

Highlights of CMMI[®] and SCAMPI 1.2 Changes

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Material adapted from “CMMI[®] Version 1.2 and Beyond” by Mike Phillips, SEI
and from “Sampling Update to the CMMI Steering Group” by Will Hayes, SEI

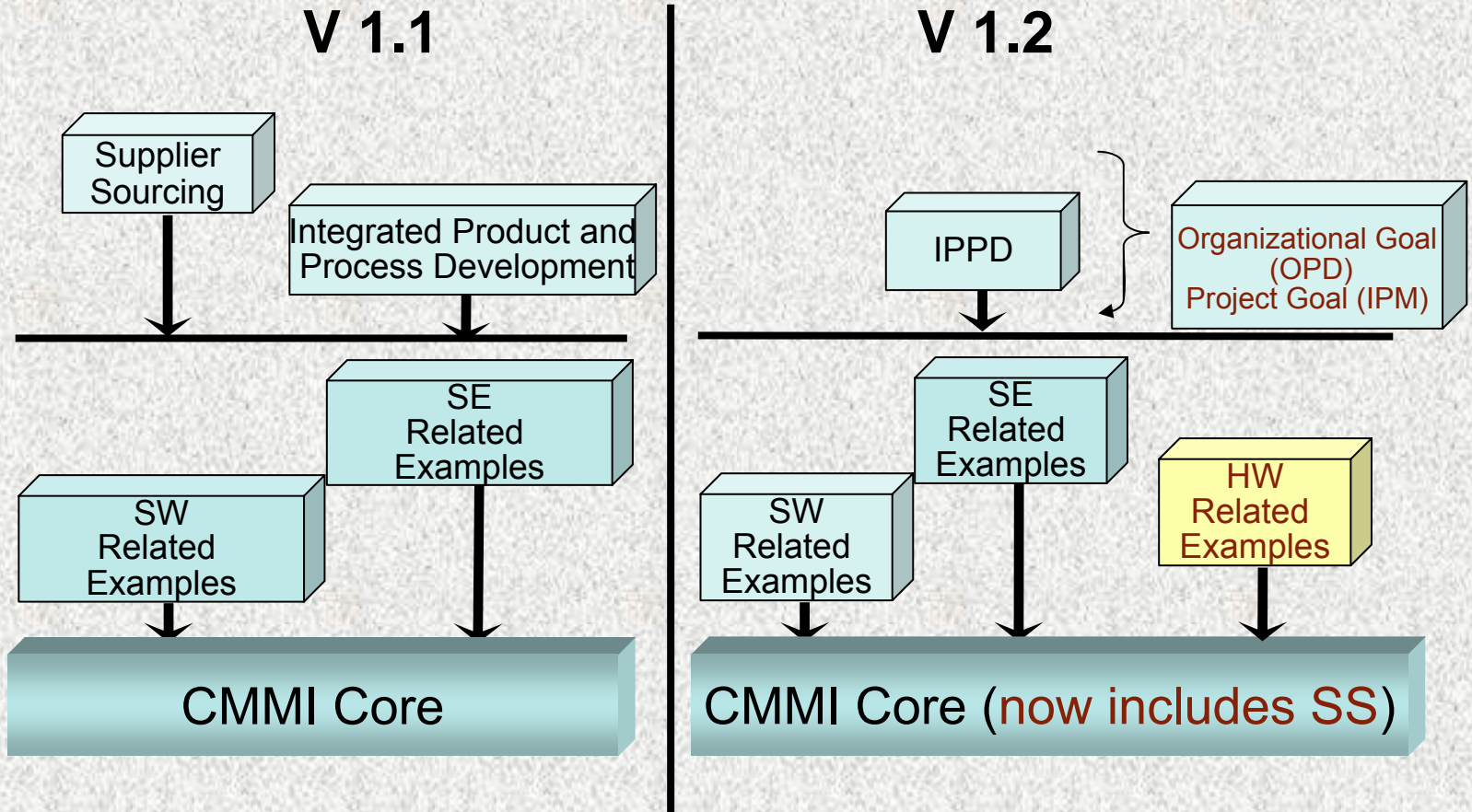
- ◆ Model Changes
- ◆ SCAMPI Changes
- ◆ Changes to Policies on SCAMPI A Appraisals in CMMI Version 1.2 and the Sunset Period for V1.1

