INTRODUCING CMMI DEVELOPMENT V2.0 TO PAN-INDIA SPIN

Kieran Doyle

Subject Matter Expert

CMMI Institute

CMMI® Institute

Guiding Principles of CMMI V2.0

- Focus of delivering business value

- Focus on business performance and results

- Flexible, scalable architecture

- Reduce redundancy

- Use of plain language

- Increased use of graphics and iconography for understanding and adoption

CMMI V2.0 Key Improvements

Developed based on the feedback of thousands of customers, CMMI V2.O is an evolution of the CMMI product suite that will:

Demonstrate the value and ROI of adopting CMMI

Performance capabilities built-in at every level of the model will help organizations to:

- Understand performance needs
- Establish performance goals
- Track, measure and achieve those goals

Improve the overall value for CMMI appraisals and lower time, effort and cost of the appraisal process

- New appraisal method intended to improve confidence and reliability of results and to lower total life cycle costs of appraisals by decreasing the appraisal preparation for the appraised organization.
- Organizations can extend the validity of benchmark appraisals through the lighter-weight Sustainment appraisal.
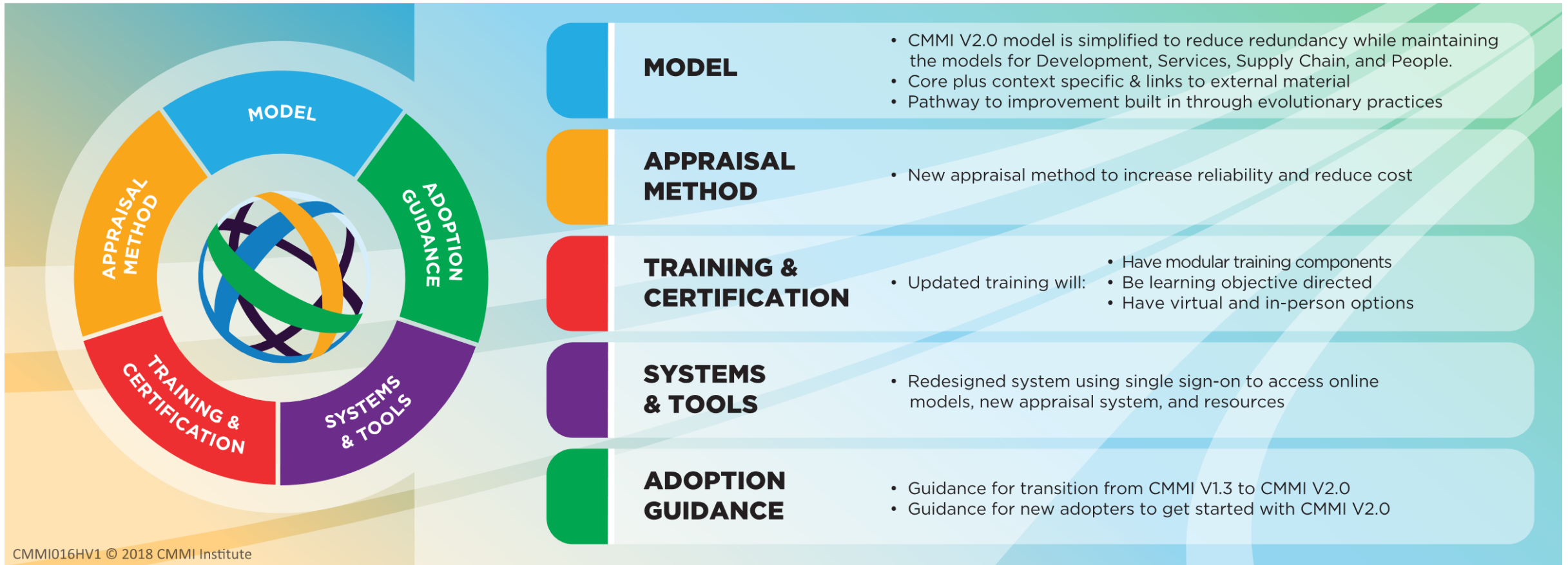
Keep CMMI current and up-to-date with latest trend methodologies used in the market

- Scalable architecture platform to include additional method guidance, such as built-in agile with Scrum guidance.
- Ability to add new content additions, such as Safety and Security, address critical business needs

