CMMI® for Services (CMMI-SVC) Overview for Workshop

Software Engineering Institute
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Acknowledgments

This presentation includes data, wording, and ideas contributed by CMMI-SVC team members, especially

- Drew Allison

- Brandon Buteau

- Eileen Clark

- Eileen Forrester

- Craig Hollenbach

- Mike Konrad

- Sandy Shrum

What we will cover

This is our overview presentation, with additional slides for this workshop.

- Briefly explain why the CMMI-SVC is needed

- Describe the development team, status, and release plan

- Overview the changes we've decided compared to the publicly available review draft

- Mention changes still under consideration

- Answer common questions and pose tougher questions

- Ask for your input

- Time permitting, apply the unique service PAs to one or two service examples

- Discuss how you can participate

Why is the CMMI-SVC needed?

Service providers deserve a consistent benchmark as a basis for process improvement that is appropriate to the work they do and is based on a proven approach.

A variety of potential stakeholders approached the SEI asking for help with services. Demand for process improvement in services is likely to grow: services constitute more than 80% of the US and global economy.

Services constitute more than 54% of what the DoD acquires. In FY2006, DoD spent $146 billion on services. GAO reports a 72% increase in DoD service contracts between 1996 and 2005.*

Many organizations are cobbling together their own ITIL + CMMI solutions, reinventing the wheel over and over, and that wheel is not designed for services other than IT.

Customers are requesting that their service providers demonstrate a CMMI rating or capability profile, but attempts to use CMMI-DEV in a service setting can distort the integrity of appraisal results.

* FY 2006 data is from "DoD throws light on how it buys services [GCN 2006]." GAO data is from GAO report GAO-07-20.

How are services different?

Services form a distinct category of products:

- A service is an intangible, non-storable product.
- What makes a service intangible or non-storable?
  - Customer desires a situation or state (e.g., to have high network availability) rather than a tangible artifact
  - Product delivery may require a continuing application of labor (e.g., operation of a facility)

Services imply customer-provider relationships governed by service agreements:

- Service and non-service products may be delivered as part of a single agreement (e.g., training that includes hardcopy materials).

Services are often delivered through the operation of a service system.

Service providers have a different lifecycle and business rhythm than development.

How can services differ from one another?

Services can exhibit great variability regarding

- Services requested (both number and type)
- Incidents encountered
- Resources needed (e.g., for a single request or over time)
- Disruptions encountered (e.g., discontinuities, including upgrades)
- Quality of the services provided

Service providers share a common service management approach.

Mature service management uses

- Service levels and service level agreements
- Catalogs of standard services and service levels
- Disciplined service system development and deployment

Volunteer Organizations Working with the SEI

Team Membership

- Craig Hollenbach (Northrop Grumman) – team lead

- Eileen Forrester (SEI) – SEI lead and product owner

- Brandon Buteau (Northrop Grumman) – architect

- Frank Niessink (DNV)

- Lynn Penn (Lockheed Martin)

- Roy Porter (Northrop Grumman)

- Pam Schoppert (SAIC)

- Drew Allison (SSCI)

- Eileen Clark (formerly SRA)

- Rich Raphael (Mitre)

- Sharon Hantla (Boeing)

- Sandy Shrum (SEI)

Incorporating images in course materials should be dictated by content and all efforts should be made to allow for appropriate placement.

These guidelines can be used:

•Images should not bleed.

•Images with light areas at edges should have a 1 pt black rule.

•Images should allow for reasonable "Safe Area" to avoid overlap with other elements.

•Target file format (photos)

> •150 DPI
>
> •RGB
>
> •.JPG file format
> (medium to high quality compression)

Captions for images, charts or graphs should be 13 pt. Arial Italic. Can be made smaller if needed.

Prior members

- Jerry Simpson, SAIC

- Steve Stern, LMCO

- Jeff Zeidler, Boeing

SEI participants (partial list)

Roger Bate, architecture, CMF

Rhonda Brown, CM and QA

Maggie Glover, LA and instructor, multiple models

Mike Konrad, architect, CMF, author

Lisa Masciontonio, partners

Bob McFeely, training

Shane McGraw, customer communication

Joanne O'Leary, SAS

Mike Phillips, CMMI program manager

Mary Ellen Rich, certification

Sandy Shrum, author and editor

Barbara Tyson, training

Michael Wright, licensing

Rusty Young, appraisals

Purpose: To re-introduce the CMMI-SVC, announce SG sponsorship of CMMI-SVC constellation and re-directions, give overview of model, provide pilot feedback, provide schedule to complete

Goals:

-Announce restart and commitment and sponsorship to finish

-Provide short overview of the CMMI-SVC

-Provide CR summary

-Provide pilot summary

-Provide SG direction and guidance:

-Provide next steps

CMMI-SVC Advisory Group

Chris Carmody, UPMC

Sandra Cepeda, ARMDEC, SED/CSSA

Annie Combelles, DNV

Jeff Dutton, Jacobs Engineering

Brad Nelson, OSD

Larry Osiecki, Army

Tim Salerno, Lockheed Martin

Nidhi Srivastava, TCS

Beth Sumpter, NSA

David Swidorsky, Merrill Lynch

(Craig Hollenbach, Eileen Forrester, and Mike Phillips are non-voting members)

CMMI-SVC Purpose, Stakeholders, & History

Purpose

To extend the CMMI framework to cover the establishment and delivery of services

Key Stakeholders

CMMI Steering Group (SG), DoD, NDIA, Systems Engineering Division, industry, SEI, SEI partners

Project History

- In 2004, SG accepted a Northrop Gruman proposal to sponsor a Services CMMI; team began work in August 2005.

- In September 2006, the team produced a full review draft. SG asked the team to suspend work while the CMMI-ACQ was developing.

