CMMI® Interpretive Guidance Project: Preliminary Report

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Software Engineering Institute

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Software Engineering Process Management

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The ideas and findings in this report should not be construed as an official DoD position. It is published in the interest of scientific and technical information exchange.

FOR THE COMMANDER

Christos Scondras
Chief of Programs, XPK

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- Dennis Goldenson
- Craig Holenbach
- Mike Konrad
- Sally Miller
- Kenneth Smith
- Agapi Svolou
- Gian Wemyss

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[2] Singh is vice-chair of the CMMI Interpretive Guidance Expert Group.

Abstract

The CMMI® (Capability Maturity Model® Integration) Interpretive Guidance project was formed to help commercial software, information technology (IT), and information systems (IS) organizations adopt CMMI. Project members collected data to learn more about how CMMI is being accepted by these organizations. This report describes the data-collection activities and includes summaries of the data collected through August 2003.

The project received both positive and negative comments that lead to some interesting and surprising observations. Overall, the positive comments greatly outnumbered the negative. Input provided by commercial software, IT, and IS organizations was similar to input from organizations from other disciplines.

Organizations reported that CMMI is adequate for guiding their process improvement activities and that CMMI training courses and appraisal methods are suitable for their needs, although there are specific opportunities for improvement. Having two representations caused concern and confusion for some but was a benefit for others, so the project will investigate these comments further to see what can be done to address these concerns. The cost of CMMI is an issue that affected adoption decisions for some but not for others. Finally, return-on-investment information is usually helpful to organizations when making the business case to adopt CMMI.

® CMMI and Capability Maturity Model are registered in the US Patent and Trademark Office by Carnegie Mellon University.

1 Introduction

Since the release of Version 1.1 of the Capability Maturity Model Integration (CMMI) Product Suite in January 2002, the Software Engineering Institute (SEI[SM]) has been helping organizations understand and adopt CMMI. The CMMI Interpretive Guidance project was formed to understand how CMMI is being adopted and used by software, information technology (IT), and information systems (IS) organizations. This preliminary report contains the data gathered from a wide variety of sources, including sessions at conferences, a Web-based questionnaire, and feedback from appraisals.

1.1 Background

Capability Maturity Model (CMM®) development began in the late 1980s. In November 1986, the SEI, with assistance from the MITRE Corporation, began developing a process maturity framework to help organizations improve their software processes. After years of experience with the maturity framework and questionnaire, the SEI evolved the framework into the Capability Maturity Model for Software (SW-CMM).

With the success of the SW-CMM in the mid-90s, many other disciplines began to develop capability maturity models in areas such as systems engineering, software acquisition, workforce management, and integrated product and process development. Although these models have proved useful to many organizations, the use of multiple models was problematic. Many organizations wanted to focus their improvement efforts across multiple disciplines within their organizations. However, the differences among these discipline-specific models, including their architecture, content, and approach, have limited these organizations' ability to focus their improvements successfully.

The CMM Integration[SM] project was formed to sort out the problem of using multiple CMMs. However, the greater goal of the project was to develop a single improvement framework for use by organizations pursuing enterprise-wide process improvement. The CMMI models are based, in part, on the work that started with the SW-CMM and are enhanced so that they are applicable to all product development and maintenance processes. Since CMMI is the designated successor of

[SM] SEI and CMM Integration are service marks of Carnegie Mellon University.

the SW-CMM, the CMMI project wants to ensure that SW-CMM users will make a smooth transition to CMMI.[3]

At the SEI a CMMI Workshop was held May 7-8, 2002. The purpose of the workshop was to understand CMMI adoption barriers and benefits for commercial software, information technology, and information systems organizations. A special report, *A Report on the May 2002 CMMI® Workshop,* is available that summarizes the workshop discussions [Konrad 02].During the workshop, there was considerable discussion (and disagreement) about what exactly the software community needed to guide their process improvement efforts. Possible solutions discussed during the workshop included the following:

- maintaining the SW-CMM indefinitely
- creating a "software-only" version of CMMI
- developing CMMI interpretation guidelines for software organizations

Since the workshop, there were several actions taken. First, the decision was made to continue with the sunset of the SW-CMM. Second, a "software-only" version of the CMMI model (CMMI-SW) was created and made available to the public. Third, the SEI formed the CMMI Interpretive Guidance project to research how best to help software, IT, and IS organizations adopt CMMI. By forming this project, the SEI has been able to collect and understand issues unique to software, IT, and IS organizations while allowing these organizations to continue their adoption of CMMI with minimal disruption. This approach also enables the SEI to support and carryout existing CMMI adoption plans while encouraging SW-CMM users to upgrade to CMMI.

1.2 Project Objectives

The objectives of the Interpretive Guidance project are as follows:

- understand and address the issues that software organizations, with a special emphasis on commercial software, IT, and IS organizations, have when using CMMI
- enable current SW-CMM users to more easily upgrade to CMMI
- eliminate as many barriers to CMMI adoption as possible
- encourage CMMI adoption

1.2.1 Resources

The majority of the research and development work is the responsibility of the Interpretive Guidance project team. This team is composed primarily of SEI members of the technical staff. However, to ensure that interpretive guidance issues are understood, community members are in-

[3] Refer to the sunset policy at <http://www.sei.cmu.edu/cmmi/adoption/sunset.html> for more information.

volved through discussions, workshops, and surveys. An expert group of software leaders was formed to review project activities and results.

1.2.2 Interpretive Guidance Expert Group

The CMMI Interpretive Guidance Expert Group was formed to help the SEI understand and prioritize the CMMI adoption issues and perceived barriers identified in the data collected. Expert group members represent the commercial software, IT, and IS communities and provide advice and recommendations to the Interpretive Guidance project team. Participation on the expert group requires in-depth software engineering knowledge and extensive experience with a quality model, which can be a CMMI model, the SW-CMM, an International Organization for Standardization (ISO) model, or Personal Software Process[SM]/Team Software Process[SM].

The expert group's purpose is to function as a standing committee that reviews and comments on products developed by the CMMI Interpretive Guidance project.

The mission of the expert group is to do the following:

- independently review proposed CMMI interpretive guidance on behalf of software, information technology, and information systems organizations
- provide recommendations to further the CMMI project's mission and the satisfaction of the user community
- advise the Interpretive Guidance project team regarding its project development plans
- facilitate communication between the Interpretive Guidance team and the user community

To fulfill its purpose and mission, the expert group is composed of knowledgeable industry and government representatives who use CMMI products. The expert group has members with the following qualifications:

- expertise in key software areas
- ability to advocate interpretation goals and priorities expressed by the user community
- understanding of the missions of the SEI and the CMMI project
- ability to anticipate user community responses to proposed interpretive guidance

1.2.3 Interpretive Guidance Project Activities

The Interpretive Guidance project consists of two phases. Phase I began in November 2002. The purpose of this phase is to collect data to understand issues and to promote CMMI. Phase I ends with publication of this report. The following activities support the data collection activities that make up Phase 1:

- Hold birds-of-a-feather (BoF) sessions at conferences.

- Conduct workshops at SPIN meetings.
- Hold expert group meetings.
- Gather feedback from SCAMPI appraisals.
- Develop and distribute a Web-based questionnaire.
- Create an issue repository.
- Prepare and release the preliminary report.

The purpose of phase II is to analyze issues and develop solutions to address the issues. Phase II began in June 2003 and is expected to conclude in June 2004. The following activities support Phase II:

- Conduct detailed interviews.
- Address selected issues (i.e., develop interpretive guidance and make it available).
- Prepare and release a final report.

2 Data Collection

In an effort to reach a broad sampling of the software, IT, and IS communities, many data collection sessions were held at conferences, SPIN meetings, and training sessions. A Web-based questionnaire was also administered broadly to collect feedback on CMMI.

2.1 Birds-of-a-Feather (BoF) Sessions

The purpose of BoF sessions was to (1) identify the areas of CMMI that may require interpretation or guidance and (2) promote CMMI and the efforts of the Interpretive Guidance team. Table 2-1 contains information about all of the BoF sessions held:

Event	City	Date
CMMI Users Group Meeting	Denver, CO	Nov. 12, 2002
ICSPI Conference	Baltimore, MD	Nov. 19, 2002
New York City SPIN	New York, NY	Dec.3, 2002
QAAM/QAI Conference on Managing Software Excellence	Baltimore, MD	Dec.3, 2002
PROFES 2002	Rovaniemi, Finland	Dec. 10, 2002
Acquisition of SW-Intensive Systems	Arlington, VA	Jan. 28, 2003
SEPG 2003	Boston, MA	Feb. 24 & 26, 2003
Southern California SPIN meeting	Long Beach, CA	Mar. 7, 2003
San Diego SPIN meeting	San Diego, CA	Mar. 10, 2003
bITa Europe Conference	Nice, France	Mar. 13, 2003
NDIA Transition Workshop	Arlington, VA	Mar. 13, 2003
STC 2003	Salt Lake City, UT	Apr. 29, 2003
European SEPG Conference	London, UK	Jun.16, 2003
Practical Software Measurement	Keystone, CO	Jul. 18, 2003

Table 2-1: Birds-of-a-Feather (BoF) Sessions

2.1.1 The BoF Process

Prior to each BoF session, a member of the Interpretive Guidance team contacted the event organizer to arrange for the distribution of the following materials to BoF attendees:

1. CMMI Background Questionnaire
   Attendees completed this questionnaire to help the Interpretive Guidance team understand the context from which interpretation issues would arise.
2. "Lean view" of the CMMI-SW model
   This document was the primary data gathering instrument used in BOF, SPIN, and Training sessions. The "lean view" included the purpose statement, specific goals, and specific practices of all CMMI-SW process areas across all maturity levels. Attendees were given the following instructions with the document:
   - Circle words, phrases, or other items that you would like clarified and explain why the word is confusing in the space provided.
   - Identify any additional guidance that is needed for implementing the process areas, goals, or practices in a software organization.
   - Identify any practices that are not applicable to your organization/business situation by writing *non-applicable* in the space provided under the statement.
   - Finally, if you have any alternative practices that you have in place of the stated practice and use on a regular basis, please document them in the space provided.

At each BoF session, the BoF leader from the Interpretive Guidance team prepared the room with poster-size copies of the "lean view." The Interpretive Guidance team delivered a presentation that included an overview of the Interpretive Guidance project. Following the presentation, BoF attendees selected one or more areas of interest and joined the appropriate working group(s) to provide their input and discuss CMMI issues with other attendees. Depending on the number of participants and their interests, the BoF working group breakout discussions were typically organized into the following groups:

1. **PA Working Groups**: These groups focused on issues related to the specific goals and practices of CMMI process areas. The discussions in these groups were generated from the prework that attendees completed using the "lean view." If there was time, these groups also discussed informative material such as typical work products, notes, and subpractices. PA discussion groups included the following:
   - ML2: REQM, PP, PMC, MA
   - ML2: SAM, PPQA, CM
   - ML3: RD, TS, PI, VER, VAL
   - ML3: OPF, OPD, OT
   - ML3: RSKM, IPM, DAR
   - ML4&5: OPP, QPM, OID, CAR

2. **Global Issues Working Group**: This group focused on adoption issues and other (non-process area) aspects of CMMI. This group could discuss CMMI concepts or terminology, model representations, implementation costs, ROI, and migration from the SW-CMM. The discussion in this group was generated by attendees who were either adopting CMMI or preparing for CMMI adoption.

At the conclusion of the working group period, each working group typically provided a five-minute presentation outlining the top five issues. The sessions ended with a general question and answer period.

The following artifacts were collected from each session:

- flipcharts describing the issues discussed by the working groups
- detailed notes taken by volunteer recorders selected from within the working groups that documented the context of issues and other relevant information
- marked up "lean view" documents collected from participants to capture issues that were not recorded or discussed during the working group session due to time or other constraints
- CMMI background questionnaires that described participants' background and context

2.2 Web-Based Questionnaire

Geography, schedule, and other barriers kept many members of the targeted community from providing input at the BoF sessions. The Interpretive Guidance team needed to provide another way to involve those in the larger community who were unable to attend BoF sessions. The team chose a Web-based questionnaire as an additional input vehicle. Besides overcoming barriers, the Web-based questionnaire allowed the team to collect in-depth information regarding CMMI adoption and transition since participants could provide detailed information without the time constraints of a workshop session.

2.2.1 Questionnaire Content

Members of the Interpretive Guidance team and the SEI's Software Engineering Measurement and Analysis team created the Web-based questionnaire. To capture data consistent with other data gathering tasks, the questionnaire included many of the components of the BoF sessions. The questionnaire was designed to be 'chunked' by selected sections for ease of navigation and to allow participants to provide input in specific areas relevant to their experience and concern. The questionnaire was divided into the following sections:

1. **Background and Context**: This was the one section of the questionnaire all participants were required to complete. The responses helped the Interpretive Guidance team understand the participant's background and the context from which interpretation issues would arise
2. **Global Issues**: This section focused on issues related to adoption and other (non-process area specific) aspects of CMMI. Issues could include those regarding CMMI concepts, ter-

minology, model representations, implementation costs, ROI, and the migration from the SW-CMM.

3. **Generic Goals and Generic Practices**: This section focused on issues related to CMMI generic goals and generic practices and how these goals and practices are applied across CMMI models and are applied in implementing individual process areas.
4. **Specific Process Area**: This section focused on issues related to CMMI specific goals and specific practices. Issues could include those regarding informative material such as typical work products, notes, and subpractices.

2.2.2 Questionnaire Administration

To reach our target audience, the Interpretive Guidance team created a mailing list of potential questionnaire participants. The list was compiled from many sources and included names from the following groups:

- Birds of a feather (BoF) attendees
- CMMI instructors
- Introduction to CMMI students
- CMMI Intermediate students
- SEI members
- SEI transition partners
- Software Process Improvement Network (SPIN) contacts
- CMMI User's Group Conference Attendees
- Business cards from conferences

The mailing list created for the Web-based questionnaire contained over 7,000 names. We provided 4,000 people with direct internet access to the questionnaire. We notified 3,000 people that the questionnaire was available. The team also placed an announcement on the SEI Web site at <http://www.sei.cmu.edu/cmmi/adoption/interpretiveguidance.html> to encourage participation. Incremental release of the email and the Web-based questionnaires occurred between May 1, 2003 and July 1, 2003. The emails were released incrementally so that participants would not overwhelm the questionnaire Web site. Access to the Web-based questionnaire was closed on July 31, 2003.

2.3 Reporting the Results

The majority of the questions in the questionnaire allowed two types of responses: selecting a radio button and entering specific comments. The radio buttons allowed participants to select responses from a Likert scale; for example, users could select answers ranging from "strongly agree" to "don't know." The specific comment portions of the questions allowed the participants to add open-ended comments and justifications to their responses.

The following sections contain the data from the radio button responses and are summarized in bar charts. Because radio button responses were used only for the questionnaire and not the BoF sessions, the data in the following sections summarize only the responses from the questionnaire. We have provided a sample of the specific comment responses after the bar charts in these sections.

Because we encouraged those filling out the questionnaire to answer only those questions relevant to their experience, we received a different number of responses for each section and each question. The numbers of responses received for the sections of the questionnaire are listed below:

- 668 Background and Context
- 587 Global Issues
- 339 Generic Goals and Generic Practices
- 182 Specific Process Areas

As you can see, a total of 668 people completed some portion of the CMMI Web-Based Questionnaire. Of these total respondents, all completed the required Background and Context section. However, only 587 people went on to complete the Global Issues section. So, as you review and compare the charts in Sections 3 and 4 of this report, the number of *Total Respondents* in the charts varies depending on the questionnaire section.

Since we collected specific comments in the BoF sessions as well as from the questionnaire we have included all of the specific comments in the Appendices for those who would like to review more than a sample set. The Appendices, therefore, contain response data from both the BoF sessions and the questionnaire.

3 Summary of Background and Context Data

This section contains a summary of the responses to the background questions. We received responses from participants in both the BoF sessions and the questionnaire regarding their background. However, please remember that the data in this section of the report only represents the responses from the questionnaire and that the background section of the questionnaire was the only one that participants were required to complete. If you would like to see all the comments from both the BoF sessions and the questionnaire, please refer to Appendix C.

In some of the figures in this section you will see the statement "Multiple responses were permitted" below the title of the bar chart. In the Web-based questionnaire, these particular questions allowed respondents to select one or more answers to the question. Therefore, the percentages displayed on these charts will not total 100, unlike the other questions that allowed only one answer per respondent.

3.1 Background Q1: Familiarity with CMMI

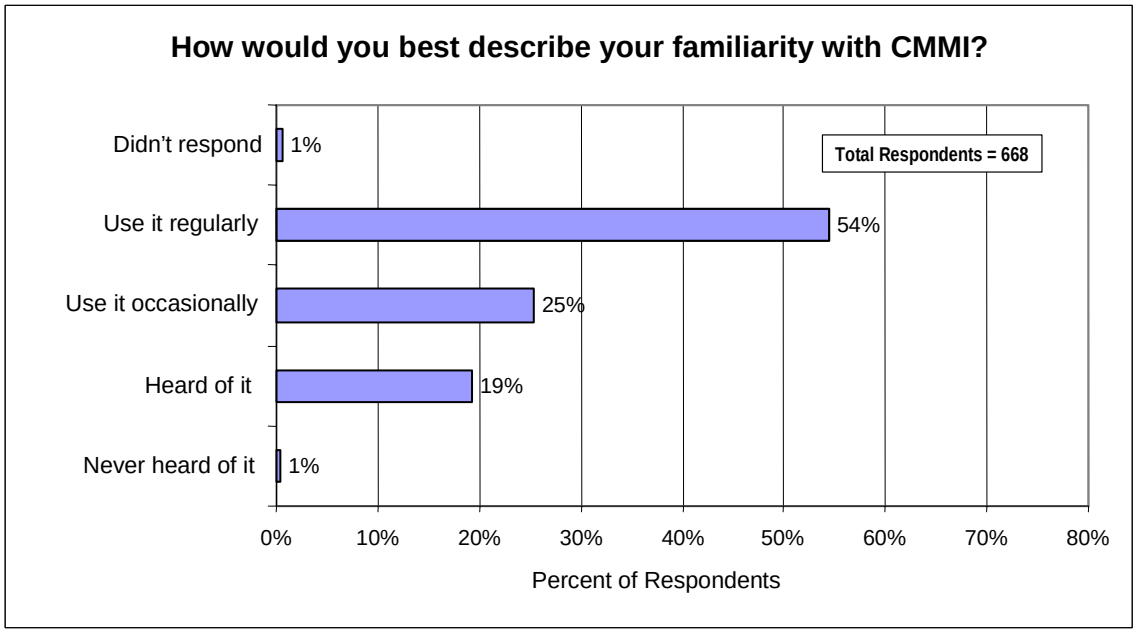


Figure 3-1: Background Q1: Familiarity with CMMI

Background Q1 Sample Comments

There were no comments associated with this question.

3.2 Background Q2: CMMI Training

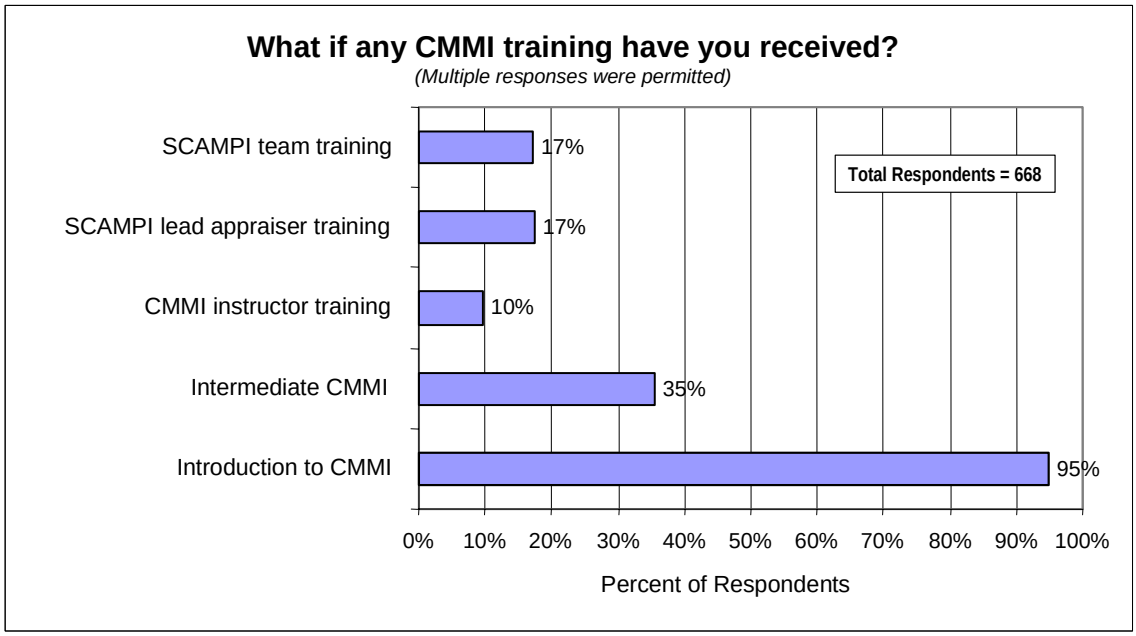


Figure 3-2: Background Q2: CMMI Training

Background Q2 Sample Comments

There were no comments associated with this question.

3.3 Background Q3: Number of Appraisals

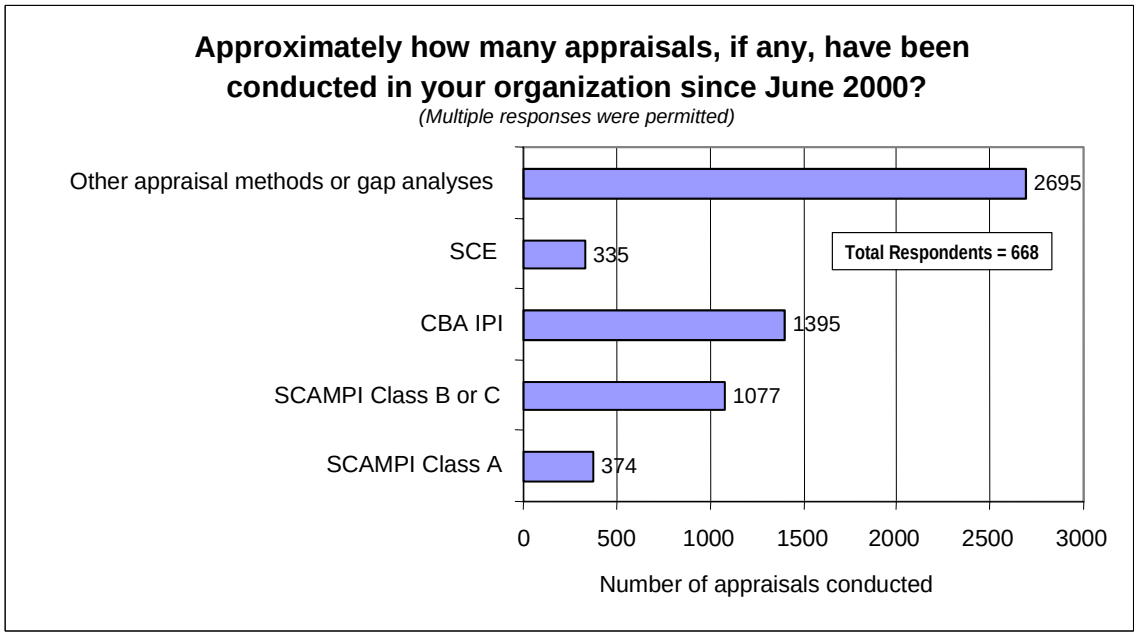


Figure 3-3: Background Q3: Number of Appraisals

Background Q3 Sample Comments

Other appraisal methods or gap analyses (Please describe briefly):

- Mini Assessment v. close to SCAMPI Class B
- Internal gap analysis with the help of a lead appraiser
- ISO-9001
- SPA and EIA731
- SW-CMM mini-assessments
- 2 gaps using CMM; 1 gap using CMMI
- SW-CMM Health Checks (Gap Analyses)
- 1 CMMI Shadow Appraisal (complimentary evaluation during a CBA-IPI to get a rough feel for the level of CMMI compliance)
- Brief, informal internal review of projects
- A "Mini-Assessment" for three of the CMM Level 3 KPAs based on the CBA IPI Assessment method
- ISO 9000:1994 / ISO 9000:2000 and TICKET
- Not applicable. I use CMMI for my work in risk analysis and developing acquisition plans based on CMMI as a standard of care and practice.

- We have performed several Class B and C assessments using the SW-CMM. The methodologies for performing the Class B Assessments were developed in house and the Class C Assessment methodology was developed with the assistance of a third party vendor.
- Internal SCAMPI-type baseline assessment conducted in 2001 as part of our determination to GO/NO GO on CMMI model. Previously we used the SE-CMM model.
- Currently doing a mapping with our methodology and management standards.
- Software Micro-Assessment, Profiles, Internal Readiness, CMMI Gap Analyses, PIIDs, Quick-Look review
- XXXXXX is a XXXXXX. A prerequisite is the support by a person with CMMI experience. In the sessions the team has to answer the "questions" of CMMI. The method is supported by a tool.
- Internal project appraisals (Approximately 10 SCE and 10 internal were with CMM L2 and CMM L3.)
- Business unit gap analysis using CMMI as baseline
- Informal SW-CMM assessments. I have been on an appraisal team for another organization's SCAMPI-B pilot.
- A combination of SW-CMM based mini-assessments, CMM "On-boards," CMM "Quick-Looks." Since I am in corporate R&D, our "organization" includes sites in XXXXXX.
- "Snapshot" appraisal to give us insight on any gaps in our software development practices than need improving for us to be at CMM Level 3.
- CMM Health check, CMMI Health check, SE-CMM assessment
- Internal IPI
- Informal Process Appraisal
- We used an abbreviated form of the SCE method to provide us with a gap analysis of our progress prior to a formal appraisal. We did this several times to check our progress against the CMM.
- Conducted gap analysis using SA-CMM

3.4 Background Q4: CMMI Adoption Decision

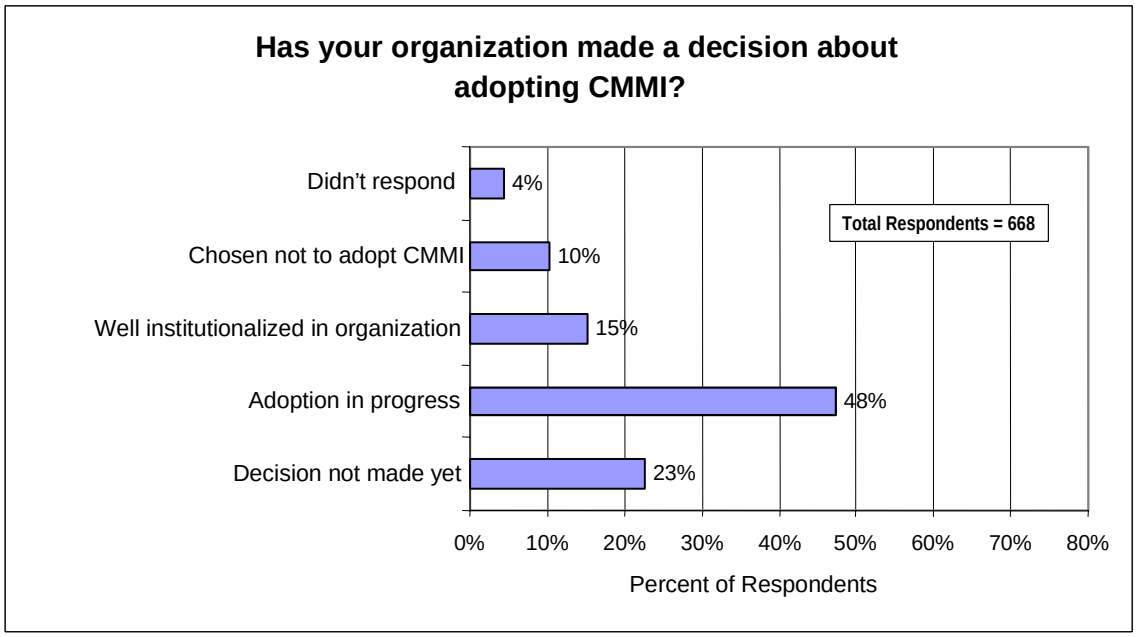


Figure 3-4: Background Q4: CMMI Adoption Decision

Background Q4 Sample Comments

- We will use the benefits of process improvement fostered by CMMI, but will not actively pursue an appraisal.
- S/W CMM is well institutionalized at Level 4/5 (4 confirmed thru assessment, 5 via prep for CMMI). We are currently (as this is written) being assessed for L5 in S/W, and L3 in Systems, Program Mgmt, and Hardware Development (even though no formal PAs for H/W exist).
- We are XXXXXX supporting a Program Management Office therefore we do not directly use CMMI. We assess contractors that do use CMM/CMMI. However, we do develop some software for the Program Management Office and are looking into adopting some of the CMM requirements.
- My organization chose a division to adopt CMMI, and the division is certainly well institutionalized CMMI ML2; and we will evaluate if we should adopt CMMI throughout the organization or not at the end of this year.
- Just achieved CMMI level 3 for SE, SW, & HW engineering and CMMI level 5 for Software Engineering for the XXXXXX Division. We are now making plans to roll out the process to other parts of the XXXXXX.
- As far as I know we are not adopting CMMI.
- Starting with SW-CMM

- We first wish to achieve CMM level 5 then transition to CMMI.
- Our company is a software-only shop so the SW-CMM is a more viable option. It provides better guidance and is less cumbersome.
- Sr. Management was not aware of CMMI, and went with SW-CMM. After the decision was made, they staffed with expertise that asked (and is asking) why the CMMI is not being used.
- CMMI requires far too much overhead for a smaller software development house. CMM 1.1, when tailored, fits the bill much better.
- My organization is using the CMM and the CMMI as guidelines only and is not looking to adopt one or the other totally. At this time we are not working towards a formal assessment either.
- Pursuing SW-CMM through 2005, whereby migration to CMMI may take place

3.5 Background Q5: Personal Role

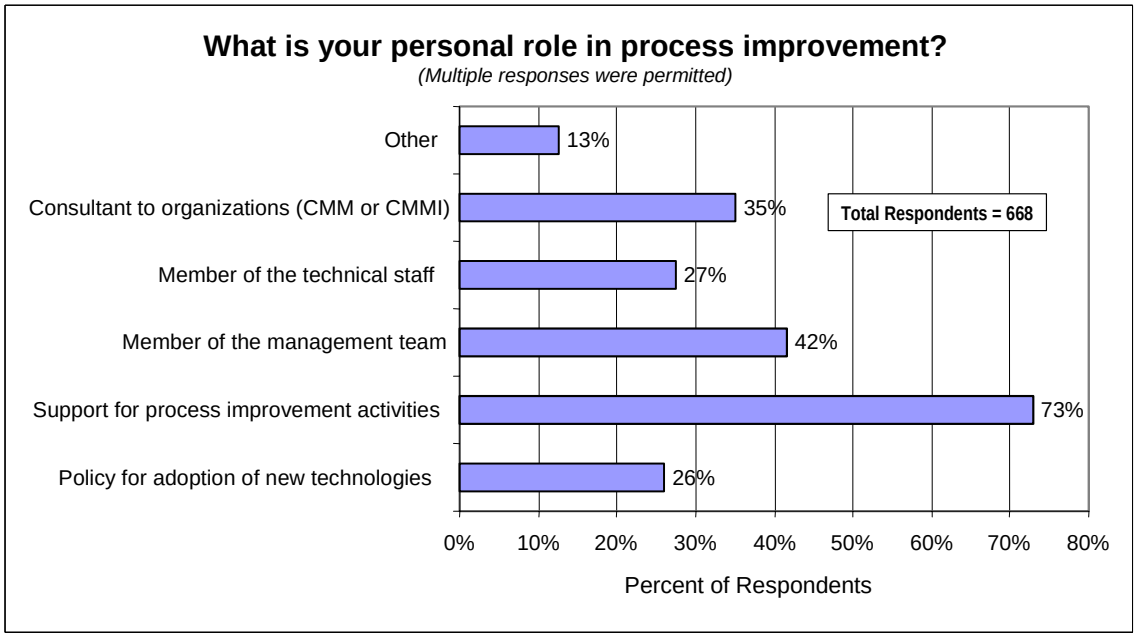


Figure 3-5: Background Q5: Personal Role

Background Q5 Sample Comments

- I am also the Chair for our SEPG.
- I am a member of SQA (Software Quality Assurance).
- Lead our EPG
- Our organization is CMMI Level Three, and my division provides a core competency involving ISO/CMM/CMMI consulting and training solutions.
- I am the Enterprise Software Process Improvement Manager.

- Lead Process Engineer
- I am a program engineer using company processes.
- I am in charge of process and method improvement in System engineering at XXXXXX
- Working Operational Safety, Suitability, & Effectiveness for XXXXXX
- Project leader for deploying CMMI
- I am a manager for a program, but am also responsible for process improvement, metrics, and risk activities for the program. Former member of SEPG and interface with current IPG members regularly, as well as metrics working group participant.
- SW on-site engineer for a prime contactor
- I am a SCAMPI Lead Appraiser.
- Full time consultant (3 year contract plus 2 options of 2 years) in a project office. Scope includes recommending practices, technology to support practices and implementing the recommendations in a timely fashion.
- Process Integrator. I help define and build the process definitions and conduct the training to the organization to facilitate CMMI use.
- CBA Lead Assessor (candidate)
- I am an internal consultant for CMMI adoption.
- I conduct evaluations and appraisals as the team lead.
- Deployment and oversight of SQA processes (Why is QA listed as technical staff?)
- We work as a CMMI Implementation Partner with high maturity organizations.
- We are a small company. I am taking the lead in preparing the company for a future assessment.
- Provide support to CMMI self-assessments in an acquisition program
- I play as a quality assurance engineer in my organization. I am also an ISO9000 auditor (my organization has ISO9000:2000 certification).

3.6 Background Q6: Organization Size

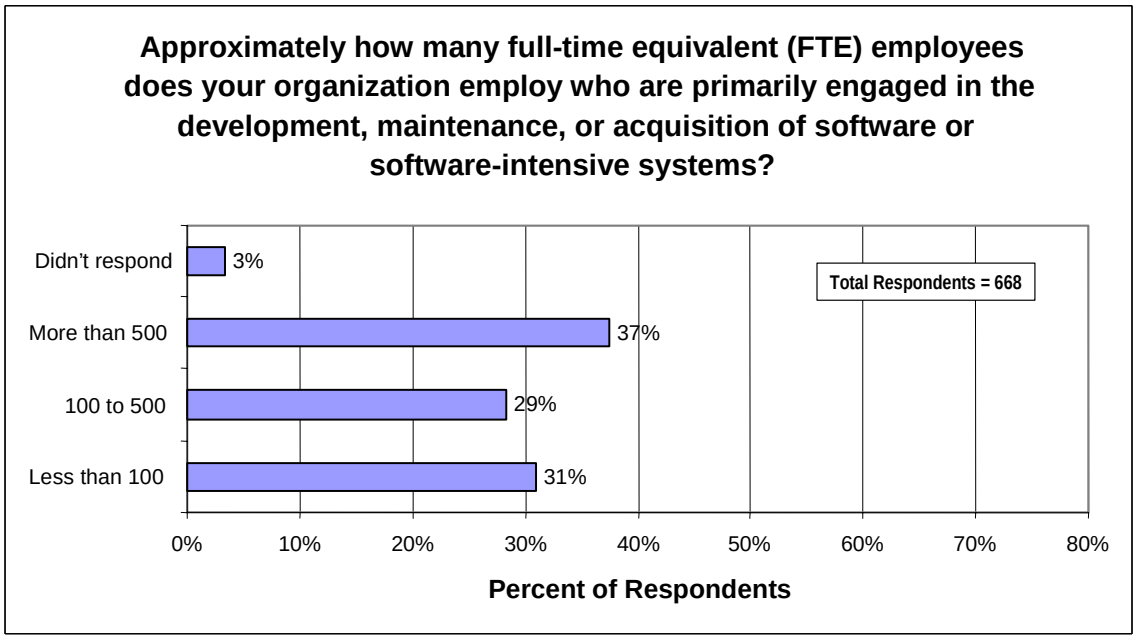


Figure 3-6: Background Q6: Organization Size

Background Q6 Sample Comments

There were no comments associated with this question.

3.7 Background Q7: Domain Experience

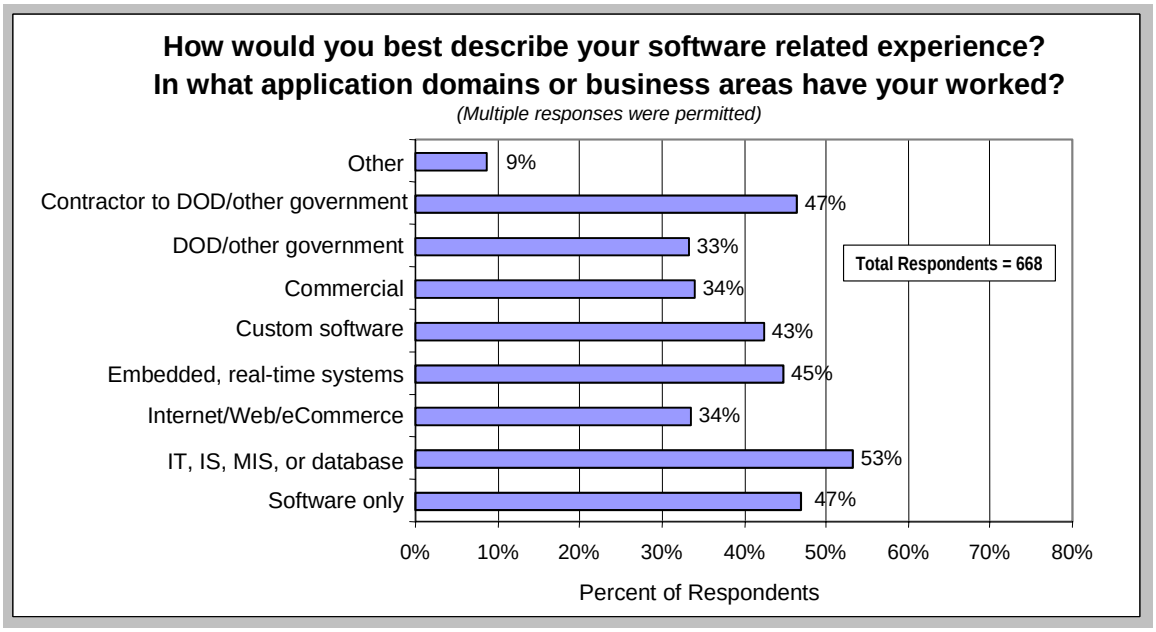


Figure 3-7: Background Q7: Domain Experience

Background Q7 Sample Comments

- All of the above, focusing on software and business engineering management practices.
- I have been the project engineer for an organization which adopted CMM about 1987. I personally have no formal training in S/W CMM, but have "gleaned," and fashioned a subsequent and effective overhaul of all organizational processes in the shadow of CMM. I am currently working the SE aspects of CMMI, and leveraging our proven L4/5 S/W CMM capabilities.
- We don't develop or maintain any software. We are strictly acquisition and support of complex systems for avionics applications for the XXXXXX aircraft.
- Large and small software and system engineering projects for both commercial and government contracts.
- As a military user
- I work with clients that fit all the above situations.
- I was in charge of improving productivity of software development. I designed and developed many tools for software development. I am now mainly in charge of using CMMI in an effective manner.
- Software systems engineering, Software development for DoD
- Systems engineering on large ($200M+) XXXXXX systems
- Software and systems engineering work, both development (as XXXXXX) and acquisition (as XXXXXX), for DoD and civil space systems

- Systems work with Hardware & System Software included for XXXXXX Manufacturing Facility Material Handling and XXXXXX manufacturing equipment
- I have worked in DOD, commercial environment in US and International, and have been a Senior Software Process Consultant. I have been a Project Manager, developed XML and HTML Web Pages, and have been a QA Manager in software and systems environment.
- Have developed drivers, Operating Systems, and other Real time software
- Consulting - Software Development Program Management
- Data acquisition & processing, modeling & simulation
- Financial and Banking arena
- Systems Engineering and Integration
- R&D Technical Architect responsible for new technologies, algorithm development
- Quality Assurance, Risk Management, Data Administration, Test Documentation, Contracting Officer Representative, and Configuration Management
- I have over 35 years experience in software and systems engineering with over 25 years of that experience as a manager. The management experience includes software management, program management, and system integration management.
- I have a background in business, scientific, manufacturing, and telecommunications billing software.

3.8 Background Q8: Familiarity with SW-CMM

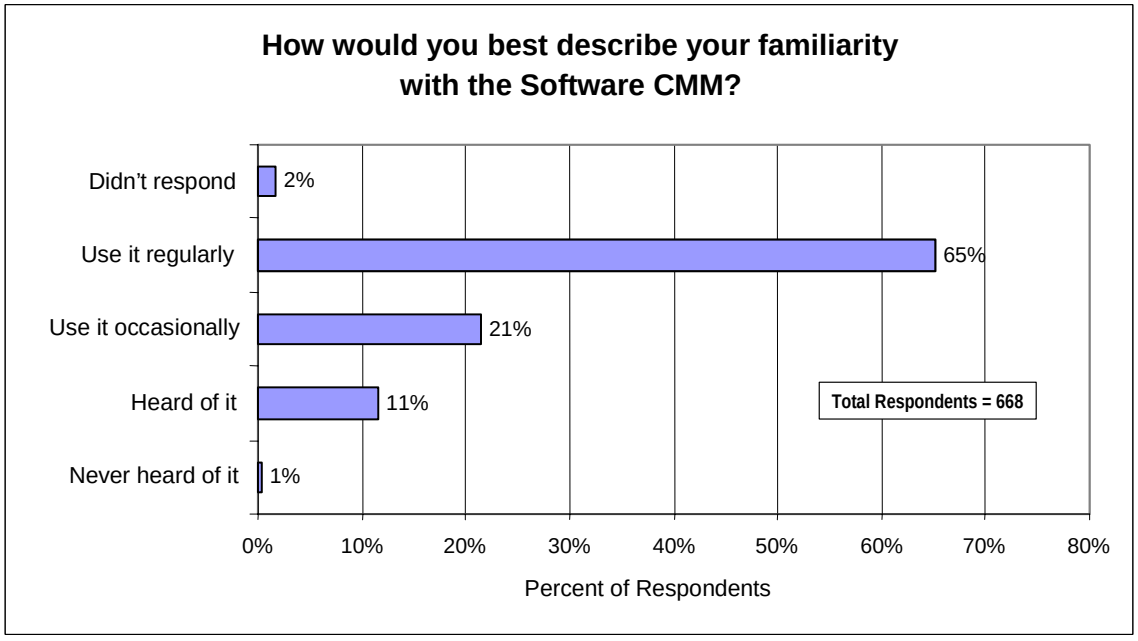


Figure 3-8: Background Q8: Familiarity with SW-CMM

Background Q8 Sample Comments

There were no comments associated with this question.

3.9 Background Q9: SW-CMM Training

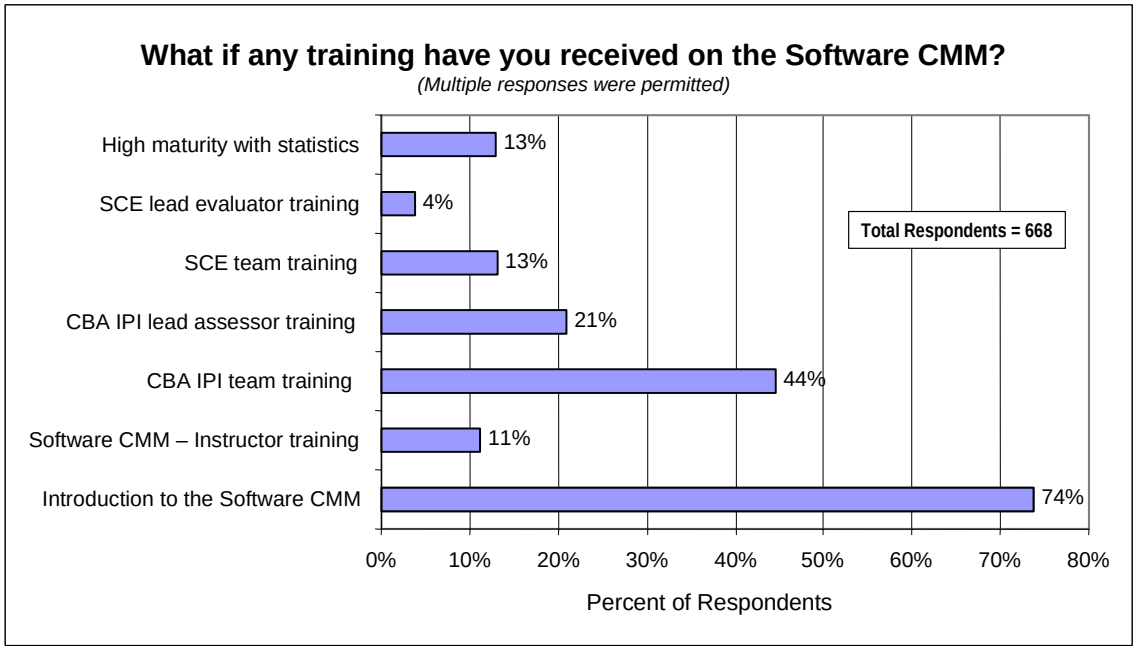


Figure 3-9: Background Q9: SW-CMM Training

Background Q9 Sample Comments

There were no comments associated with this question.

4 Summary of Global Issues Data

This section contains a summary of the responses to the questions related to global issues. We received comments from participants in both the BoF sessions and the questionnaire regarding global issues. However, please remember that the charts represent only the responses from the questionnaire since radio button responses were not used in the BoF activities. If you would like to see all the comments from both the BoF sessions and the questionnaire, please refer to Appendix D.

4.1 Global Issues Q1: Adequacy of CMMI

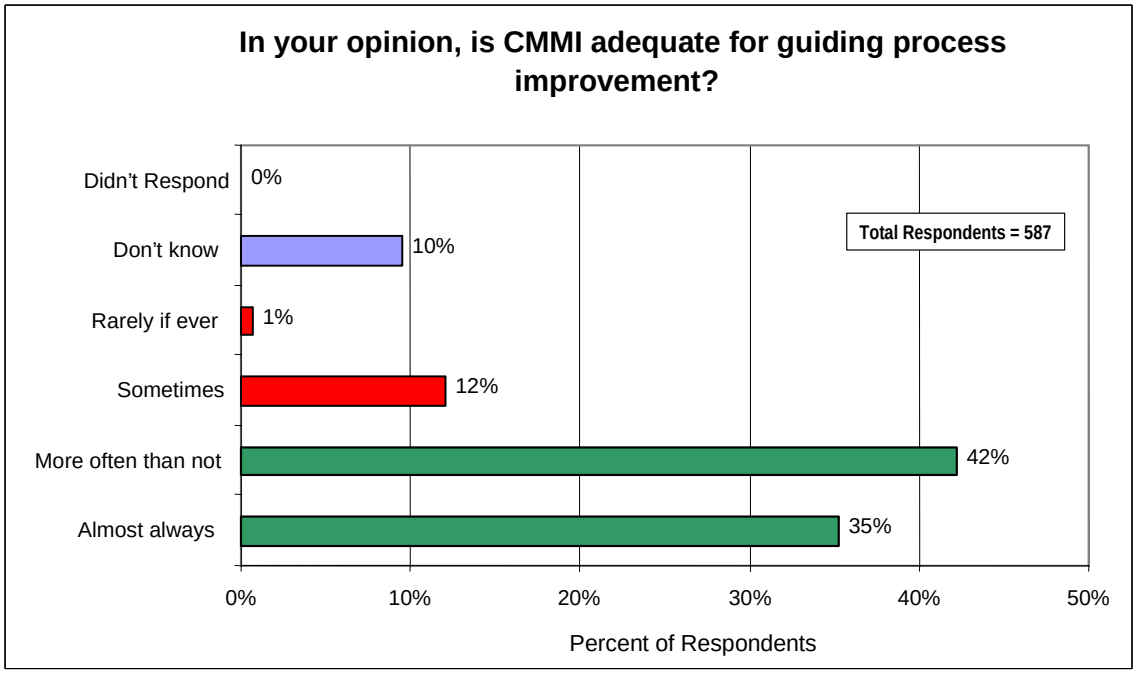


Figure 4-1: Global Issues Q1: Adequacy of CMMI

Global Issues Q1 Sample Comments

- CMMI has best practices from industry and government and academia to choose from.
- Our organization used SE-CMM for our appraisal last fall. CMMI closely relates to the processes we used.

- It’s a process that has been used so it has some history.
- There is an abundance of information material to help guide process improvement.
- Right now as we are preparing our organization for a level 2 assessment we have been able to bring process elements over to our hardware engineering side and vice versa to improve our overall system development.
- It is a lot more descriptive than the SW-CMM, and seems to be updated with more knowledge on the current state of software development.
- We can even use it for improving the Hardware Engineering process, so we do
- The Process Areas reflect a workable segmentation to address. The expectations set with the Practices are very good (I believe the Practices could be a bit more ’prescriptive’).
- The model language is discipline neutral so it can be applied in a wide range of product development applications.
- I believe that the CMMI is an adequate model. I believe that by itself it is however inadequate to guide process improvement, one still needs IDEAL, information from classes such as “Managing Technological Change” and ”Consulting Skills”, and experience (in addition to the CMMI) to guide successful process improvement activities.
- The general principles are okay. Unfortunately, it is just too big, especially Maturity Level 3. Despite its size, it lacks detail to help guide improvement. I liked how the SW-CMM used to have "a plan typically includes:" to help understand what goes in a plan. The "required training" for higher maturity levels was critical also but lost in CMMI.
- There is still a lot of ambiguity in the wording that still makes tailoring tricky.
- Process Improvement comes from an organization’s understanding of the process of improvement and a desire to improve. Any well thought-out "improvement" model can work in that environment. CMMI happens to be the instrument of choice for the DoD, and you go with the flow.
- I believe that the document should be divided into smaller offerings. The present (700 + pages) can be very daunting to groups attempting to find out about the CMMI.
- The CMMI, coupled with SW or SE experience, training in the model, and experience in its application is "more often than not" adequate. The model, "off the shelf," is not.
- What is lacking is how to apply to small projects and software only projects.
- One dysfunction I observed occurs with OUs using a certain maturity level as "the ultimate goal": Easy to understand for managers and easy to reward with the variable part of the salary, difficult for projects because they do not get the support they really need because the EPG tries to satisfy the model and not the need of the projects.
- It's not there yet when we talk about business processes, marketing, sales, transition, etc. We need womb to tomb processes.
- "Coverage" of the disciplines is challenging in the area of implementation.
- Too complex, too costly for small organizations that only produce software. Sometimes SW-CMM is a better fit. It is not the answer for all organizations.

4.2 Global Issues Q2: Noteworthy Improvement

For question 2 we asked, “Is CMMI a noteworthy improvement compared to other models and approaches that you have used?” There is no chart for this question because there were no radio buttons for the respondents to select.

Global Issues Q2 Sample Comments

- The company did not know of any others. Some pockets may have heard of the SEI or standard 732, but nothing was formally pursued.
- Yes – It is more complete than SW-CMM.
- Yes, it is more comprehensive.
- Yes. It provides a level of detail and scope missing from other models.
- I like it as a "reference" to supplement good judgment. I like the two representations but am currently using the Continuous Representation for the assessments and guidance.
- Yes, CMMI goes into a little more detail in aiding organizations to implement the process improvement strategies.
- CMMI is the most comprehensive I have encountered.
- Yes. Both system engineering and software engineering, and both technical and management aspects, are concerned.
- The fact that it has both staged and continuous is an improvement over the continuous only models. Models like the SE-CMM lacked process measurement information that is critical to demonstrating improvement. By having both representations, it ensured measurement became a component of each process area.
- CMMI is much better than the SW CMM. The system perspective is essential to capture all of the elements needed for good software development.
- No, it is not a "noteworthy" improvement. In its infancy, V1.1 does not have sufficient understanding by a large enough crowd to be fully effective. There is still an unacceptably wide range of interpretations by assessors.
- Not really, the CMMI compares favorably to other models, however I wouldn't say it is a "noteworthy improvement." Different models provide different aspects of process improvement to organizations.
- It is more comprehensive than SW-CMM so that it includes hardware development component.
- For our business that has equivalent Systems Engineering - the model makes more sense for our daily process needs.
- CMMI improves on SW-CMM in that it is more complete (e.g., Requirements Development) and seems to have fewer contradictions/ambiguities to deal with. It loses some acceptance power (particularly at the engineer level) due to the need for terminology to be more generic than discipline specific.

- Yes. Incorporating both SE & SW into a single model and then raising it up a level, provides a framework that can address not only SE & SW but also HW - we did it.
- Yes and no. In many areas, it is more complete than the CMM, but it is so large, that it appears daunting to companies that are thinking about adopting it. The model is also very repetitive, in some areas.
- Yes. It acknowledges the fact that software and s/e do not exist in a vacuum. And that the model can apply more broadly to *business* process improvement, not just s/w and s/e.
- Yes, GGs & GPs are very structured, and two representations are systematic to implement.
- It is definitely noteworthy improvement for organizations committed to improving overall quality. It is definitely an improvement from the CMM. This also covers overall organizational processes not covered by other models such as ISO. Although it does not touch upon realistic results.
- We previously used the SE-CMM to improve processes in the SE domain. CMMI provides more detailed expectations, subpractices, and work products and is very useful to guide improvement choices. CMMI is more rigorous for assessments.

4.3 Global Issues Q3: Other Approaches

For question 3 we asked, "Are other approaches more suitable for your organization?" There is no chart for this question because there were no radio buttons for the respondents to select.

Global Issues Q3 Sample Comments

- No, we are committed to the CMMI and will later work on achieving ISO 9001 registration - we consider ISO and CMMI compatible and synergistic.
- We do a lot of Rapid Development now at our site. The customer is willing to accept a lesser quality product in order to field a capability quickly. CMMI doesn't appear to help me with this issue.
- As stated earlier, our company provides consulting services that include process improvement. Not all process improvement efforts require the full concurrent product & process development model presented by CMMI. Yes, other approaches are sometimes more suitable for a given client.
- CMM is our best approach. Sometimes blending in ISO and IEEE standards into the mix strengthens the results.
- In some cases, clients are requiring ISO or other approaches.
- Yes and No. For the Software portions - absolutely YES! For other aspects/other industries different or additional approaches are required.
- Not that we're aware of.
- Our focus is currently on CMM and achieving a level 2 in 4th quarter of FY03.
- Others may apply but the foundation and potential expansion of the CMMI into other disciplines such as system administration makes the CMMI more suitable for adoption.

- We have made the decision to abandon CMM/CMMI and just implement RUP.
- ISO 9001 is also a valuable standard in our organization.
- No, although we're also audited against ISO 9001:2000.
- The CMM is more suitable due to contract definition and contract requirements. The customers desire an organization to "work to" or "achieve" a specific CMM/CMMI level. However, the customer will not pay for the road to achieve or maintain that CMM/CMMI level.
- We've used the CMM.
- No - but others, such as DSSM - are very useful & outside the overt scope of CMMI.
- Not quite
- The SW-CMM is presently better suited to our organization. We are mid course on implementing SW-CMM level 3 and do not wish to confuse or side track that effort.
- I don't know.
- A modified form of the CMMI
- The software CMM and the Project Management Maturity Model (PMMM) are currently being pursued by our organization and seem to be quite suitable.

4.4 Global Issues Q4a: Leveraging Earlier Investments

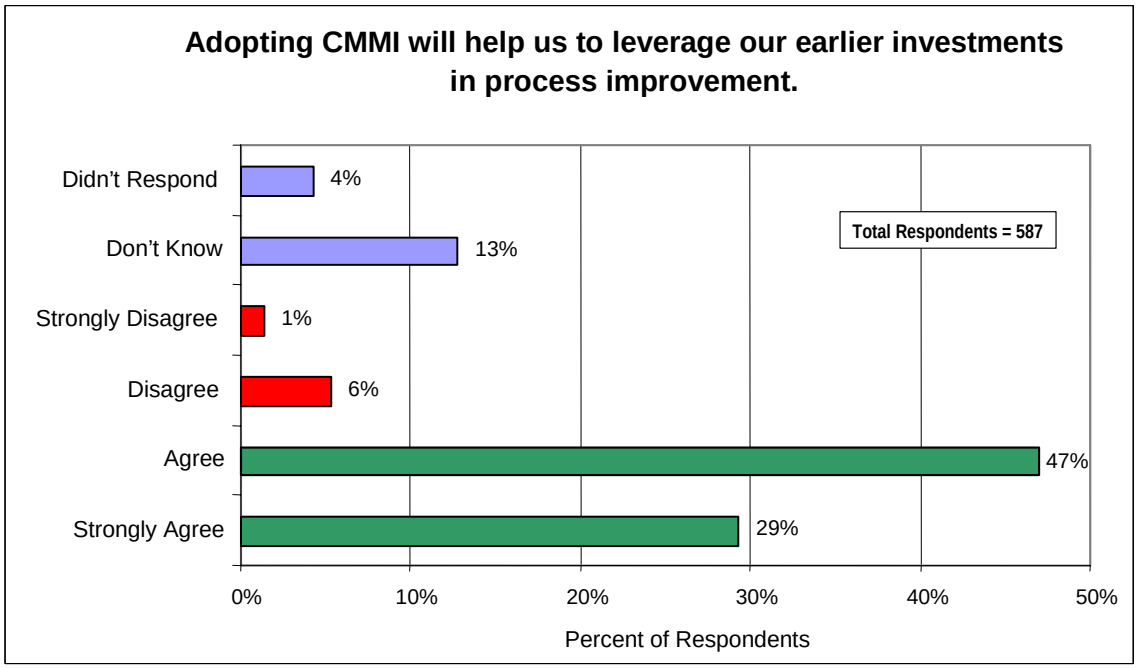


Figure 4-2: Global Issues Q4a: Leveraging Earlier Investments

Global Issues Q4a: Sample Comments

- CMMI as compared to CMM has added some good details in Engineering areas that would help a software organization like ours.
- I think the CMMI is a natural progression from the SW-CMM, which is where our earlier investment was.
- Enriches our core competencies in developing software components as well as multiple component solutions
- The blending in of systems engineering and some acquisition enriches the straight SW-CMM.
- Some process improvements in software engineering may now be expanded into other areas.
- So far, we have been able to continue on our process improvement path with little impact, except to expand our processes to include the additional CMMI practices. The change is allowing us to better understand the intent of the practices within our environment.
- We recently completed a class C appraisal of a software project that went from CMM to CMMI and we instructed them not to do much in the way of process improvement prior to the class C. They did very well - but, gaps were clearly visible where the CMMI was "more" than the CMM (e.g. DAR, VAL, TS, PI).
- Organizations using SW CMM can readily transition to CMMI with little/no waste.
- We have been doing so for the past year and notice that the organization is making good returns on the investment. Plus better understanding of the CMMI Model seems to help the projects improve.
- CMMI builds on the prior work.
- Adopting CMMI simply keeps our government customers happy. The value to our process improvement effort is minimal. For instance, we are an IPPD organization - complying with IPPD PAs does not help our IPPD processes. Is a vision in each IPT really necessary when they have charters, goals, mission statements, and detailed objectives all documented? But lack of an IPT vision can cause us to fail the CMMI Appraisal according to our CMMI Lead Appraiser.
- Depends upon the earlier investments. If they were SW-CMM, I wouldn't use the term leverage, but it also wouldn't render them useless. This may be ok for a systems shop where they have been struggling with integration issues or the application of process principles to a new discipline area.
- No. It's shameful how little from the SW-CMM you can leverage on your way to CMMI. The CMMI should not have been rolled out without also a clearly defined transition plan from CMM to CMMI.
- It can but there is no guarantee because the organizations are still maturing and therefore are somewhat reluctant at this time to adopt CMMI.
- We were very content with SW-CMM v1.1, and I would not say migrating to CMMI will "help us leverage earlier investments." Instead, I would say that that we are being forced to expend additional effort and expense to make a "parallel migration" to CMMI. I also do not expect that the use of the CMMI (vs. SW-CMM v1.1) will yield any notable benefit over using CMMI, given the nature of our project work (i.e. SW-only work at level 2), yet we still must absorb the significant cost of this "migration" (retraining, time spent revisiting existing assets and processes to ensure CMMI compliance rather than time spent propagating our

known to be CMM compliant processes which work well for us across more of the organization, etc.).

- No clear "upgrade" or "transition" paths. CMMI seems to be a replacement, not a newer version.
- Since we had achieved SW-CMM and EIA/IS-731, not sure that CMMI-SE/SW will gain us much more.
- We have already adopted some of the principles of CMMI, however, the fact that there are two models, Staged and Continuous, appears to be overkill.
- Staying with CMM (no change) maximizes the investments.
- However, adopting the SW CMM will provide the same benefits at less expense (effort, time, and cost).

4.5 Global Issues Q4b: Adequacy of Training, etc.

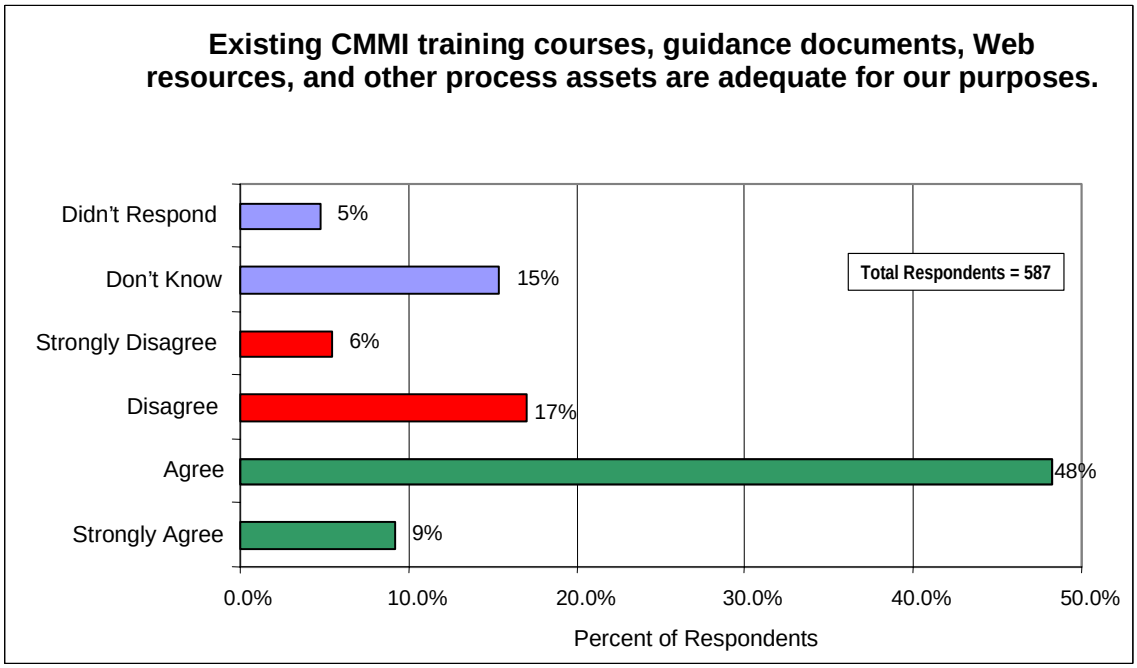


Figure 4-3: Global Issues Q4b: Adequacy of Training, etc.

Global Issues Q4b Sample Comments

- SEI has been more than adequate for our needs.
- Compared to the SW-CMM, there is a significant shortage of guidance documents.
- Interpreting the materials is sometimes a challenge, i.e., there are two equally valid ways of viewing the presented material and you are not sure which is meant.
- I've only taken the Intro to CMMI, Continuous course and it was very helpful. I can't comment on the other courses available.

- I am satisfied with the courses I attended.
- Existing CMMI Training was excellent. Our organization requirements are not just software. More is needed.
- CMMI training, coupled with general process improvement and training on the organization's process framework are adequate.
- The Websites are outstanding and the Intro class was excellent.
- Our organization has also developed assets that can be applied to CMMI adoption.
- I've always been able to find the information I need.
- What is missing is the guidance needed to both build a CMMI-compliant process and appraise a project against CMMI practices. I feel the guidance that is missing will cause appraisers to use more of their own judgment. Results then will depend to a certain extent on appraiser biases.
- The basic training which I did was too crowded with general information and missing good examples. The exercises didn't really fit in the context. Maybe courses to different PAs should be offered.
- The existing CMMI training courses do not support our tailored process.
- Hold on. You've combined too many items in this list: 1. training courses - need improvement and 2. Guidance documents - I really question the need for interpretive guidance. In my mind, it seems a bit silly. Guidance on guidance? Guidance on what? The normative components? The expected components? The informative components? I thought informative and supplemental information was interpretive guidance. I really question what's being done, but maybe you can educate me.
- I think they fall short in application. Most people want to know how you get started, rather than just the theory.
- I would like to see additional practitioner training - to include real world examples.
- I would like to see more "how-to" and "experiences" type of articles/books.
- Although, I would recommend establishing training specific to tailoring/adapting the CMMI model for smaller projects and/or unconventional environments like XP, SCRUM, etc. In addition, would like to see training, workshops, or guidance for different stage representations based on the organization's characteristics.
- We had to work with consultants to develop our own training content and reference materials that corresponded with our specific interpretation of the CMMI process areas selected.
- Understanding how a particular CMMI practice relates to an individual project/organization is often difficult. Repeated conversations with SEI personnel and Lead Appraisers have provided no help.

4.6 Global Issues Q4c: Appraisals

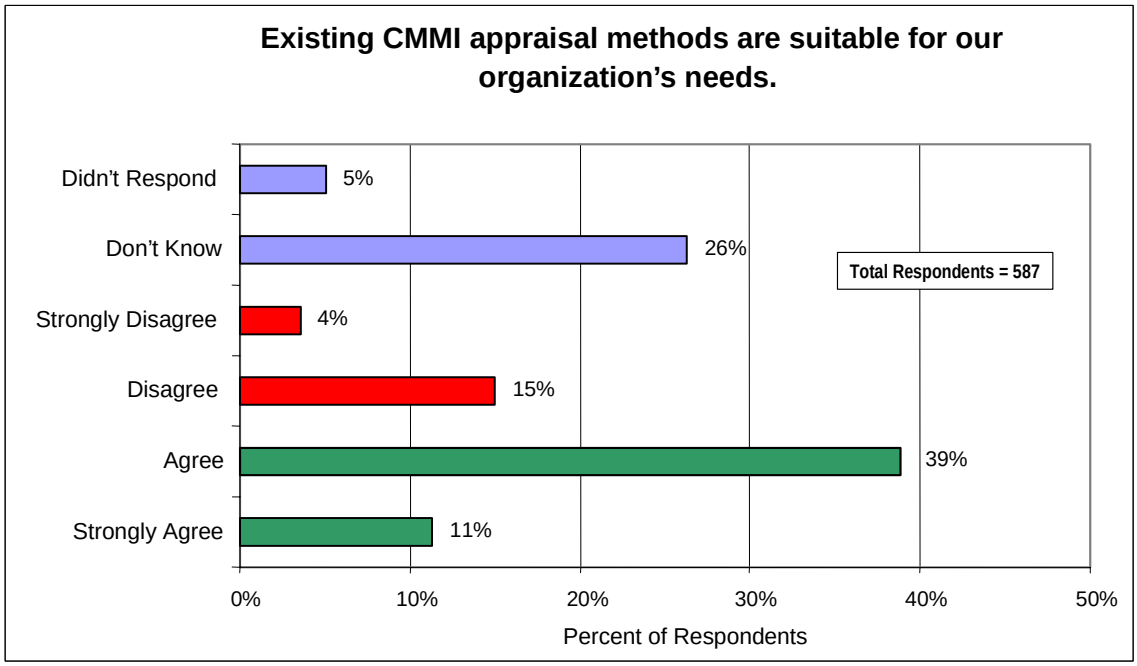


Figure 4-4: Global Issues Q4c: Appraisals

Global Issues Q4c Sample Comments

- The methods are suitable. Having Class B and C appraisals function as health checks, which we rely on as a way to gauge progress without the added burden of trying to achieve a rating.
- There is especially no problem.
- SCAMPI is one good approach, but it is very expensive and others are needed. We developed our own class C appraisal method, and used SCAMPI without the rating for a class B method. The EIA731.2 method had some features that would be useful. Questionnaire/interview method would be helpful. Need larger selection of methods to use!
- SCAMPI V1.1 fills one category of appraisal need, and ad hoc, proprietary, and unofficial methods are used to fill many others. More standard methods need to be defined to satisfy all process improvement needs.
- While I think the process is too labor and time intensive, I like this much better than discovery.
- I have briefly reviewed the SCAMPI and the levels are appropriate and easier to understand for laymen.
- SCAMPI is a well researched method & we find it addressing the appraisal requirements of our organization.
- Should provide credible evaluation

- We have been using CMMI benchmarks to maintain our process capability. These are less comprehensive methods which can be done across a number of programs without a prohibitive cost. We are working with the SEI to develop SCAMPI B and C appraisal methods similar to the methods we have been using.
- The CMMI appraisal methods provide good guidance to help organizations to find opportunities to improve.
- Resource requirements are too heavy for our organization.
- Want more guidance and credit to lead assessors on the Class B and C appraisals.
- The appraisal method is very cumbersome and expensive for most of smaller businesses. Organizations of less that 100 employees cannot afford it.
- The team training materials could be improved. The previous material emphasized interview techniques. The new method does not.
- Meaning of "fully implemented" in MDD is too subjective, resulting in too much variability in results from one appraisal to the next. Some general examples: How recent must the evidence be? How many repetitions must be included in the evidence to show ongoing institutionalization? How much weight should be given to consistency between the defined process and the process work products? How much weight should be given to non-conformances identified in process audits?
- I'm not familiar with the appraisal method. If it is similar to the CBA-IBI it is suitable.
- The cost of the appraisal makes it unsuitable. I have been trained to do the informal class C mini-appraisal. It costs about $11,000 to conduct a mini-assessment and much more for formal appraisal. We just don't have the $$.
- Need an industry-defined Class B and C - we're getting lots of questions about this - we have our own, but don't know if it will track with what the SEI is doing . . . the end of the year is a long time to wait to find out.
- The method does not take a process view of the organization. Instead it focuses on the process areas of the model. This is a serious weakness in the value to the organization in conducting an appraisal for PI.
- The appraisal process is too invasive and takes too long.

