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Software Engineering Institute

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Standard CMMI℠ Assessment Method for Process Improvement (SCAMPI): Current Status and Plans

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Agenda

Current Status and Plans

SCAMPI Lead Assessor Track

Frequently Asked Questions

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Current Status of CMMI Assessment-Related Products

ARC V1.0 and SCAMPI V1.0 published in 2000

Special assessment team (AMIT) chartered and operating to address key assessment issues for V1.1 timeframe

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AMIT Purpose / Charter

Evolve SCAMPI v1.0 method and resources to v1.1 by Fall 2001

- **Maintain a comprehensive method**
- **Incorporate quantified improvements to satisfy stakeholder objectives and performance goals**
- **Consider aspects beyond the SCAMPI method, such as model refinements, team effectiveness, training, tools, and resources.**

Formulate a CMMI formal, rigorous appraisal method that:

- **Supports both assessments and evaluations in an integrated method description, with implementation guidance**
- **Meets ARC v1.0 class A requirements, with revisions proposed by the AMIT to reflect the addition of evaluations**
- **Provides accurate and repeatable results, with defined measures to quantify improvements**
- **Improves the appraisal efficiency and effectiveness relative to CMMI phase I pilots**
- **Does not invalidate the investment of adopters of SCAMPI v1.0**

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AMIT Membership

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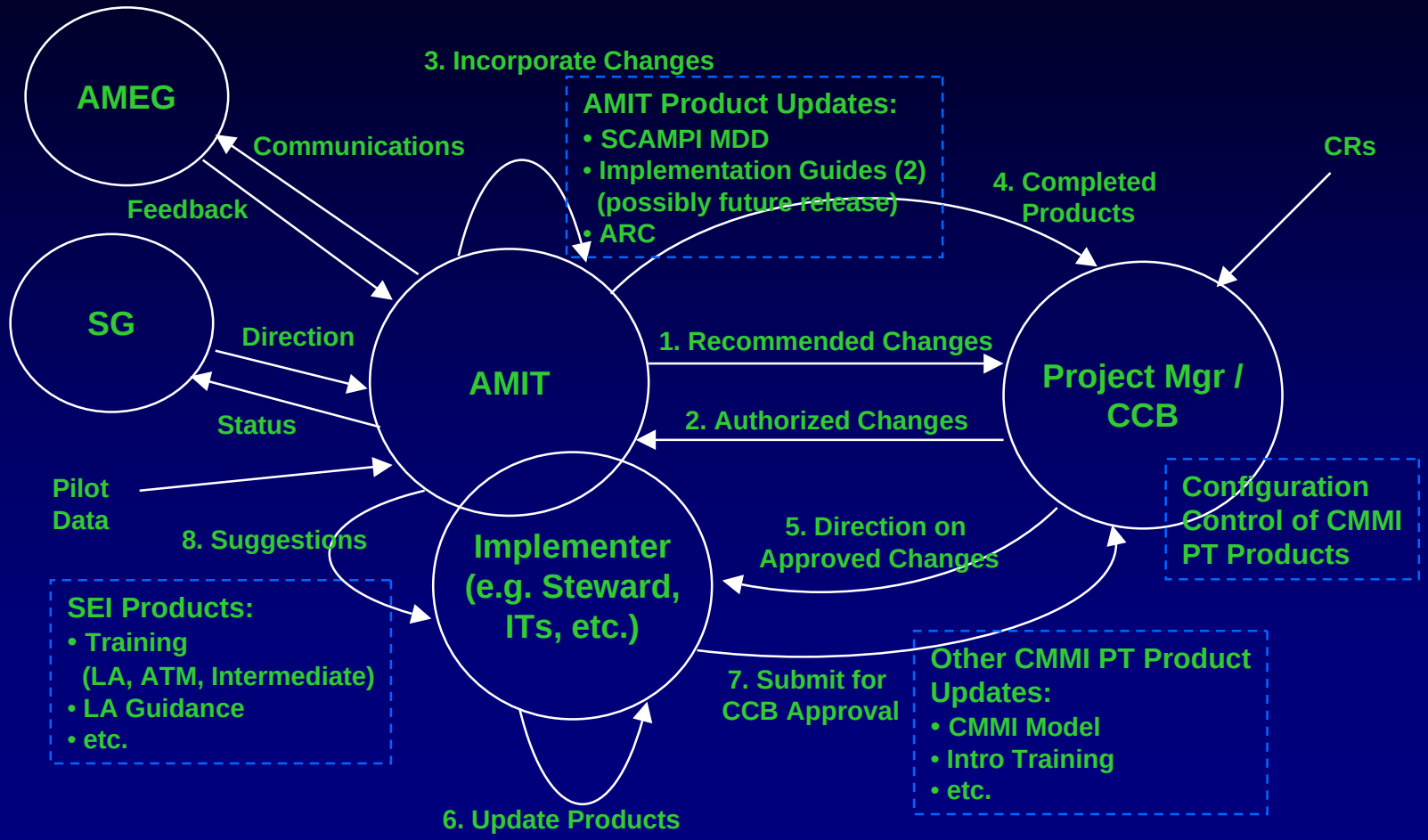
AMIT / AMEG Interfaces