- In January 2007, the SG allowed the team to seek expert review of the draft.

- In April 2007, the SG asked the team to stop work on the resulting CRs.

- In February 2008, the team was given authority to proceed again.
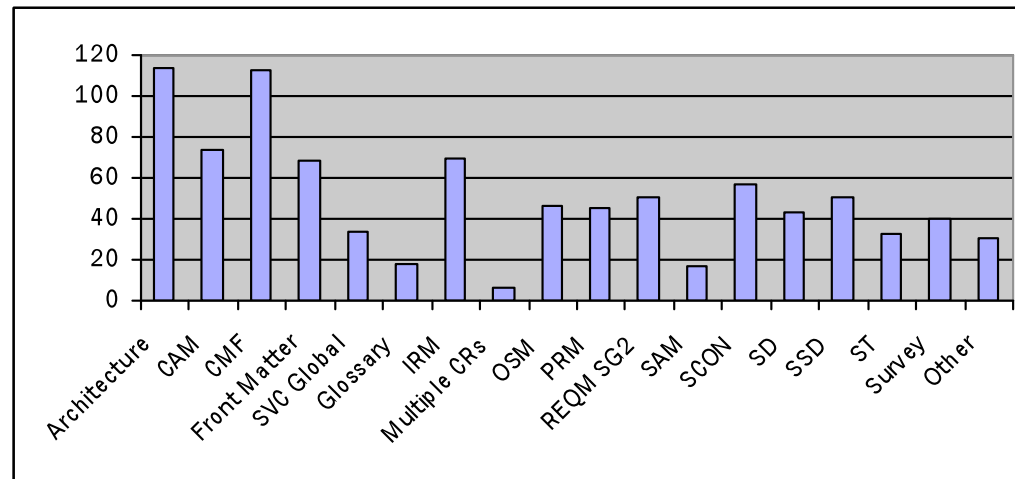
Current Status

CMMI-SVC team is currently working on the following builds:

- Architectural and editorial change requests
- CMMI Model Foundation change requests (via CMMI Architecture team)
- SVC-unique PA change requests

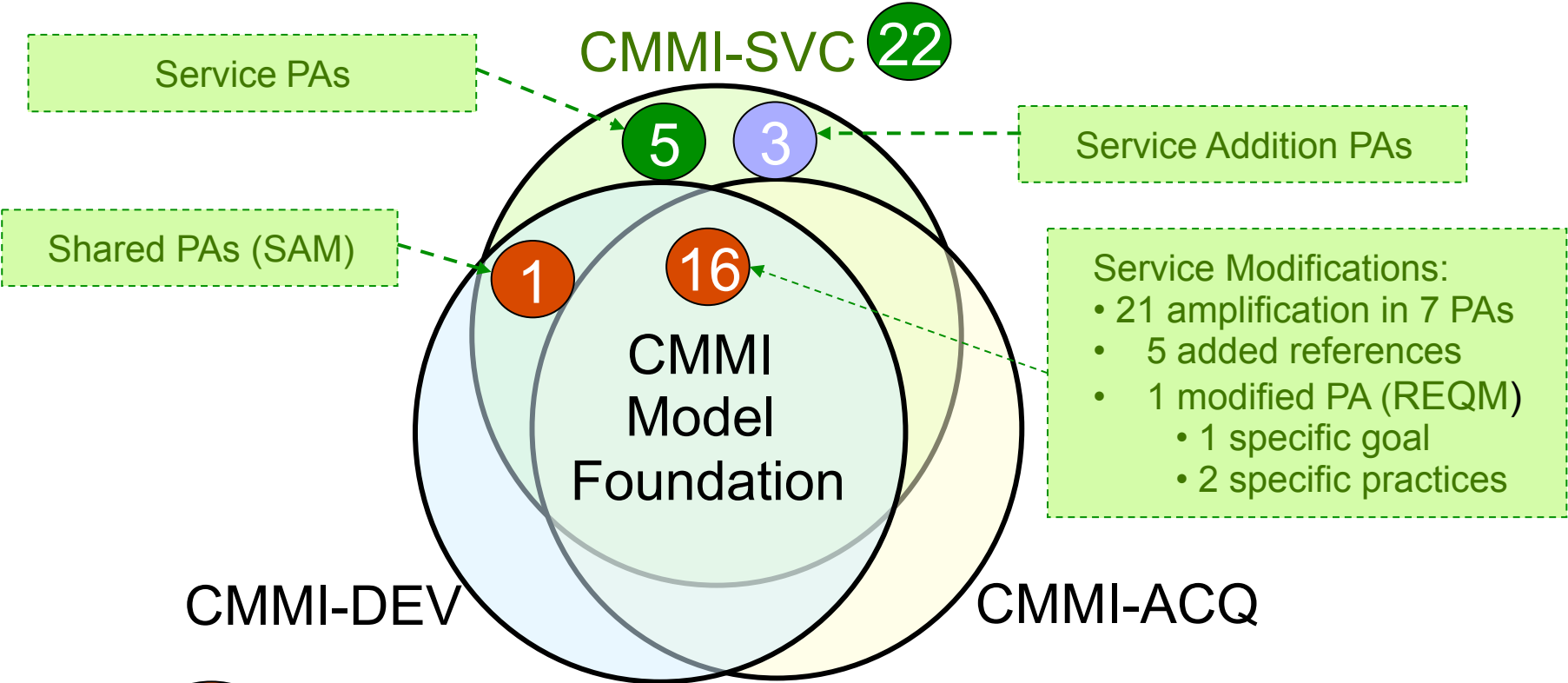Release of CMMI-SVC v1.2 is scheduled for March 2009

CMMI-SVC v0.5 change requests

CMMI-SVC v0.5 Reuse

CMMI for Services Constellation = 22 PAs + 3 Optional PAs

Service PAs

CMMI-SVC **22**

5 **3**

Service Addition PAs

Shared PAs (SAM)

1 **16**

CMMI Model Foundation

Service Modifications:
- 21 amplification in 7 PAs
- 5 added references
- 1 modified PA (REQM)
  - 1 specific goal
  - 2 specific practices

CMMI-DEV

CMMI-ACQ

77%

% of CMMI-DEV PAs are reused;
% of Corporate Investments are potentially reusable!

