

Using CMMI-DEV and CMMI-SVC Together

Where “Build Stuff” Happens in CMMI-SVC

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Topics

- Combined approaches and models for improvement
- The patterns for using multiple models in mixed service and development environments
- How the SEI is trying to help



The CMMI Models

The CMMI Product Suite currently has three models relevant to improvement in a particular area of interest.

Development (CMMI-DEV)

- build stuff
- tangible, storable products made to specification in a lifecycle

Acquisition (CMMI-ACQ)

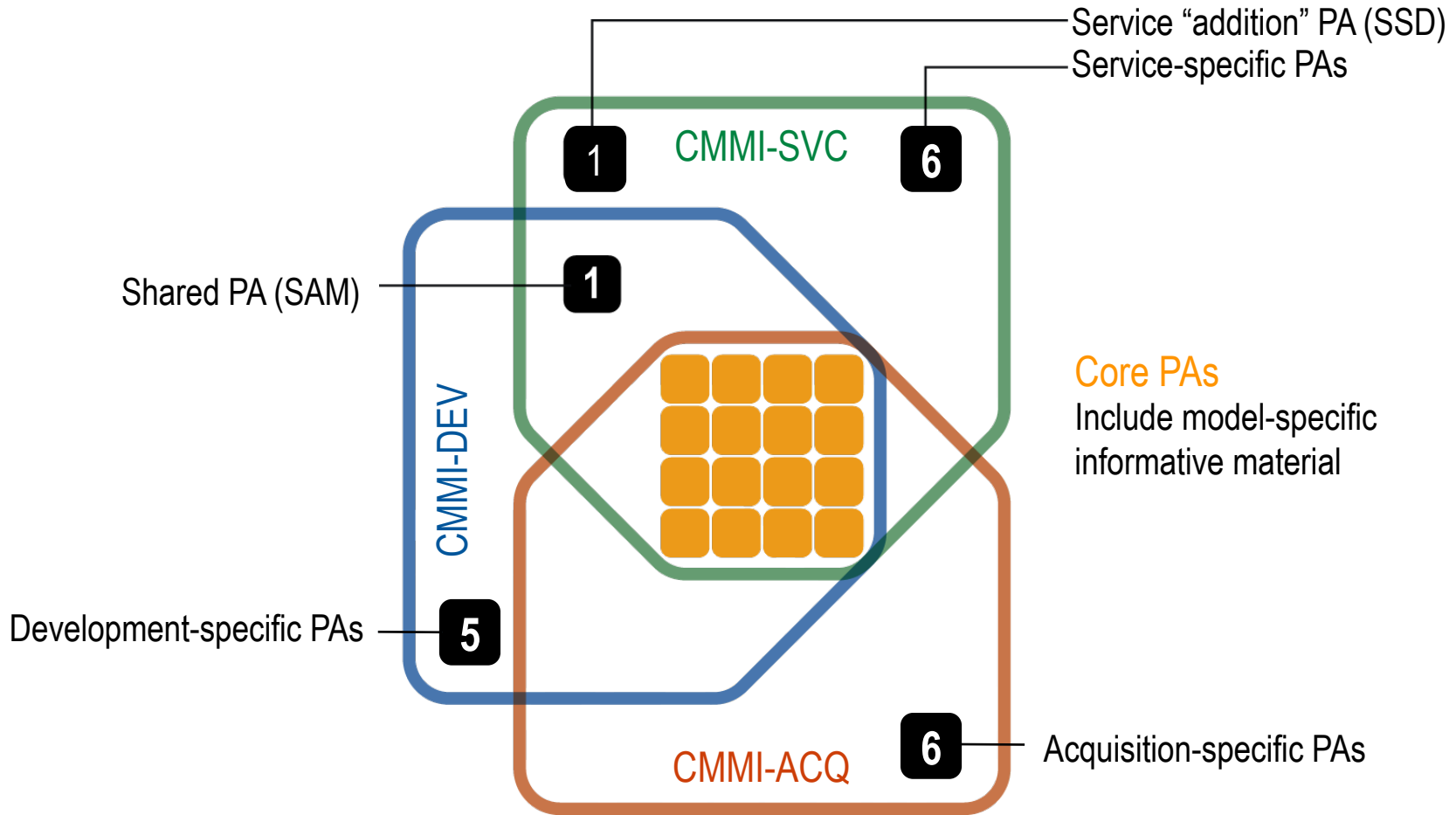
- buy stuff
- specify, solicit, select, contract, procure, accept, transition to consumer

Services (CMMI-SVC)

- do stuff
- intangible, non-storable products delivered via a service system based on explicit or implicit service requests



