

Release: V3.0, 6 April 2023

Description of Changes
<p>Major Release</p> <p><b>Global Changes</b></p> <ul style="list-style-type: none"> <li>• Minor updates for grammar, formatting, plain language, translatability, clarity, and consistency with the CMMI Style Guide and the CMMI Performance Solutions ecosystem, e.g., update of all V2.0 references, CMMI Product Suite renamed to CMMI Performance Solutions ecosystem, updated external links for accuracy</li> <li>• Practice Area: Supplier Source Selection (SSS) removed with salient content extracted and incorporated into Supplier Agreement Management (SAM)</li> <li>• Addition of new Capability Area: Managing Data</li> <li>• Addition of new Practice Areas <ul style="list-style-type: none"> <li>○ Data Management (DM)</li> <li>○ Data Quality (DQ)</li> <li>○ Workforce Empowerment (WE)</li> </ul> </li> <li>• Former Practice Area: Enabling Virtual Solution Delivery (EVSD) renamed to Enabling Virtual Work (EVW), and updated to reflect virtual work in addition to virtual delivery as per community comments</li> <li>• View/domain information updated throughout to reflect the following domains: Data, Development, People, Safety, Security, Services, Suppliers, and Virtual <ul style="list-style-type: none"> <li>○ Supplier Management view renamed Suppliers</li> </ul> </li> <li>• Graphics updated to reflect latest updates to the CMMI Performance Solutions ecosystem, including updates to domains, addition of new Capability Area, and updates to Practice Areas</li> <li>• Updated Model Viewer Instructions to align to current functionality of Model Viewer</li> <li>• Updated Model Viewer drop downs to include a Model View of ALL, in addition to each of the domains, each Capability Area, and Medical Devices Discovery Appraisal Program (MDDAP)</li> <li>• Updated Context Specific information <ul style="list-style-type: none"> <li>○ Addition of Context Specific information for Data, DevSecOps, and People across core and domain Practice Areas</li> <li>○ Agile with Scrum Guidance Context Specific information renamed to Agile Development, and all content updated for clarity</li> <li>○ Supplier Management Context Specific information renamed to Suppliers for consistency with Suppliers domain</li> </ul> </li> </ul> <p><i>Detailed changes by major section are reflected below. Global changes, as reflected above, are not repeated in each section below. Sections not reflected below are indicative of the section only including global changes.</i></p> <p><b>Overview</b></p> <p><b>Part One: About CMMI and Executive Summary</b></p>

## Description of Changes

- Updated Benefits section to CMMI Performance Results and Benefits, and updated information to include latest available performance data
- Added a Domains section which explains the organizing principle of domains in CMMI, and provides a table of all available domains and their descriptions
- Removed Practice Group Level 0 information

### ***Part Three: Process Habit and Persistence***

- Updates made to emphasize the concept of the use of CMMI as a habitual and persistent way to continuously improve processes and performance

### ***Part Four: Achieving High Maturity***

- Addition of High Maturity graphics: High Maturity Foundational Building Blocks (Figure 20), High Maturity QPPO Funnel (Figure 21), and High Maturity Capability Area and Practice Area Relationships (Figure 22); all key concepts for High Maturity and reflected in HMLA training

### **Practice Areas**

- Updated Additional Required PA Information, Additional PA Explanatory Information and Additional Explanatory Information to reflect Practice Area and individual practice changes
- Updated Example Activities and Example Work Products across Practice Areas to reflect practice changes
- Updated Related Practice Areas

### ***Causal Analysis and Resolution (CAR)***

- The word “root” was removed when referencing causal analysis at Practice Group levels 1, 2, and 3, for technical accuracy and to make a clearer distinction between expectations for causal analysis and root cause analysis (now only applicable in Practice Group Levels 4 & 5)
- CAR 3.1, 3.2, 3.4 - Practice statements: Removed “root.” For CAR 3.4, phrase of “root cause analysis” changed to “causal analysis.” Practice information updated for consistency.
- CAR 2.2 - Revised value statement
- CAR 5.1 - Practice statement: Changed “on a broader scale.” to “to optimize performance across the organization.”