- ◆ Reduce Complexity & Size
- ◆ Increase Coverage

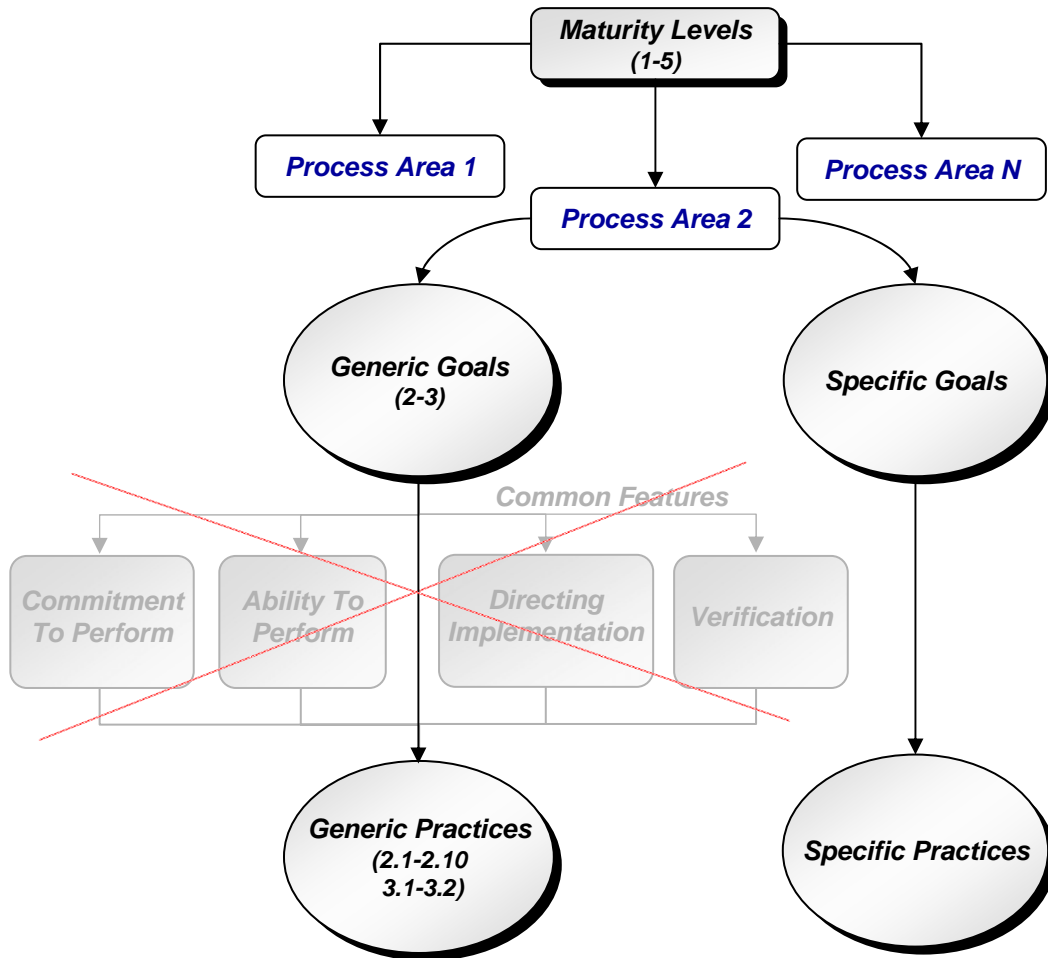
- ◆ Eliminated the Concepts of Advanced Practices and Common Features
- ◆ Consolidated and Simplified the IPPD Material
 - ~~OEI~~ → OPD
 - ~~IT~~ → IPM
- ◆ Incorporated ISM into SAM; Eliminated Supplier Sourcing (SS).
- ◆ All Definitions Consolidated in the Glossary
- ◆ Adopted a Single Book Approach (i.e., Will No Longer Provide Separate Development Models)
 - All Representations, Additions, and Disciplines are in One Document
 - Users Can Choose to Use:
 - Representation-Specific Content (i.e., Continuous, Staged)
 - Addition-Specific Content (i.e., IPPD)
 - Amplifications (i.e., Hardware Engineering, Software Engineering, Systems Engineering)
- ◆ Report Size Reduced 15% From Either Predecessor; PAs Reduced 12%

- ◆ Added Hardware Amplifications
- ◆ Added Two Work Environment Practices (i.e., One in OPD and One in IPM)
- ◆ Added Goal and Two Practices in OPF, and Detail to One Practice in IPM to Emphasize Importance of Process Adoption at Project Startup
- ◆ Updated Notes (Including Examples) Where Appropriate so That They Also Address Service Development and Acquisition of Critical Elements
- ◆ Updated Name to CMMI for Development (CMMI-DEV) to Reflect the Expanded Coverage