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Evaluations

DoD sponsor request for integrated CMMI appraisal method

- **Internal Process Improvement (Assessments)**
- **External Supplier Selection and Monitoring (Evaluations)**

Document format based on SCE v3.0 method description and implementation guide

Focus on method; avoid non-technical issues relating to deployment

- **Policy, resources, training, etc.**

Consider draft evaluation requirements from DoD / Industry Software Evaluation IPT

CMMI Project

a joint activity of Government, Industry, and the Software Engineering Institute

CMMI

January 10, 2001

Dr. Jack Ferguson
DUSD(S&T)/SIS
Crystal Mall 3, Suite 104
1931 Jefferson Davis Hwy
Arlington, VA 22202

Dear Dr. Ferguson,

The CMMI Steering Group, and its Assessment Methodology Integrated Team (AMIT), are uniform in their support of an integrated appraisal method for assessments and evaluations. In the interest of maintaining schedule for a Fall 2001 release of the CMMI v1.1 product suite, the AMIT is being directed to focus primarily on the technical issues of such an approach, based on experience with the SCE v3.0 method. The guidance of the DoD/Industry Software Evaluation IPT on requirements for an evaluation method will also be considered.

In an attempt to provide sufficient stakeholder involvement in development of the appraisal method, additional Government representation from the evaluation / acquisition community will be added to the AMIT. However, even this may not be reflective of all interests within the Government evaluation community at large, nor can the AMIT address all issues relative to Government policy or deployment of the integrated appraisal method and the constraints this implies. Therefore, the SCAMPI v1.1 release can be considered a stable method for assessments and a candidate for government evaluations that will be improved upon over time. Additionally, we recommend other means to obtain Government involvement, such as through the Software Intensive Systems (SIS) Steering Group.