Relationships Among CMMI Models



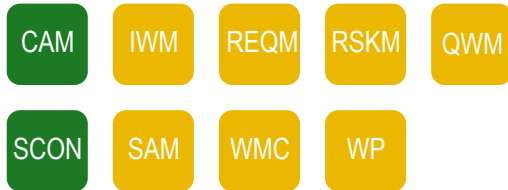
Differences in PAs and Categories

CMMI-SVC PAs by Category

Process Management



Project and Work Management



Support



Service Establishment and Delivery



CMMI-DEV PAs by Category

Process Management



Project Management



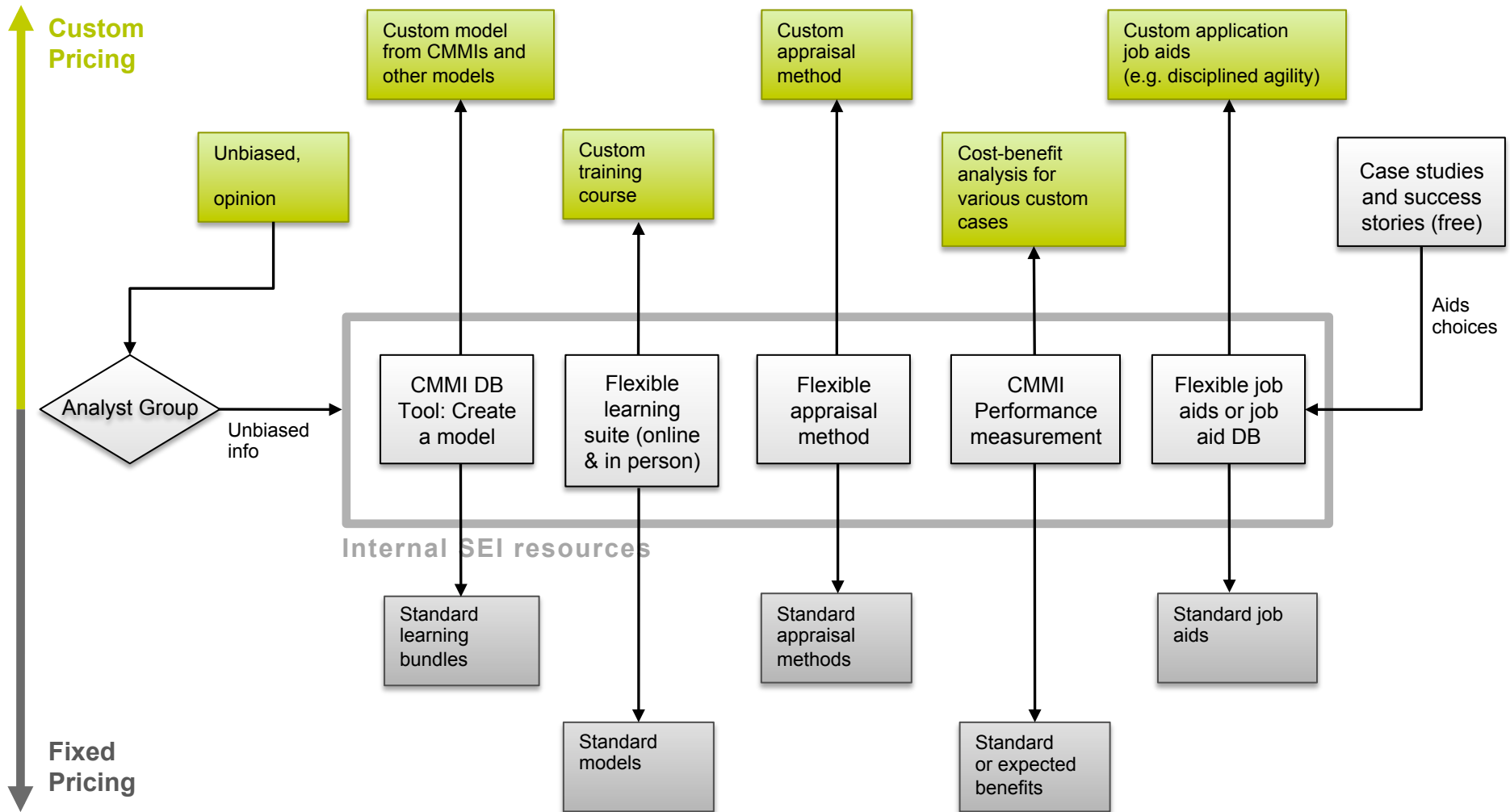
Support



Engineering



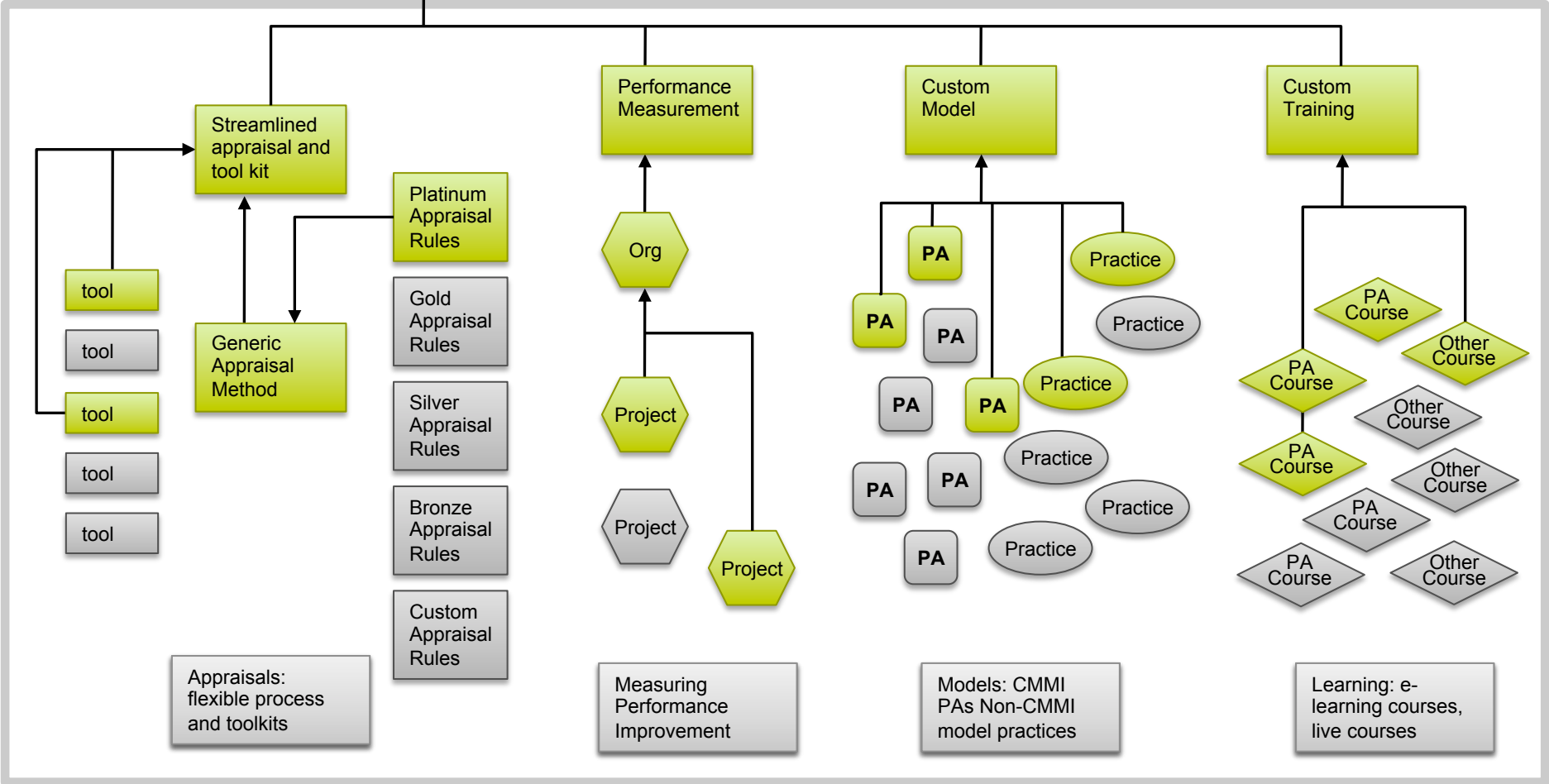
CMMI Strategic Product Planning



SAS and PARS
(posted to PARS by
specific authorization)

Your
Solution

Tell us what you need and we'll provide the mixed model to suit your domain and business; the type of appraisal that suits your budget, resources and requirements; custom training for precise practices that matter most to your business success!



Your needs such as: for appraisals (cost, precision, accuracy, etc.) for models (applicable models, methods, standards, etc. and only those parts of them that you need), for training (training specific to the parts and pieces selected for models and where you have training needs, i.e., targeted training)



Patterns we see in using DEV and SVC

Increasingly, CMMI-DEV and CMMI-SVC are used in the same organization, implementing and appraising together.

Choose CMMI-SVC as your base model, grab the engineering PAs for particular services.

Treat development or engineering as a service, managed using the practices of CMMI-SVC, and treat the engineering PAs as informative material to SSD.

Use all of the CMMI-DEV for advanced development, and then add CMMI-SVC for additional practices: SCON, SST, CAM.

Start with CMMI-DEV at the beginning of a life cycle, adding in a few SVC goals and practices. Add more in mid-life. Change over to SVC at the end for operations and maintenance.

Take a life cycle view and consider total cost of ownership, may add multiple other models, do a mash up or composition from CMMI and other models.



SSD and CMMI-DEV Engineering PAs

SSD compared to CMMI-DEV Engineering PAs		
In SSD (SVC)	In Engineering (DEV)	
SG1 Stakeholder needs, expectations, constraints, and interfaces are collected, analyzed, and transformed into validated service system requirements.	RD - Requirements Development	
SP1.1 Collect and transform stakeholder needs, expectations, constraints, and interfaces into prioritized stakeholder requirements.	RD SG 1 Stakeholder needs, expectations, constraints, and interfaces are collected and translated into customer requirements.	RD SP 1.1 Elicit Needs RD SP 1.2 Transform Stakeholder Needs into Customer Requirements
SP1.2 Define and elaborate stakeholder requirements to develop service system requirements.	RD SG 2 Customer requirements are refined and elaborated to develop product and product component requirements.	RD SP 2.1 Establish Product and Product Component Requirements RD SP 2.2 Allocate Product Component Requirements RD SP 2.3 Identify Interface Requirements
SP1.3 Analyze and validate requirements, and define required service system functionality and quality attributes.	RD SG 3 The requirements are analyzed and validated.	RD SP 3.1 Establish Operational Concepts and Scenarios RD SP 3.2 Establish a Definition of Required Functionality and Quality Attributes RD SP 3.3 Analyze Requirements RD SP 3.4 Analyze Requirements to Achieve Balance RD SP 3.5 Validate Requirements