CMMI-SVC Process Areas in Review Draft

CMMI.®

Process Management

- Organizational Innovation and Deployment (OID)
- Organizational Process Definition (OPD)
- Organizational Process Focus (OPF)
- Organizational Process Performance (OPP)
- **Organizational Service Management (OSM)**
- Organizational Training (OT)

Support

- Causal Analysis and Resolution (CAR)
- Configuration Management (CM)
- Decision Analysis and Resolution (DAR)
- Measurement and Analysis (MA)
- **Problem Management (PRM)**
- Process and Product Quality Assurance (PPQA)

Project Management

- **Capacity and Availability Management (CAM)**
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- Risk Management (RSKM)
- Quantitative Project Management (QPM)
- **Service Continuity (SCON)**
- Supplier Agreement Management (SAM)

Service Establishment and Delivery

- **Incident and Request Management (IRM)**
- **Service Delivery (SD)**
- **Service System Development (SSD)**
- **Service Transition (ST)**

Proposed Structural Changes

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- **Incident Resolution and Prevention (IRP)***
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- **Service System Development (SSD)**
- **Service System Transition (SST)**
- **Strategic Service Management (SSM)**

CMMI-SVC Process Areas in Next Working Draft

CMMI®

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Maturity levels and additions, V 0.5b

In the review draft (V 0.5b)

- Two service-specific PAs were at maturity level 2: Incident Request Management (IRM) and Requirements Management (REQM), to which we added a goal 2 for establishing agreements

- All other service-specific PAs were maturity level 3: Capacity and Availability Management (CAM), Organizational Service Management (OSM), Problem Management (PRM), Service Continuity (SCON), Service Delivery (SD), Service System Development (SSD), and Service Transition (ST)

- Three of the service-specific PAs were additions (think "optional"): OSM, SCON, and SSD.

Maturity levels and additions, V 0.7d

Our current decisions about maturity levels:

- The revised SD is at maturity level 2; it now includes agreement management and request management.

- All other service-specific PAs are at maturity level 3.

Our current decisions about additions:

- SCON is no longer an addition.

- OSM (likely to be SSM or SSDM) will probably not be an addition.

- SSD remains an addition.

What changes are stable in the next drafts?

A new PA called Incident Resolution and Prevention incorporates material on incidents and problems that the review draft had in IRM and PRM. PRM is deleted.

Material on managing agreements and requests is included in SD.

SCON will be regular content, not an addition.

OSM will be Strategic Service Management (SSM) or Strategic Service Definition Management (SSDM) and move to the service category, with goal 1 oriented to strategic service definition, and customer satisfaction a practice.

We're trying out the CMMI-ACQ approach to generic goals and practices. They appear all in one section, not in each PA. However, we include elaborations.

We have applied the CMMI-ACQ approach to IPPD: an SP in IPM and in OPD.

SAM, which is shared rather than CMF, is revised to be more service friendly and is included.

What other changes might be coming?

The CMMI architecture team is applying changes to the CMF, based on CMMI-ACQ and CMMI-SVC needs.

For example, the CMF team has proposed a new specific practice for PP: Establish Project Strategy. This proposal is based on needs identified by both CMMI-ACQ and CMMI-SVC, and may not be implemented until version V1.3.

CMF changes go through the CCB. These changes may not be reflected in a working draft until CCB approves. Mike Konrad will brief next on CMF changes.

Advisory Group and pilots continue to provide input on these decisions:

- SSD: it has to be in the model, and not required. So far, it's an addition.
- CMF team is considering CRs requesting that SC be CMF for all constellations.

CMMI-SVC Service-Specific PAs: CAM

Capacity and Availability Management

- To plan and monitor the effective provision of resources to support service requirements

Issues:

- Isn't this something only IT does?

- Isn't this PP and PMC?

- Shouldn't this be high maturity?

- Aren't you raising the bar on level 3?

CMMI-SVC Architecture Principles (APs)

1. Minimize changes to CMMI architecture

2. Apply discipline-specific frameworks/models as sources of requirements and practices, but not as structural constraints

3. Model services-distinctive practices as distinct services process areas

4. Minimize cost of implementation and appraisal

5. Try to keep PA internal structure from getting too large (3-4 SGs, 3-4 SPs per SG) and balanced across PAs

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CAM Combined with PP/PMC?

- No – By AP #3, CAM practices are more specific expected guidance than is presented in PP and PMC. Adding purely informative material to PP and PMC would be inconsistent with existing level of detail.