4.7 Global Issues Q4d: Cost

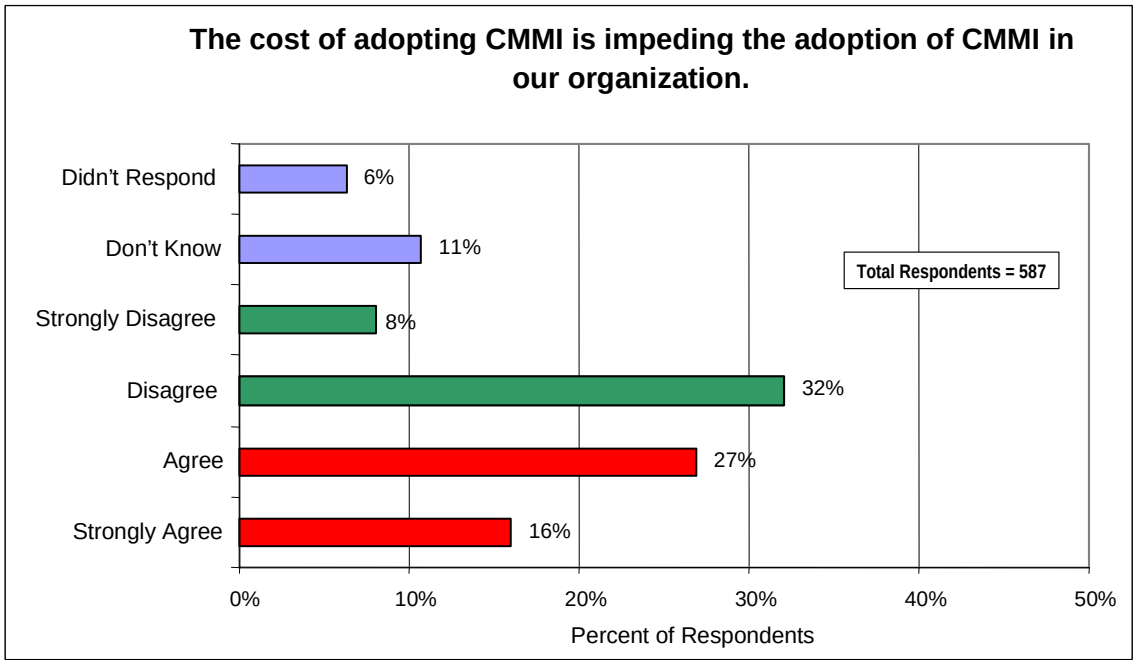


Figure 4-5: Global Issues Q4d: Cost

Global Issues Q4d Sample Comments

- The cost of doing anything other than keeping operations running and developing the projects that our business partners request impedes the adoption of such an improvement. There seems to be a short-sightedness in this area.
- Our company has been committed to CMM for its application development organizations for a number years and it's been highly endorsed by our CIO, so this has been no problem.
- Our organization is committed to software process improvement and we see it as a way of doing business. The extra cost is not a critical factor for us.
- We're managing the cost effectively and expect a healthy ROI within 1 year!
- During the deployment like my organization, it is not true.
- Cost is an issue, especially appraisal cost, but aggressive tailoring of process requirements to appropriate levels for individual programs has avoided much cost increase to programs to implement compliant processes.
- Considering the cost of not adopting the CMMI the cost of adoption is not that great.
- We have always viewed process improvement as part of doing business. So I agree with this statement to a smaller degree than most would.
- Probably not, since we're taking the focus of making ROI-based process improvement rather than model compliance.

- CMMI requires some initial resource investment; however, it is mainly lack of confidence and buy in from upper management that impedes CMMI adoption.
- Causing a delay in achieving level goals.
- The cost of adopting the CMM and CMMI has always been an obstacle. This is true even when the customers understand the benefits and what they will gain from a development organization which has achieved and works to CMM Level 3 or greater.
- Many sections of my company are thinking the cost of a SCAMPI appraisal is expensive. This is major reason that they do not have plans for official SCAMPI appraisal.
- Cost of adopting CMMI is a barrier.
- It is costly but mgmt has made a commitment. Setting up the infrastructure, procedures, doing the appraisals, training, etc. requires significant capital investment.
- Wall Street does not ask you to meet CMMI. They want you to meet the quarter. Top management works for Wall Street. The rest of us work for them.
- The cost of training and assessments can be daunting, especially for the smaller organization.
- While the adoption goes forward, cost is definitely a factor in the adoption process and is a constant concern.
- The issue is not the cost of adopting the practices, but the cost of proving that an organization and its projects have adopted the practices.
- Many times, it comes down to money. In today's economy, CMMI for the smaller business is cost prohibitive.
- Belief in this as being increasingly required for bidding new business drives through much of the cost issue.

4.8 Global Issues Q4e: Systems and Software Combined

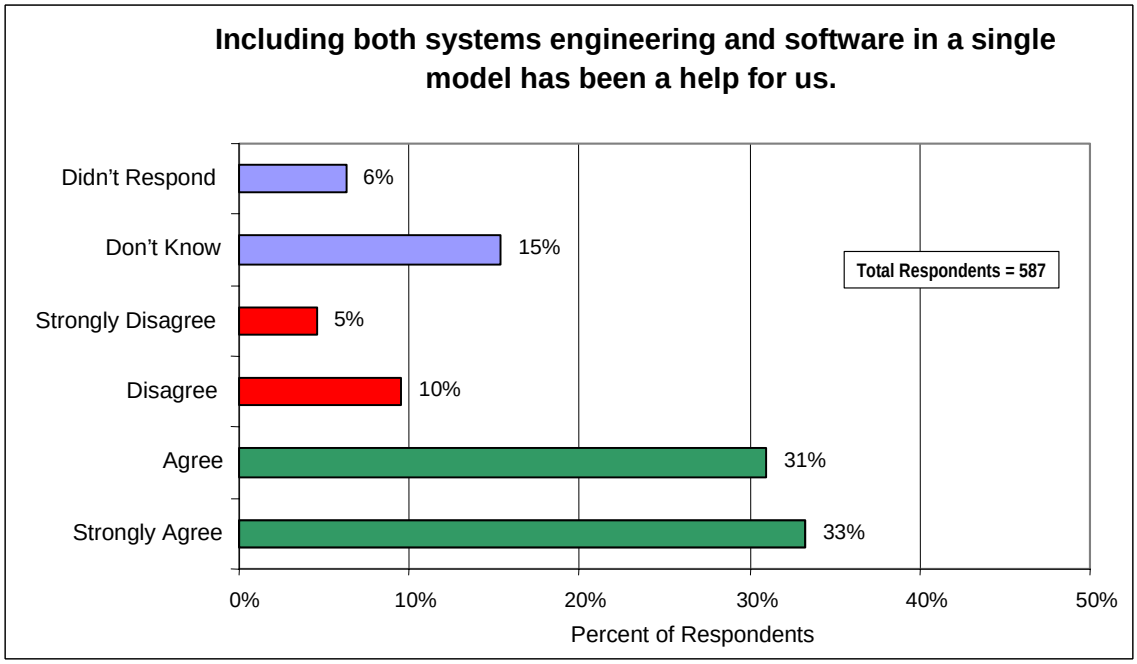


Figure 4-6: Global Issues Q4e: Systems and Software Combined

Global Issues Q4e Sample Comments

- It has improved the focus for our systems engineering organization and has ensured that the processes have been created and used by all groups - Software, Systems, and Services.
- We were trying to combine the models on our own and were glad to get CMMI.
- Since we already had Level 3 ratings for CMM and EIA 731, and had a company-wide integrated process at a high level, having both disciplines in one model has made it much easier to combine processes into one set that all engineers will follow.
- I'm familiar with CMM and think that this is also suitable to system engineering and even hardware engineering if the interpretation is OK. CMMI makes it easier to do convince others to adapt the model as well, because they cannot claim that it is for SW only. Of course the CMMI is more detailed for usage of other disciplines as well.
- It is critical to our organization for developing complex hardware systems with embedded, real-time software.
- As stated previously, this model not only covers SE & SW, it also covers program management and HW. We are using the model across all of the engineering disciplines.
- Found many areas where common process can be used.
- Had already done some work along this line. It IS a help to get the SW "culture" more aligned with the rest of the development community.
- Helps to guide integrated engineering practices for software intensive systems.

- Don't see any reason why it would not be beneficial.
- Not at this point in time, since we are still following CMM.
- It's not in our business model.
- We could have cared less about systems engineering.
- For organizations doing both, good idea. However, implementation is overcomplicated. Still too much evidence of two groups each with their own opinions attempting to form a single model.
- Not always true in the MIS environment.
- While it would be useful, the systems engineering is a distributed function that does not have a direct owner.
- Software engineering and systems engineering are two different trades. In my opinion, trying to unify them dilutes the usefulness of the model.
- I know that many SE concepts can be applied to the "SW-only" environment, but for our purposes, I feel that the addition of SE to the model that we are being forced to shift to (in order to even survive in our current markets) has not brought us additional value (as compared to the direct/indirect costs).
- However interpretation of the model for tactical service delivery areas is providing an interesting challenge.
- We have little use for the systems engineering portions of the model.

4.9 Global Issues Q4f: Mapping Processes

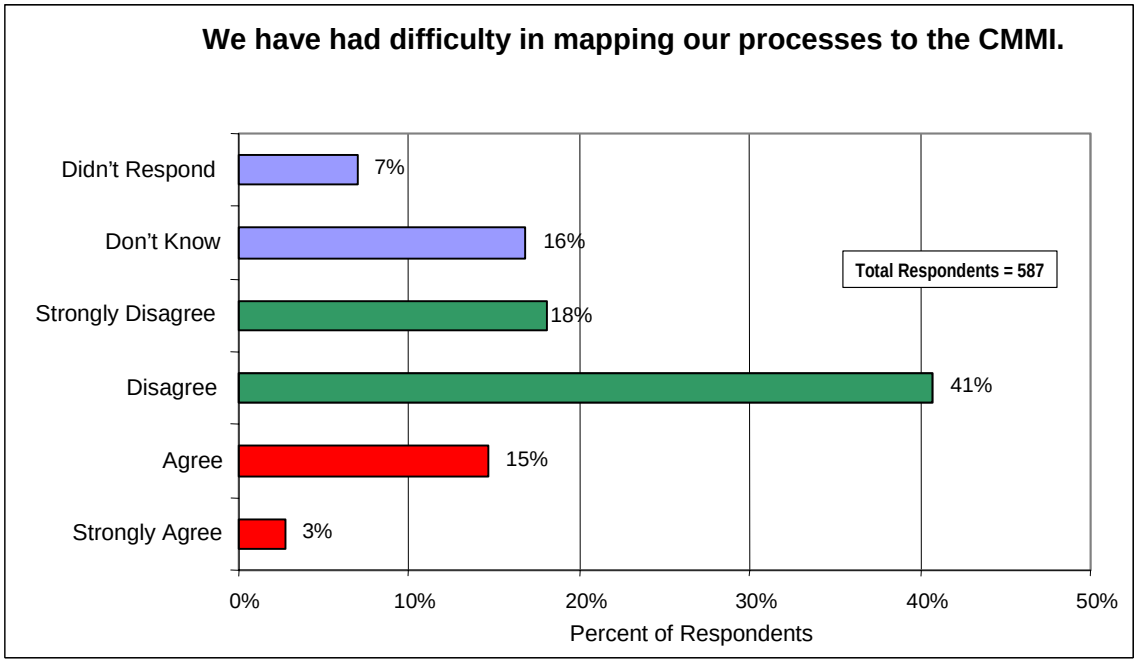


Figure 4-7: Global Issues Q4f: Mapping Processes

Global Issues Q4f Sample Comments

- Just another mapping
- If you do systems engineering, the CMMI fits like a glove.
- Since most of the organization was familiar with the SW-CMM we were close. However there were a few groups that we had to really guide them along.
- Due to training and hired consultant - we have been able to identify mapping to existing processes.
- I agree with the statement but think it should not be taken too negatively. Probably also had difficulty in mapping to either SW or SE CMM too, or any other model for that matter. I believe though that once the mapping is done it provides tremendous opportunity for improvement and leverage
- Still in the process, but no difficulties yet.
- Not really a problem -- except for purely service organizations.
- Prior to CMM-I we could say, "what processes?" Although those less familiar with the model (untrained) do have difficulty. An initial investment in training is requisite.
- Our initial mapping has proven easy, but also has exposed some gaps that we will address under the SW-CMM so when we switch to CMMI, things will be in place.
- Having SW-CMM experience and being a systems engineering company mapping is quite easy.
- Again, in its infancy, V1.1 still has controversial requirements in many areas, as well as assessor approaches. Some PAs seem overburdening, and others seem not to go far enough.
- A gap analysis is in progress and so far has not shown difficulties in mapping, just having the time to do it between mission work.
- Since the CMM-I is at a higher level of abstraction than the CMM-SW, more interpretation help has been required.
- Specifically in the area of COTS integration
- Again, as a small business we do not necessarily need to perform every practice/subpractice of a PA. Consequently when we map our processes we are left with holes in areas where we have no real need to do anything.
- Mapping was not a problem. Only difficulty was dealing with SPs and GPs in specific PAs that did not add value to our processes. So we added them to our processes to be compliant even though no one thinks they do us any good.
- We have done 2 cursory mappings, but find this very time consuming and "open for interpretation" in many cases (even having taken the SEI's CMMI training). The early assets we found to help in this process on the CMMI site were not particularly helpful. Having done SW-CMM, we are very comfortable with interpretation and (probable) assessment team expectations, but we are very concerned about the risk of SCAMPI teams have a "slightly different" interpretation of various practices under CMMI model guidance, thus exposing unforeseen weaknesses under assessment conditions. (Note: while successful assessments are a "by product" of our "for the greater good" PI efforts, in our markets, we would be completely ignorant to think that we could stay in business without the ability to be successfully assessed at a given Maturity Level.)

- There is tremendous difficulty competing with buzz-word management, and emphasizing proven quality procurement techniques.
- Some parts of our process only apply to certain components of the CMMI - also some of our work is service based and not as directly applicable.
- We have many services projects (those projects supplying services to our customers) which don't seem to fit well with the model.

4.10 Global Issues Q4g: Tracking Changes

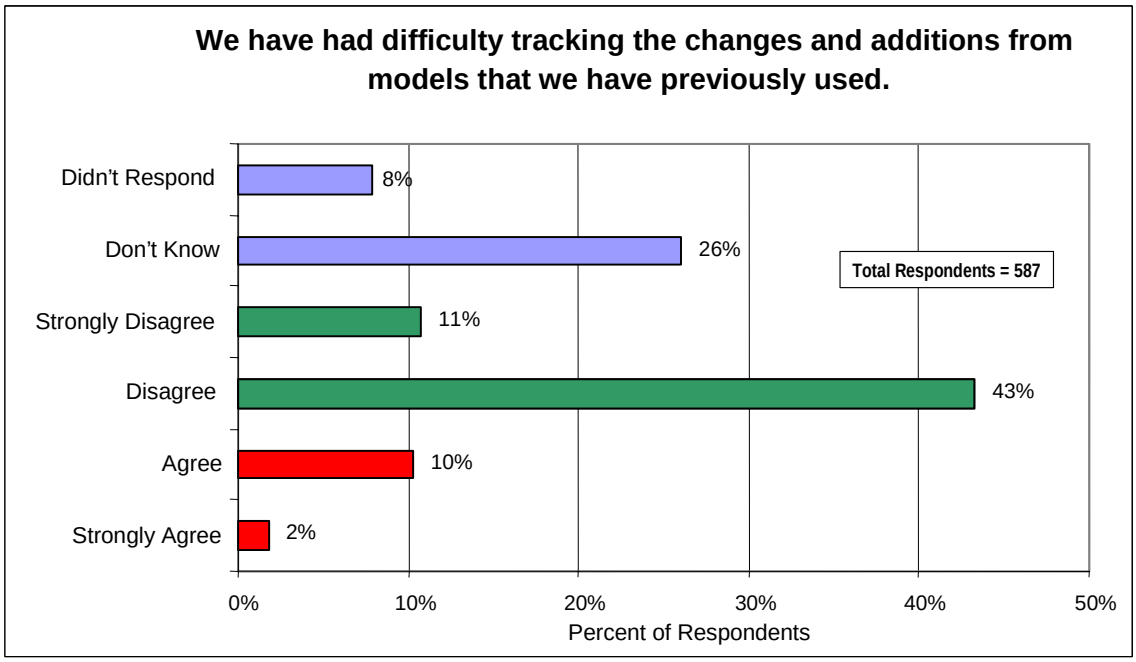


Figure 4-8: Global Issues Q4g: Tracking Changes

Global Issues Q4g Sample Comments

- Mapping CMM to CMMI and vice versa is very easy.
- We encountered some problems tracking from CMM to CMMI on first cut. However, after we looked at it again and took a less SW focused view, it wasn't as hard.
- Very similar to all other models.
- Not with all the material provided in the SEI Website, which highlights those changes.
- We were very experienced with SW-CMM, and participated in CMMI product development, so had little difficulty understanding CMMI for transition. We had some prior use of SE-CMM, but not extensive or institutionalized enough to impact adoption of CMMI for Systems Engineering.
- The only other model we used was SW-CMM. We had a few difficulties mapping from the SW-CMM to the CMMI, but we were successful.

- Comparison documents from SW-CMM to CMMI V1.02d to CMMI V1.1 have helped tremendously with moving from one model to another.
- Not really - CMM to CMMI transition has been very smooth. Since ISO is not as prescriptive as the CMMI, the two can coincide.
- I am neutral on this question, it was not that difficult, but it was time consuming.
- Reasonable mappings have been published (e.g., by XXXXXX), and anyone reasonably knowledgeable of both models can get along well.
- Moving from CMM to CMMI was not always smooth.
- If you mean other models such as ISO9001 the statement is correct.
- It can be ascertained but it is not a simple mapping. Many people overlook a lot of the more subtle changes.
- This is a time consuming chore that the org must do when they transition.
- However, it takes a very experienced SPI person to help with this transition.
- Although we haven't "done" it yet (past tense), identifying how to do this, and do so efficiently, remains a challenge.
- We still use the SW-CMM.
- You have to do a better job of letting us know when you rev the model. We are in the middle of an appraisal during the last rev and it caused much confusion.
- You map changes to SW-CMM version 2 Draft C but I have not seen anything that shows a mapping to SW-CMM version 1.1.

4.11 Global Issues Q4h: Two Representations

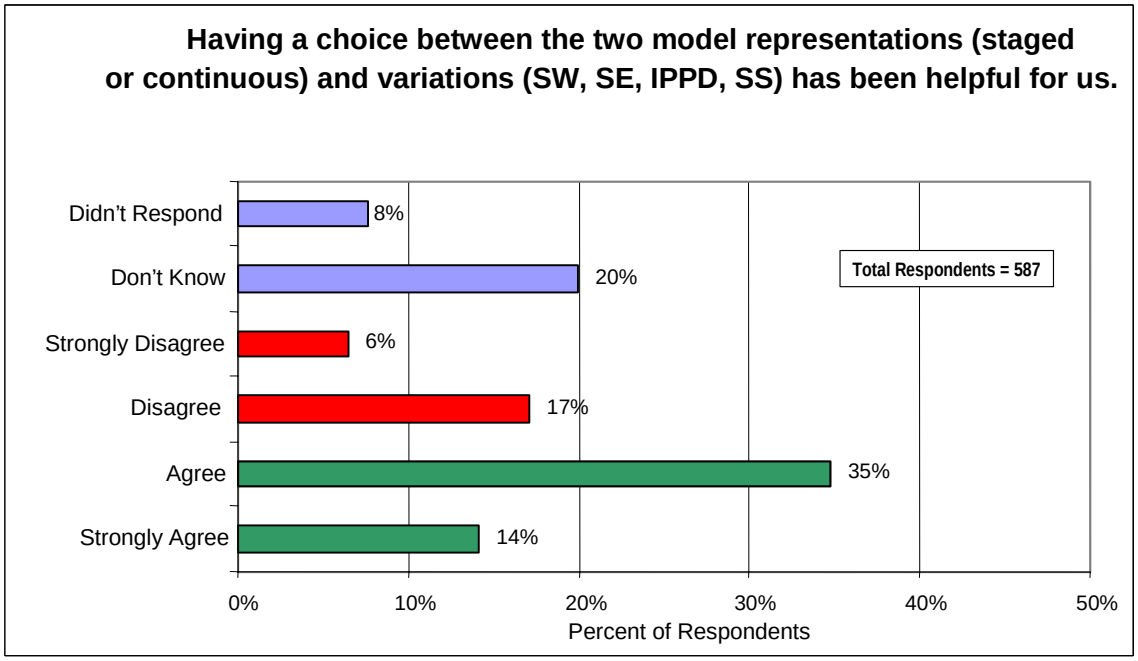


Figure 4-9: Global Issues Q4h: Two Representations

Global Issues Q4h Sample Comments

- Though we have adopted the staged representation for various operational reasons, we could use some of the concepts of Continuous representation to help us to set some short-term process improvement goals.
- Two representations is helpful. Variations sometimes caused confusion and debating.
- We use both representations and have not made a firm choice. We find both to be useful.
- Did not make any difference.
- Agree somewhat. It is convenient to have it available, but sometimes gets in the way after the decision is made regarding representations and variations.
- Should provide more flexibility.
- Not really an issue either way. We're going staged because that makes sense for organizations of our type at . . . .
- Being free to select either one of the two versions (staged and continuous) is very well received. The other choice is less relevant.
- Having the representations is valuable. Some have had the ability to understand them, and some have even taken advantage of both. Others still do not.
- For multidisciplinary organization the two model representations makes process improvement activities easier.

- It’s a needless complication. People tend to argue religiously over which model is best. No value added.
- This has been most confusing (and debated, and debated . . .) I personally think there should be only 1 representation (Staged), and any variations should be kept to a minimum.
- There is no difference between SW and SE. Staged vs. continuous has confused industry and our customers. The IPPD variation is worthless.
- This has only added confusion (particularly in getting / maintaining Sr. Mgt support) . . . the choices become a game on how to "look good" . . . perhaps with CMM ML3+ orgs this is less of an issue.
- Two representations has not been helpful. Why do I need to continually address two representations when my customer only asks for results from one of them? IPPD is a nice concept, but there are aspects that we as a site do not control and never will control, hence IPPD probably will never be implemented, or at least never appraised.
- Agree - Although the high cost of training is hampering our efforts in making the best choices between and use of those options.
- While the Continuous formulation/methodology sounds nice, the real world business case is that to achieve a RECOGNIZED maturity level one really has to satisfy the Staged Representation Maturity across applicable process areas i.e., DoD talks of CMM ML3 or equivalent. While an organization may be fully committed to process improvement, the allocation of resources, therefore rate of improvement, is tied to the benefit in business terms. Even given quality/schedule/efficiency improvements, the dedication of resources is driven by the perceived value of the "Level X" shingle.
- It has caused confusion.
- There should be a single model - staged or continuous. I prefer staged, but either one would be better than the complications presented by two. I’m not certain that following all of the IPPD aspects of the model necessarily improves the overall process.
- It is rather unfortunate that this survey is structured exclusively on the Staged Representation! Can I draw an implication about the relative support within the team for the two representations?

4.12 Global Issues Q5: Return on Investment

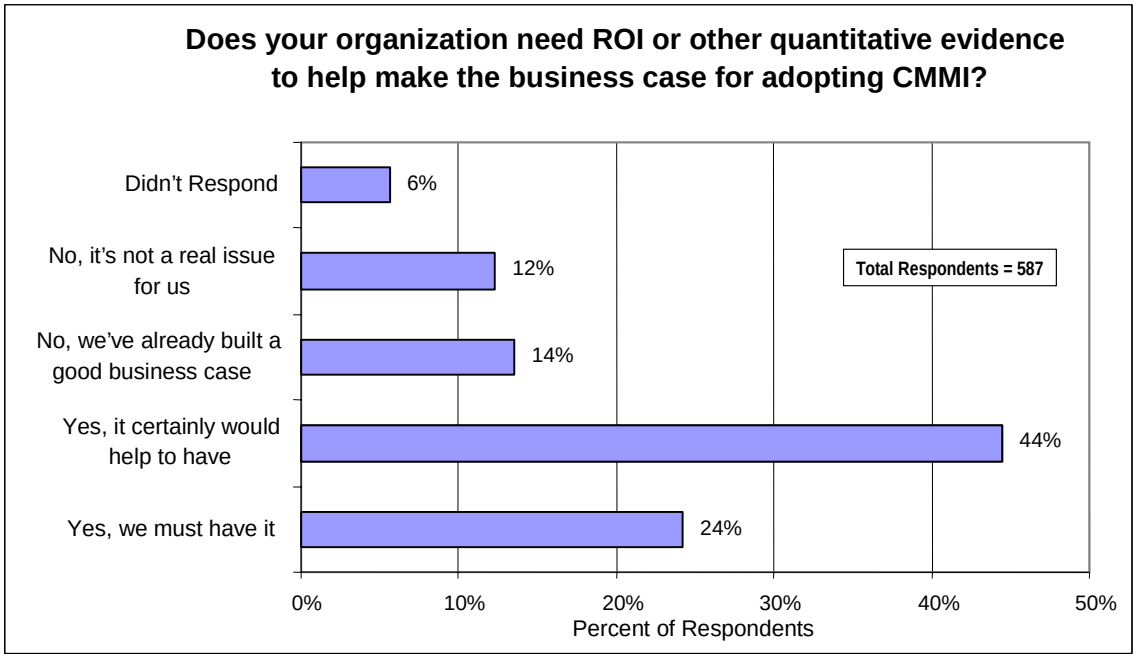


Figure 4-10: Global Issues Q5: Return on Investment

Global Issues Q5 Sample Comments

- The answer is actually Yes and No. It is difficult to qualify what ROI is? It opens many questions: if one says ROI is 8 to 1, then does it apply to a level 1 organization, or a Level 2 or at what level? I would be very interested to see an 8 to 1 ROI for a level 2 to level 3 transition! In my opinion the ROI is far less up to a level 3. One spends a lot of time, money and energy in streamlining and defining the process infrastructure, procuring the right tools, imparting the right training and also we spend a lot on simple coordination activities. All of these expenses in the true sense of the term ROI would give a very low value for it . . . may be even negative ROI. . . then does that mean that since we spent more than what we really got till . . . we reached level 3, process improvement can be trashed simply on this number of ROI. Definitely NOT! ROI makes sense only after the level 3 is established.
- All the ROI available at the moment is based on CMM, and therefore software. This is useful but when presenting the information you get asked about the source - once you admit it is only software then the credibility of the case you present starts to drop.
- Senior managers would like to be reassured that other organizations have benefited from CMMI adoption. The old SW CMM figures are not very impressive any more and are out of date. There is a real gap here.
- We currently use such ROI for our decisions.
- We are pursuing CMMI only because our clients have indicated (in no uncertain terms) that it would be in our best interest . . . Our efforts are geared to achieving the rating and the benefits of process improvement with the least expenditure.

- All of our clients need ROI.
- YES, YES, YES.
- Adopting CMMI costs a tremendous amount money. Any method to measure cost effective analysis will be a key aspect for continuing secure sponsorship from upper management.
- We have tried to pull some ROI data together but it never seems to be enough or complete or representative of our situation.
- We have a business case developed, but most execs see only a long term payback. I believe that there are also many short-term gains especially in reducing the error-rate. It would be very useful to have an ROI model based on the collective experience of entities which have achieved a rating.
- As mentioned above, it is not clear to senior management whether we should commit the resources to transition to CMMI. I do not know if ROI would convince them, but it could not hurt.

4.13 Global Issues Q6: What Else

For question 6 we asked, “What else could be done to facilitate your adoption of CMMI?” There is no chart for this question because there were no radio buttons for the respondents to select.

Global Issues Q6 Sample Comments

- In order to have a controlled process, we needed to develop a stable process architecture as a standard for all of our process documentation to be written against. We made the mistake in our CMM implementation of just creating a CMM-focused process. This left gaps in our process that were the same gaps that the CMM had. They go undetected because we focus too heavily on model compliance and not as much on process compliance. Both require the same amount of attention.
- Customer requirements, business paybacks, more flexibility in the implementation and assessment process.
- Reduce the subjectivity and variability of interpretation; Simplify model by reducing duplication, Reduce cost of the appraisal method; Include greater hardware orientation. Clarify the role of sub-practices; Provide consistent level of detail & importance of sub-practices.
- Need more multi-function guidance (on architecture & appraisals).
- Not necessarily ROI but some other quantitative evidence such as quality and/or productivity improvement would be helpful.
- Cost effectiveness and overcoming language problem
- At this time, I don't know. Haven't tried using CMMI in non-software development arenas yet.
- Publication of business cases and adoption stories; Courses by PA; Publication of base-lined PIIs
- Consider parsing the SAM PA such that contracting decisions made by corporate groups are clearly delineated from the work performed by accounts and projects once the contracts are

established. Organizations continue to struggle with the precedent of claiming SW-CMM SSM KPA did not apply to them because most of their suppliers were other corporate groups under a service agreement (not a legally binding contract that would hold up in court); they believe that if SAM is the replacement to SSM, then SAM should also not apply to them. Complexifying this issue is the appraisal expectation that if a PA applies, the whole PA applies. In our business context, organizational units scoped in an appraisal really do not let the contracts, our global purchasing office does this at the corporate level; there is then a corporate mandate to use preferred suppliers they have contracted with. The global purchasing office is not scoped into the appraisal, so obtaining data sufficient for organizational coverage is difficult.

- The difficulty for organizations is the lack of discipline. Leadership faces the challenge of inculcating changes in values and processes that are monumental in scope and depth. It will come in due time.
- We are looking at getting some consulting on the management level to obtain buy in for the process changes.
- More simple, but complete examples of processes and data items.
- ROI; quantifiable data re: time it takes to adopt/transition from previous CMM model; lessons learned from Federal civilian agencies, not necessarily DoD
- I think the ROI data would be most helpful to get other small projects on board.
- Sunsetting of the CMM by the SEI. Some clients are confused over choosing the CMM or the CMMI.
- Cannot think of anything to add at the moment.
- Extend the grandfathering time from SW-CMM until end of 2004.
- A break in the fees required to become a lead assessor would be nice. The "deal" for Government employees to become leads for the great price of $45,000 for five years is a hard sale to our management.
- I think you need to talk to our executives.
- Time, we are transitioning from CMM smoothly but in addition we are trying to create common practices across multiple divisions who are less mature.
- SEI could develop training material for each PA (e.g., Power Point presentation, instructor's notes, student exercises, templates and examples of Procedures, Plans, estimation worksheets) and sell them to organizations for a reasonable cost, rather than having hundreds of organizations duplicate the effort with varying degrees of success.
- Establishing appropriate documentation that provides the framework for implementation is a challenge, especially for smaller organizations. Without resorting to a "Document Suite in a Box" approach, it would be useful to have some templates or checklists that would help reassure the small organization's Process Improvement group that they were on the right track.

5 Summary of Generic Goals and Practices and Specific Process Areas Data

We are not providing the results of the Generic Goals and Practices and Specific Process Areas sections of the Web-based questionnaire in this preliminary report. In both of these sections there were no radio buttons and therefore the responses provided were in the form of specific comments. Many of these specific comments contain little information. For example, responses such as “none” or “no” were common; therefore, we are not providing any of these comments in this preliminary report. We will analyze and report these comments as part of Phase II of the Interpretive Guidance Project.

6 Next Steps

We are concluding Phase I of the Interpretive Guidance project in which we collected information from a broad cross-section of the community. As you can see from the data presented in this report, we have collected data that is both positive and negative. Our Phase II activities will concentrate on analyzing Phase I data and collecting more detailed data to get a better understanding of what is needed to address the issues identified.

6.1 Preliminary Observations

The preliminary data leads to some interesting and sometimes surprising observations about CMMI adoption. The following list contains some of our preliminary observations:

- The responses were overwhelming positive.
- Much of the data collected is not unique to commercial software, IT, and IS organizations. Similar data was reported by organizations in disciplines such as systems engineering and acquisition.
- Most organizations believe that CMMI is adequate for guiding process improvement activities and that their prior investments in process improvement have helped them to adopt CMMI.
- Although the majority of respondents believe that existing CMMI training courses, guidance documents, and appraisal methods are suitable for their organization's needs, we received specific comments that identify areas for improvement.
- Having two model representations appears to cause concern and confusion for some organizations; however, others liked the flexibility provided by two representations. There was no obvious preference of one representation over the other; therefore, further investigation will be required before any action can be taken.
- We received the most negative input in the area of costs. For many respondents, high costs inhibited their adoption of CMMI. However, some felt that other issues inhibited adoption. Further investigation is required to understand the cost issues and how to address them.
- Finally, return-on-investment information is usually helpful to organizations when making the business case to adopt CMMI. Most organizations felt that ROI data is necessary; however, some felt that ROI data would not have made a difference in making their decision to adopt CMMI. The SEI currently is conducting an impact study to collect ROI information for CMMI.

6.2 Phase II

As mentioned earlier, this report marks the conclusion of our general data gathering efforts (Phase I) and the beginning of our detailed analysis of the data (Phase II). Our analysis tasks will include the categorization and stratification of the data and detailed interviews with selected organizations to clarify our understanding of the issues identified in Phase I and to form potential solutions to those issues. We will also publish a final report that provides the results of the data analysis and a summary of recommendations and actions.

6.3 Conclusions

In this report, we intentionally present the data in its raw form (i.e., no editing) and without rationale. We provide only preliminary observations because we have not begun our detailed analysis and the observations may change. We will be presenting the data gathered from Phase I at many of the same conferences we attended last year to confirm that it is correct and our analysis is accurate.

As we perform our detailed analysis, we will better understand what types of "interpretive guidance" should be developed to address CMMI adoption issues.

Appendices Note

The appendices for this special report are located in a separate file.

Appendix A Participants' Organizational Affiliations

Individuals from the following organizations participated in one or more of the Interpretive Guidance project's data gathering activities. The responses of the participants do not necessarily reflect those of their organizations.

A1 Independent Consulting
Abacus Technology Corporation
ABB, Inc.
ABC Informatica S.A. de C.V.
Abelia Corp.
ABS/ABS Quality Evaluations
AC Technologies, Inc.
Accenture
Adnet, Inc.
Automatic Data Processing
Advanced Information Services, Inc.
Advanced Technology Systems
Advanced Weapons Laboratory
Aeronix, Inc.
Aerospace Corporation, The
Affiliated Computer Services, Inc. (ACS)
AFFTC/AX Joint Program Management Office
Agile Transitions, LLC
Alcyonix, Inc.
ALSTOM Transport
American Management Systems
ANICO
Anteon Corporation
Application Development Effectiveness
Applied Signal Technology, Inc.
ARINC Engineering Services, LLC
Artech Information Systems
AT&T Corporation
Australian Ministry of Defence
Auto Club Group, The
Axiom Resource Management
BAE Systems
Ball Aerospace & Technologies Corp.
Ball Corporation
Bank of America
Bank of Montreal
Barrios Technology, Inc.
Battelle Memorial Institute
Bayer Healthcare
BB&T Corporation
BearingPoint
BellSouth Technology Group
BFD SA
BMH Associates, Inc.
BMW Group
Boeing Company, The
Bollinger Consulting, Inc.
Booz Allen Hamilton
BSD/SEC
Bureau of Customs and Border Protection
Business and IT Solutions
C & J Sci-Tech.
CACI, Inc.
CAE, Inc.
Camelot Group plc
Cap Gemini - Sogeti
Capital One Financial
Carrier Electronics (part of United Technologies Carrier)
Caterpillar, Inc.
CCH Incorporated
CCS Technical Services
CDI Engineering Solutions
Center for Software Engineering
Center for Systems Management
Centre for Software Process Technologies
Chenega Technooogy Services Corp.
CMC Electronics
Comet Way, Inc.
Compliance Automation, Inc.
Computer Aid, Inc.
Computer Resources Support Improvement

Computer Sciences Corporation
Concurrent Technologies Corporation
CONQUEST Technologies
Cooliemon, LLC
Coors Brewing Company
Countrywide Home Loans
CRB iT
CSM
Cyber Keji Park, Inc.
Daiwa computer Co.,Ltd.
DCS Corp.
Defence Science & Technology Agency
Defense Contract Management Agency (DCMA)
Defense Finance and Accounting Service
Defense Logistics Agency
Defense Modeling and Simulation Office
Digital System Resources
Draper Laboratory
DRS Technologies
Dynamic Security Concepts, Inc.
DynCorp Information & Enterprise Tech.
Eastman Kodak Company
Electronic Data Systems Corporation (EDS)
Engineering Processes, Tools, and Assessments
ENSCO, Inc.
European Software Institute
F/A-18 Advanced Weapons Laboratory (AWL)
Federal Aviation Administration
Federal Reserve Board of Governors
FedEx Services
Fire Support Software Engineering
Fitec Corp.
Florida Hospital
Foster-Miller, Inc.
Fujitsu Limited
Galaxy Scientific Corporation
Galorath Incorporated
Gates Corporation
General Atomics
General Dynamics
General Motors
Goodrich Surveillance and Reconnaissance Systems
GPI Ltd.
Graduate School of Dynamic Intelligent Systems
GRafP Technologies
Grant Thornton
Great-West Life Assurance Company
Hamilton Sundstrand - Electric Systems
Harris Corporation
HCA, Inc.
Hewlett Packard
Hill-Rom Air-Shields
Hitachi Software Engineering Co., Ltd.
Honeywell, Inc.
IT Solutions India Pvt. Ltd.
IBM Global Services
i-flex solutions ltd.
Impact Innovations Group, LLC
Industrial Technology Research Institute (ITRI)
INES Corporation
Infinity Technology, Inc.
Information & Communications University
Information and Mathematical Science Lab, Inc.
Information Data Management
Information Management
Information Technology Services
Innovision Technologies, Inc.
Institute For Defense Analyses
Intec
Integic Corporation
Integrated System Diagnostics, Inc.
Integrated Systems Analysts, Inc.
Integrity Applications, Inc.
Intel Corporation
Internal Revenue Service
International Atomic Energy Agency
IT Consulting - Software Engineering
IT Process & Project Management
ITT Industries,
Jacobs Sverdrup
JASSON Tehnolocy, Inc.
John Hancock Financial Services
JP Morgan Chase & Co.
JT3, LLC - Center for Engineering Excellence
KAMO Consultancy
Kearfott Guidance & Navigation Corp.
Key Tech Services
Keynote Consulting
KLA-Tencor
KMD
Kotick Consulting, Inc.
KPMG

L.L. Bean, Inc.
L-3 Communications
Laboratory Development Office
LG CNS, Inc.
LG Electronics, Inc.
LifeScan, Inc. (a Johnson & Johnson company)
Lockheed Martin Corporation
Logis-Tech, Inc.
Logo Business Solutions
LOGOS International, Inc.
Long Island Rail Road
Lucent Technologies
LUXOFT
Management Systems Designs, Inc.
Marilyn Bush Associates
MBDA UK Ltd
McKesson Corporation
Mellon Financial Corp.
Merck & Co., Inc.
MiaTech LLC
Microwave Support Systems & Automation
Ministry of Economy, Trade and Industry
MITRE Corporation, The
Mitsubishi Electric Corporation
Moog Aircraft Group
Motorola
NASA
National Air Traffic Services Ltd
National Defense Industries Association
National Institute of Justice
National Law Enforcement and Corrections Technology Center, Northwest
National Security Agency
Natural SPI, Inc.
NCI Information Systems, Inc.
NCR Corporation
NCS Pearson Assessments and Testing Shared Services
NEC Corporation
NGMS
Nomura Research Institute
Northrop Grumman Corp.
Novo Nordisk IT
NP-LAB
NS Solutions Corporation
NTT Comware Corporation
NTT Data Corporation
OAO Technology Solutions
Ocean Systems Engineering Corp.
Office of the e-Envoy
Office of the Secretary of Defense
Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Strategic, and Tactical Systems
O'Neil & Associates, Inc.
Oshkosh Truck Corporation
P3I, Incorporated
PATH Computer Systems, Inc.
Patni Computer Systems Ltd
Pearson Educational Measurement
Pearson VUE
PeCan
Pegasus Solutions
PEI Electronics
Perot Systems
Pinnacle Corporation
Pratt Whitney
Process Company, LLC (TPC), The
Process Improvement Asia
Process, Inc.
Process Plus, Inc.
Process Strategies, Inc.
Process Velocity, LLP
Process Works, Inc.
PYXIS Systems Int'l, Inc.
Quality Assurance Association of Maryland (QAAM)
Q-Labs, Inc.
QSS Group, Inc.
Quality and Regulatory Systems
Quality and Security Compliance
Quality Assurance Institute
Quality Improvement Consultants, Inc.
Quality Plus Technologies, Inc.
Quality Point Integrating Systems Pvt. Ltd.
Quality Services
Quantitative Software Management
Quarksoft
QVision International
Raytheon Company
RCG Information Technology, Inc.
Red Hen Systems, Inc.
Release TEAM, Inc.
Research In Motion
Reuters
Robert Bosch GmBH
Rockwell Collins
Rogers Aerospace
Rogers AT&T Wireless, Inc.

SAFE TECHNO Limited
Samsung SDS
Sandia National Labs
SAP Global Custom Development Services
SAQ
Satyam Computer Services Limited
SBC Communications
Science Applications International Corporation (SAIC)
Scitor Corp.
Securities Industry Automation Corporation (SIAC)
Seguros Banamex Citigroup
SETA Corporation
SFA, Inc.
Siemens AG
Sierra Nevada Corp.
SITARA Technologies Pvt. Ltd.
Soar Technology
Social Security Administration
Software Management Solutions
Software Productivity Consortium
Software Quality Center Pvt. Ltd.
Software Quality Institute, Griffith University
Software Research Associates, Inc.
Software Systems Quality Consulting
Software Technology Transition
Sogeti Nederland BV
Sony Electronics
Southwest Research Institute
Space and Naval Warfare Systems Center
Spectrum Astro, Inc.
Sperry Marine
SPI Consulting Company
Stanley Associates, Inc.
State of Wisconsin
StepUp Solutions, Inc.
STN ATLAS Elektronik GmbH
Sumaria Systems, Inc.
Surety Partners, Inc.
SWIOC
Synchro PP&T, Inc.
Target Corporation
TeAM, Inc.
Technical Software Services, Inc.
TECHSOFT, INC.
Telcordia Technologies, Inc.
Telos OK
TeraQuest
Terradigm, Inc.
Thales Research & Technology Ltd
THINQ Learning Solutions, Inc.
Thomson, Inc.
Titan Systems Corporation
Toshiba Corporation
Travelers Property Casualty
TYBRIN Corporation
U.S. Air Force
U.S. Army
U.S Navy
U.S. Census Bureau
U.S. General Services Administration
U.S. PEO Aviation
U.S. Strategic Command
Unisys
United Defense
United Health Group
United Parcel Services
Veridian IT Services
Verizon IT Corporate Systems
VIA Telecom, Inc.
ViaTech Systems, Inc.
Vistronix, Inc.
Wachovia
Walter Reed Army Medical Center
Webber Computer Consultants
Wind River
Wipro Ltd.
Xerox Corporation
Yazaki Corporation

Appendix B Questionnaire Content

For your convenience, Appendix B contains a copy of the Web-based questionnaire that was described in section 3.

Instructions

Welcome to the CMMI Interpretive Guidance project's Web-based questionnaire. Understanding the experiences of organizations that have made an effort to implement CMMI is invaluable to the SEI.

As you can see in the column on the left, this form is broken up into several sections.

- **Background & Context:** Covers your experience with CMMI and other approaches to process improvement. **Please complete this section**.
- **Global Issues:** Covers your overall judgments about CMMI models, as well as issues that you may face in making the transition to CMMI. **Please complete this section**.
- **Generic Goals & Practices Issues:** Covers your experiences using the generic goals and practices. Please complete this section **only** if your experience with the model's generic goals and practices has been particularly challenging or particularly valuable.
- **Process Area Issues:** Covers your experiences using the process areas. Each of four maturity level headings expands into separate sections for its respective CMMI Process Areas. Please complete **only** those sections for Process Areas where your experience with the model has been particularly challenging or particularly valuable.

When you select **Process Area Issues:**

- Please be as detailed as possible when completing these sections, and refer explicitly to any pertinent practices, subpractices, or other model elements.
- If you wish to refer to one of the CMMI models while formulating your comments, searchable copies are available at: http://www.sei.cmu.edu/cmmi/models/model-components-word.html.

You may save your work at any time by pressing the **Save** button in each section.

- You must be sure to save your work before you move to another section of the questionnaire.

If you wish to complete your form over several sessions, you may return to your personal URL and continue where you left off.

- When you have finished completing the questionnaire, press the **Submit** button at the end of this **Instructions** section.
- Please be sure that you have finished all of the sections that you intend to complete before you press the **Submit** button.

As always, any information that could identify you or your organization will be held in strict confidence by the SEI.

Submit

Please press this Submit button only when you have finished everything.
You may press the Save buttons in the other sections as often as you wish to avoid losing any work.
You must be sure to save your work before you move to another section of the questionnaire.

Background and Context

Always be sure to save your work before you move to another section of the questionnaire.

1. How would you best describe your familiarity with CMMI? *(Please select one)*

   ○ Never heard of it

   ○ Heard of it

   ○ Use it occasionally

   ○ Use it regularly

2. What if any CMMI training have you received? *(Please select as many as apply)*

   ☐ Introduction to CMMI – Staged

   ☐ Introduction to CMMI – Continuous

   ☐ Intermediate CMMI

- ☐ CMMI instructor training
- ☐ SCAMPI[SM] lead appraiser training
- ☐ SCAMPI team training

By “organization” we mean an entity within which (possibly many) projects or similar work efforts are organized under common management and policies.

When thinking about your organization, please answer for the unit where you actually work - not for the larger entity of which it may be a part.

3. Approximately how many appraisals, if any, have been conducted in your organization since June 2000? *(Please specify for each)*

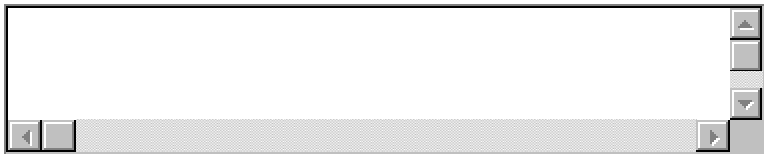
   ☐ SCAMPI class A

   ☐ SCAMPI class B or C mini-appraisals

   ☐ CBA IPI[SM]

   ☐ SCE[SM]

   ☐ Other appraisal methods or gap analyses *(Please describe briefly)*



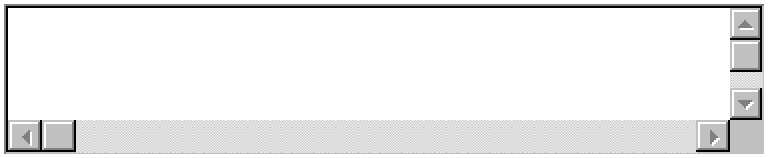
4. Has your organization made a decision about adopting CMMI? *(Please select one)*

   ○ Decision not made yet

   ○ Adoption in progress

   ○ Well institutionalized throughout the organization

   ○ Chosen not to adopt CMMI *(Please describe briefly)*



5. What is your personal role in process improvement? *(Please select as many as apply)*

   ☐ I set policy for adoption of new technologies *(e.g., CMMI, SCAMPI)*

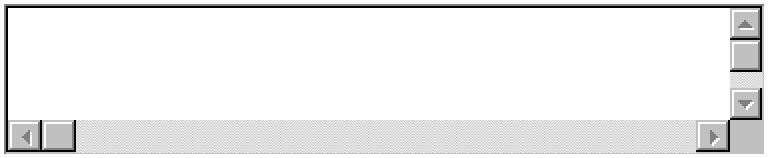
   ☐ I provide support for process improvement activities *(e.g., SEPG, EPG)*

   ☐ I am a member of the management team

   ☐ I am a member of the technical staff *(e.g., systems analyst, programmer, QA)*

   ☐ I am a consultant to organizations using CMM® or CMMI

   ☐ Other *(Please describe briefly):*



6. Approximately how many full-time equivalent (FTE) employees does your organization employ who are primarily engaged in the development, maintenance, or acquisition of software or software intensive systems? *(Please select one)*

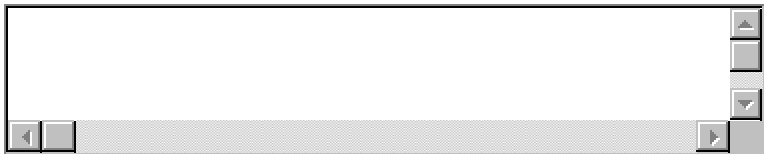
   ○ Less than 100

   ○ 100 to 500

   ○ more than 500

7. How would you best describe your software related experience? In what application domains or business areas have you worked? *(Please select as many as apply)*

   - ☐ Software only (no hardware or systems work)
   - ☐ IT, IS, MIS, or database
   - ☐ Internet / Web / eCommerce
   - ☐ Embedded, real-time systems *(e.g., avionics, telecom)*
   - ☐ Custom software (including outsourcing)
   - ☐ Commercial
   - ☐ DOD or other government agency
   - ☐ Contractor to DOD or other government agency
   - ☐ Other *(Please describe briefly)*



8. How would you best describe your familiarity with the Software CMM? *(Please select one)*

   - ○ Never heard of it
   - ○ Heard of it
   - ○ Use it occasionally
   - ○ Use it regularly

9. What if any training have you received on the Software CMM? *(Please select as many as apply)*

   - ☐ Introduction to the Software CMM
   - ☐ Introduction to the Software CMM – Instructor training
   - ☐ CBA IPI team training

- ☐ CBA IPI lead assessor training
- ☐ SCE team training
- ☐ SCE lead evaluator training
- ☐ High maturity with statistics

10. Contact information: *(Please help us contact you in case we need clarification or further information)*

Your name:	
Title:	
Organization:	
Email:	
Telephone:	

Save

You must be sure to save your work before you move to another section of the questionnaire.
You may save as often as you wish to avoid losing any work.
Press the Submit button in the Instructions section only when you have completed your entire entry.

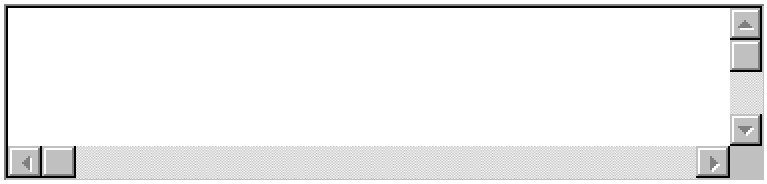
Global Issues

Always be sure to save your work before you move to another section of the questionnaire.

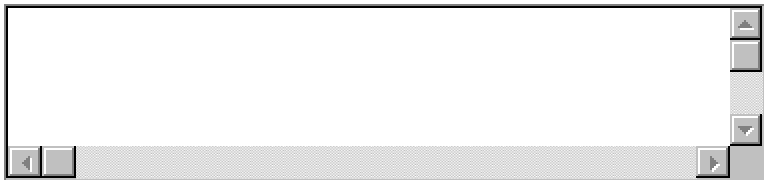
1. In your opinion, is CMMI adequate for guiding process improvement? *(Please choose one and describe the reasons for your choice)*

   - ☐ Almost always
   - ☐ More often than not
   - ☐ Sometimes
   - ☐ Rarely if ever
   - ☐ Don't know

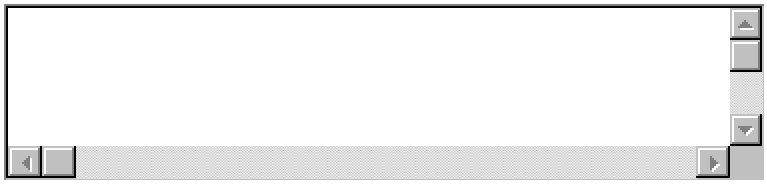
   (Please describe)



2. Is CMMI a noteworthy improvement compared to other models and approaches that you have used? *(Please describe)*



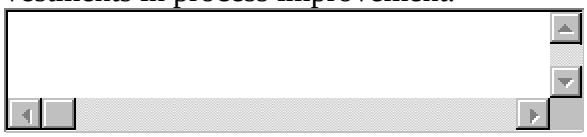
3. Are other approaches more suitable for your organization? *(Please describe)*



4. Following are a number of statements that are sometimes made about CMMI. Do you agree or disagree with them? *(Please choose one for each and describe the reasons for your choice)*

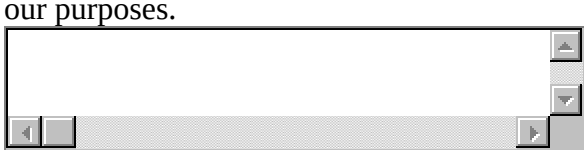
Please select one

Adopting CMMI will help us to leverage our earlier investments in process improvement.



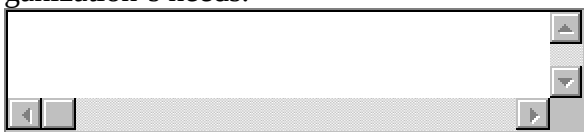
Please select one

Existing CMMI training courses, guidance documents, Web resources, and other process assets are adequate for our purposes.



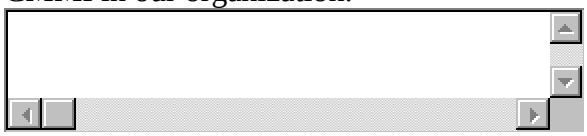
Please select one

Existing CMMI appraisal methods are suitable for our organization's needs.



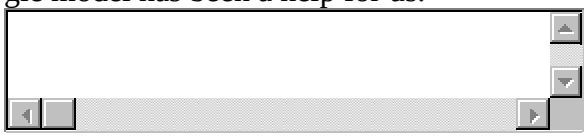
Please select one

The cost of adopting CMMI is impeding the adoption of CMMI in our organization.



Please select one

Including both systems engineering and software in a single model has been a help for us.



Please select one

We have had difficulty in mapping our processes to the CMMI.

Please select one

We have had difficulty tracking the changes and additions from models that we have previously used.

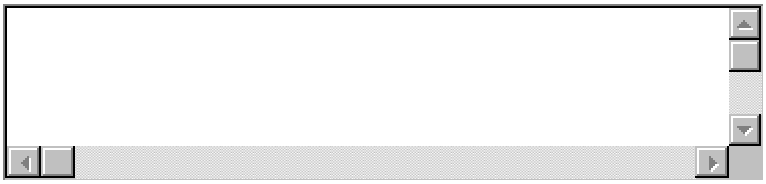
Please select one

Having a choice between the two model representations (staged or continuous) and variations (SW, SE, IPPD, SS) has been helpful for us.

5. Does your organization need ROI or other quantitative evidence to help make the business case for adopting CMMI? *(Please select one and describe briefly)*

   - Yes, we must have it
   - Yes, it certainly would help to have
   - No, we've already built a good business case
   - No, it's not a real issue for us

6. What else could be done to facilitate your adoption of CMMI? (Please describe)



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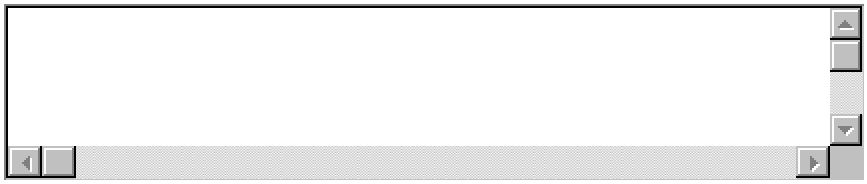
Press the Submit button in the Instructions section only when you have completed your entire entry.

Generic Goals and Practices

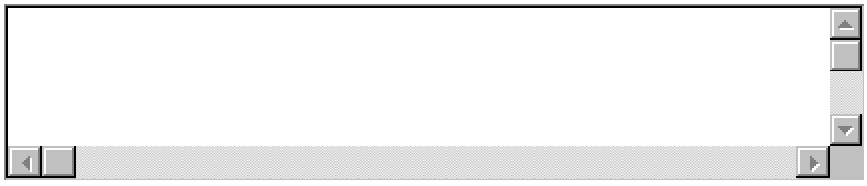
Following are several statements that may describe your experience in interpreting the **Generic Goals & Practices** and related model content.

- You should address **only** those statements that characterize your experience with the model.
- Please describe fully. Be as detailed as possible, and refer explicitly to any pertinent practices, subpractices, or other model elements.
- You must be sure to save your work before you move to another section of the questionnaire.

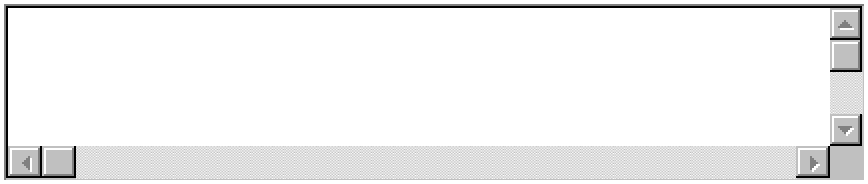
1. Particularly useful model content



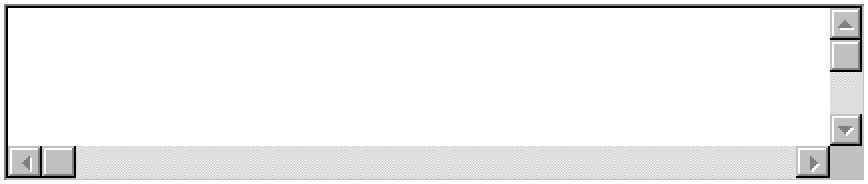
2. Confusing use of words or phrases that need to be clarified



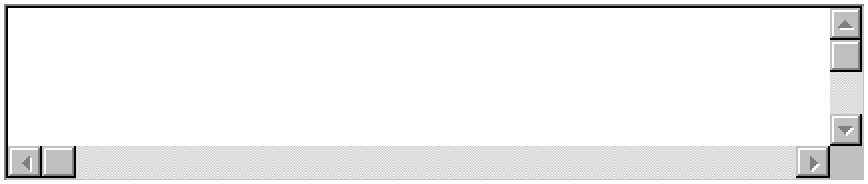
3. Concerns about changes from models that we have used before (e.g., emphasis or de-emphasis of former model components)



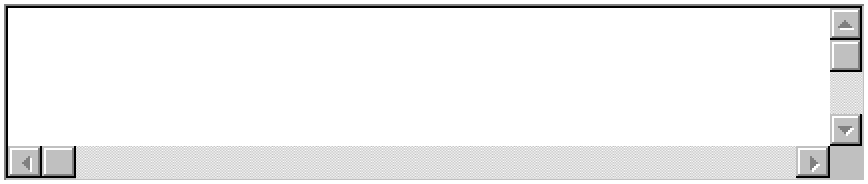
4. Inappropriate level of detail (i.e., too much or not enough)



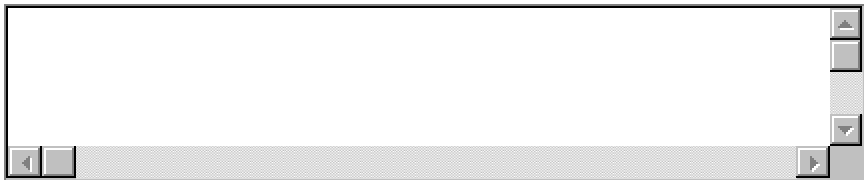
5. Difficult to apply to certain Process Areas



6. Difficulty understanding relationships with related content elsewhere in the model (e.g., among the generic practices or with specific practices in the process areas)



7. Other issues or concerns



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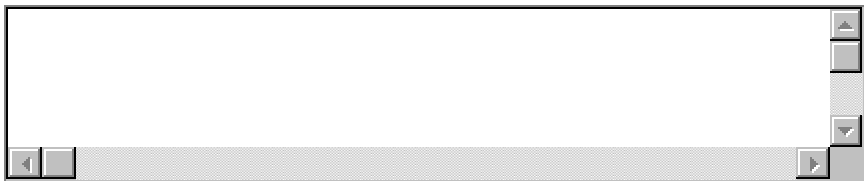
Press the Submit button in the Instructions section only when you have completed your entire entry.

(**Process Areas)**

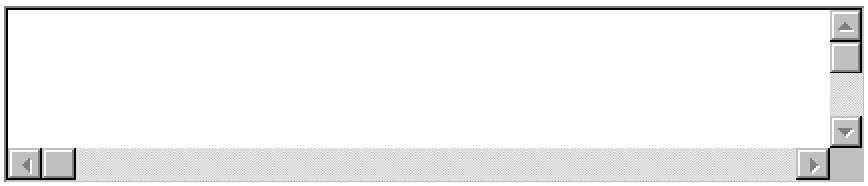
Following are several statements that may describe your experience in interpreting **Requirements Management** and related model content.

- You should address **only** those statements that characterize your experience with the model.
- Please describe fully. Be as detailed as possible, and refer explicitly to any pertinent practices, subpractices, or other model elements.
- You must be sure to save your work before you move to another section of the questionnaire.

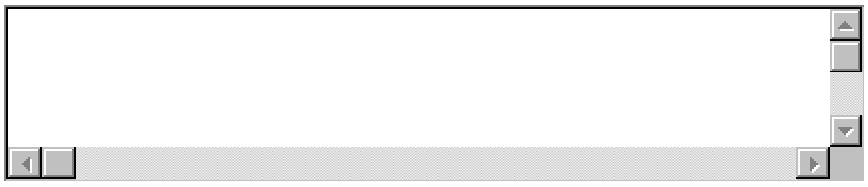
1. Particularly useful model content



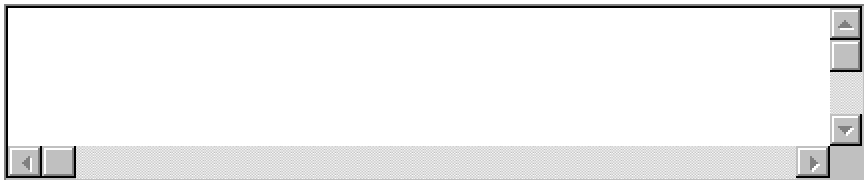
2. Confusing use of words or phrases that need to be clarified



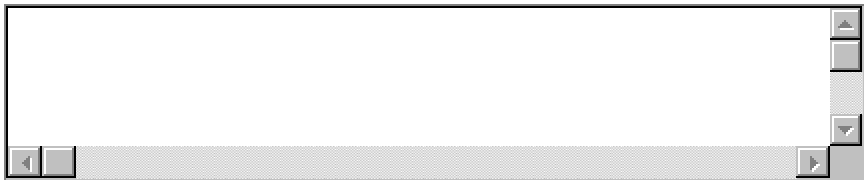
3. Concerns about changes from models that we have used before (e.g., emphasis or de-emphasis of former model components)



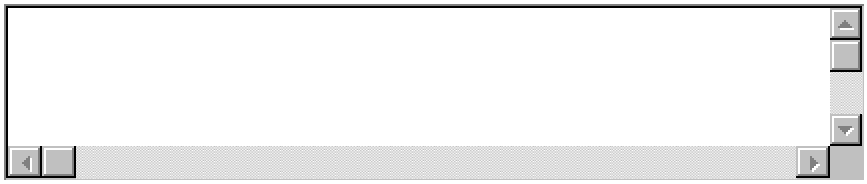
4. Inappropriate redundancy or inconsistency with related content elsewhere in the model



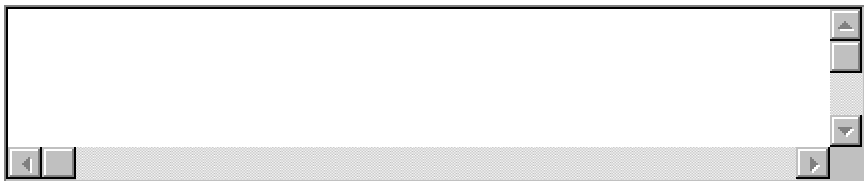
5. Inappropriate level of detail (i.e., too much or not enough)



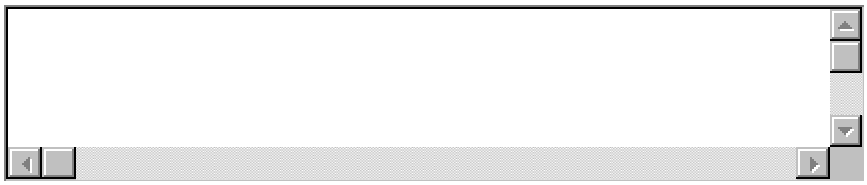
6. Difficult to apply or not applicable to this organization



7. The need for alternative practices to satisfy model content



8. Other issues or concerns



Appendix C Response Data from Background Questions

Appendices B and C provide all of the comments to the questions to the Web-based questionnaire and responses we received in the data collection activities from the birds-of-a-feather sessions held at conferences, software process improvement network (SPIN) meetings, and training classes. Except for the removal of some words (to protect anonymity and assure confidentiality), these comments are directly from the respondents with no editing or analysis by the Interpretive Guidance team.

This category contains information about the respondent's background and experience with CMMI and other approaches to process improvement.

1 Background Question 1: How would you best describe your familiarity with CMMI?

There were no comments for this question.

2 Background Question 2: What, if any, CMMI training have you received?

There were no comments for this question.

3 Background Question 3: Approximately how many appraisals, if any, have been conducted in your organization since June 2000?

1. XXXXXX is NOT CMMI certified, nor working toward a CMMI certification to the best of my knowledge.
2. Mini Assesment v. close to SCAMPI B
3. Gap analysis
4. SPA and EIA731
5. Appraisal method (probably close to SCAMPI C or B) on a Project Office with the end outcome of an assessment report, a set of recommendations and an implementation plan. Assessment took 4 people 2 weeks (including a minin training session). Report and Plan took 1 month.
6. Internal gap analysis with help of a lead appraiser
7. ISO-9001
8. The XXXXXX conducts appraisals for other organizations. Since 2000, the XXXXXX has participated in 6 SCAMPI appraisals on other organizations. None on the XXXXXX.
9. The XXXXXX assisted XXXXXX in performing a systems engineering process <> CMMI Model V1.02 gap analysis.
10. XXXXXX performed their Informal Software Process Review in May 2002.
11. SW-CMM mini-assessments
12. gaps using CMM; 1 gap using CMMI
13. 10+ ARC B&C; (note SCAMPI B or C does not yet exist - in development)
14. gap analyses, 2 CMMI
15. XXXXXX
16. Continuous model tailored for an acquisition organization that is the early throes of adoption.
17. Mini-assessments, XXXXXX CMM Eval
18. an annotated gap analysis (with examples for a service-based organization), currently under further development, was administered to 10 locations in March 2003
19. ISO Appraisals
20. XXXXXX, a CMM-based self assessment with tool support for projects to understand their particular situation and check individual improvement progress
21. Consultant mini assessment
22. 2 SW-CMM 'Quick Look' and 10 SW-CMM 'On-Board'
23. SW-CMM Health Checks (Gap Analyses) 1 CMMI Shadow Appraisal (complimentary evaluation during a CBA-IPI to get a rough feel for the level of CMMI compliance.
24. gap analysis on 2 existing projects

25. These were in support of DOD Program Assessments for specific projects as a XXXXXX.
26. SCAMPI Class A appraisal is scheduled for July 2003
27. Unofficial micro assessments and XXXXXX CMM Evaluation methods
28. CBA-IPI like mini assessment using SW-CMM
29. Min-assessments (all but the rating of CBA IPI)
30. Holding "Verification Visits" whereby appraisers check OE and determine the "goodness" of it and likelihood that a PA will pass a Class B or A appraisal
31. We are consultants so the numbers above reflect different clients, not a single organization
32. 30 additional informal CBA IPIs
33. SPAs, local flavors for various companies
34. XXXXXX is a process consulting firm. As an organization, XXXXXX uses the CMMI as a guideline for providing professional services to its clients. We do not use it internally for process improvement. XXXXXX has provided CBA IPI and less formal appraisals to its client organizations.
35. None in 'our' organization. We conduct appraisals for other organizations. Since June 2000, I have conducted 1 SCAMPI Class A, 3 SCAMPI Class B, 3 SCAMPI Class C, 6 CBA IPIs, 1 People CMM Observation Assessment
36. 15504 trial
37. Some SCEs have been conducted but I am not in knowledge as to how many.
38. XXXXXX mini-assessments based on CMM or CMMI (like class B or C)
39. None at this Juncture
40. CMMI PPQA gap analysis
41. Performed a Continuous Appraisal Method (CAM) on our Organizational Standard Process
42. Quick Look assessmets and 2 internal software process assessments
43. ISO 9001 Type
44. We have developed our own Class B/C ARC compliant appraisal methodology that has been piloted. In addition I have carried out two assessments of systems engineering and electronics have been carried out using CMM.
45. I am an independant consultant that performs these services for other organizations.
46. We are a consulting firm conducting the appraisals.
47. ISO 9001
48. SECM EIA-731
49. None
50. Mentored Self Assessment
51. An internal CAM-style assessment was conducted by myself and another assessor having Lead-assessor training.

52. Software Process Risk Evaluation conducted by XXXXXX on my organization as part of a source selection.
53. Internal assessments, with modified CBA-IPI method. The count above indicates the assessments at my parent organization and the client organization, together
54. We did ISO9000 internal audit by QA department to find the CMMI adoption situation. 2. We did a CMMI ML2 self-appraisal by CMMI appraisal team, but not complete SCAMPI class C mini-appraisals.
55. Gap Analysis and mapping ISO to CMMI
56. Internal Reviews
57. We are using a modified version of the CMMI, called the CMMI-A ("A" for "acquisition"), along with a SCAMPI B appraisal approach. The appraisals are not of our own organization but of our customer's acquisition processes.
58. many other mini assessments and so on
59. SPA
60. One CMM gap analysis was conducted about 10 months prior to the CBA IPI Assessment.
61. internal gap analysis
62. internal Gap analysis were performed during this period
63. Multiple ISO/TL registrations and surveillances. * Internal gap analysis to CMMI performed continuously as needed.
64. numerous tailored (model-based or experience based)
65. N/A. We are a consulting company that delivers CMMI services.
66. SW CMM Evaluation
67. Brief Introduction about CMM, 4hrs. 3 months with 5 visits for doing Gap Analysis and a Gap report submission with suggestions how to eliminate gaps. Based on Gap analysis, roadmap set for accomplishing CMM-L3 after 18months. But the client never called back and started working on CMM models using SEI web information.
68. Internally developed method (using IPI as basis) to analyse progress and gaps
69. Conducted 7 CBA IPIs for other companies, 6 pre-assessments (gap analysis).
70. Various desk audits and mini assessments
71. ISO 9001:2000
72. Semi-annual reverification using quick look methodology for SW-CMM against model for all SPI projects by trained local SPI Agents Third formal SCE schedule July 2003 (XXXXXX performing) First formal SCAMPI Class B tentatively schedule July 2003
73. Various types of mini-assessments/evaluations and gap analyses - mostly CAF and ARC related
74. None
75. Internal Quality Assurance audits using the CMM as a baseline (internally referred to as XXXXXX reviews)
76. Internal Prpocess Assessment that are based on the CMM
77. ISO

78. ARC Class C assessments (we call them mentored self-assessments). These are workshops facilitated by a lead appraiser - with data primarily being oral affirmations.
79. CMM Interim Profile Mini Assessment. We are still a CMM shop.
80. Third party, not related to SEI.
81. Comment: The appraisals have been within the larger organization, not my immediate organization.
82. Engaged in BPR efforts inclusive of development of "As Is" and "To Be" I-Graphics Representation. Utilize APIC, BSC, ITSM(ITIL) and gap analysis (BP Gap Assessment, HR Gap Assessment & IT Gap Assessment).
83. Comparison of certain PAs to be compliant to capability level 1 requirements mainly.
84. Interim Profiles, Mini Assessments
85. We conducted approximately four "pre-assessments" in house prior to the CBA-IPI.
86. gap analysis
87. Assessment of where we currently are so we could start to plan our CMMI journey
88. We always perform baseline and/or gap assessments leading up to the formal appraisal. Typically use the CBA IPI methodology, but somewhat abbreviated.
89. Regular CMM
90. I think we have had a couple of mini or informal assessments. These were conducted in order to see where we were and where we wanted to focus our efforts rather than to see if we were a certain level.
91. XXXXXX
92. Sustainment Audit to ensure we were still Level 2. Gap analysis to see what needed to be done to reach Level 2.
93. Both were CMM Evaluations led by the XXXXXX. The first, in Sept 2001, was used as a CMM Level 3 gap analysis to start our CMM Level 3 process improvement program. The second, in Mar 2003, was an evaluation to determine readiness for our CMM Level 3 CBA-IPI.
94. A part of our services is to perform appraisals for other organizations. This is how we interpreted the question. We also perform risk assessments that use the CMM, CMMI, CobIT, ITIL, ISO and custom models. This is what this number refers to.
95. Internal assessments using the internal teams and equipped with things like the maturity questionnaire.
96. Internal corporate appraisals
97. EIA/IS 731 assessment
98. CMM BaselineGap Analysis assessments in preparation for CBA IPI
99. CMM L2 Assessment conducted in Nov.,2001 CMM L3 Assessment to be conducted in Nov.,2003
100. We'll held a SCAMP class B/A during 08.25 -0905 2003 in my company
101. my organization assists other other organizations in SPI- we've conducted more than 10 cba-pi's and 25 or more workshop assessments since June 2000
102. "baseline" SW-CMM v1.1 appraisals (based upon the CBA IPI methodology) conducted internal SEPG resources; 1 "progress check" informal SW-CMM v1.1 appraisal (based

upon the CBA IPI methodology) conducted by an external SEI-Authorized Lead Assessor.