SG 2 Service system components are selected, designed, implemented, and integrated.	TS - Technical Solution PI - Product Integration	
SP 2.1 Select service system solutions from alternative solutions.	TS SG 1 Product or product component solutions are selected from alternative solutions.	TS SP 1.1 Develop Alternative Solutions and Selection Criteria TS SP 1.2 Select Product Component Solutions
SP 2.2 Develop designs for the service system and service system components.	TS SG 2 Product or product component designs are developed.	TS SP 2.1 Design the Product or Product Component TS SP 2.2 Establish a Technical Data Package TS SP 2.3 Design Interfaces Using Criteria TS SP 2.4 Perform Make, Buy, or Reuse Analysis
SP 2.3 Manage internal and external interface definitions, designs, and changes for service systems.	PI SG 1 Preparation for product integration is conducted.	PI SP 1.1 Establish an Integration Strategy PI SP 1.2 Establish the Product Integration Environment PI SP 1.3 Establish Product Integration Procedures and Criteria
SP 2.4 Implement the service system design.	PI SG 2 The product component interfaces, both internal and external, are compatible.	PI SP 2.1 Review Interface Descriptions for Completeness PI SP 2.2 Manage Interfaces
SP 2.5 Assemble and integrate implemented service system components into a verifiable service system.	TS SG 3 Product components, and associated support documentation, are implemented from their designs. PI SG 3 Verified product components are assembled and the integrated, verified, and validated product is delivered.	TS SP 3.1 Implement the Design TS SP 3.2 Develop Product Support Documentation PI SP 3.1 Confirm Readiness of Product Components for Integration PI SP 3.2 Assemble Product Components PI SP 3.3 Evaluate Assembled Product Components PI SP 3.4 Package and Deliver the Product or Product Component
SG 3 Selected service system components and services are verified and validated to ensure correct service delivery.	VER - Verification VAL - Validation	
SP 3.1 Establish and maintain an approach and an environment for verification and validation.	VER SG 1 Preparation for verification is conducted. VAL SG 1 Preparation for validation is conducted.	VER SP 1.1 Select Work Products for Verification VER SP 1.2 Establish the Verification Environment VER SP 1.3 Establish Verification Procedures and Criteria VAL SP 1.1 Select Products for Validation VAL SP 1.2 Establish the Validation Environment VAL SP 1.3 Establish Validation Procedures and Criteria
SP 3.2 Perform peer reviews on selected service system components.	VER SG 2 Peer reviews are performed on selected work products.	VER SP 2.1 Prepare for Peer Reviews VER SP 2.2 Conduct Peer Reviews VER SP 2.3 Analyze Peer Review Data
SP 3.3 Verify selected service system components against their specified requirements.	VER SG 3 Selected work products are verified against their specified requirements.	VER SP 3.1 Perform Verification VER SP 3.2 Analyze Verification Results
SP 3.4 Validate the service system to ensure that it is suitable for use in the intended delivery environment and meets stakeholder expectations.	VAL SG 2 The product or product components are validated to ensure they are suitable for use in their intended operating environment.	VAL SP 2.1 Perform Validation VAL SP 2.2 Analyze Validation Results

