SEI CMMI - APPRAISALS

The CMMI Appraisal is an examination of one or more processes by a trained team of professionals using an appraisal reference model as the basis for determining strengths and weaknesses of an organization.

Appraisals require planning. When planning an appraisal of your organization, determine the scope of the organizational unit, which disciplines to include, whether the appraisal team will consist of members internal or external to your organization, projects to be included, individuals to be interviewed, and the type or class of appraisal necessary.

Appraisals consider three categories of model components as defined in the CMMI:

- **Required** : specific and generic goals only.
- **Expected** : specific and generic practices only.
- **Informative** : includes sub-practices and typical work products.

The SEI has released two guiding documents for CMMI assessments:

- **Appraisal Requirements for CMMI** *ARC* : It contains the requirements for three classes of appraisal methods Class A, Class B, and Class C. These requirements are the rules for defining each class of appraisal method.
- **Standard CMMI Appraisal Method for Process Improvement** *SCAMPI* : Method Description Document *MDD* is currently the only approved Class A appraisal method.

SCAMPI is currently the only approved CMMI Class A Appraisal Method. That is, SCAMPI satisfies all the requirements of an ARC Class A Appraisal Method and has been approved by the SEI.

There are three classes of CMMI Appraisal Methods: Class A, Class B, and Class C.

SCAMPI Class A Appraisal

A SCAMPI Class A appraisal is typically conducted when an organization has implemented a number of significant process improvements and needs to formally benchmark its process relative to the CMMI. A SCAMPI A is the only appraisal method that provides CMMI Maturity Level or Capability Level ratings.

You can expect following outcomes from a SCAMPI A:

- A Maturity Level rating or Capability Level ratings.
- Findings that describe the strengths and weaknesses of your organization's process relative to the CMMI.
- Consensus regarding the organization's key process issues.
- An appraisal database that the organization can continue to use, to monitor process improvement progress and to support future appraisals.

SCAMPI Class B Appraisal

A SCAMPI B is called for when an organization needs to assess its progress towards a target CMMI Maturity Level, but at a lower cost than a SCAMPI A. SCAMPI B appraisals provide detailed findings and indicate the likelihood that the evaluated practices would be rated as satisfactorily implemented in a SCAMPI A appraisal.

A SCAMPI Class B appraisal, one of three SEI appraisal methods, helps an organization understand, with a relatively high degree of confidence, the status of its software and systems engineering process relative to the CMMI. A SCAMPI B is often performed when an organization needs to accurately assess its progress towards a target CMMI Maturity Level.

You can expect following outcomes from a SCAMPI B:

- Detailed findings that describe the strengths and weaknesses of your organization's process relative to the CMMI.
- Practice characterizations indicating the likelihood that the examined practices would satisfy the goals and meet the intent of the CMMI.
- Consensus regarding the organization's key process issues.
- A FIDO database that the organization can continue to use, to monitor process improvement progress and to support future appraisals.

SCAMPI Class C Appraisal

SCAMPI C appraisals are shorter and more flexible than SCAMPI A and B appraisals and are conducted to address a variety of special needs, from a quick gap analysis to determining an organization's readiness for a SCAMPI A.

SCAMPI Class C appraisals, the least formal of the SEI's suite of appraisal methods, are highly flexible and can be conducted to address a variety of needs. Typically much shorter in duration than Class A and B appraisals, SCAMPI C appraisals are often performed for reasons such as:

- Provide a quick gap analysis of an organization's process relative to the CMMI.
- Assess the adequacy of a new process before it is implemented.
- Monitor the implementation of a process.
- Determine an organization's readiness for a SCAMPI A.
- Support the selection of a supplier.

You can expect following outcomes from a SCAMPI C:

- Findings that describe the strengths and weaknesses of the assessed processes. Depending on the appraisal scope and strategy, findings may be mapped to the relevant CMMI components.
- Characterizations that summarize the adequacy of the assessed processes vis-a-vis the CMMI.
- Recommended process improvement actions.
- A FIDO database that the organization can continue to use to monitor process improvement progress and to support future appraisals.

Appraisal Class Characteristics

Each class is distinguished by the degree of rigor associated with the application of the method. Class A is the most rigorous, Class B is slightly less rigorous, and Class C is the least rigorous. Following table gives some idea of the expected differences between the methods in each class.

Characteristics	Class A	Class B	Class C
Amount of objective evidence gathered	High	Medium	Low
Rating generated	Yes	No	No
Resource needs	High	Medium	Low
Team size	Large	Medium	Small
Data sources *instruments, interviews, anddocuments*	Requires all three data sources	Requires only two data sources *onemustbeinterviews*	Requires only one data source

Appraisal team leader requirement	Authorized Lead Appraiser	Authorized Lead Appraiser or person trained and experienced	Person trained and experienced

SCAMPI Fundamentals

SCAMPI is an acronym that stands for Standard CMMI Appraisal Method for Process Improvement. A SCAMPI assessment must be led by an SEI authorized SCAMPI Lead Appraiser. SCAMPI is supported by the SCAMPI Product Suite, which includes the SCAMPI Method Description, maturity questionnaire, work aids, and templates.

Currently, SCAMPI is the only method that can provide a rating, the only method recognized by the SEI, and the method of most interest to organizations.

SCAMPI is based on experience from previous methods, including:

- **CBA IPI** : CMM-Based Appraisal for Internal Process Improvement.
- **SCE** : Software Capability Evaluation.
- **EIA/IS 732.2** : The interim international standard entitled Systems Engineering Assessment Method.
- **SDCE** : Software Development Capability Evaluation.
- FAA Appraisal Method