103. Unfortunately where I implement CMMI methods/practices, it must be done with as little influence on the organisation as possible. Therefore we end up with RFC/suggested practices which may be implemented rather than any strong directives.
104. Mini-assessments have been conducted on different XXXXXX to ensure we are conforming to our CMM Level 3. We also conduct mini-assessments on XXXXXX that are gearing up to become Level 2 and 2 compliant.
105. class Bs were done on behalf of my client. we also have our own appraisal method.
106. Primary work is to conduct evaluations on other organizations, however recently awarded an IT contract for XXXXXX and have performed a baseline assessment to determine what processes were in place (if any). Have developed a process framework consistent with the four categories in the CMMI
107. using XXXXXX Process Assessment: 2 internal consultants conducting SW&SE&HW assessments (based on SW CMM) including a "Bootstrap"like rating. Focus:internal process improvement (ranking of actions; concrete work packages)
108. none
109. Using CMM V 1.1 as current guide. No plans to move to CMMI
110. CBA-IPI scheduled for Septemeber 2003
111. No other formal appraisals since CBA IPI Dec 2000.
112. CBA-IPI (SW-CMM)
113. Informal Software Process Review with XXXXXX.
114. Chose not to answer some of these questions as they appluy to an organization rather than a consultant, working across many organizations and companies
115. Pre-assessment before formal CBA-IPI
116. EIA-731 Mini-assessments (2) and formal assessment (1).
117. Informal evaluation of current practices against the CMMI levels. Determined to be at level 1 and set a goal of level 2
118. 1 XXXXXX ISO Audit.
119. Internal Sustaining assessments
120. XXXXXX PARM
121. mini-assessments (tailored CBA IPI); Evaluations as defined by the XXXXXX
122. Mini-assessments (Please note these CBAIPIs and mini-assessments were done not for my organization but on behalf of my orgainzation as a consulting for our clients)
123. XXXXXX Progress Assessment method (similar to a SCAMPI B)
124. Audit of how well my organization adheres to ISO 900x related policies.
125. We have been working with SW-CMM for a couple of months and we have conducted a gap analyses with our current practices, we also have conducted an informal appraisal with SW-CMM.
126. none
127. Informal or mini-CMM assessments

128. I don't know since I am fairly new to the company.
129. informal gap analysis
130. CMMI implementation team currently conducting gap analysis.
131. We are ISO 9001:2000 certified so we have had many years experience n having those audits conducted, but not CMMI appraisals yet. We did have one informal CMMI gap analysis conducted by a staff member from another company site around one year ago (May 2002).
132. Large number of informal assessments within various lines of business based on interpretation of SW-CMM process areas.
133. SW-CMM
134. Internal appraisal and independent appraisal
135. There were 5 formal appraisals and atleast 5 more informal appraisals to ensure we were progressing toward our CMM Level goals.
136. Internal assessment
137. ISO audits. For Every Project closure a CMM checkslist is used which by itself is like a mini assessment
138. My organization has just begun a CMMI initiative and we will be performing a 'quick look' or 'gap analysis' for the first time this year.
139. No formal appraisals have been conducted. Based on my understanding of the model, we are at Level 1. Others in our organization disagree in that they feel we are on our way to achieving Level 2. There is a somewhat cavalier attitude within the management ranks that SEI's CMMI-SW is not for us.
140. I'm not sure of the number, however we are at level 3 - I can contact our QA manager to find out.
141. In-house Gap Analyses vs. CMMI SE/SW v1.02 and v1.1
142. It is like a CBA-IPI method assessment, we call it simplified CBA-IPI assessment. Use TR25 for model reference, but we do not assess all practices.
143. Internal CMMI assessment based on XXXXXX method. XXXXXX method was created by myself and two colleagues from XXXXXX as part of the XXXXXX
144. site audit leading toward appraisal.
145. As part of my studies at XXXXXX, my practicum project entailed developing an assessment method that was based off of the CMMI model. The intent of this was to allow an organization the ability to get a "calculated estimate" as to where they stood with regards to any chosen Process Area(s). In other words, it avoided the potentially high overhead that comes with a full SCAMPI assessemnt. To date, this tool (titled the XXXXXX Assessment Method) is in the process of being integrated into our organization here at XXXXXXXXXX.
146. We perform gap analyses requlary at all of our software projects. The number given is an estimate ... it could be higher!
147. Internal appraisals for SW CMM (Level 3)
148. As a consulting firm that provided process improvement services, we have performed gap analysis for several clients. This has included identifying transition needs when moving from CMM to CMMI.
149. Informal gap analysis performed by QA group.

150. Involved in CMM based process improvement efforts but an appraisal has not been requested by our client.
151. Baseline assessment at start of our program
152. XXXXXX mini assessments and XXXXXX fairly equivalent to class B and C for either CMM or CMMI
153. Monthly evaluations of portions of the CMMI.
154. XXXXXX performed quick-look in November 2002 and we are planned for a CBA-IPI Level 5 assessment in October 2003
155. Comparison to CMM gap analysis
156. 3- Workshops, Mini CBA IPIs; 1-Formal CMMI Training Session; 1-CBA IPI
157. Procurement related CMM appraisals
158. In preparation for a 4th quarter FY03 Level 2 CBA IPI, we have had 2 gap analyses.
159. Brief informal, internal review of projects
160. A "Mini-Assessment" for three of the CMM Level 3 KPAs based on the CBA IPI Assessment method
161. None. XXXXXX provides appraisal services for its clients. There are no internal appraisals for XXXXXX.
162. day workshop mini assessment againse SW-CMM in July 2000 by XXXXXX
163. 50 is just a guess, I don't know how many of: ISO 15504 (done by externals/customers); ISO 9000:1994 / ISO 9000:2000; etc.
164. Not applicable. I use CMMI for my work in risk analysis and developing acquisition plans based on CMMI as a standard of care and practice.
165. ISO 9001:2000 and TICKET
166. None
167. We have done two formal SCE's and 10 or more informal internal "mini" SCEs
168. SW-CMM and CMMI class B assessments
169. We do a gap analysis or 'quick-look' using a Maturity Questionaire
170. 25 ARC Compliant Bs and Cs (There are not SCAMPI Class Bs or Cs at this time).
171. 0 CMM / CMMI conducted in my organization. 2 CMM conducted for other organizations since June 2000. ISO9001:2000 and ISO14000 certified.
172. Now conducting an internal CMMI L5 gap analysis.
173. ISO audits.
174. Not Applicable
175. We made a PIIDs and did the gap analisys including document review and interviews.
176. Gap analyses for CMM level3 and CMMI level3
177. Informal CMMI appraisal of client's processes
178. SW-CMM informal "Quicklook" or equivalent based upon CBA-IPI
179. My organisation is a Research Centre, part of a University.
180. IT is only the site of XXXXXX, not all units of XXXXXX

181. Using an internally developed method called CMM Based XXXXXX, this would be similar to a SCAMPI Method C type appraisal.

182. XXXXXX Process Appraisal Review Methodology.

183. We have conducted 2 informal assessments and 1 formal assessment. Four projects were assessed at Level 2 in the formal assessment.

184. These have been self assessments to determine the progress made toward implementing Level 2 of the Staged CMMI. Use the organization's process manuals (which are based on the CMMI) as primary point of reference. Uses interviews, checklists, and document reviews to gather data.

185. Desk audits of proposed policy and procedure documents

186. CMM/CMMI based internal assessments (at least 2 per year) on related KPA/PA (for example on management)

187. CMM Mini assessments (similar to Class B) and Gap analysis' (Class C) have been done on individual and groupings of projects over the last few years. We intend to do something similar for the CMMI effort currently underway.

188. ISO 9002 quality audits (internal and external)

189. Internal appraisal method involving a continual appraisal approach

190. mini-appraisals using CMM-SW

191. We currently have mini appraisal methodologies for Software and Systems Engineering. When our Integrated Product Development Process is fully fielded in September 2003, we will switch to an Integrated Process Assessment-mini methodology, which is based on the current software and systems methodologies.

192. SWAPs (Strength and Weakness Assessment Profile) - XXXXXX

193. n/a

194. Home-grown appraisal based upon review of processes, project artifacts and interviews of a representative sample of the population to determine if the KPA elements and other internal process requirements have been met.

195. SW-CMM based mini assessments

196. We use the XXXXXX Approach Model inperforming appraisals.

197. ISO audits

198. Regular internal assessments are carried out basing on Software CMM and they have been telescoped to incorporate all the relevant requirements of CMMI(Staged).

199. FAA-iCMM Level 1; FAA-iCMM Level 2

200. SECM Assessment

201. The XXXXXX and the XXXXXX watches the way my XXXXXX does things and bases whether or not we receive some of our funding on how well we do things such as project management. I don't know that they use any particular assessment or appraisal tool.

202. I completed SCAMPI A at the end of May 2003, another scheduled at the end of July, another scheduled mid August, and the final one currently on the books is scheduled for early November. The six were gap analyses

203. SE-CMM

204. We've ISO registered units within the organization i support

205. ISO 9000 : 19994 & Iso 9000 : 2000.These assessments have have been done for other organizations as we are a process consulting company

206. Two Gap analyses has been performed in order to prepare process improvement activitites as well as SCAMPI asssesment i 2004

207. SCE used for internal process improvement using a validation based (as opposed to discovery based) approach

208. Internal IPI

209. Informal Process Appraisal

210. Note - as a consultant, the word 'your organisation' can be interpreted as being seperate clients I work with.

211. I ALREADY COMPLETED THIS QUESTIONAIRRE. YOU SENT IT TO ME TWICE FOR SOME REASON. I COMPLETED IT THE FIRST TIME YOU SENT IT TO ME LAST WEEK.

212. We used an abbreviated form of the SCE method to provide us with a gap analysis of our progress prior to a formal appraisal. We did this several times to check our progress against the CMM.

213. conducted gap analysis using SA-CMM

214. We work with various groups to do snapshot assessments.

215. Trained process engineering agents conduct annual gap analyses on SW-CMM projects using a XXXXXX devised methodology. In 2004, these agents will receive SCAMPI training as a step toward the Center's migration to the CMMI.

216. Internal appraisals

217. Informal appraisal including gap analysis currently being conducted by XXXXXX.

218. The unit of the organization for which I work provides process improvement services, training, assessments, and evaluations for external organizations. A separate unit leads internal efforts for process improvement; their current focus is on SW-CMM.

219. None

220. We were given a mini-CBA-IPI-appraisal in June, 2000 prior to our attempting the full CBA-IPI in October, 2000

221. we had focus review (look at 1 or 2 process areas) and readiness review prior to both the Class A and B

222. I work for XXXXXX and consult in process and quality. I have conducted 1 SCAMPI A and about to conduct one more. I have also conducted about 8 ARC C compliant appraisals (methodology designed by me). I have also participated in 30 plus CBA IPIs more than 25 as a Team leader.

223. We are a consulting firm who do appraisals for other people and not for us.

224. none - we are attempting to follow CMM / RUP, not CMMI.

225. ISO 9001

226. Original SPA method(ISO/IEC TR 15504 compliant).

227. Precise data available from XXXXXX at XXXXXX. SCAMPI B/C SW CMM and CMMI 2003 year to date = 59 with further 58 planned for rest of year. I have no figures for Mini/XXXXXX FOR sw cmm AND cmmi prior to this year (2003). Some/all of the 19

CBA-IPI assessments planned for rest of year will/may use SCAMPI method and SW-CMM v1.1

228. ISO 9001 audits
229. SCM KPA-specifc gap analyses of particular projects. We have also had a CMM Level 2 and 3 gap analysis conducted by an independent consultant
230. Questionnaire and interviews based on CMM-based questions against the KPA's.
231. I work in the project office of the software engineering division and we are responsible for ensuring the certification of 9 - 12 Lines of Business in the CMM. Every Line of Business has had at least on CBA-IPI and one informal assessment that is an abbreviated version of CBA-IPI. I have been a team member of three CBA-IPI's and one informal assessment.
232. self assessment without a rating
233. ISO 9000
234. All new projects receive gap analyses and we frequently provide a gap for existing projects.
235. "Unofficial" CMM-SW Level 2 + PR assessment by a large customer
236. Annual ISO 9001 TickIT Audit
237. Tailored Mini & Micro Assessments (Number of all appraisals are approximated.)
238. mini-assessment against cmm-sw
239. Company specific
240. Only internal reviews within the organization were conducted.
241. XXXXXX.
242. Internal method that matches SCE and SCAMPI
243. Gap analysis covering about a dozen Key Process Areas.
244. 19 informal/mini assessments; 11 baseline/micro assessments; 3 gap analyses; 1 informal/mini evaluation
245. CMM and EAI 731 mini appraisals and 1 EIA 731 independently lead appraisal
246. Frequently perform informal mini-appraisal or gap analysis prior to formal SCE to confirm readiness and identify action items.
247. NA
248. Currently doing a mapping with our methodology and management standards.
249. Software Micro-Assessment, Profiles, Internal Readiness, CMMI Gap Analyses, PIIDs, Quick-Look review
250. Process audits pertinent to completion of CMM L2.
251. None
252. XXXXXX is a self-assessment method. A prerequisite is the support by a person with CMMI-exoerience. In the sessions the tean has to answer the "questions" of CMMI. The method is suppported by a tool.
253. Internal project appraisals aprox 10; the SCE and 10 internal were with CMM L2 and CMM L3
254. Business unit gap analysis using CMMI as baseline.

255. Informal SW-CMM assessments. I have been on an appraisal team for another organization's SCAMPI-B pilot.

256. A combination of SW-CMM based mini-assessments, CMM 'On-boards', CMM 'Quick-Looks'. Since I am in corporate R&D, our 'organization includes sites in the XXXXXX.

257. "Snapshot" appraisal to give us insight on any gaps in our software development practices than need improving for us to be at CMM Level 3.

258. CMM Health check, CMMI Health check, SE-CMM assessment

259. DPA, quistionnaires and formal interviews

260. Since June 2000, I have participated in 24 CBA IPIs and 8 SCAMPIs (class A) as a Lead assessor/appraiser.

261. None. Only ISO9001:2000 in May 2003

262. SW-CMM Class C

263. ISO15504

264. Informal, CMM based assessments

265. Workshop approach. Worked through the model practices (and subpractices) to identify gaps in our defined process as well as gaps in the implementation. This was a group effort including program representatives and the EPG.

266. XXXXXX 70 audit. We have conducted one SCAMPI class A for another organization using CMMI.

267. mini self-assessment (shorter version of the CBA IPI)

268. None

269. Self-assessment, not certified a class C assessment but probably very close

270. Had SCMPI in June 2003. Had Internal Readiness Review (IRR) in april (I think this was class B or C, but I'm not sure). Participated in pilot CMMI assessment in 2001 - not sure what methodology was used there either)

271. something called a Progress Assessment (1 or 2 assessors, walk through key practices of CMM with personnel and rate them as you go)

272. We have performed several class B and C assessments using the SW-CMM. The methodologies for performing the Class B Assessments were developed in house and the Class C Assessment metholology was developed with the assistant of a third vendor party,

273. Internal SCAMPI-type baseline assessment conducted in 2001 as part of our determination to GO/NO GO on CMMI model. Previously we used the SE-CMM model.

274. gap analysis conducted by external consulanting firm

275. Note regarding the SCE: The SCE held was a combined one, on SW-CMM V1.1 and EIA/IS 731.1 SECM, not the CMMI. (Your question does not clarify whether you only want CMMI appraisals or others too.)

276. Class A scheduled next month (August)

277. Gap Anlaysis for CMMI

278. CAM (Continuous Appraisal Method)

279. CMM Mini Assessments (Class B equivalents)

280. Gap Analysis between current corporate procedures and CMMI

281. ISO 9000:2000

282. Internal gap analysis

283. Various SW-CMM mini-assessments are conducted between CBA-IPIs to assess progress and readiness. The number 20 is a guess.

284. We are a consulting organization and we don't have appraisals internally. The larger organization of XXXXXX has different experiences.

285. Many mini-assessments performed over the years -- equivalent to Type B and C.

286. As I am a consultant, the organizations are my clients. - 2 Readiness Review before formal CBA-IPI assessment using CBA-IPI. - 8 Mini Assessment(SW-CMM) like SCAMPI class B

287. I perform appraisals for other organisations

288. Interim Assessments

289. One preliminary internal gap analysis has been conducted.

290. We are operating as consultants leading / participating in appraisals in other organizations. We do SCAMPI, SPICE and our own CMMI-based Class B appraisals.

291. Internal self assessment conducted once; Mentored self assessment conducted with a lead assessor once; Internal (unofficial) appraisals, completed by registered/certified appraisers from other organizations.

292. Mini-assessments, readiness reviews, gap analysis

293. Internal XXXXXX mini-assessment process (CMM and CMMI; could be described as ARC Class C)

294. SPICE, ISO 9001:2000

4 Background Question 4: Has your organization made a decision about adopting CMMI?

1. We will use the benefits of process improvement fostered by CMMI, but will not actively pursue an appraisal
2. As far as I know we are not adopting CMMI.
3. Starting with SW-CMM
4. We first wish to achieve CMM level 5 then transistion to CMMI
5. Comment: As consultants to the industry we have adopted CMMI as a model to provide services for, but not adopted in XXXXXX.
6. S/W CMM is well institutionalized at Level 4/5 (4 confirmed thru assessment, 5 via prep for CMMI). We are currently (as this is written) being assessed for L5 in S/W, and L3 in Systems, Program Mgmt, and Hardware Development (even though no formal PAs for H/W exist).
7. Our company is a software-only shop so the SW-CMM is a more viable option. It provides better guidance and is less combersome.
8. Sr. Management was not aware of CMMI, and went with SW-CMM. After the decision was made, they staffed with expertise that asked (and is asking) why the CMMI is not being used.
9. XXXXXX participated to the CMMI Development. The transition to CMMI for System Engineering, Software and Hardware is in progress since 2000.
10. We are a XXXXXX supporting a Program Management Office therefore we do not directly use CMMI. We asess contrators that do use CMM/CMMI. However, we do develop some software for the Program Management office and are looking into adopting some of the CMM requiremnts.
11. XXXXXX believes that it will be too costly to convert from CMM to CMMI.
12. Contractor is in progress. Our XXXXXX is establishing CMMI Surveillence Methodology.
13. this is not applicable
14. CMMI requires far too much overhead for a smaller software development house. CMM 1.1, when tailored, fits the bill much better.
15. Some of the companies I am working with are talking about evolving to the CMM-I in the future.
16. Our organization with the company as a whole is just beginning to make the decision to adopt CMMI.
17. One XXXXXX client remains with the Software CMM as the basis of most process improvement work, but borrows process areas and practices from the CMMI as business needs dictate.
18. We are a XXXXXX with SEI for CMMi
19. Many of the organizations we are currently consulting have readily adopted the CMMI. My own personal opinion is that the CMMI continuous (which one I was not very sure how to apply) has a very great potential to transform process improvement initiatives into what oraganizations 'MUST' establish - as a core competency. We have worked with

the CMMI continuous on 2 high maturity organizations with very good results to report. We recommend the Staged for any organization which is attempted at ML3 or below. Continuous makes for a very good model at ML4 and ML5. Even the credibility of the appraisal can improve because doing the finer calibration of the Process Areas (on the capability dimension) is the only sure shot mechanism to know if the organizational process maturity is a ML 4 or ML 5. My conculsion today is that ML 4 is possible ONLY if at least ONE process area in the Level 2 and 3 have scaled up to a CL 4 and ML 5 is possible ONLY if at least ONE process area in the Levels 2 and 3 have scaled up to a CL 5. Needless to say that other requirements of ML4 and ML5 have to be met (all process area practices in scope must be institutionalized and followed).

20. None of my clients including those with government ties have requested CMMI services even though I have always inquired as to which model they want to implement.
21. We are a XXXXXX consulting firm helping other organizations implement practices consistent with the CMM and CMMI.
22. My organization choose a division to adopt CMMI, and the division is certainly well institutionalized CMMI ML2; and we will evaluate if we adopt CMMI throughout the organization or not at the end of this year.
23. Our own organization has not adopted CMMI and it's not clear that it will.
24. Began implementing the CMMI and higher level in the organization directed using the SA-CMM model.
25. not applicable - we are an LA organization
26. Systems engineering and program management are using the CMMI, working on Level 2. They are leveraging off of the previous work done by software. Software continues to work toward Level 3 of the SW-CMM. Hardware is working toward Level 2 of the SW-CMM. We plan to merge everybody into the CMMI after software reaches Level 3 against the SW-CMM. Hopefully the systems process effort using the CMMI will have given us a big head start.
27. On aviation projects we are sticking with CMM level 3 requirements for both ourselves and the subs that work for us.
28. Rather than pursuing CMMI as an external standard, we currently realign our processes to match the organization's strategic and tactical business objectives. A corporate decision has been made to not pursue a CMMI assessment at this time.
29. N/A. We are a consulting company that delivers CMMI services.
30. As a consulting organization we work with companies that are going CMMI, staying CMM, or in the process of deciding
31. Adopting SW-CMM for journey to L2, then transitioning to CMMI L3.
32. We are targeting 2nd quarter 2004 for SW-CMM. No overall plans for CMMI yet.
33. We're a company of 23 funded mostly by government contracts - a fair number are XXXXXX. CMMI would have to be significantly downscaled for practical application here. So, while I say we've chosen not to adopt CMMI, I mean that we have chosen not to adopt it in the most formal definition of word. We have embraced the theory of CMMI and process improvement and apply the methodologies on a regular basis.
34. Completed CMMI Maturity Level 3 Implementattion and Matutity Level 5 implementation is under progress

35. Consulting organization rather than implementing organization
36. We were working with the CMM-SW and didn't want to change models in the middle of reaching our goal of level 3.
37. My organization is using the CMM and the CMMI as guidelines only and is not looking to adopt one or the other totally. At this time we are not working towards a formal assessment either.
38. We have made a plan to proceed with SW-CMM until the entire organization is ready to transition to CMMI, not just our portion.
39. eearly to determine if it applies to the organization. Too mmany organizations trying to reach CMM L
40. My organization is contractually obligated to be at level three in less than two years from now. Unfortunately, our XXXXXX cannot spell CMMI, let alone understand it. To him, all that needs to be done is have developers fill out templates - it's all paperwork. We have no processes or procedures in place, nor do we collect any metrics.
41. have achieved SW-CMM ML5 in 2003
42. Adopting modified CMMI, however customer methodology is FAA iCMM
43. Based on advice from a consultant (XXXXXX) who reported to my management that CMMI was more expensive...too new...and that CMM-SW wouldn't go away.
44. Organization not fully into CMM yet.
45. We are an IT organization and feel that the SW CMM is suffiricent for our needs. We would like to see SEI continue to support the SW CMM.
46. Just achieved CMMI level 3 for SE, SW & HW engineering and CMMI level 5 for Software Engineering for the XXXXXX Division. We are now making plans to roll out the process to other parts of the XXXXXX sector.
47. Do not see it as value added at this time - SW CMM is very useful for our needs.
48. Pursuing SW-CMM through 2005, whereby migration to CMMI may take place.
49. On Continuous - off - on staged - off - on via adoption - currently off
50. Formal SPI activities have been replaced with a problem solving mentality (finally). We are becoming a Lean Six Sigma company. So both the CMM and CMMI will be used as a set of best practices to helps us implement process improvements but they will not be used as the means.
51. Our organization (XXXXXX) is supporting our clients to get on to CMMI
52. We will have our first Level 3 appraisal beginning Sep 29th.
53. The current desicion is to adopt SW-CMM, but we are evaluating to change our mind, and to implement CMMI.
54. not even considered far as I know
55. We are not seeing demand from our customers, can't really justify the additional expense of CMMI when we are already a CMM Level 3 organization.
56. The Milestone was set to be appraised to CMMI level 2 by now (June 2003). This milestone has since moved to November. I think that summer next year is more realisticly achievable.

57. Software CMM is best for this orgnization
58. Have been using SW-CMM and have decided to move to CMMI. But have not yet taken first steps in moving towards CMMI other than reading about it and discussing it. Plan to start training ourselves later in 2003.
59. We have offered in-house the SEI Intro. to CMMI class twice in the past year and the classes were well attended. We are in the training and planning phase.
60. Adoption was in progress when a corporate decision was made to outsource our department. The vendor selected uses ISO 9001.
61. We are in the midst of reaching CCM Level 4 and don't want to complicate matters.
62. Transition in process from SW CMM for Software Engineering org to CMMI for all Internal Information Systems orgs.
63. Decided to go with RUP.
64. Do not beleive the adoption of the CMMI vs SW CMM is appropriate for the organization due to the size/type of contract; work performed on the contracts; cost, time, and effort related to the adoption of CMMI. The SW CMM is attainable where as the CMMI is not within the timeframe available. The benefits and payback to the corporation for pursuing the CMMI approach is not justified. The business goals and benefits of the SW CMM pursuit is attainable and required to remain competitive within the market place.
65. N/A. XXXXXX provides appraisal services for its clients.
66. I have. See above. My organization adopts or not my recommendations and guidance based on CMMI as a pertinant standard pf care and practice for software engineering.
67. We support our XXXXXX Companies' process improvement activities.
68. A Class B is scheduled for August, 2003
69. We provide CMMI services and are not big enough or in a position where CMMI could benefit our organization as we produce no tangible products for an external customer
70. Adopted providing CMM services. Adoption as a TP in progress. Adoption within the organization - decision not made.
71. Not Applicable
72. Transition in progress but has not reached that part of the organization in which I am a consultant
73. We are developing "supplemental training modules" for employees who have already had training on the SW CMM KPAs. Then we will develop full training workshops for each CMMI Level 2 PA.
74. At this point we are advising our clients not to use the CMMI but continue with the CMM
75. Much more familiar w/ SW-CMM and we only deal in software development. May use the CMMI for reference but currently no plans to "adopt" CMMI.
76. The SW CMM is providing a sufficient framework for process improvement; we are working toward repeatable project processes and don't feel that we need to be leading edge with respect to CMMi nor take the hit in the way of rework for converting now. Will re-evaluate once the Enterprise has successfully institutionalized repeatable processes with the thought of using CMMi for future Level 3-type process improvement.

77. Work with organization supporting their adoption.
78. Organization working through Level 2 Staged to get first hand exerience with CMMI and resource requirements.
79. Our XXXXXX company has chosen to adopt CMMI and through our formal XXXXXX relationship we are helping them do so.
80. Does not apply. Refer to comments in 3 above
81. As above, different clients are at different level of adoption
82. My current organization does not put any emphasis on modernizing our practices. More and more work is contracted out, and the impression I have is that my organization feels that process is a contractor responsibility. I am not in a position at this time where I am involved in this decision and I am not sure that there are any ongoing process modernization efforts ongoing.
83. Concerns about its theoretical validity, since it makes some unwarrranted assumtions about activity times of successive tasks, e.g. software engineering et al which are combined with or done in series with systems engineering tasks.
84. we are open to many sources of best pratices, standards, etc. incl SA-CMM, SECM, ISO 9000, 15288,...
85. Not applicable for my organization which is a transition partner
86. We have an in-house development initiative called XXXXXX. We do refer to the CMM-SW but have not been assessed at any level.
87. see question #3. We are LEVEL 1 CMM at this time.
88. We only produce software and have been using the CMM since 1996 or 1997, and are currently pursuing CMM Level 5. We work with a systems engineering team that is starting to use CMMI, we may switch to CMMI when their processes are more mature.
89. We have chosen to allow our lines of business to reach level 2 CMM prior to considering CMMI
90. Want to follow through on level 2 CMM first then reconsider - organization is too immature to understand the difference.
91. Too expensive, too complicated, not proven in market.
92. Looks like a lot of extra work. Not proven as the CMM has been. Need harder data concerning value, ROI, as with the CMM.
93. We're already using the CMM.
94. Upper management is pushing it but intermediate management is balking.
95. We are a consultant company. The two previous questions are not applicable.
96. We will probably discuss adopting the CMMI in 2004.
97. No movement. No proposal to move.
98. I'm in a XXXXXX organization. We see no additional value to CMMI over CMMs. It's too big, more cumbersome. If it ain't broke don't fix it.
99. We are completing our CMM L3 and will move to CMMI L3
100. Currently cannot afford overhead necessary to implement and deploy.

101. Some of our organizations (I am the enterprise-wide manager) have chosen to remain with SW-CMM.

102. Although our "snapshot" appraisal indicated we were at or close to CMM Level 3, we felt that to thoroughly instutionalize Level 3 practices, the most effective path was to use the Rational Unified Process (RUP) with associated Rational Tools. The RUP correlates to much of level 3, and our organization readily took to it. We presently are planning to say with the RUP. So we are not presently intending to adopt the CMMI.

103. We consult on CMMI, not developers.

104. At this time, CMM does everything we need ... may, eventually go to CMMI software only.

105. Organization is an IV&V contractor. Have yet to see it would be value added given that we don't develop software. There is no clear delineation of which goals apply or how we would know if we have met them until appraisal is completed.A method of self appraisal would at least provide encouragement for contiuing with adoption.

106. Maturity Level 5 achieved in XXXXXX SCAMPI

107. Program should be complete within one year

108. Insufficient evidence that we will have a positive ROI in going from SW-CMM to CMMI (as opposed to adopting SE-CMM along with the SW-CMM)

109. Initial drive from corporate has not been sustained. Support has moved to other assessment models (Class A for production, ISO for full site).

110. Since in our IT area we have also production issues and not only development issues, we decided to use a broader model that encompass production processes. We also use the internal XXXXXX model of XXXXXX.

111. Tentatively accepted but firm implementation date not set.

112. The organization currently uses CMM. I am facilitating a one-day off-site divisional meeting XXXXXX to consider full transition to CMMI for 2004.

113. Most of the organizations I talk to do not ask information about CMMI, though they are familiar with the model and the option to choose either CMM or CMMI. Almost always the choice is CMM.

114. I am a consulting corporation. Your questions are not geared for this.

115. 1 of 4 my clients made a decision to migrate CMMI next year aftet achieving SW-CMM level 2.

116. Not relevant - see above

117. CMMI considered too much 'red tape' for our IT organization. We are 'simply' the IT to support the business.

118. For one thing, the CMMI has not been clearly and consistently explained. And because of other company initiatives, there is the overwhelming perception that this is 'just another initiative'. Additionally, because of the company's decisions AFTER some successes with the CMM, they chose to no longer deploy it either.

5 Background Question 5: What is your personal role in process improvement?

1. Full time consultant (3 year contract plus 2 options of 2 years) in a project office. Scope includes recommending practices, technology to support practices and implementing the recommendations in a timely fashion.
2. I am a consultant to organizations using PORTIONS of CMM® or CMMI
3. Process Integrator. I help define and build the process definitions and conduct the training to the organization to facilitate CMMI use.
4. CBA Lead Assessor (candidate)
5. I am an internal consultant for CMMI adoption.
6. I am an authorized CBA-IPI Lead Assessor, SCAMPI Lead Appraiser, and Introduction to the CMMI instructor. We are XXXXXX.
7. QA
8. I conduct evaluations and appraisals as the team lead
9. Deployment and oversight of SQA processes. (Why is QA listed as technical staff??????)
10. I am a member of XXXXXX XXXXXX (XXXXXX Software Process Initiative). XXXXXX is composed of approximately 20 Principal Engineers (internal consultants) from 4 XXXXXX Corporate Research Centers (CRCs). These CRCs are located in XXXXXX, XXXXXX, XXXXXX and the XXXXXX. I have the primary responsibility within XXXXXX for the transition of XXXXXX to use of the CMMI.
11. Part of all assessment teams through out company.
12. I am a member of corporate-SEPG and support multiple organizations in the corporate.
13. Completed the CMM Lead Appraiser track.
14. We are consultants to organizations using the CMM and the CMMI.
15. We work as CMMI Implementation Partner with high maturity organizations.
16. We are a small company. I am taking the lead in preparing the company for a future assessment.
17. Provide support to CMMI self-assessments in an acquisition program.
18. I play as a quality assurance engineer in my organization, I am also an ISO9000 auditor (my organization has ISO9000:2000 certification). Since June 2002, I am the execution secretary of CMMI taskforce in my organization (my organization plan to get CMMI ML2 rating this August).
19. I am a SCAMPI Lead Appraiser
20. I provide leadership to the SPI effort.
21. I head the management steering group, which consists of the company general manager and VPs. I am devoted full time to engineering process improvement in the company.
22. I am also a lead appraiser for the organization
23. lead appraiser

24. I have been the Process Improvment Project Manager, Chair of the SEPG, Organisation SQA Manager, Internal Consultant, SCE Lead Evaluator, Internal Appraisal Team Leader, etc
25. We held our first SEPG meeting last week. I am a trained PSP/TSP instructor, but am still very new to CMM. Another individual has been working towards getting us to SW-CMM level 2 for many months.
26. I also work with projects in implementing CMMI
27. In charge of the CMMI Appraisal Program at XXXXXX (formerly XXXXXX)
28. SCAMPI Lead appraiser
29. I work to facilitate process improvements across the IT organization
30. Member on process team to role out CMMI
31. Lead Assessor
32. I am the Process Improvement Lead for the organization. I manage the process improvement program, advise senior management on the adoption of new technologies and make policy recommendations.
33. Provide appraisal support.
34. I am an Authorized Lead Assessor
35. As "Director of Process Improvement" I report to the President, guiding our PI policy/efforts, and participating in non-PI Sr Staff activities. But concurrently, I also serve as the only full SEPG resource (hands on working with projects re: adoption/training). Finally, I also serve as a CMM consultant to some of our clients who are beginning their own PI efforts.
36. internal consultant from a group of 50 people doing process improvement support and assessments within XXXXXX
37. I am a SEI aurthorizes lead appraiser (CMM® & CMMI)and am acting as a consultant to the XXXXXX - XXXXXX sector.
38. I am a business process re-engineer, implementing CMMI on individual projects and at the division level.
39. IS Quality Assurance Lead
40. I assist in performing internal appraisals on all projects across the division, on-going, to measure their compliance with CMM (and soon to be with CMMI as soon as our transition is complete).
41. I also lead the CBAIPIs and SCAMPI assessments
42. Technical Director for Engineering Performance Improvement
43. My title is "Process Improvement Manager" for my unit (XXXXXX). There are three other PIMs in my wider organization spread across three other countries, and a director that oversees the four of us internationally - she is based not based at my site.
44. Member of XXXXXX PMO, and manager of line of business quality program. XXXXXX targets are all AD teams operating at SW Level 2 by December, 2003 and Level 3 by December, 2004.

45. We have just formed an EPG and I am assisting in writing charters, policies and plans for our CMMI project.
46. As co-author of the XXXXXX Assessment Method, I am part of a small team that is directly involved with conducting assessments within the organization.
47. Corporate POC for all things CMM/CMMI/SEI
48. (was) lead system engineer for company common process used as basis
49. Corporate Manager of Quality Systems. - Manager of Quality Systems for 3 development contracts
50. QA Leader
51. I am an SEI authorized lead appraiser supporting the corporate CMMI initiative. Most of my clients are internal to the corporation, and a few are external customers to these internal clients. The corporation is comprised of 100,000 individuals worldwide, the corporate initiative to include appraisers and process asset developers/maintainers is less than 100.
52. On the team to help implement CMMI at our site.
53. I use CMMI for developing recommendations and guidance on IT/IS contract performance management.
54. I am the XXXXXX. In that role, I am responsible for managing our tools technology to support the development process. The XXXXXX and I are actively working to introduce CMMI to the organization. We are mapping the areas of our current process to the CMMI and starting to change our language in those areas to match CMMI. In areas where we do not have a process defined, we are working to utilize the CMMI terminolgy as we begin our process definition.
55. I am a divisional manager of quality within XXXXXX. I am a technical staff assessor and appraiser, ISO9000 & TL9000 & TickIT auditor for XXXXXX Quality Evlauations.
56. SQA Group Leader, SEPG Chair,
57. I am Director of Process Improvement and lead the SEPG.
58. Process Owner for Configuration Management
59. I am not currently in a software organization. I'm completing only items that relate to my experience (e.g., #7 below) rather than to an organization.
60. CBA-IPI Lead assessor
61. I provide assessment services for the XXXXXX site as well as other sites upon request.
62. I lead the organization's Quality Program (CMMI, ISO, company standard methods, etc)
63. I am an expert in CMMI. I came from XXXXXX where I wrote guidance on interpreting CMMI, as well as interpreting CMM. In my current role as XXXXXX, I am responsible for leading the organization to CMMI Level 2.
64. Provide the thought leadership to the team that drives these process improvement initiatives.
65. I'm assisting our XXXXXX company to establish CMMI Level 2 procedures and identify and establish their work products.

66. I recommened process improvement strategies (CMMI, SCAMPI), I'm a member of the engineering process group deploying CMMI
67. Refer to 3 above
68. I am a SW-CMM Lead Assessor and do influence company policy regarding software process improvement and adoption of the CMMI. Our company is in the process of submitting an application to become an SEI Transition Partner.
69. End user. In previous experience I was both part of the technical staff and on the SEPG and a strong advocate of CMM.
70. I also specialize in measurement implementation for programs and PI; my experience is mbecoming familiar with our support to DOD's XXXXXX [re sec 804 and 5000].
71. I am a PSP instructor and TSP launch coach
72. I assist other XXXXXX organizations with appraisal activities, ie participate on their Class A and B SCAMPI's
73. I have provided consultancy to over 20 oganizations, in the area of simple process improvement, metrics based management and defect prevention.
74. Working within the XXXXXX collaboration at the XXXXXX to promote use of the CMMI. President of the XXXXXX SPIN
75. Consultancy is internal to organisation – XXXXXX I am part of XXXXXX corporate Lead Appraisers team.
76. early user of CMMI in process quality management
77. currently the process champion for the SCM KPA but am also assisting RM and PR KPAs
78. Action officer in SPI element of the organization.
79. I am in internal project management consultant for XXXXXX and provide a full range of consulting services for software engineering. I have written the corporate procedures for SCM and Change Management, helped write other CMM compliant procedures and consulted on individual projects, taught project managment related classes etc
80. Training Management
81. I am transformation manager at XXXXXX
82. I set policy together with my peers and the XXXXXX in the organization - so really "we set policy"
83. Was on SEPG, briefly. It's become a Technical Working Group working on verification & validation, without regard to CMMI.
84. I am the primary project manager and lead assessor for assessments within the company.
85. I am just a CMM seminar staff in CMM area. But my major job is a system consultant.
86. I am also the Chair for our SEPG
87. I am a member of SQA(Software Quality Assurance)
88. Lead our EPG
89. Our organization is CMMI Level Three, and my division provides a core competency involving ISO/CMM/CMMI consulting and training solutions

90. I am the Enterprise Software Process Improvement Manager for XXXXXX.
91. Lead Process Engineer
92. I am a program engineer, using company processes
93. I am in charge of process and method improvement in System engineering at XXXXXX corporate level
94. Working Operational Safety, Suitability, & Effectiveness for the XXXXXX
95. project leader for deploying CMMI
96. I am a manager for a program, but am also responsible for process improvement, metrics and risk activities for the program. Former member of SEPG and interface with current IPG members regularly, as well as metrics working group participant.
97. SW On-site engineer for a prime contactor
98. I am SCAMPI Lead Appraiser.
99. I am a SCAMPI lead appraiser.
100. I also have the title of Quality Manager
101. SEPG Lead for my project.
102. I am a Lead Appraiser working within the origanisation to provide either consultancy or assessment services and support.
103. I am the leader of the EPG responsible for CMMI adoption.
104. I have worked for a company and have been trying to be a consultant in CMM/CMMI area. Until I get the training for Lead Appraiser, I will provide support in process improvement.
105. Oversight of enterprise-wide IT policy, architecture and standards, infrastructure and software application development, IT budgets and major acquisitions and IT project management.
106. This is a comment on 6. 2 clients are less than 100. 2 clients are more than 500.
107. I am leading the US Corporate EPG of XXXXXX.
108. I am a member of the XXXXXX which provides software process improvement to the different SEPGs.

6 Background Question 6: Approximately how many full-time equivalent (FTE) employees does your organization employ who are primarily engaged in the development, maintenance, or

There were no comments for this question.

7 Background Question 7: How would you best describe your software related experience? In what application domains or business areas have you worked?

1. All of the above, focusing on software and business engineering management practices.
2. I have been the project engineer for an organization which adopted CMM about 1987. I personally have no formal training in S/W CMM, but have "gleaned", and fashioned a subsequent and effective overhaul of all organizational processes in the shadow of CMM. I am currently working the SE aspects of CMMI, and leveraging our proven L4/5 S/W CMM capabilities.
3. We don't develop or maintain any sw. Strictly acquisition and support of complex systems for avionics applications for the XXXXXX XXXXXX.
4. Large and small software and system engineering projects for both commercial and government contracts.
5. As a military user.
6. I work with clients that fit all the above situations.
7. #NAME?
8. I was in charge of improving productivity of software development. I designed, developed, many tools for software development. I am now mainly in charge of using CMMI in effective manner.
9. Software systems engineering Software development for XXXXXX
10. I have ever been a manager of helpdesk, all of my software related experience are got at that time. In the organization I am now, I play a QA engineer only.
11. Systems engineering on large ($200M+) XXXXXX systems
12. Software and systems engineering work, both development (as contractor) and acquisition (as FFRDC), for XXXXXX systems.
13. Software & systems experience.
14. Systems work with Hardware & System Software included for XXXXXX Material Handling and XXXXXX manufacturing equipments
15. I have worked in DOD, commercial environment in US and International, and have been a Senior Software Process Consultant. I have been a Project Manager, developed XML and HTML Web Pages, been a QA Manager in software and systems environment.
16. No software background. Experience is with mentoring and auditing against processes.
17. Banking
18. Have developed drivers, Operating Systems and other Real time software
19. C3I Systems and software
20. Consulting - Software Development Program Management
21. Data acquisition & processing. Modeling & simulation.
22. Financial and Banking arena
23. Systems Engineering and Integration

24. R&D Technical Architect responsible for new technologies, algorithm development
25. Quality Assurance, Risk Management, Data Administration, Test Documentation, Contracting Officer Representative, and Configuration Management.
26. I have over 35 years experience in software and systems engineering with over 25 years of that experience as a manager. The management experience includes software management, program management and system integration management
27. I have background in business, scientific, manufacturing, and telecommunications billing software.
28. Financial, Insurance and telecom space as well
29. Software Quality Assurance
30. XXXXXX Business Modernization effort
31. I worked as a software engineer for 13 years before moving into my current role. Writing modelling software for simulated training equipment. This involved integration with hardware.
32. My software background is systems analyst for a major telecommunications company. I designed, implemented, tested software for telecommunication products. I also performed systems integration testing to integrate application software with the communication platforms and the OS.
33. My past work experiences and the primary responsibilities of my department are not software related - they include infrastructure and operational support.
34. Software, some systems and some hardware
35. FFRDC
36. Software/Hardware and Systems design and development
37. development incl. microcode of CMOS-devices
38. I have also been in the business of automating professional services providers business models.
39. 22 years software development experience in XXXXXX prior to XXXXXX.
40. Subcontractor organization
41. As a consultant to assist commercial and government organizations implement the SW CMM.
42. Packaged software implementations
43. Involvement has been on the User side in defining requirements and User Acceptance Testing
44. System engineering participating in issue management.
45. Quality Assurance
46. Much of my work has been in the elicitation, development, and documentation of requirements and the analysis of those requirements in terms of feasibility and reasonableness. I have also worked at moving requirements into the design phase.
47. Worked for the XXXXXX, XXXXXX, XXXXXX and also for commercial industry

48. I am not answering these for all XXXXXX...but for essentiall one divison.. XXXXXX that focuses on XXXXXX and XXXXXX; however I do know that XXXXXX is supporting the XXXXXX using CMMI; and the XXXXXX using FAA-iCMM.
49. System and Software System Acquisition support, program office, large scale system source selection
50. N/A I am in Systems Engineering
51. Major time spent was in providing solutions to banks. I have spent over 10 years in SDLC and over 15 years in managing project which were small to large and simple to mission critical (banking systems).
52. FFRDC (XXXXXX)
53. of 18 years experience in/with software, the first 9 years were in sales & implementation of COTS and hardware.
54. Main experiences in XXXXXX - XXXXXX
55. computer based training systems, - courseware
56. systems integration combining both GOTS and COTS into a unique solution utilizing network interfaces for data
57. We have over 250 business applications for financial businesses. I do not directly work on these applications but I do project management consulting with those that do.
58. Systems Engineering
59. 30 plus years of s/w on all kinds of paltforms, mostly XXXXXX and XXXXXX
60. Consulting on software development and management and process.
61. The organization produces military training devices/simulators. I am involved in coordinating software development from a program engineer perspective.
62. This is a SE not SW organization.
63. Several systems to gouvernemal or private organisations (word wide, mainly Europa and East Asia)
64. Business Service Provisioning
65. Design/development of internal (programmer support) tools in commercial as well as government contractor companies.
66. Provide systems engineering and network services

8 Background Question 8: How would youbest describe your familiarity with the Software CMM?

There were no comments for this question.

9 Background Question 9: What, if any, training have you received on the Software CMM?

There were no comments for this question.

Appendix D Response Data from Global Issues Questions

Appendices B and C provide all of the comments to the questions to the Web-based questionnaire and responses we received in the data collection activities from the birds-of-a-feather sessions held at conferences, software process improvement network (SPIN) meetings, and training classes. Except for the removal of some words (to protect anonymity and assure confidentiality), these comments are directly from the respondents with no editing or analysis by the Interpretive Guidance team.

This category contains the respondent's comments to global issues that cover their overall judgments about the CMMI model, as well as issues that you may face in making the transition to CMMI.

1 Global Issues Question 1: In your opinion, is CMMI adequate for guiding process improvement?

1. Has best practices from industry and government and academia to choose from.
2. Also PMBOK.
3. Our organization used SE-CMM for our appraisal last Fall. CMMi closely relates to the processes we used.
4. It's a process that has been used so it has some history.
5. The general principles are okay. Unfortunately, it is just too big, especially Maturity Level 3. Despite its size, it lacks detail to help guide improvement. I liked how the SW-CMM used to have "a plan typically includes:" to help understand what goes in a plan. The "required training" for higher maturity levels was critical also but lost in CMMI.
6. There is still a lot of ambiguity in the wording that still makes tailoring tricky.
7. Process Improvement comes from an organization understanding of the process of improvement and a desire to improve. Any well thought-out "improvement" model can-work in that environment. CMMI happens to be the insturment of choice for the DoD, and you go with the flow.
8. There is an abundance of information material to help guide process improvement
9. Right now as we are preparing our organization for a level 2 assessment we have been able to bring process elements over to our hardware engineering side and vice versa to improve our overall system development
10. The Process Areas reflect a workable segmentation to address. The expectations set with the Practices are very good (I believe the Practices could be a bit more 'prescriptive').

11. I believe that the document should be divided into smaller offerings. The present (700 + pages) can be very daunting to groups attempting to find out about the CMMI.
12. the repeatable process,
13. The CMMI, coupled with SW or SE experience, training in the model, and experience in its application is "more often than not" adequate. The model, "off the shelf", is not.
14. What is lacking is how to apply to small projects and software only projects.
15. It is a lot more descriptive than the SW-CMM, and seems to be updated with more knowledge on the current state of software development.
16. We can even use it for improving the Hardware Engineering process, so do we
17. One dysfunction I observed occurs with OUs using a certain maturity level as "the ultimate goal": Easy to understand for managers and easy to reward with the variable part of the salary, difficult for projects because they do not get the support they really need because the EPG tries to satisfy the model and not the need of the projects.
18. It's not there yet when we talk about business processes, marketing, sales, transition, etc. We need womb to tomb processes.
19. The model language is discipline neutral so it can be applied in a wide range of product development applications.
20. I believe that the CMMI is an adequate model. I believe that by itself it is however inadequate to guide process improvement, one still needs IDEAL, information from classes such as 'Managing Technological Change' and 'Consulting Skills', and experience (in addition to the CMMI) to guide sucessful process improvement activities.
21. CMMI provides guideline and approaches to impose a disciplined policy for the business processes within the organization. The practices will establish baselines for measuring improvements.
22. Most organizations do not have the discipline to implement their stated capabilities. How do you improve something that you are not doing/practicing?
23. "Coverage" of the disciplines is challenging in the area of implementation
24. I have been involved with two different types of organizations on their process improvement efforts at an EPG or program management level and I feel it is a great model for guiding process improvement for any orgnization whether large or small. It is easy to interpret and to me is common sense.
25. Model is all encompassing and our business does not always use choose to use all aspects of the process areas.
26. If the organization has much knowledge of software engineering, it works as a framework of improvement.
27. As long as there is some flexibility in its use to meet the needs of the particular project it is a good model.
28. The structure of the CMMI is particularly well conceived. One of the most useful feature of the structure is that it is easy to commit a good 80% of the framework to memory. In doing so, one can easily establish a cognitive map of what is required ... and execute actions based on this cognitive map; chances are that it is difficult to go wrong. Of course, there are a number of other virtues which are far more useful than the model inadequacies. (XXXXXX)

29. Too complex, too costly for small organizations that only produce software. Sometimes sw-cmm is a better fit. It is not the answer for all organizations.

30. CMMI is a model, but it does not on its own link to the drivers for process improvement. The business aims and goals are the key to gaining sponsorship for Proces Improvement. The model then helps once you have decided where to improve by allowing benchmarking of the organisation against "world class" behaviours.

31. Have not used it enough to answer but I work with many smaller software only companies of less than 30 employees. I believe it would be difficult to implement all of the roles and practices in this enviornment.

32. The principles of changes to behaviour which are behind the model and both the maturity and capability levels are applicable in all organisations where I have worked. In addition, the model contains practical and specific advice for bringing about such changes.

33. Although there are still some inconsistencies and lack of clarity in the CMMI, it still provides a good guide for improvement, and has the ability to be easily mapped into our local process.

34. In general, yes. However, I am trying to apply CMMI to a small business that engages in non-development projects (mainframe computer operations support, help desk support, etc.). In many cases the model

35. Not sure what you mean by "guide". It isn't prescriptive. I do believe it is a comprehensive model for systems process improvement.

36. There are many specific practices that appear to be overkill, resulting in a loss of credibility with technical staff and management, especially in programs. Programs asked to comply with processes based on CMMI/SW-CMM/SECM repeatedly ask "how will this benefit my program?" The answer is not obvious. Value usually accrues to the next or follow-on program. The value to the current programs seems limited to increasing their expenditures and loss of manpower time, without actual increases in benefits or funding to the program. DoD says be compliant, but when programs tell DoD "fine," then will you provide more funding to cover the increased expenses or schedule release to enable compliance to be done, the answer is usually NO.

37. The staged model gives us the step to improve process. Our engineers agree the needs of each practice in CMMI models. So we can improve the process using the Model.

38. Global standard plays role for adopting international concept and easy to deploy ways to accomodate a model that is used to interact one another.

39. There are a few areas that still need more information, distinction, or clarifications.

40. The model lacks information on other functional areas in an organization that will get affected and may need to change for implementing CMMI effectively 2. Since it covers only engineering areas, implementations tend to be perceived as an initiative of the quality department

41. CMMI does not have complete coverage of a business, particularly in terms of startegic and business planning, and commercial activities. I tend to use CMMI in conjunction with the EFQM Business Excellence Model to get complete coverage of all process improvement issues. CMMI is great at the 'coal face'. We also use ISO 9001:2000, but this is not very effective when compared to CMMI.

42. The CMMI can be difficult to interpret in the broader context in which processes exist. Interpreting the model in organizations that provide accounting or contractual support is

a challenge--these organizations may be performing activities equivalent to those found in CMMI SPs and GPs, but considerable addtional work may be needed to understand the activities.

43. The CMMI does a good job of identifying and providing guidance on practices essential for organizations to develop to improve product quality, cost & schedule predictability, and productivity. It would be improved if a well-defined approach existed for supplying examples of its application to various activities and in various environments.
44. An organization needs to be conscious of whether it is using the CMMI to build a set of processes from the ground up, or whether it is using it to map an existing set of processes and identify areas for improvement. If there is confusion about the approach to using the model, it may not be an adequate guide.
45. CMMI is a good reference "architecture" for process improvement, it also is a good "media" for communicating between engineering side and management side.
46. Exemplar best practices are comprehensive
47. As long as it is adaptable to the Business and not vice versa.
48. There are too many useful metrics that CMMI provides not to be adequate.
49. Needs to adress software acquisition issues in more detail. Our organization works with a larger organization that deals more with software acquisition than software development per se.
50. CMMI awareness in Japan is poor and Japanese industry only try to implemnet any guidelines only if it is mandatory for selling the package or product. Any extra overhead added due to CMMI is not easily welcomed by top management. Always, SEI questions are framed for targeting CMMI-Staged Maturity Level version than Capability Level Promotion.
51. Applicable to a wide range of application domains and companies.
52. too tied to project based engineering development and too much detail provided for some practices (rule of thumb: if it takes more than three quarters (3/4) of a page, it should be more than one practice OR it is wasted information)
53. CMMI has been mostly adequate in our process improvement efforts except the cases we had to seek solutions for very detailed process problems and techniques for high level management, specifically in discovering a balanced definition of business goals (we have been implementing balanced scorecard).
54. Forces interaction between systems and software engineering groups; allows for use of common terminology; allows for harvesting of best ideas as relate to common areas (reqs. man., CM, etc)
55. Difficult to implement in small teams. Too much information to absorb.
56. Some specific practices are vague with little supporting documentation but, most are complete enough to apply to most organizations.
57. We use other process improvement metnodologies such as ISO9000
58. In honesty, I prefer the CMMI to the SW-CMM due to its flexibility, particularly in the measurement and analysis and project monitoring and control areas. The model appears to successfully target the areas of highest impact to an on-time within budget end delivery to the warfighter (e.g. good planning, defect analysis, replanning, risk, etc.).

59. Have yet to delve into CMMI
60. For organizations that have been "doing" process improvement for a while and are really mature (not assessment mature) yes.

    For organizations with little to no experience with process improvement, no, because the practices are described at too high a level and these organizations typically don't have enough in-house experience to fill in the gaps.
61. I don't know enough about it to express an opinion one way or the other.
62. Very pleased with the introduction of the Continuous Representation, which is better suited to an organization doing process improvement as a means of getting better, rather than one seeking a marketing check-off.
63. More emphasis on acquisition (could some of the XXXXXX version of the CMMI not be used to share the knowledge the XXXXXX gained at significant cost); inclusion of system safety and security would be beneficial based on the new Chief Information Officer (CIO) requirements. Another topic for consideration would be interoperability.
64. We use it for that purpose and tie other initiative to it (e.g. Six Sigma)
65. Six Sigma is very useful methodolgy for applying CAR. As we all know, the CMMI is the 'what'of process improvement...almost all orgtn's need guidance in the 'how'
66. There is a real lack of examples in many cases that would help someone who does not have a lot of process history. For organizations that have some history of process and process improvement in at least one engineering area, there is enough to get by most of the time. The CMMI is a framework with various levels of 'meat' on it!
67. We are not using CMMI to implement specific improvements. Rather it is viewed as a compliance document.
68. The CMMI does a more thorough job of covering the spectrum of development processes. It has many sound practices in it. I've not gone through the exercise of trying to apply the principles to non-developmental processes. It takes ingenuity to tailor to projects that are small, R&D, prototyping, web-based commercial, maintenance or production.
69. in its domain
70. We are struggling with developing CMMI compliant processes for one of our business areas where rapid development is the primary methodology. We have similar challenges on small projects as well as maintenance jobs. But it is an excellent model for large development jobs.
71. However, I am assuming that there is an experienced leader, not someone who has just attended training, for the effort. If I was totally unfamiliar with process improvement the CMMI would rarely be adequate for improvement.
72. We are still mostly a softwarecentric company. Trying to make the model fit to everyone has sometimes been a stretch.
73. Gives good guidelines without imposing particular methods (other than in the minds of assessors).
74. Probably, I am very familiar with the CMM and it is great. I need to become more familiar with CMMI.

75. CMMI breaks down areas into manageable chunks. This way the task of improving becomes easier because you can focus on what is important to your organization.
76. Not real familiar with CMMI yet
77. The CMMI is a good next step in the evolution of process maturity models. Like process improvement itself, the models will need to continually improve. My experience to date using SW-CMM and planning our transition to CMMI is that the models seem to be more focused toward large, "traditional" software development organizations. This impression is borne out by the discussions and working relationships I have had with SEI-certified Lead Assessors. I found it difficult to try to map the processes of a streamlined, innovative software development organization to the SW-CMM. It has been difficult, but not impossible. I expect--hope--CMMI will work better for us.
78. It needs a lot of tailoring, more so than the CMM, because it is more generic.
79. Organizations need to understand that CMMI is not the "end all". The organization's business model is the capstone model and CMMI (and other models) are support increased maturity and quality in the business model. Unfortunately, many businesses use CMMI as the ad hoc business model which (I think) is incorrect. Also, the word "guiding" is probably appropriate. The CMMI is not a PI process in itself; most businesses already have an improvement process and the CMMI provides key practices / initiatives to guide the improvements to be implemented.
80. If only our boss would read about CMMI and make some attempt to understand it, all would be well.
81. CMMI is very effective in guiding PI in the areas which it targets (e.g. SW Dev, Sys Eng., etc.); however, our company also provides a significant level number of clients with "full IT outsourcing". In the area of IT Service Management, we have had to employ other standards such as the XXXXXX BS-15000 series of standards and the ITIL for our PI efforts.
82. as "guidance" it is quite good, because of the wealth and quality of information.
83. For organizations just starting out it can be a lot to take in, but it provides greater coverage and flexibility than the SW CMM. Organizations need to focus their improvement on their business needs, sometimes the focus shifts to a model and a rating, which minimizes the effectiveness of the process improvement efforts.
84. it only helps, if someone in the local organization really understands the modell. CMMI is not "process improvement off the shelf".
85. As a blend between lessons learned and best practices of SE and SW worlds, I can't think of a situation where CMMI would be LESS than adequate.
86. The process areas are generic enough to allow interpretation in most areas
87. Have had no training in CMMI; based on what I have read and heard, I suppose it would be fine in guidance, but I have no direct knowledge...
88. The model fits large scale development very well. However, we must be creative when adapting the model to small or medium scale projects or maintenance projects. This can be done by considering alternate practices and carefully evaluating the risk involved when comparing the alternate practice to the specific practice in the model.
89. I find the elaborations for most practices to be adequate to guide process improvement. Some practices and subpractices have no elaboration and therefore are horribly inadequate in guiding process improvement.

90. If the measurement and corrective action are indeed closed loop the model is always sufficient. If not some process model is necessary ex. IDEAL.
91. We just received CMM Level 2 Certification this year. I have begun reading about CMMI, but do not know much about it in detail yet.
92. I have experienced times when the CMMI banner was used to ram-rod personal agendas. ("You must use the companies standard SPR tool to be complient") This is simply wrong. Many assessor bring a "that's not the way we do it" or "I don't like that" attitude to appraisals and can't adaquitly explain why a particular activity doesn't meet the goal.
93. Useful framework. Missing some aspects related to strategic planning, and a little weak on practices related to interfaces.
94. It's invaluable for process improvement! The goals are realistic and the practices provide a clear picture of expectations. It provides guidance from an expert source and lends credibility to the decisions surrounding process changes.
95. CMMI provides the whats of best practices. The organization provides the hows. Great flexibility.
96. The model lacks some aspects such as Bid and Proposal
97. There is a much improved description of processes and use of examples on CMMI versus CMM. The downside is that means alot more to get familiar with and to teach to process area teams.
98. the model, by accident or design, does not give much disclipline amplification outside of software engineering (if you doubt this, look at class evals from systems or hardware engineers)
99. Guidance particularly as it pertains to mature applications hosted to mature infrastructure allows users to then concentrate on people maturity.
100. Software CMM is adequate for us. The structure of CMMI is meaninglessly complex in level 4 and 5. Besides continuous representation needs some guidance to diffuse it without much confuse. Otherwise it may diffuse bad practices.
101. As mentioned in the previous section, currently we are transitioning to CMMI from CMM. When the first phase of our transition if complete (the documentation phase - we are modifying all organizational documents in the PAL to reflect support of CMMI practices and requirements), then we will begin the implemention of CMMI across the division. Until we actually begin to follow CMMI and the newly written division policy, we will not be able to tell whether CMMI will prove to be an adequate guide in our continual process improvement efforts. We are hopeful, however, that the strong foundation we have establishd with the CMM (we achieved a Level 5 with CMM) will be helpful in our efforts to eventually achieve a CMMI Level 5. I guess only time will tell, for sure.
102. Since it embodies CMM and improvement over CMM, most advantages of CMM are carried forward.
103. Excellent model
104. High degree of recognition for the contributions that have been submitted.
105. I am more familiar with SW-CMM, but I think CMMI would help the company I work for to implement a successful program of process improvement
106. Interpretation challenges the projects at times

107. Although the "set of things that must be done" is fairly complete, the guidance for actually setting out on an improvement program does not, when put into practice, appear to be a structural component of the CMMI There are several strata to this issue, including the definition of process requirements (including those provided by an understanding of organizational needs and culture), how to architect a defined or standard process(es), and many more. All of this is not unacceptable if the CMMI models are treated as a "practice benchmark", which is how we use it. The one exception is extension and decomposititon of process requirements that comes from preparation for an appraisal. Lead Appraiser interpretation of the model(s), esp. the interpretation of "institutionalization" actuall adds and decomposes process requirements on the organization. Although the Lead Appraiser involvement approach (Class C, B and A SCAMPIs) mitigates this problem to a degree, the fact remains that NO process requirements should come from involvement of a Lead Appraiser. This single problem makes the CMMI suite a "level 1" product set- as people, not process, determine what has to be done to be compliant.

108. Staged model provides the same structure as SW-CMM which has been provent as a model for guiding process improvements.

109. CMMI will point any organization in the right direction by providing the meaning behind recommended processes and practices.

110. My experience has been with organizations that are a firm Level 1. I have yet to be able to reap the benifits of CMM/CMMI that are promised in the higher levels.

111. Sometimes it is difficult to determine the precise object or scope of a goal or practice, especially in the Support PA's and the generic goals and practices where they might apply to the organization or to specific projects, or both.

112. The problems I face are involved with how the process areas interface with one another.

113. Unfamiliarity with CMMI.

114. I trust that it is adequate, however I'm not sure it is the most efficient / effective model for our organization.

115. I'm very new to it. From what I've seen it fills in voids and improves upon CMM.

116. CMM Level 5 organisations will not have issue migrating to CMMi, because based on business needs you need a model to support hardware and other integrated aspects of software development. It is a powerful model for guiding process improvement

117. We need a model for guiding process improvement and CMMI is issued from "real life" process improvement experience.

118. The CMMI manual provides excellent guidance for each process area. However, I wish you could add an addendum to the model specifically for Acquistion and Source Selection. Perhaps a new process area(s) and a tailored maturity level chart to include PA's that are relevant to Acquisition and Source Selection and tailor out those that are not so Acquisition business units can achieve a CMMI maturity rating. I would prefer a new PA or two as opposed to integrating Acquistion in the existing PAs like IPPD. I do prefer CMMI to SW-CMM because of the broad and extensive coverage and information in all of the engineering disciplines. And also the IPPD component.

119. We had hoped the CMMI model would be useful to a non-software development, diversely operational organizational such as ours, but we found it to be too granular, too subjective, and too project-centric.

120. It seems to cover all of the essential aspects of integration.

121. Yes, except in the case of the creation of a small startup company

122. We have yet to require a process not defined by CMMI.

123. Due to the somewhat "abstract" nature of the CMMI model, some organizations may have difficulty applying it in a tangible sense to their process and procedures.

124. There are some cases that will required CMMI interpretation, such as COTS implementation.

125. Yes, as it reflects now better the reality of systems (instead of poor software development only) - on the other hand, still better information and interpretation is required from a systems point of view

126. Considering it is a model (and not a 'bible'), it is adapatable to any situation that I have encountered so far.

127. CMMI is very detailed down to the point of being nearly procedural. However, it is difficult to interpret for small project work in a mainly production support environment especially for the Engineering PAs. Examples and typical work products do not always help in this environment.

128. CMMI does not apply to all aspects or industries we evaluate. It is however, an excellent Template for Software Organizations, including our acquisition of Software systems.

129. Company management has not yet approved or agreed to finance the effort to implement CMMI here. At this point, I am only able to embark on laying the groundwork to position the organization for CMMI, using the guidelines in the CMMI document.

130. It provides an excellent fairly easy-to-use framework from a project management. Interpreting it for a technical support organization has been an interesting exercise, requiring some thought on how to apply the practices to smaller units of work. The primary function of our organization is technical support to application developers, primarily support for development and data tools. Our work ranges from items that take 1-2 minutes for one person to projects that take 6-9 months involving 20 or more people.

131. Believe it applies only to large organizations where Systems Engineering (products/processes) is well defined and applied.

132. The model is very good and addresses most aspects of product development. Integration of elements that have historically been viewed as separate entities is very desireable. However, its application is too complicated with many redundant elements. In addition, particularly in the sub-practices, the model often goes beyond reasonable limits of cost effectiveness - added value for added cost.

133. It seems to employ some of the CMM's higher maturity level KPAs earlier, (e.g., quatitative management) which might not be appropriate for organizations new to process improvement, much less data collection and analysis.

134. Multi-discipline; comprehensive

135. Sometimes it is time & cost consuming to keep it that way.

136. Answer may change as we get further into process improvement...

137. A good sanity check of common sense practices grouped in a way that is easy to understand and practical to use

138. Process areas are well defined, specific and generic practices are excellents and almost always complete.

139. I couldn't speak to the suitability of the whole CMMI, because I'm not an expert across all the knowledge domains. CMMI couple with the SA-CMM and the People CMM is comprehensive for my work.

140. We are using the continuous approach by selecting kpas that line up with our Balanced Scorecard. We have had a lot of resistance unless we can provide tools that support the process. We have been using an internal prototype tool to try to gather tool requirements. Once the tool is in place and in use, we seem to get much greater acceptance of the process changes that we are putting in place.

141. I think every aspect of software engineering was included.

142. I think people create work and artifacts to "meet" the model. They forget to do the "right" thing.

143. In the few cases where it doesn't quite fit exactly it is close enough

144. For some of the organizations, some of the process areas are a stretch based on their business goals and drivers

145. XXXXXX supports its XXXXXX Companies' process improvement activities. CMMI has provided good support for addressing their efforts.

146. It is not always applicable for service delivery or all O&M contracts. In those cases we use the ISO 9001 model or ITIL.

147. Just like with any model, people forget that it is a model and they strive to implement everything contained in the model and exactly as described in the model. This tends to focus of things other than process imprvement. And since the CMMI is more complex than other models it is easy for people to lose focu.

148. If tailored and used selectively

149. It offers a framework for improvement.

150. It is as good a model as exists.

151. Haven't used it yet.

152. Depending on the way the people tasked with implementation will interpret the CMMI, they may "self-impose" measures that are not really necessary for their business/scope, but that seem to be "right things to do" although they end up being "nice things to do".

153. It is complexer than SW-CMM.

154. Sometimes seems circular or redundant.

155. We are not using CMMI presently.

156. On certain low cost,low risk jobs it does not appear to be cost effective.

157. For the purposed it is intended.

158. In my experience with the model, it seems to provide good guidance to build on to cover most situations I have encountered. I think Level 2 and Level 3 offer more practical advice (from my perspective) than Levels 4 and 5, but I can see the value in working toward achieving them.

159. Sr. Management can be distracted from the long term process improvement objectives once near term goals have been achieved.

160. If used in the way intended, process improvement will happen. If used just to get recognition of a level, the culture change that is so important to realizing the benefits will not happen.

161. I see too many organizations look at the CMM/CMMI as a set of requirements to be met in order to get "the number" rather than looking at this as a way of improving processes

162. CMMI is a set of best practices that need to be tailored for an organization. There are interpretation issues and judgment that need to be applied to maximize its value. CMMI does not give a lot of detailed guidance on COTS implementation, nor outsourcing best practices.

163. CMMI applicability is much broader than what the SEI seems to focus. Our application is a the project level and involves all stakeholders associated with a project.

164. It is a very difficult document for the "lay" person to understand so that they are then capable of applying it in their organization with some judgement.

165. I don't think it is as clear as the good old SW-CMM.

166. Allows for modification where needed.

167. Yes. If it is used in operational terms with exclusive focus onthe software engineering aspects of the IT firm or a software development firm. NO. If one were to take a holistic perspective on business issues, leadership style, management structures, change mangement processes and above all People aspects of the process improvement. Model is inherently limited to address those aspects; which are vital even for the onset of a meaningful discussion on such long term initiatives with due internalized commitments.