Some mixed services and development environments use both the engineering PAs from DEV and a single SVC PA: Service System Development. The patterns:

- Stick with SSD, but grab a single engineering PA when needed
- Use SSD for simple development, add engineering PAs for complex development
- Use SSD and treat engineering PAs roughly as “informative material”
- Use engineering PAs for service systems, but add the informative material from SSD to get the service flavor



SSD vs. CMMI-DEV Engineering PAs 1 of 4

In SSD (SVC)	In Engineering (DEV)	
<p>SG1 Stakeholder needs, expectations, constraints, and interfaces are collected, analyzed, and transformed into validated service system requirements.</p>	<p>RD – Requirements Development</p>	
<p>SP1.1 Collect and transform stakeholder needs, expectations, constraints, and interfaces into prioritized stakeholder requirements.</p>	<p>RD SG 1 Stakeholder needs, expectations, constraints, and interfaces are collected and translated into customer requirements.</p>	<p>SP 1.1 Elicit Needs SP 1.2 Transform Stakeholder Needs into Customer Requirements</p>
<p>SP1.2 Refine and elaborate stakeholder requirements to develop service system requirements.</p>	<p>RD SG 2 Customer requirements are refined and elaborated to develop product and product component requirements.</p>	<p>SP 2.1 Establish Product and Product Component Requirements SP 2.2 Allocate Product Component Requirements SP 2.3 Identify Interface Requirements</p>
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SSD vs. CMMI-DEV Engineering PAs 2 of 4

In SSD (SVC)	In Engineering (DEV)	
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<p>SP 2.2 Develop designs for the service system and service system components.</p>	<p>TS SG 2 Product or product component designs are developed.</p>	<p>SP 2.1 Design the Product or Product Component SP 2.2 Establish a Technical Data Package SP 2.3 Design Interfaces Using Criteria SP 2.4 Perform Make, Buy, or Reuse Analyses</p>
<p>SP 2.3 Manage internal and external interface definitions, designs, and changes for service systems.</p>	<p>PI SG 1 Preparation for product integration is conducted.</p> <p>PI SG 2 The product-component interfaces, both internal and external, are compatible.</p>	<p>SP 1.1 Establish an Integration Strategy SP 1.2 Establish the Product Integration Environment SP 1.3 Establish Product Integration Procedures and Criteria SP 2.1 Review Interface Descriptions for Completeness SP 2.2 Manage Interfaces</p>



SSD vs. CMMI-DEV Engineering PAs 3 of 4

In SSD (SVC)	In Engineering (DEV)	
<p>SP 2.4 Implement the service system design.</p>	<p>TS SG 3 Product components, and associated support documentation, are implemented from their designs.</p>	<p>SP 3.1 Implement the Design SP 3.2 Develop Product Support Documentation</p>
<p>SP 2.5 Assemble and integrate implemented service system components into a verifiable service system.</p>	<p>PI SG 3 Verified product components are assembled and the integrated, verified, and validated product is delivered.</p>	<p>SP 3.1 Confirm Readiness of Product Components for Integration SP 3.2 Assemble Product Components SP 3.3 Evaluate Assembled Product Components SP 3.4 Package and Deliver the Product or Product Component</p>

