



A METHODOLOGY FOR ASSESSING THE SUSTAINABILITY OF PARTNER INSTITUTIONS

COMPETITIVENESS AND TRADE EXPANSION PROGRAM

KNOWLEDGE MANAGEMENT SERIES

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ACRONYMS

BPMM	Business Process Maturity Model
CISMM	COMPETE Institutional Sustainability Maturity Model
CMM	Capability Maturity Model
CMMI	Capability Maturity Model Integration
COMPETE	Competitiveness and Trade Expansion Program
FMCM	Financial Management Capability Model
KMMM	Knowledge Management Maturity Model
NGO	nongovernmental organization
P3M3	Project Program and Portfolio Management Maturity Model
P-CMM	People Capability Maturity Model
SCAMPI	Standard CMMI Appraisal Method for Process Improvement
SEI	Software Engineering Institute
SIGMA	Sustainability Integrated Guidelines for Management
SRMM	Stakeholder Relationship Maturity Model
TI-CMM	Technology Integration Capability Maturity Model

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PREFACE

The COMPETE Institutional Sustainability Maturity Model (CISMM) was designed to fill the gap between the institutional development methodologies that are used by public sector development partners to assess the viability/suitability of partner institutions and the frameworks used by the private sector for organizational development, including business process management and improvement. The CISMM addresses the limitations from both sides of the divide to determine the capabilities of partner institutions and to provide a roadmap for organizational development using an established improvement framework.

More importantly, the COMPETE Institutional Sustainability Maturity Model was developed to provide a framework that can be used to demonstrate the progress of partner institutions toward sustainability and to provide recommendations for their continued development. As COMPETE works through numerous local and regional NGOs, business associations, and training institutions, it places strong emphasis on capacity building, both as a means of fostering sustainability and of achieving its project objectives, and the CISMM is designed to support these efforts.

Why was the Maturity Model Approach Selected?

The Capability Maturity Model (CMM) approach was selected over other process improvement methodologies for two primary reasons:

- First, most competing methodologies focus on how to analyze and understand processes in specific organizations and do not try to identify industry standards by which processes can be improved with predictable results. By comparison, the CMM approach attempts to define industry practices that correlate with increasing levels of process maturity. The resulting models seek to provide an industry standard or framework by which relative maturity can be assessed, a clear path to improve processes to achieve increasingly mature states, and guidance on best practices and their applicability and implementation.
- Second, the CMM approach was chosen because of the level of industry acceptance of this model as a preferred approach to communicating process improvement within a “best practices” context. Since its development by Carnegie Mellon University’s Software Engineering Institute in the late 1980s, the CMM approach has been adapted to numerous sectors — including engineering, project management, human resources and organizational development — and companies applying these approaches have been shown to derive process-driven benefits. This combined focus on industry standards and industry acceptance of the CMM approach made it especially appropriate for business development.

Where Can You Get More Information?

Annex A of this document provides a bibliography applicable to the development of COMPETE’s Institutional Sustainability Maturity Model and related topics.

The following sources may also be helpful:

- To get more information on capability maturity models, please visit Carnegie Mellon University’s SEI website at <http://www.sei.cmu.edu>

- For more information on the Sustainability Framework, please go to the SIGMA Project's website at <http://projectsigma.co.uk>
- More information on the capability models that constitute the CISMM can be obtained from these official websites:
 - Business Process Maturity Model: <http://www.omg.org/spec/BPMM>
 - Financial Management Capability Model: <http://www.oag-bvg.gc.ca/>
 - Knowledge management Maturity Model: <http://www.infosys.com>
 - People CMM: <http://www.sei.cmu.edu/cmml/tools/peoplecmm/>
 - PRINCE2® Maturity Model: <http://www.p3m3-officialsite.com/>
 - Project Program and Portfolio Management Maturity Model (P3M3)TM:
<http://www.p3m3-officialsite.com/>
 - Stakeholder Relationship Management Maturity:
<http://www.stakeholdermapping.com>
 - Technology Integration CMM: <http://spectrum.library.concordia.ca>

SECTION I. BACKGROUND

A. About the COMPETE Project's Work with Local and Regional Partners

The Competitiveness and Trade Expansion project (COMPETE) is a USAID-funded program designed to enhance economic growth and food security in East and Central Africa by stimulating increased trade and competitiveness in regional and global markets. The project works in three key areas: reducing barriers to trade; increasing competitiveness and market access in selected value chains, including staple foods; and increasing trade and investment between the United States and Eastern and Central Africa via the East and Central Africa Trade Hub. COMPETE works with partners at all levels — from smallholder farmers to regional institutions such as the East African Community — to reduce barriers to trade and help firms adopt international quality standards that make them more competitive in regional and global markets.

To address constraints and promote opportunities available to African companies to increase their competitiveness and trade with the U.S. and global markets, COMPETE works with NGOs, business associations, and training institutions through a \$24 million Partnership Fund. The fund is designed to build capacity of local and regional organizations and institutions to better enable these groups to advocate for policy change, increase market share for their products, and provide services to their membership that will increase the region's competitiveness in targeted value chains. Activities supported by the Partnership Fund also play a key role in helping COMPETE to meet its objectives.

COMPETE support under the Partnership Fund is contingent on partner institutions' having the organizational capability to implement their activities. Sustainability, or a demonstration of growth toward sustainability, is also a condition for funding, and therefore, the project dedicates significant resources to building the capacity of its partners. For many of the nascent organizations with which COMPETE works, the most critical training is often focused on helping partner organizations to set up and implement transparent financial systems that support receiving and managing not only COMPETE funds but other sources of targeted donor funding. For more mature organizations, areas of support include working directly with partners to develop strategic plans, financial management systems, and more transparent governance systems through strategic planning workshops and "best practices" training sessions for increasing and improving organizational and administrative capacity.

While capacity building continues to be an ongoing process for most of the COMPETE partner organizations, in some cases the successes of these partners have led other major donors — including the World Bank, the U.K Department for International Development, and the European Commission — to increase their support for these regional organizations. Obtaining this type of non-USAID support for the grantee organizations is a testament to the quality and impact of the capacity building support that COMPETE offers to its partner organizations. It also speaks to COMPETE partners' preparedness to become direct recipients of USAID funding under the agency's Forward initiative.

B. The Need for an Institutional Sustainability Measurement Model

Due to the scope of its work with local and regional partners, COMPETE was charged with the design and development of a methodology to measure its partners' progress in reaching sustainability. Under COMPETE, partner institutions not only provide a mechanism for the

project to reach target groups, they also are often beneficiaries of substantial capital investments to support their activities. To ensure protection of USAID investments and to enable continuing benefits to target groups, it is essential that partner institutions are capable of continuing to provide services to their constituents without continued COMPETE support. For partners without sufficient capacity to be sustainable, it is necessary to identify the areas where assistance can be provided to achieve sustainability. It is therefore crucial to carry out sustainability assessments of partners to establish their status, identify areas for improvements, and track their progress toward sustainability.

To meet this need, the project developed a methodology to perform institutional assessments of current and prospective partners to establish their organizational capabilities, demonstrate their growth toward sustainability, and promote the continued delivery of stakeholder benefits resulting from the funding. Called the COMPETE Institutional Sustainability Maturity Model, the appraisal covers an institution's internal performance, stakeholder relations, and image, as well as its performance in achieving its objectives. The organization's overall strengths, weaknesses, development needs, and positioning are also identified through this process.

C. How COMPETE Defines Sustainability

COMPETE does not view sustainability as an end state; rather, it is a process of continual improvement that moves beyond financial solvency to include management of human and other organizational resources. Indeed, following a shift in thinking within the development community, the term "sustainability" has adopted a strategic significance that is no longer confined to the economic realm, but which embraces a broad spectrum of organizational characteristics. This is due to a growing recognition among organizations that profitability alone is inadequate as a measure of success and that many of the nonfinancial concerns associated with sustainability are fundamental drivers of long-term organizational value. Conversely, a failure to recognize these strategic issues threatens the survival of a business enterprise. In the final analysis, achieving sustainability is a continual process-driven initiative, wherein processes need to be predictable and repeatable to increase the capability of delivering successful outcomes.

SECTION II. THE COMPETE INSTITUTIONAL SUSTAINABILITY MATURITY MODEL

Institutional growth toward sustainability cannot be managed or improved unless it is measured. The COMPETE Institutional Sustainability Maturity Model seeks to measure an organization's progress toward sustainability in more than 100 capability areas, including planning, internal control, training, process definition, and risk management. Based on the outcome of the institutional assessment, COMPETE makes recommendations, where necessary, for the partners to adopt in building their capacity to function sustainably.

The COMPETE Institutional Sustainability Maturity Model is a governance framework that was designed to provide institutions with a roadmap for achieving sustainability and to allow the project to measure the progress it has made in supporting its partners' capacity development. Although the model is not prescriptive in nature, it puts forward the framework of organizational capabilities, procedures, and practices that are required for an organization to move toward sustainability. By rooting the CISMM's methodology in industry best practices, the model is able to:

- Provide partners with a roadmap to sustainability.
- Act as a benchmark to determine whether the institution is meeting its objectives.
- Provide a framework for business process improvements in the organizations.
- Provide input into the institutional strategy.

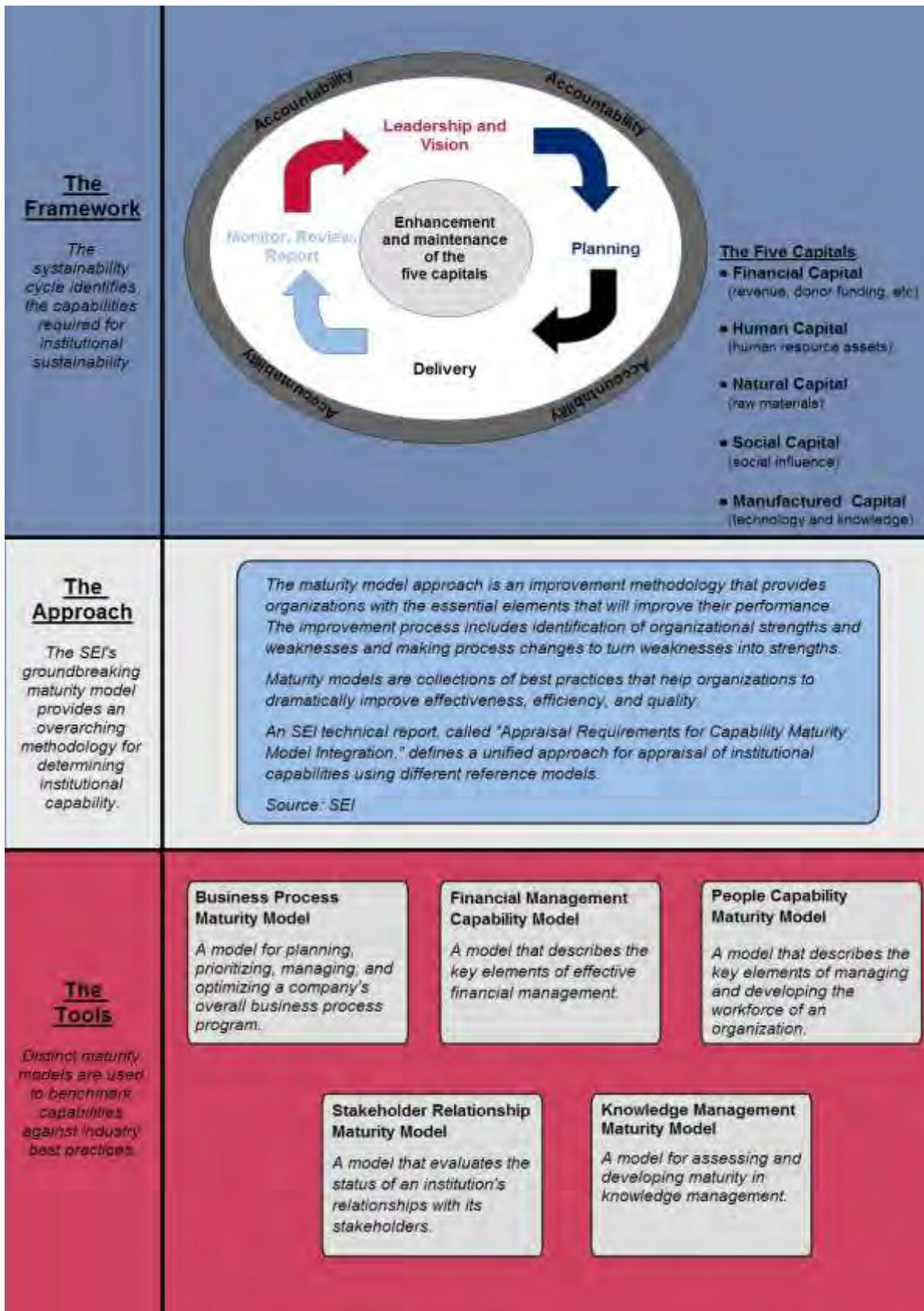
The CISMM is the result of a lengthy exploration of other institutional capacity and/or sustainability assessment models (see Annex B). To create the CISMM, COMPETE began by adapting a sustainability framework, then identified approaches to assess the constituent processes of that framework. As a result, the CISMM builds upon several models, which together provide the framework, approach, and tools for performing institutional assessments.