168. CMMI is not prescriptive. The problem in guidance lies in too many choices of adoption for organizations not familiar with CMMs. The choice and education between representations (staged vs continuous). The need to know SE/SW or SE/SW/IPPD or SE/SW/IPPD/SS...

169. In some cases, it is difficult to map the language and examples provided in the model into a real example in a user's domain.

170. It has to be coupled with a strong Six Sigma or Process Control program to be effective at the higher maturity levels

171. It is rather vague in a number of areas

172. Its broad applicability and the ability to interpret the intent of the practices for different types of organizations

173. CMMI has the capability to provide a flexible framework for most systems and software systems I've been involved with. The version I am most familar with is V 1.0, and was experienced a few of its shortcomings. I have not yet been involved/reviewed the latest version, though. Regardless, I look to it as a model to help focus an organization's processes improvement initiatives.

174. Speaking to the environment I work in only. Two problems: (1) my organization has so many external dependencies that it's difficult to stick to any process at all, (2) lack of adequate resources.

175. Currently, XXXXXX is implementing both the staged and continuous models of the CMMI-SE/SW. Though local adopters advise that they find this model more streamlined then the SW-CMM and easier to work with as a measurement stick for process engineer-

ing best practices, additional guidance in tailoring would be of benefit. For example, we have several laboratories attempting to tailor the model at this time.

176. it does not adequately address Sw/Systems Acqusition that are Governemnt clients do; also the SE aspects are not as comprehensive as the EIA-631, 732 and ISO 15288; you also need a PI guide such as IDEAL, SPICE,..; it also does not address security/sfatey aspects; it lacks details on how to which leads to need for supplement , eg, Pratical SW and Systems Measurement guidebook

177. However, there are certain processes which are better described in ISO 9000 : 2000 standards

178. great as a guide, does not cover all needs (e.g. safety, customer) or domains (e.g.hardware, manufacturing) of the business.

179. The approach to make improvements or to start implementing processes where you or your company or organization "feels the pinch" is the key to success.

    I strongly support the "constageduous" approach, as the far majority of companies are beginning to care for process management and as these "newcomers" have the opportunity to adopt those parts and PAs that meet their needs, regardless of the business/market area or the economic added-value-chain section they belong to. They find a place to "hook in". CMMI gives you the opportunity to start where YOU need it, to continuously improve and -after a few cycles- to find yourself at a stage of process maturity that is getting closer and closer to the staged representation until you are finally there. Just like that. If you are really serious with process improvement you just have to work your way forward quiet and steadily. That's it with CMMI.

180. This depends on how much Senior Management supports it.

181. I am not very familiar with CMMI.

182. I have done a lot of reading and personal training in the CMMI model. The addition of practices and process areas and the restructuring of the CMM practices and process areas make this a much tougher model to qualify our practices under. Added to this is the SCAMPI method of appraisal which intensifies the qualifications for compliance to the model over those of the CBA-IPI. The regimen, overall, is tougher which creates a stronger organizational focus for process improvement.

183. Coming in to use CMMI after having used the SW-CMM, I have found organizations which have used SW-CMM finding it easier to understand interpret CMMI. Organizations which are fresh into process improvement find it difficult to understand the CMMI terminologies and language. CMMI is described at a higher level of abstraction than SW-CMM and does not seem to belong to their discilpline. They always need an expert to interpret it for them.

184. It provides a framework for process improvement and requires continuous assessment to find gaps. With few home grown tools and aids, this is a powerful model to follow. At level 4/5, CMMI can be best suited along with Six Sigma.

185. But somewhat rigid for O&M. Better for new development.

186. Just getting started

187. Can be used as an enterprise model for inter-disciplinary process improvement.

188. As a software development company, we intend to use the staged model. In that case, Level 3 has too many PAs and Level 4 and 5 have too few PAs.

189. We are enough in SW-CMM.

190. The maturity level and continuous representations provide for flexible approaches. Applicability of SAM not well supported by the focus on PRODUCT in the specific practices.

191. Yes, as our organization was in need of a systems engineering model and not just a software model.

192. I have no personal experience using the CMMI.

193. Not enough experience or knowledge to comment.

194. I have not received any training nor familiarization on CMMI yet. I do have this as a plan for 2004.

195. CMMI is an excellent framework for process improvement. It covers the key elements essential to process improvement.

196. There is resistance due to its size, complexity, and potential impacts on current software process improvement initiatives.

197. I don't have enough experience with CMMI to judge.

198. The large scope of CMMI makes it more benefitable for almost all organizations

199. We don't use and I have not studied it in detail

200. My experience is only through reading, but my experience in the industry would lead me to believe it would help guide process improvement

201. Based upon an initial level of use and compared to past use of SW-CMM and SA-CMM, CMMI-SE/SW has been overall as good or better suited to process improvement.

202. CMMI in itself is not sufficient. While CMMI provides guidance on the desirable traits to move towards, it does not provide guidance on how to implement and institutionalize change across an organization. It tells you the "what" but not "how" to achieve the what.

203. In its area of applicability, development programs, it is very appropriate for process improvement.

204. It is very useful for software or product development projects but much less useful for non-development services projects (especially those with very short durations, small project value, minimal effort/staff).

205. Lacks a process improvement plan e.g. for Microsoft-Project. Lacks effort estimation data or tool for process improvement initiatives. The size of the CMMI document causes resistance.

206. I see the CMMI as an upgraded improvement to CMM We are preparing for a CMM Level 3 in August/September and our plan is to then upgrade to SEI CMMI Level 3. Our company (20/projects, total 1400 employees) is about 20% s/w but combining it with systems and IT engineering it becomes 60%

207. Does an excellent job at dealing with integrating existing stove pipes. It still contains some areas that are too subjective or difficult to assess - like the use of the term nurture. How do you tell if someone is nurtured?

208. CMMI (staged model) provides a good roadmap for implementing process improvement activities in an organization. The elaborations and typical work products are very helpful in most cases.

209. Since we are just beginning to evaluate using the CMMI, I have to say don't know, I do like the additional direction on engineering practices.

210. Complete model, 2 representations helps in PI strategy, good amplification. Redundant, and same answer (evidence) satisfies many of the same Specific Practices

211. With care, it can be scaled to almost any situation. As with any model, misguided application can lead to chaos and inefficiency.

212. The model is too big and complex for many SW-centric organizations

213. The CMMI is much more descriptive and complete than the SW-CMM. The model itself is a good reference for process improvement, however is insufficient as the sole 'guide' for process improvement (i.e., does not eliminate the need for the IDEAL model)

214. The organization is currently working with CMM processes and will later transition to CMMI

215. Too confusing, and it is difficult to know what is required.

216. Underlying concepts are sound.

217. As a framework it is easy to determine where you are, and then to make decisions on those areas in immediate need of attention and those that should be fixed at a later time.

218. it covers most aspects of a project

219. I am beginning to research the CMMI model. I have not as yet used the model for development.

220. Must address other issues, and methods (e.g., Six Sigma).

221. Many cultural and people issues are also involved. CMMI is a good guide, but it needs to be complemented with methods for technology transfer, gaining and sustaining organizational commitment (and resources), and a good marketing plan.

222. The CMMI appears (my organization is not using it, for reasons discussed above) adequate to guide us as to what the goals and practices should accomplish. But the CMMI appears to offer no realistic guidance on changing organizational culture to institutionalize the use of the improved processes. The associated "IDEAL" model is of little "real world" help -- it only describes how to effect change in organizations willing to change -- not how to develop strategies and tactics to improve the odds. Furthermore, there is a perception that the detailed guidance on practices is directive, to be followed literally -- not realistic in our milieu, but the goals are realistic. We found that there was enough institutializaton of CMM Level 2 practices to enable us to readily use the RUP and Rational Tools to go to the next level of process improvement. Much easier than continuing with the CMM or CMMI and yet getting us go to the next level (though we're not thinking of level numbers at this time).

223. CMMI provides very good, relevant guidlines for what an organization should be doing. Being able to select variations of the model allow the opportunity to implement processes that may be beneficial to the organization that would not have been accessable in the primary variation that the organization has selected to implement.

224. Have not come across any framework as comprehensive and as detailed in guiding one to go about developing process improvement.

225. Since our organization's business is related to total system, CMMI is suitable as a Process Improvement Model.

226. But, the horror stories being told are that it relly pushes the "big defense contracting" model that makes it unfriendly to the commercial and small company users

227. We are still evaluating and trying to understand the the CMMI

228. There are too many areas open to interpretation. This just causes thrashing. Be clear on the expectations. Too many lead apprasers are requiring that the subpractices be met and are establishing a percentage or quota of subpractices that must be met in order to show compliance with the intent of the practice. The people trying to implement practices that are compliant don't know what to do. Either the subpractices are informative or requried - which is it. This is atually a combination of the model and the appraisal method not being clearly aligned.

229. The CMMI is viewed by a majority of our executive management as Defense contractor focused and not necessarily the prescriptive model to follow carte blanche for commercial development. In short it is viewed as containing significant recommendations for beaureacratic overhead

230. It is sometimes hard to interpret because of the integration. We are a software only shop. Level 3 is too big.

231. Although CMMI covers more of the development cycle than the SW-CMM, it still leaves out manufacturing, Apps, field service, packaging, waranty issues, etc. It's fine if you don't care if you ever make money off your software, not so useful in a competitive comercial environment.

232. In the organization which performs only maintenance development of application software, I think that there is too much a part of engineering process area. (For example, tecnical solution SP2.3)

233. United States OSD position supporting use of staged representation SCAMPI scores for acquisition make CMMI a steamroller "get the number" activity or project in many organizations, not tailored to specific needs of the organization. I prefer the Australian Government's position supporting use of the continuous representation to show process improvement focused on the specific needs of each organization and their customers.

234. I've come to know that CMM is adequate for guiding process improvement. therefore I think that CMMI is must be more adequate.

235. The CMMI is an improvement over the SW-CMM. Many of the organizations I work with are not looking at reaching a Maturity Level. They like the ability to tailor the model to achive process improvements that meet their business goals.

236. My company is currently undergoing a SCE to reach CMM Level 3. After successful achievement of CMM Level 3, we plan to begin a migration to the CMMI model.

237. Yes - in that the process areas and model options are far more applicable to today's engineering work than is the software CMM; no - because implementation of CMMI is extremely costly (i.e., training alone is quite expensive), and may be, therefore, prohibitive for smaller organizations to implement.

238. I believe that it could be more useful within the Systems Engineering area if the terminology was not so heavily focused on Software. I find it next to impossible to explain to lead appraisers that not every section applies as written for Engineering Service (and it has nothing to do with software O&M) organizations.

239. It is a bit of a heavyweight methodology, in today's world of ever-shrinking budgets and schedules.

240. The same issues that hamper SW-CMM's ability to guide process improvement exit for CMMI. An implementation workbook would help. I am drafting up such a workbook for my company.

241. There is mostly good guidance up to Level 3. Level 4 of the CMMI is not well suited to s/w and such development that has long cycles and changing technology. Also, it is not clear whether QPM is only for process stabilization or also process improvement (see QPM SP 1.4-1 sub-practice 6). Level 5 KPAs of the SW-CMM were better.

242. Adequate for the process areas covered. We have supplimented the process areas.

243. Most of the experience as consultant has been, in guiding the organization who implement CMMI-SW predominantly.

244. High maturity areas need more clarification

245. It is a useful model. It does not includes the tools and techniques necesary for process imporvement such as process mapping, value chain analysis, LEAN/6 sigma etc. IT is a heavy weight appraisal tool.

246. Provides a good general framework from which we can create our internal procedures.

247. Its quite comprehensive & embodies the best practices of various technology segments/industry.

248. The guidance CMMI provided is always adequate in my past working environment (relatively low mature organizations). The only part that I feel difficult to follow is the RD/TS. These two PAs are great for large scale projects. But for smaller ones, I need to selectively adopt and/or modify those SPs.

249. The only issue appears to be getting management to "bite the bullet" by applying the appropriate resources to convert to CMMI

250. The CMMI covers both systems and software processes.

251. It is a comprehensive model that embodies the best principles of TQM and continuous process improvement.

252. Most of the organization I deal with are at the starting stage (level 1. For them any structure is very good, and better if it costs less. Most of the organizations are happy to have something to wotk with.

253. I don't think CMMI is adequate for guiding overall process improvement in the organization. There are several strategic issues, communication issues that play a very important role in an organizations' process improvement journey and CMMI does not address them at all.

254. The processes and practices in the CMMI are such that they can benefit every organization. I have never seen an organization that doesn't need it or can use it to improve what they have already.

255. I think CMMI is more sophisticated than SW-CMM.

256. Provides improvements to the Software CMM which was already a good model.

257. In my view, CMMI guides improvement of specific process areas, not guiding process improvement. Transforming a business (change management) is not at all discussed. Guidance for PI in my mind includes: PI Surveys, reinforcement techniques, sponsorship, process groups establishment etc.

258. I like the structure of CMMI and I think is a model that definitely is adequate for guiding process improvement in development organizations.

259. Describes some good practices for large software and systems engineering projects, but probably far too cumbersome to implement all practices on small projects (hence the Agile counter-reaction). Need to address this explicitly.

260. Yes,CMMI is typical reference for SW development and management organization.

261. need SA practices

262. Because of my previous experience with CMM - I can see that it is an improvement and can be a good thing. To frame with reference to my particular situation, I was hired for my previous CMM experience - which while the training was informal (not from SEI - but through XXXXXX), it was still quite thorough. In the two years I have been in this current group (layoffs and reorgs) - I have yet to utilize my Software Development, Support or CMM skills. I have yet to participate in any CMMI efforts. That seems to have gone to others and there is little insight or communication regarding direction, progress, decisions and reasoning. The training I have received on CMMI was internal and was disjointed - in that the only reason I did follow along was my previous process improvement experience.

263. Good descriptions; however, the link to daily activities is weak.

264. Needs more extensive tailoring than some other models. More time-consuming to assess, and not enough industry data to date to show hard ROI data,

265. CMMI provides a general set of best practices within the scope of its discipline coverage, but is not adequate in defining how it may be applied for use in specific situations.

2 Global Issues Question 2: Is CMMI a noteworthy improvement compared to other models and approaches you have used?

1. The company did not know of any others. Some pockets may have heard of the SEI or 732 standard, but nothing was formally pursued.
2. Can't say - never used it.
3. Yes - it is more complete than SW-CMM
4. Yes, it is more comprehensive
5. Yes. It provides a level of detail and scope missing from other models.
6. I like it as a "reference" to supplement good judgement. I like the two representations but am currently using the Continuous Representation for the assessments and guidance.
7. Yes, CMMi goes into a little more detail in aiding organizations to implement the process improvement strategies.
8. CMMI is the most comprehensive I have encountered.
9. Have not used CMMI at work so really can't compare.
10. Yes. Both system engineering and software engineering, and both technical and management aspects, are concerned.
11. The fact that it has both staged and continuous is an improvement over the continuous only models. Models like the SE-CMM lacked process measurement information that is critical to demonstrating improvement. By having both representations, it ensured measurement became a component of each process area.
12. CMMI is much better than the SW CMM. The system perspective is essential to capture all of the elements needed for good software development.
13. No, it is not a "noteworthy" improvement. In it's infancy, V1.1 does not have sufficient understanding by a large enough crowd to be fully effective. There is still an unacceptably wide range of interpretations by assessors.
14. Not really, the CMMI compares favourably to other models, however I wouldn't say it is a "noteworthy improvement". Different models provide different aspects of process improvement to organisations
15. It is more comprehensive than SW-CMM so that it includes hardawre development component
16. For our business that has equivalent Systems Engineering - the model makes more sense for our daily process needs.
17. CMMI improves on SW-CMM in that it is more complete (e.g. Requirements Development) and seems to have fewer contradictions/ambiquities to deal with. It loses some acceptance power (particularly at the engineer level) due to the need for terminology to be more generic than discipline specific.
18. Yes. Incorporating both SE & SW into a single model and then raising it up a level, provides a framework that can address not only SE & SW but also HW - we did it.
19. CMMI is heads and shoulder better than CMII
20. Yes, software CMM only addresses part of the process.

21. Yes and no. In many areas, it is more complete than the CMM, but it is so large, that it appears daunting to companies that are thinking about adopting it. The model is also very repetitive, in some areas.
22. Yes. It ackwnoledges the fact that software and s/e do not exist in a vacuum. And that the model can apply more broadly to *business* process improvement, not just s/w and s/e.
23. Level 4 is clearer than the SW-CMM, adding M&A to level 2 is good. I am not in favor of all the extra PAs at level 3 for engineering that came from the SE-CMM. The model is not balanced, there are far too many PAs at level 2 and 3 than at level 4 and 5.
24. Yes, GGs & GPs are very structured, and two representations are systemetic to implemente.
25. It is definetely noteworthy improvement for organizations committed to improving overall quality. It is definitely an improvement from CMM. This also covers overall organizational processes not covered by other models as ISO. Although it does not touch upon realistic results.
26. Yes - see above comment.
27. We previously used the SE-CMM to improve processes in the SE domain. CMMI provides with more detailed expectations, subpractices and work products and is very usefull to guide improvement choices. CMMI is more rigourous for assessments
28. I have not really used it in anger yet but from what I have read and what I received on the introduction course it does look to be a step wise improvement on the Software CMM.
29. CMMI aqllows to use a common model for all disciplines
30. Yes, we had no coherent model before
31. Yes. It provides a clear structure by addressing specific and generic elements precisely, well defined plateaus to reach and a proven sequence of steps to get there. Important: Consider possible dysfunctions during change management.
32. Yes.
33. No, but it is a good model of integration for those organizations that need it. However, it should not replace SW-CMM. (In other words, SEI should not abandon support for SW-CMM.)
34. Yes, because it now covers the larger system design process including hardware considerations
35. Yes! The emphasis on organizational improvement is better balanced with the idea of improved project performance.
36. The CMMI is much better than the SW-CMM. I find the CMMI material much more informative and clear, and the scope more realistic than offered by the SW-CMM. I'm not attempting to 'bash' the SW-CMM, it's just that the CMMI is a welcome evolution, an evolution possible due to the work previously started with the SW-CMM.
37. I believe that CMMI is more rigorous than is needed for software development and process improvement. It is hard enough trying to persuade senior managers, project managers and project staff to undertake the CMM-SW model let alone introduce more activities and processes.

38. Yes (SW-CMM, IPD-CMM, SE-CMM). It is broader and builds on the other models. Helps to involve Program Management where the other models didn't do this as well or, in the case of the IPD model, weren't supported well.

39. I was not exposed to other process improvement models. Therefore, I can't compare CMMI to others. However, CMMI provides precise description of each practice and work product resulted of each practice. It therefore, is our organization's choice for process improvement. At present time, we are using SA-CMM.

40. In comparision to the CMM, i find it all encompassing. It is encouraging to view all aspects of the system life cycle.

41. Yes, it has provided a model to follow for those who need models in order to implement process improvement, i.e. standard model, process guides

42. Yes, the system engineering piece in CMMI makes our software project much better.

43. The CMMI integration of systems and services with software has provided the impetitious for us to apply formal processes in a wider variety of projects. The integration has made this easier since my part of the organization is not a purly engineering shop, more of a systems integrator. The very much improved Supplier Services has also provided a more pragmatic approach to subcontract management.

44. From what I have seemed, I believe it will bring all elements within Systems Engineering and Product Assurance together for process improvement, whereas, Software CMM was strickly for software development. You had the software processes improving (where the CMM was implemented) but not any other functional areas.

45. It is a vast improvement over the SW CMM, however, some better definition of terms is needed.

46. It provides a better means to include related disciplines that contribute to the success of the product in the improvement effort.

47. In some areas it is better than the CMM and in other areas it is worse.. Overall it is complicated for most organizations but can be used. It tends to obfuscate the fact the management areas need to be worked on first.

48. SW-CMM is still useful as well as CMMI.

49. Yes, though with each addition to it (i.e. security, people, IPPD, it becomes too crowded with information and complexity and it then becomes a model that is not easy to follow or implement.

50. Yes, because it attempts to integrate different disciplines within the business.

51. A good portion of my clientele do not believe that it is. Some are staying with the CMM as long as possible, some have chosen other alternatives such as six sigma as the basis of their process improvement efforts.

52. I don't possess enough experience to give an opinion.

53. At a higher level of abstration than the SW-CMM. Thus, will probably require more consulting time. Companies can't as easily implement by themselves.

54. My experience is almost exclusively with CMMI. However I have assisted many organisations who previously were using SW-CMM. The differences between the 2 models is immediately apparent in the integration emphasis of the CMMI. This integration is not only integation of products and services of mutiple discplines under the one reference model but also the emphasis of integration among the Process Areas.

55. Yes, the CMMI is more comprehensive than the Software CMM, ISO 9001:2000, and Six Sigma.
56. First, clear mapping of bussiness goals to process goals. Focus on Engineering activities Concentration on sub processes
57. Model it self is equivalent in effectiveness to other models.
58. Compared to CMM it is a good improvement. Compared to ISO 9001 they are compatable but each has it good points.
59. Yes, address all our development processes (systems, purchasing and software)
60. Yes...The Continuous Version is far more flexible for today's environment.
61. Yes. It fixes many of the problems with the Software CMM by addressing system issues. It alse provides more flexibility, and I understand that additional components will be added in the future.
62. Absolutely YES! In my opinion CMMI (Continuous Rep) is what Design For Six Sigma of a software or a systems initiative ought to be. The model itself promotes process improvement ... as you scale beyond Level 3 into levels 4 and 5 by enabling the improvement to capability levels of the lower level PAs. Needless to emphasize, CMMI has to be interpretted correctly and applied thoughtfully. Of course there are some aspects like Integrated Teaming and other People CMM flavors that would have been best left alone. People CMM does a great job in addressing these issues. Anybody interested, can always seek recourse to People CMM.
63. As the scope of CMMI is wider than just software then there are obvious benefits due to being able to leverage the experiences of software CMM into the other disciplines. I am still dubious of the use of the model in a non-engineering discipline (e.g. finance/procurement)
64. There are several process areas that have improved and are more clear. I also think that instead of integrating the other models to make CMMI, they were merged. I think the model has increased confusion and introduced unnecessary complexity especially for smaller software IT companies.
65. The CMMI is clearer and better structured than the SW CMM. It promotes principles with examples rather than mandatory actions, and so leads to better understanding rather than robotic performance
66. Yes
67. CMMi is a significant improvement over CMM. It represents a maturing of the process of maturity. CMMI/CMM are the only improvement models I am familiar with.
68. It is well constructed and informative.
69. Haven't used other models.
70. Yes - insofar as the model is not as restrictive to Software (like SwCMM). It adds flexibility by being able to select SS and/or IPPD along with SE/SW. Also, continuous representation allows most organization entities to participate in process improvement without having to be a full-blown life cycle development project.
71. Yes, I like the way SPE in the software CMM became an entire catagory in the CMMI.
72. I like it better than CMM as it incorporates more than just software. Also, it has more depth than ISO 9000.

73. Yes. Generic Practices have clarified what is the role of insititutionalization. Engineering has been given its role in projects ! Measurement has received the right level of visibility
74. It might be an improvement if one CMMI replaced the multiple previous models we were using. Unfortunately, there are just as many CMMI models as there were models that it was supposed to replace. SEI should standardize on one continuous model, then provide templates to address the less flexible and narrower scope of the other CMMI models.
75. In my evaluation, what we did before CMMI was ad-hoc way, it was not using any described model.
76. Comparison between ISO9001:2000, CMMI is more specific in terms of software development management.
77. Yes it is. ISO is also widely used in our organization but in my opinion not as effective for institutionalizing better practices and real process improvement.
78. For a predominantly SW organization, CMM/CMMI are more suitable, as compared to ISO 9001 or ISO 2000 models
79. Yes, it has the deatil and relevance to systems engineering that we need. It is also quite hard to answer 'yes' when the answer should really be 'no' because it is so detailed and asks the same questions from a number of angles. A rigorous approach.
80. Somewhat. My organization is primarily a software support organization, therefore much of the Integration is not applicable. However, my organization neglected the half of the people involved with acquisition in order to get their SW-CMM Level 3 accreditation. Now, with the CMMI, they are open to incorporating processes applicable to acquisition, which is an improvement.
81. CMMI is certainly an improvement over the often very rigidly interpreted CMM. CMMI provides a convenient measurement tool, although it lacks features in being able to communicate measurements back to management (as opposed to something like six sigma, that lacks a *convenient* measurement tool but is easy to communicate to management.) CMMI is easier to interpret outside of its intended context than ISO 9001:2000, but lacks the credibility of ISO 9001:2000 due to the lack of obligation to accurately report appraisal/registration results found in ISO.
82. Impoved over CMM.
83. It's progress in terms of integrating the models (a difficult job that I don't think is yet complete), but consensus seems to be that it has watered down some of the software and systems engineering requirements of earlier models.
84. The notable improvements of the CMMI over the SW-CMM are the way the common features are organized and made applicable across all the PAs, the increased detail in the engineering process category, and the flexibility of having a choice of representations.
85. Yes, it's better than ISO9000, and it must be more suitable to my organization than 6-sigma.
86. Yes, compared to SW-CMM and its deficiencies.
87. Possibly yes. I am not yet trained on CMMI model, do not have a definite answer
88. The model is too large. The information is not easy to grasp and retain.
89. It is an approvement over CMM

90. Compared to other standards, e.g., ISO and TL, the CMM/I provides an improved approach w.r.t. providing more guidelines on the "how" (as opposed to a laundry list of things to do).
91. often.
92. Haven't used any others
93. yes, it allows the flexibibility that any organization may needs for process improvement and not limited to a fixed group of process areas
94. So far it looks good, particularly the emphasis on validation and verification
95. yes, if it is implemented correctly
96. I am familiar with the SW-CMM and the SA-CMM. The coverage of the CMMI is a definite advantage, particularly for those organizations that do more than pure software development. However, many pure software organizations still believe that their needs are met more directly by the CMM, particularly if an updated version of the SW-CMM were released as originally planned.
97. Yes, additional disciplines requirements add tremendous value.
98. Yes if compared with SZW CMM and SPICE.
99. An improvement over CMM in Engineering PAs, M&A & Risk Management
100. Yes. The CMMI is much more comprehensive than other models we have used - including our home grown initiatives.
101. Yes. It is more complete than the SW-CMM. It will be harder to achieve, so we will not direct software to use it until we have achieved Level 3 using the SW-CMM. Our government customers are very interested in us reaching Level 3 of the SW-CMM. They have made no mention of the CMMI.
102. Yes, provides best practice guidance that ISO does not provide. It is a significant improvement over previous CMM models.
103. Yes...more depth and flexibility
104. I am not really certain when comparing it to the Software CMM. Some of the PAs are more tightly focussed than the corresponding KPAs.
105. CMMI is excellent for its MA, PPQA implementation in the model which need to be maintained perpetually by the organization for maintaining its capability/maturity level. However, creating MA data is a huge task and very few experts are available in the industry. Even due to recent recession, such experts are considered extra burden to the industry and are layed off even by XXXXXX. Only personnel who are directly involved in production have a better standing than CMMI educator in general consumers and semiconductor industry.
106. Yes, wider breadth than SW-CMM and more comprehensive.
107. yes, SW-CMM is tied to software and is too specific in the practice statements
108. We had been using ISO/IEC 15504 (SPICE) since 1996. CMMI is certainly noteworthy when compared to our previous efforts in implementing a process improvement model. In our opinion, it provides enough flexibility and a clearer roadmap compared SW-CMM.
109. Yes. The integration is the most beneficial aspect of the model.

110. Yes -- incorporates a total SE approach

111. Yes. Our SWE efforts are farther ahead (process-wise) than our systems eng. efforts, though most (Congress, overseers, etc) tend to look at systems (with the assumption that software will just follow the systems model). The CMMI helps merge these as equal entities/activities.

112. It is noteworthy improvement over the SW-CMM. The expansion to areas outside of software engineering helps to integrate the processes within an organization.

113. Yes. As a model for improvement growth it is good

114. It seems to emcompass the model for establishing best practices, based on how practitioners are currently doing business. As with all things there is room for improvement of CMMI.

115. yes

116. I am still on the fence with this. I general I believe it is an improvement over the SW-CMM but the "framework" concept and all the additional background information makes it difficult to simplify it for implementation.

117. Yes, Yes, Yes!!! It is much more applicable to non-software entities/organizations. It is more complex but, once you "get it" it makes a lot more sense.

118. Yes. It consolidates software and system engineering into one model.

119. I find it superiority to the SW-CMM due to its inherent flexibility in implementation. For example, in SW-CMM very specific items are called out for tracking and analysis. In CMMI, the manager defines their business/measurement objectives, defines the measures that specifically support those objectives, and then runs with it. Much more logical, and from an implementor's standpoint, achieves better buy-in from the projects as they're more a part of their own process in this respect. SAM is a significant improvement, as well. It addresses not just contracting, but outreaches to all aspects of procurement and vendor association in a much clearer manner than the SW-CMM.

120. The biggest benefit of CMMI is the inclusion of all of the engineering domains. Most organizations I have been in have adopted the CMM, but still had failed projects because of lack of discipline in hardware and systems engineering.

121. Don't know, have yet to delve into CMMI.

122. Yes compared to ISO, no compared to SW-CMM (see answer 1 above), although it is better in being more clear on the need for documented process for "everything" , which is misunderstood and misinterpreted by the lower maturity organizations.

123. Yes, I don't feel that it is as restrictive as the SW-CMM and provides better interpretation.

124. Not ever having had practical experience using it I don't think I can answer this question.

125. While there are some improvements to the SW-CMM 1.1 that we have been using, most of the important portions have stayed the same. Some requirements, such as DAR, seem to be overkill. For our organization, it may have been a better approach to simply update the SW-CMM.

126. Only for those projects and organizations who do substantial other work than software development, of course. Also, it is difficult to apply to those projects who do only Systems Engineering (no software) and therefore only can perform a subset of the practices.

127. Yes. Mainly the Continuous Representation, but also in the organization of the process areas along functional responsibilities.

128. Yes. The other models I have used are SW-CMM, ISO 9001:1994 and ISO 9001:2000

129. There have been numerous process improvement methodologies over the years. CMMI is probably an improvement as it has leveraged/slightly morphed a number of them, but considerable work needs to be done to make it applicable to small businesses. In its current form, it is not possible to apply it in that kind of environment. And guidelines for doing so are sparse.

130. The CMMI relies on the software CMM framework so it does not seem particularly noteworthy.

131. It is certainly an improvement over the previous CMM model and seems to be more easily updated (changes seem to be more easily accepted by the community)

132. Yes, it is an improvement over the CMM. Six Sigma is still better for an approach to actually solving the issues identified by CAR (at Level 5)

133. Yes. Better reference guide, more flexible and broader application domain.

134. Yes. Previously we had to take a magnifying glass to programs for software and then another magnifying glass to the same programs for systems in order to get a full picture (and that still left out program manager processes). This is holistic.

135. Yes, it has well defined criteria in many areas WITHOUT being overly specfic

136. Great improvement over Software CMM.

137. Yes. Better coverage of engineering processes.

138. Yes, I believe it is. I am familiar with CMMI but have not had formal training yet.

139. Yes. When you go from nothing to a proven process, ultimately, you improve your internal processes.

140. I would have preferred to have gone to CMM Version 2.0 C and kept Software seperate from Systems engineering because Systems engineering is not prevalent here

141. For us the Software CMM was fine. We did not really need this one.

142. In general, yes. I like the integration - recognizes that the project and organization must operate as a team. It is less prescriptive than the CMM, allowing more flexibility in application.

143. CMMI is improved in some areas and weaker in others compared to the CMM. The CMMI strucutre with the GPs and SPs is more confusing compared to the more straight forward approach of the CMM. Although the CMM was more redudant.

144. improvement yes, noteworthy- remains to be seen

145. CMMI is covering the cooperation between different functional areas, which is not too much given in other models. It is a logical extension to the CMM and exceeding ISO 9001 significantly. Not quite clear how to get influence on the other areas, which don't belong to the own department.

146. YES, if compared to the SW-CMM or SE-CMM

147. CMMI model support the obvious roadmap for process improvement, it's helpful.

148. Yes, it is a better fit for our business.

149. It is an improvement over S/W CMM because it addresses Training and Metrics much more thoroughly.

150. yes

151. Yes, the systems engineering addition is valuable

152. Yes, I think it is a good improvement over the SW-CMM.

153. We are just starting on our CMMI journey, so it's still difficult to say. The subpractices concern me. If they are truly "informational", then they are helpful. If they are requirements (as I seem to hear some assessors say) then the model is imposing things that may be unneccesary burden in several cases.

154. Yes, I used the SW-CMM and like the structure and overall approach to process specification along with the addition of more context to understand how the SEI views a process arear, e.g., practices and sub-practices. This additional information also provides some best practice approaches in cases where an organization may not know what to do.

155. It is noteworthy in that it encompasses a wide spectrum of products. Applying it across te board has been a challenge.

156. CMMI provided improvements in some areas as compared to SW-CMM (expanded SPE), but diluted PR and added what I consider to be unnecessary PAs (RD, DAR). The politics of combining the SW-CMM and SE-CMM are evident. No real overall architecture is evident, just a cobbling together of two waring factions opinions. Adding 7 PAs to Level 3 (as compared to SW-CMM) does not help influence groups to adopt CMMI.

157. Yes, directly related to: 1) clarity of the verbage as compared to CMM; 2) amplifications, elaborations and other guidance provided; 3) new Process Areas (e.g., Measurement and Analysis, RD, Ver, Val, etc.) that provide better and more explicit practice examples

158. I liked CMM and really haven't tried to use CMMI alot yet. I like the idea of getting credit for the things you do well even though you haven't implemented each and every one in a certain level.

159. Clarity

160. Don't know

161. The integration of cross-functional processes under CMMI is a great improvement. We have just begun planning the tranistion to CMMI, but already the Systems Engineering folks are discussing improvements to process interfaces with the Software Engineering folks.

162. CMMI makes some presumptions about roles (e.g., that Systems Engineering is a well-identified function)

163. It is better than the CMM in terms of structure and coverage, but not as good in terms of details. The CMM was developed for software people by software people, whereas the CMMI is more generic and can be applied to almost anything. As one of our customers told us, one could use it in a XXXXXX plant. One of our customers was walso orried about that and he made a statement to the effect that the CMMI and the SCAMPI were becoming more like ISO. In his country, there are over 2000 organizations that are ISO certified and 95% are no good. If it happens to the CMMI and to SCAMPI, this individual feels that the CMMI will be abandoned by the community and another solution will be sought.

164. My recent past is wrapped around the CMM-SW. CMMI is definitely an improvement because a major shortcoming of the CMM is the underdeveloped interfaces with non-software entities. CMMI bridges the gap.

165. Yes

166. Yes, It provides you more choices

167. N/A

168. The CMMI process fits our requirements.

169. Yes, it is an improvement, but with some minor caveats. CMMI is a very well laid out framework for experienced PI professionals, and its content provides many improvements over the SW-CMM v1.1 (better clarification in subpractices, relevent updates based on current industry practice, etc.). I also find it much more useful/usable than XXXXXX BS-15000 series, or my (limited) exposure to ISO 9001/9000-3. However, its sheer volume is intimidating to the unintiated, and its structure is more difficult to understand/follow than the SW-CMM v1.1 (particularly when introducing the conept of the continuous representation to anyone who has only used a staged model.

170. Absolutely, whereas other methodologies may improve the procurement process specifically, they do not concentrate on the procurement process in general, i.e. from a true lessons-learned, fine-tuning experience. CMMI rather endeavours to constantly improve the quality of software, and the process used to procure.

171. far superior to the software cmm. language is more friendly for non-DoD customers as well as DoD customers. continuous representation is more acceptable in situations where business drivers are important and not just the "level". we're seeing a greater interest in the silicon valley. only complaint is the model excludes the term "hardware". definite need to look at the language. in addition, the services and manufacturing disciplines are glossed over, along with topics such as concurrent engineering. overall, however, this is a good baseline for future exploration (model expansion and model simplification).

172. In comparison to CMM it has great noteworthy improvements especially for a SW industry. The Technical set of Process areas are definitely a boon in comparison to SPE in CMM. Also, this gels well with the ISO 9001:2000 and is so nicely modelled that additional requirements for the standards get added as and when required

173. Yes the CMMI is noteworthy. Though it takes some getting use to after using the SW CMM

174. It is a natural evolution of existing models. It encompasses the extensions we added to our internal process assessment methods and adds some goodies.

175. it is an improvement but not noteworthy

176. As CMMI continues the CMM effort it appears to be noteworthy. As I have not worked with it I am not able to provide a valid reply.

177. As a blend between lessons learned and best practices of SE and SW worlds, the generalization makes it more adaptable to different situations

178. I don't see it as a vst improvement over the SW CMM.

179. CMMI allows the interpretation where some other models do not, however that interpretation can be contentious at times

180. Not sure it is an improvement we would use...(see below)

181. yes, currently using SM/CMM

182. Yes! The model now not only spans software and system engineering, it also includes program management and hardware engineering if you view the practices for each of these entities.

183. seems to be more complicated than CMM

184. I have used CMM in a limited fashion so really can't compare well.

185. I consider the CMM and CMMI the most complete and elegant model in the industry.

186. Do not know yet.

187. Absolutely...just that fact that you've gotten everybody talking the same languare is criticaly important.

188. The model is - not too sure about how it is getting used, especially by LAs. Also, disagree with the emphasis on Ratings, which require a Staged approach.

189. I am mostly familiar with the CMMI and am unable to compare it with other Industry models.

190. Yes, it is less prescriptive (providing hows) than other models.

191. Overall the model is good but complex. I some case the mode should be more explicit to aid with the understanding.

192. Yes. We have only tried CMM besides CMMI.

193. It improves on the SW-CMM, but it doesn't yet achieve the utility for acquisition of the SA-CMM.

194. Yes, more focused at my total organization instead of just software.

195. In some areas better, but by being a compromise across many discliplines, the specific guidance from the SA/SE. etc model is lost. One only has to look at the SA-CMM, replaced by 2 PAs, to see the problem

196. Yes. The integration of systems engineering has always been the missing key. Many have thus used separate models, whereby confusion and sometimes contradiction is introduced.

197. I think CMMI is a possible approach for embedded system development.

198. I do not think so.

199. Not sure yet, since we haven't adopted it.

200. Yes. I found CMM very easy to understand. However its implementation is resource intensive.

201. I think CMMI is an improvement over CMM for organizations like ours, who have projects of various work requirements; Some of our projects are mostly or all software related, some are hardware dominant with a little software, and some are an equal combination of both hardware and software. We did find it quite difficult to form a fit with CMM for our hardware dominant and our combination projects. That is one reason we have chosen to adopt CMMI, so we can find a better fit for those projects involved with mostly hardware or with a combination of software and hardware work requirements.

202. Yes - especially with Goal alignment; Special areas such as Measurement and Analysis; Decision Analysis ...

203. YES - the inclusion of measurement, risk management, and requirements development are huge improvements. Additionally, the level 4 and 5 materials are superior to the CMM.

204. Not used any other model.

205. I am familiar with SW-CMM, but I don't really know the CMMI model.

206. Yes - broader than SW

207. The CMMI contains a wealth of useful information in the subpractices and other informative material. Structurally, the model is needlessly complex.

208. Absolutely. It goes especially to IPT issues and the added detail (in most cases) in specific and generic practices does add real value to the our efforts.

209. Yes for my organization which is a system development/engineering organization. Focus of CMMI is beyond software.

210. Yes. CMMI is more comprehensive compared to just SW CMM because is requires integrated SW and Systems engineering policies and processes.

211. Yes. It makes much more sense to rate pieces of an organization rather than trying to assess an entire XXXXXX. It's easier to work on the individual pieces, one at a time.

212. I would not say "noteworthy", especially if you are in a mostly-software kind of environment (like we are). Some process areas (Measurement and Analysis at Level 2) are clearly an improvement. Others (like Product Integration) make less sense, again, for our environment.

213. Yes. It is better tied to business practices.

214. Do not know

215. It's good if you just build software/systems for a living. Here, we also run the base phone company, operate the computer networks, radios, radars, etc. CMMI doesn't have PAs to cover these areas of our organization.

216. Only used the SW-CMM, but it is an improvement over old model.

217. Yes, because it includes Systems and Software Engineering in a common model.

218. Yes. We could not focus on software/system development issues by TQM. ISO9000 Quality Mangement System define, practice, monitor, and improve overall development process, but it does not request us to manage and improve detailed processes.

219. No other experience to compare with.

220. The nice thing with CMMI is that it integrates the systems, software and management of other related process to a project.

221. Yes. Once you get your software development under control, systems engineering problems become more evident as well as more critical to success.

222. I feel it's way too complex

223. I like the concept of the integration of CMMs. However, I think the length and detail of the CMMI is a little overwhelming for new users. I also think the IPDD (although the concept is excellent) is also confusing to people. For new CMM-based users, the selection between staged and continuous representations is also confusing. This is feedback I hear from new projects implementing CMMI.

224. unsure

225. To the extent I'm familiar I think it is an improvement on CMM. The set of PAs is a better model of our improvement path than the KPAs. I especially like MA instead of all the Me practices.

226. Have not really used other models

227. Yes

228. Yes. It includes Integrated teaming. The Technical solutions PA where design alternatives are considered is note worthy. The Vision, goal , charter inclusion The Project performance goal which is identifying your Y's and X's is also noteworthy improvements

229. I have used SW-CMM model; CMMI is more precise and detailled on engineering process area than the old CMM model.

230. Yes, it is a great model. I like the approach and organization of PAs and specific goals and generic goals.

231. This was the first industry model I tried to implement, and in hindsight I would not have selected it for us.

232. Yes, particulary with regard to supplier sourcing.

233. I like the wording of the practices better than the SW-CMM, however it is still difficult translating between SEI/CMMI-speak and each organization's standard processes/terminology

234. I'm not really aware of all the advantages for an organization that does only software.

235. There are specific practices to provide processes.

236. Reduces the complexity of process improvement, gives strong guidelines.

237. In the company aspect, it has merit in tracking both hardware and software components.

238. CMMI does not dictate how to perform software development activities it gives general direction on what activities need to be done. Therefore, the CMMI process improvement methodology is very applicable to organizations following agile methodologies. Some agile activities may directly defy CMMI software engineering accepted "best" practices and result in non-compliance, however in general, CMMI can complement these activities and keep agile methodologies from becoming undisciplined.

239. Should make more adaptable to smaller projects.

240. Have not used other approaches.

241. To date, the only other formal approach we have used in our organization has been ISO-9001. In my opinion, this method exists solely for the purpose of ensuring various process and prodedures are documented. It does not necessarily examine each to determine their effectiveness.

242. Yes, it provides necesary support for SE.

243. Yes - includes org and projects that aren't strictly Software

244. Yes, far more better for internal process improvement than ISO

245. Great improvement. The problems with the SW-CMM are fixed in CMMI with VERY FEW defects.

246. It is an improvement over CMM. Wish there weren't so many Process Areas - tends to present the model as more complex and complicated than it really is.

247. Never used any other models.

248. Yes, its blend of CMM and ISO 15504 makes it more fully comply with relevant ISO standards.

249. Yes, it has more clarity in some of the areas that were confusing with CMM for Software.

250. Yes.

251. Well, since my company has not yet adopted a standard IT business model of any kind, I guess anything would be an improvement. But yes, CMMI is the direction many of my peers would like to see us proceed toward.

252. In my opinion, my organization is not ready for CMMI as we have yet to achieve a CMM Level 2.

253. It's much better suited for technical support services than the CMM-SW, which we've used in our app. development areas. I like the expansion of SPE into TS, etc., especially the focus on selection of design alternatives. It doesn't help to do the project mgmt - centric practices well, only to implement an inappropriate system a design solely based on a tech lead's personal bias without considering and evaluating alternatives. The Continuous Representation has been useful to us: 1) we can target areas for process improvement based on our own priorities and 2) scope our initiative to something we can accomplish in a reasonable amount of time.

254. Yes, it provides more detail and better coverage for risk management, decision analysis and casual analysis resolution. The additional guidance in the software product engineering areas is especially helpful.

255. It is not clear that CMMI offers benefit over CMM for software-only organizations that already have a significant investment in CMM.

256. yes, but... not everything that we do is covered.

257. Yes. The continuou representation allows us to target advanced process improvement efforts in selected process areas without getting bogged down in lower-maturity process areas.

258. Yes, compared to the SW-CMM.

259. Yes, the CMM/CMMI models far exceed other models used and available for process definition and improvements.

260. Yes, but there are too many models. Government and industry need to reduce the number of models and the overlap between them.

261. It seems to have re-arranged the order in which certain things (KPAs) are taken on and on the surface seems a lot more stringent, rigorous and less open to interpretationa and "self-expression."

262. yes - see above answer

263. Yes. Once we used ISO9001, which is still used in a part of my company. We believe CMMI is much more practical and suited for us than ISO9001.

264. CMMI scale is so large and I cannot compare with others but I utilize it to check the project quality.

265. Only experience is with SW-CMM and CMMI. Currently implementing elements of CMMI for software development. I think CMMI is an improvement over the SW-CMM. Just received preliminary training in Process Improvment by XXXXXX but felt that this has the same basic elements as CMMI. The organization considered ISO; others determined that the end result with ISO would be similar to CMM but that CMM provided more information on how to use the model. Missed the TQM and BPR approaches.

266. Yes

267. Yes. The integration of various disciplines is extremely useful.

268. Since our organization has not made a decision in regard to CMMI, we have had little experience with the model. Hence, it is difficult for us to ascertain whether or not it can be considered a notable improvement over other models such as the software CMM.

269. It's structure is easier to understand than SW-CMM. It gives common framework for S/W development process and System development process.

270. Yes. More cohesive and broadbased in its framework. Institutionalizing factors and Engineering Process Areas given more emphasis compared to Software CMM which is definitely a big plus. Risk Management and Decision Analysis are 2 other areas where the CMMI is a big improvement on Software CMM. Also, an integrated approach towards process improvement would enable PI initiatives to be more tightly coupled with business goals.

271. I used SW-CMM. I consider CMMI a big improvement because: - applies to a broader spectrum of roganizations; - provides more detailed insigths on product engineering disciplines; - more consistent in the wording of the practices

272. CMMI is better than SW-CMM and adds leverage to apply broader than SW only.

273. Yes - improved clarity and architecture, less duplication. Integrating domains is a real plus for our operations.

274. YES. Very complete, user friendly.

275. Yes, when comparing it to approaches like Bootstrap, ISO 15504. Yes, when working on PI in an environment of software-intensive systems and the PI effort exceed software development

276. Yes. It has more than adequate scope and "drills down" suffocoently where I need more developed covereage. For example, Supplier Agreements is an example of a more than adequate subject treatment for my purpose. However, even Supplier Agreements is not entirely adequate.

277. Yes, the addition of the continuous approach has very beneficial. We have been able to communicate better with management as we align the kpas that we are working on with the Balanced Scorecard objectives.

278. Yes.

279. I think the model tries to cover all circumstances and it's not easily tailored. The ISO approach of provided 10 pages of requirements gives the organization flexibility on implementation.

280. CMMI serves us as a way to organize our improvement efforts. We prefer it to the SW-CMM as it covers more than just software development.

281. Yes, but there need to be more standard templates and examples of how to accomplish.

282. Yes, it fills in the voids that the SW CMM left uncovered

283. In some areas, yes. In others, no...I could not honestly characterize CMMI as a "noteworthy improvement".

284. I see it the same as CMM if you don't do a literal interpretation. The concepts behind the model are an excellent foundation for any improvement initiative

285. Yes, but it does not cover all types of IT projects or those that do not follow a full lifecycle.

286. Some part are, some parts are not. CMMI does a better job of explaining some concepts than the CMM did. However, some of the new things that were added are somewhat confusing.

287. Yes, as a model it is an improvement. It better describes what and organization needs to do in order to "act" as a mature organization. Since we have many projects that deal with SE and SW this model is an improvement.

288. Staged approach of CMM(I) is better than lack of guidance provided by other models.

289. Yes, a significant portion of my organization provides engineering services to our customer. The Software CMM was difficult to apply since it was only applicable to our software development efforts.

290. Depends on usage, but in general, it's an improvement over SW-CMM.

291. CMMI has more guidance than ISO9001.

292. It is an improvement over SW-CMM. I am concerned, however, about the confusion that exists in representation and domain selection (staged/continuous & SW/SE/IPPD/SS) and how source selectors will intelligently descriminate between bidders given the mix of certifications that they may have. Also, it seems that the Government has fallen short of giving the CMMI model the stature that the CMM had in their policies and RFPs.

293. Haven't used it yet.

294. Yes - Every process area, with minor exceptions, contains guidence, examples. The GGs and GPs applied across all PAs uniformly makes it much easier to learn after you understand those new concepts. The additiona of the MA PA is a significant improvement for providing meassurement-related guidance.

295. CMMI is too big for small or medium organizations. SW-CMM is much usefull for these kind of organizations.

296. The continuious model allows organizations that are not interested in achieving a certain level to concentrate on particular improvement areas.

297. It has the benefit of being rather well-accepted due to the wide spread of the CMM. Also, it does not impose a solution but rather allows you to address all the elements of your own process improvement.

298. I do not know.

299. I think the CMMI is way beyond ISO and a significant improvement over the CMM. The CMMI also covers a broader spectrum than the PMI PMBOK.

300. Compared with software CMM, CMMI is a more detailed model in many respects. However, we are only concerned with software organisations and would prefer terminology that relates specifically to software rather than the more generalised terms used in CMMI.

301. Yes, I love its adaptablity to both the software and systems environment

302. CMMI is more generic than CMM. It is more easy to map any XXXXXX process to CMMI than CMM.

303. If and when the SA-CMM is also included in CMMI it will be much more beneficial to my organization.

304. See answer above

305. Too early in the CMMI adoption to be noteworthy.

306. Compared to the SW CMM, ISO 9000, and Malcolm Baldridge, it is more difficult to interpret and implement.

307. Yes, particularly because it brings Systems Engineering and Software Engineering together. They really always have been, but some practicioners, particularly in Software, have been reluctant to get out of their comfort zone and accept that the two disciplines are really are almost inseparable. For example, how many "systems" today don't involve software, and what "software" isn't really part of a a system?

308. Unable to answer because we have not tried CMMI yet.

309. CMMI is an improvement, but may require more organizational committment than the CMM.

310. Yes, much more than CMM and/or ISO

311. The key to any process improvement plan is to pick one and stick with it rather than jumping to the next "buzz phrase" or fad. CMMI offers the track record and and planned orderly process improvement framework that updates itself to stay current without acting like a ship without a rudder.

312. There are tradeoffs. One thing that we heard consistently at the higher maturity levels with the software CMM was that they wished it would be spread out to other groups. Now with CMMI, that is happening, but it is much more complicated trying to implement a standard approach acrosss functional boundaries that have a history of segregation.

313. It's biggest advantage--and disadvantage--is the integration of the multiple models, including ISO.

314. Not necessarily. It focuses on engineering but does not address the breadth that ISO 9001:2000 does. In some ways it is better than the CMM but it should be made clearer that the CMMI does include hardware engineering.

315. Yes, it is more aligned with how a solution should be delivered (vs solely focusing on software, or acquisition, etc).

316. CMMI is a noteworthy improvement because of its focus on lessons learned and details that help building processes to satisfy its requirements.

317. It fills the gaps of PSP/TSP

318. The Scope of CMMI is larger therefore it could be applied to more than software organization. Several Process Areas and practices are improved over SW-CMM

319. I personnally like the CMM.

320. I think it is.

321. Yes it is. It provides a framework to follow.

322. For someone who's a SW-CMMer, the CMMI will take some relearning.

323. Yes - used FAA-iCMM, which is considerably more rigid. Found that things being done were only being done to 'check the box' for an appraisal.

324. Yes. To the extent of explicating many a intuitive and indirectly referenced or intended requirements of software CMM. From that perspective it has made sure that the requirements are fairly clear and is consistently interpreted by different class of personnel in an organizational setting.

325. Some improvement in detail.

326. Yes, we have integrated our functions since 1995 because we realize you can not discipline one area and sacrifice others.

327. Yes

328. It is clearer in many ways, but could easily be less iterative and less complicated.

329. I don't know yet.

330. Yes. The fact that the model is integrated and begins to address system development as a whole is very important improvement.

331. Yes, the integration of systems and software is great; however, the additional Supplier Sourcing and Integrated Product and Procees Development makes the current suite very comprehensive.

332. Equivalent

333. Encompassing both systems engineering and software is a significant improvement. It would be even more beneficial if other business disciplines critical to program success were covered (HR, business development)

334. CMMI, like any mode can be used to help an organization or hurt it. The model should help the membersof an organization to ask the right questions. The problem is that too many people use the model to come up with the answers. That hurts the organization.

335. no, it is a model that appears to have been done by too many people and shows too many disconnects and inconsistencies

336. Yes.

337. Absolutely, particularly in the ability to apply to different types and sizes of organizations. The continuous representation is also a great improvement on the staged representation. The emphasis on Requirements Engineering and the application of Systems Engineering thinking is a great improvement that addresses the typical reason for project failure which are nearly always requirements related.

338. Clearer, more concise, reducing interpretation and making it more difficult for some with a "checklist" mentality to use it prescriptively (which is good thing). Results: more folks are realizing the true use of a model versus a standard, and are using it more appropriately. Of course, it requires one to have to think more, and apply more technical and business sense and reasonableness factors. (Not for the simple minded nor for the lazy.)

339. Yes and no. System Engineering disciplines were needed and are now in CMMI (vs just CMM-SW). There were some "seams," though, and the version 1.0 wasn't as integrated as the latest CMM-SW. CMM-SW is still the best model, but CMMI adds valuable disiplines.

340. Yes - much more applicable to the broader scope of business activities than earlier models

341. Not sure.

342. I would appear to be.

343. In a comparison against the SW-CMM only, local adopters have advised me that they very much like the combined approach of software, hardware, and procurement as it allows them to enhance monitoring and control across their business areas, not just specific software development projects. They also very much like the more tailorable and logical approach to measurement definition: Defining one's business/project objectives, defining the measurements that speak to those objectives and then the methods of gathering data and analyzing it better serves our dynamic organization where each project is unique. For example, one project needs to carefully track their critical computer resource metrics as they need to fit within an established computer platform in the XXXXXX. Another may not find this measurement as critical as they develop a web-based message system.

344. it certainly integrtaes two key aspects...SE and SW and addresses a little re solicitation

345. Yes

346. Yes, it is more generic and can be applied to more than just software.

347. Yes. I have used ISO9001. Compared to ISO9001, CMMI provides the detail of process improvement.

348. If/when resources are available for adequate support.

349. Better than SW-CMM. Refer to 1 above.

350. The staged representation is a moderate improvement on the SW-CMM. The continuous representation is more problematic and opens up issues that the SW-CMM did not have.

351. Yes: the improvement aspects of the CMMI is not expressed enough.

352. Yes - The ability in the Continuous Model to select and impement only what is needed to achieve the project or program goal has made a significant difference.

353. As I understand it, CMMI covers the entire business organization. I feel that CMMI is more comprehensive and covers the entire organization. My reasoning is that this approach should fit every phase of an organization. It should filter down from the top and affect every business entity.

354. CMMI has certain benefits over the SW-CMM, the most useful being the way it ties the PI programme into into practices of the model

355. This is the first approach that we have used.

356. Even if I only had a course and attended several presentations about CMMI, I think it is.

357. I don't have any CMMI training. Can't comment.

358. My current organization does not have a well defined process. CMMI would be a vast improvement.

359. Our primary experience with software process improvement is with the SW-CMM. The CMMI seems more complicated than the CMM. It does contain added features that should provide enhanced process improvement. The trick is to convince management that it is worth the additional cost to retrain and move to the new model.

360. I think that CMMI has no real improvement over SW-CMM.

361. Yes, the broadened scope is helpful to organizations that are developing systems (software intensive or not).

362. Our experience is only in the CMM and CMMI models. CMMI is a noteworthy improvement over CMM. Achieving a level rating under the new CMMI model is a greater accomplishment for an organization.

363. It is better organized than SW-CMM and has filled up certain gaps that existed in SW-CMM. Specially MAA (which is well enmeshed with other PAs. RiskM and DAR are good additions. Combining TCM, PCM, and splitting SW-CMM QPM and SQM practices by functions (SEPG - OPP and projects QPM) is also good. The emphasis on SPC and explicit focus on special causes and common causes atn Level 4 and 5!

364. I have used Sw-CMM and find CMMI is much better and more flexible to use.

365. Better than CMM.

366. Yes. It embraces more than just one engineering domain.

367. Yes . My organization is in transition from development to acquisition. This model seems a perfect fit.

368. I see a lot of value in the integrated SW/Systems view as opposed to the SW-centric CMM model.

369. We are too new to provide valid input as an orgainzation. Personally speaking, CMMI imitates life ... around here, that is a BAD THING, bacause rather than considering the big picture and molding the company to it, they reverse those roles. FOrcing the tiered CMM approach makes more sense for us, because we can teach proper practice with it.

370. Yes. More flexible that S/W Development CMM

371. don't know, am not currently using CMMI

372. Software engineering Integrate with System engineering

373. Yes - integrates SE and SW process improvement models.

374. Yes. Also use ISO-9001 and Six Sigma

375. Yes, we have been tackled ISO 9001 since 1997. ISO 9001 is general and CMMs are specific to our business field.

376. No.

377. More elaborated than any other models(SW-CMM, ISO/IEC TR 15504).Informative part is very helpful even though the size of document is increased.

378. The CMMI-model is very detailed and specific compared to ISO 9001.

379. We have not used CMMI.

380. An improvement in structure on SW CMM, particularly goals/practices. Personal preference to approach observed used historically by organisations with ISO 9000:2000

381. Yes, as the only other model we have used in software CMM.

382. not using

383. It provides the raodmap and guidelines to get to our destination.

384. No comment

385. yes.

386. Yes; it begins to include more of the key stakeholders and gets down into more detail regarding what is expected.

387. Not enough experience or knowledge to comment.

388. No

389. Don't know.

390. Yes, compared to ISO 9001; because it is more specific to the disciplines important to us (SW, SE). And Yes compared to SW-CMM because of the 10 years of experience and advances evident in CMMI-SW/SE over SW-CMM.

391. Some of the structure required to demonstrate compliance with the model is overly complex. For example direct vs indirect objective evidence. Explaining the CMMI to those who are not familiar with it is much more difficult than explaining the CMM.

392. In my opinion, yes. We need to expand into the realms of business and systems process, beyond the narrower focus of the Software CMM. CMM and CMMI both offer advantages over other models (e.g., IEEE, ISO) because they are behavioral in nature.

393. CMMI covers more areas and provides greater guidance than previous models.

394. This is the only model that I am familiar with.

395. I don't know - not enough experience.

396. For SE the SECM was much more comprehensive and easier to use than CMMI. For integrated organizations, CMMI is better than any one model.

397. Apartt of CMMI, I am used to CMM and have little exposure to ISO 15504. The main improvement is really in the larger scope, more explicit measurement usage requirement.

398. CMMI offers formal guidelines we can follow that is widely recognized and accepted by others.

399. The CMMI appears to be easier to grasp than the SW-CMM. We really haven't used it yet.

400. Feedback from the SEPG sessions I attended is that it takes longer to do assessments, is harder to understand, costs more to implement and assess and requires the participation of elements of the organization that do not have to participate in CMM. This is not very appealing.

401. I believe so.

402. It is different from other models but would appear to work well with a variety of development methodologies

403. yes because it was difficult to apply multiple models.

404. Based upon an initial level of use and compared to past use of SW-CMM and SA-CMM, CMMI-SE/SW provides substantially more overall guidance. I feel I am still in the learning mode, with limited expose to varied clients needs and scope ... it may not be as well suited for small organizations as other models.

405. Glad to have systems engineering added and the enhaned role for supplier agreement management.

406. CMMI is an improvement over the SW-CMM. It was more adaptable to our non-software development projects and the removal of the perponderance of procedure requirements was helpful.

407. I am proficient with ISO, AS9100, Lean Areospace, Baldrige, and 6-Sigma. For developmental programs, CMMI is the most comprehensive and appropriate model.

408. Yes, in that it incorporates systems engineering and integrates all engineering (software, hardware, systems, sustaining, etc.) into a single process flow.

409. Haven't decided yet

410. YEs - It covers the all of Product and Service Development

411. Have not used other descriptive models. PMBOK is a proscriptive model. Six-sigma is a method, not a model.

412. CMMI is adaptable to computer services whereas the Software CMM was not.

413. Yes, it includes measurement and analysis much earlier in the process, covers requirements, product engineering, and sourcing much better.

414. Not yet known

415. Yes.

416. I don't know, because our company did not have experience aboput CMM-I. In japan, CMMI is not major process inprovement approache. SW-CMM is used widely.

417. We are both approved CMM Level 2 and ISO 9001:2000 and hopefully becoming CMM Level 3 this Aug/Sept. I have been intimately familar with CMM.....past XXXXXXX (8yrs) and XXXXXX (11yrs) and always supported XXXXXX and XXXXXX. So yes CMM and CMMI are very noteworthy

418. Still in the process of getting familiar at the organization level. If CMMI does help define reasonable common-sense processes for Systems Engineering as it did for SW it will be a notable accomplishment.

419. Yes, again mostly due to the integration aspects of the model. The focus on IPPD and having one set of PAs for systems and software.

420. In many ways, CMMI is an improvement over the SW CMM. However, having two representations overly complicates the implementation for many organizations. And the sheer size of the model is overwhelming for organizations just starting out.

421. Not far enough to comment

422. Don't have enough experience with CMMI to answer

423. Yes, integrates the models. Good roll-out of Process Areas (Rick Mgmt, M&A, engineering). The IPPD is somewhat confusing as how it relates to the org structure.

424. Yes. It's much more internally consistent than CMM and ISO, and provides a strong set of completeness criteria for our process.

425. Absolutely. Much prefer the mostly discipline-independent focus. Recently use EIA-632 for benchmarking purposes and found it lacking, particularly with regard to organizational focus.

426. Should be developed into a programatic system which would include Maintenance surveillances and validation of ongoing compliance similar to the ISO scheme of registration

427. The format and framework are an improvement over SW-CMM 1.1, but SW-CMM 2.0 probably would have improved in the same way.

428. Yes

429. Yes, the CMMI is much more complete. I still question the need for 2 representations; specifically the need for the continuous representation since the staged representation can be used in a continuous fashion (if you don't need capability levels).

430. See response ot question 1

431. I prefer the separate CMM models. I find the disciplines (including acquisition) rarely overlap ans the CMMI contends.

432. No. It has become much too cumbersome, too detailed, too much repetition, too difficult to follow.

433. It's better than the CMM in that specifically addresses organizational goals and the beginning of measurement at Level 2

434. Yes. This is an approach that represents the collaborative efforts of many disciplines. Perhaps even more important is that it captures sets of best practices that are critically important and necessary to specific domains such as engineering, management, support and process.

435. It a step up fro the SW CMM

436. From what I have read, it appears to be much better than the previously used model.

437. Yes, in some areas, but the interpretation of many practices is tougher. Also, the IPPD material is NOT industry best practice, and addresses many practices totally unrelated to the IPPD discipline.

438. For software only orgs that are just starting on SPI path, CMM is better because its scope is smaller and it is not as intimidating. CMMI does a better job of addressing systems and not suboptimizing SW development. Also, Level 3 staged is so much bigger than Level 2 SW, that CMMI level 3 can seem too big to tackle. By having the continuous approach, CMMI allows the mountain to be eaten one PA and level at a time. So it lends itself to gocused, continuous Process Improvement better than a staged model.

439. It's good, but for our purposes, as discussed above, we think the RUP is better suited for us. The RUP used with Rational Tools is largely compatible with the CMMI, but is easier for us to use than the CMMI.

440. We have either used CMM or CMMI.

441. Yes. Merging the Systems and Software Engineering proceses is a step in the right direction. Including Project Management is the other significant improvement. It also helps that the CMMI has been designed to work with other engineering standards currently in existance and ISO.

442. Much better than ISO 9001. Improvement over CMM for Software.

443. Yes. Because CMMI contains great number of practical experience.

444. Definitely. The CMMI stipulate very concise and clear requirements of what need to be done to attain the desired capability. In view of the value of CMMI, we are adopting some of the best-of-breed practices like inspection peer review, supplier agreement management and software configuration management to be implemented in the organisation.

445. Yes,since it is more specific for our needs.

446. havn't benn working with other models

447. It is more flexible, that is good.

448. Yes. We achieve great improvements using CMM and we expect to expand these improvement to other areas of the organization using CMMI.

449. yes

450. Yes, but have only used CMM for Software.

451. ... I think only time will tell. Sunsetting the CMM V1.1 without support for the non, big defense contractors will probably gnerate a majority of users to not adopt it ... perhaps pushing them to other models.

452. We are still evaluating the CMMI

453. Yes.

454. Dn't know

455. We have just begun using CMMI in our organization. Comapred to other models like TQM, CMMI seem to provide a more systematic approach to process improvement.

456. The primary value to our organization has been the integration of Systems Engineering activities into the scope of the model.

457. The flexiblity of using CMMI for specific improvements are proving to be very valuable.

458. Better than CMM. Emphasis on risks, metrics. Continuous representation.

459. Yes. CMMI benefits from the CMM legacy and is an excellent model to build quality software.

460. I am sorry to say that I don't know it well enough, yet (I hope to change that this year)

461. I don't Know.

462. CMMI is improvement over EIA731 and SE-CMM because of the integration of SE, SW, and PM. But CMMI lacks the generic attributes of EIA731 (and the improved ones in ICMM) which I think are very important to help prioritize the process improvement efforts and to understand the return on investment in process improvement. I also think that there needs to be more relative to the PM and HW within the CMMI model.

463. I don't know other models.

464. Yes, actually we are ISO 9001:2000 certified but CMMI is percieved as a more focused and effective approach for IT Solution Developments

465. Yes. The organizations I am working with are ISO-9001 certified. With the modifications of ISO-9001:2000 and the CMMI, the transition of using the CMMI to extend the ISO procedures is much easier.

466. I believe this to be true but at this time I have limited exposure to the CMMI.

467. Yes, especially if you use the continuous model.

468. The process areas and model options are far more applicable to today's engineering work than is the software CMM.

469. It is better approach than SW-CMM .

470. it is better

471. I like CMMI better than ISO.

472. Previously, I uesd SE-CMM. Due to links between the models, the question is not relevant.

473. I have used several models, very stove piped (CMM, 16 Critical Software practices). The CMMI provides an integrating effort at process improvement. Software or Systems models alone cannot provide organizational wide inmprovement.

474. As compared to the Software CMM, CMMI scores better due to the in-depth treatment of the SDLC. The Process Performance Model is also a good concept. The challenge is to adequately tailor the processes for small projects and different types of work in software consulting organizations.

475. Yes, i think the cross-references and additional elaborations help EPGs interpret the 'intention'/'spirit' of a goal or practice.

476. The GPs are a good idea, in general.

477. From my limited experience and observations of how our contractor support (whose goal is to be CMMI Level 3 compliant by XXXXXX) organization is approaching CMMI, I believe that the CMMI process will enable our contractor to standardize their IT and Range support processes so that any contractor staff member to go to any of the xxxxxx geographic locations and function without a loss of productivity.

478. Yes, Much better examples than are provided in the published SW-CMM

479. Yes, the process is great, but sometimes evidence generation is time consuming and not necessary.

480. Have used only SW-CMM. CMMI is an improvement over SW-CMM.

481. Only in that it integrated disciplines. The staged vs. continuous representations are difficult for some to understand.

482. Yes. In combination with strong management direction and methods (Six Sigma, XP etc.) it can provide a powerful tool for PI

483. No. I have used SPICE and found it to be very useful. I have also used the XXXXXX quick assessment tool for CMM and found it very practical for commercial organizations. I have used ISO and found it to be more practical and far less costly. We use CMMI only because it is required in RFP's from the federal government.

484. Definitely an improvement over the SW-CMM.

485. Yes! The model development team has taken into consideration the various aspects of coordinating process improvements initiatives across different disciplines in an organisation. Good work!

486. CMMI is a progress compared to CMM because the focus have been widened to systems.

487. Yes. There is much more relevant information to help the user understand the activities. No model is perfect yet this is a vast improvement over previous models, especially since most of the clients I work with perform more than purely software engineering.

488. Yes. We are an ISO 9001 certified organization and have a set of quality manual called PMS. However, PMS does not give us detailed quidelines, nor does ISO 9001 itself. I think, especially for low maturity organizations, CMMI is a better approach.

489. Yes

490. Including both the systems and software processes is an improvement over the separate SW CMM and SE CMM models. I think it was a mistake to have both the continuous and staged models this is an unnecessary complication of the model. One or the other should have been selected - I prefer the staged, but can work with the continuous as well.

491. I consider it an evolutionary improvement to the SW-CMM.

492. It takes away the burden of making a dicision early in the improvement process, which route to choose. It is the model.

493. Yes. I believe that is corrects many of the problems we had in the CMM. However, it also makes appraising an organization more vague so the results of an appraisal will be much less comparable.

494. Yes

495. Yes. However, I was trained in another model eSCM (e-sourcing capability model). that appears to be more rigorous at higher level. I think there can be a synergy between these two models.

496. Yes. I consider it an improvement to the Software CMM. I emphasize that most of the CMMI is information and should be used as needed, that the PAs, goals, and practices are the main focus.

497. Probably yes.

498. No. The tailored Software CMM was/is adequate.

499. yes, it is more comprehensive although a bit more nebulous with regards to policies etc.

500. CMMI has definitely improved with respect to SW CMM.

501. Yes. Its architecture and more clear than the one in SW CMM and has adopted the good characteristics of ISO/IEC 15504

502. Yes, it provides model for systems engineering. But overall, it is extremely complex, with thousands of practices to implement in order ensure successful appraisal at Level 5. Specifically, almost every practice statement is really a compound "requirement", with many separate requirements (explicit and implicit) combined together ("establish and maintain" is really four separate requirements, for example).

503. Yes. ISO9001 2000.

504. Most of my experience is with CMM.

505. It is an improvement over the Software CMM. There are areas within our IT organization that are not addressed by the Software CMM and yet we really need a process improvement method that will engage the entire organization to be effective. From what I’ve seen CMMI does that.

506. yes - It allows you to take your individual work environment into consideration, document it, think about how you really perform your processes, and how you should improve your processes as you go.

507. In some respects yes. However the size and complexity of the model makes it less than suitable for smaller organizations.

508. There are portions of the CMMI that are theoretical, but mostly it is a pragmatic approach that can be adapted to the particular circumstance without losing specificity.

509. yes

510. Incremental improvement. I thought SW-CMM was good enough, but I like the CMM-I for the most part.

511. I think the expansions from CMM-SW are in the areas where people had a hard time interpreting the CMM-SW model. The expansion of RM into REQM & RD is especially nice. The CMMI does a better job with things like risks and measurement also.

512. Only based on what I've been able to read ... I have not been included in any CMMI efforts.

513. Yes; especially the tailoring option (selction of areas) in the continuous version attracts clients.

514. It has some good improvements over the SW-CMM v1.1 and addresses other aspects besides SW...The name is misleading - 2 representations, 3-4 options of models - hardly makes it an "Integrated" model.