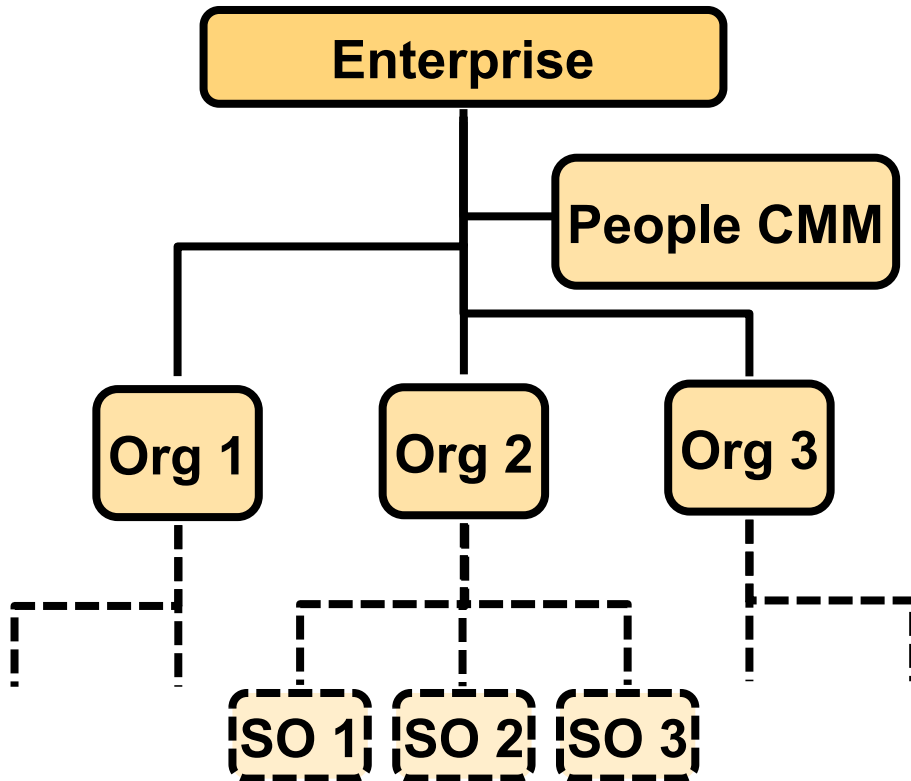


SSD vs. CMMI-DEV Engineering PAs 4 of 4

In SSD (SVC)	In Engineering (DEV)	
<p>SG 3 Selected service system components and services are verified and validated to ensure correct service delivery.</p>	<p>VER – Verification VAL – Validation</p>	
<p>SP 3.1 Establish and maintain an approach and an environment for verification and validation.</p>	<p>VER SG 1 Preparation for verification is conducted. VAL SG 1 Prepare for validation is conducted.</p>	<p>VER SP 1.1 Select Work Products for Verification VER SP 1.2 Establish the Verification Environment VER SP 1.3 Establish Verification Procedures and Criteria VAL SP 1.1 Select Products for Validation VAL SP 1.2 Establish the Validation Environment VAL SP 1.3 Establish Validation Procedures and Criteria</p>
<p>SP 3.2 Perform peer reviews on selected service system components.</p>	<p>VER SG 2 Peer reviews are performed on selected work products.</p>	<p>VER SP 2.1 Prepare for Peer Reviews VER SP 2.2 Conduct Peer Reviews VER SP 2.3 Analyze Peer Review Data</p>
<p>SP 3.3 Verify selected service system components against their specified requirements.</p>	<p>VER SG 3 Selected work products are verified against their specified requirements.</p>	<p>VER SP 3.1 Perform Verification VER SP 3.2 Analyze Verification Results</p>
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A Multi-Constellation Look



CL 3																				
CL 2																				
CL 1																				
SVC	S	C	I	S	S	S			P	P	P	R							I	R
	D	A	R	O	S	S			/	/	/	E	S						P	S
	M	M	P	N	D	T			W	W	Q	Q	A					O	W	K
									A	C	P	A	M					O	P	M
									M									P		

CL 3																				
CL 2																				
CL 1																				
DEV	P	R	T	V	V				P	P	P	R							I	R
	I	D	S	A	E				/	/	/	E	S					O	W	K
	M	A		L	R				W	W	Q	Q	A					O	P	M
									M									P		
									A	C	P	A	M					P		

CL 3																				
CL 2																				
CL 1																				
ACQ	A	A	S	A	A				P	P	P	R							I	R
	M	R	A	T	V				/	/	/	E	S					O	W	K
	D	D	D	M	L				W	W	Q	Q	A					O	P	M
									M									P		
									A	C	P	A	M					P		



Organization 1

Org 1 is primarily a development organization

CL 3																					
CL 2																					
CL 1																					
svc	S D	C A M	I R P	S O N	S D	S T	S M	C M	M A	P / W C	P / W P	P Q A	R Q M	S A M	O P D	O P F	O T	D A R	I / W M	P S K M	

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DEV	P I	R D	T S	V A L	V E R	C M	M A	P / W C	P / W P	P Q A	R Q M	S A M	O P D	O P F	O T	D A R	I / W M	P S K M

CL 3																					
CL 2																					
CL 1																					
ACQ	A M	A R D	S A D	A T M	A V L	A V E R	C M	M A	P / W C	P / W P	P Q A	R Q M	S A M	O P D	O P F	O T	D A R	I / W M	P S K M		



Organization 1

They also perform some services

- They have a help desk which is important to them
- The need to ensure it is adequately staffed, problems are corrected, and it will not be disrupted even by disaster
- The organization recognizes the value of measurement and analysis
- They want to check that the process is being followed