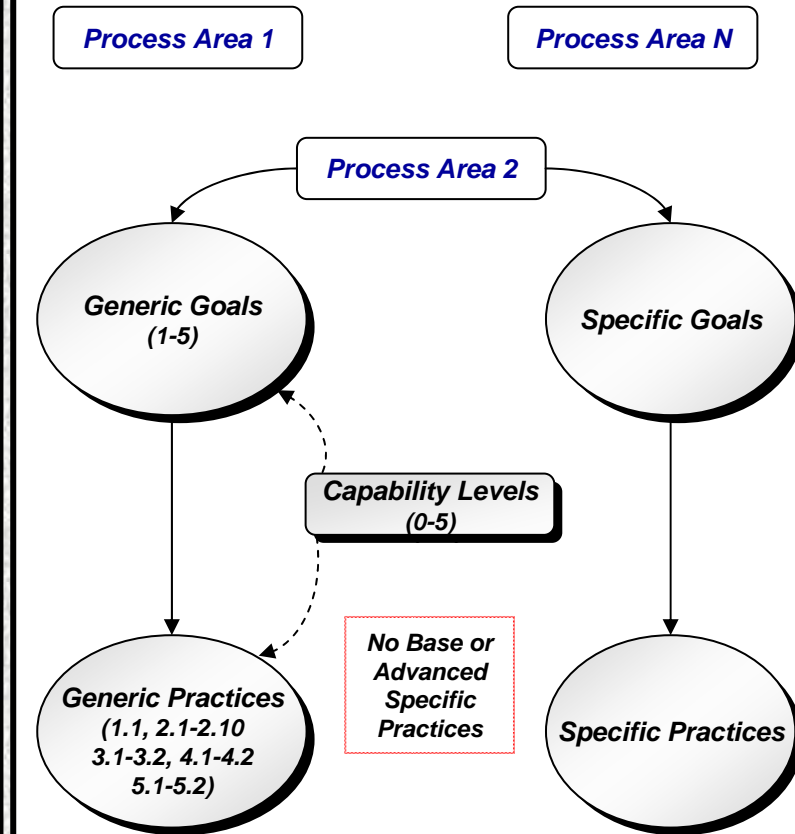
- ◆ Improved the Overview Section (Part One)
- ◆ Improved Clarity of How GPs are Used
 - Moved Generic Goals and Practices to Part Two
 - Added Explanation of How Process Areas Support the Implementation of GPs
 - Added GP Elaborations for GP 3.2
 - Changed GP 2.6 to Say, “Place Designated Work Products of the Process Under Appropriate Levels of Control”
- ◆ Improved the Glossary (e.g., Higher Level Management, Bidirectional Traceability, Subprocess)
- ◆ Clarified Material Throughout the Model Based on Over 1000 Change Requests
- ◆ Introduced the Concept of Additions
 - Informative Material, a Specific Practice, a Specific Goal, or a Process Area That Extends the Scope of a Model or Emphasizes a Particular Aspect of its Use
 - In CMMI-DEV, All Additions Apply to IPPD
- ◆ Introduced the Concept of Constellations (e.g., Development Services, Acquisition)



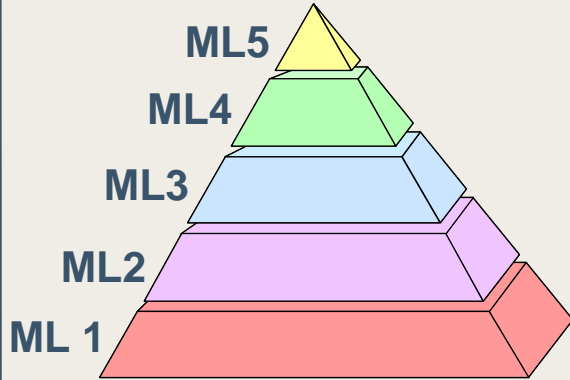
Staged



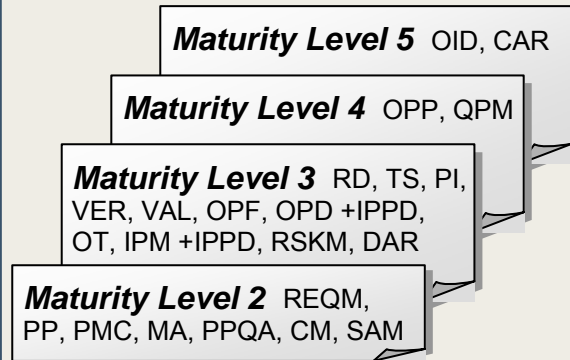
Continuous



Staged



Organization



Process Areas

Organizational Innovation & Deployment (OID)
Casual Analysis and Resolution (CAR)

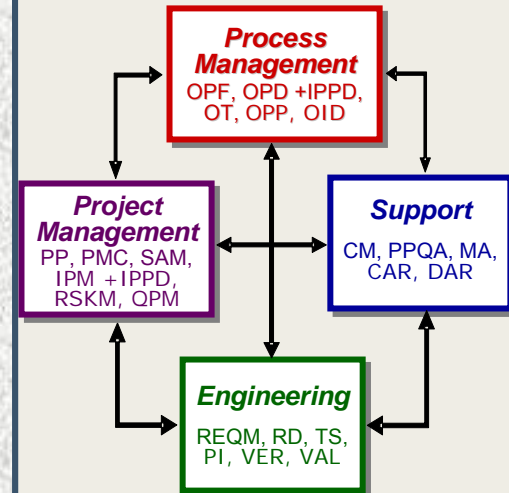
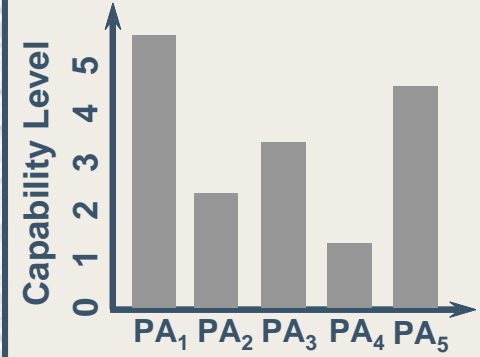
Organizational Process Performance (OPP)
Quantitative Project Management (QPM)

Requirements Development (RD)
Technical Solution (TS)
Product Integration (PI)
Verification (VER)
Validation (VAL)

Organizational Process Focus (OPF)
Organizational Process Definition (OPD) + IPPD
Organizational Training (OT)
Integrated Project Management (IPM) + IPPD
Risk Management (RSKM)
Decision Analysis and Resolution (DAR)

