Experiences with a Single PA SCAMPI℠

NDIA/SEI

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Agenda

- The Continuous Representation
- Reasons for Continuous SCAMPIs
- Experience with reduced Process Area SCAMPIs
- Some metrics on preparing and conducting continuous SCAMPIs
- Special considerations for capability level 3

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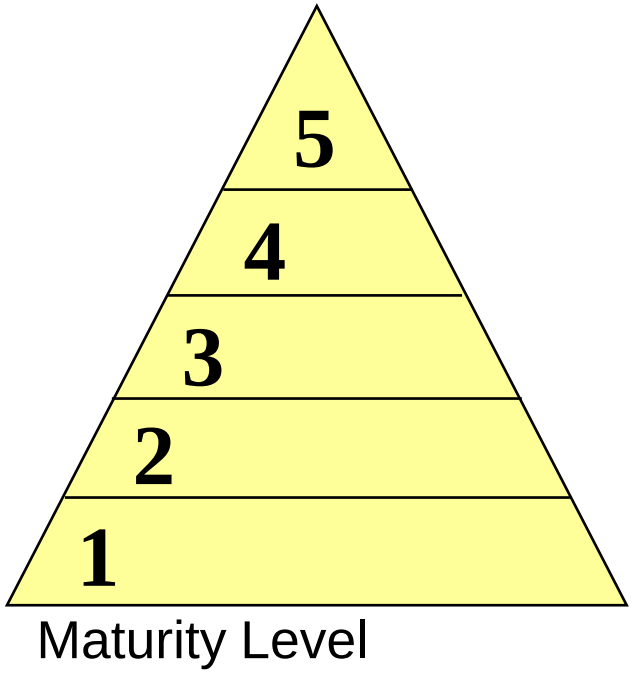
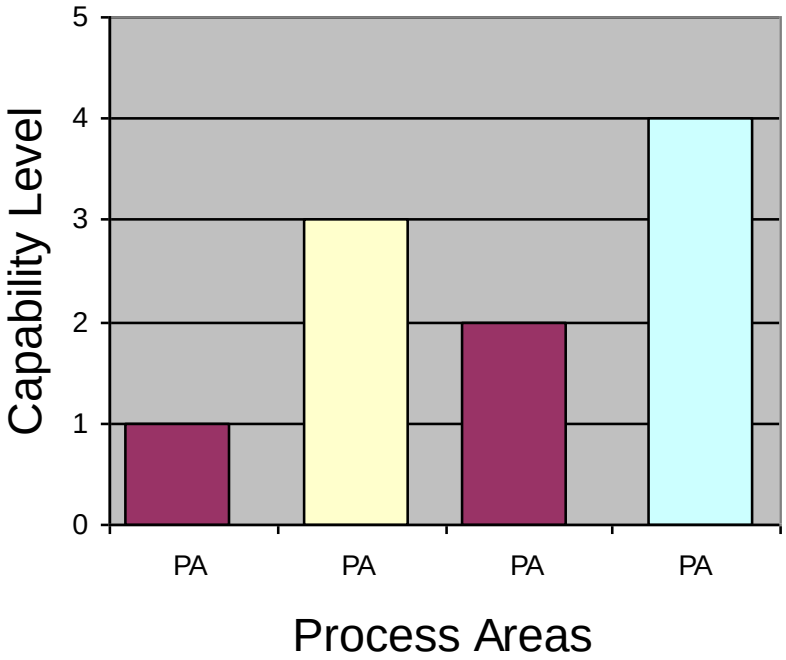
CMMI® Model – Two Representations

STAGED

Provides pre-defined roadmap for *organizational improvement*, based on *proven grouping* of processes and associated organizational relationships

Structured by Maturity Levels





CONTINUOUS

Provides *flexibility* for organizations to choose *which processes* to emphasize for improvement, as well as *how much* to improve each process

Structured by Categories of Process Areas

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CMMI® Improvement Levels

Continuously Improving Process	Optimizing (5)
Predictable Process	Quantitatively Managed (4)
Standard Consistent Process	Defined (3)
Disciplined Process	Managed (2)
Performed Process	Initial (1) Performed (1)
Fragmented Process	Not Performed (0)

5 Maturity levels in the ***Staged*** Representation

Measures the ***Organization's*** Process Maturity

6 Capability levels in the ***Continuous*** Representation

Measures each ***Process Area's*** Capability

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Reasons for Continuous SCAMPIs

