Standard CMMI<sup>SM</sup> 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
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
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 / AMEG Interfaces

1. Recommended Changes
2. Authorized Changes
3. Incorporate Changes
4. Completed Products
5. Direction on Approved Changes
6. Update Products
7. Submit for CCB Approval
8. Suggestions

AMEG

Communications
Feedback
Direction
Status
Pilot Data
SEI Products:
- Training (LA, ATM, Intermediate)
- LA Guidance
- etc.

SG

Implementer (e.g. Steward, ITs, etc.)

AMIT

AMIT Product Updates:
- SCAMPI MDD
- Implementation Guides (2) (possibly future release)
- ARC

Project Mgr / CCB

CRs

Configuration Control of CMMI PT Products

SEI Products:
- Training (LA, ATM, Intermediate)
- LA Guidance
- etc.

Other CMMI PT Product Updates:
- CMMI Model
- Intro Training
- etc.
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
SCAMPI Method Definition Document (MDD) Transition

- Existing SCAMPI Method
  - SCAMPI MDD v1.0
- FAA Appraisal Method
  - SCE v3.0
- SCAMPI v1.1
- Implementation Guides (v1.1+)

Detailed Method Description:
- Phases, Activities, Steps
- Inputs, Outputs, Outcomes
- Options
- Activity Diagram

Implementation Guides:
- Internal Process Improvement
- Supplier Selection and Monitoring

Evaluation Requirements
- Group (ERG) (Draft)
- DoD SW Eval IPT
- CMMI Reqts (Revised)
  - A-Spec
  - ARC

Evaluation Requirements Group (ERG) (Draft)

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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
CMMI AMIT Schedule

Q1 FY01 | Q2 FY01 | Q3 FY01 | Q4 FY01 | Q1 FY02 | Q2 FY02
---|---|---|---|---|---
Oct-00| Jan-01 | Apr-01 | Jul-01 | Oct-01 | Jan-02

CCB:
- Charter & Plan
- Review Initial CPs
- Approve IP's
- Approve "Beta"
- Approve v1.1 production

Model / Training:
- Prepare CPs
- Prepare IPs
- Create "Beta"
- Test "Beta"
- d.b./QA

MDD:
- MDD Outline
- MIG Outline
- Integra- tion
- Draft MDD Updates
- Peer Review
- MDD v1.1
- LA Training Updates
- Performance Updates - Pilot Updates -
- Beta PIITs
- Beta Method Updates
- Performance Report
- Baseline Measures Identified
- Beta Measures Identified
- Beta Measures Defined
- Training
- KPMG
- TBD

Performance:

Measurement:

Pilots:
- CMMI-AMIT TACOM
- CMMI-AMIT WRALC
- CMMI-AMIT SE/SW/IPPD Sverdrup Boeing L-M Owego
- KPMG
- TBD

CP = Change Package
IP = Implementation Package
MDD = Method Definition Document
M IG = Method Implementation Guide
LA = Lead Assessor

AS OF: 2/9/01

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

“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”

“Corporation ABC is a Level 3”
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 a qualified Observing Lead Assessor

Will my SCAMPI authorization be affected by SCAMPI v1.1?
- At most, 1-day upgrade training
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!)
For More Information

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