Sincerely,

(Original Signed By)
Michael R. Nicol
CMMI Steering Group
Government Co-Chair

(Original Signed By)
Robert C. Rassa
CMMI Steering Group
Industry Co- Chair

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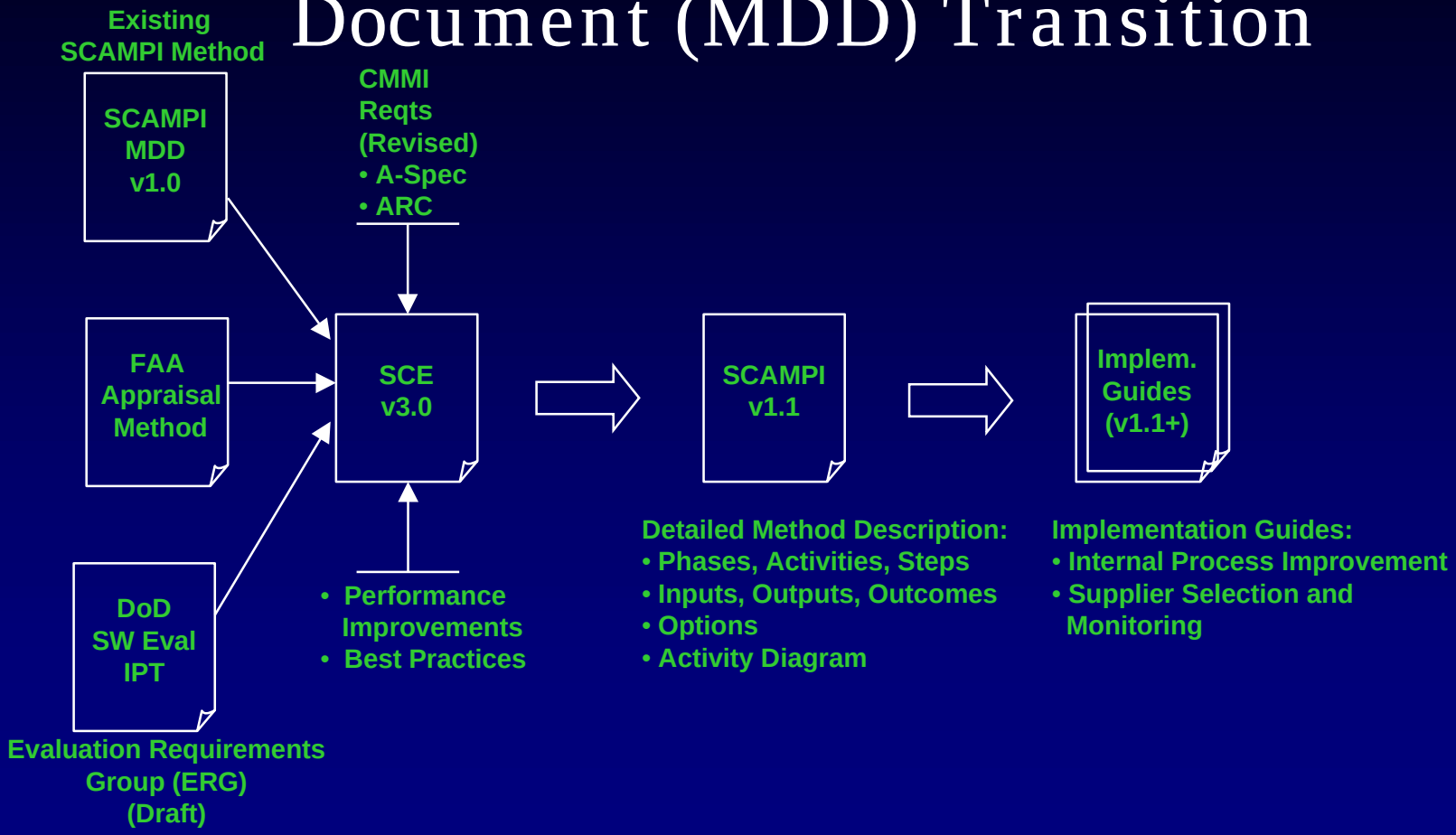
SCAMPI Method Definition Document (MDD) Transition



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AMIT Initiatives Under Consideration

Integrated Data Collection and Validation Approach

- "Triage" Concept - opportunistically use data collection (e.g., questionnaire, object evidence) to narrow the focus for further investigation and team emphasis
- Explicit practice implementation indicators - expectations and criteria for evidence agreed upon prior to appraisal
- Greater appraisal team focus on validation rather than discovery

Best Practices for Productivity Enhancement

- Collecting feedback from assessment community

Incremental Assessments

- Pre-planned partitioning of assessment scope (e.g. PA categories, maturity levels); lower priority than performance improvements