- The *framework* for the CISMM is based on the Sustainability Integrated Guidelines for Management (SIGMA) Project's Management Framework, which details a four-phase cycle to manage and embed sustainability issues within an organization's core processes.
- The *approach* to measurement is provided by the Capability Maturity Model, developed at Carnegie Mellon University's Software Engineering Institute. The CMM provides an approach to evaluating the sustainability (or the maturity) of the processes an organization uses to achieve its goals. It also presents a roadmap for continual improvement, defined as improved repeatability and predictability of business processes, which leads to increasingly successful execution of tasks and delivery of results.
- The *tools* for the CISMM are provided by a set of complementary maturity models that have been developed over time to evaluate an organization's capabilities in areas, such as human resources management, that are key to sustainability. They include:
 - The Business Process Maturity Model (BPMM), which was developed by the Object Management Group, a not-for-profit computer industry group based in Massachusetts, USA. The BPMM is designed to guide organizational development in key capability areas that affect an organization's ability to implement programs or expand innovations.

- The People Capability Maturity Model (P-CMM), developed by SEI, is designed to assess the capability of an institution’s workforce to carry out the processes and procedures that are required for sustainability.
- The Financial Management Capability Model (FMCM), developed by the Office of the Auditor General of Canada, appraises the capability of the institution to manage its financial resources, deliver programs, and exercise stewardship over the resources entrusted to it.
- The Stakeholder Relationship Maturity Model (SRMM) assesses organizational willingness to engage proactively in developing and maintaining relationships with stakeholders. The SRMM was developed by COMPETE based on best practices in stakeholder engagement presented by the PRINCE2 Maturity Model; the Portfolio, Programme, and Project Management Maturity Model of the U.K. Office of Government Commerce; and stakeholder relationship best practices outlined by Stakeholder Management Pty Ltd and the U.N. Non-Governmental Liaison Service.
- The Knowledge Management Maturity Model (KMMM) assesses knowledge use and organizational abilities to develop and deploy innovative products or services. COMPETE crafted the KMMM using experiences drawn from the development of the Technology Integration Capability Maturity Model created by the Concordia University Department of Education as a model to assist in technology planning and the design of effective technology activities in schools, and from Infosys Limited’s Knowledge Management Model, which covers all aspects of planning, design, implementation, and assessment of knowledge management.

The inter-relationships among the framework, approach, and tools of the CISMM are shown in Exhibit 1.

Exhibit 1: The CISMM Framework, Approach, and Tools



A. The CISMM Framework: The SIGMA Project's Management Framework

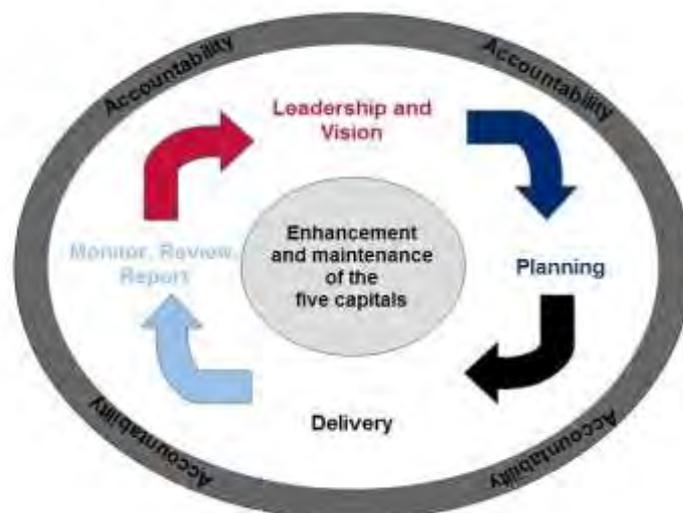
The Sustainability Integrated Guidelines for Management (SIGMA) Project was launched in 1999 by the British Standards Institution, the national standards body for the United Kingdom; Forum for the Future, a leading sustainability charity and think-tank; and AccountAbility, an international professional body for accountability. The SIGMA Project's goal was to identify the critical success factors for sustainability and to provide clear, practical advice to organizations to enable them to make a meaningful contribution to sustainable development and deliver better social, environmental, and economic value simultaneously. The project's work led to development of the SIGMA Guiding Principles, which help organizations understand sustainability, and the SIGMA Management Framework, which integrates sustainability issues into organizational core processes and mainstream decision-making.

Every product or service is built using human skills and knowledge, natural (raw) materials, and social structures, using machinery or infrastructure and financial investment. These five elements make up what the SIGMA Management Framework calls capital assets, or "capitals." Exhibit 2 illustrates how the organizational processes for production or delivery of goods and services are driven by:

- Financial capital, such as savings, revenue, and profit.
- Human capital, including employees, consultants, etc.
- Natural capital, such as naturally occurring raw materials.
- Social capital, which includes membership interaction, stakeholder relationships, and industry influence.
- And manufactured capital, or technology.

A sustainable organization will maintain and, where possible, enhance its stocks of capitals, rather than deplete or degrade them.

Exhibit 2. The Sustainability Cycle
Adapted from the SIGMA Management Framework



For sustainable organizational development, the SIGMA Management Framework describes a four-phase cycle — leadership and vision; planning; delivery; and monitoring, reviewing, and reporting — and the holistic management of the five capitals. The four-phase approach, which SIGMA also calls a “plan, do, check, act” model, mirrors formal and informal management systems and, therefore, is already familiar to many organizations. As such, it is designed to be both a practical and an effective approach to improving organizational performance. Processes addressed in the framework cover functional areas, including strategic planning, operating principles, communication, training, performance review, monitoring, measurement, auditing and feedback

B. The CISMM Approach: The Capability Maturity Model

The Capability Maturity Model is an organizational development model that was pioneered by Carnegie Mellon University — originally as a tool to objectively evaluate, based on industry best practices, the ability of software development vendors to perform a contracted project. Despite the specific purpose for which it was developed, the CMM’s use as a general model to help improve organizational business processes has extended to diverse areas, including services, financial management, and human capital management. The CMM approach also has been applied worldwide in government offices, commerce, and industry. Due to its immense success, the model was quickly adopted and applied to other processes, giving rise to a more general concept that is applied to business processes and to developing people. When applied to an organization’s development processes, it provide an effective approach for improving them.

A maturity model can be viewed as a set of structured levels that describe how well the behaviors, practices, and processes of an organization can reliably and sustainably produce required outcomes. The five levels of a CMM and their basic characteristics are:

- **Level 1: Initial.** This level is characterized by ad-hoc, possibly chaotic activity. Project success often depends on individuals; the organization is dependent on individuals and hiring outstanding employees.
- **Level 2: Repeatable.** At this level, basic management processes are established along with some documentation (e.g., costs, schedules). Consequently, it is possible to repeat previous successes.
- **Level 3: Defined.** At this stage, all processes are documented and standardized. Projects use approved versions of organization’s standards, ensuring an even higher ratio of project success.
- **Level 4: Managed.** Called a quantitative level, detailed measures of processes and product quality are collected. These data are used to establish controls to ensure quality and performance.
- **Level 5: Optimized.** This is called a qualitative level. Innovative projects are encouraged and piloted. Feedback from processes allows for continual innovation.

A maturity model may provide, for example:

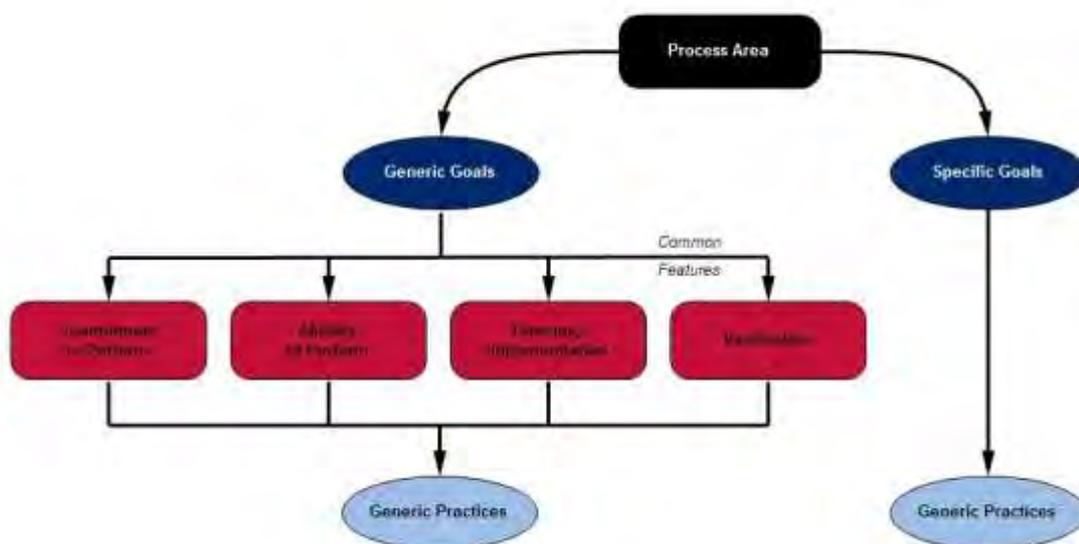
- A place to start

- The benefit of a community’s experiences
- A common language and a shared vision
- A framework for prioritizing actions
- A way to define what improvement means for the organization

A maturity model also can be used as a benchmark for comparison — for example, for comparative assessment of different organizations where there is something in common that can be used as a basis for comparison.

As shown in Exhibit 3, the Capability Maturity Model involves the following aspects: maturity levels, key process areas, goals, common features, and key practices.

Exhibit 3. Process Areas, Goals and Practices in Maturity Models
Source: SEI



Maturity levels. A five-level process maturity continuum, in which the uppermost (fifth) level is a notional ideal state where processes are systematically managed by a combination of process optimization and continual process improvement.

Key process areas. A key process area identifies a cluster of related activities, which, when performed together, achieve a set of goals considered important.

Goals. The goals of a key process area summarize the states that must exist for that key process area to have been implemented in an effective and lasting way. The extent to which the goals have been accomplished is an indicator of how much capability the organization has established at that maturity level. The goals signify the scope, boundaries, and intent of each key process area.