### ***Configuration Management (CM)***

- Added an external reference table at the Practice Area level
- CM 2.1 - Revised value statement; added Additional Required Information regarding Data and People views; added Security Context Specific information
- CM 2.3 - Added Additional Required Information regarding Data view

### ***Continuity (CONT)***

- CONT Overview - Revised intent statement
- Added Safety Context Specific information

## Description of Changes

### ***Enabling Virtual Work (EVW)***

- Practice Area renamed from Enabling Virtual Solution Delivery (EVSD) to Enabling Virtual Work (EVW), based on community review comments to place additional emphasis on having flexible work teams, projects, etc.
- Revised intent statement, value statement, Additional Required PA and all Practice Area information to reflect shift in focus for Practice Area, from virtual solution delivery to performing virtual work
- EVW Practices - All practices revised to reflect change from focus on virtual solution delivery to performing virtual work. Former EVSD 3.3 practice combined into revised EVW 3.2 practice.

### ***Estimating (EST)***

- EST 2.1 - Moved and updated scope content from Additional Explanatory Information to Additional Required Information

### ***Governance (GOV)***

- GOV Overview - Revised value statement
- Revised Additional Required PA Information to update with information relevant to domains and contexts
- GOV 2.2 - Revised practice statement, "Senior management provides funding, resources, and training for developing, supporting, performing, improving, and evaluating adherence to processes."
- GOV 2.3 - Revised practice statement to change "improvement" to "performance improvement"
- GOV 3.2 - Moved Additional Explanatory Information to Additional Required Information section.
- GOV 4.1 - Revised practice statement to change "ensures" to "verifies." Updated value statement. Added information in Additional Required Information.

### ***Implementation Infrastructure (II)***

- Added new Level 4 Practice Group
- II 2.1 - Updated Additional Required Information specific to resource capacity and availability
- II 2.2 - Updated Additional Required Information specific to monitor and verify how well processes are working
- II 4.1 - New practice, "Develop the organizational capability to understand and apply statistical and other quantitative techniques to accomplish the work."

### ***Incident Resolution and Prevention (IRP)***

- Added Safety Context Specific information

Description of Changes
<p><b><i>Managing Performance and Measurement (MPM)</i></b></p> <ul style="list-style-type: none"> <li>• MPM Overview - Updated Additional Required Information. Added Progression and Relationship of Objectives table (Table MPM-1)</li> <li>• MPM 3.5 - Revised practice statement to incorporate “and address” with regards to performance improvement needs</li> <li>• MPM 5.1 / MPM 5.2 / MPM 5.3 - Revised practice statements to incorporate “optimize” or “optimizing” phrases</li> </ul>
<p><b><i>Managing Security Threats and Vulnerabilities (MST)</i></b></p> <ul style="list-style-type: none"> <li>• MST 2.4 - Revised practice statement to include “and report”</li> <li>• MST 3.1 - Updated value statement</li> <li>• MST 3.2 - Updated value statement</li> </ul>
<p><b><i>Monitor and Control (MC)</i></b></p> <ul style="list-style-type: none"> <li>• MC 2.1 - Additional Required Information: Moved “indicators of project progress and performance” section from Additional Explanatory Information to Additional Required Information.</li> </ul>
<p><b><i>Organizational Training (OT)</i></b></p> <ul style="list-style-type: none"> <li>• OT 2.2 - Updated value statement</li> <li>• OT 3.3 - Updated value statement, and Additional Required Information</li> <li>• OT 3.5 - Updated practice statement to include “and report.” Updated value statement.</li> </ul>
<p><b><i>Peer Reviews (PR)</i></b></p> <ul style="list-style-type: none"> <li>• Updated intent statement to include “process performance”</li> </ul>
<p><b><i>Planning (PLAN)</i></b></p> <ul style="list-style-type: none"> <li>• PLAN 2.1 - Added Security Context Specific information</li> <li>• PLAN 2.3 - Added a comma to practice statement after “develop.”</li> <li>• PLAN 2.6 - Updated practice statement, changed to “Ensure plans are feasible by reconciling estimates against capacity and availability of resources.” Updated value statement.</li> </ul>
<p><b><i>Process Asset Development (PAD)</i></b></p> <ul style="list-style-type: none"> <li>• Former PAD 3.5 practice combined into PAD 3.3 practice statement as these were duplicative as previously written/interpreted. The new PAD 3.3 practice statement is: “Develop, keep updated, and make the organization’s processes and assets available for use in a process asset library.” Updated value statement and Additional Required Information for PAD 3.3 to align to adjusted practice statement.</li> <li>• PAD 3.5 - The former PAD 3.6 practice is now PAD 3.5</li> <li>• PAD 3.6 - The former PAD 3.7 practice is now PAD 3.6</li> </ul>