515. It is a more integrated way to see the entire systems and software life cycle.

516. Yes, for applications broader than that of a specific discipline.

3 Global Issues Question 3: Are other approaches more suitable for your organization?

1. Don't know.
2. SW-CMM is what we are currently doing; we think it's all we can handle for the time being.
3. Probably not.
4. I use the CMM and the CMMI as appropiate to the situation. I also use technologies, ISO standards and other papers as guidance.
5. No. Our organization has three divisions, Infrastructure and Software. CMMi is the one tool that will allow the organizations to share in the process. Currently Infrastructure used SE-CMM for their appraisal while Software used SW-CMM. The third division used SA-CMM and SW-CMM.
6. I don't think so.
7. Not that I'm aware of.
8. I think The CMM is also OK, since we are software development house.
9. The SW-CMM is ideal. It is small enough to be achieveable yet has good detail for guiding improvements.
10. NO
11. For our organization to date, LEAN and Six Sigma have proven effective.
12. Selection of an approach depends on the goals of the organisation, as a consultant I recommend a choice between ISO15504 and CMMI (Continuous). ISO15504 is good for organisations wishing to improve without the large overhead of cost to be trained and appraised against the CMMI.
13. This seems to be the best approach for us at this time.
14. none.
15. My experience has been that the CMM based approach is very directed, very focused and therfore far more meaningful in isolating opportunities for improvement.
16. Don't understand the question.
17. Although CMMI is not always the best tool, there isn't any other model that we find is better than CMMI
18. No.
19. No
20. We are making progress using the CMM-I. I do not have a similar level of familiarity with any other approaches. Some might contend that by omitting parts of the CMM-I (as we are), we are in effect creating a new approach.
21. The SW-CMM is presently better suited to our organization. We are mid course on implementing SW-CMM level 3 and do not wish to confuse or side track that effort.
22. Extended Process area, just like Measurement & Analysis, is very useful to communicate coporate basic data gathering activities.

23. Due to us being a small organization and new to CMM we prefer to go the CMM route and then mature into CMMI. We think CMMI is too resource inctensive, and will require a lot of change in the entire organization. We can implement CMM in a part of the organization, and then gradually spread it across the organization and then mature to CMMI
24. SW-CMM is being used currently because Executive Management wanted CMM to be part of the Continuous Improvement Initiative, but did not know CMMI existed.
25. Not more, maybe equally? All organisations are using ISO 9000:2000 and this can be done in synergy with CMMI. We have also EFQM (Kind of Malcom Baldrige) which has a wider scope.
26. I wouldn't say 'more' appropriate but there are other approaches which together with the SW-CMM/CMMI contribute to process improvement and business maturity. For example, ISO 9001:2000 is now very powerful if applied appropriately (as it should be) and EFQM is another model which helps. Looking under the surface of all these there isn't much difference, mainly just in how they target the improvement activities.
27. The CMMI is primarily for engineering processes. So the wording and structure is well tuned to be used in those disciplines. For purchasing and sales or other essential functions in an enterprise other approaches can be more easy to adopt. Nevertheless the basic concepts can be used in other disciplines as well using appropriate translations.
28. I'm watching the eSCM evolve and am interested in it.
29. SW-CMM
30. More suitable?
31. no
32. CMM-SW is more appropiate than complying with CMMI.
33. Probably not. There were some advantages to focused improvements with SW and SE, but the integrated model is better.
34. Using IEEE as the basic basis for improvement.
35. I don't know about more suitable. We got stagnant after achieving Level II in 16 process areas. Decided to adopt the Lean methodology and gained some significant improvments. Now trying to concentrate on how to go from Level II to Level III in chosen process areas.
36. No, we find that CMMI covers most of our projects that do not do software development. These projects were force to use Software CMM or ISO, but didn't have all that was needed.
37. none
38. I am presently looking at the CMM for Organizations. I believe our XXXXXX could provide outstanding services to our customer by implementing a CMM philosophy for Services.
39. not aware of one
40. Only CMM but not necessarily.
41. SW-CMM is more suitable for software organization which is moving to Level 2.

42. I think the jump from CMM to CMMI is a real improvement and have not really been involved with other approaches with the exception of ISO. We are doing CMMI and ISO in conjunction with each other and seems to be working fine.
43. No. The CMMI is suitable because it does integrate many disciplines.
44. Some clients feel that the CMMI is too prescriptive, too expensive to implement and assess, and not suitable for them.
45. Currently, the Software CMM seems to fulfill my requirements.
46. CMM-sw fits most of the organizations that I work with better than the CMM-I. Some of the organizations that have embedded software will be better suited with the CMM-I. However, the challenge is to get a much larger part of the organization to buy into process improvement.
47. None
48. The CMMI is very good for what it claims to be ... a model. Organizations also need things that are not and cannot be contained in a model. I doubt there will ever be GUM (Grand Unification Model), but so what.
49. CMM was used extensive in Indian Software organisations.
50. We may use our light SPA model based on 15504.
51. My familarity is with CMM and ISO 9001. Current project is ISO9001 and CMMI. Both apply. I have no other experience in today's models.
52. Not really.
53. No
54. I would consider that CMMI along with People CMM is a complete suite of management practices that any mature organization must have. There can be nothing more to process improvement or strategic management of IT initiatives ... than CMMI and People CMM combined. What I think should be done is to promote "BOTH" these fantastic frameworks. I have come to appreciate their power simply because I have a rather long practitioners' experience and insights with them ... it is only in the last 7 years that I have been offering consulting around these concepts.
55. In the past we have used SPICE (ISO 15504) to appraise out capabilities. Given the extended scope of the CMMI there is an organisational wide financial committment to be made to PI rather than on a discipline basis. Obtaining resources/funding to support such a programme is more difficult and could result in software reverting back to a software only approach.
56. I would still like to see a practical SW-CMM with improvements described years ago. I still believe a software only model is the best solution for certain organizations. I don't believe one model fits all organizations just like I don't believe one set of processes fit all organizations.
57. My organisation is largely a consulting and policy setting/suppoert organistion. We have found that teh Generic Practices are still a useful guide to maturity of processes, even if the (technical) PAs are not directly applicable
58. No
59. Don't know. CMMI appears to fill the bill.
60. The ISO standards also have applicability here.

61. Possibly, but I'm not aware of what they would be.
62. In some areas, we are establishing processes that are not covered by the CMMI -- e.g., Info Assurance, aspects of Enterprise Engineering, etc.
63. A consulting firm should not implement the CMMI in its entirity.
64. I would like to be able to implement TSP, as well.
65. NO
66. The SE-CMM and SECM worked better for us it seems. There is a lot of confusion about whether specifics in CMMI apply or not. For instance, SPs are expected but not mandatory. However, if we cannot demonstrate SP compliance (a mandatory feature) then we must demonstrate compliance to an alternative. Thus, for practical purposes, SPs are mandatory. SEI arguments to the contrary are sophistry. Yet many SPs simply are not applicable for us in achieving the related goals.
67. Some times we have to focus specific process area or specific practice to change very quickly due to business needs.
68. ISO9001 provides basic attitude toward quality awareness based on organizatinal approach.
69. The leadership aspects do not get adequate attention in CMM based models. Adding some aspects of models like Malcolm Baldrige or atleast providing some guidance on additional areas to address while adopting CMMI would be useful
70. Only at the business / strategic planning levels (see above).
71. We have not yet decided on CMMI for the future of the organization. The SEPG Lead has not yet been convinced that transitioning to CMMI is better than continuing on the SW-CMM path. However, our major customer may be using CMMI for process improvement, which will incentivize our organization to transition.
72. Perhaps--I have not thought about it.
73. We are using Six Sigma as a complementary approach. If we had to choose one or the other, I think Six Sigma is more suitable as a toolbox of techniques for implementing process improvements, but without the CMMI as a benchmark, you could waste a lot of effort re-inventing the wheel.
74. No, there is no one yet.
75. Unknown
76. We have been using SW-CMM (we are at level 3)and have not yet moved from there into CMMI.
77. Our company, while developing component software that become part of bigger solutions, are software-only, so naturally the SW-CMM becomes a closer fit. The "system" aspects of the CMMI provides the added-value in some areas where solution practices are critical, but NOT in some (detailed in the related PAs).
78. Occasionally-or rather, I tailor pieces of the contin rep of CMMI for a specific use.
79. Haven't used any others
80. Sometimes. The amount of meta-information that needs to be generated by CMMI practices is often capable of adding significant development time to an otherwise simple pro-

ject. The meta-information is however useful in comparing these types of projects to the larger one (hopefully in order to improve the process).

81. We use six sigma extensively, seems to blend well with CMMI
82. Need more SA-CMM KPAs mixed in with the CMMI in order to address the needs of organizations that feature software acquisition but still do software development.
83. no,
84. SPICE-based models for aerospace, VISION 2000, EFQM Excellence model, Malcom Baldridge.
85. No
86. No.
87. We use CMMI, ISO and Six Sigma. Each has its strengths and weaknesses.
88. have not considered other approaches.....
89. N/A. We are a consulting company that delivers CMMI services.
90. Each stable organization has their own model which contains a part component of CMMI model. Current CMMI approach is focused on sofware and current appraisers are mostly from software industry background who have not designed hardware which is a base for software.
91. No
92. We switched to CMMI while using SPICE, the reason being the need for certification against a well known and recognized model. It seemed to us that there are things in CMMI which can not exactly match the things supported by SPICE but we easily adopted our past experiences for those missing points to our CMMI based process environment.
93. Not at this time.
94. Some are lookingat the PMBOK while others are looking at ISO 9000. At the Enterprise/Corporate level, we are trying to provide linkage between these and the CMM/CMMI.
95. None come to mind. The closest would be ISO 9000
96. customer required
97. ISO 9001:2000
98. Not sure what you mean by approaches? I don't have experience with ISO or other models. As for appraisal mechanisms we use the Class C and B extensively and look forward (guardedly - becuase we like what we are doing) to more guidance on conducting Class C and B appraisals.
99. No
100. I do not feel knowledgable enough in other approaches to adequately respond to this question.
101. Right now SW-CMM is more appropriate.
102. As a consultant, it depends upon the organization and the business drivers.
103. ISO 9000:2000 is a contractual requirement by our Government customer. We have chosen to implement both, because they complement one another.

104. Yes. My organization leadership is not interested in adopting any "canned" model for process improvement. They prefer to make the decisions as to what needs to be done for our organization.

105. In XXXXXX we were assessed at a SW-CMM Level 5. Our internal process improvement assessments and activities would probably have been sufficient to carry us through at that level. Our push toward the CMMI has, in fact, weakened us, since we've had to pull resources away from maintaining our maturity and put them towards the conversion. We plan to reinstate our "station keeping" processes once the push is over.

106. Some of our projects find ISO 9000 more appropriate, based on customer perceptions. SW CMM is fine for software only or software mostly projects.

107. No. This is a good one.

108. A highly tailored version of CMMI or something comparable. Certainly the idea of process improvement can be applied, but small businesses could use a "cookbook" to get the basics down.

109. Because the CMM frameworks are based on best practices, they are consistenly following the pack in terms of innovation. Our organization must constantly be looking for the potential breakthroughs in terms of technology, processes and resources. We bring value to our customers by leading the pack, not just being a part of the pack.

110. We are using other things to support it (e.g. Six Sigma)

111. We are predominately software, so the CMMI is the most suitable. Particularly at Levels up to 3

112. We are supplementing CMMI with Six Sigma for high maturity organizations.

113. None identified at this time.

114. No, using CMMI with Six Sigma

115. In the DoD contractor area, being CMMI compliant will soon be sine quo non for bidding on major procurements. If another approach is more suitable, and I'm not aware of one, it will be tackled after we have mastered CMMI.

116. Presently, the SW CMM is more suitable because our processes are based on that model and all of the training we've provided has been related to the CMM.

117. Some have mentioned the ISO 9000 family.

118. SW CMM was fine. This one includes many new things that will add little value to our organization.

119. The model doesn't solve everything, so our organization still needs a general process improvement model. We use an adaptation of Six Sigma and the process improvement circle.

120. ISO and IEEE standards are large business drivers.

121. Not with the ones I'm really familiar with.

122. NO, at least for the development processes they are not

123. CMMI is good enough as lonl as we can apply it well

124. No

125. no

126. CMMI fits well with ISO 9001:2000
127. My local organization needs a services maturity model. I have been looking at an IT Services CMM I found on the web.
128. We do a lot of Rapid Development now at our site. The customer is willing to accept a lesser quality product in order to field a capability quickly. CMMI doesn't appear to help me with this issue.
129. I have not fully explored other options, but from I know of most of them, no.
130. Not at this time. We do a great deal of business with the government and this model appears to be the gauge for future work.
131. Theory of Constraints.
132. CMM in some areas - depends on the sophistication of the PMs/PLs, and development staff
133. Don't know
134. This is the only approach we can follow since our customers require CMM/CMMI.
135. Overall quality systems framework
136. We have developed our own assessment approach that we apply. It allows us to focus on solutions that are deemed relevant to reduce the likelihood of experiencing problems. It is also fully automated, which makes it much less costly. We use either SCAMPI or CBA IPIs for organizations that want or need external recognition. We also use part of its functionality to conduct formal assessments.
137. Probably not. Again, though, CMMI is just one approach of a few models that should be integrated with the top-level business model.
138. Not at this time. There has been several attempts to do process improvement, but only with the CMMI have we been able to make head way.
139. We use no standard approach which is making life tough for team leaders and developers.
140. No.
141. As noted in queston #1 above, for our "non-SW development" (IT Outsourcing) projects, we also employ XXXXXX BS-15000 (and PD-0015) series of standards for IT Service Management.
142. RAD, RUP.
143. no.
144. Some of our work is service focused - providing Help Desk and Facilities support. The CMMI and its general structure does provide guidance, but a service level model might be more helpful
145. In huge organizations it probably makes sense to hide the modell behing internal assessment procedures (e.g. in questionnaires). I dont recommend a do it yourself approach.
146. for advanced engineering more flexibility or some other kpa's might be helpful
147. Not sure. Limited to directive.
148. Not in my opinion.

149. SW CMM, PMI OPM3

150. The CMMI is a tool that is used where appropriate, the same applies to other methods

151. Based on our early reviews, we are not sure whether we will adopt CMMI or not. The organization that is active in process improvement is truly a software-building only kind of group. Many of the other SE functions are done outside our area, and they are not engaged (at all) in process improvement efforts.

152. No

153. not really

154. No. We find CMMI the most suitable for our organization.

155. No: but they don't know it.

156. I think that CMMI will eventually be very beneficial for our organization.

157. The concept is good. The approach is good. The implementation is highly questionable. Bottom line should be to improve the process. More than half the time the people I encounter in the process area are focused on Score, second agendas, or simply are too narrow minded to see value in new ways of doing things.

158. The Continuous model would be better, but the emphasis on Rating makes it a non-player.

159. XXXXXX ISO is a requirement for my organization. The integration of QMS to CMMI is complementary.

160. CMM, Lean Six Sigma

161. Not using other ones

162. Another portion of our organization is trying ISO 9000 2000 as a prototype implementation excluding the software development portion of the organization.

163. NA

164. We are also ISO 9001-2000 certified.

165. No. We have a good size software development house as well as a large interest in systems management.

166. I don't have enough knowledge about other models.

167. Software CMM is better at least in the present state.

168. Right now our organization is very comfortable with the CMM and we are getting more projects involved in process improvement. So we don't want to adopt a new model.

169. ISO may be. But we did not investigate that alternative yet.

170. ??? Don't know...

171. CMM may be still adequate for many of my clients. The time and money they need to spend for SCAMPI may not be worthwhile esp for the software consulting kind of organizations.

172. We must also use ISO 9000 and AS standards due to the nature of our business. The more we can map the CMMI to these other standards the easier the sell to our organizations.

173. I don't know.

174. We are currently working with SW-CMM, and we are evaluating to use CMMI.

175. No

176. An approach that is encourages disciplined development but is document -light would be very attractive. A version of CMMI that describes a level 3 organization practicing agile development would be very interesting to us.

177. No. Although we are extending the CMMI-SE/SW to Engr. Services.

178. None identified.

179. My organization is primarily focused on providing SW acquisition support in the DoD realm. Many of the practices detailed in the CMMI model do not address some of our support mechanisms used to support acquisition.

180. Currently XXXXXX is not actively involved in either CMM or CMMI.

181. SW-CMM

182. The Program Management Office of this site uses SA-CMM to guide software acquisition as part of larger systems. Our portion of this site is a software life ccyle support center that develops software and advises the PM Office on software-related issues.

183. Do not know

184. XXXXXX (formerly XXXXXX) has an IT best practices-based model that seems to fit us well, but it provides no insight into how to go about improving our processes.

185. My organization is interested in ISO 9000 as well as Six Sigma.

186. DO-178B specifies FAA regulatory requirements for software processes, but does not cover all of the PA's, goals, and practices that CMMI covers. On the other hand, DO-178B goes beyond CMMI in some process areas; for example, by specifying coverage requirements for testing.

187. My managing director thinks that the SW-CMM would have been more suitable for our unit, but the decision to go straight to CMMI was made at the corporate level.

188. maybe six sigma for measurement and improvement of specific processes.

189. No.

190. Software CMM is best for this organization.

191. I appreciated the consise nature of the Software CMM but we have implemented both successfully.

192. CMM and possibly 6-Sigma

193. We think CMMI has the right mix of approach and industry acceptance. We also use ISO 9000 and various management and software development models. We find they generally supportive of each other.

194. CMMI seems to fit just fine

195. No

196. No for the moment.

197. Just need more information for Acquisition.

198. ISO 9000's quality management and customer service process elements would be more suitable for an infrastructure support organization.

199. No - we are transitioning from the Software CMM to CMMI.

200. ?

201. Generally we're doing software CMM and TSP/PSP

202. Currentry NO.

203. No, However, we are going to use our internal assessment method before we attempt SCAMPI.

204. I don't know.

205. No, we are commited to the CMMI and will later work on achieving ISO 9001 registration - we consider ISO and CMMI compatible and sinergistic.

206. No

207. In German automotive industry SPICE is still in the game

208. No

209. As stated earlier, our company provides consulting services that include process improvement. Not all process improvement efforts require the full concurrent product & process development model presented by CMMI. Yes, other approaches are sometimes more suitable for a given client.

210. N/A

211. CMM is our best approach. Sometimes blending in ISO and IEEE standards into the mix strengthens the results.

212. In some cases, clients are requiring ISO or other approaches.

213. Yes and No. For the Software portions - absolutly YES!; For other aspects/other industries different or additional approaches are required.

214. Not that we're aware of.

215. Our focus is currently on CMM and achieving a level 2 in 4th quarter of FY03.

216. Not that I'm aware of.

217. Others may apply but the foundation and potential expansion of the CMMI into other disciplines such as system admininstration makes teh CMMI more suitable for adoption.

218. We have made the decision to abandon CMM/CMMI and just implement RUP.

219. yes, depending of specific parts of the org.

220. ISO 9001 is also a valuable standard in our organization.

221. No, although we're also audited against ISO 9001:2000.

222. The CMM is more suitable due to contract definition and contract requirements. The customers desire an organization to 'work to' or 'achieve' a specific CMM/CMMI level. However, the customer will not pay for the road to achieve or maintain that CMM/CMMI level.

223. No, XXXXXX has addopted CMMI as its standard mechanism for appraising its product development process maturity

224. We've used the CMM.

225. No - but others, such as DSSM - are very useful & outside the overt scope of CMMI

226. Not quite.

227. My team is using to tailoring method from previous experience. This approach saves much money and period.

228. I don't know.

229. A modified form of the CMMI

230. The software CMM and the Project Management Maturity Model (PMMM) are currently being pursued by our organization and seem to be quite suitable.

231. Not Applicable. Please refer to background questionnaire response.

232. Not that I know

233. No, but we are also exploring Six Sigma and ISO, given external market demands, in tandem with our model-based improvements.

234. Not sure, reccomended by DOD!

235. SW-CMM has some advantages, e.g. a better understandability for people who are new in a SEPG. We (some of us) consider the subpractice level of SW-CMM more useful.

236. Combining CMMI with SA-CMM and People CMM.

237. The only other approaches that have been successful are simply due to a very strong lead engineer or supervisor. Although successful for a section or small group these are never able to be scaled up to the organization.

238. CMMI is the benchmark.

239. We use both ISO and CMMI

240. no

241. Not necessarily.

242. No. We are systems engineering/development organization. We need the systems engineering coverage that CMMI provides

243. Yes...SW-CMM

244. No

245. Yes, as mentioned above, we use ISO 9001:2000 and ITIL for some IT service delivery projects.

246. Not really.

247. None that I know of.

248. Six Sigma has worked well for our organization since it focuses on customer desires for process improvement.

249. Moving from model/method to model/method is in itself a measure of maturity and the ISO9001 model has been achieved and CMM's are being contemplated.

250. Because we produce software-intensive systems, the CMM is probably more sutable.

251. Don't know.

252. SW-CMM

    ISO-9001:2000

253. At this point, we have decided to adopt the CMMI, and complement it with some aspects of ISO requirements, and of government regulatory requirements, that we have to demonstrate to our customers.

254. I think it is the SW-CMM now, but in the future I may think it is the CMMI.

255. No.

256. XXXXXX will not use a traditional SCAMPI A or B assessment approach, we will develop our own Method C approach, to assist in using the process information contained in the CMMI to assess process risk associated with contract management.

257. SA-CMM is also suitable.

258. We are currently using the SA model.

259. Probably not.

260. The SW CMM

261. Unable to answer because we have not tried CMMI yet.

262. We are looking at the marriage of ISO 9001:2000 and our current CMM Level 3.

263. There are other tools and methods used to support CMMI activities such as Six Sigam

264. We have merged our CMMI and ISO practices to achieve the improvements we seek.

265. We have not found anything that has been as beneficial to the organization down to the level of the development teams.

266. The CMMI will be successful in this organization if we can focus staff on process improvement rather than KPA/PA satisfaction. If not, CMMI-base process improvement will fail.

267. CMM/CMMI in tandem with things like ISO 9001:2000

268. We are looking at outsourcing/ services best practices.

269. We are also using PMBoK as a "ConOps" for process development. The Close element of PMBoK is not in CMMI, as a result, we've built processes from that part of PMBoK. ISO also plays a role here.

270. Unknown

271. The IDEAL model is still the guiding approach but it takes time to transition from SW-CMM to CMMI. We are planning for full adoption in 2005 since we have over 200 organizations and over 300,000 people to train, educate and support

272. I work with small organizations and I find the CMM easier to use with them.

273. It provides a good framework for most organizations.

274. We use the Institute's model that is useful for providing the "How To" approach in implementing the CMMI

275. Actually, even saying "CMM" is a bad thing in my org due to several failed attempts beging in '93. So I have to lead them without any references to the CMM.

276. No - widely used

277. I guess there is no ONE model would address any Organizational Improvement paradigm. For a model is a model; it is an abstraction of a facet of an organization; and there by has inherent limitation. Success lies in the pragamatic interpretation of such well de-

signed models and ability to cohesively blend the tenets for overall business benefits of the firm

278. Yes. AS9100:2001 and ISO 9001:2000 as required by the customer.

279. No

280. My XXXXXX is large and diverse and acts as if it is a bunch of separate smaller companies. Therefore, what works with one area of the XXXXXX (and one area may be as small as 5-10 people), may not work in another area. We are constantly trying new approaches to selling the same information (e.g., calling things project planning and project tracking and oversight will work sometimes and other times you have to use "project management" to get the same idea across). No matter the basic approach, we will have to analyze it and tailor it to fit our needs.

281. No, I think using CMMI is the best approach to take.

282. Yes, besides the CMMI suite, we also provide Six Sigma and ISO consulting.

283. Hardware is not readily addressed in current model

284. The CMMI is not an approach. CMMI is a set of items to consider to help an organization improve. The best approach is to use CMMI as a tool to consider the important things rather than as a requiremetns document to pass an assessment.

285. No.

286. Not that I have seen

287. No. CMMI provides a complete spectrum for my organization (gov't acquisition organization).

288. No

289. Possibly SA-CMM since we are a DOD acquisition program. In addition, we do no in-house development. All development is contracted out.

290. For the present time, we are still working on attaining software CMM.

291. Alternatives such as Six Sigma have been explored at a high-level, but our organization has definitively selected CMMI as the model to transition to in FY04.

292. we use SA-CMM a lot with our Government clients; Security also; sometomes the other SE models and statndards give more detailed guidance.

293. Probably not.

294. At this time, we're using it only as a guide, since we are not planning on having any formal appraisals.

295. None I can think of right now.

296. We are a consulting company providing services for others.ISO 9000 is more comprehensive for manufacturing and service organizations.

297. For SW process improvement - no.

298. Other approaches need to be applied (e.g. EFQM/BEM)

299. Not particularly.

300. This is difficult to anser without first assessing those approaches. I don't think so

301. No

302. So far, we are still adopting SW-CMM.

303. In my company we are implementing SW-CMM level 3 and we are using TSP and PSP and I think those models are very useful in our job.

304. We are committed to the CMM and the CMMI.

305. No idea.

306. No.

307. Not applicable to my organiztion (Transition partner).

308. We have management sponsorship to combine CMMI with Six Sigma to achive process improvement within the organization.

309. The XXXXXX is primarily an Acquiring Organization, so the SA-CMM may be more suitable. I've heard it said more than once that SA-CMM should be added to the CMMI.

310. no.

311. See question 2.

312. CMMI should do just fine, and will be better than S/W CMM model for us. Not looking for another model, but will applyIEEE 12207 also.

313. We only produce software and have been using the CMM since 1996 or 1997, and are currently pursuing CMM Level 5. We work with a systems engineering team that is starting to use CMMI, we may switch to CMMI when their processes are more mature.

314. Not necessarily, but we have successfully used SW-CMM as an improvement model for over a dozen years. Since very little of the SW-CMM is software-specific (i.e., a management model), we've also used it on occasion as an improvement model and assessment reference model for other disciplines (e.g., HW engineering).

315. No

316. No.

317. SW-CMM

318. Yes. ISO/IEC TR 15504 is more favorable because of the license and education cost of authorized lead asessor.

319. We have to use ISO 9001 for legal reasons.

    We are also closely watching the ISO/IEC 15504 developement.

320. A SW-CMM that was to be published would suit our organization best.

321. ISO 9000:2000 is contractual in many UK/European customer work so these now use both, but we still have to manage queries by sponsors, management and teams prefering one thing to deal with.

322. We have a home grown process improvement initiative that is working very well for our organization. We have not investigated models other than the SW-CMM and the CMMI as they seem to suit our needs.

323. currently using CMM

324. The CMM for Software v1.1 works very well.

325. none

326. we are looking at Six Sigma and Baldridge concepts in conjunction with the CMM. We are also considering the Project Management Maturity (PMM) from XXXXXX which uses the CMM integration with the PMI knowledge areas.

327. CMM, is easier to understand.

328. One of our divisions is required by law to have ISO certification.

329. Don't know.

330. ISO 9000 is currently used within XXXXXX community.

331. No.

332. Righ now CMMI is the best approach.

333. Not necessarily, though we do need to better understand and benefit from agile technologies.

334. No

335. Do not know

336. I don't know - not enough experience. I think I could get PSP/TSP to work if I could get people to use it (I am PSP/TSP trained).

337. Six Sigma/Agile is a very good process improvement process for our organization that goes well beyond the scope of CMMI.

338. Not at this time.

339. Not sure.

340. CMM works fine for us.

341. The SA-CMM approcah which is not part of the CMMI at this time is a better approach.

342. Not necessarily. I think the levels would provide a very realistic goal once the organization was feeling enough pain to want to improve.

343. no, the CMMI is right

344. Our organization's primary focus is on providing system and software engineering services ... we have limited development activities. Principle products are analysis, studies, and independent V&V. Use of CMMI internally will require mapping to alternate processes and practices. Our business area which provides process improvement services has ample tools geared toward SW-CMM and SA-CMM, but these are now under revision to accomodate CMMI.

345. None. CMMI is not perfect, but I believe it is the best available.

346. We also use enterprise quality standards such as ISO 9001:2000 to cover non-project aspects of our organization (HR, Finance, procurement, property, executive management, etc.)

347. CMM for now

348. Would like to combine Software Product Lines and CMMI. Would also like to use Six Sigma together with CMMI

349. No.

350. Upper management in more interested in ISO 9000 2000 than they are the CMMI models. One division has been rated at Level 3 of the Software CMM. Most other divisions do not perform software development.

351. Currently CMM is more suitable. It has taken years for the business units to embrace CMM and now there is significant momentum behind it. We need to keep the momentum going so the business units can see greater benefits and then transition them at an appropriate pace to CMMI.

352. Don't know

353. As far as I know, CMMI is more appropriate so far.

354. SW-CMM. And PPMBOK is major project manegement method.

355. See question 1

356. no.

357. No

358. Internal process improvement efforts are focusing on entire prcess including business case, process, development, transition, and maitenance.

359. Don't have enough experience with CMMI to answer.

360. ISO is still good for the org. We let ISO serve as the minimal process compliance required if scaling of the process is required for some projects. Best Practices can still help in hoing your processes.

361. No.

362. NO

363. It would be nice to be able to choose version 2 of the SW-CMM for some organizations.

364. No

365. Not at this time.

366. See response ot question 1

367. Need to settle on single architecture. It's too difficult with both staged and continuous representations. For example, Why isn't quantitative management a level 4/5 practice of tracking and oversight?

368. We are using Six Sigma in conjunction with CMMI and I like many of the concepts in Six Sigma, especially its focus on measurement at the very beginning. I recently did some Value Stream mapping in what is surely a Level 1 organization and found that to be extremely valuable.

369. None come to mind.

370. No

371. The other models have not fulfilled our requirements. This is why I have begun to research the CMMI model.

372. No

373. Yes, org is hesitant to invest in an entire model; it is doing bits and pieces in a haphazard way. So our focus is to find area of pain and address it systematically. Issue is really management ignorance, not an issue with any model. CMMI is better than just CMM or ISO 9001. It is practical.

374. I disucssed this in several of the questions above. The RUP used with Rational Tools is largely compatible with the CMMI, but is easier for us to use than the CMMI.

375. CMMI appears to be working well for us.

376. No

377. No.

378. Currently, we are quite comfortable with ISO9001:2000. There is no pressure to transform the organisation to CMMI.

379. No.

380. -

381. Unsure.

382. There is also a need to keep compling with ISO.

383. CMM

384. CMM V1.1

385. SW-CMM and ISO 9000

386. Perhaps. Due to the direction our cusotmers are heading, we are compelled to use the CMMI model without regard to which model might actually be the best model for our business.

387. Don't know

388. The reason why we decided to adopt CMMI, is because we believe it is more in tuned with our process improvement initiatives.

389. We still largely follow the CMM as the preferred model except in areas where we need the scope of Systems Engineering included

390. We use the Rational Unified Process methodology to complement CMMI. They are getting more compatible.

391. Other approaches might be useful, the the CMMI is excellent and the preferred choice

392. We are currently looking at other approaches, adopting "just" the CMMI is very unlikeley at this point (as we adopted "just" the SW-CMM a few years back).

393. Nothing Special.

394. I think the continuous representation would have been more appropriate than the staged representation. And since ICMM includes the generic attributes, that may have been better.

395. I don't know other approaches .

396. No (as far as we know)

397. Yes. We are currently investigating the incorporation of process areas of the People-CMM into our Class B and C CMMI appraisals.

398. Yes. The SE-CMM and CMMI models require too much resource both to manage improvements and also to assess. With our business reality, we cannot sustain the effort required to maintain CMMI.

399. No

400. Staying the course with software CMM (moving toward Level 5) while incrementally, informally implementing CMMI - because government contractors are not yet insisting on CMMI and because the cost of a full-fledged switch to CMMI is cost-prohibitive.

401. no

402. I believe that there is some information that is available from the Systems Engineering organization that would be more appropriate.

403. NA

404. Not really

405. I am checking out the Agile Methodologies.

406. ISO 9001/2000 for our hardware QA

407. CMMI seems to be the industry standard that will have industry support so CMM was dropped from the contract requirement as of Jul 02. The contract started Feb 02 and will run for up to 15 years.

408. We transitioned from the SW-CMM to CMMI-SE/SW because it fit our business case better.

409. As a consultant to other organizations, only one organization would have liked P-CMM included in CMMI.

410. We combine use of CMMI with other approaches such as ISO

411. Maybe, if so I'm unaware of them

412. Yes. As an IT provider and oursourcer we find the ITIL model a better fit. ISO 9000 is also a better fit.

413. Not that I know of.

414. Not really! As an early adopters of both CMM & CMMI (adopted CMM in 1993,assessed at Level 4 in 1995 and subsequently adopted CMMI in early 2001) our organisation has started strongly believing that CMMI is the way to go because of its coverage of varied disciplines.

415. This model is appropriate.

416. As a 6000-employee R&D institute covering variety of scientific fields, I believe a uniform ISO 9000 are more suitable for us. However, divisions developing software intensive products should adopt CMMI.

417. Unknown

418. Six sigma has proven to be a good mechanism for process improvements. This is compatible with the CMMI, not a different approach.

419. Our organization uses a variety of approaches, including AS9100 (ISO9001), Lean, PBM, 6-Sigma, Malcom Baldridge, and some proprietary techniques.

420. I hear of Six Sigme catching up in demand in the federal DOD area. Many companies are adopting it. My prospect are happy with CMM.

421. No

422. We also use the PMBOK

423. For my organization CMMI, according to me does not make sense. Primarily because it is a software intensive shop. CMMI's birth is due to a need for an integrated model for

addressing both software and system engineering projects. When this was felt, there was a release of CMMI for Software which did not make sense to me. Maybe, I should read more before I conclude.

424. I emphasize the CMMI.

425. No. Provides credentials for government contracts.

426. Not at this time

427. ISO 9001:2000 is currently more suitable, due to external demands

428. Yes, perhaps ISO 9001, since my organization performs non-engineering services much more than software and systems engineering.

429. Yes. But sometime is yes, sometime is no.

430. No, although the ITIL (IT Information Library) has a good fit for production & processes, and need to be related on topics such as Configuration Management.

431. Don't know

432. not at this time

433. Not relevant - we provide consultancy services.

434. We've used the IDEAL model. It seems to be a bit more 'understandable' at first glance to upper level management.

435. SA-CMM for on of our major program offices

436. We have some Six Sigma initiatives starting because our client (XXXXXX) is going to use Lean Six Sigma. Even though it is just starting, it is clear these initiatives are different both for XXXXXX and for XXXXXX at XXXXXX.

437. No, but some want to continue on CMM-SW until they achieve their level 2 or 3 rating and then move over. This is especially true where someone above them is driving the PI and demanding they achieve a certain level by a certain date.

438. Unknown.

439. ISO and IT Service CMM (under construction) are also interesting. Especially IT Serices CMM is more suited for Operations and Maintenance organisations.

440. ISO still applicable,

441. We use a variety of approached internallybut for DOD contracts we are starting to use CMMI.

442. Other models and standards may be more suitable for specific applications, but not for overall organizational process improvement.

4 Global Issues Question 4a: Adopting CMMI will help us leverage our earlier investment in process improvement.

1. We have a lot of inertia to overcome.
2. SW-CMM will be a start, but the integrated systems engineering aspects of CMMI will force PI to broaden to multiple other disciplines within our organization.
3. I does not matter. If there is a functional improvement program in place, CMMI will help. If there is not, CMMI will intimidate the uninitiated.
4. CMMI does nothing to disturb what is in place already.
5. We moved all of our CMM processes into CMMI and upgraded to the system perspective very quickly.
6. CMMI effective establishes an understandable framework, in which an organization can ferret out problem areas, and develop appropriate improvements
7. Relating improvements to our hardware groups
8. Many CMM process changes apply to systems engineering and can help leverage our transition to CMMI
9. particularly if earlier investments were CMM based.
10. Coordinates models and provides a single reference for the organization.
11. Can build on earlier Software CMM investment.
12. If an organization has adopted the CMM, it is a relatively easy thing to transition to the CMMI.
13. This is the first organized investment in process improvement.
14. Many of our organizations are at SW-CMM level 2 moving toward SW-CMM level 3. Much can be leveraged from SW-CMM L3 to CMMI L3, which is when we anticipate migrating over to CMMI.
15. CMMI integrates all processes in a way that helps organization to integrate all disparate and non coherent quality process in different areas, in a way that makes business sense and commercially viable in the long run
16. We have a history and with this significant investment in using the SW-CMM.
17. This is yet to be determined. I don't have enough data to make a statement one way or another.
18. SW-CMM is also still helpful as well as CMMI.
19. CMMI now gives us a framework under which to organize our efforts.
20. Yes, but with a lot more consulting help.
21. For many organizations, this will be difficult to answer honestly. There is a pervasive belief that the mere achievement of a maturity level is concrete evidence of business improvement, but the organizations I've worked with and known -- even those claiming a high maturity -- rarely quantify the ROI from process improvement.
22. It is desirable.
23. Its the industry standard and becoming even more required for government contracts.

24. Whether it is Software CMM or CMMI or anything else on the horizon ... the basic thinking cannot change! Of course, it has to be correct! That, one does process improvement to create a learning organization. One does process improvement in order to know about potential mistakes well in advance and does something to minimize their impact. One does process improvement to minimize the reaction time to something new that might surface (as a risk or an opportunity). One does process improvement to ensure that the framework itself supports corrective tendencies. ... and many more ...
25. Our experience with CMM/SPICE means that we have experience of the maturity model approach which helps in that we don't have to start from scratch.
26. The following set of questions is very dependent on the organization and can't be answered by an independent consultant.
27. We do not need to abandon what we have done, and there is continuity in the model.
28. There was no previous formal process improvement program. To the extent that CMMI enables us to exercise some control over informal PI efforts, then it will help us leverage those efforts.
29. I have seen almost all types of previous process improvement efforts be reusable in the cmmi.
30. Turns out that we are having to undo some of the earlier efforts in order to succeed in CMMI-based improvements.
31. Adopting CMMI simply keeps our XXXXXX customers happy. The value to our process improvement effort is minimal. For instance, we are a IPPD organization - complying with IPPD PAs does not help our IPPD processes. Is a vision in each IPT really necessary when they have charters, goals, mission statements and detailed objectives all documented? But lack of an IPT vision can cause us to fail the CMMI Appraisal according to our CMMI Lead Appraiser.
32. This is what we did in very early stage if adopt CMMI. We let engineer know what they did is correct.
33. Depends on how you consider CMMI as a improvement tool.
34. CMMI as compared to CMM has added some good details in Engineering areas that would help a sw organization like ours
35. We don't have earlier investments to leverage.
36. I think the CMMI is a natural progression from the SW-CMM, which is where our earlier investment was.
37. Enriches our core competencies in developing software components as well as multiple component solutions.
38. CMMI practices help eliminate loss of information about a process over time, allowing for more reuse of legacy development.
39. The blending in of sys. eng. and some acquisition enriches the straight SW-CMM.
40. N/A. We are a consulting company that delivers CMMI services.
41. Early process improvements are typically upward compatible with the CMMI.
42. explained in answer to 3rd question.

43. We have had persons working the SW-CMM issues for almost 10 years. Org. reorgs and other issues have resulted in no org being appraised at Level 2 of the SW-CMM. We see the CMMI helping us to merge the efforts of the systems and software engineering activities.
44. Some process improvements in the software engineering may now be expanded into other areas.
45. It gives focus to what it means to have process improvement.
46. So far, we have been able to continue on our process improvement path with little impact, except to expand our processes to include the additional CMMI practices. The change is allowing us to better understand the intent of the practices within our environment.
47. We recently completed a class C appraisal of a software project that went from CMM to CMMI and we instructed them not to do much in the way of process improvement prior to the class C. They did very well - but, gaps were clearly visible were the CMMI was "more" than the CMM (e.g. DAR, VAL, TS, PI)
48. Due to the similarities between models (SW-CMM in particular, our organization's initial model for improvement) our initial documentation, templates, processes, etc. remain applicable.
49. Depends upon the earlier investments. If they were SW-CMM, I wouldn't use the term leverage, but it also wouldn't render them useless. This may be ok for a systems shop where they have been struggling with integration issues or the application of process principles to a new discipline area.
50. We achieved SW-CMM L2 in November 01. We wanted to continue our progress but really saw no reason to continue with the SW-CMM when it is going to be discontinued.
51. It is causing us to review and rethink our eariler work and this is helping us to further improve.
52. Organizations using SW CMM can readily transition to CMMI with little/no waste.
53. Our earlier efforts were around ISO 9000. It forced documentation of some processes, but was largely superficial. We've used those process definitions to bootstrap our PI efforts.
54. We have been doing so for the past year and notice that the organization is making good returns on the investment. Plus better understanding of the CMMI Model seems to help the projects improve.
55. Builds on CMM-SW and EIA.
56. CMMI builds on the prior work.
57. A better word than leverage is salvage.
58. No. It's shameful how little from the SW-CMM you can leverage on you r way to CMMI. The CMMI should not have been rolled out with out also a clearly defined transition plan from CMM to CMMI.
59. It can but there is no gurantee because the organizations are still maturing and therefore are somewhat reluctant at this time to adopt CMMI
60. CMMI is definitely the next step for us, given our CMM and EIA 731 ratings. We can now integrate and enhance our processes using the model.

61. Probably not a big enough improvement over CMM to warrant the change.
62. Only if the committment is really given from sen. mgt.
63. Startimg from Scratch with SPI (mostly)
64. It is a better fit for our business. In the past, we have had non-software projects use best practices from the software CMM.
65. For us, there were no prior investments.
66. CMM contains sufficient for the organization - TOC a better approach.
67. We had no previous process improvement
68. We are using CMMI to leverage our software process improvement efforts to improve our Systems Engineering, Program Management and Subcontract/Supplier Management processes.
69. However, we found by and large that those organizations that have started with the CMM are more likely to remain with that model instead of transitioning.
70. True, but since CMMI is so extensive, the "earlier" investment may be dwarfed.
71. We had spent almost five years achieving SEI Level 3 and within only one year we are at CMMI Level 3
72. We were very content with SW-CMM v1.1, and I would not say migrating to CMMI will "help us leverage earlier investments". Instead, I would say that that we are begin forced to expend additional effort and expense to make a "parallel migration" to CMMI. I also do not expect that the use of the CMMI (vs. SW-CMM v1.1) will yield any notable benefit over using CMMI, given the nature of our project work (i.e SW-only work at level 2), yet we still must absorb the significant cost of this "migration" (retraining, time spent revisiting existing assets and processes to ensure CMMI compiance rather than time spent propogating our known to be CMM compliant processes which work well for us across more of the organization, etc.).
73. adopting CMMI will show the maturity of the reasoning process behind procurement management.
74. As a company had not made earlier investments in process improvement specifically, however this is true for many of my clients.
75. No clear "upgrade" or "transition" paths. CMMI seems to be a replacement, not a newer version.
76. The use of CMMI will be judged on its own merits, specifically where previous initiatives have promised, but not delivered, a culture of continuous measurable improvement
77. no real earlier investments
78. I’ve seen this go both ways. Early on the company focused on real process improvement under the staged model. We made some real strides in process improvement (quantifiable with + ROI). Later (after our competition raised the level 5 flag) we were forced (by corporate) to abandon continuous and move to staged. This drove us to focus on level 2 items where really were not causing problems in our business model. The ROI went negative, the staff felt abused, and the term "process nazi" was heard. We implemented process for process’s sake, at one point an assessor (and I used that term intentionally) told us that it would be good for our people to document the meetings they

have with themselves by writting memos to themselves so the appraisers could have some evidence of the thought process. !? You've got to be kidding!

79. Since we had achieved SW-CMM and EIA/IS-731, not sure that CMMI-SE/SW will gain us much more.
80. Current practices were being done throughout the organization -- just not in a "managed" way
81. We do extensive mapping to show leverage. We also use CMMI as a logical follow-on to SW-CMM improvements. We have developed a strategy called "concentric circle".
82. We had several areas defined as needing improvement based on our assessment in DEC 2000.
83. Nearly always, CMMI will provide a valuable context for the KPAs of the CMM.
84. Most organizations that are software only could gain as much from either model, and those that reach L4/5 should see minimal impact, as there should be some or many processes in place to address the "new" PAs
85. For the longer term, strategic vision, the model serves our ROI for future benefit.
86. CMMI can be applied over software area.
87. We haven't adopted it yet.
88. This is a small in-house software organization of about 100 persons. It was so hard to convince the developers to adopte CMM that we are not in hurry to propose CMMI.
89. We believe that the investment we made in utilizing CMM for process improvement will continue to show a return when we switch to CMMI, and that we, as an organization, will continue to improve.
90. CMMI is an improvement over existing models, so it helps to continue the PI culture
91. Builds on SW-CMM
92. Allows us to extend/reuse what worked for software engineering to the rest of the engineering organization.
93. We have already adopted some of the principles of CMMI, however, the fact that there are two models, Staged and Continuous, appears to be overkill.
94. Customer buy-in has been established. Process improvement can be expanded from software to systems and acquisition.
95. don't know if there is value added
96. Staying with CMM (no change) maximizes the investments.
97. Having ISO, CMM level 5 base, having six sigma institutionalised - CMMi will be a worthy try
98. There is a natural transition path from SW-CMM model to CMMI; this help to preserve our investment in process improvement.
99. Our adoption of CMMI was done in parallel with the adoption of the SW-CMM by our application development partners, so we hoped to speak the same language. Outsourcing has negated this benefit.
100. Not sure what this statement means.

101. I beleive that if we translate and format the effort from earlier experience, we will have a better understanding of what we need to do next, and what actually works best for us in development.
102. I think CMMI can act as a guide to ensure earlier investments are on track or perhaps, point out where they lack.
103. We have a strong SW-CMM Level 3 org.
104. As a lot of organisations are coming from SW-CMM
105. CMMI provides a map that has been lost.
106. I'm a firm believer in the cost savings of a sound process model.
107. Although our specific organization had not adopted CMM, we work with app. development areas than have achieved level 2 and are working on level 3. So we were able to leverage some of the work they did, tailoring it to our unit's specific needs. Also bought us some extra credibility with the app. developers and their mgmt. (they are our internal cusotmers.)
108. We have been primarily working on CMM Level 5 with some transistion into the CMMI model. We need more time to determine the leverage that we have from our earlier investments. But, at first glance, I believe that we have a solid foundation for CMMI, which leads me to believe our adoption will not be a total rewrite.
109. to some extent. internally, an issue of duplication dueto site specific implementation goals
110. However, adopting the SW CMM will provide the same benefits at less expense (effort, time, cost).
111. CMM was previously used
112. Our organization is at Level 4 and has already begun to harvest some gains from its process improvement and defect prevention efforts. I personally feel that we're far enough along that the CMMI wouldn't be that big a deal for us, but I don't see any particular advantage to abandoning the CMM at this point.
113. If it is brand new, it is right. But for long term experienced organization, they can have their own way of adopting past experience in a more engineering way.
114. Note: There was very little earlier investment in process improvement via SW-CMM prior to the current CMMI effort.
115. Builds on SW-CMM and embraces continuous process improvement
116. The only reason that I rated this as "Agree" is because our earlier attempt wae CMM2, but without much vision. Our current tools are not well suited to migration up the ladder. Therefore, from the view of most developers this may look like a new direction, but it actually work with our past efforts.
117. SW CMM and CMMI are close enough in their structures that we can map most of our previous process work into the CMMI
118. We found that moving over to CMMI from CMM was pretty easy
119. We used all our earlier investments in process improvement and built upon them. We took a transition approach to moving to CMMI.

120. When the organization is ready to move to the next level of process improvement implementation the CMMI will build upon them.
121. We were headed down the path of Software CMM level II.
122. Additional information in the CMMI will enable further improvements.
123. But the SW CMM upgrade would have been better.
124. Most of the process improvement related documentation (all based on the software CMM) can be mapped to the CMMI and built upon.
125. Since we perform both Software and Systems Engineering, CMMI expands the improvements made with CMMI.
126. Absolutely. The lessons learned from our CMM experiences is helping us make smart decisions in the CMMI implementation and implementing CMMI will allow us to make those process improvements that were beyond our reach with the software CMM.
127. We're hoping that the CMMI will reduce the division-specific process improvement efforts encouraged by the various CMMs through the integration of the models.
128. FOrced Systems Engineering to get their acto together and will move this into hardware engineering also.
129. I'm not sure you'll get any additional ROI from changing from one to another midstream
130. Because it allows focus to all disciplines.
131. Forces more organizationalization
132. From what I know about CMMI, it will be easy to move from SW-CMM to the staged model which will continue to make sense to people. Also, we may be able to bring in the less technical people a little more.
133. Our previous experience using the software CMM has helped us in our migration to CMMI.
134. This depends on too many variables.
135. No basis for this statement. I have yet to enter an organization that has had dedicated process improvement. Vendors I've dealt with that used CMM-SW were transitioning to CMMI seemed to easily leverage their previous investments.
136. Our experience has shown that migrating from earlier model representations to CMMI is far easier than starting from scratch in process improvement
137. Gap analysis by XXXXXX (XXXXXX) shows that approximately 80-90% of SW-CMM project efforts directly correlate to the CMMI-SE/SW (e.g. Software Development Plans, measurement methods, quality assurance processes, etc.). The only major gaps lie in the areas of vendor performance (Supplier Agreement Management), policies to cover the new model's implementation, slight reapproach in measurements (ensuring they tie into business area objectives in order achieve most ROI), and a renewed focus on requirements development and design.
138. I believe its an improvement over sw-cmm and integration with SECM
139. Provided it is done in the right spirit.
140. Yes: our biggest regret was not mtaking the word 'software' out of cmm and applying it generically.

141. However, remaining with the CMM would have allowed us to continue with those investments also. This is the argument that is made by the "suits".
142. We were on a process improvement track to achieve SW-CMM Level 5. Our SPI activities using the older model have been leveraged in our adoption of the CMMI model.
143. CMMI in the hands of an experienced process engineering person is a very good model/tool.
144. Previously were at CMM Level 4; just achieved CMMI Level 3.
145. See question 2.
146. SW-CMM investments and processes are consistent with CMMI. The value and benefits of prior improvement work was in no way minimized by transitioning to CMMI. CMMI adds additional features beyond CMM (e.g, SE, Engineering) that can help expand the areas for our process improvements.
147. Many organizations have begun to tackle to CMMI so we can compare our performance to them.
148. SW-CMM is better than CMMI.
149. Provides best practices and proven loadmap(maturity level).
150. First CMMI class C "health checks" gave us a deeper insight than previous ISO 9001 audits.
151. An established programme of internal assessments and education which can be adapted easily, as well as organisational set of processes.
152. We acheived our SW-CMM Organzational Level 2 in XXXXXX. However, we needed a systems engineering approach and thus use the CMMI as a guideline.
153. We have not adopted the CMMI so most of the following questions are not applicable.
154. Because it provides an easy to use structure to guide our improvements. CMMI is more about the "what" than the "how", but that's what we need.
155. The activities we have been pursuing are to the most part congruent with the CMMI.
156. In general, PI form earlier efforts are not invalidated by CMMI
157. I have only had Intro to CMMI training, but it looks like a good process improvement framework.
158. If the organization is taking its first step toward a process based improvement methodology; an early attempt to adopt CMMI may overwhelm them. Key staff should gain understanding of CMMI, leverage concepts, and slowly introduce CMMI to organization.
159. We were able to easily move from our previous processes based on SW-CMM to revised processes based on CMMI.
160. we do not have earlier investments in process improvements Otherwise I strongly agree with the statement in general
161. See #2 above
162. Brings in whole site since not just software. Takes a while to determine ROI
163. CMMI aids the extension of our CMM-based improvements into the enterprise realm.
164. CMMI provides guidance for how our processes should evolve and where subsequent process improvement should be focused

165. Our earlier investments were primarily those that involve the SW-CMM. The CMMI maps quite nicely to our previous work.

166. Yes, but doing the assessment is too costly. we spent close to $1M getting ready for the assessment - much more than we've spent on process improvement in recent years.

167. Not applicable to this project

168. CMMI extends our SW-CMM and ISO improvements to SE.

169. Issue is with management commitment, not a choice of model. Past PI investments have not paid off.

170. At the time we decided to go with the RUP and Rational Tools we were at CMM Level 2 and a snapshot assessment indicated we would score at CMM Level 3 if we were to be assessed. However, we went to the RUP and Rational Tools, because that approach was easier in our culture -- better accepted by our personnel and requiring far less "enforcement baggage" and "evangelism" than needed here by the CMM or CMMI.

171. We have a long history of process improvement dating back to 1985. This model continues, with improvements, along the same path.

172. CMMI is systematical approach in process improvement.

173. CMMI provides us with better tools and processes to align our process improvement efforts with our business needs.

174. The CMMI will expand process improvement coverage to engineering groups outside of software. Mechanical, Electrical etc.

175. There is enough similarity between the CMMI and SW-CMM that we probably could leverage our work with the SW-CMM, however, ROI is questionable for CMMI

176. The top of the organization (for example, headquarters) which was negative until now also cannot but do investment to an improvement because the president commits adoption of CMMI.

    Consequently, the speed of a process improvement is accelerated.

177. We recognized need to integrate SE and SW process improvement efforts and started integrating SW-CMM and EIA731 efforts before CMMI was released.

178. Many of the improvements that have been made in the past was using the SW-CMM. the CMMI pulled in most of the SW-CMM practices and expanded on them. Also, The CMMI is more inline with ISO-9001.

179. CMMI appears to be the next step for CMM organizations.

180. "Doing" CMMI diverted us away from making improvements that would have allowed us more leverage.

181. Have not investigated

182. Our processes are based on Software CMM. CMMI may not make much of a difference for Maintenance projects.

183. i've already invested in SW-CMM which i can build upon for CMMI compliance

184. However, disagree if organizations are purely going for level recognition alone.

185. previous OSP based on CMM

186. CMMI is a process model, it does not help organizations make investment decisions.
187. We invested in process improvement for SW-CMM, so we can leverage that.
188. Yes! As a CMM organisation, we are able to map most of our CMM initiatives & infrastructure to CMMI model. As on organisation, we still speak the same language when it comes to process improvement but at the same time we are in a position to address process improvement requirements various other disciplines.
189. We do not have long time CMM/CMMI experience, and just started (formally) adopting CMMI in a 100 people division. We haven't done any analysis work.
190. We were using the SW CMM so it was a relatively easy transition
191. The model is easy to map to the CMM
192. The CMMI is the next evolution. I believe it to be very powerful.
193. Majority of Software CMM is used.
194. Will help leverage earlier investment in CMM
195. I feel it will build on our SW-CMM Level 2 efforts.
196. Depends on the nature of the organisation. Certainly will benefit larger systems oriented organizations.
197. For those who have already made the journey to CMM Level 3, it will be a slight change, but a change nonetheless.
198. CMMI provides good means to keep past experiences and continue.
199. Would rephrase that adopting CMMI "allows" organizations to leverage their earlier investments in SW CMM and SE CMM.

5 Global Issues Question 4b: Exisiting CMMI training courses, guidance documents, web resources and other process assets are adequate for our purposes.

1. One person here (me) has had one CMMI training course. We don't really know how much more we'll need. For SW-CMM we used both training and consulting support.
2. day model training is painfully boring, but probably adequate.
3. Although courses are available, they are cost prohibitive (a deterent) to the whole effort. SEIR and the references are excellant.
4. Changesw since the initial offerings of the Intro course helped make this an "agree" statement.
5. The CMMI training is still mostly abstract. People need very focused training to understand what it means to their organization.
6. Still too much elbowing / jockeying for position in being the king of the CMMI hill. I can get several different views of the model and/or its characteristics depending on who is talking.
7. We would like to see more elaborations. There are times when the current elaborations do not make sense or follow the practices.
8. Training always needs to be tailored for each company to allow them the ability to find what makes the best business sense for them. For those of us on EPG available training is great - but to get it across our organization - we need to develop our own.
9. The Intermediate and SLA training are marked improvements over the "DEATH BY VIEWGRAPH".

   As mentioned before each model document is too big and can frighten those looking to migrate.
10. Have not identified any inadequacies yet.
11. The training courses are not good. The Introduction to the CMMI is very dry and repetitive. The way that the Intermediate course is structured, it amounts to the blind leading the blind. I expected to go to the SEI and learn the nitty gritty details of the PAs from the experts; instead, I found people who were equally as ignorant of the model (at that time) as I was (my classmates) teaching me about the PAs. Why not use experienced lead appraisers to teach the class? Finally, the V1.1 SCAMPI team training course is woefully inadequate. The V1.0 was more comprehensive, and considerably better.
12. We would benefit for the entire series of CMM-I courses to be provided with broader "business" examples to reach beyond s/w and s/e in a very explicit way.
13. The training materials needs to be redesigned to be easily readible. Currently there are inconsistencies.
14. with some limitations. The Intro course should be re-designed. Going through all PA in 3 days with 15min each is somewhat boring. So I suggest some homework in advance similiar to the Intermediate course to make sure everybody has read essential parts of the model. With this the class could more work on essential concepts of the model and more practically oriented exercises
15. Too Complicated!!

16. We needed to augment the SEI training with other programs that covered the spectrum from Awareness Training for "the masses" to in-depth courses for the "more difficult" PAs.
17. We're getting there but are not there yet. The CMMI training courses are generally good, however tend to be inconsistent in quality. We've had instances that the classes were so poor that we were offered additional classes at no charge. On the other hand we've had experiences where the classes were exceptional. The guidance documents (ARC 1.1 for example)are a start, however continued work needs to be done (especially in the areas of SCAMPI B & C))
18. The Intro to the CMMI is probably not detailed enough and people think they are experts when that's all that they've taken.
19. Good information that helps. But the courses/training are a little pricey with all the budget constraints for industry and government. I believe that more personnel would attend (and recieve first hand training from SEI) if the price was lower instead of train the trainer (which you only get medocrite training). Suggest price range from $350-$500 and have west coast training.
20. Existing resources are far too generic. Many of the resources we have seen do nothing more than repackage the words from the model.
21. All of my current clients have required significant help in understanding the CMM-I. Much more so than with the SW-CMM.
22. They are very good.
23. So far it has satisfied my needs.
24. As an instructor, I have a feeling that Introduction to CMMI is also a very high level view of what should actually be described in a 3 day Introduction. Examples of how higher process maturity practices have to be laid out into process infrastructure can best be described using good exercises and examples that support use and application of quantitative techniques (not just SPC). I have feeling that even a simple metrics initiative that can offer insights into the goings on in a process from a strong program management viewpoint is underemphasized ... it is not just knowing about defects and defect containment. The metrics collected must render a story that can be intervowen into describing the virtues of the process. And, for this to happen, the course material must emphasize use of QPM, OPP, CAR and OID on the lower level PAs and provide examples of how it is to be done.
25. Given the wider scope of the model there is a significant increase in the ammount of traning required. I believe that the 3 day intro course is overkill for many employees and that a shorter half or one day "awareness" course is adequate. Also the two representations of the model mean that those who choose the staged version of the training are disadvantaged for the higher level training as they are heavily based on the continuous representation.
26. We think there is a need to add to what is avaialble in public domain and develop our own assets, examples and specific training
27. However, there are additional courses and information needed.
28. I have been unable to identify any CMMI information that is geared to small, diverse businesses.
29. They are too expensive for small firms to afford.

30. The detailed guidelines that SEI provides to Lead Assessors in its training classes includes many undocumented criteria, according to our CMMI Lead Appraisor, which affect our ability to pass or fail the CMMI appraisal. These criteria should be documented and provided publically. After all, it is CMMI which requires us to document criteria all over the process - why shouldn't SEI also comply? The intro and intermediate training courses are excellent.
31. Existing course is good, however taking them is very hard for us, living in Asia. I want to take CMMI Introduction instructor course, but business travel itself is barrier.
32. Depends on your carrier, knowledge, experience.
33. The available resources are suitable for our requirements since we implemented CMM L5 2 years back. But the information available is very inadequate for a level 1 organization
34. CMMI needs to be made much more accessible for those who don't have the benefit of the SEI training courses. I have had to develop quite a lot of material myself to explain what it is all about, in simple terms.
35. Need more guidance in applying CMMI in a defense environment where software maintenance is the primary activity. CMMI needs to incorporate SA-CMM principles to accomodate about half of our current support work.
36. Haven't had enough training to say; what I've had has been good.
37. I don't think a generic set of assets like the CMMI product suite could ever be completely adequate for the purposes of a real organization. They provide the core of what an organization needs, but there are many specific tailorings and additions needed to fit the actual circumstances of an organization
38. More thorough guidance on the "deltas" from SW-CMM should be provided. More detailed and honest guidance on its interpretation w.r.t. iterative development, esp. agile methodologies, will be welcome.
39. You all *really* need to teach a mid-level course in tailoring CMMI (either representation/both represenattions) for specific applications.
40. Never been to one.
41. Need more training on implementation techniques that are proven
42. I have no reason to check otherwise.
43. The resources on the web are not yet very complete.
44. N/A. We are a consulting company that delivers CMMI services.
45. CMMI training courses can be improved (e.g., need more definition of terms, concepts).
46. Intro to CMMI course does not provide what is claimed by the SEI and other material is limited to project based engineering development
47. Other than the courses covering the aspects of model only, users definitely need (or will need) courses as practical guidance of model implementation in major process areas (project management and engineering), and executive guidance for bonding business goals with the model.
48. Information on levels 4/5 is lacking.

49. We have taking advantage of many SEI training opportunities and have re-established our working relationship with SEI personnel. We have the SEI web site mirrored off our internal web site.
50. More materials relating to the higher maturity/capability levels would be beneficial.
51. Intermediate concepts should be offered to anyone who would like to take it. Not limited.
52. I think there is some room for improvement in providing more material to those who have taken training, in order to continue education and examples.
53. I wish there was a simple, steamlined approach/materials to provide to folks who do not need to know about "CMMI" but do need an overview of the disciplines and practices.
54. I strongly agree with most of information provided. Would like to see more guidance on applying the model to adminstrative organizations (finance dept., contracts, Human Resources, etc) and would be happy to work on such a project. Also, MDD and the Appraisal Plan format seem a little awkward.
55. Due to the flexibility of the model, I find the existing data more than adequate.
56. The training materialsl are not very good at all and most of the guidance documents and web resources seem to be very academic in approach, which is fine for pure education, but are not very helpful for real world implementation
57. I have purchased some very helpful resources to help with the implementation of the CMMI and ISO processes.
58. I've gone through the SEI CMMI training twice and have had no complaints.
59. Need more help with SAM, ISM, and some of the advanced process areas.
60. It would be useful if there were a way on-line to browse and search the model as with Google.
61. Our organization (and I believe countless others) would benefit from CMMI training that ties roles (e.g., CM, QA, project manager) to process areas, typical artifacts and how it might translate into actions or behaviors. (Or put another way, personalize the CMMI for those impacted by the process areas.)
62. The support materials are readily adapted to our environment. We have made improvements to them that help us optimize the usage of the SCAMPI Appraisals.
63. It is very expensive to deliver Intro to CMMI training to our development staff.
64. Although there could be more interpretation resources available.
65. What I learned in the Intermediate Concepts of CMMI was what I should have learned in the Intro course. The intro course basically just gave me the information that I could read in the actual model.
66. SEI has been more than adequate foor our needs
67. What is missing is the guidance needed to both build a CMMI-compliant process and appraise a project against CMMI practices. I feel the guidance that is missing will cause appraisers to use more of their own judgment. Results then, will depend to a certain extent on appraiser biases.
68. They are OK. We are looking forward to the FAQs becoming robust, and getting more direction on interpretation as the experience grows.

69. The basic training which I did was too crowded with general information and missing good examples. The exercises didn't really fit in the context. Maybe courses to different PAs should be offered.
70. Compared to the SW-CMM, there is a significant shortage of guidance documents
71. Interpreting the materials is sometimes a challenge, i.e., there are two equally valid ways of viewing the presented material and you are not sure which is meant.
72. If dealing only with CMMI
73. Again, we are using it in a very limited way, almost not at all
74. We have not had CMMI training yet.
75. Agree but as far as training is concerned, this turns out to be very expensive, especially for use out of the U.S. Some of our non-US customers have opted either for ISO or CBA IPIs because of the training costs.
76. But . . . many of the training courses are too generic. Different business domains should be able to tailor to the business domain needs. This may be a problem with no solution.
77. The existing CMMI training courses do not support our tailored process.
78. I have not yet spent enough time assessing this to provide a meaningful answer.
79. Our organisation does not yet invest in these courses, I spend my own time/resources in developing our attitude.
80. hold on. you've combined too many items in this list. 1. training courses - need improvement. 2. guidance docs - i really question the need for interpretive guidance. in my mind, it seems a bit silly. guidance on guidance? guidance on what? the normative components? the expected components? the informative components? i thought informative and supplemental information was interpretive guidance. i really question what's being done, but maybe you can educate me.
81. CMMI training, coupled with general process improvement and training on the organization's process framework are adequate.
82. Problems: 1. non-equal treatment of non-US orgs; 2. lead appraiser path not rigig enough
83. I think they fall short in application. Most people want to know how do you get started, rather than just the theory.
84. However the need for delivery of training and guidance from a tutor / trainer familiar with the specific industry aids interpretation
85. I would like to see additional practioner training - to include real world examples.
86. Training hits the mark..... Apparently doesn't always stick....
87. The websites are outstanding and the Intro class was excellent.
88. Adequate at the introductory level. You may want to add more "hows" of organizations who are implementing CMMI practices.
89. Would like to see tool developed such as the CMM Live software developed for CMM.
90. I have no experience to the contrary.

91. Intro to CMMI is a rush to the finish in all cases. For organizations at L5, it is an easy class to teach. Although I have taught it 10 times, I still would not want to teach it to a group with no prior exposure to SPI
92. I had "Introduction to CMMI" course. I expect it could be applied to embedded system development.
93. So far yes. But we have adopted it yet.
94. I know only about the training courses given in Pittsburg, U.S.A.
95. I have looked at some postings (in the SEIR) from organizations that have completed the transition to CMMI, hoping to find some hints or descriptions of how others overcame hurdles similar to what we have or will experience in our transition. Have not found anything along those lines. That would be very helpful to any organization struggling through the transition.
96. + Some cases there is too much guidance (integrated teaming) + Sometimes there is not a standard set of material Team training
97. The Introduction to CMMI was too much material for a 3 day class. I've not taken the SLAT yet so can not fully reply. The web resources are similar to the CMM so are adequate. However, we still must help organizations define a business case for transitioning to the CMMI and this material is somewhat lacking.
98. We have many Lead Appraisers to help us.
99. Our organization has also developed assets that can be applied to CMMI adoption.
100. CMMI would benefit greatly if the SEI produced a series of CMMI training videos/CBT type training aids. CMMI would be more widely embraced.
101. At this point XXXXXX is not pursuing implementation of CMMI.
102. Actually, my answer here would be "NA"
103. I would like to see more "how-to" and "experiences" type of articles/books.
104. Although, I would recommend establishing training specific to tailoring/adpating the CMMI model for smaller projects and/or unconventional environments like XP, SCRUM, etc. In addition, would like to see training, workshops or guidance for different stage representations based on the organization's characteristics.
105. Except that they are only in english language.
106. For existing only. Please see Question 6.
107. We had to work with consultants to develop our own training content and reference materials that corresponded with our specific interpretation of the CMMI process areas selected.
108. I've always been able to find the information I need.
109. Understanding how a particular CMMI practice relates to an individual project/organization is often difficult. Repeated conversations with SEI personnel and Lead Appraisers has provided no help.
110. At this point, we only have minimal interaction with courses, so I am assuming attendance at additional courses will help.
111. I've only taken the Intro to CMMI, Continuous course and it was very helpful. I can't comment on the other courses available.

112. We need to bring the training down to the organ. level, with a process in place, not just theory.
113. CMMI training takes the assumption participants never heard about CMM(I) - most participants come from SW-CMM
114. I am satisfied with the courses I attended.
115. Existing CMMI Training was excellent. Our organization requirements are not just software. More is needed.
116. Have not been permitted to attend any of these courses as yet.
117. Xourses have been very good, but there were ery few assets that describe how to apply to a technical support area
118. I have only been exposed to the model itself at this point and the training courses are great!
119. some internal needed to "translate" termonology
120. For the most part. I think greater training or information is needed relative to the higher maturity and capability levels.
121. Need more information readily available: 1) CMMI mapping to CMM; 2) CMMI Mapping to ISO 9001:2000 Standards; 3)the CMMI assessment process needs to be streamlined.
122. Practices should be better defined to ensure more consistent interpretation
123. Especially examples are good for adopting CMMI in the organization.
124. There appears to be adequate classes, seminars, and other organizations that serve as resources to gain answers to questions in implementing CMM/I.
125. CMMI intro class was good. Always finding new and sometimes useful items when I visit CMMI websites
126. I agree that the resources that I have used have been adequate, but I have not used all available.
127. There are sufficient training resources available
128. The training is very weak and does not provide ANY insight into how to implement the CMMI. It only provides a 50,000 ft. view of what is in the model. That goes for the intro, intermediate and CMMI instructor training.
129. They really need ATM training.
130. I have used the WEB site often and have found what I needed almost every time.
131. Need description of problems that different practices solve, integrated into course materials.
132. Agree
133. SCAMPI team training course needs to include guidance/exercises on conducting interviews. The CBA IPI course did this very well
134. Need less extensive training for general knowledge. Not as detailed as the courses required for assessors or instructors.
135. As far as my limited experience of CMMI permits me to comment here.

136. We will need a tailored course that provides an introduction to the model, and that teaches the method that we are developing. (We will train a core team with the SEI courses to support Method A and B appraisals.)

137. See question 6.

138. The courses are basically ok, but expensive, particularly for smaller organizations. Making some of the training available through web-based training or on CDs would help defray costs (including travel costs) and probably speed up implementation within the smaller organizations.

139. I find the web resources less than I expected. Other resources support our efforts, although their use is limited to a small part of the population that support process improvement.

140. Unless something has changed over the last year, I feel that the training courses do not provide enough guidance on how to use, implement, interpret, assess, etc. the model.

141. We don't have enough experience yet to evaluate.

142. The guidance documents do not always address the deeper questions and problems.

143. CMMI training courses and other assets by themselves are very inadequate and could benefit from improvement of delivery methods (instructor led are very ineffective).

144. Haven't taken any CMMI formal courses (outside of conferences)

145. A bit too pricey, though

146. Adequate for us but lacking for the new comers.

147. Would like to have more available that helps with guidelines for implementation in the real world

148. I haven't taken formal training yet. I expect to attend training in Pittsburgh in November.

149. There is a lot of information available and this information is at different levels, from introductory material to more detailed information.

150. The information flow could be better, especially for Lead Appraisers, i.e.,SLAT is comprised of MDD, slides, ARC and model references. Some information provided in the named media is contradictory.