Delta Assessments

- Partial re-assessment to validate incorporation of past deficiencies

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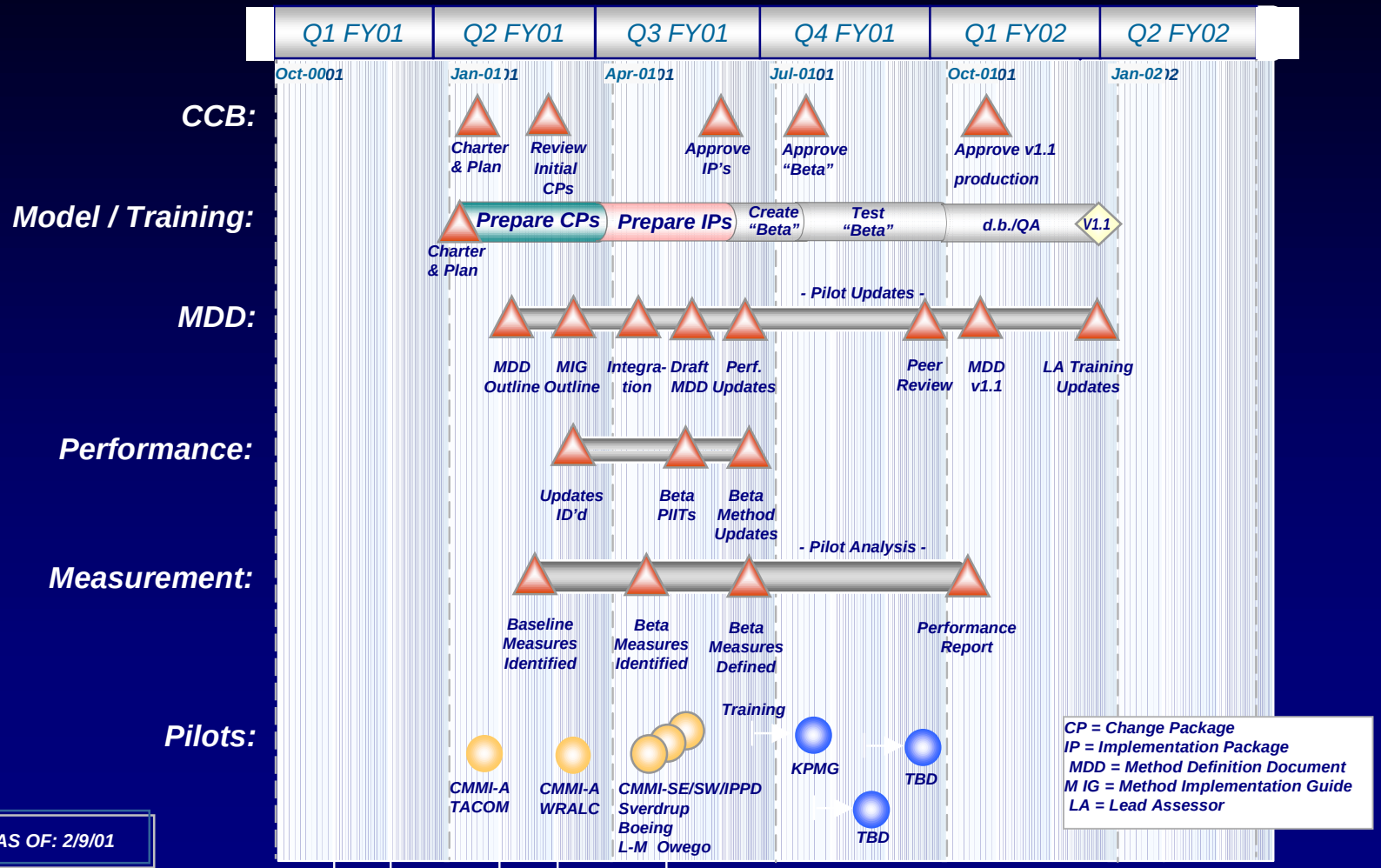
CMMI AMIT Schedule



