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Software Engineering Institute

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SCAMPI^{SM} C ++ to C-
How much is enough?

2004 CMMI Technology Conference & User Group

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Outline

Overview

Differentiating SCAMPI Family Members

Implementation Details

Operational Scenarios

Program Overview and Project Status

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SCAMPI C Approach: Examples

Readiness Review

Gap Analysis

Training Opportunities
And Model Understanding

Clients: What are they looking for

How much investigation is
Necessary?

How much information
Is needed?

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Differentiating SCAMPI C possibilities

Operational Scenarios

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Approach, Deployment & Institutionalization

SCAMPI C can limit the investigation to "approach"
- Examining the *intended* process

SCAMPI B can limit the investigation to "deployment"
- Examining the *implemented* process

SCAMPI A can focus on how implementation meets intent
- Examining the *institutionalization* of implemented practices, based on the organization's intended practices

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Differentiating SCAMPI B&C vs. ARC B&C

SCAMPI C Methods

- Gap Analysis
- Readiness Review
- Training Opportunity

Distinguishing Characteristics

SCAMPI C with a primary focus on approach, can take on a very wide range of forms – including some examination of deployment.

- No Lead Appraiser Required
- 1 type of Data gathered
- No goal ratings
- No team requirement

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SCAMPI C++ What is enough?

Gap Analysis:

'We are SW-CMM Level X, but we need to adopt the CMMI Model'

'We have to be Level X by Sept 2005, can you tell us what we have or don't have to make Level X?'

'We have had an Intro Class and have 'someone' assigned to the process improvement group, have a sponsor, but need to see how far we are.'

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SCAMPI C++ What is enough?

Readiness Review:

'We are going to have a Class A in 6 months, can you come and tell us where we stand?'

'We need an ongoing way to check out progress to see when we will be ready for a Class A'

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SCAMPI C++ What is enough?

Training and Model Introduction:

'Our CEO says we need to be Level X by Sept 2004, can you come in an do this for us?'

'What is CMMI, because all of the RFPs that we see all say that we have to be Level X in the CMMI to bid on the contract?'

'We don't have PPQA, can you explain what it really is?'

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SCAMPI C – Focus on "Approach"

Appraise practices while looking at implementation:
Gap Analysis
- Seek pockets of best practice in the organization
- Thorough examination of what people do
- Plan for future implementation

Adequacy of concept is the focus: **Readiness Review**
- Examine fidelity to practices in the CMMI
- Brainstorm possible implementations
- Anticipate ROI in context

Sufficient coverage is practically irrelevant: **Training Opportunity**

- Focus on explanation of the model in the terms the org can understand
- Discuss implementation without looking at it

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SCAMPI C++ to C-

SCAMPI C++
- Doc review (Direct and Indirect)
- Interviews (as many as done for a Class A)
- Corroboration
- Look at each SP
- Final Findings include Strengths and Weaknesses
- No stone unturned as much as humanly possible

SCAMPI C-
- Doc review only
- Interviews only
- Instruments only
- Not necessarily looking for institutionalization (GPs)

Business focus is the coverage criteria driver

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SCAMPI C – Focus on "Approach"

Depth of Investigation is Key

Why a C++ Appraisal?

- $
- No team trained for a SCAMPI B
- Not enough available personnel to attend team training
- No personnel qualified to attend team training
- No $ for holding an Intro Class to qualify for team training
- Cheaper for the company to hire one appraiser
- Need to see all the Gaps quickly and completely

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Practice Characterization

SCAMPI C : Fidelity

- Characterize the extent to which the approach is judged to be consistent with the intent of the CMMI

SCAMPI B : Risk

- Characterize the extent to which the enacted practice reflects the intent of the CMMI, without regard to institutionalization and limitations in sampling

SCAMPI A : Implementation

- Characterize the extent to which the planned and enacted practice, in a sufficient sample of an organization, are institutionalized in a way to support satisfaction of the relevant goal within the CMMI.

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Characterizing Fidelity – SCAMPI C

The appraiser, or appraisal team will characterize the extent to which the approach (planned or deployed) is judged to be consistent with the intent of the CMMI.

Hi Fidelity: The intent of the model practice is judged to be adequately addressed in the set of practices (planned or deployed) – in a manner that supports achievement of the goal in the given process context.

Medium Fidelity: The intent of the model practice is judged to be partially addressed in the approach – and only limited support for goal achievement is evident.

Lo Fidelity: The intent of the model practice is judged absent, or inadequately addressed in the approach – goal achievement is judged unlikely because of this absence or inadequacy

Using Upwardly-Compatible SCAMPIs

Integrated Suite of Appraisal Methods
- outputs upwardly compatible, feeding the next event
- conduct of B&C reduces effort of the subsequent A
- tracking progress over time with consistent baselines
- model interpretations resolved in low-pressure setting
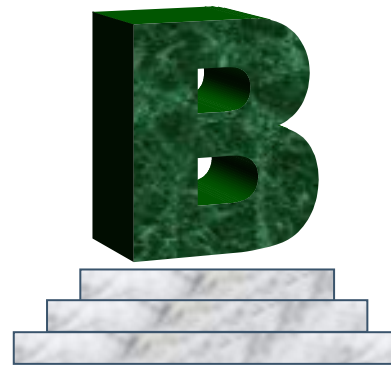- PIIDs evolve with deeper understanding
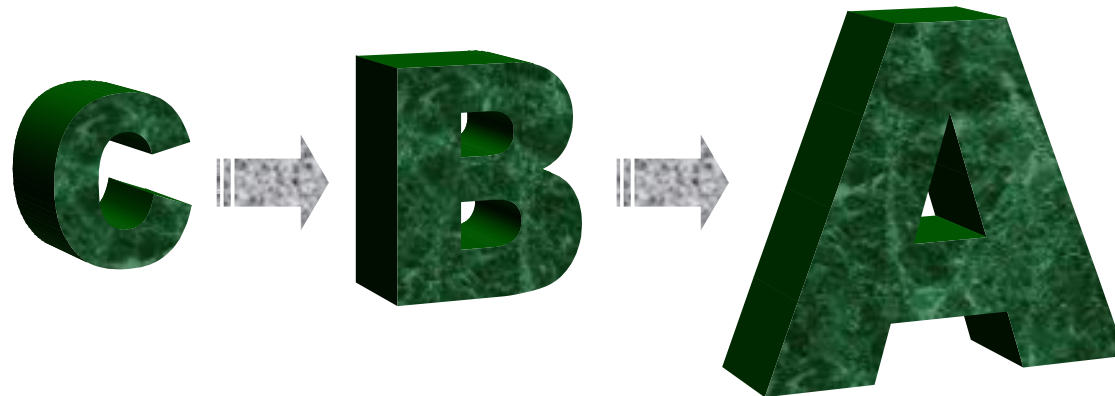
"Stand-Alone" Usage of Methods

Not every appraisal is an element of a particular sequence
- organizations have process monitoring strategies
- acquisition contexts may afford fewer interactions
- if you don't care about levels, you <u>may never do an A</u>
- transition from SW-CMM to CMMI isn't starting over
- quality assurance groups might use mini-appraisals
- many custom applications supported by the methods

Speakers' Contact Information

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