CL 3	3							3													
CL 2	2	2	2	2				2													
CL 1	1	1	1	1				1			1										
SVC	S	C	I	S	S	S	S	C	M	P	P	P	R	S	O	O	O	D	I	P	R
D	A	R	O	S	S	S	M	M	A	W	W	Q	Q	A	P	P	T	A	W	M	M

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DEV	P	R	T	V	V	C	M	P	P	P	R	S	O	O	D	I	P	R	S	K
I	D	S	L	R	M	A	C	W	W	Q	Q	A	P	P	T	A	W	M	M	M

CL 3																				
CL 2																				
CL 1																				
ACQ	A	A	S	A	A	C	M	P	P	P	R	S	O	O	D	I	P	R	S	K
M	R	A	A	T	V	M	A	W	W	Q	Q	A	P	P	T	A	W	M	M	M



Organization 1

They acquire some products and services

- Develop product requirements
- Conduct a source selection
- Manage the acquisition and requirements
- Have a formal bid evaluation and decision process
- Verify, validate, and transition the product and services
- Ensure process fidelity
- Measure and analyze the process

CL 3	3																				
CL 2	2	2	2	2																	
CL 1	1	1	1	1																	
SVC	S	C	I	S	S	S	S			P	P	P	R	S					I	P	R
D	M	A	R	O	S	D	S			W	W	Q	Q	A					D	W	K
										M	M	A	M	M					O	P	M

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
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CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
DEV	P	R	T	V	V					P	P	P	R	S					I	P	R
I	D	S	L	A	E					W	W	Q	Q	A					D	W	K
										M	M	A	M	M					O	P	M

CL 3	3	3	3																		
CL 2	2	2	2	2	2	2													2		
CL 1	1	1	1	1	1	1													1		
ACQ	A	A	S	A	A	A				P	P	P	R	S					I	P	R
M	R	A	A	T	A	V				W	W	Q	Q	A					D	W	K
	D	D	D	M	L	R				M	M	A	M	M					O	P	M



Organization 2

Org 2 is primarily an acquisition organization

CL 3																				
CL 2																				
CL 1																				
SVC	S	C	I	S	S	S	P	P	P	R	O	O	O	D	I	P	R	S	K	
	D	A	R	O	S	T	M	W	W	Q	A	P	P	A	W	M	M	M	M	
		M	P	N	D	M	C	C	P	A	M	D	F	R	M					

CL 3																				
CL 2																				
CL 1																				
DEV	P	R	T	V	V	C	P	P	P	R	O	O	O	D	I	P	R	S	K	
	I	D	S	A	E	M	W	W	Q	Q	A	P	P	A	W	M	M	M	M	
				L	R	A	C	P	A	M	D	F	T	R	M					

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ACQ	A	A	S	A	A	C	P	P	P	R	O	O	O	D	I	P	R	S	K	
	M	R	A	T	V	M	W	W	Q	Q	A	P	P	A	W	M	M	M	M	
	D	D	D	L	R	A	C	P	A	M	D	F	T	R	M					



Organization 2

They also provide acquisition help services to other organizations in the enterprise

- They have a request for services function
- They recognize the need to handle service issues
- Staffing and recovery from disruption, while important are not critical
- Measurement and analysis are important
- Ensure process fidelity

CL 3	3							3												
CL 2	2		2					2												
CL 1	1	1	1	1				1			1									
svc	S	C	I	S	S	S	S	C	M	P	P	P	R	O	O	O	D	I	P	R
	D	A	R	O	S	S	T	M	A	W	W	Q	Q	P	P	F	A	W	S	K
		M	P	N	D	T	M			C	P	A	M	D	D	T	R	M	M	M

CL 3																				
CL 2																				
CL 1																				
DEV	P	R	T	V	V			C	M	P	P	P	R	O	O	O	D	I	P	R
	I	D	S	A	E			M	A	W	W	Q	Q	P	P	F	A	W	S	K
				L	R					C	P	A	M	D	D	T	R	M	M	M

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ACQ	A	A	S	A	A	A		C	M	P	P	P	R	O	O	O	D	I	P	R
	M	R	A	T	A	V		M	A	W	W	Q	Q	P	P	F	A	W	S	K
		D	D	M	L	R				C	P	A	M	D	D	T	R	M	M	M



Organization 2

The organization develops applications to support its work

- Good requirements and controlling changes are important
- Ensuring the software works correctly is critical
- Need delivery on schedule
- Need to measure and analyze the process
- Need to ensure process fidelity

CL 3	3							3													
CL 2	2		2					2													
CL 1	1	1	1	1				1			1										
svc		C	I	S	S	S	S			P	P	R								I	
	S	A	R	O	S	S	T	M	C	M	W	W	Q	Q	A	M	M	O	O	D	P
	D	M	P	N	D	T	M		M	A	C	P	A	M	M			D	F	R	M

CL 3								3												
CL 2		2		2	2			2			2									
CL 1	1	1	1	1	1			1	1	1	1	1	1							
DEV		P	R	T	V	V				P	P	P	R	S						I
	I	D	S	L	R		C	M	M	W	W	Q	Q	A	M	O	O	D	A	P
	D	S	L	R		M	A	C	P	A	M	M				D	F	R	M	M

CL 3	3	3	3	3	3	3		3	3	3	3	3	3	3	3	3	3	3	3	3
CL 2	2	2	2	2	2	2		2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1
ACQ		A	A	S	A	A				P	P	R								I
	M	R	D	D	T	V	R	C	M	W	W	Q	Q	A	M	O	O	D	A	P
	D	D	D	M	L	R	M	A	C	P	A	M	M		D	F	R	M	M	M