- No – By AP #5, adding more specific practices to PP and PMC as CMMI-SVC additions would make those PAs larger and unwieldy, and would also be inconsistent with existing level of detail

CAM at Maturity Level 3

CAM practices are best employed as mature practices as standardized processes across projects at an organizational level

- Level 2 use is possible but not preferred

While dependent on some quantitative analysis and capability for prediction, CAM practices do not require statistical process control capability

- Level 4 or 5 use is not necessary, although CAM practices would be a likely beneficiary of QPM

Current intent of CMMI-SVC team is to keep CAM at ML 3

CMMI-SVC Service-Specific PAs: IRP

Incident Resolution and Prevention

- To ensure timely and effective resolution of service incidents and prevention of service incidents as appropriate

Notes:

- Combines the prior IRM and PRM
- "Incident" has variety of definitions in different contexts

CMMI-SVC Service-Specific PAs: SCON

Service Continuity

- To establish and maintain contingency plans for continuity of agreed services during and following any significant disruption of normal operations

Notes:

- Some CRs ask for consideration of SCON as CMF
- Not for "normal incidents" but significant disruptions

CMMI-SVC Service-Specific PAs: SD

Service Delivery

- To deliver services in accordance with service agreements

Notes:

- Incorporates agreement management (was REQM goal 2)
- Includes request management (was in IRM)
- Still revising, for example to agree on fit with PP

CMMI-SVC Service-Specific PAs: SSD

Service System Development

- To analyze, design, develop, integrate, verify, and validate service systems, including service system components, people, and consumables, to satisfy existing or anticipated service agreements

Notes:

- Applies to new and existing service systems

- Engineering PAs in DEV are recommended for improving product development process, large complex systems, and those very familiar with DEV.

- Using SSD may be preferred by service provider organizations that are new to the CMMI Framework—especially those with simple services. Even organizations that use the CMMI-DEV model for service system development may refer to the SSD process area for helpful guidance on applying development practices to service system parts like people, processes, and consumables.

CMMI-SVC Service-Specific PAs: SST

Service System Transition

- To deploy new or significantly changed service systems while managing their effect on ongoing service delivery

Notes:

- Can include deploying something new, replacing something, or retiring
- Strong interrelationships to SD and SSD
- People (end users and others) are part of the service system and must be accounted for in a transition

CMMI-SVC Service Specific PAs: SSM

Strategic Service Management

- To establish and maintain standard services in concert with strategic plans and needs

Notes:

- Service catalog is common term, but not only option

- Outcome is the collection of standard services, including service levels

- Internal and external audiences are important

- Still considering how much service improvement to include here

What are some common questions we get?

What is a service request?

What is a service agreement? Don't you mean SLA?

What is a service level?

Shouldn't the standard service repository be the PAL?

Is this model about SOA or SaaS?

Is this model a replacement for ITIL? Is it compatible with ITIL? Why didn't you just use the ITIL language for things? What about V3?

What's an example of a service system?

What's a service system component?

Service System

A necessary concept for understanding the effective delivery of services

Portions may not be delivered to the customer or end-user as part of service delivery.

Portions may remain owned by the customer or end-user or another provider before service delivery begins and after service delivery ends.

Encompasses everything required for service delivery, including people, work products, processes, infrastructure, consumables, and customer resources.

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Service System Definitions

A **service system** is an integrated and interdependent combination of service system components that satisfies stakeholder requirements.

A service system **component** is a process, work product, provider resource, supplier resource, or customer resource required for the service provider to deliver services. Service system components may include things owned by the customer.

A service system **consumable** is a component usable by the service provider that ceases to be available or becomes permanently changed by its use during the delivery of a service.

The **people** who perform tasks as part of the service system, including provider staff and end users, enable the system to operate and thereby deliver services.

Service system components are sometimes referred to informally as the "parts" of the service system for simplicity or brevity where appropriate.

What are the remaining big issues?

Use of the word "project" in the service context.

> The SEI is considering other options for how to describe work that is not development. This is relevant not only for services, but also for potential future CMMI constellations. (This issue is unlikely to be resolved with the first release of CMMI-SVC.)

Providing more help with applying CMF material in service context.

Handling joint appraisals and organizations that need more than one constellation to cover all their work.

Deciding how to qualify, train, and certify lead appraisers.

Ensuring applicability and usability (and enough informative material) for different service types.

Improving usability for small settings.

Deciding whether "staff augmentation" is in or out of scope.

What feedback and input would we like?

Experience reports and feedback from pilots. We especially need feedback on

- multiple constellation and multiple model use
- SSD; how well does the new informative material apply
- using the CMF PAs in service contexts
- overcoming barriers from use of the word "project"
- examples and experiences from a range of service types and sizes
- qualifications for lead appraisers

Tangible whole-product components we're interested in include

- interpretive guides for particular service types
- exemplar PIIDs
- training exercises and examples
- exam topics
- scenarios for additional service types (see scenario slides for examples)