Make CMMI easier to use and more user friendly

- Non-technical language makes it easier for users to read and understand the model.
- Online platform allows users to tailor the model to fit specific organizational needs.
- Tools provide guidance for the successful adoption of CMMI & transition to CMMI V2.0 from V1.3.
- Model, training, and usage guidance will be translated into several languages.
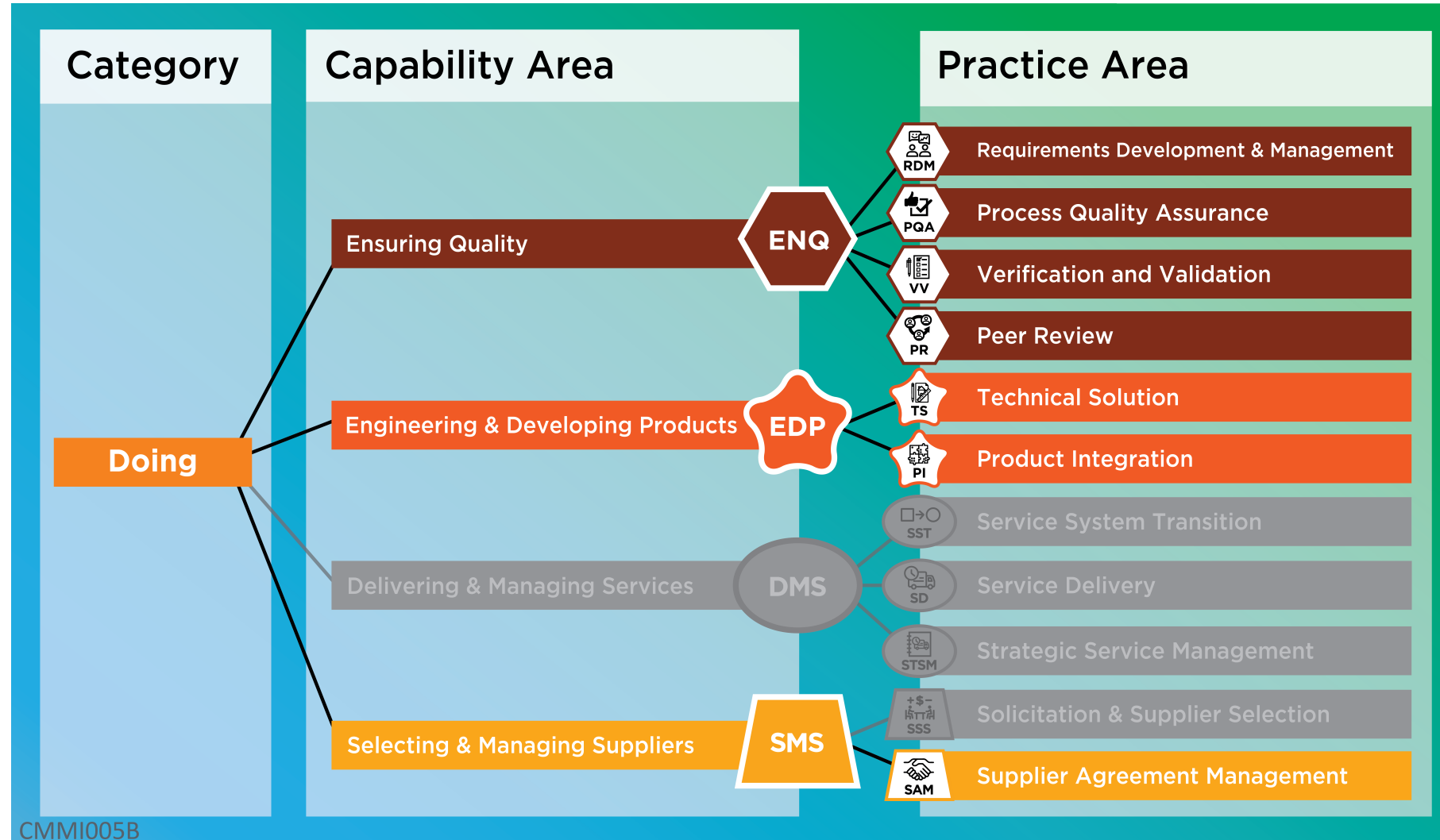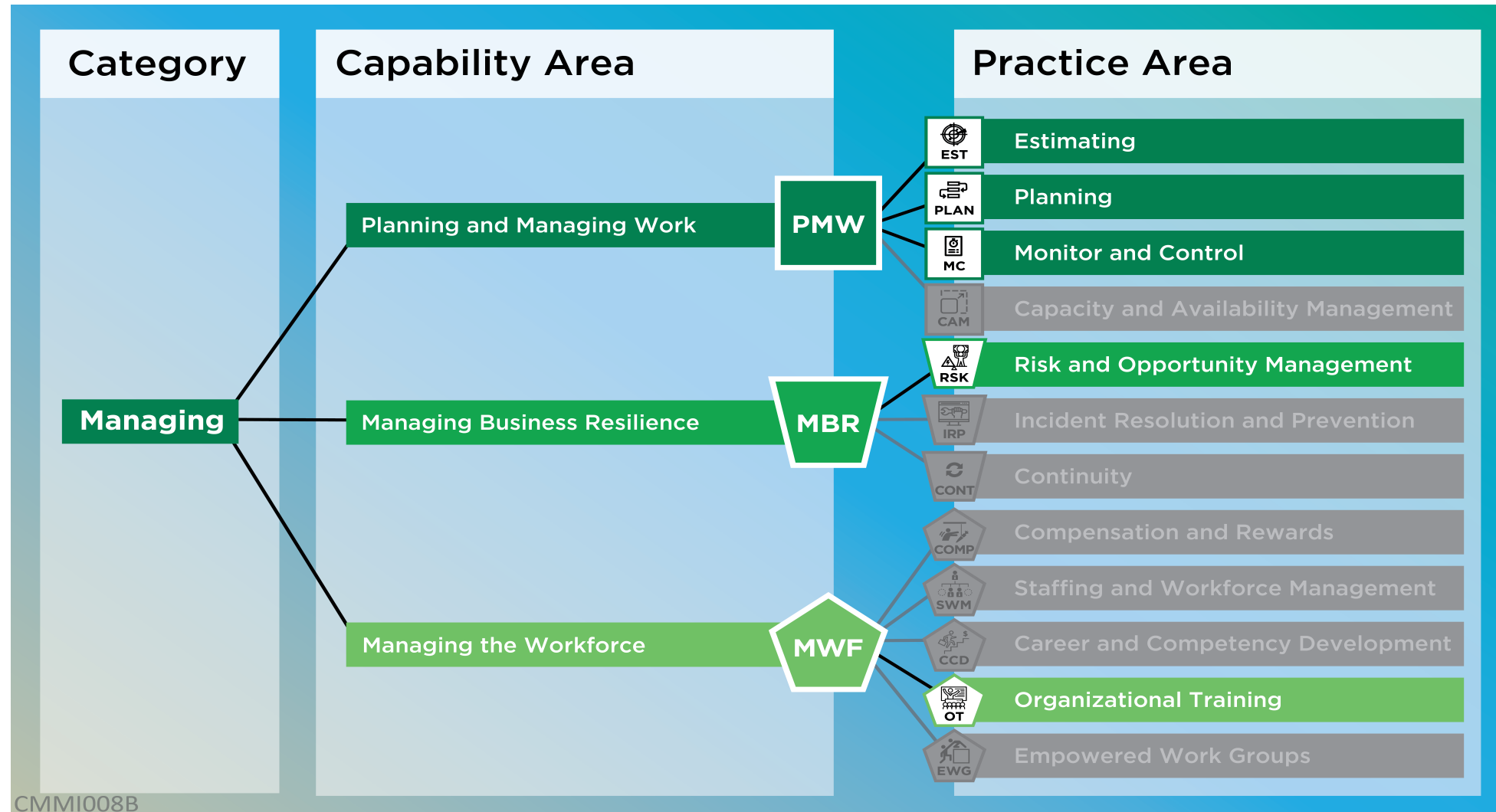
CMMI V2.0 PRODUCT SUITE