Common features. Common features include practices to implement and institutionalize a key process area. There are five types of common features: commitment to perform, ability to perform, activities performed, measurement and analysis, and verifying implementation.

Key practices. The key practices describe the elements of infrastructure and practice that contribute most effectively to the implementation and institutionalization of the key process areas.

C. The CISMM Tools: A Complementary Set of Capability Maturity Models

Due to the success of the CMM, the maturity model approach has been adopted for numerous competency assessments, including organizational capabilities using methodologies such as the Project Program and Portfolio Management Maturity Model of the British Standards Institution, the Organizational Project Management Maturity Model of the Project Management Institute, the Staging Organizational Capacity Model for the Institutional Assessment of Non Profits from the University of Pittsburgh, and the Business Sustainability Maturity Model from the University of Manchester.

Use of the extensively adopted maturity model approach for COMPETE’s institutional capability assessments provides a methodology whose principles are widely understood and that is based on industry best practices. By making use of recognized maturity models that are specialized for each of the SIGMA Management Framework’s capitals, the COMPETE institutional assessments are able to draw from the wealth of knowledge generated by continuing research in the respective areas. The project uses five maturity models as the tools for its assessments: the Business Process Maturity Model, the People Capability Maturity Model, the Financial Management Capability Model, the Stakeholder Relationship Maturity Model, and the Knowledge Management Maturity Model, as shown in Exhibit 4. (Note that the CISMM does not contain a maturity model to measure uses of natural capital assets, as it is not applicable to COMPETE’s grantees.)

Exhibit 4: Relationship between the SIGMA Management Framework and Maturity Models



C1. Business Process Maturity Model

The Business Process Maturity Model was developed by the Object Management Group to guide organizational development in key capability areas that affect the organization's ability to implement programs or expand innovations. The BPMM is a conceptual model based on best practices that are in actual use in fields such as marketing, banking, operations, manufacturing, and finance. It describes an evolutionary improvement path that guides organizations in moving from immature, inconsistent procedures to mature, disciplined business process workflows with proven methods for achieving business objectives.

The model describes an evolutionary improvement path characterized by five levels of maturity, as shown in Exhibit 5 below. The capabilities in each level are ordered so that improvements at each stage provide a foundation on which to build improvements undertaken at the next stage.

An improvement strategy drawn from use of the model provides a map for continual process improvement by identifying process deficiencies in the organization and guiding the improvements in logical, incremental steps. Effective use of the BPMM allows an organization to introduce improvements in stages, with each stage creating a foundation for later stages, and enabling the organization to continually improve business results.

Exhibit 5. BPMM Architecture
Source: Object Management Group, Inc.

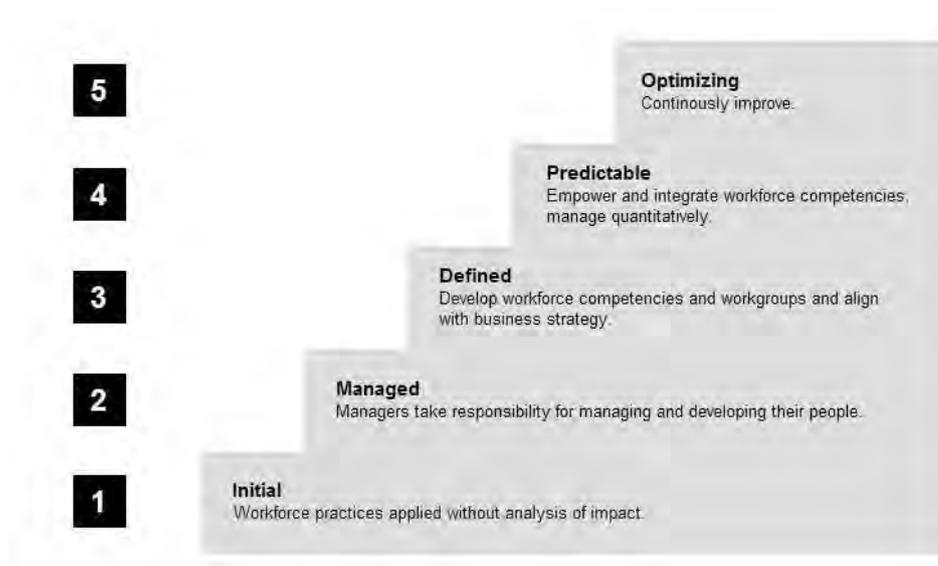


C2. People Capability Maturity Model

The P-CMM is used in the partner assessment to evaluate the capability of the institution's workforce to carry out the processes and procedures that are required for sustainability. The P-CMM was created by SEI to address critical human resources issues in organizations. It uses the process maturity framework of the successful CMM as a foundation for a model of best practices for managing and developing an organization's workforce. Based on best practices in human resources, knowledge management, and organizational development, the P-CMM guides organizations in improving their processes for managing and developing their workforce, establishing a program of continual workforce development, and setting priorities for improvement actions.

The P-CMM consists of five maturity levels that establish successive foundations for continually improving individual competencies, developing effective teams, motivating improved performance, and shaping the workforce the organization needs to accomplish its business plans. Each maturity level is a well-defined evolutionary plateau that institutionalizes new capabilities for developing the organization's workforce, as shown in Exhibit 6 below.

Exhibit 6. P-CMM Architecture
Source: SEI



Each maturity level of the P-CMM, with the exception of the initial level, consists of three to seven process areas. Process areas identify the capabilities that must be institutionalized to achieve a maturity level, and each process area identifies a cluster of related practices, which, when performed collectively, achieve a set of goals considered important for enhancing workforce capability. Each process area organizes a set of interrelated practices in a critical area of workforce management, such as staffing, compensation, or workgroup development. Each of these areas constitutes an important organizational process. The process areas at each level of maturity create an interlinked system of processes that transform the organization's capability for managing its workforce.

C3. Financial Management Capability Model

The CISMM uses the Financial Management Capability Model appraise an institution's capability to manage its financial resources, deliver programs, and exercise stewardship over the resources entrusted to it.

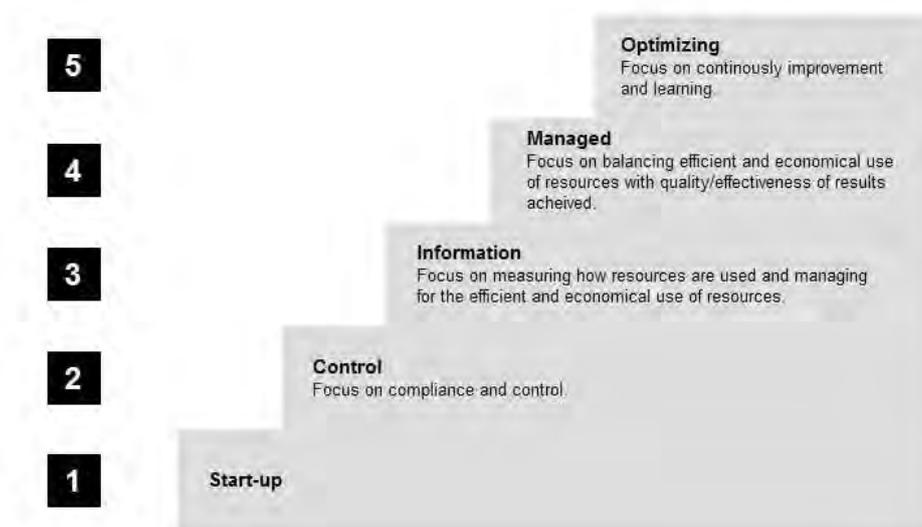
The FMCM is a framework that describes the key elements of effective financial management. It is based on an adaptation of the SEI's maturity model and sets out a path an organization can follow to develop progressively more sophisticated financial management practices. It shows the progression from a financial management level typical of a start-up organization to strong, effective, financial management capabilities associated with a mature, complex organization.

In addition to its use in auditing, the Financial Management Capability Model provides a tool an organization can use to:

- Determine its financial management requirements according to the nature, complexity, and associated risks of its operations.
- Assess its existing financial management capabilities against the requirements it has determined.
- Identify any gaps between those requirements and its existing financial management capabilities. Having identified these gaps, an organization can then address any significant ones and work toward developing the appropriate level of financial management capability.

The model illustrates the stages through which an organization can evolve as it defines, implements, measures, controls, and improves its financial management processes. These steps have been organized into five progressive capability levels, as shown in Exhibit 7 below. Each level represents a well-defined stage toward developing a mature financial management regime.

Exhibit 7. FMCM Architecture
Source: Office of the Auditor General, Canada



Achieving a given capability level involves mastering the key process areas associated with it and ensuring that these key processes are institutionalized within the organization. An organization can reach a given level of financial management capability by mastering all key process areas included in that level.

The FMCM was designed to be a practical tool for allowing an organization to assess where it is — and where it should be — in terms of its financial management capabilities, and subsequently, enabling it to reach the appropriate capability level

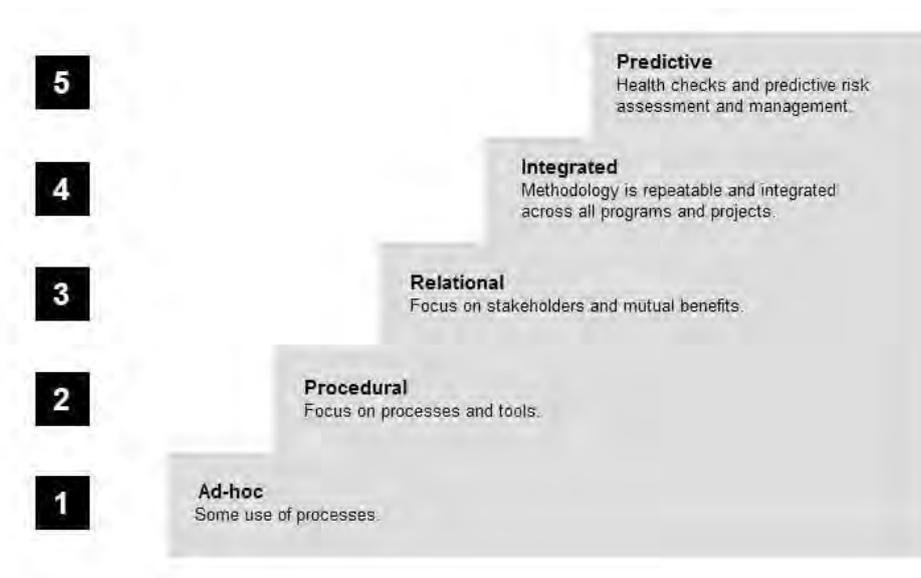
C4. Stakeholder Relationship Maturity Model

To evaluate the status of an institution’s relationships with its stakeholders, the partner assessment uses a Stakeholder Relationship Maturity Model (SRMM), which assesses organizational willingness to engage proactively in developing and maintaining relationships with stakeholders. Partner stakeholders include association members, development partners, donor agencies, and government departments. Because effective relationships within an organization’s network of stakeholders are essential for its long-term survival, the relationships must be managed in ways that best meet stakeholders’ needs and expectations and needs of the organization.

The SRMM used in the CISMM was developed by COMPETE based on best practices in stakeholder engagement presented by the PRINCE2 Maturity Model and the Portfolio, Programme and Project Management Maturity Model from the U.K. Office of Government Commerce, as well as stakeholder relationship best practices outlined by Stakeholder Management Pty Ltd. and the United Nations Non-Governmental Liaison Service.

The SRMM provides a framework for effective management of stakeholder engagement within an organization, through adoption of best practices using an evolutionary model that defines five levels of capability in the management of stakeholder relationships, as shown in Exhibit 8 below.