Requirements Management (REQM)
Project Planning (PP)
Project Monitoring and Control (PMC)
Measurement and Analysis (MA)
Process and Product Quality Assurance (PPQA)
Configuration Management (CM)
Supplier Agreement Management (SAM)

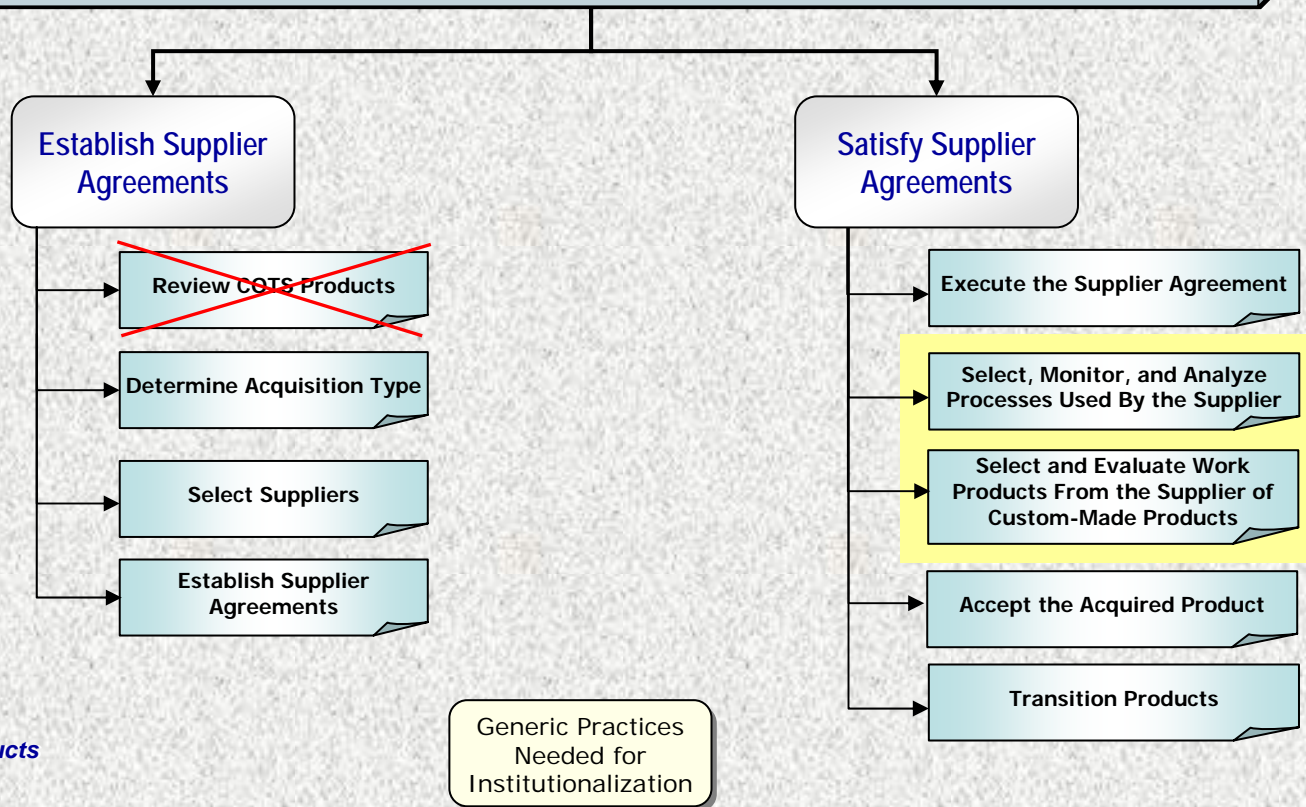
Continuous



- ☞ 22 PAs in Development Constellation
- ☞ Two Models - CMMI-DEV and CMMI-DEV + IPPD
- ☞ Two Representations - Staged and Continuous
- ☞ Three Disciplines: SW Eng, HW Eng and Systems Eng

Supplier Agreement Management

Purpose: Manage the Acquisition of Products From Suppliers.