151. Most CMMI courses do not provide any guidance on how to intepret and use the model.

152. Courses do not describe application of the model

153. The training courses are a little prescriptive.

154. My role was on a SCE-like evaluation team, and I took a introduction to CMMI-staged course and Introduction to CMM-SW before starting on the team. Both were a good introduction to the models.

155. I find most information that I need is available, although sometimes only after much searching

156. At this time, XXXXXX is in the transitioning stage. We have not explored this area in enough depth to reasonably comment.

157. my general feeling is they do not go into enough detail on practical implementation and interpretaion and tailoring considerations

158. SCAMPI LA course needs to cover some aspects of the model to reinforce interpretation of the model

159. Number of courses is adequate, content is dea6th by viewfoil. Additional courses and resources have been developed internally (CMMI in 37 pages, Type B/C tools and training, CMMI Workshop, roadmap)

160. The SEI classes are focused to much on the model and it content, and do not provide much practical detail of how to implement

161. We expect to continue to take advantage of the other courses at the SEI, particularly those of higher maturity, as we have in the past with the CMM.

162. Intro to CMMI is not adequate for those who are going to be implementing and/or facilitating improvements. Intermediate Class should be advertised more strongly as fulfilling this purpose.

163. A lot of information on the CMMI model, history of the development, SCAMPI, etc., has been provided on the SEI, SEIR, and SEMA sites.

164. SInce I am consulting to mainly to software companies, I find SW-CMM to be an excellent supplementary material. I have faced problmes though when consulting for an organiztion in the Network -Set-up industry, difficulties to answer their questions, and define equivalents what is a 'defect' etc.

165. We just need to know what the CMMI is at this point.

166. The extensive CMMI training required for SCAMPI and CMMI Instructor authorization was more than adequate (perhaps overkill, and certainly very expensive). The CMMI web pages are valuable, but the experiential data and interpretative guidance are not yet as rich as SW-CMM (e.g., I've made substantial use of the Mark Paulk papers published for SW-CMM). A stronger set of infrastructure assets (e.g., reference materials, example assets, implementation guidance, templates) would be very useful.

167. The SCAMPI MDD version 1.1(CMU/SEI-2001-HB-001) is a little ambiguous comparing to the CBA IPI Lead Assessor's Giude version 1.2(CMU/SEI-2001-HB-002).

168. There is no japanese version.

169. The access to free documents allowes for intensive personal training before taking the official courses.

170. I have not found the training courses, guidance docs, etc. overly adequate or useful for our purposes.

171. n/a

172. Based on training I received for CMM-SW I would expect it to be adequate.

173. We haven't taken any courses yet, but from the advertising about them and from my attendance at SEPG 2003 in Boston I believe there will be little difficulty in finding good instruction.

174. We have used the XXXXXX and their courses which I found very helpful in implementing and understanding the CMMI. Also found the Book "CMMI Guidelines for Process Integration and Product Improvement" useful.

175. We have created 2 and 4 hour training sessions to fill the gap in our needs

176. I currently use the CMMI information as a supplement to our application of the SW-CMM. The documents I've found so far are adequate.

177. have not participated in any courses and have only just begun reading your documents.
178. The existing material is too lengthy; should be steamlined; it is not that difficult of a topic.
179. Agree to a point for my unit of our organization which is already familiar with process improvement methodologies. New comers which I have worked with are easily lost in all the materials. Roadmapping thru the content is needed and has to be tailored to the client.
180. CMMI training and documents on SEI web site have been helpful.
181. Succinct high quality executive overviews are hard to find.
182. My CEO and several VPs "know" that CMM is a good thing. They do not know what CMMI is. Need to make the renome of CMMI the same as CMM and make people aware that this is not just software
183. The size and organization of the CMMI causes resistance to adoption.
184. However, additional guidance and implementation examples always add more to our adaptation and understanding.
185. Because all document is not translated. But existing training course by Japanes is helpful for us.
186. Have not yet used any.
187. I believe the material is there.
188. The courses are fine, but it'd be nice if they had more flexibility.
189. All of my CMMI training has been internal XXXXXX training including Intro to CMMI, SCAMPI team training, and implementation and deployment training. Haven't had any recent need to access SEI web site. Most of my CMMI materials are coming from internal XXXXXX developments, which are getting better and better.
190. Many of the folk that we have sent for CMMI training have had a positive experience, however some have not. The problems were not so much with the material, but with the sometimes lack of experience of the instructors. Every effort should be made to ensure that experienced instructors are available as mentors when 'new' instructors teach a class.
191. Training is not the issue - the model is too complex and difficult to assess against
192. I have only attended the Intro class and it was good. I am scheduled to attend the Intermediate and Lead Appraiser classes later this year. Have not been on a SCAMPI yet.
193. Not applicable to this project
194. We have had to develop additional training of an overview nature (less than 3 days duration), as well as our own interpretation guidance.
195. Org is not keen on paying for training. We'll have to see if they follow through on their words.
196. Too academic. Lack case studies meaningful in our organization. Some of the practices need more meaningful rationale here.
197. There is always room for improvement with the model and the other assets and tools that support the model. But, generally, we find that currently available resources, etc. are very helpful.

198. As a SCAMPI/CBA-IPI Lead Appraiser(Authorized) and Intro. CMMI Instructor(Candidate),SEI process assets are valuable.

199. The training, I think, misses the mark. It does not present the model as a "big picture", but rather a long string opf process areas that we are supposed to piece together. Thisnk of it this way, you have a puzzle spread out on the table. I will discuss the attributes and philosophy of each piece, but I will leave it to you to figure out what you will get when they are all put together, or how they fit together. People can read the model and see the goals and practices, tell them why they are reading it and what it can do for them.

200. The CMMI training and other resources out there have been of tremendous help to our process developments efforts. These resources are certainly adequate for our purpose.

201. THE CMMI training still largely focuses on the MIL-STD model of doing business and is not very adaptive to commercial industry.

202. Adequate, but expensive

203. Many Japanese of the software industry do not have skilled English. Even if, even if those people are excellent process champions, they are not accepted as lead appraser. It is because an end certificate cannot be obtained even if it takes a lecture on the lead appraser course of SEI.

204. I have attended several of the SEI courses and conferences. I also regularly use the SEIR. I would like to see a forum on the SEIR to ask questions or discuss interpertaions of the practices.

205. I'm still perturbed that the Pilot CMMI course I completed XXXXXX from SEI was never rewarded with course completion status. When we registered for this course, SEI indicated that it would provide us with course completion certificates, however this commitment was never fulfilled.

206. Exsiting training is far too expensive.

207. Almost every asset needed to be modified to make it understandable within my organization.

208. Have not investigated

209. However, some sharing of experiences related to Process Performance Model would have helped.

210. too few implementation resources for EPGs... or maybe i just work with an EPG that refuses to get trained or participate in the CMM community (conferences and SPINs)

211. Would appreciate more guidance on interpretation for different envioronments and size of organizations.

212. materials I have seen/used are well done.

213. Any model that "requires" a three day training course to understand, and a 5 day Intermediate course to apply, is clearly out of touch. CMMI does not provide the tools necessary to carry out process improvement. We find the XXXXXX Continuious appraisal model a far better assessmetn instrument. We also find ISO to be far more cost effective in assessing and providing continuious process motivation.

214. The ones I have seen so far seem to be good.

215. Improvement opportunites exists in some of the guidance documents & resources. More case studies on successful adoptations are required during the early stages of the model.

216. CMMI-Into is really poor and unsuitable. Teamtraing-material for assessments is unsuitable. Possibilities to adopt on company requirements is poor

217. SEI provided material is adequate.

218. We have had to develop a 6-hour overview class for people who only need a working knowledge of CMMI. There is a need to a 1-hour executive overview.

219. Too many courses at a very high price, but adequate for the purpose.

220. Trainings at SEI should have more focus on real case studies from SCAMPIs or other experiences of organizations implementing CMMI rather than having a focus to discuss the PAs and practices.

221. I think the CMMI class is adequate, but could be improved. The other support is fine.

222. CMMI Intro course was sufficient (with experience using CMM-SW).

223. We need ROI data, prefer more meat in the Intro CMMI course - it was disappointing.

224. Expected practices and process areas sometimes unclear, ambiguous. Also, it would be very helpful to some of our projects, which must comply with IEEE 12207 to have information (e.g., a mapping) relating CMMI to 12207. Also, it would be very helpful to clean up the terminology definitions and place them all in a single combined glossary.

225. I'm currently in IT, and they don't have a strong software engineering background. Simplified information would be helpful.

226. So far only myself and my colleague have been trained. Our manager is a certified CMMI instructor so we have an experienced person to go to.

227. What our internal lead assessors are telling us is sufficient so far

228. The SEI approved courses are too expensive for the number of people we need to train.

229. Provided there is at least one person who has in-depth knowledge.

230. Lots of conflicts in the current training and lots of variation in the quality of the classes we have been through, the new book does not track with the paper-bound representations and classes.

231. Guidance, training, tools are just now becoming available to adequately support the CMMI. There is still not enough standard support outside of experts.

6 Global Issues Question 4c: Existing CMMI appraisal methods are suitable for our organization's needs.

1. Not specifically familiar with appraisal methods.
2. SCAMPI method is expensive, hard to implement. Organizations game the time line by not counting all visits to do up front document review. This is giving the impression to some mis-guided people that a SCAMPI can actually be executed in 2 weeks. Method is subject to interpretation regarding need and role for direct, indirect, affirmations.
3. You keep making the overall appraqisal process more time consuming and costly. The size of the model seems to have driven the appraisal method vice just getting a good appraisal method.
4. There is still a lot of subjectivity in the appraisal process. This scares a lot of people. There is still an aspect of doing everything and still failing.
5. An appraisal should not cost $350,000 to satisfy the wants of an assessor who has never produced product.
6. haven't been involved in formal SCAMPI - but in gap - liked the approach.
7. SCAMPI being the only method to rate is the best of all situations - no more apples & oranges - well ideally. Once SCAMPI B&C are ready I would rate this as strongly agree.
8. Haven't been through a Class A SCAMPI yet.
9. I think that there are times when the use of a discovery method (V1.0) is equally as effective as a verification method. Both should be allowed as Class A SCAMPIs.
10. The need to be a transition partner to provide internal SCAMPI appraisals, and the associated cost structure for the TP program and to take the SCAMPI lead courses, is a significant impediment to using CMMI and SCAMPI appraisals.
11. SCAMPI A appraisals are very heavy.
12. The idea of having a PIID data base seems to be helpful. The SCAMPI training could include the use of XXXXXX XXXXXX from my point of view.
13. Why do we need a new process? The same assessment process should be usable with any model.
14. We needed to develop class B and class C appraisal processes to augment the class A SCAMPI.
15. The SCAMPI 'A' method seems to be getting quite good (this is not from my first-hand experience but from what I have heard / observed at the SEPG Conferences). However work remains for the SCAMPI B & C. Currently we have defined our own B & C appraisal methodologies internal to XXXXXX (ARC 1.1 compliant), however we would really like to have more guidance from the SEI.
16. Having to devote approximately twice the resources to a CMMI appraisal is onerous and may not be acceptable to senior management.
17. Need to clarify the Class B and Class C appraisals. People are claiming they've done them when they probably don't meet the requirements.
18. Haven't been involved with an actual SCAMPI appraisal yet.
19. SCAMPI method is much more time intensive that CBA IPI. Not during the appraisal perion, but in the preparation time involved.

20. I admire clarification of evidence. But I sometimes have concern that SCAMPI may drive oragnizations to generate a lot of documents (evidence artifacts) rather than to improve processes.
21. Current appraisal method is unfavorable to our local organization due to the small size of a typical program. Too many programs need to provide OE in order to meet the % penetration requirement.
22. I have been involved with both a Class A and Class C assessment using the CMMI and found the methods to be adequate for their intended purpose.
23. It is difficult for our company to buy into the cost of performing an appraisal. This includes both the cost of appraisers as well as internal human resources cost.
24. However, the SCAMPI additional training requirements add additional days (and cost) of little additional value. Specifically, the requirement for the formal 3-day CMM-I class.
25. Maybe.
26. We have our first SCAMPI in XXXXXX
27. CMMI appraisal method is fine ... but then there is a gap when it comes to expecting PIIDs for every project! It is NOT possible for every project to show all the PIIDs ... example if a project has just begun, how will it have artifacts to show TS, PI, VER, VAL and even other support PAs? The other lacking is in coming up with a good 'qualitative' feel for the process. It is absolutely incorrect in my opinion to say that: the appraisal will only look at facts and will not make 'qualitative' judgements about the process. Very little value can be transferred out into the sponsoring organization if a lead assessor and the team cannot make 'value based' judgements about the 'richness' or otherwise of the process. CAQ does not exist like how it has to be! XXXXXX uses a CAQ which was derived internally on our CMMI appraisals ... and we have excellent feedback from the sponsors. I would be willing to share the XXXXXX CAQ if required. Since it is a proprietary product of XXXXXX, we would like to have due recognition given to us for it.
28. No. Our organisation has made a decision to adopt PI for our business needs, not to get the CMMI "badge". Therefore, unless there is a customer requirement, we will not be performing Class A appraisals. The lack of process for Class B/C led us to develop our own.
29. Provided this includes SCAMPI B and C
30. The method is still undergoing tailoring, in order to meet the needs of organizations. Also, there is still to much probability of the method being inconsistently applied among organizations. For instance, we received a brief at the SEI, from a newly achieved Level 5 organization, which said that they only collected evidence at the "Goal" level. They also had no explanation of how they achieved "institutionalization" of the DAR Process Area, in only 6 months.
31. The model was developed by and for large business under the aegis of large government (DoD). Trying to make a small business jump through all the hoops is difficult at best.
32. SEI needs to provide guidance sooner (rather than later) on performing Class C appraisals.
33. We have been able to get what we need from Class C and Class a appraisals.
34. Need better definition of Class C.

35. The detailed guidelines that SEI provides to Lead Assessors in its training classes includes many undocumented criteria, according to our CMMI Lead Appraisor, which affect our ability to pass or fail the CMMI appraisal. These criteria should be documented and provided publically. After all, it is CMMI which requires us to document criteria all over the process - why shouldn't SEI also comply?
36. Making PIIDs take lot of efforts. The interview should be focused more, However SCAMPI is nice. I want to use FORMAL SCAMPI B or C. Please open them soon.
37. Verification approach will contribute appraisal efficiency for appraisers, but contains risk for getting formality than actual improvement.
38. I have participated in one Class B for an organization other than mine and will be participating in a Class B for my organization at the end of June with a class A scheduled in December. I have some concerns but until I Go through a few more I'm not sure if my concerns are valid. For instance I am concerned about not having every ATM in an interview I concern that ATM's will not have the ability to get a full picture of the organization and it's behaviors. I also concern that the method is becoming to focused on primarily documentation review and less on information from interviews. This seems much more like ISO than I am comfortable with.
39. We used XXXXXX and beleive that this should be endorsed as a formal appraisal method.
40. Need more guidance and support for SCAMPI. I have seen tools developed by several organizations that can expedite the SCAMPI process. It would be beneficial to create a standardized toolset, which the ability of organizations to submit process improvement suggestions for the toolset. Also, more guidance is needed for conduct of SCAMPI B and C assessments.
41. Don't know enough about these yet.
42. Would like to have a defined method For ARC B and C appraisals.
43. Our company utilizes a proprietary assessment method that is not entirely compatible with CMMI assessment
44. The approach to lay down all evidence on the table during appraisals may have unnecessarily expanded the appraisal time frame.
45. I will agree when SCAMPI B & C are codified. Thus far, no - I need a scalable appraisal process. Ideally, it (too) would bew uniform (i.e., repeatable).
46. As long as the appraisal methods are realistic/practical and the teams realize organizations will be tailoring the model to a certain degree to adapt to specific business cases.
47. Instances where appraisers are bias - need to ensure appraisers are from outside the organizations
48. Not that familiar with SCAMPI at this time.
49. We will use class B&C methods as well (we have devised our own)
50. N/A. We are a consulting company that delivers CMMI services.
51. Need to define SCAMPI B and C methods.
52. needs some rework and fine tuning
53. Our experiences revealed no problem about those.

54. The info about the new CMMI appraisal methods indicate that this will work for orgs looking at SW-CMM. We are working with SEI on the pilot of the SCAMPI B process (XXXXXX and XXXXXX from my org).
55. XXXXXX has defined an additional appraisal method which is also benefical to our organization.
56. Have not been part of an appraisal yet
57. Assuming you are addressing the Class C and B also. We look forward to more guidance in these areas. I would think it is suicidal to go straight to a Class A, with out doing some kind of gap analysis, Class C, B or something.
58. I would like to see more detailed information on the SCAMPI methodology in terms of sample interview questionnaires, and such. I think this would be of benefit to organizations early in their maturity to help prepare for their first SCAMPI assessments in a more expedient manner.
59. Based upon reading the avaiable descirptions, I believe that it suffers from the same problems as the current IPI and SCE methods in being overy burdonsome in some areas and overly open to interpretation.
60. The SCAMPI method isn't all that different from the CBA-IPI so it hasn't been that difficult to make the transition.
61. Jury's still out until we complete our appraisal
62. The only difficulty is in describing to the untrained what continuous appraisal results mean.
63. I'm very impressed with the improvements in SCAMPI over CBA/IPI in reducing the subjective nature of the appraisal. I wish guidance on appraisal team composition was more forceful in blocking membership of anyone who has a vested interest in the outcome. I our case, one of the teams included a QA person assigned to the project he was evaluating, and he was assigned to review evidence of PPQA. This seems a clear conflict of interest. To the Lead Appraiser's credit, the PPQA findings accurately reflected the poor state of that PA. I was also concerned about the presence of our EPG Chair on the appraisal team for OPF, OPD, and OT. I felt strongly that he should have been an interviewee rather than an appraiser. Regardless of the integrity of the individuals, such staffing imposed a cloud of doubt over the outcome of the appraisal, especially where it is positive. We earned CL3 in OPF, OPD, and OT, but I think it would have been more spectacular without our EPG Chair on the appraisal team.
64. too costly
65. Assuming the SCAMPI and various levels of appraisals continue to be available. Ideally, a method for appraising specific process areas could be provided in a cost effective method for those organizations using the continuous representation.
66. Yes. We modified the furnished materials and have used them to cut the cost of performing the onsite with little or no loss to the return to the projects being appraised.
67. The SCAMPI Class A methodology for assessments, is extremely time consuming and expensive. We use our own very mature and proven Class B methodolgy more frequently now.
68. The various classes of methods provide options for both 'certification' and process improvement needs.

69. We are still moving in the direction to use the SEI-CMMI appraisal methods. Goal is for next year.
70. See previous comment.
71. Too much reliance in doc review
72. The appraisal method is onerous, cumbersome, expensive, and intrusive on the real work of the organization. I have not yet been on a SCAMPI, but my experience so far and what I have learned from those that have been on Class Bs or SCAMPIs leads me to be doubtful that the increased appraisal thoroughness is worth the cost. It definitely takes away from being to develop processes that are an improvement and are lean. The evidence collection requirements dictates a process that is heavy in artifacts, and prescriptive so that the many artifacts have a common appearance. We are definitely finding that the evidence requirements are causing us to have a process that is "heavier" than we feel is necessary. Frankly, we have not been able to make a good business case for CMMI because of this, other than that we need it for competitive reasons. The "heaviness" of the processes makes it difficult to sell the process improvement aspect sometimes.
73. I'm not too familiar with the appraisal methods but having the choice of A,B,and C seems to be very useful.
74. We still have to try this out
75. We need the Class B & C methods
76. I think the appraisal methods are too expensive.
77. Will let you know when we get that far.
78. Haven't been exposed to differences between SCAMPI and CBA-IPI.
79. We are pleased to see the 3-tier appraisal methods. It corresponds with our current 3-tier SW-CMM assessment/evaluation approach.
80. As I know them, they appear to heavy, time consuming and costly.
81. Again, we provide appraisal support and the cost of formal assessments is beyond the means of most of the organizations we deal with. They prefer to develop their own approaches, possibly by using parts of the CMMI/CMM, other models or by modeling their own process based on the issues they are facing.
82. But . . . I still think that the "modularity" could improve (goes along with the expression, "Eat the process improvement elephant one bite at a time").
83. This statement is true.
84. It appears so. Although I am concerned that the SCAMPI methodologies require more investment than the (already through) CBA IPI methodology/process.
85. We are in desparate need of process improvement from a scientific perspective.
86. class A is burdensome for most orgs. class b and c methods from the sei would be useful, and i'm clear that they're in the works. there needs to be a greater communication of when these alternative methods will become available.
87. not enough focus on providing help for process improvement. Only one objective Lead doesnt make a team of 4 objective. I would recommend always to have a majority of team members who are not from the assessed org.
88. Haven't done one.

89. A recent SCAMPI B appraisal provided both physical and anecdotal evidience. A step further than other appraisals had gone
90. However, the methods need to be improved to become more cost efficient.
91. SCAMPI suits our organization's needs.
92. I've seem them work well.
93. Not sure whether the emphasis on format vs. content (at least as interpreted by LAs) is valid.
94. Excellent method. I like the flexibility of Class A, B and C. We would like registered C's.
95. Have not seen the apraisal material
96. We have not scheduled any CMMI assessments yet.
97. I have no experience to the contrary.
98. Althouth from a practical standpoint, and especially from finding areas for improvement, the SCAMPI metho is "maximum overkill". In fact, the effort required to conduct a SCAMPI could lead to a forest/tree problem where fundamental business issues could be lost because the team is focused on dotting all the i's
99. We have not CMMI appraisal experience yet.
100. We haven't adopted it yet.
101. We have reviewed descriptions of SCAMPI methods and we believe they will be suitable for our organizational needs whenever we are ready to schedule a formal CMMI appraisal. Only the actual experience will be able to prove/disprove our expectations.
102. The SCAMPI A is too costly for most of our organizations and is not required by the business. A lower cost method that is authorized by the SEI is needed. That is why XXXXXX is a partner in the SCAMPI B and C pilot.
103. Really like the ability to give project-specific findings.
104. An assessment strategy based on verification is much better than on-site disciovery, but the methodology needs streamlining (simplification.
105. Only because of the problem mentioned earlier. The elicitation of process requirements should not take place during the appraisal process.
106. Would like to see specific Class B and C tailoring.
107. Existing CMMI appraisal methods need to be tailored to be suitable for my organization.
108. At this point XXXXXX is not pursuing implementation of CMMI.
109. Especially since SEI is formalize the SCAMPI class B and C methods. Recommend update/clarification of the associated PIIDs.
110. I think they will be
111. I have not yet use the SCAMPI method.
112. Agree for the most part - I know the class B & C appraisals are still being defined. I think the class A & B models are fine. I don't see much practical value in the class C as it is currently described because Im not sure it's really possible to evaluate a PA with so little evidence (i.e. only 1 source). I don't see the benefit of conducting an appraisal like this.

113. I haven't been directly involved with the appraisals.

114. SCAMPI v1.1 is way too burdensome, especially for smaller organizations. Many of the "requirements" listed in the SCAMPI Method Description are completely infeasable.

115. Unknown at this point.

116. We developed our internal assessment method to bridge the gap.

117. Due to the fact that our organization is using our own assessment method (XXXXXX) and based on my lack of knowledge regarding the details of SCAMPI, I'm not sure about existing CMMI appraisal methods.

118. AGREE - for larger organisations DISAGREE - for smaller organisations or as a starting point

119. The SCAMPI assessor process & SEI Transition partners process come across as being complex.

120. "

121. Haven't experienced an appraisal yet.

122. We'll know more after our mini-assessment in August and final assessment for our target profile in December

123. Given our approach to adopting a data-collection methodology with the CMM model, our processes contain alot of direct artifacts; thus, I believe it is great for our organization. However, I cannot imagine how hard it would be for an organization to do an assessment when they handle data collection/information via e-mail.

124. We are also using the XXXXXX internally-developed XXXXXX XXXXXX Method.

125. Too costly. Requires more effort than a SW CMM CBA IPI, not as flexible, fewer trained assessors and consultants available, etc.

126. Appraisal method is too expensive. As a minimum, there should be some accomodation for incremental appraisals

127. I don't forsee any need for CMMI appraisals.

128. SCAMPI1.1 put too much emphasis on documents. I prefer SCAMPI1.0.

129. It is too much time consuming, it might need to improve to be effective and efficient.

130. Haven't reached the point to support an appraisal.

131. These are suitable but heavy. (*My experiences are only SCAMPI Class A).

132. Appraisal Requirements for CMMI (ARC) describes the requirements for Class B and C appraisals. Method definition required for conducting B and C.

133. We need SCAMPI B rather than SCAMPI A.

134. Need much less formal and less expensive method than SCAMPI. We will not do SCAMPI unless pushed to it by a customer.

135. first SCAMPI A's will be at the end of 2003

136. There is little guidance for Class B and Class C appraisals. Most small organizations cannot afford the Class A appraisal. Too expensive, time consuming and resource intensive.

137. We need a SCAMPI B and C. We have our own methods that map fairly well, but would like to see more of what SEI had in mind. I also think the SCAMPI A is way to complicated. The assumption that PIIDs will be a living document is unrealistic in many cases.

138. Don't serve Level 1's.

139. Class B & C appraisal methods under development.

140. However, the C appraisal guidelines require more than is really necessary to perform an informal appraisal.

141. Too big. Expensive.

142. We are not ready yet, and have not spent much time looking at that. However, from the intro to CMMI class, I believe they will be.

143. Need lower cost alternatives to full SCAMPI

144. I think and hope so, we will know better in a few months time.

145. The existing methods are suitable when our customers want our assistance in conducting Method A and B appraisals, as XXXXXX, a specialized method is needed for use by the majority of our population involved in Software and Systems acquisition.

146. No experience yet.

147. While I understand the need for consistency that drives the appraisal approach (SEI certified lead appraisors, SCAMPI, etc.,) there should be a better way for small organizations to do on their own to get an idea if they are "doing the right things," without going to the expense of a formal appraisal.

148. We have worked with the XXXXXX, at XXXXXX and had good success with desk audits and snapshot audits. These are preliminary to the other appraisals.

149. Although there are aspects that I would change, we have become proficient in SXAMPI and are fairly efficient in it's use.

150. Not sure at this time. Since all appraisal methods focus on compliance with the model rather than process improvement results, esp. ROI, I'm not convinced that the methods will show the real improvements.

151. SCAMPI (A, B, or C) are too cumbersome and time consuming. A more contunual approach to appraisals is needed.

152. This org would never withstand the strain of a SCAMPI (or even another CBA-IPI)

153. Way too pricey!

154. With the added definition of Class B & Class C, it will be.

155. I have no feel for this yet. Only a few areas at my XXXXXX are even interested in formal assessments of any sort.

156. We have only conducted one SCAMPI at our site. It appears to be suitable to our needs.

157. Do not appear to adequately address use for acquisition

158. I was involved in a post-award risk reduction SCE-like evaluation effort. I'm not sure what appraisal method it was based upon--it was tailored for our program.

159. Appraisal methods better tailored to smaller, more service oriented efforts, are required.

160. At this time, XXXXXX is in the transitioning stage. We have not explored this area in enough depth to reasonably comment. Though several of our practitioners have re-

searched the SCAMPI Appraisal method, none have as yet been formally trained in this approach. I have heard the suggestion made that they felt the information regarding appraisal differences between staged and continuous could be made clearer.

161. I believe they are a good direction ; trying them out over time will tell; XXXXXX experience on FAA-iCMM is a good other option with more experience.

162. SCAMPI MDD V 1.1 is adequate.

163. Methods provide the scope that we need, with a reduction in formal assessments

164. I think the SCAMPI class A method has taken away the ability for the team to make judgements. In that sense the class B method is better, but the B does not carry the rating badge. In other words, to achieve a rating, the Appraisal method uses the model in a most prescriptive way (collecting direct. indirect and affirmation data for every practice, specific and generic) and then rating each practice (FI,LI,PI and NI). In the IPI method, only the goal was rated.

165. I've read the ARC and concur.

166. SCAMPI as a method is very strong in establishing the existence or the absence of a practice. But I have doubts about how well it will be used since it has not set the expectations for the minimum amount of evidence and the need to

167. There were a few areas that we were told we would be contacted for follow up that were not and were noted as weakness, when we had additional affirmation supprt, if contacted.

168. SCAMPI-A is fine for benchmarking, but less formal, standard appraisal methods (B and C methods) would be a great addition to the marketplace. We use an internal XXXXXX mini-assessment process (Class C), but would welcome a complete SCAMPI appraisal method suite (particularly if it would help maintain SCAMPI Lead Appraiser authorization).

169. SCAMPI is too data centric.

170. I don't know about SCAMPI.

171. Too much focus on verification rather than discovery.

172. Class B and C appraisals must be defined in detail.

173. Believe SCAMPI is going to be challenging without automated tool support as amount of data and results to be processed and collated increased greatly.

174. At this time our organization is not striving for an appraisal, just to improve our processes.

175. n/a

176. I especially appreciate the 3 levels of SCAMPI inspection.

177. SCAMPI are too long, complex and costly. I would like to see streamlining of the process .

178. The method does not take a process view of the organization. Instead it focuses on the process areas of the model. This is a serious weakness in the value to the organization in conducting an appraisal for PI.

179. Is too rigid to accomodate special cases.

180. I am not familliar with the CMM Appraisal methods.

181. I believe so, but need to go further with it to be sure

182. Thus far most organizations are confused about SCAMPI maturity and capability ratings. Most organization want some form of rating [status, score, etc.] but do not want a class A SCAMPI and even class B. Need some alternate ways {which is repeatable and credible} to provide this information but at the same time protect against the recipient miss using the information; it a significant dilema.

183. We have successfully used the SCAMPI method in performing multiple gap analyses and former appraisals.

184. The appraisal process is too invasive and takes too long

185. Especially since you can scale the approach and output via ARC A, B, C, etc.

186. If SCAMPI B and C have not changed purpose during the past year

187. Appraisal isn't required and provides no benefit appart from the improvements themselves.

188. See response to cost statement.

189. Have not used.

190. Looking forward for the SCAMPI B and C method.

191. Currently getting into the CMMI appraisal method and working with an external lead appraisor. Thus far,looks reasonable and not as prescriptivesa the CBA-IPI

192. SCAMPI is far too rigorous for its professed purpose: aiding process improvement. Its cost is so prohibitively high that it can only be used to get a number for competitive purposes. Class B appraisals aren't much better and are, as defined, nearly as expensive as SCAMPIs - hence, they've become useless and unthinkable. Class C appraisals are more reasonable, but the rigor that's been added to them has rendered them inappropriate for their stated purpose - project-level and similar appraisals. What all of this adds up to is a major ripoff for implementing organizations and a major boon for appraisal vendors and consultants.

193. We have one large, long-term project that is nearing its completion (within next couple of years). The rationale (cost justification) for conducting a SCAMPI level appraisal here just doesn't make any sense.

194. The SCAMPI appraisal method seems to be adequate, however we anxiously await more detailed descriptions of the Class 'B' & 'C' appraisal methodologies.

195. Too costly, to difficult. Our appraisal team told us the SCAMPI "was not a discovery process". I can't understand how the team can expect to appraise an organization without perfroming discovery. The appraisal team wanted the organization to spoon feed them and do all the mapping of our policies, procedures and work products to each and every CMMI practice. It was a painful experience and I'm very CMMI literate!!

196. Not sure yet since haven't been on one

197. Not applicable to this project

198. Although we have extensive used SCAMPI, we did need to develop ARC B and C methods.

199. Need lots of informal (type C) assessments. Don't know if we'll ever go for a formal assessment.

200. The methods are suitable. Having Class B and C appraisals function as health checks, which we rely on as a way to guage progress without the added burden of trying to achieve a rating.

201. Jury is still out. It will depend on how efficiently we can conduct SCAMPIs.

202. Because of two representation(Staged and Continuous) are flexible to fit our organization's business goal.

203. A 2-3 week on site will never fly as a regular (every 2 years) option in this industry

204. I have only heard the the CMMI appraisal methods are longer and more expensive compared to the SW-CMM.

205. It could be improved. From what I hear, there is a lot of variation in the appraisal process.

206. Since we are new in this arena, I have no reason to believe otherwise. The current appraisal methods will serve us right.

207. We need a shorter more succint method for the onsite period

208. Desperately need more Class B & C appraisal descriptions to stabalize those methods

209. There is especially no problem.

210. SCAMPI is one good approach, but it is very expensive and others are needed. We developed our own class C appraisal method, and used SCAMPI without the rating for a class B method. The EIA731.2 method had some features that would be useful. Questionnaire/interview method would be helpful. Need larger selection of methods to use!

211. We are currently looking at the People-CMM practices due to the business environment.

212. Resource requirements are too heavy for our organization.

213. The SCAMPI method is still in the bedding down period, and too many people are only hearing 5day assessment, rather than the last step is 5 days after all the doc reviews and readiness checks.

214. We've not yet conducted a SCAMPI, however our research indicates that CMMI appraisal methodologies require considerable maturation before acceptance is assured.

215. While I think the process is too labor and time intensive, I like this much better than discovery.

216. Have not investigated

217. The choice of indirect objective evidences is not clear

218. However, I understand each key practice needs to demonstrated in 50% of the projects selected. This can be a problem with diverse nature of work as in a software consulting organization.

219. I have briefly reviewed the SCAMPI and the levels are appropriate and easier to understand for laymen.

220. Requires too much evidence.

221. SCAMPI impacts ongoing projects too much

222. Teh XXXXXX XXXXXX methodology was developed because we found the SCAMPI too intrusive, costly, and not focused on continuious imporvement.

223. We have not yet experienced a CMMI Appraisal.

224. SCAMPI is a well researched method & we find it addressing the appraisal requirements of our organisation.

225. We are coming up with appraisals to learn.

226. Want more guidance and credit to lead assessors on the Class B and C appraisals.

227. Our first appraisal is scheduled next month. So far SCAMPI is ok.

228. We have been using CMMI benchmarks to maintain our process capability. These are less comprehensive methods which can be done across a number of programs without a prohibitive cost. We are working with the SEI to develop SCAMPI B and C appraisal methods similar to the methods we have been using.

229. The appraisal method is very cumbursome and expensive for most of smaller businesses. Oranizations of less that 100 employee cannot affort it. It is a tool for the well-off the get better widening the gaps.

230. The team training materials could be improved. The previous material emphasized interview techniques. The new method does not.

231. Should provied credible evaluation.

232. We have developedour own internal Class B and C appraisal methods using ARC1.1 as a basis

233. Class B/C methods are also needed

234. Meaning of "fully implemented" in MDD is too subjective, resulting in too much variability in results from one appraisal to the next. Some general examples: How recent must the evidence be? How many repetitions must be included in the evidence to show ongoing institutionalization? How much weight should be given to consistency between the defined process and the process work products? How much weight should be given to nonconformances identified in process audits?

235. I'm not familiar with the appraisal method. If it is similar to the CBA-IBI it is suitable.

236. We are actively developing a suite of appraisal methods based on CMMI to meet our customers' needs. We have found that SCAMPI resource requirements are independent of the size of the organization, and this means that costs to small organizations are prohibitive. A more flexible approach that meets ARC Class A requirements is needed.

237. By the time our turn comes (2004ish) the details will be worked out and we'll use the appraisal results to get better.

238. The cost of the appraisal makes it unsuitable. I have been trained to do the informal class C mini-appraisal. It costs about $11,000 to conduct a min-assessment and much more for formal appraisal. We just don't have the $$.

239. The CMMI appraisal methods provide good guidance to help organisations to find opportunities to improve.

240. Need an industry-defined Class B and C - we're getting lots of questions about this - we have our own, but don't know if it will track with what the SEI is doing...the end of the year is a long time to wait to find out.

241. SCAMPI V1.1 fills one category of appraisal need, and adhoc, proprietary, and unofficial methods are used to fill many others. More standard methods need to be defined to satisfy all process improvement needs.

7 Global Issues Question 4d: The cost of adopting CMMI is impeding the adoption of CMMI in our organization.

1. What's holding us up is not cost - it is the breadth of cultural upheaval. SW-CMM has a smaller scope of upheaval.
2. Not really impeding, but is expensive. May be due to timeline established as a goal.
3. The Jargon needs to be translated to normal engineering and management people. The overloading of terminology and the underlying effects / ramifications is intimidating to those that are not immersed with the process technology.
4. We have enough to try and get SW-CMM compliance in a reasonable time and expense. CMMI makes it too costly to demonstrate true maturing of processes.
5. It takes time and money, so we use incremental implementation to evolve our capability.
6. As noted, a $350,000 bill for a L3 CMMI in SE will make it a prohibitive ROI for L4/5, based on proven ROIs of LEAN and 6Sigma
7. This almost was true. When we presented the cost especially in effort to do our gap analysis and begin to fill the gaps we thought it would go no farther.
8. Behavior changes is the biggest challenge to adopting CMMI as our organization.
9. I do not think the cost of CMMI is distinctly different than any other approach; the CURRENT issue is the general downturn in the economy and the need for companies to delay spending wherever possible. Some incentives or forcing functions are needed to stimulate adoption.
10. CMMI is actually a cost savings - only one model now! SE & SW were brought together starting in 1995.
11. I have adequate budget to accomplish the task.
12. The cost to our clients for presenting the Introduction to the CMMI course, plus team training, plus SCAMPI appraisal is considerably greater than what it was for the CMM.
13. We are not trying to attain a "level"; rather hope to monitor our progress on the continuous scale and in the areas that make sense for our business.
14. The need to be a transition partner to provide internal SCAMPI appraisals, and the associated cost structure for the TP program and to take the SCAMPI lead courses, is a significant impediment to using CMMI and SCAMPI appraisals.
15. Early investment was made in the direction of SW-CMM, and the decision is to play out that improvement effort and then adopt CMMI for it's added benefits. Executive Mgmt. is looking for an earlier win, and with their current investment, want to stick with it to provide motivation upon achievement.
16. Indirect cost are greatly impeding adoption. Time away from billable work in a small organization is a great obstabcle to adoption.
17. There is a strong common sence about the benefit of using maturity models for improvement. Nevertheless there are some laggards argueing against it using cost statements.
18. Most of the organizations that we work with are Level 1, so we are using the CMMI mostly as a 'first exposure' to a Model rather than a transition from an old Model. So the

cost is more tailorable / adjustable (i.e. we are not having to transition a lot of old pre-CMMI materials).

19. Trying to train over 60 personnel at one site is very time consuming and to send to SEI training is too costly.
20. Programs have not budgeted for the requirements of CMMI and are having to bear the brunt of initial implementation. Agree that the savings will come later, but difficult to convince the program managers to spend the time and money up front.
21. We are working towards becoming CMMI compliant and have not made the commitment to become "certified" mainly due to cost concerns.
22. The additional consulting to help organizations understand the CMM-I, plus the additional training requirements as part of the SCAMPI are especially bothersome for many of my smaller clients.
23. Anyone who thinks it is isn't thinking clearly. Adopting the CMMI doesn't necessarily mean adopting the model in its entirey. It can mean adopting those practices that fit the organization and actually improve something.
24. Maybe.
25. Its been mandated so assume the company believes the cost is ok.
26. XXXXXX participates to the creation of the model and takes no advantage of this. SEI applies us, non US rates.
27. It is ONLY an illusion that CMMI costs more. Infact, the only additional component for costing is the 'SEI authorized Introduction to CMMI' which is dependent upon who the TP you source this training from. Otherwise, we have always executed CBAIPIs with the same rigour or more as what a SCAMPI expects ... we have always done a mini-assessment 3 months prior to a formal CBAIPI; I have myself taught the 3 day SW-CMM Model training along with XXXXXX CD and the Team training; We have used a MQ to come up with scripts; we have revised the scripts based on documentation review; we have even updated scripts as interviews progress and we get enough clarity. ... So, I dont think cost of adopting CMMI is impeding in any sense.
28. it's not cheap! Especially if performing across the organisation. Since we don't have a strong sponsor at board level the bean counters just look at the figures we propose and dismiss them as too high.
29. Mostly this belief can be challenged when it becomes clear that an organisation has no idea what anything is costing
30. However, it is very costly, and the cost will have an impact on continued process improvement activities.
31. For a small business the cost can be oppressive. Small business simply cannot absorb the overhead costs and remain profitable. When I attended training I was impressed by the fact that the large companies that were in attendance seemed to have large staffs devoted to PI with annual budgets greater than our corporate annual revenues.
32. This doesn't seem to be the case with our clients.
33. But, the those who balk at its cost tend to be short-sighted, ignoring the return.
34. Cost in terms of time, manpower and schedule impact are slowing adoption and credibility of CMMI in our programs.

35. Appraisal cost is significant.
36. This is always likely to be an issue, but I don't think that it is any more difficult than getting funding for improving processes or other intellectual property. It would be easier if SEI tried harder to explain CMMI in simple yet convincing terms.
37. While we recently (XXXXXX) were appraised as a SW-CMM level 3 organization, we have just combined with another organization who had been using SW-CMM for process improvement. We need to first combine processes to create a new organizational process, then spend resources "filling in the holes" in order to tranisition to CMMI. Senior management is reluctant to commit the resources and what may be years of effort to adopt a new model (CMMI).
38. NA
39. Although we have a strong committment to adoption driven from the top down, I think the pace of adoption is having a larger cost impact at the project level than expected. It would be more accurate to say that it hasn't been feasible to implement the CMMI in our projects as fast as planned, not that there is resistance to the idea of adopting the CMMI due to cost.
40. Adopting CMMI is very resource-intensive due to the number of new/modified process assets that have to be developed - resources that have to be balanced with conflicting project resource requirements.
41. Cost includes monetary and time/effort. In some PAs the efforts to adopt far outweighs their intended benefits.
42. we have more to gain than to lose...
43. Since my organization has an extremely strong CMM foundation to start with (we have been appraised at a CMM Level 5), we believe there will be a relatively small cost above and beyond what we are currently expending for process improvement efforts, which have essentially become the norm.
44. I must say that is is quite expensive to adopt to the CMMI, however, we do not have a choice not to adopt to CMMI
45. Our organization is striving to complete Level 3 in the SW-CMM, so the CMMI is not an immediate concern.
46. N/A. We are a consulting company that delivers CMMI services.
47. Adoption is typically hampered due to insufficient knowledge of how to interpret the CMMI.
48. It restricts our speed but not considerably.
49. We are just starting to work with pilot improving organizations. We are working on the generation of Service Level Agreements with each org, listing our resource commitment and making them aware of their resource commitment. I think they will be surprised at the amount of time and money that they need to find.
50. While cost is always a consideration, the benefit of adoption needs to be considered.
51. Once Senior Management is sold on the ROI, there's very little impedence.
52. There is obviously a significant cost to starting up process improvement but, it eventually will pay for itself and once up and running the cost levels out and becomes much

less expensive than not doing process at all. Although that is unfortunately hard to prove concretely.

53. Here's a counter question: What's the cost of NOT doing process improvement? We're not at a stage to quantify transitioning costs in our organization as of yet, but I will say that projects see a definitive ROI from model adoption, up to and including award of new work they would not have otherwise received due to their quality processes.
54. The perceived costs are impeding the adoption.
55. The true cost is in changing the organizations habits as in fairly model independent (until you get to teh extremes)
56. We have Sr Mgmt support for our established budget and we report on monthly basis our progress toward our plan.
57. While the cost is significant, it isn't impeding our adoption. It MAY however, be impacting our previous implementation of SW-CMM.
58. It affects the speed of acceptance. The training is quite expensive.
59. While cost and the associated resources slows the work, adoption is limited primarily by the existing culture of the organization. Projects implementing the CMMI in a rational way are seeing the return on their investment.
60. Even with having documented processes, a great deal of effort must be invested to ensure all areas of Version 1.1 are adequately addressed. The number of process areas is considerable. For many organization, CMMI activities must be coordinated across multiple independent groups to provide adequate coverage.
61. Since the organization feels that adoption is REQUIRED across the organization the cost is part of the cost of doing business. We are cutting the costs by optimizing the way we perform the SCAMPI appraisal process.
62. Definitely. XXXXXX at one time had approximately 12 Lead Assessors. We cannot maintain that number of Lead Apprasiers due to cost. The CMMI is now a very expensive model for process improvement
63. Although that is a factor slowing implementation. Especially the cost of authorizing lead appraisers and instructoirs for internal use.
64. It is simply a matter of priorities. (But it is not cheap!)
65. The cost of adopting CMMI has increased the adoption of CMMI within the organization.
66. The main impediment is middle management.
67. This is one of the reasons the company won't fund incrementally adopting CMMI in various parts of the company.
68. The organization does not see a huge payback with moving from CMM to CMMI.
69. Absolutely. Even given our CMM and EIA 731 ratings, there was a lot of work to do because the CMMI is so large, complex, and comprehensive. The cost of the appraisal and evidence collection is staggering. Because we are reaching into more organizations than before, and reaching deeper into their process, there is definitely more cost. Even though we had recent CMM Level 3 and EIA 731 Level 3 (all FAs) ratings, this project is costing us only slightly less than both those projects combined.
70. for our customers, the cost is a barrier

71. For every good process improvement activity you have to invst vefore you can make use of it. I don't think that CMMi is much different here.
72. Yes, this is a major concern
73. At least the cost of SCAMPI appraisals is an issue.
74. We have limited budgets.
75. I do not think it is the cost of CMMI per se. Management still perceives spending on process improvement, regardless of approach, with a jaundice eye. Even with appropriate data they still don't fully buy it.
76. CMMI not best model for consulting organization. Cost is not the issue.
77. Budget concerns are a top priority
78. This is especially true regarding the cost in time-to-achieve as well as the dollar costs associated with labor. The time it takes just to be ready for appraisal is killing my support from seniro management, who like quick results. See answer to Global Issue question #6.
79. Based on what we observe in the community, this is by far the biggest obstacle. It is definitely cheaper to go with ISO, even though in my opinion, ISO does not provide the level of detail that the CMMI provides. However, ISO 2000 has incorporated significant improvements and when used intelligently, it is almost equivalent to the CMMI.
80. We are getting through the roadblocks with strong sponsorship.
81. Not a factor as our contract with the government says we are to be CMMI compliant within three years
82. With limited resources to deploy/assist our projects in improving their processes, I find it very hard to absorb the cost of re-training, re-engineering CMM-based proceses, setting aside time to do the detailed (sometimes work product/process-specific) gap analysis between SW-CMM and CMMI that I feel that I now need to do.
83. Buy-in is more of an impediment.
84. However, we don't have a need to achieve a maturity level, CMMI is being used as a guide. If we did require a SCAMPI or a specific level, the cost would be an issue.
85. For large orgs it is not the cost, but the long duration until becoming an instructor/appraiser impeding quick adoption.
86. The cost of implementing ANY MODEL would impede...not just the cost of CMMI
87. This is an area we are still working on, however it is clear that there is an amount of push back on the estimates of resources required
88. The total cost includes the gathering and storing of the data in preparation for the class C, B and SCAMPI class A appraisals as well as the cost of each of these appraisals. Further, we must make sure that this information is kept for future use to avoid additional cost in the future. We are looking for ways to streamline the data collection and appraisal process prior to moving the approach across the sector.
89. maybe a little, but certainly not the largest impedience - people are the largest
90. The cost of adopting CMMI is truly minimal if an organization embraces CMMI fully. It's only when CMMI is an "added" requirement that it is costly.
91. For the wrong reasons

92. Its not the cost of Process Improvement - that pays for itself - its the cost of aprasials that slow us down.
93. There is a significant delta cost in pursuing CMMI vs. just pursuing improvement using existing best practices.
94. We're managing the cost effectively and expect a healthy ROI within 1 year!
95. I think most organizations would agree with this. Especially those who are DoD contractors.
96. Not familiar with level of cost. Not in my area of concern.
97. This is an issue with many of my potential clients.
98. The switching cost to CMMI outweighs the benefits we perceive at this time. We are using SW CMM, PMBOK and SWEBOK and graduate education in software engineering as our foundation, and they work very well for us.
99. Suspect this is a problem - have seen many orgs choose CMM as it is less expensive
100. I heard it requires about 2 times more momey than CMM.
101. We haven't adopted it yet.
102. Because of the fact that our organization was strongly in favor of following the CMM, we've already made the initial inventment in, and the commitment to follow a model from the CMM family of process improvement models. Our upper management feels that the cost is well worth it, whatever it is.
103. Costs quite a bit - especially if they have gone through CMM exercises recently
104. We still do not have a solid business case that shows why we should move to the CMMI. We're working this very aggressively but more help from the SEI would be appreciated.
105. Strong management support and funding
106. To an extent.... The adopter really needs to be careful with process strategy to keep costs down. Structural omission of process improvement support makes this more difficult.
107. We has extended our full-time EPG membership to individuals with hardware and systems engineering experience.
108. CMMI requires some initial resourse investment, however, it is mainly lack of confidence and buy in from upper management that impedes CMMI adoption.
109. Cost is probably the biggest factor.
110. The extended set of process areas is making it more expensive to develop processes and track compliance.
111. Especially since the continuous representation exist for the CMMI model and the introduction of the SCAMPI methods
112. The training courses are a little pricey but we think we can live with it.
113. The word organisation is important. Management leadership makes the difference. If the leader can see the value to business and quality, then one should go in for CMMi. That is what our org did
114. The main issue for CMMI adopting is a cultural issue.

115. There is resistance because managers feel they cannot spare the resources for this effort. They do not want to take people off their projects, and lose time on their projects, to work on CMMI.

116. We had management support and funding.

117. I don't think we even know what the cost is.

118. The cost of conducting a SCAMPI is impeding the acceptance of CMMI

119. The cost will slow the advance and implementation of eforts to get trained at courses and imlement the procedures.

120. However,we developed our internal assessment method to migate this cost.

121. Our upper Management is very schedule and results oriented.

122. One motivation for us developing our own assessment method was to offset the cost of an outsourced SCAMPI team coming in and performing an assessment.

123. Deployment to org. involving systems engineering, platform engineering, networks, etc. is major cost and culture change

124. Especially the cost of the training courses.

125. In certain business units yes. The organization might not be ready to make the investment on process improvement to reach level 2.

126. Have not used CMMI yet.

127. N/A

128. The cost of doing anything other than keeping operations running and developing the projects that our business partners request impedes the adoption of such an improvement. There seems to be a short-sightedness in this area.

129. Our company has been committed to CMM for its application development organizations for a number years and it's been highly endorsed by our CIO, so this has been no problem.

130. Our organization is committed to software process improvement and see it as a way of doing business. The extra cost is not a critical factor for us.

131. In addition, it may now be too late as we have taken a different path.

132. causing a delay in acheiving level goals.

133. More in relation to the impact on programs and support groups.

134. The cost of adopting the CMM and CMMI has always been an obstacle. This is true even when the customers understand the benefits and what they will gain from a development organization which has achieved and works to CMM Level 3 or greater.

135. However, adoption is proceeding at a rapid pace

136. During the deployment like my organization, it is not true.

137. I am not familiar enough with the cost of adopting CMMI to be able to answer this. It is costly to implement CMM but I have not made a judgement as to whether this is too much. Although, I have heard from other organizations that they find the cost of the appraisals prohibitive.

138. Many sections of my company are thinking the cost of SCAMPI appraisal is expencive. This is major reason of that they do not have plans of offical SCAMPI appraisal.

139. Cost is an issue, especially appraisal cost, but agressive tailoring of process requirements to appropriate levels for indiividual programs has avoided much cost increase to programs to implement compliant processes.
140. Considering the cost of not adopting the CMMI the cost of adoption is not that great
141. We have always viewed process imprvement as part of doing business.SO I agree with this statement to a smaller degree than most would.
142. Cost of adopting class CMMI is a barrier.
143. It is costly but mgmt has made a commitment. Setting up the infrastructure, procedures, doing the appraisals, training, etc. requires significant capital investment
144. XXXXXX does not ask you to meet CMMI. They want you to meet the quarter. Top management works for XXXXXX. The rest of us wotk for them.
145. The cost of training and assessments can be daunting, especially for the smaller organization.
146. Not applicable
147. The SEI is a federally funded research and devopment organization largely sponsored by the DoD, and for a XXXXXX to be required to pay fees for becoming a transition partner seems a lot like double dipping to me.
148. While the adoption goes forward, cost is definetly a factor in the adoption process and is a constant concern.
149. The issue is not the cost of adopting the practices, but the cost of proving that an organization and its projects have adopted the practices.
150. Probably not, since we're taking the focus of making ROI-based process improvement rather than model compliance.
151. Done deal.
152. Training would be a cost and cultural shock would be a cost
153. Many times, it comes down to money. In todays economy, CMMI for the smaller business is cost prohibative.
154. The cost was again based on our natural progression - started years ago.
155. Belief in this as being increasingly required for bidding new business drives through much of the cost issue
156. The cost is not what is impeding the adoption of CMMI - it's the lack of time and staff available to investigate changing to CMMI just as we are making so much progress with SW-CMM.
157. We have been able to adopt CMMI with a cost that is comparable to when we adopted the SW CMM.
158. The problem is not implementing improvements, the proble is that most organizations are very poor at making the improvemetns and waste a great deal of money. Sure the assessment cost is high. However, you can stil implement improvemetns without going through a full CLass A.
159. Cost (dedication of people) is always an impediment to getting CMMI adopted/implemented. I wish it weren't so, because I see the gross inefficiencies that result from poor processes and lack of process improvement efforts.

160. Our manager is committed to making the CMMI transition happen
161. Counter: What is in a maturity model that one shouldn't already be doing in a high-performing organization?
162. yes...does SEI give guidance on estimates?...it is expensive' can we show ROI or cost-benefit?
163. SEI costs for training and the annual fee for non-US is killing us.Further the restriction on the license for non-US use is further reducing revenues. We consult for others.
164. The lack of ROI data is an element, the cost of formal assessments is daunting and activities need to be carefully roadmapped
165. The cost of use for small organisations is much higher.
166. I think my organization just isn't ready to modernize processes yet. There is some sort of cultural barrier. Most of our people haven't even heard of CMM except that they may require some contractors to have reached some level of certification.
167. It is a very expensive proposition and selling management on it is a tough sell. What will drive it will be marketplace requirements.
168. The benefits of process improvement under the new model outweigh the cost factor. The difference in cost between CMM and CMMI is not that great as far as I can tell. Granted, the amount and degree of improvement we are asked to make under the new model will, obviously, cost more in time and man hours.
169. Many smaller organizations are not looking at CMMI (with an intent of getting a SCAMPI done) because of the cost involved in comparison to CBA IPI. The decisions seem to be driven more by the assessment cost.
170. Management was very supportive to implementing CMMI levels 4&5 practices having invested so much to get to Level 3 in the CMM.
171. Expensive, but not impeding adoption. Not only do we see the benefit, but it is expected in the DOD acquisition community.
172. The adoption cost is not a big issue if we can get much benefit.
173. Our organization will perform class C appraisals until we are forced to do an A one.
174. Not yet impede but policy/approach to fomal (SCAMPI A) appraisals under review and may be reduced due to costs.
175. Since we are not planning an appraisal cost is not option.
176. it is the reluctance of our culture to adapt a unified process and not the cost
177. Our organization is happy with the CMM-SW and the significant cost to switch is definitely a factor.
178. I believe the clear, specific, and relevant-to-us structure and guidance provided by CMMI will reduce cost of using it compared to less applicable models like ISO.
179. The decision was made to adopt CMMI because the benefits outweighed the costs. However the cost will be more of an issue with smaller organizations.
180. The cost is affecting our bottom line because to be rated is a critical factor in our business. The cost of satisfying CMMI includes not only $investment in processes, but inefficient processes that adds overhead to the program performance. Six Sigma and CMMI

often conflict. Six Sigma says to eliminate non value added tasks and CMMI says to add many of these in.

181. We have not decided to adopt the CMMI, so this is not an issue.

182. The cost is slowing implementation but it is not stopping the progress.

183. Tyrany of the urgent may be a greather impediment

184. Not sure. Struggle is more with justifing the investment and giving management some hard linkage to ROI. How does one define the total relative cost?

185. We have already adopted CMMI.

186. The only significant cost stems from the fact that the DoD community is forcing rapid adoption via their procurement strategies. This causes money to be spent that a normal business driven process improvement effort would not have spent. The other side of the same coin is without the DoD push most large XXXXXX would not change even with a positive business case.

187. Not the cost... but the understanding and awareness of the need

188. No discretionary expenses are being allowed.

189. It does pay to shop arround....Companies should run a selection process when deciding on 3rd party auditors etc. You want one that knows your business

190. Funding for process improvement initiatives is hard to come by in the current economy.

191. Have executive sponsorship

192. The exorbitant costs of preparing for and conducting SCAMPIs and Class B appraisals has led to overly rigorous and cautious process development and deployment.

193. CMMI is viewed as too expensive for our needs. We are ISO 9001 certified for contractual reasons, which has created the process infrastructure and culture for adopting CMMI, but our customer is not driving us to be CMMI appraised.

194. We have been able to tailor our efforts to accomodate adoption at a reasonable cost. The hinderance to date has been more closely related to the economy (and resultant layoffs and reorganizations) rather than costs related to the CMMI adoption.

195. We’ve adopted it, despite cost and pain of assessment methodology.

196. I believe there is a perception that it costs too much to use CMMI, hence organizations are resistant

197. Not applicable to this project

198. Value is worth the cost.

199. The cost is not the primary reason. The org is not yet ready for a full blown PI program. CMMI is not any more expensive than CMM.

200. The cost is in terms of the manpower needed to "enforce" and "evangelize." Once we made it to level 2 the RUP and Rational Tools required little in the way of evangelizing and enforcment in order to be used willingly.

201. Our organization has fully embraced the CMMI. However, the labor cost needed to prepare for the appraisals is quite high. We have not found a way to avoid incurring these costs. This aspect is a very real problem.

202. Since I am Authorized Lead Appraiser, our organization does not have any difficulty. However, if a company does not have one ,it could be impediment.

203. The cost of CMMI adoption is significant, but much of the cost is due to the need to achieve a particular matrurity level. Transitionsing from CMM and EIA-731 is not free.

204. Cost is not yet a factor in this process but we are monitoring the situation carefully as we move along.

205. Our executive management still view CMMI as a MIL-STD driven model

206. This is one major factor, the other is: "Why reorient our personnel to a new model when there is no clear advantage to doing so?"

207. We have got the commitment about the cost of of the top apprasal. Several years after is touch-and-go. cost of process improvement activities is dependent on the degree of comprehension of each division manager.

208. Yes, the staged representation and the SCAMPI method are very expensive - without very strong upper management commitment, we would not have been successful in our first two years using CMMI.

209. Due to the business environment, resources are not available to perform a continuous process improvement activity. Many organizations do not have adequate resources to perform all current projects to create new products and maintain current products.

210. This is exactly the case for us.

211. I believe that in some areas we would happily move to Level 5, but if we say we are going there so we can claim Level 5 (with the extra infrastructure) we will choose to not move officially to level 5.

212. Have not investigated

213. Although we are implementing the same processes across the organization, the assessment is being limited to one location due to the cost factor.

214. We are on a slow omving train. We want to show both sectors at SM-CMM level 3 before addressing CMMI, so the considerations have not been made yet.

215. With multiple geographic sites being players in this process and with project funds being tight, it is difficult to gain the trust of management to see the positive return on investment of spending money today to gain savings in the near term.

216. When we look at progressing to ML 4, the cost of common tools to efficiently capture, report and analyze organizaitnal and project metrics is daunting.

217. We have adopted CMMI.

218. Training and appraisal costs are high, compared to SW-CMM.

219. we have adopted at reasonable cost

220. In our case-not. But this is a factor for a number of organizations.

221. We will spend almost $1MM in FY 2003 to implement CMMI capable processes and conducting a SCAMPI appraisal. This is being funded by marketing becuase it is required by customers. Our commercial and non-Federal Government sections of our business prefer ISO appraisal and the ITIL process library of best practices.

222. Cost of implementing process improvement is always a concern, despite the obvious benefits.

223. Since we are in a postion to leverage our earlier investments in process improvement using CMM model, I do not agree with the above statement.

224. I see not a strong difference in costs.

225. To some degree.

226. See above. Cost of resources

227. Moving from the SW CMM and SE CMM to the CMMI was not a prohibitvely expensive transition. A SCAMPI A appraisal is costly, but the strong management support in my company did not make this an issue.

228. CMMI, like many improvement methods, is a hard-sell. It is hard to "prove" to management that the benefits outweigh the costs. They want to see immmediate results.

229. In most cases, adopting CMM is expensive and CMMI is more expensive without any tangible benefit.

230. No

231. Cannot comment on this aspect

232. The real issue should be if you get a return on investment on what you spend, not the initial cost.

233. It depends on organization.

234. In terms of time, effort and training.

235. Hard for projects to divert enough time to implement practices and collect evidence for appraisals

236. We're wasting money on maintenance projects. Also I don't believe there would be a substantial increase from the investment in adopting SW-CMM.

237. Not relevant to our organization; howevewr it is a significant factor in many of our client organizations.

238. We've done a lot of CMM work already. The only people who are complaining about cost are those who never got on the CMM train when it left the station. They will always complain and they will always be behind on improvement efforts.

239. I believe, based on 'snipets' of conversations I have overheard that cost is one of many factors.

240. Haven't seen yet as a real impediment.

241. This is a significant start up cots since we were ISO 9001 registered and not SEI CMM assessed.

242. The cost is substantial, and if it were not that it is required, or that competition were not driving adoption, it would not be as widely embraced.

8 Global Issues Question 4e: Including both systems engineering and software in a single model has been a help for us.

1. Systems engineering in XXXXXX handled by another XXXXXX
2. Even though SW-CMM doesn't directly address it, we found it important to address systems engineering. If/when we go to CMMI this will be a key factor.
3. Will be in the long term, but it would be nice to have some guidance about how to appraise together. Does that mean you only have to show system verification or do you have to show software and system verification?
4. We also use the IPPD and SS integration in the current office.
5. We are a software only shop. That said, enough organizations had success removing references to software in the SW-CMM to apply to other areas of their bussinesses that it was not necessary to merge two models. You should have just made the SW-CMM more generic.
6. We are a systems engineering company. The software CMM did not fully meet our needs.
7. Having previously developed and implemented effective process improvements (across the board, not just SE or S/W) without the aid of a "model" seems to have been a productive / profitable undertaking.
8. A majority of our development is system in nature,
9. This has helped make every engineer at our plant be responsible.
10. There was an advantage to less generalization and use of more specific terminology when separate. More overlap was needed (e.g. Requirements Development was needed for software) but some separation would help (e.g. Technical Solution and Product Integration are difficult in a software-only world)
11. see above
12. Need to address the big picture.
13. Most of our clients are software houses. The effort to "translate" system engineering terminology and concepts to a purely software development environment has complicated adoption.
14. Integration has made the model useable; these two disciplines in particular were not key, though.
15. I wish I could select neutral as an answer. Systems engineering applies to some of our organizations but not others. A streamlined CMMI-SW that trimmed the size of the model for software only organizations would be very beneficial (not just removing the discipline amplifications for systems eng.).
16. We produce embedded systems and not software only. So engineering of software determinded systems is our business. For that CMMI helps better than SW-CMM.
17. Overcomplicates the model.
18. Definately! The concept of the CMMI including both Systems and Software is a major sell point to the organizations that we work with.

19. From what I have seen from the Contractors implementation, I feel in time that a single system will be value-added.
20. System engineering or hard ware design people may join software peoples' process improvement activities, althogh reader may needs detailed interpretation to comprehend and implement practices in the context of software processes.
21. This has added to the confusion of my customers.
22. Most of the Indian software organisations work purely on software / product development and maintenance. Application value Management is a very key area of work.
23. Many of our project involves both.
24. Every project I've worked on had both systems and software engineering. We used SW CMM and systems people felt they didn't have to comply to any model.
25. It gives a good orientation of the applicability of practices to the 2 disciplines.
26. IN SOME COMPANIES THIS IS TRUE.
27. One of our biggest risks is the interface between systems and software engineering
28. It has been understandable, but it has not been of any significant help.
29. Yes, it does provide a bit of flexibility useful to a small business, especially when looking for proof that one is performing in a given PA.
30. Since it is nearly impossible to separate them in today's world.
31. We do more than just software.
32. Not only does this help SE and SWE, but our HW engineering people are starting to try to apply it also, and find it helpful to have a single model (within XXXXXX Model with its mandate to use the continuous model.)
33. It helps us keeping our learning process consistent.
34. Since our organization is a pure sw one, it has made the model too bulky for our use
35. Yes, systems, hardware, software, are just different physical ways of achieveing the same ends, and from a process perspective are interchangeable in our eyes.
36. Though it has been difficult trying to convince the SEPG that our organization does systems engineering as well as software engineering.
37. We have both types of projects, so having a single model is useful. However, in other organizations I've worked with in the past, the SW-CMM was used successfully in a mixed Systems/SW engineering environment. You just had to mentally drop the word "software".
38. This model does not fit for Organizations primarily into busniss with Outsourced contracts
39. As mentioned, it provides an all-in-one approach to both software and "product line".
40. But then, we do systems.
41. Our organization does so sys. eng.
42. It has broadened the view of PI efforts
43. N/A. We are a consulting company that delivers CMMI services.
44. This was another reason to adopt the model.

45. I believe long-term this will be true (as refernced above). We have at least one organization that has made a large investment in the SW-CMM and wants to get appraised at Level 2 before considering the move to the CMMI.
46. The two areas are related and should be integrated rather than treated separately.
47. We had already implemented some aspects of cmm within systems. It will brings us together better
48. Most organizations are multi-disciplined.
49. Allows us to include more projects within the scope of our assessments. Our current block here is that our internal process assets cover SW more strongly than SE.
50. I unfortunately have only done a little PI with sys eng. but, having the model all together is very helpful in applying to other non-software entities.
51. The CMMI is better suited to our organization, which ranges in work from software development, to hardware development, to test, to integration, to laboratories, to dolphin training. This flexibility will allow us to greatly expand process improvement activities in our organization, and new projects have voluntarily "jumped onboard the bandwagon" by virtue of this.
52. We (the CMMI community) need to include hardware development.
53. We envision it will be a help, however we are currently applying the behaviors of SW-CMM to our non-engineering projects.
54. Not a real big deal though.
55. We do a great deal of map production type work so being able to include this in with our typical engineering processes under the CMMI has been very helpful.
56. This model does not fit our organization as well as the SW-CMM. We don't do systems engineering and end up using the CMMI Staged for Software anyway.
57. Particularly for projects on which both disciplines are applied.
58. Until just this month, our efforts were focused on software. The Systems Engineering group has just decided, after long debate, to adopt the CMMI model. I think our previous adoption of CMMI for software helped nudge them in this direction. The future looks very good for being able to truly integrate our improvement efforts.
59. Overall it was the right thing to do. However, what message has been sent to those professionsls who were not software developers, but instead had the title "System Engineer." The implication is that all software developers are now expected to perform as systems engineers. What role does that leave for those who had been the recognized system experts?
60. It has improved the focus for our systems engineering organization and has ensured that the processes have been created and used by all groups - Software, Systems, and Services.
61. N/a
62. Minimal.
63. We were trying to combine the models on our own and were glad to get CMMI.
64. This has ben very helpful.
65. It simplifies things, to the extent you could consider the CMMI as simple.

66. Not at this point in time, since we are still following CMM.
67. It's not in our business model
68. We could have cared less about systems engineering.
69. Since we already had Level 3 ratings for CMM and EIA 731, and had a company-wide integrated process at a high level, having both disciplines in one model has made it much easier to combine processes into one set that all engineers will follow.
70. Trying to merge processes now. The jury is still out.
71. I'm familiar with CMM and think that this is also suitable to system engineering and even hardware engineering if the interpreation is OK. CMMI makes it easier to do convince others to adapt the model as well, becuase they cannot cliam that it is for SW only. Of course the CMMi is more detailed for usage of other disciplines as well.
72. Although we have not utilized it this way yet, I believe it will be of value when we bring our systems types into the fold.
73. For organizations doing both, good idea. However, implementation is overcomplicated. Still too much evidence of two groups each with their own opinions attempting to form a single model.
74. Not always true in the MIS environment
75. It is critical to our organization for developing complex hardware systems with embedded, real-time software.
76. While it would be useful, the systems engineering is a distributed function that does not have a direct owner.
77. Software engineering and systems engineering are two different trades. In my opinion, trying to unify them dilutes the usefulness of the model.
78. Although I think it's still sub-optimizing without the IPPD dimension included.
79. This is partly true as we were SEI Software compliant. System Engineering will be another story.
80. I know that many SE concepts can be applied to the "SW-only" environment, but for our purposes, I feel that the addition of SE to the model that we are being forced to shift to (in order to even survive in our current markets) has not brought us additional value (as compared to the direct/indirect costs).
81. It certainly has been a benefit, but rather under-employed to agree more strongly.
82. We didn't select CMMI so won't know!
83. However interpretation of the model for tactical service delivery areas is providing an interseting challenge
84. As stated previously, this model not only covers SE & SW, it also covers program management and HW. We are using the model across all of the engineering disciplines.
85. We have little use for the systems engineering portions of the model.
86. Found many areas where common process can be used.
87. Had already done some work along this line. It IS a help to get the SW "culture" more aligned with the rest of the development community.
88. It's always better to combine the knowledge to cover the bigger picture!

89. Helps to guide integrated engineering practices for software intensive systems.
90. Don't see any reason why it would not be beneficial.
91. Most clients say so. Also, as an SPI manager I found it helpful for organizing my company's practices since some fell outside the CMM KPAs.
92. Would rather see the richness of CMM V2 and the SE-CMM - the bogus reason for having a common appraisal method overlooks the reason for using a model - increasing levels of engineering competence
93. We didn't try it yet.
94. We haven't adopted it yet.
95. I do not have experience with CMMI in the organization.
96. This was one area where we found it difficult to form a fit with the CMM. We are looking forward to being able to form a much better fit with the CMMI in the systems engineering area.
97. Not had the experience of combing both these disciplines
98. What about hardware?
99. Helps broaden institutionalization
100. We started including other engineering disciplines in our process improvement initiatives before CMMI was introduced but CMMI provides more incentive to apply process improvement to the entire engineering organization.
101. Our support organization is not structured in this way.
102. At this point XXXXXX is not pursuing implementation of CMMI.
103. It is a help is providing assistance to government offices acquiring software.
104. Especially since the two disciplines are really complimentary in today's world.
105. Agree that it "will be" helpful to us.
106. The inclusion of Decision Analysis and Resolution was important as a separate PA. However, Manage Product Line Evolution was not incorporated into the CMMI. Manage Product Line Evolution gave a valuable perspective of the mainstay of our business--integrating systems and providing services. The inclusion of integrating technology into end products is weak in Organization Innovation and Deployment. This is an area where we have achieved wonderful results in terms of measures (which could help organizations justify process improvement).
107. Not highly relevant for us
108. We think this will be an advantage though we are starting with SW only.
109. This Model is very suitable for telecom OEM manufactures who have systems engineering, software engineering and h/w engineering groups. For Service organisations, unless proper tailoring is done, it might become an overhead
110. The result is a more stable and generic model.
111. Excellent.
112. More attention should be given to broadening the interpretation of the Engineering and Support process areas. The Project Mgmt process area should be reviewed to ensure it is not just a plug-in from the SW model.