- **Allows focus on process areas that are important to organization**
- **Allows quicker scheduling of first appraisal**
  - **Less elapsed time from start of process improvement program**
  - **Organization becomes appraisal "savvy" earlier**
    - Reduces waste effort in future appraisals
    - Helps focus prioritization of "fixes"
    - Makes future appraisals "relatively cheaper"
- **Provides "proof" to management that progress is being made**
  - **Target capability level 1 for rapid success**
  - **Add capability level 2 to continue organization culture change**

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Experience with Continuous Appraisals

Have performed five continuous SCAMPIs

- **Three PAs, 1 instantiation, target CL3 – OPF, OPD, OT**
- **Seven PAs, 4 instantiations, target CL3 (ML2 equivalent) – RM, PP, PMC, SAM, MA, CM, PPQA**
- **Twenty Two PAs, 4 instantiations, target CL3 (ML5 equivalent) – all PAs in SE/SW**
- **One PA, 3 instantiations, target CL3 – PPQA**
- **Seven PAs, 1 instantiation, target CL2 (ML2 equivalent) - RM, PP, PMC, SAM, MA, CM, PPQA**

Have performed eleven continuous Class B – type appraisals

- **Most all were seven PAs – RM, PP, PMC, SAM, MA, CM, PPQA**
- **Some deleted SAM and MA**
- **Some added engineering process areas – RD, VER**

Have performed dozens of Class C – type quick look appraisals

- **Mostly seven or less PAs in various combinations**

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Appraisal Metrics 1

The equivalent ML5 appraisal against the SE/SW model, 4 instantiations

- Planning/Coordination/Reporting – 2 days
- Appraisal Team Training – 2 days (included 1 day readiness review)
- 1st Readiness Review – 6 days (1 day combined with above)
- 2nd Readiness Review – 2 days
- Appraisal – 7 days (two mini-teams of three people each led by two Lead Appraisers)

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Appraisal Metrics 2

The equivalent ML2 appraisal against the SE/SW model, 1 instantiations (the successful organization)

- Planning/Coordination/Reporting – 2 days
- Appraisal Team Training – 2 days (included 1 day readiness review)
- Consulting/PI support – 20 days
- Readiness Review – 2 days
- Appraisal – 5 days (one team of five people with two Lead Appraisers)

The equivalent ML2 appraisal against the SE/SW model, 4 instantiations (the other organization)

- Planning/Coordination/Reporting – 2 days
- Appraisal Team Training – 2 days (included 1 day readiness review)
- Consulting/PI support – 2 days
- Readiness Review – 2 days
- Appraisal – 5 days (one team of five people with two Lead Appraisers)

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Appraisal Metrics 3

The appraisal against the PPQA process area, 4 instantiations

- **Planning/Coordination/Reporting – 2 days**
- **Appraisal Team Training – 2 days (included 1 day readiness review)**
- **Consulting/PI support – 2 days (1 day combined with above)**
- **1st Readiness Review – 1 day**
- **2nd Readiness Review – 1 day**
- **Appraisal – 3 days (one team of five people with two Lead Appraisers)**

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Special Considerations for Capability Level 3

Capability Level 3 requires satisfaction of Generic Goal 3 in addition to Generic Goal 2

- **without the benefit of OPF/OPD)**

GG3 - Institutionalize a Defined process

GP 3.1 : Establish a Defined Process

- **Establish and maintain the description of a defined process**

GP 3.2: Collect Improvement Information

- **Collect work products, measures, measurement results, and improvement information derived from planning and performing the *process* to support the future use and improvement of the organization's processes and process assets**

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Summary

The continuous representation provides an opportunity for organizations to achieve demonstrable success earlier than otherwise possible with the staged representation

Continuous appraisal effort is relatively proportional to the number of process areas examined and the number of instantiations

Overhead effort associated with the SCAMPI methodology tends to swamp the total effort for small scope SCAMPIs

- **Planning/Coordinating/Reporting (Appraisal Input/Plan/Records)**
- **Minimum 2 days Appraisal Team Training**
- **Minimum of 1 readiness review (duration unspecified)**
- **Appraisal activities**
  - Appraisal Participants Briefing
  - Validation of findings
  - Final Findings Presentation

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