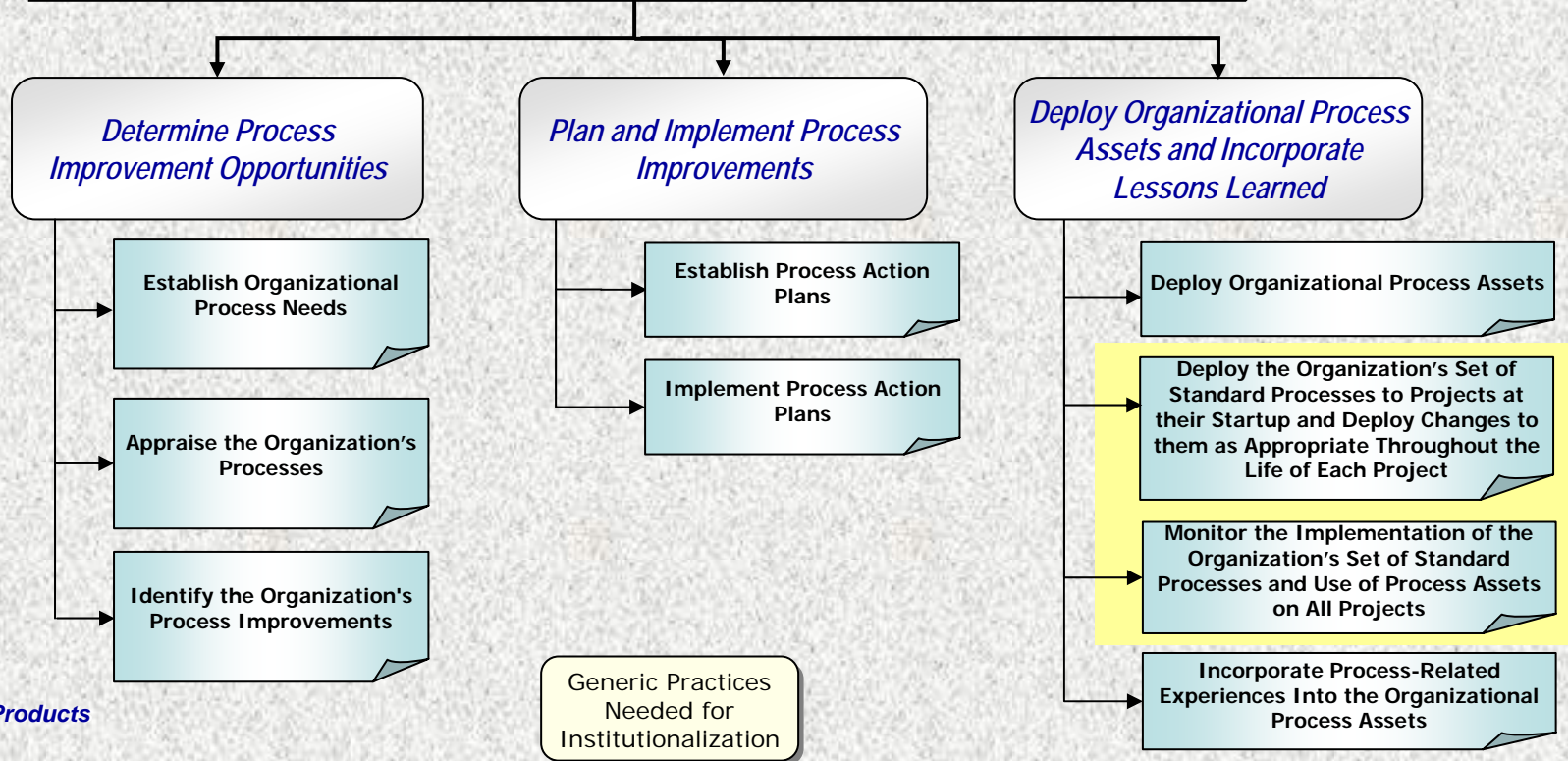
- Goals
- Practices
- { } Typical Work Products

Generic Practices
Needed for
Institutionalization

- | | | | |
|--|---|--|--|
| <ul style="list-style-type: none"> • List of Candidate Suppliers • Preferred Supplier List | <ul style="list-style-type: none"> • Rationale for Selection of Suppliers • Evaluation Criteria | <ul style="list-style-type: none"> • Trade Studies • Supplier Review Materials and Reports | <ul style="list-style-type: none"> • Acceptance Test Procedures • Transition Plans |
|--|---|--|--|

Organizational Process Focus

Purpose: Plan, Implement, and Deploy Organizational Process Improvements Based on a Thorough Understanding of the Current Strengths and Weaknesses of the Organization's Processes and Process Assets.