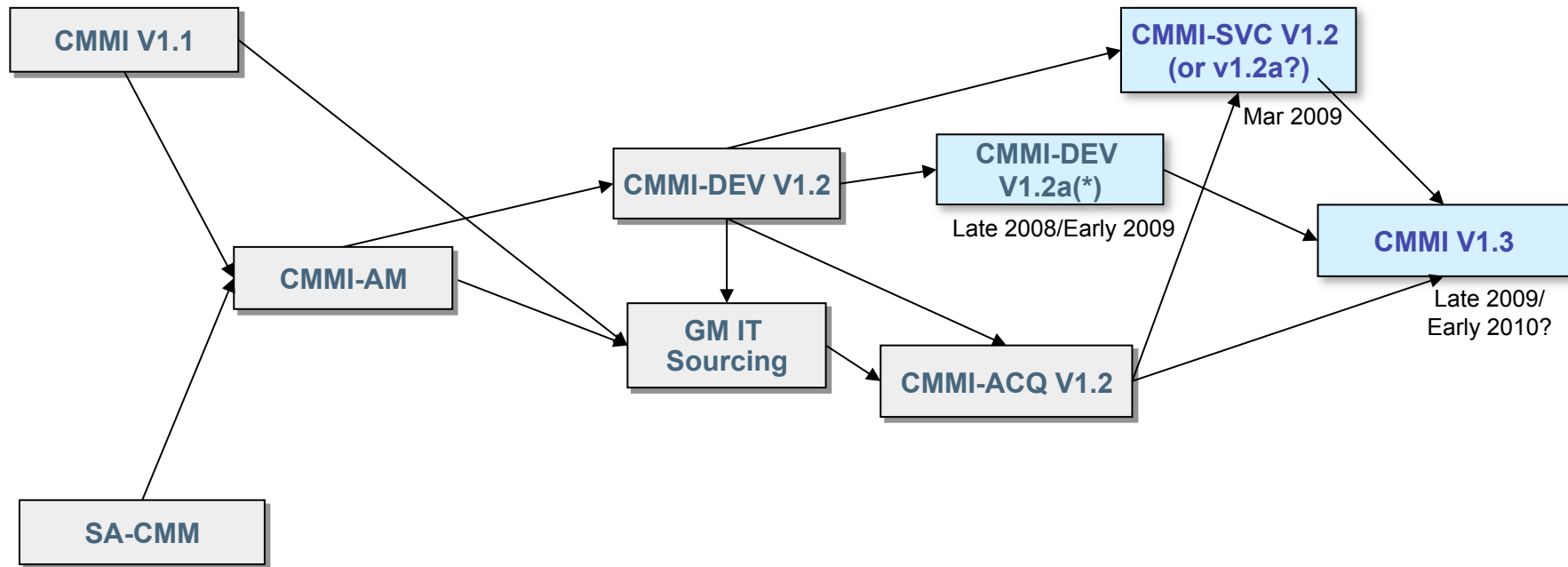# CMF changes are the next topic

Mike Konrad will present next about CMF changes.

We'll return to input we're looking for when we talk about partnering, pilots, and the topics for working groups.
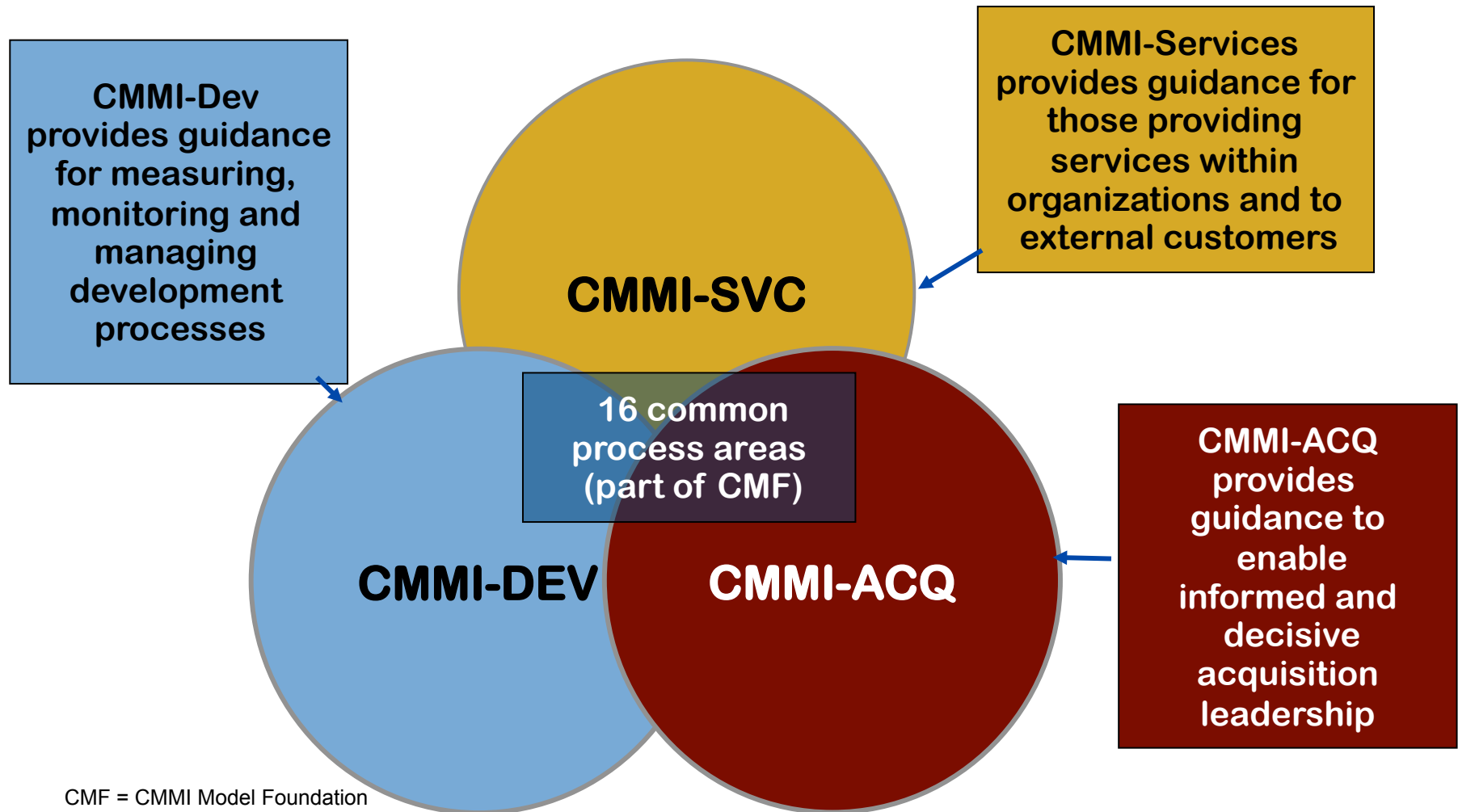
Planned Sequence of Models

*to cover clarifications to high maturity practices

3 Complementary "Constellations"

CMMI-Dev provides guidance for measuring, monitoring and managing development processes

CMMI-Services provides guidance for those providing services within organizations and to external customers

CMMI-SVC

CMMI-ACQ provides guidance to enable informed and decisive acquisition leadership

16 common process areas (part of CMF)

CMMI-DEV

CMMI-ACQ

CMF = CMMI Model Foundation

CMMI-SVC Process Areas in Next Working Draft

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Service Establishment and Delivery

- **Incident Resolution and Prevention (IRP)**
- **Service Delivery (SD)**
- **(+) Service System Development (SSD)**
- **Service System Transition (SST)**
- **(+) Strategic Service Management (SSM)**

An Evolving Definition of CMF

Keep concept of PA categories "loose"

- Move REQM to Project Management
- New PAs may be placed in existing PA categories

Give freedom to placement of GG & GP summaries and elaborations

- Allow GG and GP summaries to appear all in one section; not in each PA.
- GP elaborations would appear with the summaries.