113. Eventually this will help us, but for the moment, it's causing confusion.
114. Not sure how it has helped.
115. Especially in the battefields of WE Software vs. WE Systems Engineers.
116. We are at the beginning of this effort, but it appears that this will help us significantly.
117. This is key in an automotive environment
118. CMMI is key for organizations such as ours that deal with embedded, real-time systems.
119. Sys eng org is still too new and there is still a lot of confusion as to when they are included on projects, how, etc.
120. But the model needs improvement in the systems engineering points
121. The model is now more vague and needs to be adapted greatly to fit an organization's reality.
122. Have not used CMMI yet.
123. Yes. It helps bring these together - Which I believe should have been together in the first place. -"Integrated" Systems.
124. We don't really have S/E and Software segregated, so perhaps it would be a help. However, since we're not currently in the process of adopting the model, it remains to be scene.
125. We are planning to integrate systems engineering into our processes after our Level 5 CMM assessment.
126. yes, but needs "hardware" also (beyond IPPD).
127. We were previously conducting combined SW-CMM / SECM appraisals. Using one model is more straight-forward and reduces training costs.
128. It has provided a wealth of information and knowledge. However, the CMMI model is overwhelming to a novice or beginning organization. As an experienced advocate for the SEI models I have found it technically difficult to switch from the SW CMM to the CMMI.
129. We have strong culture of Integrated Product and Process Development and it is a key element of our business model
130. Not applicable
131. I have no experience in system engineering for CMMI appraisal.
132. I don't know; we are currently only applying the model to software development.
133. This has enabled us to work with clients in a more efficient and coherent manner
134. We saw a need to do this when working SW-CMM. CMMI came along at just the right time to make it happen.
135. we also need something for hardware organizations
136. Integration makes our efforts applicable to all of our projects, not just SW projects
137. We have increasingly seen projects where there is a mix of software and systems.
138. Most of our project have both an SE and SW content.

139. Our software does not involve systems while our engineering is traditional marine, mechanical, electrical, piping, etc, having nothing to do with the software offered. Implementing in engineering will be a different implementation.

140. It has brought the SE people into the process improvement fold which has made the project efforts easier.

141. We do both, and have a lot of engineers that do both. It saves us on development of our process, and in training and acceptance of the whole process by our staff.

142. Shows how the close similarity between the two discipline's processes

143. Not really - deal with software only to date. This may open a larger market for us.

144. We just need the SW CMM

145. As I noted earlier, the two disciplines are really so closely interdependent that putting them in the same model just emphasizes how they should, and do, support each other.

146. Basically sound approach, but hard to implement in our organizational culture.

147. Although it does tend to blurr the responsibilities a bit.

148. We're just starting, but hope that this will be true...we're counting on it!

149. See what I mean about ignoring hardware engineering. Take a closer look at Technical Solutions and note the number of references to "hardware".

150. I really wish you were pushing its use with other communities such as Program Mangement, Hardware(including ME and EE) and Operations (Manufacturing).

151. We are very much standalone PC/web development. Very little integration or "systems" thinking.

152. This is a perceptional value that is determined by the nature of business in which one is presently in.

153. The software culture strongly resists the inclusion of other engineering disciplines. Trying to develop a system that includes both at the same time has been extremely trying.

154. We did it ourselves before the model was introduced.

155. However, we are still trying to identify our potential universe of applicable projects

156. I expect that this will be very useful to some areas in my XXXXXX and not make any difference to other areas.

157. This made us take an integrated approach to how we solved problems. It also made is easier for system engineering to leverage off of what was done in software.

158. It was easy enough before and and offered the advantages of specialized models which could provide more depth while maintaining a reasonable size

159. A larger look at systems development (SW & SE) definately was an important step for CMMI and is invaluable in helping to align all the disciplines.

160. Also, we have extended it to our business management projects. More lessons learned from others in this area would be helpful

161. Definitely. Please refer to earlier commentary on increasing project monitoring and control across a business area, as opposed to focusing on limited software development projects.

162. SE is very important and more encompasing than just SW...most Government orgs acquire systems , albeit many are sw-intensive.

163. My clients have not found this particularly useful.

164. This is due simply to our situation - we are application developers where the systems engineering issues are invisible. This however may not be the case in the future.

165. Whether people like it or not, systems engineering is part of any organisations. They do it, they just know know they do.

166. We are an IT consulting firm. It is hard to develop a solution for a client that does not involve both software and system engineering.

167. The one scampi I did, I used noth SW/SE on the staged representation, mainly based on the recommendation given in the model. But I hope to find increasing justification why SW organizations should use it that way.

168. We have a siloed rganization. We have to overcome internal politics before we could use any combined strategies.

169. Improvements in SE maturity are expected to be our single greatest benefit. We're also well into a transition plan for using CMMI for Hardware engineering.

170. Our business is software alone.

171. We don't need the part of system engineering

172. The SE/SW model exactly matches our kind of work product.

173. As this may span internal organisational boundaries it may take more time to broaden scope for many of our organisations to include both; currently using both is resricted to organisations with specific needs and project practices e.g XXXXXX.

174. n/a

175. Need to add SA-CMM into the mix.

176. We expect it to be but don't have enough experience yet to know.

177. Software transition from a CMM environment was relatively easy. Was a good structure for Systems.

178. Since I use the CMMI along with the CMM, it has been helpful to see the systems engineering information.

179. I think it would be, but adds a level of political complexity in gaining support

180. Not an issue for us thus far

181. Our software engineers work closely with the systems engineers. We are planning on expanding the scope of our process improvement efforts to include the systems engineers.

182. In 2003, even toasters are software intensive. Systems and software must both be discplined and colaborative in process improvement to achieve real value.

183. Eliminates resistance from hardware folks. What are you going to do about the names SEI and SEPG?

184. It definitely has generated more interest and discussion across the engineering disciplines.

185. This is why we will be moving from CMM L3 to CMMI Level 3

186. Expected, not yet confirmed.

187. Further helps get rid of the stovepipe disciplines

188. It'd be even better if there was a version of the model that didn't even mention engineering.

189. I strongly agree that elevating the model to be largely discipline independent was the right thing to do and it helps us normalize our processes among disciplines as those processes are reviewed and refined.

190. Our engineering sites believe that the combination of both SE and SW in a single model is more reflective of reality, of how a project is really done.

191. See response ot question 1

192. We like the concept of integration , but don't like the end result. he two architectures have got to go!

193. But I think it will help since engineers often say the big problem is in the requirements (which is one reason they resist PSP/TSP)

194. Not applicable to this project

195. Provides a common method for us to address greater parts of our business.

196. We are just looking at using some of the systems eng. application of CMMI (for a select group). But we will use CMMI only for guidance, not for goal setting of PI results. CMMI is the model of choice for the time, but we may select another model.

197. For multidisciplinary organization CMMI makes process improvement activities easier.

198. This assumes that you improve both together ... regularly, software process is the culprit.

199. These is certainly a big help for us because we can use a single model to cover both areas.

200. The expansion of process model coverage on our standard product development process will be very helpful

201. This is the main appeal for us - we develop systems, and the SW-CMM is of dubious use to Systems Engineering (from their point of view, anyway)

202. Engineering is our strong point and it is important to define the process. However, Engineering Process Area of CMMI is not necessarily best practice for us. (In addition, there are more important processes.)

203. It has been very helpful in breaking down stovepipes.

204. In our organization will develop hardware, software, and firmware. In many projects, the development of both the hardware and software is performed by the same group/individual.

205. Integration was ideal, and the move from SE to CMMI would not have been onerous.

206. The inclusion of both systems and software engineering closely follows the structure of my company.

207. When SE was not in the model, I could focus on things that we felt mattered more than things that others feel matter.

208. Have not investigated

209. We have embedded technology projects.

210. Have not yet applied in an organization that does SE and SW
211. Provides consistency in expectations
212. Definitely.
213. It helps us to consolidate our process improvement initiatives at an organisational level & map them to our business goals.
214. More a topics for the future.
215. Yes. Most of ur products are embedded real time systems.
216. It helped merge our software and systems improvement models (SW CMM and SE CMM).
217. Yes.
218. According to me, this will help big System integratros rather than software only shops
219. It emphasizes that both have more in common than differences, especially in the management areas.
220. Difficut to understand the terms for the software persons.
221. Not yet implemented.
222. Especially, as our organization has moved towards hybrid systems development (SW and HW)
223. Only applicable projects currently in organization are SW. We have struggled with whether the model applies to SW (or SE) "services" or not: Does a project that provides only software (or systems) engineering services but no engineered software (or systems) products fall within the scope of the SW (or SE) discipline in the model? What about software (or systems) O&M? The M probably does, but the O is a service, not a product, so what about the O?
224. Too many people are ignoring our SW-CMM implementation efforts because they deal with SE engineering or infrastructure.
225. We don't get into systems much, but it won't hurt to have a systems engineering perspective.
226. I guess I have too much common sense. It was always easy for me to take the CMM and expand (just remove the word Software), get people to 'think'.
227. Could be a hinder for organisations are organised in different groups ie where software engineering is outsourced.
228. Development of common processes and collaboration in process improvement is a great plus, and has caused walls to be removed between HW and SW in many organizations.

9 Global Issues Question 4f: We have had difficulty in mapping our processes to CMMI.

1. Haven't specifically tried. SW-CMM we did not have great trouble mapping processes in place, but many PAs didn't have a clear process to map at all.
2. Just another mapping
3. We haven't tried this activity yet.
4. If you do systems engineering, the CMMI fits like a glove.
5. Again, in its infancy, V1.1 still has controversial requirements in many areas, as well as assessor approaches. Some PAs seem overburdening, and others seem not to go far enough.
6. Since most of the organization was familiar with the SW-CMM we were close. However there were a few groups that we had to really guide them along
7. Due to training and hired consultant - we have been able to identify mapping to existing processes.
8. I agree with the statement but think it should not be taken too negatively. Probably also had difficulty in mapping to either SW or SE CMM too, or any other model for that matter. I believe though that once the mapping is done it provides tremendous opportunity for improvment and leverage
9. Still in the process, but no difficulties yet.
10. Not really a problem -- except for purely service organizations.
11. Prior to CMM-I we could say, "what processes?" Although those less familiar with the model (untrained) do have difficulty. An initial investment in training is requisite.
12. We have not yet implemented CMMI.
13. Our initial mapping has proven easy, but also has exposed some gaps that we will address under the SW-CMM to when we switch to CMMI, things will be in place.
14. Difficult but not impossible
15. Having SW-CMM experience and beeing a systems engineering company mapping is quite easy.
16. A gap analysis is in progress and so far has not shown difficulties in mapping, just having the time to do it between mission work.
17. Since the CMM-I is at a higher level of abstraction than the CMM-sw, more interpretation help has been required.
18. Piece of cake.
19. Generally it is easy. However we sometimes confused how we map our "programming" acitivity.
20. It has proved to be time consuming but we succeeded.
21. No way! Infact XXXXXX experience as a CMMI implementation partner is quite the opposite! Since practitioners can execute their activities from having a cognitive map of the CMMI (CMMI can be easily committed to memory), it is more than likely that rich process improvements are possible given that process mapping has already happened.

22. This should not be an aim, but a support
23. Specifically in the area of COTS integration
24. Although, there is still some questions in the TS, PI, Val, and Ve Process Areas, and the SEI has not been able to clarify the issues. We overcome the lack of clarity by adopting and training a locally derived understanding.
25. Again, as a small business we do not necessarily need to perform every practice/subpractice of a PA. Consequently when we map our processes we are left with holes in areas where we have no real need to do anything.
26. No, the CMMI is large enough that almost everything has a home.
27. It might be difficult if we HAD a process ...
28. Mapping was not a problem. Only difficulty was dealing with SPs and GPs in specific PAs that did not add value to our processes. So we added them to our processes to be compliant even though no one thinks they do us any good.
29. Model describe too specific, appears many academical terms.
30. CMMI isn't, and shouldn't be our business model, but we don't have any trouble in identifying relevant areas.
31. If we had the resources to do the mapping, we would not have much difficulty.
32. NA
33. This is a tricky one, because I think wahat we did was restructure our process descriptions to align with the CMMI. So mapping our processes to the CMMI was not a problem, the problem is in making sure the projects are really using the restructured processes.
34. We haven't yet done that.
35. Our internal mappings have been performed continuously (to match new versions of CMMI and our process framework) and with relative ease.
36. Again, CMMI must be incorporated into the organization in a way that makes good business sense. To go the opposite direction is asking for trouble.
37. Decompose CMMi into a matrix of requirements and map accordingly. Implementation strategy that works!
38. We have not made much effort to map our process beyond the SW-CMM.
39. I am mapping our software processes simultaneously to the SW-CMM and to the CMMI, although we are only focusing on compliance to the SW-CMM. That way we are developing a running gap analysis to the CMMI. This should allow us to get up and running quickly when software starts using the CMMI.
40. N/A. We are a consulting company that delivers CMMI services.
41. Most organizations have this problem if they lack adequate training in the CMMI.
42. Since we switched from ISO/IEC 15504 (SPICE), there were certainly problems in mapping (or redesigning) processes to CMMI. Those problems were not big since basic understanding of the process areas is the same for both models.
43. Our processes for the most part can be mapped to the CMMI. In expanding to IPPD additional areas are reviewed.

44. Although we haven't done a formal mapping yet - Having looked at it I don't think we will have issues with this.
45. More/better examples are needed.
46. Not a problem.
47. Having moved from the CMM mapping to the CMMI has been a lot of work but, not particularly difficult.
48. Haven't run into this... we've mapped software development, hardware development, projects with a "corporate business model flavor" and service-oriented laboratories to-date. I believe the only case we've yet seen in Level 2 where something didn't directly map was requirements traceability for a laboratory. They received a waiver on that one, the rest of the model applies beautifully.
49. We have not started that work yet, but I don't foresee many problems
50. Has not been a problem
51. We leveraged off work already established by our adoption of the SW-CMM. It has been a little more difficult to map the production processes but we have managed to tailor it appropriately.
52. It hasn't been that difficult.
53. Not a problem if there are trained CMMI experts around.
54. We have struggled to reform the nonsensical organization imposed by the implementers of ISO 9000, but that has more to do with weakness in the world's approach to ISO 9000. We have struggled to identify the right level of work products to provide as artifacts. This resulted in what I think was an erroneous conclusion about our strengths and weaknesses in SAM. In discussions following the appraisal, we discovered we had really provided the wrong artifacts to demonstrate what the appraisers were looking for.
55. Becuase our processes were documented prior to the draft CMMI and were based on the SW-CMM and SE-CMM, we've found ourselves having to re-map each time the CMMI is updated.
56. We formed a group to generate process that were common to our 15000 employees and got the buy in through that process and have been successful at getting all organizations to use the Tailoring and Process Compliance Report tools. The tailored processes are incorporated into all the project plans etc.
57. No real issues.
58. The CMMI process are so much clearer to map then the CMM Software model was.
59. We haven't mapped to CMMI yet.
60. Haven't tried
61. Because our processes were aligned with both the CMM and EIA 731, the translation has been reasonably straightforward. I think that without having the EIA experience, it would have been much harder.
62. No we're just doing this and don't have a real issue with that. It's mainly extensions or clarifications which have to be done.
63. at least for the existing processes

64. We had little formal process to map. And what people are doing anyway, even if culturally based, was not too hard to map.
65. See answer below.
66. We have only completed preliminary process mapping to CMMI, but CMMI looks to be very compatible.
67. No. It requires tailoring and interpretation, but the CMMI is fairly straitghtforward. The only exception would be in the GPs category, where there seems to be some convolution (e.g. planning and managing a process that deals with planning and management, for instance).
68. But . . . this problem is usually because our processes are disjointed, incomplete and inadequate!
69. We have no standard practices, processes, or procedures.
70. We spent several months on this task, however, it was not a problem.
71. We have done 2 cursory mappings, but find this very time consuming and "open for interpretation" in many cases (even having taken the SEI's CMMI trianing). The early assets we found to help in this process on the CMMI site were not particularly helpful. Having done SW-CMM, we are very comfortable with interpretation and (probable)assessment team expections, but we are very concerned about the risk of SCAMPI teams have a "slightly different" interpretation of various practices under CMMI model guidance, thus exposing unforseen weaknesses under assessment conditions. (Note: while sucessful assessments are a "by product" of our "for the greater good" PI efforts, in our markets, we would be completely ignorant to think that we could stay in business without the ability to be successfully assessed at a given Maturity Level.)
72. There is tremendous difficulty competing with buzz-word management, and emphasising proven quality procurement techniques.
73. Some parts of our process only apply to certain components of the CMMI - also some of our work is service based and not as directly applicable.
74. Issues usually arise in the local organization who lack detailled understanding of CMMI (e.g. overlaps, using CMMI as a process)
75. Doesn't apply
76. NA
77. We had some early interpretation issues. Primarily the difinitions of verification and validation. However, the model fits well with how we are doing business.
78. We have many services projects (those projects supplying services to our customers) which don't seem to fit well with the model.
79. We have no processes
80. We don't - Some of the external apraisers seem to...
81. Not difficult.
82. no trouble here!
83. No. Using a concentric circle strategy has enabled us to map our processes by proactively looking at CMMI in terms of a framework, not just a model. We look ahead in our mapping.

84. No major difficulty but there is a certain amount of uncertainty in some areas that had to be hashed out. Don't recall which ones they were.
85. I have no experience of this.
86. no sweat for mature organizations. No experience with immature orgs as they have chosen CMM (where I have had exposure)
87. We didn't try it yet.
88. We haven't adopted it yet.
89. So far, in the documentation phase of our transition efforts, we are having no trouble in matching our process to the process areas of the CMMI. In fact, we have discovered that we are already performing many of the new CMMI process area practices and requirements as a result of when we used the CMM.
90. Most of the times, the mapping is not a difficult area
91. We always used the 'discipline' approach - mgmt, engineering.
92. Looking at the generic practices across process areas has helped in quickly mapping to the generic practices.
93. This is due to the awkward existing structure of our organization.
94. At this point XXXXXX is not pursuing implementation of CMMI.
95. In some cases as mentioned above.
96. haven't tried yet
97. We plan to use CMMI as an input to our process and not to convert our process to CMMI.
98. We had no problems, though it took us some time to understand the concepts
99. The CMMI process areas are very well documented and easy to map to ordinary processes.
100. Since we are in the very, very early stage of applying CMMI to our organization, it is really to early to tell. It will be a challenge. We have many support, maintenance, post-award project monitoring projects here as well as IT, and these will be easier to map to the CMMI. However, as I have already mentioned, I think the Source-selection and Acquisition areas will be more difficult.
101. The model is project-centric. Projects are only one of the many services provided by an infrastructure department.
102. Instead of a true mapping, all we've really done so far is change "software" to "systems" in our Systems Engineering Process.
103. Actually, I'd say this the other way around... we've had difficulty mapping the CMMI practices to our processes (our processes are the foundation, not the CMMI).
104. Not trivial, but mappings can be found and defined.
105. Due to minimal training in this, we are moving very slowly, but work is ongoing and we are not capturing all of our work.
106. Initially, we had to understand how the model related to our processes and procedures. We dealt with this via something called "annotations" in our XXXXXX Method. This

was basically text that converted the wording in the CMMI model to something we could understand in our environment.

107. Coming from SW-CMM Level 3

108. but it requires experience with the CMM(I) model

109. No.

110. Have not used CMMI yet.

111. Particularly in the Engineering PAs for the small production work, the CMMI practices are at a level of detail that just doesn't happen in small work.

112. We had/have growing pains, but I don't see this as a long-term problem.

113. I use the CMMI as a sort of template for creating and documenting our processes.

114. We had some difficulty understanding how to apply it to small units of work, i.e. initiatives that are less than 2 person months of effort. (Greater that 2 person months of effot ia our basic standard criterion for establishing a project.) This was compounded by the fact that we provide a wide range of services. The services are sometimes performed as a direct request (e.g. reset my password) and sometimes as part of an application development project from another internal organization. Then our person is assigned to that project which following their own CMM- compliant procedures. That being said,it was a very worthwhile effort to define our work types and then analyze how each of the practices in the PAs we selected for our intitial target profile applied to each work type.

115. We used the mapping document provided from STSC on their web site and the mapping was quick and painless, but our approach has alot to do with it. We use Step action tables with a column to map each step to the CMM and a second column to map each step to the CMMI.

116. Have not tried

117. Not for the most part.

118. Yes, I agree. And if I had spent more effort in mapping our processes to the CMMI I would likely select 'strongly agree' because our processes are mapped to the ISO 9001:2000 Standard and the SW CMM. It is also difficult to map our processes to the CMMI. It requires too much effort, time and cost to map to the CMMI.

119. The CMMI model aligns well with long established industry standards

120. Not applicable

121. I have not noted this as a problem in our early stage of implementation.

122. There are part of OEI, RD, and TS which are difficult in mapping.

123. We have more problems figuring out how to appropriately cover gaps in our processes than in mapping them to the CMMI.

124. not on the basis of extensive experience with SW-CMM

125. Our SW CMM processes for the most part map directly to the CMMI

126. There was no problem whatsoever

127. Not completed.

128. The org made sw-CMM L3 a few yrs ago.

129. Our process was under development prior to deciding to shift to CMMI. It was already designed in modular fashion, and this helps us a lot in re-mapping.

130. No problem at all.

131. Not applicable and have not been involved in a CMMI appraisal yet.

132. So far, we have had great success in mapping our processes to the CMMI, we will continue this in our next pilot efforts.

133. Although there are CMM/CMMI mapping documents, it is still sometimes unclear as to whether A=B or whether C is required or only suggested.

134. The processes we had in place that were based on the CMM are relatively easy to map. On the other hand some of the other processes have been less easy to map unless they relate to a particular Process Area. For example, QA Processes map very well to PPQA. Other engineering processes less easily.

135. Our main customer is the DoD, and the CMMI represents best practices that we have generally followed over the years.

136. Having CMM based processes makes is easier. However, if you were starting from scratch, I would probably agree with this statement.

137. I don't think this has been a problem at this time, but we're just starting the mapping.

138. Done deal.

139. With the exception of some PI and RD practices, most mapping was easy.

140. I don't see a problem mapping from SW-CMM to CMMI all that much...

141. Mapping is not a problem.

142. The difficulty continues to be moving from one level to the other with backward traceability.

143. Started much before CMMI.

144. Our protege company uses ISO and it has been interesting mapping our processes to CMMI.

145. We have not begun this process yet.

146. Again, this may have been made somewhat easier because of previous process improvement activities associated with the SW CMM.

147. No problem

148. On our assessment team, we found most processses could be mapped to CMMI.

149. Since we began from the S/W-CMM and SE-CMM, mapping to CMMI has not been that difficult

150. it can be challenging since the KPA allocation may not fit well with the way an org does business; more guidance on how to be more flexible is needed.An assessor should hav eth ability to focus on goals wherever the processes/procedures are...don't be KPA myopic!

151. Particularly the GGs and GPs.

152. It was easier than for CMM, perhaps due to our improved understanding and awareness

153. Never had that problem

154. Originally, when we started our effort using the SW-CMM model, that would have been very true. Transitioning to CMMI once we adjusted to CMM is a breeze.

155. Organiztions have reported but I have helped them do the mapping. The PAs of RD, TS, PI, Ver, VAl have been the major areas. The organizations involved do a lot of maintenance and short SDLC projects.

156. Just getting started

157. Many existing processes (based on SW-CMM) mapped directly and required few modifications. For some new CMMI PAs (e.g., DAR) we already had effective practices in place informally, but they were not documented, trained, etc. sufficient to satisfy CMMI institutionalization goals. Some processes needed to be enhanced to explicitly address CMMI generic practices (e.g., stakeholder involvement).

158. We have been tackled SW-CMM.

159. We don't do it.

160. Enterprise Process framework was adapted to meet SW CMM and CMMI expectations. Where there are current mismatches (very few), we have an enterprise oversight activity for changes involving monitoring assessment results by the LAs, and CRs requests to entrprise process framework, as well as monitoring addittions to Best Practices Repository. Current supporting tools to automate mapping - PIIDs for supporting appraisals not yet planned/implemented

161. Again, we are using the CMMI as a guideline so if we have problems defining a process we use the CMMI as a reference.

162. n/a

163. Our process level is relatively immature so there isn't much to map.

164. Maybe "challenging" is a better word than "difficult"

165. Not applicable to us but usually, there is no big difficulty

166. We have not tried to map our processes to the CMMI yet.

167. Not an issue for us thus far

168. Our processes map easily to the CMMI.

169. However, there are infrastructure processes not covered by the CMMI and there are non-engineering services projects that are not covered by the CMMI.

170. I'm attempting without traction to get alignment of our initiatives with the CMMI.

171. There should be more information on transitioning from CMM to CMMI and common threads from ISO to CMMI

172. We are currently adopting RUP as a methodology and are in the process of doing this mapping, but since both RUP and CMMI are relatively new to us, it is too soon to gague the difficulty.

173. Not terribly difficult. The 'whats' are the same. The problem has come in with the 'hows'.

174. Was easier than with CMM due to the increased internal consistency of the CMMI.

175. None of our processes were ever aligned with any capability maturity model. So mapping to CMMI has been a challenge.

176. It's some work but I would not say that it was extremely difficult because of the model description.

177. we aren't structured that way and the assessment team forced us to map down to the practice level. Very painful and not very useful.

178. haven't been involved in this

179. Not applicable to this project

180. CMMI is predicated on a certain type of contract, which only cover about 50% of our work. Interpreting the CMMI for service projects has been very difficult.

181. In the past, org has had difficulty mapping processes to CMM because the personnel were not fammiliar with CMM or process definition. If mgmt assigns task to those with CMM(I) experience, we will not have any difficulty.

182. We found it relatively straight forward to do the mapping since we had been implementing both the SW and SE CMMs.

183. Since our organization has been adopting CMM past 5 years or so, mapping was not difficult.

184. It is tedious, time consuming, and mind numbing. It can and is being done but painfully. Even when finished,choice of links is still highly subjective and subject to differing intrepretation.

185. There has been some difficulty, but this is largely due to the lack of experience with CMMI.

186. Our product development model maps easily

187. We have spent a great deal of effort mapping to the SW-CMM, we aren't pleased that we now need to do it again for the CMMI

188. It was difficult at first. However, after receiving a gap analysis, we gained a better comprehension of CMMI and it was able to advance smoothly.

189. Especially distinguishing Product Integration from Verification from Validation. In addition, the actual model guidance and requirements for the Verification and Validation are not sufficiently different. By that I mean that the wording for Validation is too similar to that of Validation to be clearly understood.

190. Some difficulties come from different terminology and for some processes (i.e. setup of existing IT solutions for new Clients)that are specific of our Organization

191. Due to our experience in working with the CMM's, we are able to help the organizations interperate the practices. Without the knowledge and experience with the CMM's this would probably be more true.

192. I have not yet attempted to map our processes to the CMMI model. I will be beginning this effort within the next few months.

193. Although the CMMI frequently refers to Product or service, it is extremely difficult to map some PAs to the work actually undetaken. Also, COTS features in such a way that it may be very difficult to really satisify the model.

194. SE expecially services SE does not readily map. There is no production and the supplier management section is weak.

195. Have not investigated

196. Due to the prior experience with Software CMM, this was not difficult.
197. We have not done it in this organization, but i used Quagmap from the XXXXXX with great success!
198. There was some overlap, but did not cause difficulty
199. We did it through a Gap Analysis; it was not difficult, but it did consume considerable time and effort.
200. Not at all! We could complete a three dimesional mapping of CMM-Our process framework(XXXXXX)-CMMI within 12 working days!
201. No major problems.
202. From the start of our process improvement efforts, the process group that was formed covered all processes, not just software and not just systems and software. We never had a "Software" Engineering Process Group.
203. Mapping software processes has been relatively easy (SW-CMM Level 5 processes). Mapping other processes has been very difficult.
204. I have not done in-depth work in this area, but the guideline appears adequate.
205. This was never a problem
206. Improvement means change. If there is a problem in mapping, it probably means you need to change more things for improvements.
207. Should not be a problem from initial evaluation.
208. Ambiguity and lack of clarity make it difficult to decide where some processes belong
209. While we're not doing CMMI yet, I can easily see how our processes will map to it.
210. We have a corporate process team that is taking care of this for us. We just need to map their point of view to our understanding of the process set and CMM to get a sense of where CMM-I fits our personal models.
211. We haven't done much mapping yet but it seem pretty clear to me.
212. No problems observed.
213. Yes and no. I am very familiar with ISO 12207, SPICE and 15288 so it was very clear to m. However, the company found it difficult to cope with all the pieces of the model.
214. Mappings and traceability are still immature and slow in developing, even though attempts have been made and documented.

10 Global Issues Question 4g: We have had difficulty tracking the changes and additions from models that we have previously used.

1. We are not using CMMI, and SW-CMM is our first, so we are not tracking changes.
2. Didn't really address differences. Just did a mapping to the CMMI from how we actually execute
3. Who cares? Only if you want a badge, does it matter. The real effect is to gain knowledge in good practices.
4. You map changes to SW-CMM version 2 Draft C but I have not seen anything that shows a mapping to SW-CMM version 1.1.
5. Most of the CMMI was easy. There are some subtle issues, but we are catching them as we go.
6. This is a new organization for me, with a previous history in CMM. Others in the organization do S/W mapping, but I have seen no real prior model for SE to map from.
7. If you mean keeping the Org. Std. Process in line with the previous models - SE CMM, EIA 731, CMM.
8. Transition from Software CMM has been relatively smooth.
9. I agree from the perspective of tracking updates to the model. Releasing the IPPD and SS PAs with no explanatory information for the instructors ws bad. If you expect the instructors to glean the nuances of the PAs from the text in the model, you are mistaken.
10. not applicable
11. The STSC mapping has been helpful.
12. No. SW-CMM users.
13. Again, more consulting help has been required.
14. Whiners.
15. We have not used previous models.
16. Moving from CMM to CMMI was not always smooth.
17. Not really ... why would anybody want to look at a previous version?
18. We found it very straightforward to identify the differences from SW CMM, SE CMM, etc
19. I have had no problems with this.
20. Not applicable, no previous model usage.
21. You have to do a better job of letting us know when you rev the model. We were in the middle of an appraisal during the last rev and it caused much confusion.
22. Never used any CMMs
23. This hasn't been an issue. We have had an external CMM assessment previously, but the transition to CMMI has been easy.
24. In line with the continuous mapping mentioned above.

25. Matrix tracking changes- nothing gets lost
26. Transitions from the SW-CMM are still somewhat fuzzy.
27. N/A. We are a consulting company that delivers CMMI services.
28. We found the process view of both models (ISO/IEC 15504 and CMMI) differ in detail but quite similar in philosophy. Since we had been keeping detailed logs and applying change management, things from the previous model were identifiable and reusable in CMMI based implementations.
29. No difficulty.
30. We're a small business that has performed ad hoc under the 8-A program.
31. Do not understand the question.
32. Other than CMMI I have only used the CMM - the transistion is not overly challenging.
33. Our Systems Engineering Process Office has assembled mapping information between the models, probably stemming from an SEI presentation.
34. Also, not a problem
35. Haven't really been tracking or monitoring this.
36. It would have been helpful to have transition guidelines in place that said something to the effect of "This area of the CMMI was covered by SW-CMM such and so, with the following changes."
37. Hard to say. Sometimes true, usually not. Depends on expertise of staff with respect to CMMI.
38. We started with a relatively clean slate. The ISO 9000 procedures were stagnant as we began our efforts.
39. This hasn't been a problem. We ensured that our processes were compliant with the CMMI for all process areas and have gone from there.
40. We have simply made the switch so the mappings have not been a problem.
41. The CMMI process is so much clearer.
42. What is missing is the rationale for making the changes from version to version. The model files themselves could benefit by change bars or at least having a complete description of the changes in one place.
43. Have not done so yet.
44. N/A
45. The into to CMMI does help.
46. Our company has been involved in CMMI development since the very early efforts. We have invested in tracking changes, mapping them and training them.
47. No see remark above
48. the transition from the SW-CMM (where taken place) was less easy than considered
49. It is time consuming rather than difficult to track changes. There are mappings available that help.
50. Does not apply to our case

51. Mappings available at SEI and STSC provide good tracking of model differences.
52. We have had no difficulty mapping process areas from SW-CMM to the CMMI. We have had excellent help from the XXXXXX (XXXXXX) in this.
53. XXXXXX has prepared a mapping between the CMM and the CMMI. It is not perfect but it certainly is a good start.
54. We have no standard practices, processes, or procedures.
55. Not a problem.
56. We have only used SW-CMM v1.1 to date, and have not yet begun our transition to CMMI in ernest.
57. There has been no effort whatsoever to hold procurement techniques accountable.
58. This is not applicable
59. Doesn't apply
60. NA
61. Not involved in previous models
62. n/a
63. This hasn't been a problem.
64. Not a problem.
65. Has not been a major issue.
66. this is the first time!
67. We keep good records. CMMI further supports making explicity our process improvement experience.
68. Mapping frm CMM has not been difficult.
69. I have no experience of this.
70. again, for high maturity orgs, no sweat
71. We didn't try it yet.
72. We haven't adopted it yet.
73. As mentioned in the previous question box, we have found that we are already performing many of the CMMI process area practices and requirements as a result of when we were using the CMM. No difficulty here...
74. The changes are not so difficult to understand
75. I do not understand the intent of this question so can not answer it.
76. Experienced cadre of people in Process Improvemetn
77. CMMI is our first model to be adopted.
78. This was not important to us. When the latest version (1.1) was issued, we just started using it and did not worry about the changes.
79. Proper training and documentation on the SEI website clearly defines all changes to the model. One must invest time to understand the changes.
80. At this point XXXXXX is not pursuing implementation of CMMI.

81. No modles were previuosly used.
82. haven't tried yet
83. Have done only a very little of this but it seems okay so far.
84. No . Our SEPG Managed it
85. This could happen due to the generic objectives and practices of the CMMI.
86. There is one project in our organization that has begun a SW-CMM effort and now they have to transition to CMMI - it's frustrating.
87. N\A
88. So far, there haven't been that many changes.
89. We got tripped up on the transition from SCAMPI 1.02 to SCAMPI 1.1. The model changes have been less significant (although v 1.0 of CMMI was a poor quality document).
90. We have not had controlled processes and therefore have nothing to track. We do have work performed that is being converted and find that extremely slow to get acomplished.
91. The revsion markings in WORD were perfect.
92. CMMI is really the first model we've used so this question should really be answered with a "Not Applicable".
93. Transition not completed yet
94. Do not apply.
95. Have not used CMMI yet.
96. Personally N/A. I think some work needs to be done to bring the previous efforts together.
97. We haven't used previous models.
98. Our specific organization had not officially applied another model. However, our applciation development units in going from CMM-SW level 2 to 3 have been mapping to CMMI without a problem
99. We have been using CMM v1.1 for 4 years - not sure on this question.
100. Have not tried
101. We threw out the CMM.
102. Not for the most part.
103. Yes, too much rework and lost effort. Often it is difficult to lead a group or organization through implementation of changes or to justify such an activity.
104. CMMI has evolved from CMM
105. N/A - We have not really used any previous model other than SW-CMM
106. Tracking changes from SW-CMM has not been a big problem.
107. The only model we were using was the SW CMM and the mapping from CMM to CMMI is pretty straight forward
108. We have been involved since very early in the development of the CMMI so understood completely what changes impacts were.

109. The SEI WEB site has excellenet refferences to help map back to previous models.

110. Again, we came from a SW-CMM model. Not that drastically different.

111. I am not sure what this question is referring to.

112. mapping CMM to CMMI and vice versa is very easy

113. See above

114. We encountered some problems tracking from CMM to CMMI on first cut. However, after we looked at it again and took a less SW focused view, it wasn't as hard.

115. I am neutral on this question, it was not that difficult, but it was time consumming.

116. No idea.

117. Done deal and did not worry about mapping from model to model. Only concern was out OSP to the models.

118. If I need to know, I go look.

119. If you mean other models such as ISO9001 the statement is correct.

120. Very similar to all other models.

121. We have not begun this process yet.

122. It can be ascertained but it is not a simple mapping. Many people overlook a lot of the more subtle changes.

123. Not applicable to my visibility into CMMI and my organization.

124. We have basically followed v1.1

125. My experinec has been mostly with level 1-2 orgs o snot much stablized processes to worry about..I can see this being a problem in higher maturity orgs.

126. The changes could be communicated by a synopsis document and this document can be sent to the TPs.

127. No, we have a consolidated CMMI model and dont use the SEI versions

128. This is a time consuming chore that the org must do when they transition

129. However, it takes a very experienced SPI person to help with this transition.

130. Not with all the material provided in the SEI website which highlights those changes.

131. We were very experienced with SW-CMM, and participated in CMMI product development, so had little difficulty understanding CMMI for transition. We had some prior use of SE-CMM, but not extensive or institutionalized enough to impact adoption of CMMI for Systems Engineering.

132. We have been tackled SW-CMM.

133. We only started using the model, a year ago (V1.1), when it was settled.

134. The only other model we used was SW-CMM. We had a few difficulities mapping from the SW-CMM to the CMMI, but we were successful.

135. Company started using ITIL and as a result there is significant redundancy as we try to apply CMM

136. n/a

137. Although we haven't "done" it yet (past tense), identifying how to do this, and do so efficiently, remains a challenge.
138. Haven't used other models enough for change to be a problem.
139. We still use the SW-CMM.
140. Not an issue for us thus far
141. Comparison documents from SW-CMM to CMMI V1.02d to CMMI V1.1 have help tremendously with moving from one model to another.
142. Never used models before
143. CMM was rejected. No conversion involved. For fresh starts, I refer to the CMMI, not CMM.
144. will Let you know
145. Not really - CMM to CMMI transition has been very smooth. Since ISO is not as prescritive as the CMMI, the two can coincide.
146. Reasonable mappings have been published (e.g., by STSC), and anyone reasonably knowledgeable of both models can get along well.
147. You need a doesn't apply selection here. We haven't used any previous models.
148. This is not as difficult in a level 1 organization compared to higher maturity organizations that have more documented processes.
149. Have not attempted to do this.
150. Not applicable to this project
151. We simply started over, and did not care about the differences (e.g., SW-CMM to CMMI).
152. Again, reason is using unqualified personnel to do the mapping.
153. This has not been a problem. See prvious response.
154. Not insurmountable, but very costly.
155. Same reason as above.
156. This is our first time using any CMM or CMMI model
157. OUr process gurus have this well in hand
158. Although true, more training in CMMI would probably rectify most of these issues
159. Since there was no model from the first, there were no difficulties.
160. We have taken the Introductory courses offered by SEI. Plus, we read the newsletters from the SEI to maintain current.
161. I have not yet attempted to track the changes from the CMM model to the CMMI model. I will be beginning this effort within the next few months.
162. n/a- not using a previous model
163. didn't use an earlier version
164. Have not investigated

165. We had an internal team which did the Gap Analysis. This was then validated with our Consultants.
166. We have not done it in this organization, but i used XXXXXX from the XXXXXX with great success!
167. Was not of real concern. We just starting using the CMMI as our baseline without worrying how it was different, but we did note differences and similarities
168. We are using Version 1.1 and have not used other versions.
169. Does not appear to be applicable to us.
170. Not at all! We could complete a three dimesional mapping of CMM-Our process framework(XXXXXX)-CMMI within 12 working days!
171. No previous models.
172. It hasn't been a big deal.
173. Not an issue here.
174. If it is emphasized to identify and track the changes, it is not difficult.
175. Not yet implemented, but do not expect any problem.
176. Relatively straightforward to map from CMM to CMMI
177. I have no experience with models here other than SW-CMM
178. Not relevant
179. It hasn't even been on the radar. We let someone at corporate take care of that.
180. Some changes are difficult to track from SW-CMM to CMMI. In general, no problem.
181. Earlier, before the CMMI was well understood by legacy users of earlier models this was true. But this analysis has been done.

11 Global Issues Question 4h comments – Having a choice betwee the two model representations (staged or continuous) and variations (SW, SE, IPPD & SS) has been helpful for us.

1. Does not apply - not using CMMI.
2. Having both is silly. You can execute the staged model in a continuous way anyway. Just gave us another decision to have to defend
3. It will be helpful if/when we make the transition
4. This confuses things. Fortunately, it has not been a factor in our outsourcing activities but I can see a day when a mismatch between our choice in representation and variation causes difficulty in finding an outsource partner that matches our approach.
5. It is easier to train from the continuous view, but it is easier to implement from the staged view.
6. In the end, one model does not always fit all, but can 20 models be effectively melded? Make it staged with tailorability to business needs, and you won't need other approaches.
7. Generally I believe this to be helpful. I also believe though that 'continuous' has been a bit oversold. The variations offer too much confusion and option for what they are worth. I do not believe there exists many organizations in the world today where IPPD is not relevant eventhough most initially say it is not for them. The same holds true for SS to a lesser degree. It adds confusion overall that can easily be properly applied by the lead person (trained).
8. Our customers have used Staged, so we continued with the Staged. I believe that with the ability to tailor there should only be the one published model and the Org would then tailor out the unused elements - IPPD or SS. (actually don't comprehend the elimination of SE - how does SW get requirements and sell off the final product???
9. Provides us with flexibility on implementation, assessments, etc.
10. Our clients have had differing needs.
11. A continuous model makes sense for us but wouldn't have stopped our application; the CMM-I has been more valuable than the existance any of the other solitary models.
12. When we have to convert we will most likely use a combination of continuous (setting SPI goals, capability level appraisal results) and staged models (maturity level appraisal results). It would be more helpful if the -SW version was streamlined more for software only projects.
13. Only really looked at Staged, the same as SW-CMM and the SW, SE variation so far
14. Only Staged model is useful for XXXXXX.
15. We use the staged representation but our customers use ISO 15504. So mapping/switching is supported by CMMI.
16. Too complicated.
17. Since we are not concerned (yet) about levels, we end up using the Staged Representation in a rather 'continuous' fashion (pick and choose among the PAs as we feel appropriate, however almost always ending up applying the PAs as defined by the Staged maturity levels anyway). I'm ok with the variations (SW,SE,IPPD, SS), however I

personally would get rid of the Continuous representation (it just adds to the confusion, requires SEI time / resources, and gives people something to argue about at the SEPG Conferences)

18. Two representations is confusing. Continuous through Level 3, then Staged at 4/5 is probably going to meet the needs of most organizations whether they know it or not.
19. Not really sure if value-added yet. Will know in about a year. This makes it tougher for government oversight agencies to learn all the different models.
20. We've decided to use the staged model. Having two different options was difficult for us to explain to management.
21. Most companies I have worked with have trouble understanding the differences and need help deciding. The most frequent response I get is that the CMM-I is overly complex. Especially for smaller organizations.
22. This is irrelevant as those who are familiar with the CMMI realise that they are one and the same. The Staged representation merely represents an indicative and suggested path to continuous process improvement. Being aware of the need to align process improvement with business goals and objectives is a lot more helpful than achieving a targeted maturity level.
23. Yes, I think so.
24. CMMI Staged was the choice from the beginning mainly because that was the representation use under CMM.
25. In my opinion, the continuous model does not provide us with any advantages. I believe that the stages representation is the way to go.
26. My opinion today: there must be only one representation and it must be CONTINUOUS. Continuous is a 'super set' of the staged. It is also helpful to get rid off the SW/SE/IPPD/SS ... and call the current version as CMMI v1.1. Since it is very clear and explicit that practices are 'EXPECTED COMPONENTS' .. having just a continuous representation helps because one can rule out a practice if it is not in scope. (NOTE: there has to be a very well defined criteria for what is Not Applicable ... especially for practices below 3.X). So far, we have used professional judgement along with management involvement to rule such cases.
27. This has led to "representation wars". Those people who come from a CMM background are arguing that you can only use the staged represntation and those from a SPICE/SeCMM background ar arguing you can only use a continuous representation - this is self defeating in my opinion, however it tended to dominate the early meetings and still there are undercurrents of disent.
28. We have government clients, they generally only understand/specify staged representations.
29. We would rather have one model, which is being used by everyone.
30. We are following the continuous representation because there are certain PAs where we can make a case for performance at advanced levels (4&5). And it will let us achieve a staged equivalence rating to satisfy the government.
31. Yes, We used our version of the continuous model for the software cmm before the cmmi came out. I am glad to see the idea institutionalized.

32. I really like the idea and will use both, but it's been a huge confusion factor for those on the fringes.
33. This has been a strong hinderance to getting acceptance. 2 representations is confusing since the staged advocates do not realize that the staged model is just a special template of the continuous model. Variations for SW, SE, IPPD, SS has made it difficult to select which model to use. One (variation) should be selected, and instructions for tailoring to eliminate non-relevant portions with Lead Appraisor concurrence added.
34. Only if you understand proper SPI approach. Without it, these options merely confuse people, especially any who are in apprentice period.
35. Our choice was fairly straight forward since we had used CMM before. At the client site, the option did help debate the right approach
36. The continuous approach was easier to swallow !
37. You tend to get into religious wars over which representation is best. I understand that these wars within the CMMI group was what caused the two representations to remain when the dust settled, but it is difficult to convince those who are not trained in the model that it doesn't matter - just use a representation for process improvement. On the other hand, the variations can be helpful in cutting down the process areas and activities that are not applicable to our organization.
38. I agree with this statement in principle. In practice within my organization, I think a decision was made early on to use the staged representation only, and there has been no consideration of possible advantages of using the continuous rep. in some situations.
39. It is obvious that our best choice, the staged SW-SE, is the one closest to what has been best aligned with our business process and objectives (the SW-CMM). The other models are "out of our scope."
40. However, SEI needs to better point out the benefits of each representation (and each variation) in a business context.
41. Staged is our primary interest, but the ability to pursue individual areas via the Continuous is helpful.
42. I would prefer to have one representation. It confuses many people.
43. We pretty much need to focus on one of the models - we have chosen staged.
44. N/A. We are a consulting company that delivers CMMI services.
45. Gives organizations added flexibility.
46. But most of the IPPD material is reduntant and not really "ready for prime time", alowing process area profiles (to as few as one PA) in the staged version would eliminate the need for the continous version, and the SS material is weak.
47. We had been using a (another) continuous model, and finding the similar concepts in CMMI was quite helpful.
48. I believe we will be able to make use of all of the "flavors" (staged, continuous, SW, SE, etc). One area we have just started looking at is the SA-CMM. It is unknown how much of the SA-CMM is actually part of the CMMI, though I will be attending the SA-CMM course in Aug and completed the Staged CMMI course this past January.

49. The corporation has choosen the representation and variation to be used within the corporation. At the higher maturity/capability levels it is unclear if there are differences when selecting between the two model representations.
50. However it has made it more difficult for management to understand its implementation
51. It's like having a cafeteria plan. It encourages agility. Companies cannot follow a "cookie cutter" concept since not all are alike.
52. So far it has been helpful in order to get the SW-CMM and SE-CMM folks to agree to work together because there is a "choice". Organization still focuses on implementing the Staged representation to get the maturity rating.
53. Other than the fact that industry and our DOD customers don't wouldn't understand a CL rating I don't see why staged is still around. Continuous makes so much more sense. The only issue being it is a little harder when it comes to selecting your target profile (you really need to have a good grasp on the model to do this well). But, it just makes so much more sense to customize your PI to your organization instead of the old maturity levels. However, due to customer and industry pressures - we are using equivalent staging to get our ML rating.
54. We have elected as an organization to go CMMI-SE/SW Staged, which projects are implementing in various stages of Level 2 at this time. Several projects are moving to continuous representation in Level 3 in order to better target the areas that give their sponsors the speediest ROI - a VERY nice aspect to this process. Love it.
55. As a consultant it has made life much more difficult, as it requires a whole lot more explanation and answering to the second guessing.
56. We have chosen to use the Continuous representation while incorporating a staged rep as well.
57. It would have been disastrous if there hadn't been the choice.
58. No help to us at all. We would have an easier time with only one model and one representation in terms of training teams.
59. Absolutely, especially with respect to the representations.
60. The continuous representation is the approach we're using for the moment. But, since we can't get a rating based on it, I have no doubt that external and management pressures will force us to move to the staged approach. Not sure what the real impact to the organization's process improvement efforts will be as a result of our decision.
61. We chose the Staged Model and have taken the SW/SE portions of it. But are considering using the Continuous and adding in the IPPD portions. Since we used the CMM previously there has been little problems and it appears that once the Staged Model is used the Continuous can easily be used if needed.
62. It is useful to have two representations; however we have taken the path of 'achieve Level 2 staged' then different sites can choose staged or continuous.
63. The representations have been very helpful although mostorgs are using the staged. The variations for SS and IPPD have caused confusion. They should really just be included rather than optional.
64. Absolutely not! There is now even more differences on what it means to be a particular level with both continuous and staged. The variations are fine.

65. Different departments have opted for different models because of the different processes within the different departments.
66. This has confused many and benefited few to the extent that people have to qualify what it means to be CMMI compliant. The Staged versus Continuous factions remind me of Middle East politics where there is little evidence of compromise.
67. Not there yet.
68. Without a pre-trained upper management, attempting to convey the differences, pro's & con's is nearly impossible
69. We have not tried CMMI yet
70. I have no use for continuous. It just confuses things. Also we plan to use SW and IPPD. No use for SE or SS.
71. Given our need to have a rating, the choice was a given for our organization.
72. However, it has also been improving.
73. No in most times I see that sen. mgt is looking for ratings as level 4 or something like this. I personally like the continous appraoch which is more useful but it is no more so easy to compare with not having easy ratings. You have to be in a mature process environment to use such a continuous approach.
74. But there was a lot of confusion which one of the variations to use ...
75. I am not a believer in the continuous model as a pure implementation format.
76. Providing organizations two representations with tailoring options for SW, SE,IPPD,and SS makes developing a system approach to process improvement easier for large, somewhat diverse, organizations.
77. Overall, I agree. However we have experienced strong differences of opinion within the organization regarding which representation to use and which variation to adopt first. I saw some excellent presentations at SEPG 2003 that apply to resolving this issue.
78. We either select stage or continuous, exclusively. In my opinion, the continuous approach is an interesting intellectual curiosity that only XXXXXX could come up with, being very top down. I don't mean that as a derogatory statement, but XXXXXX are very bottom up and the staged approach is a better fit for that way of thinking.
79. I like the choice of representations, but I think the variations just add unnecessary complexity.
80. This has been helpful to our organization.
81. I strongly agree only because if we had been forced to migrate to the Continuous Representation of the full SW/SE/IPPD/SS, we would be in a world of hurt! We will be adopting the CMMI SW (only) Staged.
82. Again, we are in a knowledge-vacuum regarding effective procurement.
83. In general for my clients is is helpful, though most require some type of rating for customer or industry needs and use the staged representation. Within my organization since we are using general pricipals of the model, picking and choosing is helpful.
84. For me it is helpful, for the rest of the organization it is very confusing (e.g. to understand the complex relationships and GGs)
85. Doesn't apply...we didn't get to that stage.

86. Not involved in previous models
87. Don't know yet
88. We only use the SW staged - we may in the future incorporate the IPPD and SS - but for now, the choice isn't relevant.
89. Even though we have not begun CMMI, I believe that having a choice is very beneficial for organizations.
90. Well... when we had a choice it was helpful. That choice is now lost to us so the question is mute.
91. If one wants a Rating, there is no choice in the representation. That's not right.
92. The choice was interesting at the beginning but after we chose "staged" we didn't continue to review alternatives.
93. Constageous. Am I allowed to say that? Model representations have allowed us to explain to Sr. management in terms they can understand. You must be consistent, however.
94. We are using staged representation and having a choice is useful.
95. There are advantages of flexibility and disadvantages of complexity. I don't have an opinion yet about the net value of how the ML and CL indicators in the CMMI have been packaged. I'm leaning toward a preference for packaging them together in one representation of each model rather than two (staged, continuous) as there are now.
96. For a Level 5, no decision needed
97. We prefer staged.
98. We haven't adopted it yet.
99. We are thinking of possibly following the staged representation in the implementation of the CMMI across our organization, and we are thinking of possibly using the continuous representation when performing our continuous, on-going internal appraisals of projects across the organization. We are modeling our division policy and other PAL documents after the SE/SW variation of CMMI. So, we are able to select whatever representation or variation seems to fit our organizational needs. That was one thing we felt we could not do with CMM.
100. Having a choice and better granularity always helps.
101. One model with one approach would be easier. Let's go continuous and include discipline notes where necessary.
102. Allows us to apply even more discipline
103. The continuous model permits the early demonstration of progress. However, some generic practices add little value and considerable complexity.
104. Although we haven't taken advantage of this yet, we intend to when we add Engr. Services to our Level 3 SE/SW implementation.
105. Right now were using the staged. That was our decision from the beginning.
106. The existence of the two model is very confusing and unnecessary and seems to have originated out of political infighting between stds organizations and ruling bodies. This is quite unfortunate because the model would have had greater acceptance in the outset. A more consistent and concise product should have been published.

107. At this point XXXXXX is not pursuing implementation of CMMI.

108. There is still disagreement on the applicability of the various models.

109. Although, the SEI should investigate model inconsistencies for the continuous representation for higher levle capability practices. For example, in the Engineering process area, higher level capabilities practices are address via the numbering scheme. However, in the Project Management process area, the same concept was handled by creating additional process like IPM and ISM for higher level practices.

110. The choice in variations was particularly important. The staged model helps new projects determine where their priorities should be in commencing process improvement.

111. It seems to add complexity. It may help it fit better but there will be misfits anyway.

112. No doubt it is of help. Improving one processes Vs improving all processes in steps

113. The choice is not binary; we currently use both representations.

114. I'm glad the new book came out 'CMMI Guidelines for Process Integration and Product Improvement' 2003 - the two different representations, staged and continuous, is unnecessary.

115. The ability to tailor our process improvement program using the Continuous representation was helpful.

116. I don't think anyone here has really explored the possibilities offered by the different choices.

117. Has had no impact

118. Yes and no. The two representations were extremely helpful for those of us who are familiar with the model. It confused the others.

119. Not sure at this point.

120. Yes, we feel the Continuous representation provides us flexibility to adopt process improvement according to our priorities

121. It has been most useful for us to be able to focus on selected Process Areas with the intent of improving solely in those areas.

122. Depends on the organisation and the history in process improvement

123. The staged model is a useless appendage carried over from the SPA days.

124. No, adds complexity when working with clients who find too many options that seem so closely related.

125. It gives more flexibility and focus areas.

126. Have not used CMMI yet.

127. Conceptually no problem. Problem is explaining to the non-technical managers.

128. I feel that, when we finally do decide to implement CMMI, this flexibility will be very helpful to us.

129. Being able to use the continuous rep and target areas and levels to fill our gaps, has made it easier to do something meaningful and accomplishable. Our tech support oraganization was not used to having much rigor around managing their support work and projects, so it enabled us to take some baby steps.

130. I have no opinion on this one way or the other. I think it is one more decision that management has to make and they need it explained to them - but I do understand the need for 2 models.

131. If staged and continuous are truely the same model, just different representations it should not matter. It becomes what is your favorite flavor, not a benefit. We have no use for other than SW.

132. but some confusion exists. getting a ML requires staged, but process improvement is better worked via continuous.

133. The variations are allowing us to prioritize our process improvement activities. However, many of our technical personnel have had difficulty in transitioning from the staged rep of the SW-CMM to the continuous rep of the CMMI, which is the preferred rep for our corporation.

134. Yes, more information and application results are needed.

135. One tailorable model would be more cost effective

136. Currently, we have selected the continuous model for implementation. However, I have noticed that when progress is discussed, it seems that we fall back to the staged measurement (maturity level). This may be due to being more familiar with the staged measurement. I think we will need to have an appraisal before this can be determined.

137. Really like the flexibility that continuous provides. However, based on Sr. Mgmt's knowledge of SW-CMM and perceived customer preference for SW-CMM, we are initially implementing CMMI continuous using the "Equivalent Staging" model as our goal profile.

138. Our corporate lead appraisers had accepted SEI's advise about taking courses with the representation less familiar to us (continuous), only to learn that our internal market wants to stay with the representation they are most familiar with (staged). In many cases, this is the result of their customers requiring a maturity level, and not being knowledgeable of equivalent staging.

139. We will stick to the staged repr. for a while. SE is important, IPPD may be considered

140. I think it is very confusing.

141. I agree but I'm not sure what the overall effect has been. We have selected the staged model and have not fully investigated the continuous model.

142. I can't quite say that there is any benefit to using the continuous representation based on the poor set of advanced practices.

143. I would say this has not been the case, since most projects are not interested in going to the trouble of implementing a partial implementation for one or two PAs.

144. We have onlyused the Staged model so I have no comparison to the COntinuous model.

145. We work mostly with Level 1's, who need the guidance of the staged representation.

146. Someday

147. Source of confusion...

148. Continuous has provided more options in attaining process improvement goals

149. Big time. We do Systems, Software, Hardware (electronics and mechanical), and we have a way to focus our improvements in areas of best return (continuous).

150. It is so complex.
151. Don't have enough information to form an opinion, but I like the concept.
152. We prefer Staged, but wish we had the choice of SW only.
153. We use staged and the SE-SW variant at this poing but will probably add IPPD and SS later.
154. We selected the Staged SW/SE model without much evaluation of the other representations.
155. No idea. We haven't chosen a representation yet and may not for a while as we focus on process improvement rather than model compliance.
156. The continuous representation adds more confusion that it is worth. It adds nothing. By having it, there are now 8 models rather than 4. Also, if the goal is integration, why is there a SW only model?
157. Have not used continuous.
158. We probably would not have implemented if the Continuous representation was not included.
159. It does not matter, a model is just a model. It is important on how to implement them and get the benefits
160. Overkill
161. CMMI is not a 'one size fits all" solution.
162. Not sure if the term is helpful.
163. A little difficult to pick the appropriate one, but nothing stressful.
164. Staged is the only one that seems to make sense in our culture
165. For us, this has made it more of a pain to consider. We are just making real inroads with people throughout the XXXXXX and now we are faced with having to present another view (CMMI) plus we have to pick a representation. For our situation, the continuous makes more sense on the surface, but we are dealing with mathematicians who are comfortable with the levels of the staged representation. This is another example of having too many choices - each selection has its good points and its bad points. You can't win... or lose.
166. We focused on the staged model for CMMI immediately due to the fact that we were familiar with the staged model from our use with the SW CMM.
167. Has caused confusion about what is the norm in our industry
168. No help at all so far, but may be in some future case
169. Continuous is a significant advantage for all organizations. However, there is some misinformation being spread by some people about the continuous representation that should be addressed.
170. Jury still out on this. This "flexibility" confuses the "hurried". And requires extra effort to explain and educate.
171. From an assessment viewpoint, it's hard to mix staged and continuous evaluation results.
172. It has helped us map to our dynamic business environment

173. As a Center we have selected a specific variation that we feel will have the most ROI for our end-users, but the choice between two representations has been of considerable benefit. We're finding that most projects prefer to implement the staged representation in Level 2, as they consider that to implement the basics of a good management infrastructure. An emerging trend then shows them to be switching to continuous representation in Level 3, where they can focus on those elements that would provide the most immediate ROI and benefit to the end-users and sponsors.

174. We prefer the continuous model with flexibility on which processes are key.

175. Any successful software organization needs all- SW/SE/IPPD/SS.For hardware and other manufacturing organizations the model does not contain enough information for interpretation .

176. Having 2 approaches helps, I do not think that the 2 representations were necessary or have helped (causes religious wars as opposed to getting on with PI).

177. I think the two represenations are the most useful. I also think there should be only one intro class, and it should cover both represenations. The staged represenation is only one of many target profiles.

178. We have pretty much gone with the Staged right off the bat as it is easier for folks to grasp and relate to. An organization starting at Level 1 with the CMMI might find more interest in the continuous representation.

179. We chose to use the SW-CMM Staged representation. Adopting a Continuous representation for CMMI provides us with a focus for improving the areas of our organization that show specific weaknesses. We no longer have to move the entire organization up a notch, but can address those areas within Process Management, Project Management, Support and Engineering where we fall short of our level goals. However, organizations new to process improvement models should begin as we did - with a staged representation. Until they develop a strong organizational commitment, the continuous representation might cause more internal departmental haggling.

180. Most organizations that I am consulting have SW CMM experience and hence automatically have picked the staged representation. Generally IPPD and SS requirements have not been observed. Redefining SSM of SW-CMM into SAM has made organizations accepting it as an applicable PA (rather than discarding it).

181. Staged seems more straight forward in measuring the capability.

182. Continuous is better for Government because they don't need that "level rating" like industry does. They just need process improvement.

183. It is very nice to consider both approaches. We chose the staged one as a methos of controlling organizational chaos and managerial ignorance of what exactly needs to be invested in any standardization effort. Top management still thinks it's a simple tool install and they're done ... not a change in culture. And we're 10 years into this thing!

184. Our legacy is staged, due to SW-CMM, and staged models and maturity levels are culturally the best way for us to communicate with management; this would be difficult but not impossible to change. However, personally I have come to appreciate (and maybe prefer) the continuous representation and use it on occasion to illustrate and reinforce CMMI process improvement concepts.

185. We could have multiple choices.

186. Staged rep. can be an appendix to show a sample profiles during improvement load map.

187. Being able to use the contiuous SE/SW model, we want to stay compatible to the pending ISO/IEC 15504.

188. More so in future; currently generally using SW and staged to minimise tranistion issues for the local organisations and the flexibility of approach lets us do this. Some organisations such as defence are now benefiting from integrated SE & SW approach. Expect that the flexibility will be used more and to greater effect as we gain more experience and broaden sponsorship and commitment in broader scope of enterprise.

189. Since we are not going for an appraisal the coninous seems the appropriate approach.

190. N/A

191. As noted above, Yes re the disciplines. The staged vs. continuous seems to be a religious war that is not helpful. While we haven't made a final decision, I expect us to use staged for four primary reasons -- we need to improve process maturity across the board, I think it will be easier for our Engineers to understand, it appears it will be easier for the organization to feel a sense of accomplishment by achieving each stage, and I expect it to be easier for our (mostly commercial) customers to understand.

192. Software had been using the CMM staged representation so staged vs continuous was not an issue. In general non software people appear to prefer the continuous representation. I have a preference for the Staged presentation based on my experience with philosophy of the CMM.

193. Again, we haven't "done" it yet, but knowing there are options makes entertaining CMMI more palatable, even if more complex and in some ways confusing to people and organizations.

194. The CMMI should have only one representation. The appraisal method should determine how it is appraised, not the model.

195. We have not really used the two model representations yet.

196. Not an issue for us thus far

197. We have used the staged model since we need to obtain a maturity rating. We selected the variations which more closely matched our environment.

198. It's a needless complication. People tend to argue religously over this which model is best. No value added.

199. Continuous maps to our needs: process & project management & engineering

200. Having a choice between the two representations is good, especially for those of us who have a good understanding of multiple predecessor models; however, it is overwhelming to those individuals who are not as well educated in one or more predecessor models Also, a 400 some page book is much easier to "swallow" than a 600 some page book.

201. We did not use the staged version or the variations.

202. Yes -- like to implement by continuous, can still roll up to goals, and get capability levels. Helps since other disciplines are trailing software.

203. Continuous representation appeals to me as a process professional, but has been useless from a marketing perspective. All it does is confuse people for a very small amount of variation. The model variations could have been as easily handled via annotations within one published model. In fact, we routinely pass out the combined model (SE/SW/IPPD/SS) and just guide people on its use.

204. I think the existence of the two model representations and the various disciplines only confuse people. There should be just one representation (I'd prefer continuous) and no discipline designation (although the discipline elaborations are beneficial).

205. The 2 representations add confusion among non-experts. The staged representation could easily be used in a continuous fashion with the proper guidance to experts.

206. This has been most confusing (and debated, and debated ....) I personally think there should be only 1 representation (Staged), and any variations should be kept to a minimum.

207. Select one architecture (continuous)!

208. No great experience here, but I can see the usefulness of both

209. Not applicable to this project

210. There is no difference between SW and SE. Staged vs continuous has confused industry and our customers. The IPPD variation is worthless.

211. We haven't used CMMI enough in my current org to have a strong opinion on this question. I know from its use in other orgs that having multiple variations and 2 models seems confusing for a while in the beginning, but actually are very helpful in practice.

212. If we were starting out all over again, when we were at CMM level 1, I think it would have been very much easier to effect the needed cultural changes if we had the continuous model. We might have been able to stay with the CMMI.

213. We prefer the continuous model, and are currently interesetd in just being rated against the SW & SE variations. This let's our business needs drive our implementation - which is as it should be.

214. For multidisciplinary organization the two model representations makes process improvement activities easier.

215. XXXXXX only support the staged model.

216. This has only added confusion (particularly in getting / maintaining Sr. Mgt support) ... the choices become a game on how to "llok good" ... perhaps with CMM ML3+ orgs this is less of an issue.

217. Two representation has not been helpful. Why do I need to continually address two representations when my customer only asks for results from one of them? IPPD is a nice concept, but there are aspects that we as a site do not control and never will control, hence IPPD probably will never be implemented, or at least never appraised.

218. We chose to adopt the staged representation because as an organization, we want to be certified at Level 2 during our next appraisal which is coming soon.

219. The continuous model would still have been used even if staged were only available to us.

220. This will be essential, but it also has made adoption of the model much more controversial (and complex) due to the obvious dificulties in mapping processes from "other" parts of the company to the CMMI model ("other" meaning parts not touched in our SW-CMM implementation)

221. It is not so important for us.

222. Would prefer to use continuous representation, but US OSD position makes that unrealistic.

223. Even when using the SW-CMM, we chose the Key Process Areas that would be most benefitual to meeting the business goals of the organizations. (i.e. we usually worked on Peer Reviews first because it gave us a quick return on investment.

224. Agree - Although the high cost of training is hampering our efforts in making the best choices between and use of those options.

225. Corporate made a decision to implement, so we did not really have a choice.

226. Have not investigated

227. It helps to select the most appropriate fit.

228. WWe have not done it in this organization, but in past organizations, we had little guidance on which representation to select or what variations to apply. The model's discussion of representations does delve deeply enough into the pro and cons of each for different types of orgs.. nor did we know if DoD would understand the difference between a maturity level and capability level.

229. While the Continuous formulation/methodology sounds nice, the real world business case is that to achieve a RECOGNIZED maturity level one really has to satisfy the Staged Representation Maturity across applicable process areas. i.e. DoD talks of CMM ML3 or equivalent. While an organizaiton may be fully committed to process improvement, the allocation of resources, therefore rate of improvement, is tied to the benefit in business terms. Even given quality/schedule/efficiency improvements, the dedication of resources is driven by the perceived value of the "Level X" shingle.

230. Actually the variants are helpful. Haven't come across representation being helpful. Would apprecaite more experience sharing of conntinuous model adoption.

231. It has caused confusion.

232. We prefer the continuious model. Having the staged model creates confusion in our customer and executive managemetn community.

233. This has not really been an issue for us; we have been examining mainly the staged version.

234. Though we have adopted stages representation for various operational reasons, we could use some of the concepts of Continuous representation has helped us to set some short term process improvement goals.

235. In practice we have typicall staged representations. For SEPG-work ist is very helpful to have a continious view, too. Use is to have a understanding how e.g. project management is going more mature across the more mature organizations.

236. Two representations is helpful. Variations sometimes caused confusion and debating.

237. There should be a single model - staged or continuous. I prefer staged, but either one would be better than the complications presented by two. I'm not certain that following all of the the IPPD aspects of the model necessarily improves the overall process.

238. We use both representations and have not made a firm choice. We find both to be useful.

239. yes

240. Not really, stick to the staged version

241. did not make any difference

242. Agree somewhat. It is convenient to have it available, but sometimes gets in the way after the decision is made regarding representations and variations.

243. Should provide more flexibility.

244. The improvement activities in our organization are a mix between the staged and continuous representation. Similarly, we use the SE, SW, and IPPD variations of the model

245. Didn't hurt, except added layers of complexity

246. CMMI not implemented yet.

247. It is rather unfortunate that this survey is structured exclusively on the Staged Representation! Can I draw an implication about the relative support within the team for the two representations?

248. Not really an issue either way. We're going staged because that makes sense for organizations of our type at XXXXXX (XXXXXX centers).

249. Being free to selct either one of the two versions (staged and continuous) is very well received. The other choice is less relevant.

250. Pick one - continuous would be our choice, but there needs to be a transition approach/method for moving from a staged model like the CMM. Staged Equvelince is a step in the right direction (but confusing to a lot of people).

251. Having the representations is valuable. Some have had the ability to understand them, and some have even taken advantage of both. Others still do not.

12 Global Issues Question 5 comments – Does your organization need ROI or othe quantitative evidence to help make the business case for adopting CMMI?

1. GIGO
2. Customer (XXXXXX) demand is our fundamental driver, not ROI. However, the customer (XXXXXX) is only demanding SW-CMM. ROI may well help sell CMMI internally.
3. Sure wish there were good evidence of cost savings for system engineering.
4. That's the bottom line: cost.
5. But the ROI needs to be about CMMI. Reusing SW-CMM ROI data and extrapulating it to CMMI is not a reasonable approach. Show a comparison between SW-CMM ROI data and CMMI ROI data. That would help us in considering a switch.
6. We are commited from the business end, but we are still getting resistance from the practitioner level. Some still fail to see value.
7. We do business with the DoD and they claim "no ticky, no washy". It's a do or else prospect. Given the now known cost of the assessment, it would have been a "no-way" proposition.
8. We don't have good metrics on what it cost us to do business before we started improving the process.
9. The published ROI data for the SW-CMM is many years old in most cases. Convincing management to switch from a model they are comfortable with will probably include having ROI data to show the benefits of CMMI over SW-CMM alone.
10. it is still difficult to get from most of the BUs. Some already have figures to quantify the benefit of PI.
11. Using Six Sigma as a business strategy; need data to justify projects.
12. Absence of ROI evidence is in many cases a barrier when discussing the CMMI with internal organizations.
13. We know we are getting value out of it and we are doing some measures to prove it. If there were other measures, it would help, but it won't drive us to do anything differently.
14. We have already collected, analyzed and reported CMMI ROI using CMM metrics, past experience with CMM and predictive models.
15. Were budget driven by DOD. I think if I can get things in place at the location where I am located and I can show how CMM for Service Organization has a ROI for Customer Service, then our XXXXXX may lean towards a CMMI approach for internal processes. The biggest issue now is "Customer Expectations-Outcome (ROI) and how does the CMMI Support this Improvement?"
16. We are forging ahead, but ROI information (other than for SW) would be helpful.
17. As a member of the EPG Corporate, we are in the process right now of building a case to our senior managers and board members on how we will be collecting the ROI information over the next several years. We are in the piloting phase of implentation on our program.