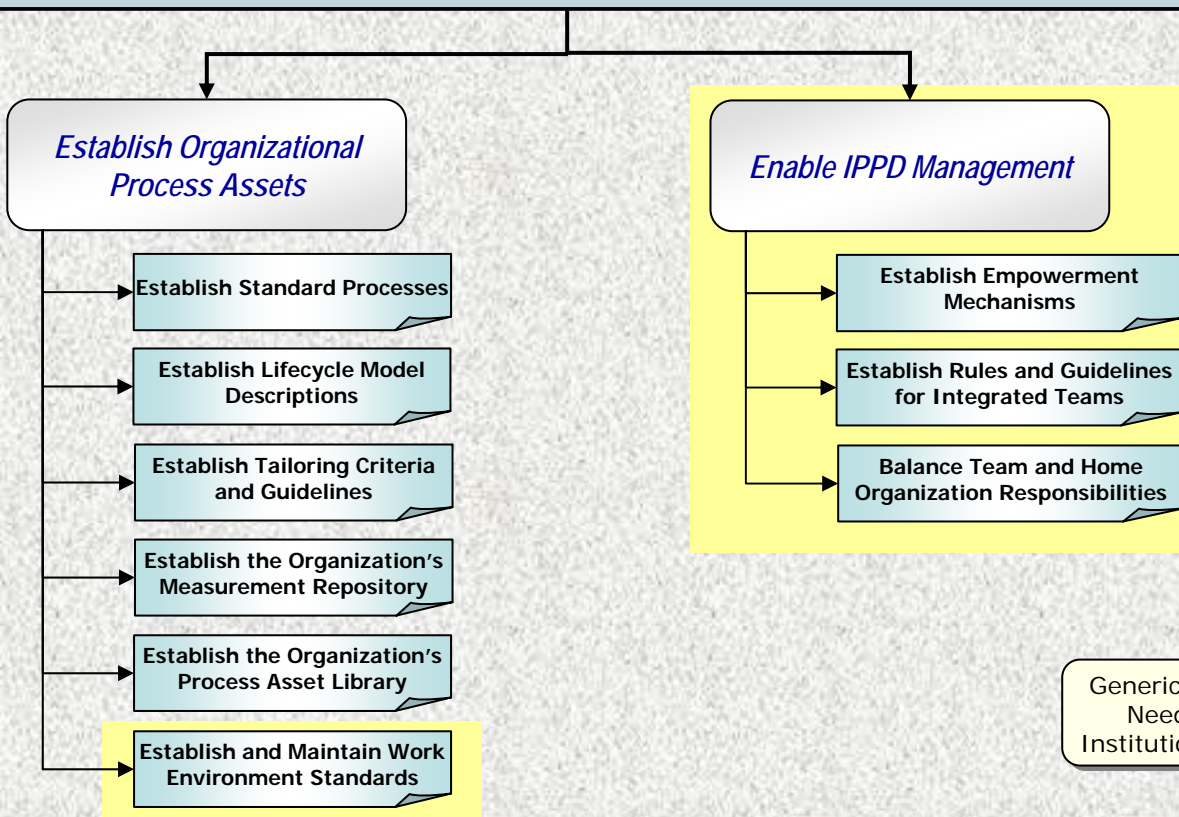


- Goals**
- Practices**
- { } **Typical Work Products**

- | | | | |
|---|---|--|--|
| <ul style="list-style-type: none"> • Organization's Process Needs and Objectives | <ul style="list-style-type: none"> • Plans for the Organization's Process Appraisals | <ul style="list-style-type: none"> • Improvement Recommendations for the Organization's Processes | <ul style="list-style-type: none"> • Organization's Approved Process Action Plans |
|---|---|--|--|

Organizational Process Definition + IPPD

Purpose: Establish and Maintain a Usable Set of Organizational Process Assets and Work Environment Standards. For IPPD, Organizational Process Definition +IPPD Also Covers the Establishment of Organizational Rules and Guidelines That Enable Conducting Work Using Integrated Teams.



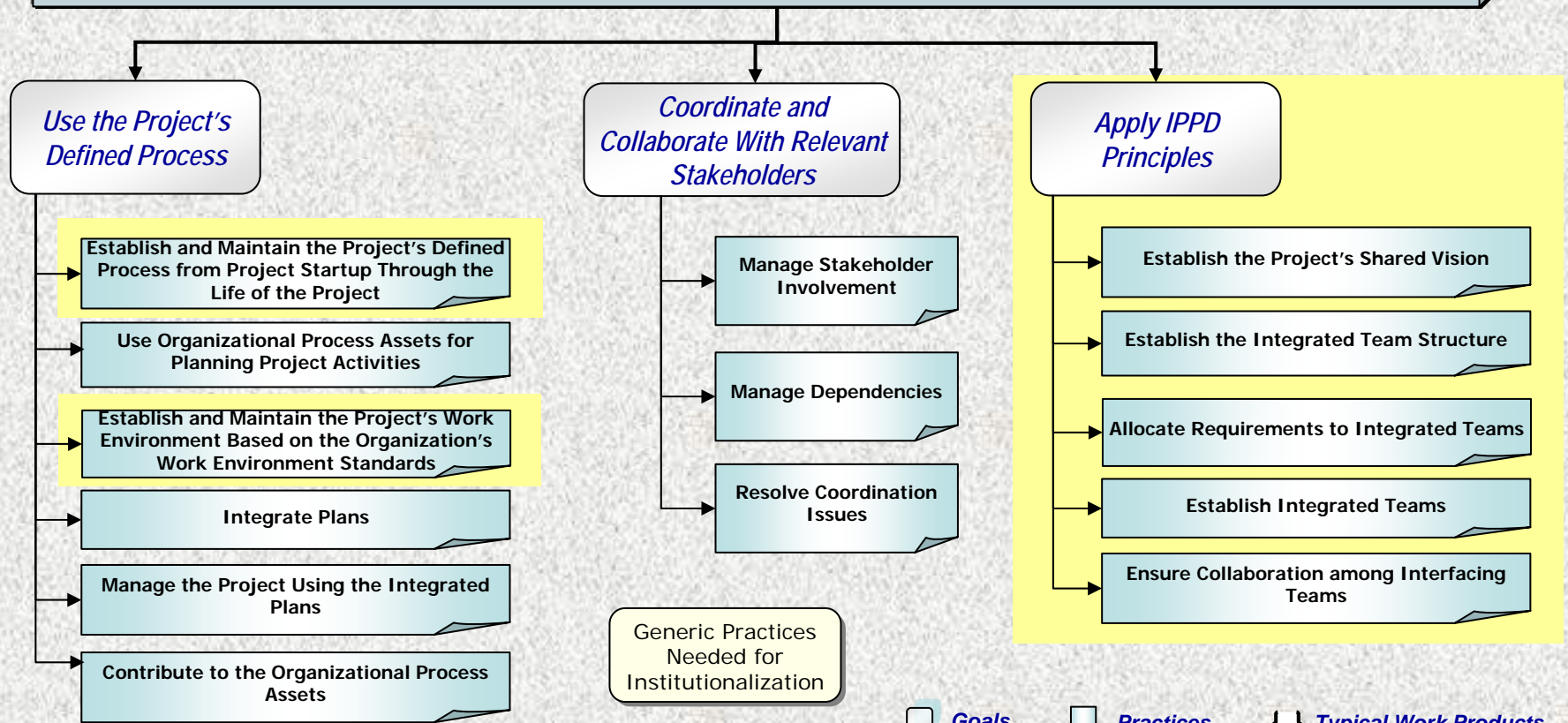
- Goals*
- Practices*
- { } *Typical Work Products*