Organization 3

Org 3 is primarily a services organization

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
SVC	S D	C A R M	I R P	S O N	S D	S T	S M	C M	M A	P / W C	P / Q P	P P Q M	R E Q M	S A M	O P D	O P F	O T	D A R	I P W M	R S K M

CL 3																			
CL 2																			
CL 1																			
DEV	P I	R D	T S	V A L	V E R	C M	M A	P / W C	P / Q P	P P Q M	R E Q M	S A M	O P D	O P F	O T	D A R	I P W M	R S K M	

CL 3																			
CL 2																			
CL 1																			
ACQ	A M	R A D	S A D	A T M	A V L	A V E R	C M	M A	P / W C	P / Q P	P P Q M	R E Q M	S A M	O P D	O P F	O T	D A R	I P W M	R S K M



Organization 3

Services include some software maintenance

- Need to meet the maintenance SLAs
- Need to provide quality maintenance
- Need to control changes
- Measure and analyze
- Ensure process fidelity

CL 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SVC	S	C	I	S	S	S	S	P	P	P	R	S	O	O	O	D	I	P	R
	D	A	R	O	S	S	S	W	W	Q	Q	A	P	P	T	A	P	W	K
	M	M	P	N	D	T	M	M	P	A	M	M	D	F	R	R	M	M	M

CL 3						3													
CL 2	2	2	2	2	2	2	2			2									
CL 1	1	1	1	1	1	1	1	1	1	1									
DEV	P	R	T	V	V	C	M	P	P	P	R	S	O	O	D	I	P	R	S
	I	D	S	L	R	M	A	W	W	Q	Q	A	P	P	T	A	W	K	M
								M	P	A	M	M	D	F	R	R	M	M	M

CL 3																			
CL 2																			
CL 1																			
ACQ	A	A	S	A	A	C	M	P	P	P	R	S	O	O	D	I	P	R	S
	M	R	A	T	V	M	A	W	W	Q	Q	A	P	P	T	A	W	K	M
	D	D	M	L	R			M	P	A	M	M	D	F	R	R	M	M	M



Organization 3

Occasionally provide procurement support services under the SLA

- Develop and control requirements
- Support the solicitation
- Provide verification and validation support services
- Measurement and analysis
- Ensure process fidelity

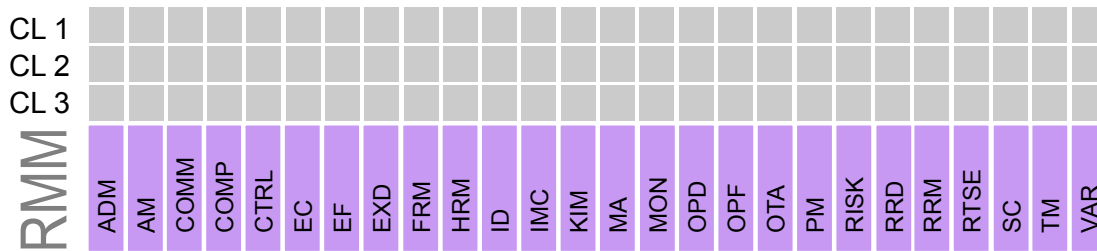
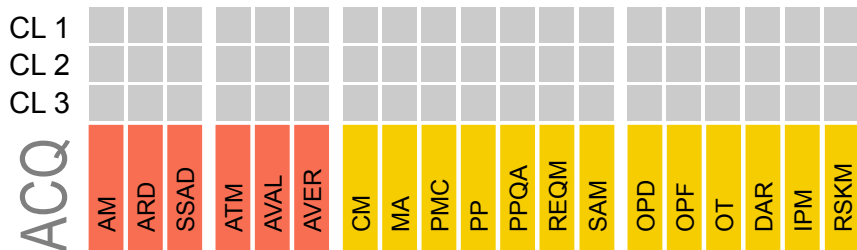
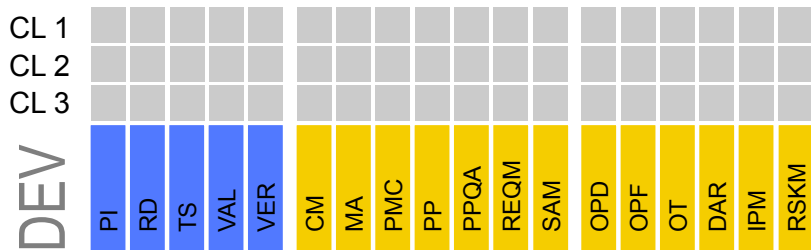
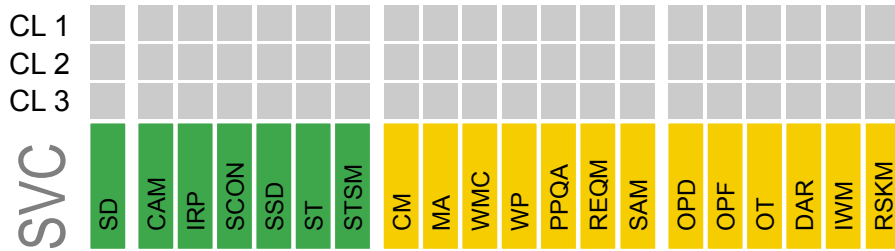
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CL 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CL 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SVC	S D	C A M	I R P	S O N	S D	S T	S M	C M	M A	P / W C	P / Q P	P P Q M	R E S A M	O P D	O P F	O T	D A R	I / W M	P S K M