Description of Changes
<p><b>Process Management (PCM)</b></p> <ul style="list-style-type: none"> <li>• PCM 2.1 - Moved Additional Explanatory Information specific to opportunities and issues to Additional Required Information</li> <li>• PCM 3.6 - Revised practice statement to include “and report”</li> </ul> <p><b>Product Integration (PI)</b></p> <ul style="list-style-type: none"> <li>• PI 2.1 - Additional Required Information revised for clarity.</li> </ul> <p><b>Requirements Development and Management (RDM)</b></p> <ul style="list-style-type: none"> <li>• RDM Overview - Updated intent and value statement</li> <li>• RDM 2.1 - Former RDM 2.3 combined with practice statement RDM 2.1, updated practice statement includes “and confirm understanding of the requirements.” Additional Required Information updated to include information specific to criteria. Added Safety Context Specific information.</li> <li>• RDM 2.3 - The former RDM 2.4 practice is now RDM 2.3</li> <li>• RDM 2.4 - The former RDM 2.5 practice is now RDM 2.4</li> <li>• RDM 2.5 - The former RDM 2.6 practice is now RDM 2.5</li> </ul> <p><b>Supplier Agreement Management (SAM)</b></p> <ul style="list-style-type: none"> <li>• Former Supplier Source Selection (SSS) Practice Area was consolidated into SAM. Intent, value, Additional Required PA Information, and all Practice Area information updated to reflect the consolidation of SSS and SAM.</li> <li>• Level 1 SAM practices have been restructured.</li> <li>• SAM 1.1 - New practice information and statement, “Identify, evaluate, and select suppliers.”</li> <li>• SAM 1.2 - The former SAM 1.1 practice is now SAM 1.2</li> <li>• SAM 1.3 - The former SAM 1.2 practice is now SAM 1.3</li> <li>• SAM 1.4 - The former SAM 1.3 practice is now SAM 1.4</li> <li>• SAM 2.1 - New practice information and practice statement, “Identify evaluation criteria, potential suppliers, and distribute supplier requests.”</li> <li>• SAM 2.2 - New practice information and practice statement, “Evaluate supplier responses according to recorded evaluation criteria and select suppliers.” Added Security Context Specific information.</li> <li>• SAM 2.3 - The former SAM 2.1 practice is now SAM 2.3, initial phrase of practice updated to “Manage supplier activities... “</li> <li>• SAM 2.4 - The former SAM 2.3 practice is now SAM 2.4</li> <li>• SAM 2.5 - The former SAM 2.4 practice is now SAM 2.5</li> <li>• SAM 3.1 - Updated practice statement to, “Conduct technical reviews of supplier performance activities and selected deliverables.”</li> <li>• SAM 3.2 - Updated practice statement to, “Manage supplier performance and processes based on criteria in the supplier agreement.”</li> </ul>

## Description of Changes

- SAM 4.1 - Updated practice statement to, “Select measures and apply analytical techniques to quantitatively manage suppliers against their performance targets.” Reflective of community comment on when High Maturity should be applied from acquirer to their own and their suppliers’ process performance analysis and objectives.