Exhibit 8. SRMM Architecture



It should be noted that although the SRMM provides a framework and map for development of stakeholder relationship management, development of the related capabilities is a long-term process, as its success depends on developing and nurturing social relationships.

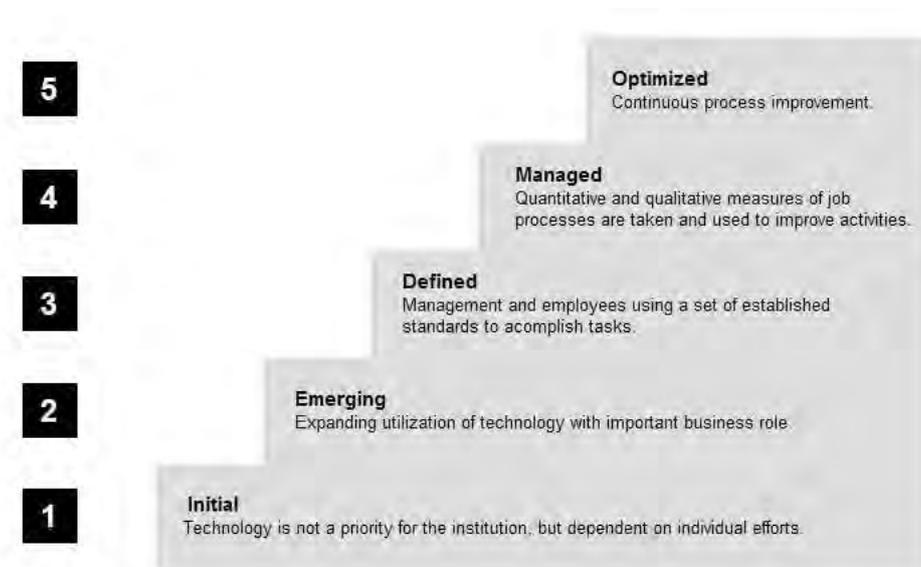
C5. Knowledge Management Maturity Model

The use of knowledge and technology within organizations is essential for their survival today. For evaluation of organizational capabilities on the use of technology, the partner assessment employs the Knowledge Management Maturity Model (KMMM), a framework for evaluating knowledge use and organizational abilities to develop and deploy innovative

products or services. The model is based on the premise that the most effective organizations are those that derive maximum competitive advantage by leveraging a combination of what they know and what they can do.

COMPETE crafted the KMMM using experiences drawn from development of the Technology Integration Capability Maturity Model by the Concordia University Department of Education as a model to assist in technology planning and the design of effective technology activities in schools, and Infosys Limited’s Knowledge Management Model, which covers all aspects of planning, design, implementation, and assessment of knowledge management. The KMMM, illustrated in Exhibit 9 below, defines five capability levels that establish an organization’s goals at each stage and to evaluate the progress in meeting them.

Exhibit 9. KMMM Architecture



D. Putting it All Together

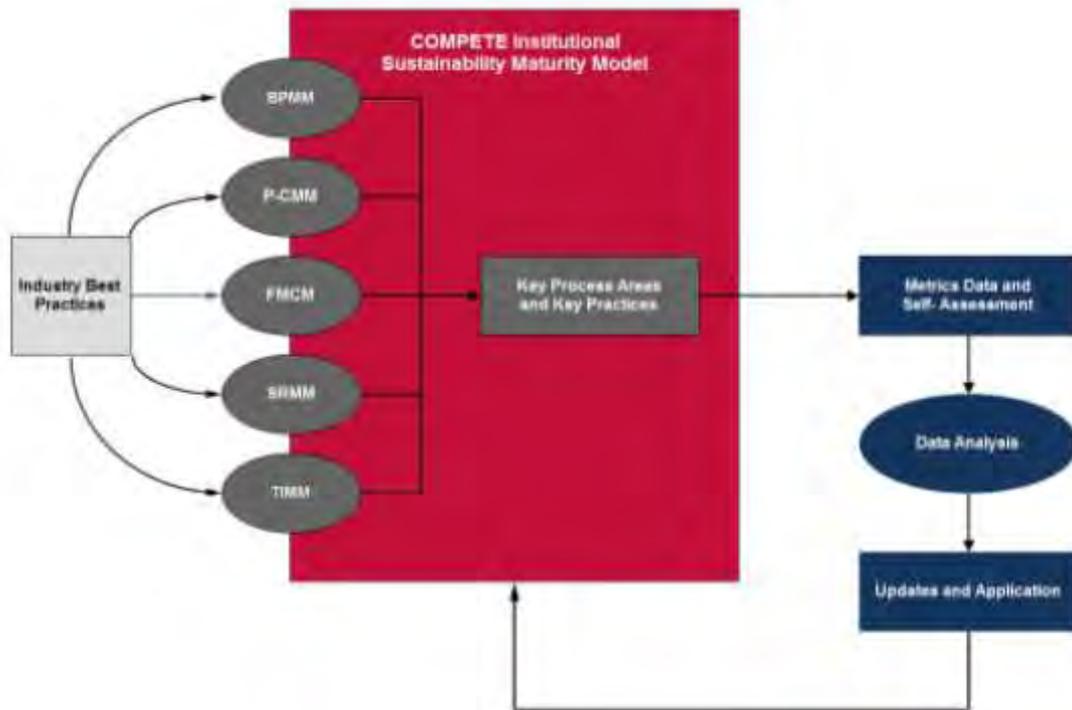
Capability Maturity Model Integration (CMMI) is the process by which different maturity models are integrated into one framework. CMMI, and by extension the CISMM, allows for two types of assessment: staged representation and continual representation. In staged representation, the entire collection of capabilities for sustainability is assessed. In a continual representation, discrete capabilities that correspond to one of the capitals of the SIGMA management framework, such as social capital, is assessed. The continual representation may be used in situations where a need for focused strengthening is required, such as strengthening of financial systems to comply with partnership grant requirements.

Each of the constituent maturity model “tools” is drawn from industry best practices that are identified through academic research and interaction with the industry in line with the principles of total quality management. The identified best practices are used to develop the key process areas and practices for the models, which are then subsequently adopted by the CISMM, as illustrated in Exhibit 10 below.

Although the CISMM uses a complementary set of maturity models, the key process areas and practices it addresses are customized and adapted to fit the COMPETE environment using knowledge gleaned from its application to partner institutions. This learning process

enables the CISMM to undergo continual improvement, which enables it to remain relevant to COMPETE and the partners amid changing environmental situations.

Exhibit 10. Use of Best Practices in CISMM



SECTION III. IMPLEMENTING THE COMPETE SUSTAINABILITY ASSESSMENT PROCESS

The capability of an institution to operate sustainably and provide continued service to its stakeholders depends upon maintenance of its capital resources and how it uses them to deliver services. The COMPETE sustainability assessment seeks to establish the effectiveness of institutional capabilities in managing their critical organizational resources, as well as the effectiveness of their business processes to foster sustainability.

COMPETE performs assessments of its partners to evaluate their organizational capabilities as part of its contractual obligations. Although recipients of grants under the COMPETE Partnership Fund are required to adhere to USAID accountability and reporting procedures, COMPETE also works to build the sustainability of partners based on recommendations derived from partnership assessments, which are periodically performed to ascertain the capabilities of partner institutions.

A. Pre-Award Assessments of Potential COMPETE Partners

A pre-award assessment of partners is performed under the direction of the COMPETE Partnership Fund director to evaluate a proposed grantee's capabilities in regard to the administrative, financial, and management systems to make a pre-award responsibility determination. The pre-award surveys include assessments related to financial and program management standards contained in Circular A-110 from the U.S. Office of Management and Budget, as well as other applicable standards (e.g., procurement) with respect to terms and conditions of the proposed grant award. If an applicant's administrative and financial systems are determined not to be in compliance with USAID requirements, COMPETE recommends systems, which the applicant must implement to be eligible for a grant award.

B. Post-Award Assessments of COMPETE Partners

COMPETE is also contractually required to make periodic assessments of its partners to determine their capabilities, based on organizational best practices, and to chart their growth toward sustainability. Based on the findings of the assessments, COMPETE makes recommendations for improvement and provides technical assistance to strengthen the partners' institutional capacities.

Evaluations using the CISMM consist of an internal and external, or "facilitated," institutional assessment. The internal assessments are broad introspective appraisals and evaluability assessments performed by a team of internal resources (staff, board members, etc). The internal appraisals are conducted using an organizational self-assessment checklist (Annex I) to establish an internal view of the organization's capabilities.

Facilitated appraisals form the core of the institutional sustainability assessment and are led by an appraiser who has been trained in the CISMM, Capability Maturity Model Integration (CMMI), and the associated appraisal methods. The lead appraiser, together with an external associate appraiser, directs a team that includes at least some members from the organization being appraised. The team collects and evaluates evidence regarding the implementation of practices described in the CISMM and makes judgments about their strengths and weaknesses and the extent to which they collectively satisfy the goals of the process areas at the maturity levels within the scope of the appraisal.

The findings of the external assessment team are compiled and presented using a practice implementation indicator worksheet (Annex J); these are then used to formulate any recommendations to address any weaknesses that may be identified.

Conformance is evaluated using the following forms of evidence:

- Review of artifacts that are produced by performing a process
- Review of artifacts that support performing a process
- Interviews with individuals or groups who perform a process
- Interviews with individuals who manage or oversee the performance of a process
- Interviews with individuals who support the performance of the process
- Quantitative data used to characterize the state of the organization or the attitudes and behaviors of those in it
- Quantitative data describing performance of a process, its outcomes, and business results

By definition, an institution that starting use of the model is deemed to be at Level I of the maturity model. The first step for the institution is then to demonstrate that it has satisfied all the process areas and goals required for achieving maturity Level II. For each process, the institution needs to provide the assessment team with substantive confirmation of its institutionalization through the provision of a direct artifact produced by the process, an indirect artifact arising from a separate but related and supported process, or by making a strong affirmation to the assessor in the situation where a direct or indirect artifact cannot not be obtained. To support data validity, direct artifacts are usually preferred, and at least two assessors should be used to conduct the assessment. On completion of the assessment, the organizational strengths and weaknesses are evident and a clear roadmap of what needs to be addressed is generated.

To maintain a consistent methodology for assessment when employing the set of independent maturity models, the CISMM appraisals are performed in conformity with the Standard CMMI Appraisal Method for Process Improvement (SCAMPI), the official SEI method to provide benchmark-quality ratings relative to maturity models. So as to preserve the validity of the assessments, the CISMM appraisals are required to meet SCAMPI A, B, or C standards as outlined by the Appraisal Requirements for CMMI (Annex L).

SECTION IV. CONCLUSION

The process for developing the methodology to enable COMPETE to measure the progress of its partners toward sustainability yielded two fundamental lessons:

- Sustainability can be attained and maintained through prudent use of organizational resources and administration of the sustainability process cycle.
- Achieving sustainability is a continual process-driven initiative, whose processes need to be predictable and repeatable, to increase the capability of delivering successful outcomes.

The COMPETE approach to assessing institutional capability brings together two principal frameworks that address organizational development, namely the SIGMA Management Framework of processes for sustainable growth, and the maturity model framework for organizational process improvement.

Since the introduction of the maturity model approach by Carnegie Mellon University in the 1980s, CMMI quickly evolved into a powerful tool and it has been adopted to guide process improvement initiatives in many fields, such as engineering, human resource management, project management, and others. Today, CMMI is one of the three leading process improvement frameworks (the others are the ISO 9001:2000 Quality Management Standard and Six Sigma). By adopting the use of a maturity model approach in assessing organizational capabilities, COMPETE has designed a methodology that is based on industry best practices, is widely understood, and provides a roadmap for the organizations to work toward sustainability.