Generic Practices Needed for Institutionalization

- Organization's Set of Standard Processes
- Tailoring Guidelines for the Organization's Set of Standard Process
- Descriptions of Life-cycle Models
• Organization's Measurement Repository
- Organization's Process Asset Library

Integrated Project Management + IPPD

Purpose: Establish and Manage the Project and the Involvement of the Relevant Stakeholders According to an Integrated and Defined Process That Is Tailored From the Organization's Set of Standard Processes. For IPPD, Integrated Project Management +IPPD Also Covers the Establishment of a Shared Vision for the Project and the Establishment of Integrated Teams That Will Carry Out Objectives of the Project.



- Project's Defined Process
- Work Products Created by Performing the Project's Defined Process
- Proposed Improvements to the Organizational Process Assets
- Agendas and Schedules for Collaborative Activities

- ◆ Reduce Complexity and Ambiguity
- ◆ Strengthen Appraisal Planning and Conduct
- ◆ Strengthen Appraisal Reporting
- ◆ Provide Additional Guidance Where Needed
- ◆ Define Appraisal Validity Period
- ◆ Strengthen Lead Appraiser Requirements
- ◆ Increase Confidence in Appraisal Reports

Increase Confidence in Appraisal Results

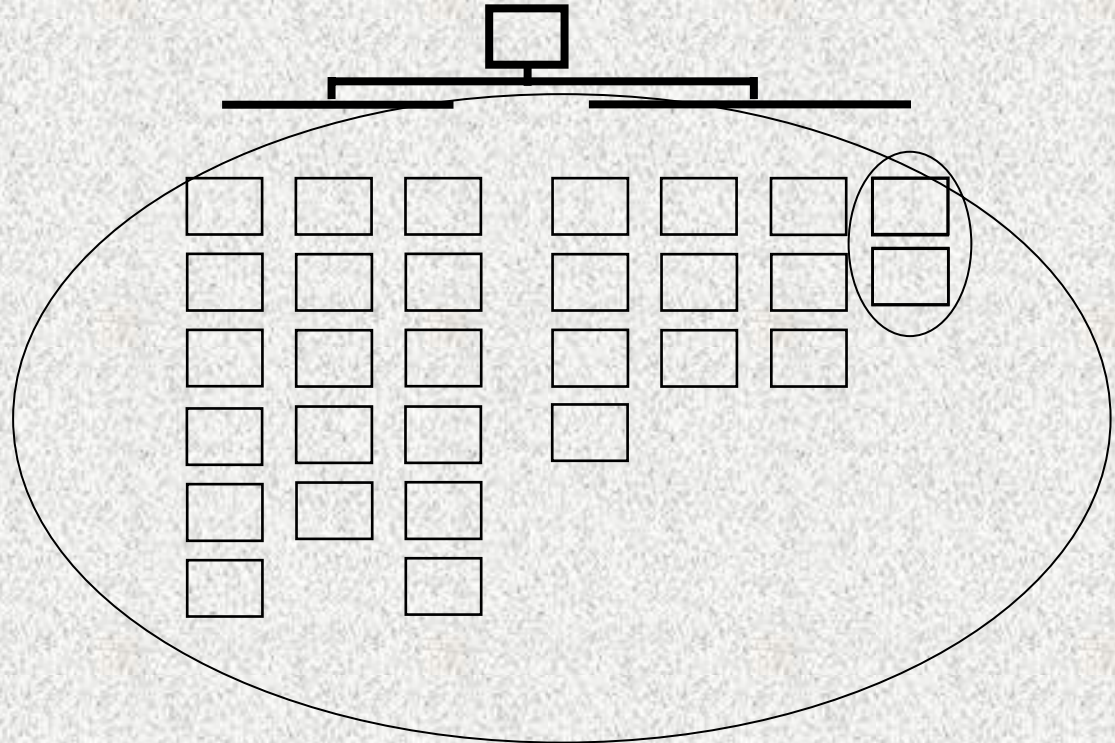
- ◆ Defined NY (Not Yet) Characterization
- ◆ The Rating “Not Rated” was Clarified:
 - Process Areas Outside of the Model Scope are Rated as “Out of Scope”
 - For Example, for a Maturity Level 3 Appraisal, Maturity Level 4 and 5 Process Area are Rated as Out of Scope
 - For Process Areas That Have Insufficient Data to Be Rated, the Rating is “Not Rated”
 - Process Areas in the Model Scope, but Outside the Organizational Unit’s Scope of Work Are Rated as “Not Applicable”
 - The Only Process are That can be Not Applicable is SAM (as Determined by the Appraisal Team)
 - Rationale for Declaring SAM to be “Not Applicable” Must be Provided in Appraisal Disclosure Statement
 - To Achieve ML2 or Higher, Only SAM can be Not Applicable