CL 3						3													
CL 2	2	2	2	2	2	2	2			2									
CL 1	1	1	1	1	1	1	1	1	1	1	1								
DEV	P I	R D	T S	V L	V R	C M	M A	P / W C	P / Q P	P P Q M	R E S A M	O P D	O P F	O T	D A R	I / W M	P S K M		

CL 3						3													
CL 2		2			2	2	2				2								
CL 1		1	1		1	1	1			1	1								
ACQ	A M	A R D	S A D	A T M	A V L	A V R	C M	P / W C	P / Q P	P P Q M	R E S A M	O P D	O P F	O T	D A R	I / W M	P S K M		



Multiple Models

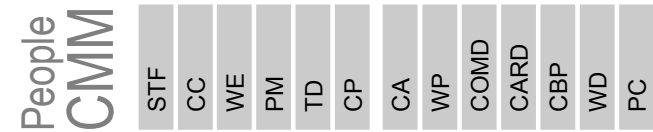


Level 2 P-CMM

- STF Staffing
- CC Communication & Coordination
- WE Work Environment
- PM Performance Management
- TD Training and Development
- CP Compensation

Level 3 P-CMM

- CA Competency Analysis
- WP Workforce Planning
- COMD Competency Development
- CARD Career Development
- CBP Competency-Based Practices
- WD Workgroup Development
- PC Participatory Culture



What's the Summary?

CMMI-SVC has a PA that “summarizes” the engineering PAs in DEV, for those occasions when more detailed practice information is needed.

CMMI-SVC and CMMI-DEV can be used and appraised together.

Development or engineering tasks can be treated as a service, and managed with the practices in CMMI-SVC.

Advanced development may use all of the CMMI-DEV, and then add CMMI-SVC for additional practices: SCON, SST, CAM.

Service and development organizations can add security, resilience, and people management—and more—as needed.

The SEI is positioning to support multi model implementation.





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Multi-Constellation/Model
Alex Stall and Eileen Forrester
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Some Useful Links

CMMI for Services Model

<http://www.sei.cmu.edu/cmmi/tools/svc/index.cfm>

CMMI for Services and Security Whitepaper

<http://www.sei.cmu.edu/cmmi/tools/svc/upload/Security-and-CMMI-SVC.pdf>

CMMI for Services Book

http://www.amazon.com/CMMI-Services-Guidelines-Superior-Engineering/dp/0321711521/ref=sr_1_1?ie=UTF8&qid=1304415568&sr=8-1



CMMI-SVC Service PAs in Plain Language

Capacity and Availability Management (CAM):

making sure you have enough of the resources you need to deliver services and that they are available when needed—at an appropriate cost

Incident Resolution and Prevention (IRP):

handling what goes wrong—and preventing it from going wrong ahead of time if you can

Service Continuity Management (SCON):

being ready to recover from a disaster and get back to delivering your service

Service Delivery (SD):

setting up agreements, taking care of service requests, and operating the service system

Service System Development (SSD):

making sure you have everything you need to deliver the service, including people, processes, consumables, and equipment

Service System Transition (SST):

getting new systems in place, changing existing systems, and retiring obsolete systems, all while making sure nothing goes terribly wrong with service

Strategic Service Management (STSM):

deciding what services you should be providing, making them standard, and letting people know about them



Core and Shared PAs in Plain Language – 1 of 3

Causal Analysis and Resolution (CAR):

getting to the sources of important outcomes and taking effective action to correct or repeat them

Configuration Management (CM)

controlling changes to your crucial work products

Decision Analysis and Resolution (DAR):

using a formal decision making process on the decisions that matter most in your business

Integrated Work Management (IWM):

making the most of your participants and defined processes, even when it's complex

Measurement and Analysis (MA):

knowing what to count and measure to manage your service

Organizational Performance Management (OPM):

managing your improvements and innovations using a statistical understanding of your process performance

Organizational Process Definition (OPD):

establishing standard processes and relaying them throughout your organization



Core and Shared PAs in Plain Language – 2 of 3

Organizational Process Focus (OPF):

figuring out your current process strengths and weaknesses, planning what to do to improve, and putting those improvements in place

Organizational Process Performance (OPP):

making sure you understand your process performance and how it affects service quality

Organizational Training (OT):

developing the skills and knowledge your people need to deliver superior service

Process and Product Quality Assurance (PPQA):

checking to see that you are actually doing things the way you say you will in your policies, standards, and procedures

Quantitative Work Management (QWM):

managing service to quantitative process and performance objectives

Requirements Management (REQM):

keeping clear with your customers and other stakeholders about the service you provide, and adjusting when you find inconsistency or mismatched expectations

Supplier Agreement Management (SAM):

getting what you need and what you expect from suppliers who affect your service



Core and Shared PAs in Plain Language – 3 of 3

Risk Management (RSKM):

supporting the success of your service mission by anticipating problems and how you will handle them—before they occur

Work Monitoring and Control (WMC):

making sure what's supposed to be happening in your service work is happening and fixing what isn't going as planned

Work Planning (WP):

estimating costs, effort, and schedules; getting commitment to the work plan; and involving the right people—all while watching your risks and making sure you've got the resources you think you need



CMMI-DEV Engineering PAs in Plain Language

Product Integration (PI):

putting together all the product components so that the overall product has expected behaviors and characteristics

Requirements Development (RD):

understanding what stakeholders think they need and documenting that understanding for the people who will be designing solutions

Technical Solution (TS):

using effective engineering to build solutions that meet end user needs

Validation (VAL):

making sure that the solution actually meets the needs of users in the service environment

Verification (VER):

making sure that the solution you ended up with meets your agreement about the needs