The COMPETE Institutional Sustainability Maturity Model is a governance framework that has been designed to provide institutions with a roadmap for achieving sustainability and to enable the program to measure its progress in strengthening its partners to reach sustainability. Although the model is not prescriptive in nature, it puts forward the framework of organizational capabilities, procedures and practices that are requisite for organizations to take staged progress toward attaining sustainability. By basing the methodology on a framework that utilizes industry best practices and using it against recognized guidelines for achieving organizational sustainability, the model is able to:

- Provide partners with a roadmap to sustainability.
- Act as a benchmark to determine whether the institution is meeting its objectives.
- Provide a framework for business process improvements in the organizations.
- Provide input into to the institutional strategy.

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ANNEX B: OTHER INITIATIVES FOR MEASURING INSTITUTIONAL PERFORMANCE

Many initiatives have been undertaken to measure the institutional capacity and performance of partner institutions. Many of these initiatives faced deep conceptual and practical limitations, while others were plagued by minimal public acceptance. Additionally, the focus of many assessment methodologies was on financial stewardship, with no reflection of the public good that the institutions were mandated to deliver.

In designing the methodology to measure the progress of its partners toward sustainability, COMPETE researched the methodologies and tools used by USAID and other development agencies, including the Partner Institutional Viability Assessment from USAID/East Africa, the NGO Sustainability Index used by USAID/Europe and Eurasia, and capability maturity models.

B1. Partner Institutional Viability Assessment

The Partner Institutional Viability Assessment is an organizational management tool, designed by USAID/Regional Economic Development Services for East and Southern Africa to analyze the institutional performance of partner organizations and to identify key areas for improving the performance capacity to reach sustainability. It has a numerical scale and matrix-method design, used to identify changes and progress in organizational development capacity.

The Partner Institutional Viability Assessment provides a framework for analyzing information, data, and evidence about the management and technical capacity of strategies and systems. It examines the organizational record to identify areas for strengthening and improvement indicators for organizational viability. With this analysis, organizations can more formally and thoroughly identify long-term strategies, action plans, and measurable monitoring and evaluation approaches.

The tool's application was, however, plagued by drawbacks, including limited understanding of how to apply the methodology correctly, heavy dependence of the evaluation on the opinion of the assessor, and absence of a roadmap for improvement. The Partner Institutional Viability Assessment process also faced criticism as being tedious and often contentious.

B2. The NGO Sustainability Index

The NGO Sustainability Index is the premier instrument used by the USAID Bureau for Europe and Eurasia since 1997 for gauging the strength and continued viability of the region's nongovernmental organization (NGO) sectors. The index analyses seven dimensions of the NGO sector: legal environment, organizational capacity, financial viability, advocacy, public image, service provision, and NGO infrastructure. Taken together, these dimensions provide a basic description of what a sustainable NGO sector should look like. Individually, these dimensions provide USAID missions, implementing partners, and other international donors with a reasonable measure of impact over time and a basis for identifying needs and opportunities in a strategic planning process. Although the index brings many perspectives into sustainability discussions, it suffers from being a qualitative index, grade creep, and the subjectivity of pessimistic vs. optimistic sector evaluators.

B3. The Balanced Scorecard for Not-for-Profits

The conceptual framework of the balanced scorecard was introduced by Kaplan and Norton for the purpose of designating, evaluating, and measuring factors that drive an organization's performance. Although organizations have historically emphasized financial measures in operating their organizations, Kaplan and Norton argued that reliance on financial measures in a management system is insufficient, as financial measures are lag indicators that reflect outcomes from past actions.

The balanced scorecard paradigm retains measures of financial performance and supplements these measures with factors that drive future performance. The Balanced Scorecard is based on cause-and-effect relationships of financial and non-financial measures derived from the organization's strategy.

Kaplan and Norton's balanced scorecard concept seeks to provide managers with a set of performance metrics balanced between outcome measures and measures of the drivers of future outcomes. It provides a framework for organizing strategic objectives into four perspectives. In each of the four perspectives, quantitative measures are developed to operationalize the model. The four perspectives are as follows:

- **Financial:** the strategy for growth, comparability, and risk viewed from the perspective of the shareholder
- **Customer:** the strategy for creating value and differentiation from the perspective of the customer
- **Internal business processes:** the strategic priorities for business processes that create customer and shareholder satisfaction
- **Learning and growth:** the priorities to create a climate that supports organizational change, innovation, and growth

While the balanced scorecard is designed to encourage positive organization learning, it ignores the complexities of individual and organizational learning, and there are no processes within the balanced scorecard to encourage it. Another drawback is that it requires highly skilled staff who understand what a balanced scorecard is supposed to accomplish, why, and how; it must be adapted to each organization's culture and cannot be copied blindly. Finally, while the balanced scorecard provides a holistic view of the organization, it has little to offer non-profit organizations beyond that. In short, the balanced scorecard is a management control system designed for the business sector, and the process of its implementation and operation ignore the fundamental differences between businesses and not-for-profits.

B4. The Global Reporting Initiative

The Global Reporting Initiative is a network-based organization that produces a comprehensive sustainability reporting framework that is widely used around the world. Global Reporting Initiative's reporting framework is developed through a consensus-seeking, multi-stakeholder process, with participants drawn from global business, civil society, labor, and academic and professional institutions.

The Sustainability Reporting Framework provides guidance on how organizations can disclose their sustainability performance. It consists of the sustainability reporting guidelines, sector supplements and the technical protocol — applying the report content principles. The framework is applicable to organizations of any size or type, from any sector or geographic region, and has been used by thousands of organizations worldwide as the basis for producing their sustainability reports. The Global Reporting Initiative’s framework has, however, been found to contain many sections are not applicable or meaningful and to require considerable effort to complete the assessment.

ANNEX C. SIGMA FOUR-PHASE MANAGEMENT FRAMEWORK

Leadership and Vision

- LV1 Business case and top-level commitment
- LV2 Vision, mission, and operating principles
- LV3 Communication and training
- LV4 Culture change

Planning

- P1 Performance review
- P2 Legal and regulatory analysis and management
- P3 Actions, impact, and outcomes
- P4 Strategic planning
- P5 Tactical planning

Delivery

- P1 Change management
- P2 Management programmes
- P3 Internal controls and external influence

Monitor, Review, and Report

- MMR1 Monitoring, measurement, auditing, and feedback
- MRR2 Tactical and strategic review
- MRR3 Reporting progress
- MRR4 Assurance of reporting

ANNEX D. STRUCTURE OF THE BUSINESS PROCESS MATURITY MODEL

Maturity Level	Focus	Process Areas
5 Innovating	Organization's processes are continually improved.	<ul style="list-style-type: none"> Organizational improvement planning Organizational performance alignment Defect and problem prevention Continual capability improvement Organizational innovative improvement Organizational improvement deployment
4 Predictable	Work processes are managed quantitatively to establish predictable results.	<ul style="list-style-type: none"> Organizational common asset management Organizational capability and performance management Product and service process integration Quantitative product and service management Quantitative process management
3 Standardized	Organization establishes standard processes and assets for performing the product and service work.	<ul style="list-style-type: none"> Organizational process management Organizational competency development Organizational resource management Organizational configuration management Product and service business management Product and service work management Product and service preparation Product and service deployment Product and service operations Product and service support
2 Managed	Managers establish a stable work environment in their work units.	<ul style="list-style-type: none"> Organizational process leadership Organizational business governance Work unit requirements management Work unit planning and commitment Work unit monitoring and control Work unit performance Work unit configuration management Sourcing management Process and product assurance
1 Initial	Individual efforts with no explicit process or organizational support.	

ANNEX E. STRUCTURE OF THE FINANCIAL MANAGEMENT CAPABILITY MODEL

Maturity Level	Focus	Process Areas
5 Optimizing	Focus on continual improvement and learning	<ul style="list-style-type: none"> • Prospective information • Strategic improvement targets • Quality improvement • Optimizing financial management Processes and performance of resources
4 Managed	Focus on balancing efficient and economical use of resources with quality/effectiveness of results achieved	<ul style="list-style-type: none"> • Information management • Organization performance information • Enhanced decision support • Quantitative process management • Business line management
3 Information	Focus on measuring how resources are used and managing for the efficient and economical use of resources	<ul style="list-style-type: none"> • Financial management environment • Risk management • Integrated financial management systems • Management information and reporting • Performance measurement • Quality measurement • Cost management • Resource management
2 Control	Focus on compliance and control	<ul style="list-style-type: none"> • Organization control environment • Internal controls management • Data management • General accounting • Stewardship reporting • Planning and budgeting • Funding • Operations control
1 Start-Up		

ANNEX F. STRUCTURE OF THE PEOPLE CAPABILITY MATURITY MODEL

Maturity Level	Focus	Process Areas
5 Innovating	Continually improve and align personal, workgroup, and organizational capability.	<ul style="list-style-type: none"> • Continual workforce innovation • Organizational performance alignment • Continual capability improvement
4 Predictable	Empower and integrate workforce competencies and manage performance quantitatively.	<ul style="list-style-type: none"> • Mentoring • Organizational capability management • Quantitative performance management • Competency-based assets • Empowered workgroups • Competency integration
3 Defined	Develop workforce competencies and workgroups and align with business strategy and objectives.	<ul style="list-style-type: none"> • Participatory culture • Workgroup development • Competency-based practices • Career development • Competency development • Workforce planning • Competency analysis
2 Managed	Managers take responsibility for managing and developing their people.	<ul style="list-style-type: none"> • Compensation • Training and development • Performance management • Work environment • Communication and coordination • Staffing
1 Initial	Workforce practices applied inconsistently.	

ANNEX G. STRUCTURE OF THE STAKEHOLDER RELATIONSHIP MATURITY MODEL

Maturity Level	Focus	Process Descriptions
<p style="text-align: center;">5 Predictive</p>	<p>Health checks and predictive risk assessment and management.</p>	<ul style="list-style-type: none"> • Proactive use of typical view of “normal stakeholder community” for risk assessment, health reviews, etc
<p style="text-align: center;">4 Integrated</p>	<p>Methodology is repeatable and integrated across all programs and projects.</p>	<ul style="list-style-type: none"> • Application of stakeholder relationship management beyond projects, programs and portfolios
<p style="text-align: center;">3 Relational</p>	<p>Focus on stakeholders and mutual benefits.</p>	<ul style="list-style-type: none"> • Development of “normal stakeholder community” • Organization-wide implementation of stakeholder relationship management
<p style="text-align: center;">2 Procedural</p>	<p>Focus on processes and tools.</p>	<ul style="list-style-type: none"> • Standardized processes • Centralized support
<p style="text-align: center;">1 Ad-hoc</p>	<p>Some use of processes.</p>	

ANNEX H. STRUCTURE OF THE KNOWLEDGE MANAGEMENT MATURITY MODEL

Maturity Level	Focus	Process Areas
5 Optimized	<p>Culture of knowledge-sharing is institutionalized.</p> <p>Continual improvement of knowledge management processes.</p>	<ul style="list-style-type: none"> • Enterprise integration • Knowledge leverage
4 Managed	<p>Enterprise-wide knowledge-sharing systems in place.</p> <p>Quantification of benefits of knowledge-sharing. Business impact clearly is recognized.</p>	<ul style="list-style-type: none"> • Customized enabling (people) • Knowledge infrastructure Management (technology) • Content enlivenment (process) • Knowledge configuration Management (process) • Quantitative knowledge Management (process)
3 Defined	<p>Enterprise-wide knowledge-propagation systems in existence.</p> <p>The organization is able to see a link between knowledge-management processes and results.</p>	<ul style="list-style-type: none"> • Central knowledge organization (people) • Knowledge education (people) • Content structure management (process) • Knowledge technology Infrastructure (technology)
2 Emerging	<p>The organization shares knowledge purely on an as-needed basis.</p> <p>Routine and procedural knowledge is shared.</p>	<ul style="list-style-type: none"> • Knowledge awareness (people) • Content capture (process) • Basic information management (technology)
1 Initial	<p>All learning is reactive.</p> <p>The organization's knowledge is held in fragmented and isolated pockets.</p>	

ANNEX I. ORGANIZATIONAL SELF-ASSESSMENT CHECKLIST

Needs Identification and Self-Assessment Tool¹

CONFIDENTIAL

Date: _____

Organization Name: _____

Contact Information: _____

Date of Organization's Inception: _____

Executive Director: _____

Number of Employees: _____

Annual Operating Budget: _____

Number of Board Members: _____

¹This tool was adapted from the National Endowment for the Arts' Organizational Self Assessment Tool, LISC'S Capacity Building Survey, and the Irvine Foundation Assessment Tool.