18. Frankly, the increased costs are due to the required training and paying for consultants/assessors in order to complete the assessment. Since we are a goverment contractor, if the government requires we be assessed at a certain CMMI levels, then we must do so whatever the cost.
19. Beautiful question! I'd like to know how many respond that it's not a real issue.
20. However I think CMMI is only a framework, and such framework can never promise any concrete return.
21. It was a factor used.
22. We have some data, but data coming from some other companies would be helpful
23. The answer is actually Yes and No. It is difficult to qualify what RoI is? It opens many questions: if one says ROI is 8 to 1, then does it apply to a Level 1 organization, or a Level 2 or at what level? I would be very interested to see an 8 to 1 ROI for a level 2 to level 3 transition! In my opinion the ROI is far less upto a level 3. One spends a lot of time, money and energy in streamlining and defining the process infrastructure, procuring the right tools, imparting the right training and also spend a lot on simple coordination activities. All of these expenses in the true sense of the term RoI would give a very low value for it ... may be even negative RoI ... then does that mean that since we spent more than what we really got till be reached level 3, process improvement can be trashed simply on this number of RoI. Definitely NOT! ROI makes sense only after the level 3 is established.
24. All the ROI available at the moment is based on CMM, and therefore software. This is useful but when presenting the information you get asked about the source - once you admit it is only software then the credibility of the case you present starts to drop
25. Senior managers would like to be reassured that other organisations hve benefited from CMMI adoption. The old SW CMM figures are not very impressive any more and are out of date. There is a real gap here
26. We currently use such ROI for our decisions.
27. We are pursuing CMMI only because our clients have indicated (in no uncertain terms) that it would be in our best interests. Our efforts are geared to achieving the rating and the benefits of process improvement with the least expenditure.
28. All of our clients need roi.
29. YES, YES, YES.
30. Adapting CMMI costs tremendous amount money. Any method to measure cost effective analysis will be a key aspect for continuing secure sponsorship from upper management.
31. We have tried to pull some ROI data together but it never seems to be enough or complete or representative of our situation.
32. True for the client organization.
33. We have a business case developed, but most execs see only a long term payback. I believe that there are also many short-term gains especially in reducing the error-rate. It would be very useful to have an ROI model based on the collective experience of entities which have achieved a rating.

34. As mentioned above, it is not clear to senior management whether we should commit the resources to transition to CMMI. I do not know if ROI would convince them, but it could not hurt.
35. ...and for our environment, which doesn't include software or systems development.
36. Yes, In the current business environment, efforts such as this which require many months (years) and large resource commitment to realize cannot be embarked upon based simply on faith that all our problems will be solved. Management needs evidence of ROI and reasonable expectations for when it will be realized.
37. We have not performed this yet since a corporate decision has been made to not pursue a CMMI assessment at this time but this will become a necessity when appropriate.
38. We have established an extremely accurate and useful metrics program helping us determine ROI.
39. Would help a lot in "selling" to the organization
40. At an indeterminate future time when we seriously consider CMMI as the next step from SW-CMM Level 3, I'm sure quantitative support will be helpful.
41. Answer regards my customers
42. Our software process efforts have really helped our performance. Management has encouraged us to expand those efforts to systems, program management and hardware. The CMMI was accepted as a natural way to do this.
43. N/A. We are a consulting company that delivers CMMI services.
44. We had been using similar models for years and we have now continuously updated cost-benefit analysis for using such models.
45. ROI info makes it easier getting buy=in from our mid-level managers. As a XXXXXX, profit is not our goal.
46. I have not been involved nor am aware of a business case at my organization for adopting the CMMI.
47. We know we will have to transition (because of sunsetting of sw cmm). Levels are important to our customers. However, having ROI is always a better pushing agent to get it done faster and proving its worth internally.
48. We always need to go out to SEI to get the current ROI to continue validate it's value.
49. Our management knows it's a good idea and they are behind it however, it is always nice to have ROI data to back it up. Also, extremely valuable when trying to sell CMMI services.
50. We are a Level Five CMMI Organization that uses quantative measures.
51. Hard data never hurts when discussing issues with upper management, though our Captain and business board have already mapped the future path forward, which is CMMI.
52. Adopting CMMI is a future endeavor.
53. When presented with ROI figures and experiences of other companies that have adopted the CMM or CMMI (gathered from SEPG conferences and other networking sources) the response I recieved from my management was (and I quote) "Prove it." They don't believe in it.

54. Our management feels that the benefits from achieving Level 5 on the SW-CMM have been two-fold: improved products and insight, and improved ability to take on new workload. They're sold on it.

55. There's a good supply of ROI info for SW CMM. We are now operating on the assumption that there will be similar evidence for CMMI. This assumption is challenged frequently and will not stand alone indefinitely.

56. The return on investment in the case of XXXXXX needs to be extrapolated to terms of mission success, rather than the traditional monetary or time measures. If XXXXXX sees that PI yields more successful missions directly through saving quality, time, and cost, then it will will get big management support.

57. I highly doubt a meaningful ROI could be estimated. Besides, ROIs are not all they're cracked up to be. Like most stats, ROIs can be madxe to say nearly anything you want.

58. Our organization has built its reputation on defined and repeatable processes. We're expected to build in process innovations to each product we produce.

59. Our organization has a mandate that all organizations will be SW CMMI Level 5 and SE CMMI Level 3 by the end of the year. The CMMI initiative has grouped supporting process improvement into the CMMI initiative. We have Level 4/5 Launch workshops where we cover Six Sigma methods to ensure that projects will be prepared for CMMI Level 4/5 Appraisals.

60. To date ROI information has been poor and anecdotal in style. While ROI is not critical for our organisation, (we simply do process improvement to improve our processes, not for the 'badge')it does help in discussions with snr managment and some customers.

61. We are figuring by SEI dropping CMM we will be forced to move to CMMI by our XXXXXX customers. We do not see any real advantage to CMMI over CMM. But SEI has forced us to move.

62. Even though achieving CMMI maturity is a corporate mandate for competive reasons, the other levels of management and practitioners are definitely not seeing the business case.

63. Lack of data makes it a hard sell.

64. In the current economical situation nothing is excepted if you cannot prove a pay off. Unfortunately it is not seen that you have to have an invest before you can come to savings and that this is not done within a few weeks.

65. The government doesn't want to do anything unless it sees a high ROI.

66. Needed but I have found it extremely difficult to quantify. SEI could provide assistance in this area. (example: What is the value of transitioning from CMM to CMMI in $ terms.

67. Latest real ROI info is from Herbsleb et al in 1994-1995. Organizations considering adoption would benefit from more current ROI information.

68. Since the decision has not yet been made, and the senior manager responsible for the decision is against CMMI, it is essential.

69. Currently, our customers' requirements for CMM/CMMI to bid on jobs makes the business case for my senior management. Without those requirements, we would not be adopting any model unless I can present a convincing ROI case.

70. It helps but it is not absolutely essential. The marketing aspect of being able to say that one is at level 3, 4 or 5 also carries some weight.
71. Cost / benefit drives most all decisions that are made by my company.
72. The XXXXXX (XXXXXX and XXXXXX) has no real issue with ROI as they haver seen the savings.
73. We are not even able to consider whether or not we will see ROI. since the SEI is sunsetting the SW-CMM, we have no choice about moving to CMMI (we presume, of course, that all of our clients who require CMM will now require CMMI). As you can probably tell from several of my comments, even though I really am a proponent of PI, and I love the CMM as an improvement model- we do feel we are being *forced* to migrate to CMMI whether it is an improvement for our specific business model or not (which, I think understandably, causes some resentment).
74. It would help to have, but communication/propensity to adapt, are the real issues.
75. ROI needed ESPECIALLY as it relates to showing how CMMI provides incremental improvements above and beyond CMM-SW.
76. Due to the support of Senior Management, the current Business Case is a "leap of faith", however performance measures are seen as the backbone to the improvement programme and are to built in as the programme develops
77. However, it's been done. This is not an issue when you consider the improved quality and productivity gains that come with a level 5 organization.
78. No, we've been throughly "stage-afied" We're going to do every PA just as it is recommended (through the guidance, and the second agendas) whether it fits our business case or not. No ROI required! Damn the torpedoes.....
79. Needed for many reasons.
80. We integrate Six Sigma projects into our CMMI activities to aid in ROI. This enables us to develop a quantitative understanding of the current state before a change is implemented. We are then able to quantify the change in terms of cost avoidance and cost savings.
81. We have graet difficulties with the ROI as we do not have the measurement in place to support the activity
82. I am personnally not sure but intuitively believe it would be useful.
83. and mosrt cannot see it. Real problem for starting with CMMI is that RM changes and M & A make it significantly harder to reach L2, thus longer, thus less appealing to the Sr Exec with 1 1/2 to 2 years to "be successful" The CMMI is not constructed to be easy to "sell"
84. We didn't define it yet.
85. We have a good business case for adopting CMMI by virtue of our track record from the use of CMM in the past. The fact that we have acquired MANY new customers based on our reputation of being a CMM Level 5 organization forms our quantitative evidence.
86. It will be great if the success stories of return on investments are widely shared
87. It would help the senior management to take the decision.
88. Current industry data is always powerful to provide to skeptical customers

89. We have begun a process improvement initiative based on the CMMI. Nonetheless, additional hard data on costs and benefits will prove useful to sustain management support.
90. XXXXXX developed an initial ROI approach that XXXXXX briefed to the NDIA CMMI conference. ROI must be extended beyond productivity and error avoidance (ie production) to full business life cycle issues.
91. We know the organization will benefit and our management is not concerned with quantifying the benefit.
92. This is needed to convince the purse string holders up top.
93. Quantitative evidence has been presented in the past but still has not persuaded management to go forward with implementation.
94. Senior management always wants to see if processes assist us or impede us in achieving our business goals.
95. We have a business case model showing ROI, but the fidelity is somewhat questionable.
96. I have trouble convincing senior management of the benefits they will receive in implementing CMMI. This results in a lack of support from them.
97. Everyone asks for it but even when we have numbers those who ask are not particularly convinced. Industry ROI information is good to have but success of the model will hinge on more personal and immediate issues.
98. This is the first question that all managers ask.
99. Yes, whatever you have please let me know, especially as it may relate to Acquistion and government organizations.
100. It would have been helpful since the model was new and it was difficult to find success stories as examples, but our CIO already endorsed the SW-CMM for the application areas so we didn't encounter resistance.
101. We are an Air Force organization, so we are basically directed to implement CMMI by higher DoD authority.
102. If the government didn't require it, or at least suggest/prefer organizations to be a certain CMM/CMMI level rating we would have nothing to do with the SEI. We've seen no real positive ROI except it allows us to bid on certain projects. It has provided little real business value to this or any of the dozen organizations I've seen implement it. I've seen very little hard data (besides some very general ROI "sales presentations") that show a significant ROI from SEI CMM/CMMI.
103. As the lead agent for CMMI and the only member in the company to have been involved in trying to get this implemented, this would help my case significantly.
104. Our organization realizes that CMMI is the proper model to guide our process improvement activities. As I stated above, it is very applicable to the embedded, real-time systems products that we develop. In addition, XXXXXX has established a working relationship with Carnegie Mellon so this further enhances our appeal to the SEI and CMMI.
105. Yes, particularly when explaining to potential clients the benefits of implementing CMMI vs staying the course with CMM.
106. a Metric.

107. Our management requires ROI for all business decisions in IT. We must constantly keep the "bottom line" in view, even to the point of being understaffed and "burned out" because the budget is so lean.
108. Not an issue at this time because our focus is still on CMM.
109. Quantitative backing is always a good thing when trying to adopt new approaches - it definitely helps with the buy-in and reassurance of the decision as time goes by.
110. Again, providing it at this time may be too late.
111. Our business case for CMMI is based on business development and proposals.
112. We have a business case -- our major customers expect it -- but additional data would help with other customers and with some personnel within our organization.
113. We have built a business case but must be able to show ROI and cost savings to the government.
114. Our customers sometimes require CMMI, independent of ROI evidence
115. Based on SW-CMM ROI.
116. It would be good to have this information to present to management. Or a method for measuring this.
117. This is a question that many of our clients enquire about. It would help to have published and validated data on ROI available.
118. As a consultant, I am frequently asked for that type of info. A lot is now availbale on SW-CMM. We look forward to ahev more on CMMI to recommend to our customers
119. Words on ROI achieved at other organizations is helpful, but we have found it difficult to point to any positive ROI in this organization yer. Still very early in adoption, but still perceived as extra cost to implement compliant processes on most programs.
120. we've got information from some business units. It's a start, but it means that we need more internal ROI information, not so much from other companies.
121. "ROI" is almost meaningless, because the term has lost its "rigor". I prefer to use the term as one identified with engineering economy. So, I qualify my answer to one conditioned upon some acceptable definition of "ROI" incorporating sufficent rigor in terms of quantitative analysis.
122. We have been looking at our problem areas and then defining our process changes within the CMMI kpas. We show our improvement with quick win pilots, which provide the approval for a more general roll out.
123. We're compelled do get a "level" to do business with the governement. It's a business entrant regardless of cost.
124. As with any commercial organization, management requires evidence of return on investment before they will fully commit
125. We can show a pretty good business case based on our experience with the SW CMM.
126. We do not have a DoD software customer mandating CMMI.
127. Much of the ROI data seems anicdotal and based on CMM experiences.
128. Being primarily a XXXXXX makes this a non-issue.
129. To help convince clients on the benefits of CMMI.

130. See above comments on XXXXXX.

131. I think the information would be very helpful in view of the increased detail in the new model. The apparent additional processes and the increased cost of training and assessments will make alot of managers think twice before committing to adopt the CMMI.

132. WE have business cases but don't know if this wil help presently.

133. We've decided that you can't get an accurate measure of ROI, so it?s not an issue for us. "It is easy to know how many seeds there are in an apple, but impossible to know how many apples there are in a seed."

134. As noted earlier, the cost of implementing CMMI is substantial and is always a consideration for continued management support. While the implementation has senior management support at this point, it is too early to have much metric data accumulated to indicate ROI, and some outside examples of data would be useful.

135. We have data for software CMM, but it always helps to back it up with data related to the CMMI.

136. Our senior management understands the real problems we face and has embraced our recommendation to base future process improvement efforts on the CMMI. However, we are focusing our process improvement on ROI to ensure that we focus on those elements of our work that will yield the biggest benefit to the overall organization--ROI--AND the best possible service to our user community (in terms of reducing schedule, lower costs, and higher quality products).

137. Always need this type of information to present to skeptics.

138. We are collecting data and transition to the new model

139. It's not the model that counts.

140. We knew it was the way to go before the model appeared.

141. It always helps to sell things around here if we can show a real money reason to do it.

142. We are expecting to have a CMMI Level 3 requirement in upcoming requests for proposals from our customer. Although one may not win a proposal solely by being CMMI level 3

143. Getting management to divert people from their work to focus on process improvement is a hard sell. Added to the fact that much of the management in my organization (military) turns over every 3-4 years means it's hard to keep a focused process improvement initiative or the attention in place.

144. My organizations top management has already made the committment to improve internal processes to conform to CMMI-SE/SW/IPPD/SS, v1.1. (Hopefully you won't ask me what all those letters mean....)

145. The decision has already been made for adoption, but quantifiable data to justify the course set over time is ALWAYS a good thing. Of real interest would be to compare the ROI between various types of organizations. For example, does industry see greater ROI than government facilities? Do development groups see greater ROI than maintenance groups?

146. as noted above...very important to get senior level commitment and to motivate the orgs.

147. This would be very essential to tell our clients.

148. Specifically for adopting CMMI - no. But ROI evidence is essential for justifying investment in process improvement.

149. Rule No. 1: No investment that doesn't pay!; You MUST measure states before and after and clearly define the profit within the organization! And this does NOT mean selling the Label "CMMI Level 2 (3,4,5) Certified"! Any other strategy ("me 2") is DELUTING the market value of CMMI (as happened in India with CMM) "We bring you to CMM Level 5 in 9 Months"...sigh....

150. The trouble with presenting numbers to a management team.....

151. We already established our business cases and we are trying to find a way to measure them and establish a ROI to keep going with our SW-CMM SPI program.

152. CMMI could not be sold internally without it, but I don't think we are ready yet.

153. We have already realized the financial advantages of achieving a process improvement maturity level. Selling the idea of continuing our efforts has not been difficult.

154. It is useful to sell process improvement as a concept. ROI for use of automation in SDLC and management will help shake up the mindset of many organizations that are willing to spend on automation.

155. Other divisions within XXXXXX have adopted the CMMI but the commercial divisions, e.g., Carrier use the model for guidance only. THere are no plans to be asessed at this time.

156. When implementing in Government programs, ROI is not the same because there is no such thing as profit. You have to answer the questions "Why should we do this?" It looks like nothing more than extra work, and saying "trust me - things will be better after you do this" is a hard sell.

157. The only things they believe in here are ROI figures and the Gartner Group.

158. Our commitment is already made at the senior management level, however ROI data would be useful to maintain commitment and sponsorship for continued investments.

159. Other companies' progress is important as well.

160. This would help making a point in discussions with higher level management.

161. Did not need it for some of the organisations, others did. Enterprise is now seeking RIO info to demonstrate value of efforts todate, and to influence continued sponsorship.

162. We made a business case for CMMI.

163. We are having difficulties getting intermediate management to implement any process control. Quantitative evidence might help.

164. It would be a much easier 'sell' to senior management, if we had ROI information.

165. The business market for CMMI SPI services expands.

166. We built our business case from SW-CMM data. It was a stretch to make it apply to CMMI.

167. But more that ROI, we need the "buzz"

168. The ROI would have to show benefit of CMMI as an addition to the entrenched Six-Sigma.

169. Currently creaating business case.

170. we must provide evidence that implementing CMMI is benefitial to the organization, that is, the cost for adaoption is less than, or much less, the cost for not adopting CMMI.

171. As a DoD contractor, we feel this is an element of being marketable.

172. CMMI is a large investment for any organization, including those that have already successfully adopted the SW-CMM. ROI is a critical factor.

173. Helps convince the bean counters.

174. This is a tough question. Employing the best engineering practices and processes is intuitively smart, and we are confident will result in a good ROI. Having the CMM data to quote helped.

175. ROI data is already readily available from many sources on the web and within our company.

176. ROI is extremely helpful and should be addressed, even if the numbers shown were best estimates vs actuals.

177. See response ot question 1

178. Most of organizations still are asking for this information on all new technology.

179. As primarily a DoD contractor, we are seeing more and more customer/contract offices requiring CMM/CMMI Maturity Level achievement for RFP submission and contract performance. From this persective, we understand that this is the nature of our market. While ROI would be helpful, it is not currently seen as truly necessary.

180. Not applicable to this project

181. We don't believe a proper ROI case can be made due to all the unknowns, nor would it be useful in achieving buy-in (see "The Shangri-la of ROI").

182. As always, the mgmt wants proof from their own org, but lack existing data to compare to.

183. The topic of ROI and making a business case for using the CMMI is one that comes up quite often, even though we have a long history of using CMMs and have already been using the CMMI for nearly 3 years.

184. To convince top management, ROI is strongly necessary.

185. Yes, it would help, but it also isn't crucial. If asked, "is managing requirements important or not?", we don't necessarily also need how much return we will get if we do ...

186. It would be nice to have, but we have been moving forward without it. We ahve a pretty strong business case without the data.

187. ROI is critical to justify the cost and effort expended on CMMI and its related process improvement efforts. It is a good metric for solicitng continuous managemnet support.

188. The greater issue is the applicability or linkage to business results in a commercial development world of all the PAs

189. Our senior executive is committed to process improvement but having ROI data helps persuade his boss and the internal partners that we need to do things right.

190. The ONLY reason to adopt any improvement approach is to achieve a positive ROI. That's what improvement means.

191. This is currently the #1 issue - is there really a good business case for our industry and our company, in particular. Our customer base does not care (or even realize what the differences between SW-CMM and CMMI are). At SEPG conferences, I have seen studies that actually show a near zero ROI for adopting CMMI (if an organization has already adopted SW-CMM and SE-CMM) - the Execs know about these studies

192. The top management has been turning a blind eye to ROI until now. However, after level 3 achievement will be required.

193. Because of XXXXXX position on "getting a [staged] number" as criteria for new contracts, we are getting lots of upper management "support" focused on "getting the number." But it would make more sense internally and at middle management levels to have ROI data and generic attributes, by process area (or better yet, by goal or by practice). One other roadblock is that certain parts of our organization believe that the current CMMI drives cost too high rather than saving cost. Having the quantitative evidence, or guidance to develop quantitative evidence for each organization, would be very helpful.

194. With the current business environment, ALL projects that are currently being under taken by the organization is based on ROI.

195. The business case does not support adoption of CMMI in our situation.

196. Although the business case is relatively easy to make, it always helps to have ROI information available for reinforcement.

197. Have not investigated

198. ROI justification is always a higher level management request !!!

199. XXXXXX has ROI data which has aided its effort to move towards the model as a corporation.

200. We have decided to adopt CMMI based on qualitative gains. If ROI data and a standard mechanism to determine ROI is available, it would help to benchmark our efforts.

201. I think they are delaying the transition too late.

202. As I mentioned in my answer to the 4th question within section 4 above, our customers are extremely concerned about the costs associated with CMMI and are distrustful of statements made about future SAVINGS!!! Industry ROI data could prove useful in defending the CMMI effort.

203. I don't know.

204. I have not seen a positive ROI in our organization. I have not seen a good model for collecting and analyzing inforaiton to calculate an ROI.

205. Always helpful to have.

206. This one area where we may need some help. We have been measuring the ROI on our SPI using CMM model through our metrics program. While we are currently in the process of arriving at our ROI by adopting CMMI, would appreciate any assistance/ideas in differentiating model specific ROI (ROI using CMM & ROI using CMMI)

207. Necessary to continue the avctivities.

208. We are a non-profit organization. More than 60% fundings are from government.

209. It's the up-front cost of resources that seems to inhibit management from jumping into CMMI.

210. Almost all of the ROI data is based upon software and does not have high credibility in other engineering domains.

211. In most cases, late starts know the benefit in attaining any level first.

212. It is best to have the numbers, but you can still receive the benefits just by using the CMMI. You also usually receive some anecdotal evidence.

213. This is a huge selling point for any best practice model.

214. At this point we are developing a method to measure the economic benefits of implementing a continuous process improvement using CMMI. We feel that this will be soon a requirement in our company. Similarly, we need to make sure that we are able to justify the work of our EPG group to the organization and show benefits.

215. ROI appears to be hard to measure; not much data yet on CMMI

216. Especially the case needs to be made for allowing sufficient time and resources to realize the ROI. Any ROI that is not cost avoidance would be well received. It must also be differentiated from our Six Sigma efforts.

217. ROI is useful but not sufficient in isolation. More recent data is definitely needed - many of our clients regard the published data as lacking credibility because of its age.

218. Due to changes in the way we do our IT business (totally outsourcing) we are not in any position to adopt new processes at the current time.

219. We need it because current business conditions are making senior leaders question every expense - including process improvement (or at this point, process maintenance). We haven't really had much of a connection between SPI and the business value it delivers but that will need to change. I am hopeful that the Six Sigma insights will help all leaders understand what SPI means to our survival as an industry, much less an enterprise.

220. Our stock price continues to drop, internal initiatives are failing, layoffs and reorgs continue (2nd consecutive year) ... morale is pretty low, professional trust is failing ... it would help, but I think it might take a more overall commitment and vision from management. And there is a conflict between the levels of management and each levels particular vision/direction.

221. This seems to be the hardest part. Getting quantitative data to prove the benefits.

222. Yes but it always help to have objective evidence from an "expert" to assure that it is the right way to go.

223. The cost of adopting CMMI, and of process improvement in general, requires that it can be proven that the benefits justify the costs.

13 Global Issues Question 6: What else could be done to facilitate your adoption of CMMI?

1. Reduced cost for training new lead assessors and/or better transition strategy for current CBA-IPA assessors
2. Not sure.
3. One problem is that process improvement is viewed as an overhead activity. With XXXXXX audited accounting, the productivity / quality cost improvements go to contract accounts; nothing "pays back" the overhead investment in a visible manner. Since the goverment drives both aspects, helping to overcome this (allow process improvement to be included in program costs, perhaps?) may help.
4. Make the appraisal method cheaper and easier. Incremental appraisals within some reasonable timeline would be helpful. Appraise and fix than reappraise the fixes would be better than having to start over every time.
5. Nothing more at this time. Currently our organization is undergoing transition to the XXXXXX and the current directive is to maintain our current levels.
6. More success stories.
7. Do a true software-only CMMI. The version you did that simply took out all references to systems engineering is a joke. Reduce the size at Maturity Level 3 by combining a couple of process areas (like Verification and Validation). Actually, you wouldn't be willing to do the real solution which is to go back to the drawing board and simply remove software references from the SW-CMM to create a generic CMM. We didn't need an integrated model; we needed a generic one.
8. It would help a lot if the SEI would establish some good tailoring examples so that people will lose their fear of making tailoring decisions. They are so afraid of failing an assessment that they feel that they need to do everything in the model. This fear is really slowing adoption.
9. Maybe a good pilot use case on a full program would have been helpful. But to have a DoD contract requirement to be L3 in SE when the contracting authority doesn't even know how to apply CMMI to the program is sorry.
10. Case Studies; Timelines; SW-CMM to CMMI Transitions courses (at a lower cost than starting at the beginning)
11. Nothing for now. We are proceeding towards our end of year assessment.
12. Better industry number from SEI to indicate ROI by adoption of CMMI. Better Executive briefings that really identify to executives the need and ROI by following CMMI
13. There needs to be an external incentive, e.g. a directive from DOD, or a requirement from customers. Customers, Procurement Officers, CEOs, etc. need to believe that CMMI status is a valid and beneficial 'seal of approval' or 'mark of stability' when buying. SEI could expend far more effort promoting and less time delivering classes and appraisals; let the Transition Partners deliver.
14. For XXXXXX, nothing. They have adopted and achieved CMMI ML 5, XXXXXX. For other parts of XXXXXX, keep supplying information for me to assist them in their journey. I have gotten a lot of mileage out of "Lite".
15. Put more CMMI related articule on publication that could increas management's awareness.

16. Simplify the model. Allow for making PAs "not applicable" because there are legitimate cases for that, such as applying the CMMI to service organizations.
17. More plentiful research in the application of the CMM-I outside of s/w and s/e organizations. Assign a "mentor" to us. Assign a grad student to document our progress as a Master's thesis/Doctoral dissertation. Offer free training for our team in exchange for helping to broaden the model's application.
18. As stated above, providing a streamlined version of CMMI-SW that goes well beyond just pulling out the systems eng discipline amplifications. The present model as structured has far more practices, and level 2 and 3 PAs, than the SW-CMM and as such is dificult to apply to smaller projects, software only organizations, commercial development etc. than the SW-CMM - which also is geared toward larger projects. Can the engineering PAs at level 3 be merged back into a single PA as in SPE, or a few PAs (reqts dev, sw design/code/sw int test, system test), for software only projects???
19. Clear messages on it's existence and it's role in relation to the SW-CMM. While us "process folk" know all about it, Executive Management audiences aren't out surfing the SEIR sites, etc. They're reading CIO and Wired magazines as well as the airline magazines.
20. Promote CMMI as means not dedicated to software but can be widely used for any discipline in an organisation
21. Greater marketting in the industry especially across in Europe. People still think this is an extremely expensive thing to do, just look at the 700 pages and the sie of evaluation teams. Smaller companys can use the model but just can't except the cost involved and in any case they can see or don't understand the advantages. It is still considered to be something that 'Defence' organistions do!!
22. More case histories of smaller organizations who have successfully implemented CMMI
23. CMMI requires SCAMPI. As for SCAMPI A there is a number of questions open for our company. Currently we do not have enough experience in executing SCAMPIs. It will take time to have enough internal lead appraisers. Currently we expect 30 (!) CBA-IPIs in 2003. So to supersede CBA-IPI by SCAMPI requires an adequate number of qualified people within and outside our organization. SEI's observation policy may conflict with language constraints. We need German speaking observers! A second issue is the availability of consulting, tools and training (SEI plus focussed trainings)
24. CMM seems to be cumbersome to institutionalize. CMMI may be just as difficult. Costs are now a big factor and clients are more apt to give up part of the process to save cost. How can CMMI help with that?
25. Market the staged SW version separately as SW-CMM v2.0, a clear upgrade from v1.1. Strip out only the components needed for enhancement to the SW-CMM, and position the remainder of the CMMI as an optional, advanced model.
26. The inconsistency of interpretations by lead appraisers is creating frustration and is a distraction to the focus of making meaningful improvements.
27. More cross-company collaboration, sharing of experiences, the creation of inter-company CMMI appraisal teams.
28. Additional transition workshops, particluary in the greater Washington area would be very helpful.

29. A hybrid model as described above. Improved details in the Intro class (eliminate the exercises and provide better examples of what a High Maturity Organization looks like). Get Class B & C appraisal methods in place. Better tools for conducting the appraisals to make it consistent and faster - especially for Gap-Analysis-type appraisals.

30. I would like to work with SEI and possibly a government or industry that has or is working toward a Level III that is in a smiliar type of business as we are. It has been difficult to get an understanding of how to continue since we are not software. I've attended several conferences,I had the introductory training and truly it is too software oriented. I was also on our assessment team two years ago when we assessed my organization along with the assistance of SEI. But I have not really seen much knowledge or experience come from different sectors other than software, that can assist. Most attendees and instruction is still slanted to software. I can't find anyone that has experience that can help in my organization.

31. More help from the SEI on accomadating the Washington DC needs.

32. keep it stable long enough for us to implement.

33. This is a good question. The organization and Contractors seem to have Systems Engineering personnel leading the implementation of CMMI, but the experience in just using a Capability Maturity Model (CMM) other than in the Software Engineering environment is weak/unexperienced with CMM. It appears you have the unexperienced leading the experienced/strong in industry and government both.

34. Adopting CMMI is not a problem for us

35. Decrease the cost of transition. For example, observer fees for the Instructor training are outrageous especially XXXXXX the CMM.In fact when all the fees are added together they are enormous investment which companies will not do unless they have to. And right now they do not have to.

36. Business success stories or engineers' experiences stories could be motivate people more.

37. Central list of available appraisers and their specialties.

38. Provide examples of implementation strategies for process areas (i.e IPM, IT, OEI, OPF, etc)

39. Make is more scaleable for small commercial environments

40. Provide more guidance on how to adopt the CMMI on small projects (10 or less people) with short deadlines (3-9 months).

41. Simpler and easier to understand information from the SEI. Especially on the website. My customers come to me and state they just can't understand what the CMM-I and SCAMPI are all about from the SEI's website. This is good in a way for my business. But others are just giving up.

42. Like it or not, let's face it: Organizations are forever going to place too much emphasis on obtaining maturity levels, especially orgs in certain parts of the world where it seems the ONLY thing pursued are maturity levels. The SEI does a very good job of publishing disclaimers and caveats to the effect that reported appraisal results are not "certified," verified, or validated in any way. But the bottom line is that there is an obvious need and market for independent verification of appraisal results. XXXXXX company has developed a documented methodology that at least verifies an appraisal was conducted in accordance with either the CBA IPI or SCAMPI methodology, and satisified the require-

ments of the CAF or ARC. We have used this methodology several times to give clients some level of confidence in reported appraisal results. I know the SEI does not have the resources to take on this role, but I would like to see the SEI authorize a transition partner to offer this appraisal verification service.

43. May be a clear definition of when IPPD model could be deployed in an organistion. Many organisations have asked us if they could deploy IPPD for their internal program management.
44. More scientific or objective evidence reported.
45. Its taking time to understand what artifacts and their classification (direct, indirect, affirmation) are needed and what constitutes each type. Suggest a little more explanation and guidance be published on these definitions.
46. Reduce the cost for European companies or at least for the ones which have participated in the model creation
47. Addition of some "How To" approaches as samples.
48. Better management commitment. I believe that we have a good grasp of everything needed to get to Level 2; better management support would help immensely. The one area that I believe we need more help is with establishing defined processes for Level 3. While I understand the basic concepts, I am not real sure how to draw the line between standard processes and defined processes.
49. A lot more! But I dont think I can state everything here ... contact me via phone XXXXXX and I will try to give some suggestions since the answer to this question is more for a discussion.
50. Publicise. Our biggest hurdle is that none of our board directors have heard about it. They tend to treat suggestions from engineering with suspicion, especially where money is involved. Perhaps getting articles/presentations/seminars aimed at these people is a good step forward.
51. See answer to #3.
52. The SEI Europe could hve a role in federating existing European entities (XXXXXX, XXXXXX) and providing focus and facilitating real exchange between Europe and US on process improvement, tools, training, support, ideas,… Today it seems isolated, not in touch with European community (SPINs etc.) and the relationship with ESI and ESPI is unclear but seems in competition rather than cooperation.
53. Either update the Model to eliminate some of the unclear issues, or publish a formal opinion on these issues. For instance, "In order for an organization to demonstrate that DAR is institutionalized, they must be able to present "n" number of "x" documents, which span "y" amount of time." Or, "In order for an organization to demonstrate that criteria for decisions exist for Make, Buy, Reuse analysis, they must be able to present the criteria in "(some form)" for "n" number of cases."
54. A realization that the model is not designed for small business and some modification to accomodate that reality.
55. N/A. My organization was appraised at CMMI SE/SW Level 5 in XXXXXX by an externally led Class A SCAMPI. We are looking at augmenting this appraisal with SS and IPPD.
56. Incentive for change.

57. More ROI info.
58. Provide more detailed interpretation for SW only organizations.
59. Stop pussyfooting around with so many different models, and adopt one continous representation with no variations. Provide good tailoring instructions which are objective, and reduce the subjective approval of a lead appraiser.
60. Facilitating CMMI affect not only interprete acurate model, but need to learn relevant area concering SPI as a whole.
61. A simple guide with some pictures to indicate how the process areas interact at different levels, and also what are the procedures and other assets required at each level - something similar to a CAF, presented in more user friendly form would be very useful for organizations with limited expertise in the model
62. The biggest difficulty is in getting people to work on CMMI issues when their main concern is with the Customer. This is particularly difficult at the earlier stages of CMMI when the organisation is more reactive than planned. Are there any lessons learned which might help in the project management of CMMI ?
63. Make it less expensive for people to be "officially" trained in the CMMI. Perhaps you could have a transition track for CMM authorized instructors to become CMMI instructors. Another suggestion would be to have those with SW-CMM training able to start their CMMI training by taking the Intermediate CMMI class. A lot of the material in the Intro class is redundant to SW-CMM training.
64. Case studies/examples of its use in our environment (FFRDC, assisting the government in system acquisition).
65. A grant for about $150,000 to cover the estimated loss to the bottom line for the cost of training
66. Look at the seminal paper (IEEE ?anyway, author was Herbsleb, I believe a VS/RA at SEI at the time) on ROI of SPI. SOmething like this for SYSTEM ENGINEERING PI would really advance you guys' case.
67. Success stories
68. Nothing. We're doing it and we're happy!
69. Nothing external. When we reach SW-CMM Level 3, a decision about direction will be made at that time.
70. Increased awareness in executive mgmt.
71. Facilitate TPWEB GUI, Foster EU deployment with a most proactive approach from SEI - EU in Frankfurt
72. More material to convince senior management of the benefits gained when adopting CMMI.
73. There is not an adequate description of some of the practices that are described in the CMMI. For instance, we have had a lot of discussion about the meaning of "horizontal traceability." More examples of good practices would be useful.
74. A consolidated business case and benchmark improvement data would be helpful. An SEI service to provide responsive implementation/interpretation assistance would be helpful.
75. None at this time.

76. N/A. We are a consulting company that delivers CMMI services.
77. Lower training cost and more real world example and simple interpretations with more lucid practical example on measurements and effectiveness of the measurement.
78. A CMMI Executive overview would have been helpful, however I have developed this on my own.
79. solve problems listed above
80. Finding partners to share experiences and exchange views in our country.
81. Develop training materials for levels 4 and 5. Provide appraisal tool set.
82. We are actively working with SEI and a number of transition partners. We plan on awarding a contract this summer to help with our process improvement efforts. We have staffed our effort at the enterprise/corporate level. Internally we ned to find the time and a few more personnel to push our efforts.
83. More information at the higher maturity/capability levels.
84. More/better examples of how other organizations have adopted the model, and substantial examples of their process improvement work products.
85. Not much....ROI would be helpful; and keeping on top of the problem of organizations being able to "buy" their appraisals. You have to know to ask for the ADS to understand what was really appraised.
86. Nothing.
87. Everything is addressed above.
88. Define the proctices to a lower level. Strengthen the assessment method
89. More CMMI focus at the SEPG conferences.
90. Without management support and belief we will never adopt any model. I'm not sure what you could do to persuade them at this point. I think it will re change at the top and that is not likely to happen soon.
91. Since many organizations have invested heavily in the SW-CMM and so much of the CMMI comes from the SW-CMM, it would have been nice to have an accurate map of CMM to CMMI ... more specifically, what's changed and what's been added, so that we could have targeted those areas easily. I'm assuming this would also have been helpful to those using the SE-CMM.
92. Reduced training costs. Simplification if possible. More RFPs with CMMI requirements.
93. One thing we're looking at is putting the CMMI into a Requirements Management system and establishing traceability to our process definitions, plans, work products, and records. Our hope is that this will make preparation for future appraisals easier and more accurate.
94. CMMI needs to be distilled down to a number of different business sizes. It seems apparent that it is designed for $50M/yr or $100M/yr (as an absolute minimum) businesses or larger. You ought to have a version for new small businesses, as well as transition plans for when the company grows and expands.
95. Figure out how to translate the CMMI to language that makes sense to those performing the activities. The process improvement groups, and management shouldn't be the only ones who understand expectations, benefits and actions required.

96. At this point we are doing many 6 Sigma project to improve the way we are performing appraisals (e.g. electronic evidence collection and usage, optimizing SCAMPI preparation) so I don't know what else is needed. Our organization fully supports the CMMI and is working to improve the way it is used and incorporated into our business.
97. training in the CMMI, understanding direction of SEI and the certification program, will CMM be supported in the near term future, exactly when will CMM support stop, etc.
98. Reduce costs. Due to excessive costs it is likely that we will NOT be investing in any more Lead Appraisers. Thus without career development, the programme may atrophy.
99. Lower the costs for lead appraisers support fees or cap them for a large enterprise (we have 13 lead appraisers, and the costs have increased 2000% over SW-CMM) and we don't really have a corresponding ROI. Also the cost to have internal instructors is prohibitive.
100. More elaboration from various prespectives (disciplines, lifecycles, size of projects, development vs maintenance vs research) on each of the practices.
101. More education at the Sr. management level. Same story same song.
102. Have a capability to ask the SEI questions on the interpretation of the CMMI.
103. We're adopting, thanks.
104. All CBA-IPI's to be used as CMMI assessments 2. Allow a CMM level 3 some degree of "qualification" in CMMI 3. DoD training - we still have customers writing "CMM level 3" into new contracts - they are unaware that CMMI exists.
105. Local training and less expensive partnership
106. You all ready did it by dropping support of CMM. We disapproved of the decision, but its done.
107. Provide more guidance on the implications of practices, and on the inter-relationships. I've seen some lead appraisers and trainers give good information in these areas, and others not so good. More publicly available material would be helpful.
108. Improved training.
109. Currently we suffer of having enough assessors. Support of SEI for this would be very helpful, especially outside US as e.g. Europe.
110. Training courses and materials for the "beginners" and practitioners, where the Introduction course is "too high", too expensive,and difficult to arrange
111. To select tool which is helpful for CMMI adoption.
112. We are just beginning the adoption process. Once we collect lessons learned, we will have a better idea of what else could be done.
113. Less expensive training. On-line training.
114. I think the SEI should share more of the materials the appraisors will use, like the PIIDs for example, to the general public.
115. Training for adopting CMMI on small or Rapid Development projects
116. More concrete metrics examples

117. Standardization of lead appraisers ..some seem to take the "spirit and intent" road (does it appear the company is doing what it should, for the right reasons) while others are sticklers for documentation.

118. Reduce the PAs at Level 3 to a reasonable number. Organizations faint when they see the requirement to implement an inordinate number of PAs to achieve Level 3, especially when several of them are an expansion of the old SW-CMM SPE SPA.

119. See #5 above. Also, the expense of transitioning our CBA IPI assessors to SCAMPI is prohibitive (especially the "observing" lead must come from the SEI)

120. Training

121. We need time to work on the processes instead of getting work out the door, but this is not an option. Management buyin and time to adopt CMMI would help.

122. A two-stage appraisal. Step 1: Conditional appraisal at a given maturity level based upon documented processes and organizational infrastructure. Step 2: Final appraisal at the maturity level based upon evidence of use, maintenance of documented processes and organizational infrastructure.

123. Strategies of how to move from SW-CMM to CMMI along with presentation material etc. Inexpensive training.

124. Make it affordable. I would suggest that a survey be performed to compare the cost of ITIL, CobIT, and ISO assessments/audits normalized over the number of such assessments/audits one can reasonable perform in a year, and that pricing be set accordingly. Some of the people I work with are constantly performing ISO audits all year around. There is no way we could do that with the CMMI because of the costs involved.

125. Develop and provide baseline enablers.

126. More resourses and support from senior management. Senior management seem to see PI as the flavor of the month type of things. next month it will be something else

127. Get rid of our current manager.

128. More training.

129. While I haven't looked at the SW-CMM to CMMI mapping recently, versions I found 1+ yrs ago were not particularly helpful. Explicit guidance on actual (or even representative) processes/work product/asset mappings from CMM to CMMI would have been very helpful.

130. Take out 100-storey ads, blast the marketing/management community with propaganda.

131. customer awareness of the benefits of process

132. speeding up the lead appraiser path (providing assessments); but I know that is not realistic;-))

133. The Headquarters staff to under stand that we can not continue to quality services using 1950's methods.

134. Clear method of tranisitioning CMM-SW materials to CMMI "versions"

135. A move away from software. While I recognise its background the CMMI has far wider application. Its software bias may scare other areas away.

136. We must all find ways to streamline the process to reduce the cost and time of performing appraisals. Consider an organizational unit that achieves CMMI level 3 and then

another part of the organization goes for CMMI level 3 a little later in the year. If there is a standard process in place and the new organization is just an extension of the previous organization then we shouldn't have to review OPF, OPD, OEI and OT. In particular we've already seen the standard process, the organization training, the SEPG structure, etc and this shouldn't have to be evaluated again for the next 2 years as the organization rolls out the process to other parts of the sector. This could be a considerable savings if you are in the process of performing many of these "piggy back" appraisals to roll the process out across a large part of the parent organization. Note, this is just one example of things that need to be done to save on cost and time.

137. management training
138. Improved interpretive guidance for typical evidence. The variability in interpretations from Lead Appraiser to Lead Appraiser is causing significant difficulty in our attainment of a Level 3 rating.
139. I wish I knew.
140. Stop the Level Race! Fix the assessment process (from a cost point of view and from a not invented here point of view).
141. Strengthen the message to LAs to focus on content of OE, not the format. Process discipline is about repeatability of process, not about identical artifacts.
142. Your entry requirements for SCAMPI lead assessor training are too high. There are not that many SCAMPIs out there (right now). I am having to wait until I complete the SCAMPIs. I am the company's lead assessor candidate; the whole company is in a holding pattern until this requirement is met.
143. see the first section for my comments. Also, certainly the amount of training and the costs involved are a prohibiting factor.
144. This was not an issue for XXXXXX
145. Training aids are always welcome. Powerpoint slides with unrestricted use would be beneficial.
146. More outreach to the CMM community.
147. Ease up on heavy data requirements in SCAMPI, rewrite the IPPD PAs/SPs with someone who understands teaming, and for heaven's sae put the "proactive" nature of SW-CMM Level 3 (ISM) back into the CMMI. the only place thresholds are mentioned in the CMMI is in RSKM, and when mentioned, it is done incorrrectly as an impact, not stated as a risk!
148. No idea
149. Restructure and simplify CMMI.
150. If we knew that we were going to have a stable project, with a long life span, then we would consider adopting the CMMI.
151. It will be useful to build a list of small organizations (less than 100 IT staff) which accept to have their names published. This may help some managers that real organizations as their are involved.
152. At this point, one thing comes to mind right away - as previously mentioned, if we could review some hints/descriptions of how other organizations overcame the hurdles they encountered along the way, that would give us some options to consider in making deci-

sions on how to handle each one we may encounter along our way. That is the big thing we are looking for right now...

153. Allowing SCAMPI lead assessors to conduct CMMI training without having to go through one or two more set o formalities. (I believe, the instructor qualification criteria are subset of SCMPI lead appraiser criteria)

154. Help us with ROI/business case. 2. Ensure that the CMM sunsets as planned and that you keep your word not to support it nor accept assessment results in 2005. 3. Continue to communicate about the sunsetting of the CMM. 4. Creat a Transition Plan Template to be used by organizations to facilitate deployment. 5. Create and use a TCM strategy for the CMMI program. It seems to an outsider that the SEI may not have fully benefited from the resources available at the SEI to assist in transitioning the CMMI.

155. Broader availability and awareness of web based training and materials

156. Right know we are working to implement CMM because its our client decision, but we are evaluating to change to CMMI, if we decide to implement CMMI I would need become Lead Appraisers in order to lead the appraisal in the company. Right now I need to take the Introduction to CMMI course in order to get more familiar with the model and to be able to guide the organization.

157. More training in Arlington

158. The training problem was pointed out be almost all companies at the May 2001 Technology Transition conference. I also pointed out the faults in the training program during early stakeholder reviews. This problem (sorry, but largely less effective training at relatively high prices) is perhaps the NO. ONE obstacle to adoption of the CMMI! The business model for training is broken- and needs to be fixed. We have developed Knowledge Mgt approaches that are much more effective and cost effective for industry. The SEI course set and business model actually forces companies to look elsewhere or develop their own training for all but the "mandatory" courses. A travasty.

159. Mandate it out through the DoD for all DoD contractors and their subs and a requirement for contracting.

160. I don't know. Without top-down support, the workforce environment will still be resistant. Even when top management mandated CMM implementation it met with resistance and was done half-hearted.

161. Provide the abililty (through model tailoring or SCAMPI customization) to make the systems engineering process-based areas "not applicable". Provide better interpretation or clarification notes in the model for software only organizations.

162. Broaden or interpret CMMI SW/SE to include ongoing operations of our other communications systems.

163. Lessons learned for adoption the CMMI in non-traditional environments (i.e., small projects using XP or SCRUM, non-engineering applications, etc.)

164. Better planning templates, as one would expect of a well-run project: SEMP, Schedule, Task Estimates, Data List, etc.

165. Cheaper training courses, so that they were more accessible.

166. Provide examples to show how the process areas can be implemented

167. Training geared for our top-level managers. If they believe in it, it will happen.

168. The mapping of SW CMM to CMMI done by XXXXXX was helpful as a first step. I would suggest additional revisions of this document.

169. It appears to be an attempt of the SEI to find a cash-cow. The expenses appear onerous against questionable value added for our commercial business.

170. Provide more guidance on the differences between two models (SW-CMM and CMMI) so that it will be easier for CMM organization to transition to CMMI

171. We are CMMI Level 5 Organisation

172. More communication from the SEI !!!!!

173. A guideline for those who are just beginning to bring CMMI into their organizations. Such as templates for start-up plans, charters, schedules, order of activities and time and people estimates. This type of guideline can be written based on the experiences of those organizations that have achieved CMMI success.

174. It's irrelevant now that we have been outsourced, but the SEPG conferences do not provide much for non-SW organizations.

175. Senior management needs to re-affirm their commitment to CMMI. It seems to have gotten lost with the recent changes in personnel and the organizational structure.

176. Clarify practices for various business / organizational scenarios

177. Having additinal models to use as a toll in converting earlier work to CMMI processes, and additional training would be the greatest assistancefor us at this point.

178. Having known verifyable milestones in adoption/institutionalization to shoot for, rather than the grey timeline of Audit/Appraisal.

179. Perhaps more involvement with CMMI/SEI activities (such as this one) would give us more visibility to current trends and ideas with regards to the CMMI concept.

180. More interpretation and guidance for the CMMI implementation.

181. Keep the org. responsible for deployment stable instead of moving it around and putting it under people who are not really familiar with CMM or CMMI except as acronyms and "something we have to do"

182. Provision of more guidance how to interface the different disciplines in the PAs

183. The SEI should support the CMMI on a consitent basis instead of going astray, e.g., the SW-CMM v3.0 fiasco.

184. Make it easier to become a certified CMMI instructor / SCAMPI assessor. 2. Less expensive classes or being able to take a test and test out of classes would enable more people to become advocates and thus result in greater acceptance in the business community.

185. Nothing.

186. More examples and typical work products related to software support as well as services as products.

187. At this point, I don't know. I've even attempted to bring in consultants to assist in implementation of CMMI, but my management has put them off for 2 years now (the consultant company has been remarkably patient), saying they want to get our processes in place before bringing anyone in - even though implementation of CMMI will no doubt

be a process upheaval as well, therefore rather than doing it once and getting it over with, we'll wind up doing it twice, probably at double the expense.

188. As noted before, more guidance for applying the model to technical support non-porject work, which is 80% of our effort hours.

189. Not sure at this point - but I believe I'll have definite input in about 12 months.

190. In order to have a controlled process we needed to develop a stable process architecture as a standard for all of our process documentation to be written against. We made the mistake in our CMM implementation of just creating a CMM-focused process. This left gaps in our process that were the same gaps that the CMM had. They go undetected because we focus to heavily on model compliance and not as much on process compliance. Both require the same amount of attention.

191. Customer requirements, business paybacks, more flexibility in the implementation and assessment process.

192. Reduce the subjectivity and variability of interpretation. Simplify model by reducing duplication. Reduce cost of the appraisal method. Include greater hardware orientation . Clarify the role of sub-practices. Provide consistent level of detail & importance of sub-practices

193. Need more multi-function guidance (on architecture & appraisals).

194. Not necessarily ROI but some other quanitative evidence such as quality and/or productivity improvement would be helpful.

195. Cost effectiveness and overcoming language problem.

196. At this time, I don't know. Haven't tried using CMMI in non-software development arenas yet.

197. Publication of business cases and adoption stories. Courses by PA. Publication of baselined PIIs

198. Consider parsing the SAM PA such that contracting decisions made by corporate groups is clearly delineated from the work performed by accounts and projects once the contracts are established. Organizations continue to struggle with the precedent of claiming SW-CMM SSM KPA did not apply to them because most of their suppliers were other corporate groups under a service agreement (not a legally binding contract that would hold up in court); they believe that if SAM is the replacement to SSM, then SAM should also not apply to them. Complexifying this issue is the appraisal expectation that if a PA applies, the whole PA applies. In our business context, organizational units scoped in an appraisal really do not let the contracts, our global purchasing office does this at the corporate level; there is then a corporate mandate to use preferred suppliers they have contracted with. The global purchasing office is not scoped into the appraisal, so obtaining data sufficient for organizational coverage is difficult.

199. a German-speaking observer for SCAMPI lead appraisers, as discussed (and promised) with SEI Europe.

200. The difficulty for organizations is the lack of discipline. Leadership faces the challenge of inculcating chnages in values and processes that are monumental in scope and depth. It will come in due time.

201. We are looking at getting some consulting on the management level to obtain buy in for the process changes.

202. More simple, but complete examples of processes and data items.

203. ROI; quantifiable data re: time it takes to adopt/transition from previous CMM model; lessons learned from Federal civilian agencies, not necessarily DoD.

204. I think the ROI data would be most helpful to get other small projects on board.

205. Make it lean.

206. Time.

207. Sunsetting of the CMM by the SEI. Some clients are confused over choosing the CMM or the CMMI.

208. Change the world's culture from being financially-driven to "do-what's-right".

209. Can not think of any thing to add at the moment.

210. Extend the grandfathering time from SW-CMM until end of 2004.

211. A break in the fees required to become a lead assessor would be nice. The "deal" for Government employees to become leads for the great price of $45,000 for five years is a hard sale to our management.

212. That SEI support the Safety extension of CMMI model

213. I think you need to talk to our executives.

214. Time, we are transitioning from CMM smoothly but in addition we are trying to create common practices across multiple divisions who are less mature.

215. SEI could develop training material for each PA (e.g., Power Point presentation, instructor's notes, student exercises, templates and examples of Procedures, Plans, estimation worksheets)and sell them to organizations for a resonable cost, rather than having hundreds of organizatins duplicate the effort with varying degrees of success.

216. Establishing appropriate documentation that provides the framework for implementation is a challenge, especially for smaller organizations. Without resorting to a "Document Suite in a Box" approach, it would be useful to have some templates or checklists that would help reassure the small organization's Process Improvement group that they were on the right track.

217. I need additional training - Intermediate

218. We have already adopted the CMMI.

219. We are acquiring new organizations through M&A activities. Plans or lessons learn for rolling out current CMMI practices to merged organizations would be insightful.

220. It would help if respected systems engineering personnel would come to conferences and talk about the implementation and the coordination and cooperation that is necessary between systems and software personnel.

221. Acceptance by our separate organizations that we must present one face to the customer and that together we're responsible for implementing appropriate solutions. We're attempting to convince our organizations that our combined resources are needed, rather than the current stovepipe view of projects. Some divisions view project work as burdens, preferring the flexibility of managing large pots of money with little accountability. We're attempting to change that.

222. Done deal.

223. XXXXXX is an early adopter of CMMI.

224. Right now our issue is primarily cultural resistance, since we're applying the model to disciplines that have not worked under model-based processes.

225. Convince Executive Management that the initial cost is nothing compared to the benefits of adoption.

226. Since we have used the SW-CMM very successful since 1990, it will take time to transition to CMMI fully.

227. Make the training more availbale and less costly to small companies who may want to use it or who consult in SPI. We are your best advocates!!!

228. Address the issues beyond system engineering. HW development. Manufacturing.

229. Nothong at this point

230. Have someone very high up in the DOD publish a "thou shalt adopt the CMMI, or else..." like XXXXXX did back in the early 90s. ;-)

231. Training that isn't beyond our budget.

232. What is the tangible cost and benefit analysis of instituting such high requirement model to a typical software services firm? Be it either a IS shop of a large engg firm or a typical software services firm....such precise analysis or literature would help internalize the rationale for adopting fulfledged feature laden model like CMMI

233. A clear cut checklist for the process areas and levels would help.

234. Adopted and institutionalized.

235. Simplify it so the implementation path is clearer.

236. Having some breathing room from our day-to-day chores so we could analyze it and really think about how to make the transition. We are hoping that we have built adequate time for this in our schedule over the December holidays this year following our formal CMMI training, but we'll see.

237. We have already adopted CMMI so I'm not sure there is much else that can be done.

238. Nothing at this point in time.

239. Merge ISO registration with CMMI so that multiple assessments are not ongoing. This is a very large expense and not seen as value added

240. clarification of assessments in particular use for acquisition and how to set a level playing field

241. The removal of misinformation being spread by some CBA-IPI lead assessors that have a vested interest in the future of the SW-CMM.

242. Better and more consistent senior management buy-in. It has to be downward directed and resourced appropriately.

243. A wider repository of lessons learned

244. More time, more bodies.

245. Management does not see it as a priority ... and is not willing to expend the time or effort at this time.

246. An assessment of formal SEI training costs would be interesting... costs for the SEI Certificate in CMMI program appear to be prohibitive for a taxpayer-funded organization to justify paying.

247. More guidance on what is critical vs what is 'must have'; more tailoring guidance; have assesors be more focused on the processes as used by an org rather than a 'checklist' mentality focused on KPAs

248. Need to get management buy-in in a corporate culture that is in its infancy.

249. Quantitative benefits of adoption of CMMI would help convince Snr. Mgmt. that it is a worthwile investment.

250. Give more real case study of adoption of CMMI, especially for small company.

251. More commitment on the part of management.

252. More interpretive guidance for SW/SE and for hardware and service organizations.Possibly separate guideline documents as we have in ISO 9000 would be helpful.E.g.ISO 9001 : 2000 is supported by ISO 9000-3 : 1997, IOS/IEC 12207 : 1995 and ISO/IEC 9126-1 : 2001 for sofware.

253. I think the SEI are doing a terrific job. The help and support of the staff both technical and administrative has contributed greatly to our successful use of CMM and our adoption of CMMI.

254. A mapping to ISO9001-2000 and SPICE so that customers accept Appraisals as meeting their needs/intent.

255. Nothing at the moment.

256. As time goes on and more organization become familiar with CMMI, we will have more sources to pull information from. We are in the transportation industry. We could benefit from other rail roads using CMMI and learning from their results and experiences.

257. SEI needs to do a statisical representation of the advantages of the CMMI over the CMM from the standpoint of advantages in cost (effort), schedule and quality.

258. No idea.

259. The decision to adopt CMMI has already been made and steps have been taken to implement the model in several of our business units. This has changed our original schedule for achieving the next level under the old model. But, we are formulating plans for an appraisal under the new model soon.

260. We are at CMMI Level 5 (XXXXXX).. The PIIDs supplied to help understand the CMMI need improvement. One area is for the Organizational KPAs need to clarify what is expected from the Organization, and what each artifacts each project would be expected to supply. - I second my coworker's comment! As the collector of our project artifacts, I thinnk this should be a priority.

261. Every List of Lessons Learned includes "can't do it without upper-level management being supportive and actively involved." Discussions/presentations on ROI and things like that should focus more on the bosses. If they think it must be done, it usually is.

262. None. We are adopting.

263. You need to roadshow this thing - like Rational has done with CMM / RUP. Set up Webinars like Rational does. They like the razzle-dazzle, and the high-level overviews around here. They like Whitepapers. Advertise in Computerworld. Offer Whitepapers

via COmputerworld. The brighter and more fashionable the "peacock", the more they'll give it a look.

264. A repository of existing process assets from successful adopters might help.

265. Strongly sponsorship. Introduce sucessful case with CMMI

266. Example assets; technical reports; templates; experiential data; implementation strategies (process architecture, etc.); metrics.

267. Quality and delivery improvements are important as well.

268. Localization(language).

269. Developement of a differential CMMI appraisal method.

270. Tools support for appraisals

271. Establishing policy and direction from the top

272. don't know.

273. Executive management buy-in and consulting to show value

274. It should have a simplar format. A lot of the people in the class I attended came out confused. Need more clarification.

275. The availablilty of more CMMI Introductory courses in Arlington.

276. We are just getting started and don't know yet. Ask me in 6 months. P.S. We are following the process improvement approach in the book "Making Process Improvement Work" by Potter and Sakry: list business goals, list obstacles/problems to achieving those goals, map problems to goals, list actions to solve the problems, priorities based on simple impact * feasibility = "ROI" model, develop detailed action plans, execute. And in developing the action plans, refer to the CMMI for detailed guidance on goals and practices as relevant. Then, because it is also a business goal to display evidence of process maturity according to some standard to our customers -- examine how much of CMMI-SW/SE Staged Level 2 (our starting point) we will achieve after executing the action plan, and consider whether/how to achieve the rest of Level 2. Then take a similar approach to Level 3 (in a year or so) and so forth. This approach is making much more sense to us than a focus on CMMI first so to speak (in other words, we don't want "process for process sake" -- not that CMMI urges that, but I imagine some organizations, in spite of good intentions, end up with a process-focused approach rather than a business goal-focused approach). So to answer this question 6 -- materials which, like Potter-Sakry take this business goal-focused approach could be helpful.

277. We have adopted CMMI. We have adopted CMMI. Streamlining the appraisal process would be helpful

278. Lower costs for training, lower costs for appraisals, less time consuming appraisals, better and more definitive mappings of CMM to CMMI.

279. Nothing

280. Redesign the method so it focuses on the processes instead of the model. For example, if an org has a single development process that is mapped to all Project Managment, Engineering, and Support process areas, then there should only be one set of generic practices collected for that process, not a set for each PA covered by that process. This would redice the cost of an appraisal significantly.

281. ROI observed on business parameters by organization adopting CMMI after having used CMM

282. Internally, we need to continue to make our folks aware of our adoption of CMMI and what are goals are and where we are at this point. We are currently striving to achieve all CMM level 2 goals for our software development projects. Thank you for the reminder to fill out this survey. At this point, I have nothing else of value to contribute.

283. We probably will need to call our consultant in to help us put a transition plan into place.

284. Streamline the SCAMPI process to reduce time and cost. Extend the deadline for "grandfathered" CBA-IPI's lead assessors to get SCAMPI/CMMI qualified. We have two lead assessors in the organization and by the time SEI announced the re-training deadline their schdules were full for the rest of the year and it will be a real pain for them to get recertified.

285. Easy path to transition from CMM to CMMI

286. Including the SA-CMM.

287. If the gov't would make process capability requirements in their solicitations.

288. Unknown

289. Nothing, we have already adopted CMMI.

290. Hold sessions with the CEOs and higher of organizations (telecom/commercial) and convince them that CMMI is better than CMM

291. Brochures that present the structure of the CMMI Continuous. Incremental, 1/2 hour webinars that provided value and could be retrieved anytime. Horror stories.

292. Nothing. Only reason our one division pursued SW-CMM was to enable us to compete for government contracts which require a level 2 or level 3 rating.

293. Lots of training.

294. more documentation on moving from cmm to cmmi real case examples .....lessons learned etc.

295. More available tutorial material on-line.

296. More practical lessons learned (not marketing pitches) available on the SEIR. Examples of how best to populate a PIIDs, why is the PIIDs valuable in going from class C to B to A.

297. Collect and provide ROI data. More samples, best practices, case studies of implementation in different sizes and types of organizations.

298. N/Z

299. Practical guidance on practical phased implementation.

300. Appraisals are still too much impact -- readiness and conduct. Seems we should be able to use the web and other means to facilitate the appraisals without bringing everyone to a boil point.

301. Fix the problems with appraisal methods - but you have to get the professional appraisers and purists out of the way before success is possible. 2. In general, there's much more annotation for SW than for anyone else. This needs to be balanced by providing more annotations for SE and beyond.

302. The biggest impediment to CMMI adoption is lack of customer interest. So an enlighten customer would help, which would in turn provide incentive to our management.

303. Reduced costs, simpler application, more business people vs tech people providing common sense, solutions.. More realistic timelines...THis is not rocket science...

304. N/A

305. Provide training and authorization for internal (within a single company) lead appraisers without the requirement of 2 previous SCAMPI appraisals. This training would include Class A, B & C.

306. See response ot question 1

307. Provide guidance on how IV&V organizations could make it work.

308. One architecture, new assessment methodology.

309. Reduce annual fees and requirements to maintain Lead Appraiser. It's good to have internal appraisers, but we don't do too many appraisals because of the cost, competing priorities (e.g. Six Sigma, ISO), etc

310. Nothing comes to mind.

311. Not applicable to this project

312. Get DoD to take a string advocacy position, such as using it in a consistent way across procurements.

313. Getting executive leaders to understand level of commitment needed to support a successful program.

314. The SEI needs to find a way conduct appraisals that are less costly for the organization being appraised.

315. Make SCAMPIs more efficient.

316. Local representation of CMMI to champion for its proliferation.

317. If possible , SEI and Japanese government have some information exchange system. However, I would still like SEI to control these activities, because of keeping objectivity.

318. Cost is the major factor, set against a culture of redundancy and cost savings. It is very hard to make a convincing business case, even though the evidence appears overwhelming.

319. Extend CMM V1.1 sunsetting ...

320. Simplification of the framework; support for easy to follow, light, agile, and value added processes that clearly map to business goals, objectives, and needs; value added business case and ROI data; project success and failure data for framework adoption activity;

321. Having the customers agree to and be up front that they are going to "require" CMMI, rather than hide behind all of the CMMI words being written into RFPs with saying "CMMI Maturity Level x".

322. At the moment we have scheduled several training classes to coincide with the rollout of our new CMMI processes. These training classes are mandatory for all our associates.

323. Publish or benchmark slolid product development houses adaptation of the CMMI

324. We did not use CMM before in this organization. Most of the "basics" presentations and papers address moving from CMM to CMMI, or assume you understand the content of

CMM. It was hard for me to find basic overview of CMMI information for our organization to use as introductions.

325. Provide more short courses for personnel who will remain on the edge of development. The concept is to entice them with the short course and then lead them to the full model

326. Allow Lead Assessors to be authorized for other models (don't force anyone who wants to become SCAMPI authorized first become CMMI knowlegable - provide classes for Lead Assessors who want to continue using SW-CMM, but want to do SCAMPI assessments instead of CBA IPIs).

327. Comparison with CMMI, ISO 9001 and ISO/IEC TR15504. The presentation about the process improvement to president and directors.

328. For SCAMPI, improve the examples of direct and indirect evidence for each practice. 2. Add more definitions. For example, "analyze" is used in several practices, but is not well defined (or not defined at all) in most of these. 3. Clearer description of what is "required" vs. "guidance" within each Process area, it is not clear in all cases if "Work Products" and "Subpractices" are required, expected, or guidance only. This allows appraisal teams to be to subjective rather than objective in their activities.

329. Many Japanese Documents

330. Have at disposal samples on: - policies, - checklists, - process schema, - experiences from Companies that adopted the Model, would help a lot

331. culture change

332. Have more a better mapping to services and a better understood assessment method/process. Have the ability to make COTS not applicable. Suppliers - not all organisations have the ability to use other suppliers. COTS, Services, Suppliers means htat we are force-fiiting our work to the model simply to try and get a match and then a rating. This is wrong.

333. In addition to waiting for government contracting offices to come up-to-speed on CMMI, the cost for training and for hiring an appraiser must come down prior to our company fully adopting CMMI.

334. I often introduce CMMI to my clients and their organizations. And I provided CMM and CMMI training for them.

335. NA: CMMI is adopted

336. More and better intrepretation of the model in language understood by practicing engineers.

337. * Can we have Discipline Amplification Notes in each Process Area for s/w organizations that conduct consultancy projects? * MODEL ADDRESSES DEVELOPMENT LIFE CYCLE IN PARTICULAR. MAINTENANCE / CONVERSION / MIGRATION project requirements should also be addressed in specific practices across process areas.

338. An understanding that it is not a choice- SW CMM is going away.

339. Some data that reassures our customers that CMMI is not another "flavor of the month" process improvement tool. They seem to be log jamming efforts to move forward with CMMI in an attempt to wait out for the next process improvement tool.

340. While CMMI is a compilation/construct of best practices, as a practical matter, programs must do everything (in some manner) to successfully be appraised. This may mean that there are few programs that could actually contribute to a successful assessment even

though the overall organizational development processes, and their implementation, are very good. There should be more latitude to have partial coverage of a process are by each assessed program vice needing every item to be implemented in every assessed program.

341. Training and appraisal costs are high.

342. not applicable

343. More information on the adoption rate across the community.

344. Simplify the model. Provide only the continuious representation. Provide simple, consistent, requirements and mapping rules for equivilant level 4 and 5.

345. Perhaps more readily available information on ROI of adopting CMMI, but I understand that most companies guard this information very carefully.

346. Case studies on successful adoptations & ideas on differentiating model specific ROI (ROI using CMM & ROI using CMMI)

347. Improved material and support: comparing and compatibilty in detail: ISO9000, SPICE and CMMI - Better course material / more freedom to make adoptions for us

348. More advice from experienced lead assessors in Class A, B, and C methods.

349. We are in Taiwan. Chinese speaking Instructors/Lead Appraisers are needed.

350. If I knew the answer to that, I'd be in management, not software development.

351. Not applicable - we've already adopted it.

352. Make it illegal for a senior manager to set an arbitrary Maturity Level calendar year goal for an organization.

353. Training as a lead appraiser should be available to anyone who has met the education requirements. To be a lead appraiser, two or more participation in appraiser could be required. THe training helps in undestanding the model from appraisal point of view and one is maore able to use the knowledge improving the processess. Lack of training also increases the cost of implementation with help of expensive lead appraisers.

354. Not much that I can think of at this time.

355. Tools to help convince mid-mgt

356. Nothing. We are already on that path

357. Keep improving the training materials for CMMI and SCAMPI.

358. More CMMI training opportunities in Northern Virginia.

359. Provide additional interpretive guidance on implementation of the PAs. My organization spends time arguing over "literal" interpretation. This is caused by the lack of PI/CMM/CMMI experience by those involved on the implementation team.

360. I believe that even though the transition partner program is well structured, it may be in certain instances an obstacle for an organization due to its cost and/or other constraints. It is very good to have CMMI training at different levels and to have the tests at the end of certain courses such as the Intermediate Concepts of CMMI. This ensures that the students have a good understanding of the model.

361. Case studies with successful migrations from SW CMM

362. Increase rigor in document - admit that it's effectively a requirements spec for any organization that is going to be appraised externally. Decompose all the compound practice statements into individually testable "requirements" and determine which are truly required to fully satisfy a PA goal and which are nice to have. Make appraisals less open to opinion, bias, and conflict of interest (e.g., Can appraisal team with all but one from inside company truly be objective? How full is "fully" implemented? Where is boundary between fullness and goodness of practice implementation?).

363. Detailing the bottom line benefits to the financial services industry. Since we don't deal with the government the way DOD software development companies do, there is less motivation. The fact that SW-CMM is being sunsetted doesn't mean much here.

364. Manpower resources to be able to get the CMM/CMMI work documented and improved upon as well as getting the actual XXXXXX work completed at the same time on schedule.

365. Not relevant.

366. Educate our upper level management as to the need for standardized processes and the need for 'gel' time so we can see those processes work. Historically we've changed and changed and changed again since the return wasn't intuitively obvious within the first month of using a new process...and to align to new management. Many managerial changes have added to this issue.

367. Get the economy going again so that we can get a little breathing room.

368. Don't pull out CMM-SW support so fast.

369. I am unsure. Do you folks have a 'miracle' section or key process area you are working on? (sorry - some humor as things can get a bit serious at times...)

370. See all comments above.

371. An easy to understand overview that can show top management that we shouldn't just do it to get contracts but to help use it get better.

372. More flexibility in the interpretation of how the model may be tailored and scoped for organizations with different needs and constraints.

References/Bibliography

[Konrad 02] Konrad, Michael et. al. *A Report on the May 2002 CMMI® Workshop* (CMU/SEI-2002-SR-005). Pittsburgh, PA: Software Engineering Institute, Carnegie Mellon University, August, 2002. <http://www.sei.cmu.edu/pub/documents/02.reports/pdf/02sr005.pdf>

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13. ABSTRACT (MAXIMUM 200 WORDS)

The CMMI® (Capability Maturity Model® Integration) Interpretive Guidance project was formed to help commercial software, information technology (IT), and information systems (IS) organizations adopt CMMI. Project members collected data to learn more about how CMMI is being accepted by these organizations. This report describes the data-collection activities and includes summaries of the data collected through August 2003.

The project received both positive and negative comments that lead to some interesting and surprising observations. Overall, the positive comments greatly outnumbered the negative. Input provided by commercial software, IT, and IS organizations was similar to input from organizations from other disciplines.

Organizations reported that CMMI is adequate for guiding their process improvement activities and that CMMI training courses and appraisal methods are suitable for their needs, although there are specific opportunities for improvement. Having two representations caused concern and confusion for some but was a benefit for others, so the project will investigate these comments further to see what can be done to address these concerns. The cost of CMMI is an issue that affected adoption decisions for some but not for others. Finally, return-on-investment information is usually helpful to organizations when making the business case to adopt CMMI.

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