training materials
  - For the appraiser community
  - For management on why measurement is necessary, and why they need to be involved in setting the measurement agenda
- Organize tutorials and information sharing workshops for future PSM meetings and elsewhere