Organizational Purpose	Well Developed	Adequately Developed	Needs Development	N/A
1. Concise, written vision/mission statements				
2. Understanding of vision/mission by stakeholders:				
a. Board of directors				
b. Staff				
c. Constituencies/general public				
3. Vision/mission statement reviewed regularly				
4. Concise, written history of the organization				
5. Within the category of organizational purpose, what are the primary areas in which technical assistance is needed?				

Governance	Well Developed	Adequately Developed	Needs Development	N/A
1. Written board member job descriptions and understanding of responsibilities (please attach list of board of directors, officers, and committees)				
2. Bylaws: current, functional, used (please attach copy)				
3. Procedures for evaluating short-term/ long-term objectives				
4. Procedures for recruiting and orienting new board members				
5. Procedure for evaluating board members and/or board rotation				
6. Structure of board committees				
7. Frequency and attendance at board meetings				
8. Procedure for meeting notice and preparation				
9. Effective use of time at board meetings (please attach minutes of the three most recent meetings)				
10. Staff input into board decision-making				
11. Financial reports presented to and understood by board				
12. Method of reviewing auditor's report				

Governance	Well Developed	Adequately Developed	Needs Development	N/A
13. Board represents community served				
14. Board's understanding of board/staff relationship				
15. Board's understanding of fund-raising				
16. Board members make sufficient cash donations annually				
17. Board members give time/expertise				
18. Board members advocate for the organization in the community				
19. Board members review/approve long-range plan				
20. Board members' recruitment of new donors				
21. Board members' sense of involvement				
22. Board members' sense of accomplishment				
23. Role of advisory committees				

Governance	Well Developed	Adequately Developed	Needs Development	N/A
<p>24. Within the category of governance, what are the primary areas in which technical assistance is needed?</p>				

Planning	Well Developed	Adequately Developed	Needs Development	N/A
1. Comprehensive, multi-year organizational plan in place and in use				
2. Plan reviewed and updated annually with board and staff				
3. Evaluation of previous year activities in relation to plan				
4. Within the category of planning, what are the primary areas in which technical assistance is needed?				

Programs	Well Developed	Adequately Developed	Needs Development	N/A
1. Sense of vision and continuity provided by organization's leadership				
2. Annual program planning process				
3. Written annual program plan				
4. Formal communication of annual program plans to staff/volunteers				
5. Formal communication of annual program plans to board				
6. Method for review/evaluation of prior year's program				
7. Method for determining whether programs meet constituent need				
8. Written multi-year program plan				
9. System for costing-out program elements				
10. Volunteer support of programs				
11. Within the category of programs, what are the primary areas in which technical assistance is needed?				

Staff/Communications/ Decision Making	Well Developed	Adequately Developed	Needs Development	N/A
1. Clarity of reporting relationships				
2. Current and accurate written job descriptions				
3. Administrative leadership				
4. Communication among staff members				
5. Communication between staff and board				
6. Staff's understanding of the function and duties of the board				
7. Staff's participation in planning				
8. Appropriateness of staff size re: programming challenge				
9. Staff experience in relationship to the job assignment				
10. Upgrades from volunteer to staff				
11. System for volunteer recruitment (i.e. volunteer manual)				
12. Description of roles and responsibilities of volunteers				
13. Time available to perform jobs satisfactorily				
14. Opportunities for staff training and personal development				

Staff/Communications/ Decision Making	Well Developed	Adequately Developed	Needs Development	N/A
15. Systems for recruiting/ using/thanking staff and volunteers				
16. Written personnel manual and policies				
17. System for annual performance reviews				
18. Benefit package for staff				
19. Salary scale for staff				
20. Staff use of consultants/ contractors				
21. Staff morale				
22. Office equipment				
23. Within the category of staff/communications/decision-making, what are the primary areas in which technical assistance is needed?				

Public/Community Relations	Well Developed	Adequately Developed	Needs Development	N/A
1. Consistency and clarity of organizational image communicated to public				
2. Organizational chart clearly depicts structure of agency				
3. Mechanism for handling public queries, complaints, etc.				
4. Annual public relations plan				
5. Effectiveness in representing the organization to:				
a. its constituencies				
b. the public				
c. the media				
d. critics				
6. Mechanism for receiving and evaluating feedback from sources				
7. Organization's publications				
8. Size of staff in relation to task				
9. Experience of staff in relation to job assignment				

Public/Community Relations	Well Developed	Adequately Developed	Needs Development	N/A
10. Budget for public relations				
11. Within the category of public/community relations, what are the primary areas in which technical assistance is needed?				

Fundraising	Well Developed	Adequately Developed	Needs Development	N/A
1. Process for setting annual fund-raising goals				
2. Mechanism for providing development staff input into fund-raising goals				
3. Mechanism for providing board input into fund-raising goals				
4. Ability of organization to consistently meet fund-raising goals				
5. Written development plan for annual operating support				
6. Plan indicates secured, renewable, and speculative contributed income				
7. Size of development staff in relation to task				
8. Experience of staff in relation to job assignment				
9. Grant-writing expertise				
10. Individual donor research capacity				
11. Corporate, foundation, government grants research capacity				
12. Involvement of board in prospect identification				
13. Involvement of board in individual donor solicitation				
14. Non-board volunteer support of fund-raising effort				

Fundraising	Well Developed	Adequately Developed	Needs Development	N/A
15. Solicitor training				
16. Earned income/contributed income mix				
17. Ability of organization to set and accurately project earned income goals				
18. Ability of organization to consistently meet earned income goals (where applicable)				
19. Organization's ability to attract:				
a. Individual donations, gifts				
b. Corporate and corporate foundation gifts				
c. Private foundation funding				
20. Level of local government grants				
21. Level of state government funding				
22. Level of national government funding				
23. Development materials				
24. Computer support for fund-raising				
25. Computerized procedures for updating/purging information				

Fundraising	Well Developed	Adequately Developed	Needs Development	N/A
26. Gift recording system				
27. Gift acknowledgement system				
28. Systematized information about donors/prospects				
29. Mechanism for systematic renewal of past/lapsed donors				
30. Systematic plan for expanding donor base				
31. Budget for fund-raising expenses.				
32. Within the category of fund-raising, what are the primary areas in which technical assistance is needed?				

Financial Management	Well Developed	Adequately Developed	Needs Development	N/A
1. Annual budgeting process				
2. Computerized accounting/ budgeting/reporting systems				
3. Board mechanism for reviewing monthly statements				
4. System for regular cash flow projections and monitoring				
5. Ability of organization to manage cash flow				
6. Formalized cost controls				
7. Ability of organization to pay accounts payable within 30 days				
8. Annual financial audit (with management letter) by certified public accountant				
9. Board system for reviewing audit				
10. System of internal controls				
11. Payroll tax deposits made when due				
12. Ability of organization to manage debt repayment of notes/loans outstanding				
13. Line of credit for the organization				
14. Investment and endowment returns				

Financial Management	Well Developed	Adequately Developed	Needs Development	N/A
15. Formal policies that maintain integrity of a. Cash reserve b. Endowment				
16. Size of staff in relation to tasks				
17. Experience of staff in relation to job assignments				
18. Staff's understanding of financial statements				
19. Within the category of financial management, what are the primary areas in which technical assistance is needed?				

Computer Systems and Operations	Well Developed	Adequately Developed	Needs Development	N/A
1. Computer systems/ operations support organization's:				
a. Planning				
b. Programs				
c. Communications				
d. Staff/volunteers/board members				
e. Financial management				
2. Computer training for staff/ volunteers/board members				
3. Computer software systems				
4. Computer hardware acquisitions				
5. Within the category of computer systems and operations, what are the primary areas in which technical assistance is needed?				

Legal	Well Developed	Adequately Developed	Needs Development	N/A
1. Percentage of budget allocated to insurance policies				
2. Access to legal counsel and expertise (board member, paid or pro-bono services)				
3. Staff participation in training on compliance issues				
4. Existence of personnel and grievance policies/procedures				
5. Existence of appropriate insurance policies				
6. Compliance with reporting other legal requirements				
7. Achievement of identified legal goals				
8. Does the organization have any outstanding lawsuits? (Yes or No)				

External Environment	Well Developed	Adequately Developed	Needs development	N/A
1. Understanding of local/regional: health, social service, and economic climate				
2. Organization's knowledge of/ relationship to immediate community				
3. Organization's knowledge of/ relationship to municipality and county				

Final Comments

1. Please prioritize the three most pressing capacity building needs identified by the staff.

2. a. Has your organization received technical assistance and/or training in the past?

2. b. If so, what was purpose and who was the provider of this assistance and/or training?

3. Please comment on any additional areas of concern that are not covered by this survey.

List of Participants/Position in Self-Assessment
1.
2.
3.
4.
5.
6.
How long did it take (in person-hours) to complete this survey)?

Please attach the items/documents listed below (where applicable):

1. Vision/mission statements
2. List of directors, officers, and committees
3. Bylaws: current, functional, used
4. Minutes of the three most recent meetings
5. Organizational chart (hand-drawn is acceptable)
6. Job descriptions for leadership and management positions
7. A copy of your annual budget and latest budget-to-actual report
8. Most recent audited financial statements

ANNEXJ. PRACTICE IMPLEMENTATION INDICATOR WORKSHEET

Process Area

The purpose of the (process area name) is to...

Practice ID	Practice	Implementation Tracking	Direct Artifact	Indirect Artifact	Affirmations	Strengths/Weaknesses (Description of gap in implementation)	Supporting Evidence
COMMIT1							
COMMIT2							
ABILITY1							
ABILITY2							
GP1							
GP2							
GP3							
GP4							
GP5							
MESR1							
MESR2							
VRFY1							
VRFY2							

ANNEX K. APPRAISAL REQUIREMENTS



Appraisal Requirements for CMMI[®] Version 1.3 (ARC, V1.3)

SCAMPI Upgrade Team

April 2011

TECHNICAL REPORT
CMU/SEI-2011-TR-006
ESC-TR-2011-006

Software Engineering Process Management
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Carnegie Mellon

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Acknowledgments

Many talented people were involved in the V1.3 upgrade of the CMMI appraisal method. Four primary groups were involved: the SCAMPSM upgrade team (SUT), the configuration control board, the CMMI steering group, and organizational sponsors. Members of the groups involved in upgrading the CMMI appraisal method are listed in Appendix C.

The SUT reviewed and discussed change requests submitted by CMMI users to change the CMMI appraisal method. The SUT then wrote, reviewed, and revised proposed changes to the appraisal method.

The configuration control board for the CMMI Product Suite reviewed and approved proposed changes to the appraisal method.

The steering group guided plans for the appraisal method upgrade, provided feedback on significant appraisal issues, and ensured involvement from a variety of stakeholders for the CMMI appraisal method.