Incorporate "leaned down" version of IPPD material

- A focus on *integrated teaming*, rather than on IPPD
- OPD SP 1.7 Establish Rules and Guidelines for Integrated Teams
- IPM SP 1.6 Establish Integrated Teams

Re-introduce concept of "shared" material

- Allow improved examples, explanations, and editorial refinements introduced by one constellation to be reused by others (e.g., ACQ's improvements to SAM; SVC's improvements to SS development practices)

But Exercise Care When Adapting the CMF[1]

Identify confusing or conflicting terminology in the CMF-related PA

- Rather than changing the definition, introduce usage notes to explain how the term is to be interpreted. Consider also adding to the Glossary.

Identify possible overlaps with new PAs

- Where possible, maintain integrity of the CMF-related PA
- If a new practice is special case of an existing CMF practice, try adding a note explaining this rather than introducing an additional practice
  - If there is a need for a more specific instance of the practice elsewhere, include a reference and acknowledge the overlap
- If a new practice is not a special case of a CMF practice, but might appear to be so, consider adding a note that explains the difference

Identify interrelationships with new PAs and existing CMF-Related PAs

- Especially where detail or instances are handled in the new PA
- Especially where the new PA provides inputs to the CMF-related PA
- Normally, CMF-related PAs do not refer to PAs that call them

But Exercise Care When Adapting the CMF[2]

Make the CMF-related PA concept, practice, or subpractice understandable in the new constellation

- Consider the context in which the term, practice, or subpractice will be used and selectively add notes and examples that explain how that term, practice, or subpractice is to be interpreted in the user's context

Be very cautious about adding new practices or subpractices to a CMF-related PA

- *Ideally, any non-CMF material introduced in a CMF-related PA is either a note or example explaining how the term, concept, practice, or subpractice applies in the context of the user – not a new behavior!*

In non-CMF-related PAs, avoid introducing new meanings to existing terms defined in the Glossary

- Use "usage notes" to explain the meaning of a term ideally using terminology familiar to users of the new constellation.

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Non-CMF Changes Proposed for PP[1]

Added notes on the meaning of "project:"

In CMMI, the term "project" is given a broad definition so that the practices that use that term (e.g., in the project management process areas) have appropriately broad applicability. The term "project" refers to a group of people and resources committed to planning, monitoring, and executing defined processes in a shared endeavor to achieve a set of objectives. These objectives include (or may be derived from) the goals of the business but will also include goals associated with customers, though there may not yet be any customers identified (or service agreements in place) when the project is initiated. [snip]

Obtaining business value from the practices in this and related process areas requires, in part, correctly identifying which endeavors are "projects."

Non-CMF Changes Proposed for PP²

Added notes on the meaning of the following terms:

- WBS

- Lifecycle

- Milestone

- Criteria for corrective action

Added examples:

- Tasks for which size measures are made

- Risks

- Relevant stakeholders

CMF Changes Proposed for PP[1]

Added a new SP that will be proposed for inclusion in CMF:

SP 1.1   Establish Project Strategy

Establish and maintain the project strategy.

The project strategy provides the business framework for planning and managing the project. It includes consideration of the following factors at an appropriate level of abstraction:

- the objectives and constraints for the project

- possible approaches to meeting those objectives and constraints

- the resources (e.g., key skills, environmental needs, tools, and new technologies) that will be needed

- key risks associated with these and how they are addressed

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CMF Changes Proposed for PP[2]

Other changes proposed to CMF:

- Added subpractice to SP 2.3 Plan Data Management:

    Determine the requirements for providing access to and distribution of data to stakeholders.

- Added subpractices to SP 2.4 Plan the Project's Resources

    Determine requirements for communication mechanisms.

    Determine other continuing resource requirements.

- Make explicit that SP 2.5 Plan Needed Knowledge and Skills also covers the changing needs and skills typical in service delivery (not an actual expansion of scope in the SP but a clarification of scope, providing value).

- Added subpractices to SP 2.7 Establish the Project Plan (it had none!)

Non-CMF Changes Proposed for PMC

Added explanations:

- SP 1.7 Conduct Milestone Reviews to better explain the SP

- SP 1.6 Conduct Progress Reviews and SP 1.7 Conduct Milestone Reviews – both include reviews of measures of customer satisfaction

- SP 2.1 Analyze Issues – how it differs from incident analysis as addressed in IRP

Added examples:

- Risks

- Issues in data management

CMF Changes Proposed for PMC

Changes proposed to CMF:

- Added an introductory note to each of the following SPs that better explain the SP (the SPs were otherwise terse and relatively note-free):

    1.4 Monitor Data Management

    1.5 Monitor Stakeholder Involvement

    1.6 Conduct Progress Reviews

- Make explicit that SP 1.3 Monitor Project Risks also covers new risks as they arise in service delivery

- Make explicit that SP 1.6 and 1.7 (progress and milestone reviews) can be addressed in one joint meeting

Non-CMF Changes Proposed for IPM

Added explanations:

- The term "project"