Strengthen Appraisal Planning and Conduct¹

- ◆ Appraisal Team Members are now Required to Sign Final Findings
- ◆ The Conduct Appraisal Phase Must now be Complete Within 90 Days, and Starts With the “Conduct Participant Briefing” Activity Unless Practice Characterizations are Done Before or During the Readiness Review
- ◆ Organizational Unit Sampling was Revised
 - LA in Conjunction With Appraisal Sponsor Determine Appraisal Scope
 - Organizational Scope Must Include Projects That are Representative of the Organizational Unit
 - Critical Factors That Influence Implementation of Practices in Projects and Functions Within the OU Must be Understood and Identified (e.g., Lines of Business, Disciplines, Effort Types, Project Types, etc.)
 - Sample Project and Support Groups Must Represent All Critical Factors Identified

- ◆ Samples in the Organizational Scope Must be One of the Three Types Below:
 - Focus Projects (FP): Must Provide Objective Evidence for Every PA
 - Non-Focus Projects (NFP): Must Provide Objective Evidence for One or More PAs
 - Support Groups: Must Provide Objective Evidence for Practices Which Address Organizational Infrastructure or Functions
- ◆ If the Model Scope Includes Project Related PAs, the Organizational Scope Must Contain at Least One FP
- ◆ If the OU Includes More Than 3 Projects, the Organizational Scope Must Include Sufficient FP & NFP to Generate at Least 3 Instances of Each Practice in Each Project-Related PA in the Model Scope of the Appraisal
- ◆ As Needed, the Appraisal Team May Seek Clarification or Data From Other Projects or Support Functions Within the OU

	FP	NFP
PA		
PA		
PA		
PA		
PA		
PA		
PA		



- ◆ The Appraisal Disclosure Statement (ADS) now Requires the Following Information:
 - Organizational Sampling Criteria and Decisions (e.g., Projects Included, Projects Excluded, Percentage of Organization Represented, Coverage of Critical Factors in Quantifiable Terms)
 - Basis for Maturity/Capability Level 4 and 5 Appraisal Results
 - Subprocesses Statistically managed
 - Mapping of These Subprocesses to Quality and Process-Performance Objectives
 - Signatures of Both the Lead Appraiser and Sponsor
 - The Lead Appraiser Affirms That the Appraisal Scope is Representative of the Organizational Unit
 - The Sponsor Affirms the Accuracy of the ADS and Authorizes the SEI to Conduct Any Audits Deemed Necessary

- ◆ Guidance for Readiness Reviews was Revised to Include Team and Logistical Readiness
- ◆ Additional Guidance was Provided for Using Virtual Methods (e.g., for Interviews and Briefings)
- ◆ Changed “Face-to-Face Interviews” to “Oral Interviews”
- ◆ Additional Guidance was Provided for Using Alternative Practices (i.e., Appendix C: Alternative Practice Identification and Characterization Guidance)

- ◆ With the release of v1.2, there is a three-year maximum period of validity for SCAMPI Class A appraisals. Three years after the appraisal end date, the appraisal results will expire and become invalid based on age; however, an appraisal can become invalid for other reasons. Version 1.1 SCAMPI Class A appraisals will expire August 31, 2007 or three years after their appraisal end date, whichever is later.
- ◆ All Class A SCAMPI v1.2 appraisals that will become public record (e.g., announced in a press release or on an organization's Web site, or posted on a published SCAMPI appraisals results Web page) or used in a proposal in response to U.S. Department of Defense requirements must be led by an SEI-authorized SCAMPI Lead Appraiser from an external, third-party organization. The external, third-party organization can be another SEI Partner company or a separate business unit from the one containing the appraised organization (e.g., from corporate or from a different division, group, or other organizational business type, which is under separate management).
- ◆ For high maturity v1.2 appraisals, i.e., capability or maturity levels 4 and 5, an [SEI-certified High Maturity Lead Appraiser](#) must lead the appraisal.

- ◆ The Appraisal Disclosure Statement (ADS) has been expanded significantly to provide more insight into an appraisal. Any SCAMPI appraisal, whether v1.1 or v1.2, with its on-site period beginning on or after November 1, 2006, is required to use the v1.2 ADS. If the appraisal is posted on a published SCAMPI appraisals results Web page, all the information in the ADS will be displayed except for sensitive or proprietary projects; however, for sensitive or proprietary projects, the organization must provide a point of contact who can supply additional information.
- ◆ For US Defense business organizations, any SCAMPI Class A v1.2 appraisal that will become public record or used in a proposal in response to U.S. Department of Defense requirements must be posted on a government Web site similar to the SEI's PARS site. The SEI will post this appraisal information to the government Web site. Although other organizations are not required to post to that site, they are encouraged to do so. More information about the government Web site will be available at a later date.
- ◆ The December 31, 2007 sunset date for v1.1 of the CMMI Product Suite has been accelerated to August 31, 2007. For more information about other aspects of the sunsetting plan, see [Sunsetting Version 1.1 of the CMMI Product Suite](#).

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