The contributions of these individuals are gratefully acknowledged. So, too, are those of others from the CMMI product team and the process improvement and appraisal communities who provided change requests, ideas, and best practices leading to the improvements reflected in the current set of appraisal documentation.

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Abstract

This report, the Appraisal Requirements for CMMI, Version 1.3 (ARC, V1.3), defines the requirements for appraisal methods intended for use with Capability Maturity Model Integration (CMMI[®]) and with the People CMM. The ARC may also be useful when defining appraisals with other reference models. The ARC defines three appraisal classes distinguished by the degree of rigor associated with the application of the method. These classes are intended primarily for people who develop appraisal methods to use with reference models such as those in the CMMI product suite.

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1 Introduction

The Appraisal Requirements for CMMI (ARC), V1.3 defines the requirements for appraisal methods intended for use with Capability Maturity Model Integration (CMMI®) and with the People CMM. The ARC may also be useful when defining appraisals with other reference models. The ARC consists of a set of high-level design criteria for developing, defining, and using appraisal methods based on CMMI models.

In addition, a set of appraisal classes is defined based on typical applications of appraisal methods. These classes are intended primarily for developers of appraisal methods to use with reference models such as those in the CMMI Product Suite. Appraisal methods may be applied for different purposes, including assessments for internal process improvement and capability evaluations for supplier selection and process monitoring. This document defines the requirements for such methods, but not the conditions or constraints under which they might be applied.

The approach employed to provide guidance to appraisal method developers is to define a class of typical applications of appraisal methods (which are based on years of experience in the process improvement community) called appraisal method classes. Requirements are then allocated to each class as appropriate based on the attributes associated with that class. Thus, a particular appraisal method may be declared to be an ARC Class A, B, or C appraisal method. This designation implies the sets of ARC requirements that the method developer has addressed when designing the method.

Appraisal teams use reference models as the basis for identifying the strengths and weaknesses of the processes examined during an appraisal. Appraisal results can be used in a number of ways:

- planning an improvement strategy for the organization
- generating maturity level or capability level ratings
- supporting acquisition or business partnering decisions
- mitigating risks for product acquisition, development, and monitoring.

General appraisal principles include the following:

- Start with an appraisal reference model.
- Use a formalized appraisal process.
- Involve senior management as the appraisal sponsor.
- Focus the appraisal on the sponsor's business objectives.
- Observe strict confidentiality and non-attribution of data.
- Approach the appraisal collaboratively.
- Focus on follow-on activities and decision making based on the appraisal results.

Where to Find Additional Information

You can find additional information, such as the intended audience, background, and benefits of using SEI reference models at the following web pages:

- <http://www.sei.cmu.edu/cmm/>
- <http://www.sei.cmu.edu/cmmi/tools/peoplecmm/index.cfm>
- <http://www.cert.org/resilience/rmm.html>

Feedback

We are very interested in hearing your ideas so we can continually improve our products.

Please share your ideas using a change request form available on the SEI website:

<http://www.sei.cmu.edu/downloads/cmmi/forms/cr-appraisal.doc>

If you have other questions, send an email to the following email address:

cmmi-comments@sei.cmu.edu

2 Benefits and Features of CMMI Appraisal Methods

ARC requirements are designed to help improve appraisal consistency across multiple constellations, models, and appraisal methods. ARC requirements will help appraisal method developers, sponsors, and users understand the tradeoffs associated with various methods.

For organizations that intend to appraise against multiple CMMI constellations (e.g., CMMI-DEV, CMMI-SVC, CMMI-ACQ), or against other reference models (e.g., People CMM and potentially the CERT Resiliency Management Model), a unified appraisal approach permits some economy of scale in model and appraisal training. One appraisal method can provide results for one or more constellations and other reference models.

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3 Requirements for CMMI Appraisal Method Class Structure

The CMMI appraisal method class structure (specified in Appendix A) identifies the requirements appropriate to appraisal methods designed specifically for three typical applications, shown in Table 1. There is no requirement for any given appraisal method to fall exactly into one class; however, this structure is intended to provide value and utility to users of the CMMI Product Suite, and its use is encouraged.

Table 1: Requirements of CMMI Appraisal Method Classes

Requirements	Class A	Class B	Class C
Types of Objective Evidence Gathered	Artifacts and affirmations	Artifacts and affirmations	Artifacts and/or affirmations
Ratings Generated	Goal ratings required	Not allowed	Not allowed
Organizational Unit Coverage	Required	Not required	Not required
Appraisal Team Leader Requirements	Certified lead appraiser	Person trained and experienced	Person trained and experienced

Key differentiating attributes for appraisal classes include the following:

- the degree of confidence in the appraisal outcomes
- the generation of ratings
- appraisal cost and duration

Class A methods must satisfy all ARC requirements and are the only methods considered suitable for providing ratings for benchmarking. The SEI will only record ratings generated by SCAMP A appraisals, although other ARC class A methods may be created.

Class B appraisal methods must comply with a subset of ARC requirements. As indicated in Appendix A, several requirements of Class A methods are optional for Class B methods. Two types of objective evidence are required for both Class A and B methods. Class B methods do not produce ratings. These types of appraisals are recommended for initial assessments in organizations that are just beginning to use CMMI models for process improvement activities. They also provide a cost-effective means for performing interim assessments and/or capability evaluations between Class A appraisals.

Class C appraisal methods must comply with a subset of ARC requirements for Class B methods. Only one of the two types of objective evidence required for Class A and Class B methods is required for Class C methods. Class C Methods do not produce ratings. Validation and corroboration are also optional for Class C methods. These types of appraisals would most likely be used when the need for a "quick look" arises or for periodic self-assessments by projects and organizational support groups.

ARC requirements are based on widely used appraisal methods that have yielded accurate, consistent, and useful results. As other appraisal methods are identified and are shown to have similar quality characteristics, the requirements may be modified to reflect their features.

4 Requirements for CMMI Appraisal Methods

The following sections define the suite of requirements for CMMI appraisal methods. Each requirement statement is preceded by an indicator of applicability to one or more of the three CMMI appraisal method classes (i.e., A, B, C). If the indicator for an appraisal class is not listed for a requirement, then that requirement is either optional or not applicable for that appraisal class, as shown in Appendix A.

4.1 Appraisal Method Documentation

- 4.1.1 (ABC) The method shall be documented and, at a minimum, include the following:**
- a identification of the CMMI models (version, discipline, and representation [staged or continuous]) with which the method can be used
 - b identification of the ARC version upon which the appraisal method is based
 - c a list of which CMMI appraisal requirements are satisfied by the method, along with the CMMI appraisal method class it belongs to (if applicable)
 - d activity descriptions, artifacts, and guidance that implement each of the appraisal requirements
- 4.1.2 (ABC) The method documentation shall provide requirements and/or guidance for determining the suitability of the appraisal method relative to the appraisal's purpose, objectives, and constraints.**
- 4.1.3 (ABC) The method documentation shall provide requirements and/or guidance for identifying the scope of the model(s) to be investigated in the appraisal, including the process areas and capability levels, as appropriate for the model representation.**
- 4.1.4 (ABC) The method documentation shall provide requirements and/or guidance for identifying the organizational unit to be appraised, including the sponsor's relationship to the organizational unit and the basic units (e.g., projects or work groups) and support functions that will participate.**

- 4.1.5 (ABC) The method documentation shall provide requirements and/or guidance for selecting appraisal team members and criteria for qualification.
- 4.1.6 (ABC) The method documentation shall provide requirements and/or guidance for an appraisal team leader's qualification criteria.
- 4.1.7 (ABC) The method documentation shall provide requirements and/or guidance for determining the appropriate size of the appraisal team.
- 4.1.8 (ABC) The method documentation shall provide requirements and/or guidance on the roles and responsibilities of the sponsor, the appraisal team leader, and the appraisal team members.
- 4.1.9 (ABC) The method documentation shall provide requirements and/or guidance for estimating the resources required to conduct the appraisal (including the amount of time required to conduct an appraisal).
- 4.1.10 (ABC) The method documentation shall provide requirements and/or guidance for appraisal logistics.
- 4.1.11 (ABC) The method documentation shall provide requirements and/or guidance for collecting relevant data on the organizational unit and associating the data to the reference model.
- 4.1.12 (ABC) The method documentation shall provide requirements and/or guidance for creating findings, relative to the reference model.
- 4.1.13 (ABC) The method documentation shall provide requirements and/or guidance for protecting the confidentiality of appraisal data and ensuring non-attribution of data contributed by appraisal participants.
- 4.1.14 The method documentation shall provide requirements and/or guidance for (1) recording traceability between the data collected during the appraisal and the findings and/or ratings, (2) the retention and safekeeping of appraisal records, and (3) compiling and maintaining an appraisal record that supports the appraisal team's findings and/or ratings and that contains the following minimum content:
 - a. (ABC) dates of appraisal
 - b. (ABC) appraisal plan

- c. (A) objective evidence, or identification thereof, sufficient to substantiate goal rating judgments
- d. (ABC) the appraisal method (and version) used, along with any tailoring options
- e. (ABC) findings
- f. (A) characterizations
- g. (A) any ratings rendered during the appraisal (goals, process areas, and maturity or capability levels)

4.2 Planning and Preparing for the Appraisal

4.2.1 (ABC) The method shall provide for the preparation of appraisal participants.

4.2.2 (ABC) The method shall provide for the development of the appraisal plan.

At a minimum, the appraisal plan shall specify the following:

- a. the identity of the sponsor of the appraisal, and the sponsor's relationship to the organizational unit being appraised
- b. the appraisal purpose, including alignment with business objectives
- c. the appraisal reference model scope, including
 - 1. the process areas to be investigated within the organizational unit
 - 2. the highest maturity level and/or capability level to be investigated for each process area within the appraisal model scope
- d. the organizational unit that is the subject of the appraisal
- e. the process context, which, at a minimum, shall include the following:
 - 1. size of the organizational unit
 - 2. demographics of the organizational unit
 - 3. application domain of the products or services of the organizational unit
 - 4. size, criticality, and complexity of the products or services
- f. the identity of the CMMI and other reference models used, including the version, and representation (staged or continuous)
- g. the experience, knowledge, and skills of the appraisal team leader who is responsible for the appraisal in accordance with the method requirements
- h. the identity and affiliation of the appraisal team members, including the appraisal team leader, with their specific appraisal responsibilities
- i. the identity (name and organizational affiliation) of appraisal participants and support staff, with specific responsibilities for the appraisal
- j. any additional information to be collected during the appraisal to support achievement of the appraisal objectives
- k. a description of the planned appraisal outputs, including ratings to be generated (process areas, maturity level)
- l. anticipated follow-on activities (e.g., reports, appraisal action plans, re-appraisal)

- m. planned tailoring of the appraisal method and associated tradeoffs, including the sample size or coverage of the organizational unit
- n. the activities to be performed in conducting the appraisal
- o. resources and schedule assigned to appraisal activities
- p. appraisal logistics
- q. appraisal risks and associated mitigation plans
- r. potential conflicts of interests and associated mitigation plans

4.2.3 (ABC) The method shall require that the appraisal plan, and any changes to the appraisal plan, shall be agreed to by the sponsor (or the delegated authority) and documented in the appraisal record.

4.3 Appraisal Data Collection, Consolidation, and Validation

Appraisal teams base their findings on review of one or more types of objective evidence. The requirements in this section identify the types of objective evidence recognized by ARC-compliant appraisal methods. As indicated in Appendix A, both of the two types of objective evidence identified below are required for Class A and Class B appraisal methods. At least one type of objective evidence is required for Class C methods.

4.3.1 (AB) The method shall collect affirmation data (e.g. by conducting interviews with project or work group leaders, managers, and practitioners).