- The project's defined process would also be expected to cover the particular services that would be delivered

- How integrated teams apply in a service establishment and delivery context

Added examples:

- SP 2.1 Manage Stakeholder Involvement – added a TWP on coordination issues to be documented in a service context

Added subpractices:

- SP 1.1 Establish the Project's Defined Process

  – Select service descriptions from those available that best meet the needs and priorities of the project and organization

CMF Changes Proposed for IPM

Changes proposed to CMF:

- Revision to note explaining the types of organizations this PA applies to

- "Demote" CMF paragraph under SG 1 so it can be instantiated uniquely for each constellation

- SP 1.5 Manage the Project Using Integrated Plans – clarified nature of records collected in Typical Work Products

- SP 1.6 Establish Integrated Teams – a "new" SP!
  Also, added two notes to clarify in what circumstances this SP might be expected to apply

- SP 2.1 Manage Stakeholder Involvement – added subpractice:
  Ensure services that are performed to satisfy commitments meet the requirements of the recipients.

Non-CMF Changes Proposed for RSKM

Added explanations:

- Relationship to Service Continuity (SCON) – (SCON covers a certain category of risks, generally handled at the organizational level)

Added examples:

- Provide better placement of examples of risks specific to services; as well as additional examples of risks (e.g., risks associated with customer-provided resources).

CMF Changes Proposed for RSKM

Changes proposed to CMF:

- Under RSKM SP 2.2 SubP 1 (and/or other subpractices as appropriate): address monetization of risks and to quantifying consequences and risks as a whole. Make the existing note CMF.

- RSKM SP 3.1 SubP 3 statement: replace "cost-to-benefit ratio" with "costs and benefits"

Non-CMF Changes Proposed for REQM

Added explanations:

- Improved explanation of maintenance projects

- What traceability is important in a services environment and how you might manually manage it.

Added examples:

- Examples of how traceability applies in a service environment

- Traceability matrix

CMF Changes Proposed for REQM

Changes proposed to CMF:

- SP 1.3 Manage Requirements Changes – inserted a service-specific example ("breaches of service levels") in a CMF paragraph on why requirements change – should we consider a better approach (one that has less impact on what is CMF)?

"Backed out" proposed new goal on establishment of written agreements between service providers and customers on service requirements and service levels (SG 2).

- Moved to SD

- Notes inserted in the Introductory notes (and Purpose statement) and SG 1 to cover the proposed new goal have been eliminated/moved

Non-CMF Changes Proposed for MA

Added examples:

- Sources of information needs and objectives (MA SP 1.1) include "Recurring or other troublesome incidents."

CMF Changes Proposed for MA

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Changes proposed to CMF:

- Add introductory note that when data is to be used widely or is to be analyzed in support of determining data trends or benchmarks, data should reside in the organizational repository.

- Add a new sentence under MA SP 1.1 about the importance of identifying the change of behavior desired as a result of implementing a measurement and analysis activity.

- Add a new subpractice in MA SP 1.2 on maintaining traceability to objectives, also between measures derived from the same objective.

- Modify the information under MA SP 1.3 to specify that the context present when a measurement is made should be recorded and why.

- Add a sentence in MA SP 1.4 stating the importance of taking into account the quality (e.g., age and credibility) of all data that enters into an analysis.

Non-CMF Changes Proposed for CM

Added explanations:

- For services, CM is often focused on document versions and change control

Added examples:

- What may be placed under configuration management

- What information should be recorded for a configuration item

- Baselines

Added subpractices:

- Add new subpractice to SP 1.2 Establish a Configuration Management System: Provide access control to ensure authorized access to the configuration management system. (Should this be CMF?)

CMF Changes Proposed for CM

Changes proposed to CMF:

- Improve placement of examples of what to place under CM.

- Improve placement of example of baseline (from I.N. to SP 1.3)

- Improved wording of notes and subpractices so they apply to services.

- Add new subpractice to SP 1.1 Identify Configuration Items:
  Specify relationships among configuration items.

- SP 1.2 Establish a CM System: explain that different environments may
  require different CM subsystems

- SP 1.3 Create or Release Baselines: add note on providing access control

- Add new subpractice to SP 2.1 Track Change Requests:
  Categorize and prioritize change requests.

- SP 3.2 Perform Configuration Audits: added note on how to handle audits
  of multiple databases.

Changes Proposed for PPQA

All changes proposed for PPQA are related to CMF:

- All occurrences of "services" used in the "work product" sense have been removed because "service" is a subset of "work product."
(Should this also be a global change?)

- SP 1.2 Objectively Evaluate Work Products: add note that this SP also covers services produced by a process.

- SP 1.2: several inclusions of "selected" before "work products"

- SP 1.2: consolidate several subpractices, both CMF and non-CMF into: Evaluate selected work products at selected periods in their lifetime, as appropriate, including before they are delivered to the customer.

- Add note that ensures SP 1.1 and 1.2 jointly cover services: If a service to be evaluated has a process description, then SP 1.1 covers the evaluation of that service against its process description. SP 1.2 would then instead focus more on the effects of that service—its results, its impacts, etc.

Non-CMF Changes Proposed for OPD, OPF, OT, DAR

Added references:

- OPD: add reference to SSM

Added examples:

- DAR: When to apply a formal evaluation process in a services context

- OPD: almost one example per practice (i.e., example process elements, lifecycles, process tailoring, measures, other assets)

No changes (CMF or non-CMF) proposed for OT.

CMF Changes Proposed for OPD, OPF, OT, DAR

Changes proposed to CMF:

- OPF: add mention of the need to improve customer satisfaction as a driver for process improvement

- OPD SP 1.7 Establish Rules and Guidelines for Integrated Teams – a "new" SP!