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SCAMPI Lead Assessor Track

5-Day SCAMPI Lead Assessor training being delivered

5-Day Intermediate CMMI model course being delivered

SCAMPI Lead Assessor "kit" materials being delivered via CD to authorized SCAMPI Lead Assessors

Transition partner web site progressing

- **Authorized SCAMPI Lead Assessors will be notified by SEI when they can establish their accounts**

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SCAMPI Implementation Model

The SCAMPI implementation model (SIM) is intended to provide a way of thinking about the various constraints and considerations that apply to the application of SCAMPI to a specific assessment instance

Lead Assessors need to clearly understand the "degrees of freedom" they have when planning an assessment

- **Where can there be no deviation from what is prescribed by the method?**
- **Where can alternative implementations be considered?**
- **Where are there opportunities for customization?**

Why alternative implementations and/or customizations?

- **Adapt method to special circumstances**
- **Exploit opportunities for additional efficiencies**
- **Take advantage of special circumstances**

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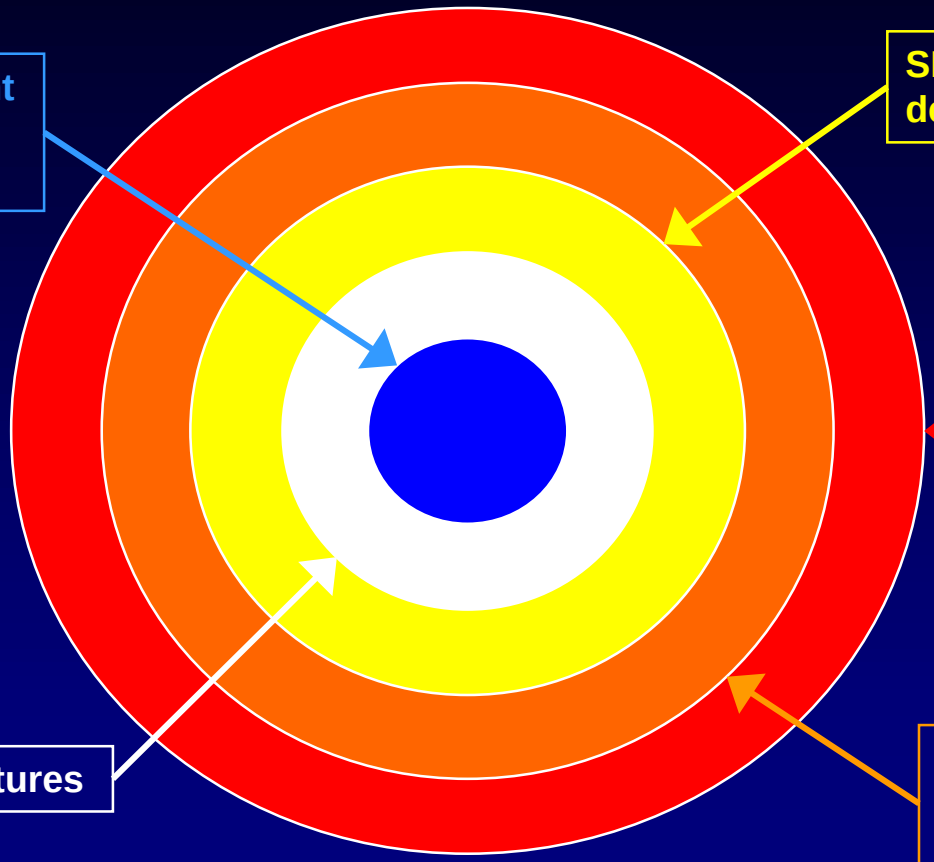
SIM Ring View



SIM1: Assessment Requirements for CMMI (ARC)