4.3.2 (AB) The method shall collect data by reviewing artifacts (e.g., organizational policies, project or work group procedures, slides from past presentations, and implementation-level work products).

4.3.3 (ABC) The method shall require appraisal team consensus when teams are involved in decisions related to determining the validity of findings and establishing ratings.

4.3.4 (ABC) The method shall require a mechanism for consolidating the data collected during an appraisal into accurate findings according to the following criteria:

- a. The finding was derived from objective evidence seen or heard during data collection sessions.
- b. The finding is clearly worded, phrased without attribution, and expressed in terminology used by the staff working in the organizational unit.
- c. Objective evidence supporting the finding is traceable to the project, work group or organizational unit.

- d. The finding is relevant to the appraisal reference model and can be associated with a specific model component.

4.3.5 (AB) The method shall require a mechanism for verifying findings according to the following criteria:

- a. The finding is based on corroborated objective evidence.
- b. The finding is consistent with other verified findings. (Verified findings cannot be both true and mutually inconsistent; in aggregate, they constitute a set of truths about the organizational unit that must be consistent.)

4.3.6 (AB) The method shall require the following minimum set of criteria to be satisfied in order for objective evidence to be considered "corroborated":

- a. The objective evidence is obtained from at least two different sources.
- b. At least one of the two sources must reflect the work that is actually being done (e.g., process area implementation).

4.3.7 (ABC) The method shall require a mechanism for determining that sufficient data has been collected to cover the scope of the appraisal.

4.3.8 (A) The method shall require a mechanism for consolidating objective evidence into preliminary findings relative to the appraisal reference model.

4.3.9 (A) The method shall require that preliminary findings be validated with appraisal participants in order to solicit their responses for validation of the findings' accuracy and clarity.

4.4 Rating

4.4.1 (A) The method shall define a rating process that satisfies, at a minimum, the following:

- a. An appraisal team can rate a specific or generic goal when corroborated objective evidence for each practice related to the goal meets the method's defined data coverage criteria.
- b. An appraisal team can rate a process area when it has rated each of the process area's specific goals and generic goals within the appraisal scope.
- c. An appraisal team can determine a maturity level rating once it has rated all of the process areas within that level and each level below.¹
- d. An appraisal team can determine the capability level of a process area when it has rated each of the generic goals at or below the target capability level.

¹ See 4.4.5b for how a maturity level rating can be determined when using the continuous representation.

- 4.4.2 (A) The method shall require that maturity level ratings and/or capability level ratings be based on the definitions of capability levels and maturity levels such as those found in the CMMI models.**
- 4.4.3 (A) The method shall rate each specific and generic goal (provided the prerequisites of rating have been met) within the appraisal scope in accordance with the following rules:**
- a. Rate the goal "satisfied" when the associated generic or specific practices (or acceptable alternative practices) are judged to be implemented and the aggregate of weaknesses does not have a significant negative impact on goal achievement.
 - b. Rate the goal "not rated" if the goals cannot be rated in accordance with the method's defined criteria for data sufficiency.
 - c. Rate the goal "unsatisfied" otherwise.
- 4.4.4 (A) The method shall rate each process area within the appraisal scope, if requested by the appraisal sponsor, in accordance with the following rules:**
- a. When a process area is determined to be outside of the organizational unit's scope of work, the process area is designated as "not applicable" and is not rated.
 - b. When an applicable process area is outside of the scope of the model used for the appraisal, the process area is designated as "out of scope" and is not rated.
 - c. When one or more goals cannot be rated in accordance with the method's defined criteria for data sufficiency, the process area is designated as "not rated" and is not rated.
 - d. Otherwise, when a process area is to be rated for a staged representation, the process area is "satisfied" if and only if all of its specific goals and all of its generic goals at the maturity level of interest and below are rated "satisfied." Else, it is "unsatisfied."
 - e. Otherwise, when a process area is to be rated for a continuous representation, the process area is given a capability level rating based on the highest level for which all of its specific goals and generic goals have been satisfied.
- 4.4.5 (A) The method shall rate the maturity level, if requested by the appraisal sponsor, in accordance with the following rules:**
- a. A maturity level for a staged representation is achieved if all process areas within the level and within each lower level are either "satisfied" or "not applicable."
 - b. A maturity level for a continuous representation is achieved if the capability level profile is at or above the target profile for all process areas for that maturity level and all lower maturity levels in the equivalent staging, excepting those process areas that are designated as "not applicable."

4.5 Reporting Results

- 4.5.1 (ABC) The method shall require documenting and reporting the appraisal findings and/or ratings to the appraisal sponsor and to the appraised organization.
- 4.5.2 (ABC) The method shall require that the appraisal record be provided to the appraisal sponsor for retention.

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Appendix A CMMI Appraisal Method Class Specification

The following table shows the applicability of the ARC requirements to the three classes of appraisal methods. In the cases where a requirement is applicable to a particular appraisal method class, "yes" is denoted. In some cases, a requirement has been specified as "not applicable" or "optional" for one or more appraisal methods. Requirements identified as not applicable are not relevant to the indicated method class; optional requirements, however, may still be performed. In the cases where "partial" is denoted, one or more sub-elements of the associated requirement are not applicable or are optional for the specified appraisal method class, while the rest of the sub-elements of that requirement are applicable to the class, as indicated.

Table 2: Applicability of ARC Requirements to Appraisal Method Classes

Requirements	Class A	Class B	Class C
Method Documentation			
4.1.1 – Documentation of method	yes	yes	yes
4.1.2 – Identifying appraisal purpose and objectives	yes	yes	yes
4.1.3 – Model scope	yes	yes	yes
4.1.4 – Identifying organizational unit	yes	yes	yes
4.1.5 – Team member selection	yes	yes	yes
4.1.6 – Team leader qualification criteria	yes	yes	yes
4.1.7 – Size of team	yes	yes	yes
4.1.8 – Sponsor, team leader, and team member roles and responsibilities	yes	yes	yes
4.1.9 – Estimating appraisal resources	yes	yes	yes
4.1.10 – Logistics	yes	yes	yes
4.1.11 – Collecting and mapping data to appraisal reference model	yes	yes	yes
4.1.12 – Creation of findings	yes	yes	yes
4.1.13 – Assuring confidentiality and non-attribution	yes	yes	yes
4.1.14 – Appraisal record	yes	partial (a, b, d, e only)	partial (a, b, d, e only)

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Requirements	Class A	Class B	Class C
Planning and Preparing			
4.2.1 – Preparation of participants	yes	yes	yes
4.2.2 – Development of appraisal plan	yes	yes	yes
4.2.3 – Sponsor approval of appraisal plan	yes	yes	yes
Data Collection, Consolidation, and Validation			
4.3.1 – Data from interviews	yes	yes	At least one type of objective evidence
4.3.2 – Data from documents	yes	yes	
4.3.3 – Consensus of team members	yes	yes	yes
4.3.4 – Accuracy of findings	yes	yes	yes
4.3.5 – Verification of findings	yes	yes	optional
4.3.6 – Corroboration of objective evidence	yes	yes	optional
4.3.7 – Sufficiency of data	yes	yes	yes
4.3.8 – Preliminary findings preparation	yes	optional	optional
4.3.9 – Preliminary findings validation	yes	optional	optional
Rating			
4.4.1 – Define a rating process	yes	N/A	N/A
4.4.2 – Basis for maturity level and capability level rating	yes	N/A	N/A
4.4.3 – Rules for goal rating	yes	N/A	N/A
4.4.4 – Rules for process area rating	yes	N/A	N/A
4.4.5 – Rules for maturity level rating	yes	N/A	N/A
Reporting Results			
4.5.1 – Report results to sponsor and appraised organization	yes	yes	yes
4.5.2 – Retention of appraisal record	yes	yes	yes

Appendix B CMMI Appraisal Upgrade Participants

Many talented people have been part of the effort to upgrade the CMMI appraisal method to Version 1.3. This appendix recognizes the people involved in this upgrade. Primary groups involved included the SCAMPI upgrade team, the configuration control board, and the CMMI steering group. (If you wish to see a more complete listing of participants involved in the larger V1.3 effort, see Appendix C of CMMI for Development V1.3.)

SCAMPI Upgrade Team

The SCAMPI upgrade team (SUT) reviewed change requests submitted by CMMI users to change the CMMI appraisal method. Upgrade activities were then based on change requests, V1.3 guidelines provided by the CMMI steering group, and additional input from the configuration control board.

- Busby, Mary (Lockheed Martin)
- Buttles-Valdez, Palma (Software Engineering Institute)
- Byrnes, Paul (Integrated System Diagnostics)
- Hayes, Will (Software Engineering Institute)
- Khetan, Ravi (Northrop Grumman)
- Kirkham, Denise (The Boeing Company)
- Ming, Lisa (BAE Systems)
- Ryan, Charlie (Software Engineering Institute)
- Schaaf, Kevin (Booz Allen Hamilton)
- Stall, Alex (Software Engineering Institute)
- Svolou, Agapi (Alexanna LLC)
- Ulrich, Ron (Northrop Grumman)

Configuration Control Board

The configuration control board for the CMMI Product Suite reviewed and approved changes for the appraisal method, including these Appraisal Requirements for CMMI (ARC)

- Campo, Mike (Raytheon)
- Carleton, Anita (Software Engineering Institute)
- Chrissis, Mary Beth (Software Engineering Institute)
- Dauplaise, Kirsten (NAVAIR)
- Evanon, Mike (SSCI)
- Frost, Rich (General Motors)
- Gallagher, Brian (Northrop Grumman)
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- Godfrey, Sally (NASA)
- Jacobson, Nils (Motorola)
- Konrad, Mike (Software Engineering Institute)
- Moore, Chris (WR ALC)
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- Phillips, David M. (Software Engineering Institute)
- Schwomeyer, Warren (Lockheed Martin)
- Scibilia, John (US Army)
- Swidersky, Dave (Bank of America)
- Tyson, Barbara (Software Engineering Institute)
- Rassa, Robert C. (Raytheon Space and Airborne Systems)
- Richter, Karen (OSD/IDA)
- Young, Rusty (Software Engineering Institute)

CMMI Steering Group

The steering group guided plans for V1.3, provided consultation on significant appraisal issues, and ensured involvement from a variety of interested stakeholders for the CMMI appraisal method.

- Beamish, Alan (USAF)
- Carleton, Anita (Software Engineering Institute)
- Chittester, Clyde (Software Engineering Institute)
- Gill, James C. (Boeing Integrated Defense Systems)
- Kelly, Dr. John C. (NASA HQ)
- Landaen, Kathryn (Defense Contract Management Agency)
- McCarthy, Larry (Global Process Partnerships)
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- Penn, Lynn (Lockheed Martin)
- Rassa, Robert C. (Raytheon Space and Airborne Systems)
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- Zettervall, Brenda (US Navy)

Ex-Officio Steering Group Members

- Konrad, Mike, chief architect (Software Engineering Institute)
- LaFortune, Susan (National Security Agency)
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Appraisal Team Support

- Young, Rusty (Software Engineering Institute)

Change Control Board Support

- Chrissis, Mary Beth (Software Engineering Institute)

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ANNEX L. CISMM REVISION LOG

Date	Version	Change
April 2010	1.0	Based on P3M3
July 2010	2.0	Introduced the Sustainability Cycle Introduced the organizational self-assessment checklist Assessments based on SOC, P-CMM, FMCM, Business Sustainability Maturity Model, CSCMM
August 2011	2.1	Replaced SOC with BPMM Introduced TI-CMM, SRMM Dropped Business Sustainability Maturity Model, CSCMM
January 2012	2.2	Replaced TI-CMM with KMMM Replaced SRMM (Strategic Management Pty) with SRMM (COMPETE)

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