Non-CMF Changes Proposed for OPP, QPM, CAR, OID

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Added references:

- CAR: to IRP

- OPP and QPM: to SSM and CAM

Added examples:

- OPP, QPM, CAR, and OID: add examples specific to services

Added explanation:

- OID: what "process and technology" means in the services context (i.e., it applies to the service system)

CMF Changes Proposed for OPP, QPM, CAR, OID

Changes proposed to CMF:

- CAR: "defects" is not a commonly used term in the services context; thus, use sparingly or characterize as "defects and other problems" instead

- QPM: improve placement of example boxes in SP 1.1 to improve their utility.

Adapting CMF-Related PAs to SVC

Many non-CMF changes have been proposed to the CMF-related PAs

- Clarifications, examples, references
- Implementing these is low risk

Adjudication of CMF-proposed changes may be rolled forward to v1.3

- Continue to pursue conservative approach to adapting CMF-related PAs
- While allowing CMF to evolve in directions that allow for greater harmonization and clarity (e.g., allow consideration of SVC-inspired improvements to CMF-related PAs that could benefit DEV, ACQ)
- Consistent with approach taken to developing ACQ
- From a multiple-model appraisal perspective, most problematic proposed changes are the two IPPD practices and new PP project strategy practice.
  - Note that these changes have already been made to ACQ - it is DEV that is "behind"
  - In any case, this is not an issue when using only a single model

Likewise, "HM update" (DEV v1.2a) may be pursued asynchronously.

Next Steps

In our reviews, we will continue to ensure that adaptations don't alter the meaning of CMF goals and practices.

This requires exercising care in what gets added to the CMF-related PAs.

We'd like your "reviews" of these CMF-related PA adaptations "in context," i.e., through piloting and submission of experience reports.

How good are the explanations? How good are the examples?

Ensure applicability and usability for different service types.

Give us your feedback using the mechanisms that Eileen Forrester will describe.

Pilot Appraisals and SCAMPI

We are encouraging pilots. CMMI partners have access to pre-release drafts and training to aid in piloting. We have an experience report template to assist you in giving us input.

Early users who are not partners have reported that they are already doing "SCAMPI Cs and Bs." We'd like your help in managing expectations and using correct labels.

You can do class B and C appraisals consistent with the SCAMPI MDD. But the results will not yet be recorded in our SAS system.

If a partner performs an appraisal as part of a pilot, we are evaluating whether we can "count" participation for those who are working toward LA or Team Leader.

The Steering Group has decided we will not accept SCAMPI A results for six months after release of the model.

Learning more and contributing

Opportunities for stakeholders:

- This workshop August 6 & 7 in Washington, D.C.

- First offering of the one-day training October 30 in Vancouver Washington after the Lead Appraiser workshop (price is TBD).

- Possible one-day training at the November NDIA CMMI Technology Conference (CTC) in Denver.

- Possible alpha or beta testing of CMMI certification exam at CTC.

- Currently accepting alpha and beta testing candidates; send mail to cmmi-comments@sei.cmu.edu.

- Planning to put a version of this overview online with a voice track.

- Possible public workshop and partner-only training in Europe in November.

Most opportunities are in the U.S. We can consider European and other venues if we have financial sponsorship.

How can you participate?

Pilot and provide experience reports. Let us know if you'd like to be listed on our web site as an early adopter.

Review or implement the draft CMMI-SVC, especially for applicability in various service domains, and feel free to apply likely changes described in this presentation.

Write additional scenarios for service types.

Contribute exercises and examples for appraisal training.

Suggest typical work products and other informative material for specific service types.

Provide mappings to other frameworks and models that you use.

Contact partner-info@sei.cmu.edu if you aren't a partner and would like to learn about becoming one. Or talk to Lisa while you're here.

How can you stay informed?

Get more information about CMMI-SVC

- CMMI website: http://www.sei.cmu.edu/cmmi/

- CMMI for Services Public Workspace (http://bscw.sei.cmu.edu/pub/bscw.cgi/0/424939) contains

    – Draft CMMI-SVC model, v0.5

    – Q&As and notices

    – Information on joining CMMI-SVC information email list

    – Other communication products

Write to cmmi-comments@sei.cmu.edu with comments and questions

When in doubt, contact SEI CR: customer-relations@sei.cmu.edu

Deciding on working groups

Are there any topics that merit full-group discussion?

Remember the panel opportunity to discuss questions and issues.

I propose a modified "open space" approach to decide topics.

The desired outcome of this agenda topic is an initial set of likely topics. You can think overnight and in the morning we'll "vote with our feet."

Team members and SEI staff will be asked to participate in groups as needed.

Desired output for groups

Briefing in plenary session, length dependent on number of groups.

Useful outputs include:

- Problem or issue identification

- Recommendations or feedback

- Analysis of options

Questions to guide the group (or roll your own):

- What's the topic? How did you frame the issue?

- What insights or answers were seminal in your group? Significant agreement or areas of disagreement?

- What questions remain? Data or research needed?

- Do you have recommendations or advice for the development team, Advisory Group, Steering Group, or SEI?

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Topics for working groups

Deep dive on any PA or combination of PAs

The "project" conundrum

How to get started if you're brand new to CMMI

CMF PAs in service contexts; CM and PPQA, for example

Definitions and terminology

CAM: why it's not high maturity, and not PP and PMC

Range of service types

Lead appraiser qualifications

SSD (criteria for using it or engineering PAs)

"Blended" learning for CMMI-SVC training products

Maturity levels of SVC PAs

High maturity and CMMI-SVC

Issues for small settings

Staff augmentation

Contact information

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References

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itSMF - http://www.itsmf.com/

BS 15000 - http://www.bs15000.org.uk/

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ITSCMM - http://www.itservicecmm.org/

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