MODEL

- CMMI V2.0 model is simplified to reduce redundancy while maintaining the models for Development, Services, Supply Chain, and People.
- Core plus context specific & links to external material
- Pathway to improvement built in through evolutionary practices

APPRAISAL METHOD

- New appraisal method to increase reliability and reduce cost

TRAINING & CERTIFICATION

- Updated training will:
  - Have modular training components
  - Be learning objective directed
  - Have virtual and in-person options

SYSTEMS & TOOLS

- Redesigned system using single sign-on to access online models, new appraisal system, and resources

ADOPTION GUIDANCE

- Guidance for transition from CMMI V1.3 to CMMI V2.0
- Guidance for new adopters to get started with CMMI V2.0

CMMI® Institute

CMMI CAPABILITY AREAS

DOING
- Ensuring Quality
- Engineering and Developing Products
- Delivering and Managing Services
- Selecting and Managing Suppliers

IMPROVING
- Improving Performance
- Building and Sustaining Capability

MANAGING
- Planning and Managing Work
- Managing Business Resilience
- Managing the Workforce

ENABLING
- Supporting Implementation
- Managing Safety
- Managing Security

CMMI002V1 © 2018 CMMI Institute

CMMI® Institute

DOING CAPABILITY AREAS AND PRACTICE AREAS

Category	Capability Area	Practice Area
Doing	Ensuring Quality (ENQ)	Requirements Development & Management (RDM)
		Process Quality Assurance (PQA)
		Verification and Validation (VV)
		Peer Review (PR)
	Engineering & Developing Products (EDP)	Technical Solution (TS)
		Product Integration (PI)
	Delivering & Managing Services (DMS)	Service System Transition (SST)
		Service Delivery (SD)
		Strategic Service Management (STSM)
	Selecting & Managing Suppliers (SMS)	Solicitation & Supplier Selection (SSS)
		Supplier Agreement Management (SAM)

CMMI005B

CMMI® Institute

MANAGING CAPABILITY AREAS AND PRACTICE AREAS

IMPROVING CAPABILITY AREAS AND PRACTICE AREAS

Category	Capability Area	Practice Area
Improving	Building and Sustaining Capability (BSC)	Governance (GOV)
		Implementation Infrastructure (II)
	Improving Performance (IMP)	Process Management (PCM)
		Process Asset Development (PAD)
		Managing Performance & Measurement (MPM)

CMMI® Institute
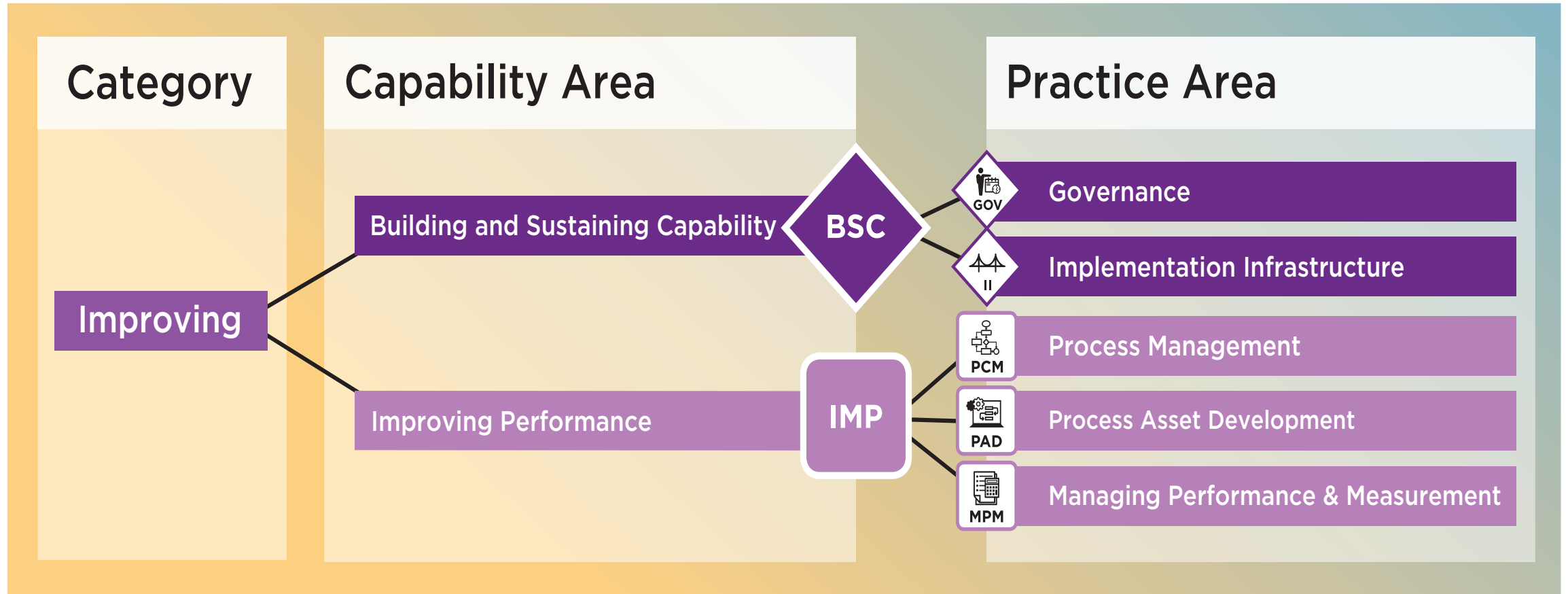
New and Most Significantly Changed Practice Areas