### **Technical Solution (TS)**

- Added Security Context Specific information

### **Verification and Validation (VV)**

- Added Services Context Specific information
- VV 2.3 - Updated value statement

### **Appendices**

#### **Appendix A: Core Practice Areas, Categories, and Capability Areas**

- Capability Area: Selecting and Managing Suppliers (SMS)
  - Removed Supplier Source Selection (SSS)
  - Updated Supplier Agreement Management (SAM) description
- Capability Area: Planning and Managing Work
  - Updated Planning (PLAN) description
- Capability Area: Managing Business Resilience
  - Updated Incident Resolution and Prevention (IRP) description
  - Updated Risk and Opportunity Management (RSK) description
- Capability Area: Managing the Workforce (MWF)
  - Added Practice Area: Workforce Empowerment
  - Updated Enabling Virtual Work (EVW) description [formerly Enabling Virtual Solution Delivery (EVSD)]
- Capability Area: Managing Data (MD)
  - Added Managing Data to Category: Enabling
  - Added Practice Areas: Data Management (DM) and Data Quality (DQ)
- Capability Area: Improvement Performance
  - Updated Managing Performance and Measurement (MPM) description

#### **Appendix B: Predefined Model Views – Maturity and Capability Levels**

- Removed Required and Explanatory Information Section, since this information is contained with the Overview
- Reordered maturity level information before capability level information
- Replaced prior maturity level figures for views of Development, Services, and Supplier Management and replaced with one figure depicting all CMMI Maturity Level Requirements (Figure 30)

#### **Appendix C: CMMI Adoption (formerly CMMI Adoption and Transition Resources)**

## Description of Changes

- Added information about accessing resources on the CMMI website and personalized dashboards

### **Appendix E: Glossary**

- *Updated* glossary definitions of terms for clarity and consistency
  - 5-Whys
  - agile development (formerly agile development with Scrum)
  - Benchmark Model View
  - capability level
  - Capability Maturity Model Integration (CMMI)
  - causal analysis
  - development
  - DevSecOps
  - domain
  - empowerment
  - habit and persistence (formerly persistent and habitual)
  - maturity level
  - measurement and performance objectives
  - measurement-based
  - practice group
  - process architecture
  - process improvement objectives
  - solution
  - virtual work
- *Updated term names* for clarity and consistency
  - agile development - formerly agile development with Scrum
  - CMMI Performance Solutions ecosystem – formerly CMMI Product Suite
  - DevSecOps – formerly DevOps
  - root cause analysis – formerly root cause
- *Removed* glossary terms:
  - assignable cause of process variation
  - core assets
- *Added* glossary terms:
  - coaching
  - compensation
  - core Practice Areas
  - data cleansing
  - data dictionary
  - data glossary
  - hybrid work
  - knowledge

Description of Changes
<ul style="list-style-type: none"><li>○ mentoring</li><li>○ offboard</li><li>○ onboard</li><li>○ process asset</li><li>○ qualitative objective</li><li>○ remote</li><li>○ required information</li><li>○ skills</li><li>○ workforce competency</li><li>○ workforce management</li></ul>
<p><b>Appendix F: Abbreviations</b></p> <ul style="list-style-type: none"><li>● Adjusted list to align to acronyms being referenced</li></ul>
<p><b>Appendix G: CMMI Development History (formerly CMMI V2.0 Development History)</b></p> <ul style="list-style-type: none"><li>● Added release information for 2023</li></ul>
<p><b>Appendix H: Additional References (formerly References)</b></p> <ul style="list-style-type: none"><li>● Added live hyperlinks</li></ul>
<p><b>Appendix I: Acknowledgements</b></p> <ul style="list-style-type: none"><li>● Removed corporate logos</li></ul>