SIM3: SCAMPI-defined tailoring

SIM5: SCAMPI Add-ons

SIM2: SCAMPI Features

SIM4: SCAMPI Implementation choices

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Utility of SIM

Provides a simple way of classifying and organizing method features so that it is apparent

- **What the origin of the feature is**
- **What degree of freedom the lead assessor has for customization**
- **What the implications of deviating from the feature are**

Any feature in the implemented method will be assignable to at least one level of SIM

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SIM Utility -2

Method Implementation Feature	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
Consensus is used as the decision-making process when determining the validity of observations, creating findings, and establishing ratings	X				
The sponsor and the assessment team leader must approve the contents of the assessment plan prior to conducting the assessment.	X				
A minimum of one assessment team member must be from the organization being assessed.		X			
A process area may be assigned the rating of "partially satisfied"			X		
Process area worksheets (Excel) are used to assist in data collection and validation				X	
Provide Malcolm Baldrige equivalent "score" for Process Management Category					X

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Where are Things Headed?

Improved SCAMPI method definition; clearer tailoring choices

Single integrated method for internal process improvement and external capability evaluation

A range of assessment choices for customers with clear cost/benefit differentiation and better cost/benefit performance

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Frequently Asked Questions - 1

What are the key differences in SCAMPI vs. CBA IPI?

Rules of corroboration

- **Added emphasis on use of questionnaire as an independent data source (in addition to interviews, documentation)**

Explicit consideration of each specific and generic practice (or alternative practices)

Scoping and planning an assessment is more challenging

- **E.g., for multiple discipline assessments, team experience must encompass all disciplines**

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Frequently Asked Questions - 2

How does the government intend to do evaluations?

Several potential options under discussion by the OSD Software Evaluation IPT

- **External government team conducts SCAMPI evaluation, using the implementation guidance**
- **Combined government/industry team conducts joint SCAMPI appraisal**
- **Various reuse options**

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Frequently Asked Questions - 3

Can I assess just the SW projects in my organization, even if we do SE?

Yes

How do I assess a set of projects containing both SW and SE processes?

Each process area/goal/practice must be considered for both SW and SE if they are in scope

- **E.g., Software Development Plan vs. System Engineering Management Plan vs. Integrated Management Plan**

Assessment results could be given separately for SW and SE

Statement of results should include organizational and model scope

"The software projects of Division XYZ of Corporation ABC were assessed as CMMI Maturity Level 3 (excluding Supplier Agreement Management) on April 1, 2001, by an internal team using the SCAMPI method"

vs.

"Corporation ABC is a Level 3"

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Frequently Asked Questions - 4

How do I transition from CBA IPI LA to SCAMPI LA?

- Introduction to CMMI training (staged or continuous)
- Intermediate training
- SCAMPI Lead Assessor training

I'm just starting - how do I become a SCAMPI LA?

- Experience on 2 qualified assessments (e.g., CBA IPI, EIA 731, SCAMPI)
- Introduction to CMMI training (staged or continuous)
- Intermediate training
- SCAMPI Lead Assessor training
- Observed leading a SCAMPI assessment by an qualified Observing Lead Assessor

Will my SCAMPI authorization be affected by SCAMPI v1.1?

- At most, 1-day upgrade training

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Frequently Asked Questions - 5

How long does SCAMPI take?

- Goal is two weeks on-site (10-hour days) to assess SW and SE for 4 projects for the Level 2 & 3 process areas
- Pilots have taken significantly longer than the goal
- AMIT requested ideas and best practices from over 50 experienced assessors and evaluators
- Their ideas will be incorporated as suggestions in the implementation guides to reduce the on-site time

What other methods can I use to do assessments?

- SCAMPI (and other ARC Class A assessments) are intended for mature organizations seeking detailed, highly accurate results, and for benchmarking with industry
- Class B and C methods are appropriate for other situations (Buyer beware!)

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For More Information

http://www.sei.cmu.edu/cmmi/

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