Type of Change	Practice Area
New Practice Areas	Estimating Peer Reviews Governance Implementation Infrastructure
Most Significantly Changed Practice Areas	Managing Performance and Measurement Risk and Opportunity Management Verification and Validation Requirements Development and Management

ESTIMATING

- Established as a stand alone practice area.

- Emphasizes the importance of this area in evolving realistic project and work plans.

- Clarifies use of "size" as the basis of accurate estimates.

- Adds practices to help explicitly evolve estimation beyond the current simplistic picture in v1.3.

CMMI® Institute

PEER REVIEWS

- Established as a stand alone practice area.

- Acknowledges the role peer reviews can play in driving significant performance improvement.

- The basics of peer reviews are introduced at an earlier point, performing simple, basic reviews at Level 1.

- Practices at level 2 also more explicitly formalise the conduct of peer reviews at this early stage.

- The analysis of peer review data to determine potential improvement opportunities is clarified and strengthened.

Strengthened Measurement Practices

MPM

- Built upon v1.3 Measurement and Analysis Process Area

- Managing Performance and Measurement Practice Area in V2.0

- Emphasizes collecting measures sooner at Level 1 to identify and address performance issues

- Adds practices to couple business objectives to deriving performance needs and maintaining traceability

- Introduces data quality and the need for operational definitions sooner

- Explicitly ties High Maturity practices to achieving business objectives

CMMI® Institute

RISK AND OPPORTUNITY MANAGEMENT ALIGNS WITH CURRENT INDUSTRY PRACTICE

- In v1.3, Risk Management primarily dealt with factors that may negatively impact the organisation's goals.

- The term risk typically carries a negative connotation

- The Risk and Opportunity Management Practice Area brings risk inline with ISO 31000 where risk is defined as the "effect of uncertainty on objectives" and an impact can be a positive (i.e. an opportunity) or a negative (i.e. a risk) deviation from what is expected.

BUILDING AND SUSTAINING CAPABILITY

- In the CMMI V2.0 model, the practice areas in the **Building and Sustaining Capability** (BSC) capability area ensure that an organization's culture and environment support processes and improvement that are *persistent and habitual.*

- BSC practices address organizational persistence and habit from two different perspectives:
    - Governance (GOV)
    - Implementation Infrastructure (II)

- BSC practices apply to the *processes that the organization develops and uses* and **NOT** to the practice areas of the CMMI.

CMMI® Institute

Capability Counts 2018

Created Context Specific Content

- Agile with Scrum guidance highlights the synergy between CMMI and agile
  - **Eases the learning curve** for agile organizations adopting CMMI
  - **Provides guidance** on how to scale agile performance in an organization
- DEV context specific information provides additional explanation on how to adopt CMMI in more traditional development lifecycles
- SVC and DevOps context specific information under development

Estimating

Release Planning

Backlog Grooming

Sprint Planning

Sprint Execution

Sprint Review/Demo

Retrospective

CMMI078V1 © 2018 CMMI Institute

CMMI® Institute

APPRAISAL CHANGES FOR V2.0

- Simplified presentation of information
- Types of appraisals
  - Benchmark
  - Sustainment
  - Evaluation
  - Action Plan Reappraisal

- Model Views
  - Benchmark
  - Custom

- Using Building and Sustaining Capability practice areas (GOV, II)

- Appraisal Team Members
  - ATM Qualification: CMMI Associate
  - High Maturity: Complete High Maturity Concepts

- Random Sampling
- Data adequacy and sufficiency
- Characterization
- Rating Process
- Performance Report
- Validity period for appraisals

CMMI V2.0 TRANSFORMATION TO A BUSINESS PERFORMANCE MODEL

VIEW: DEVELOPMENT V2.0 -- MATURITY: LEVEL 3 -- CONTEXT SPECIFIC: NONE   Back

DOWNLOAD ENTIRE VIEW ⬇

Causal Analysis and Resolution

Configuration Management

Decision Analysis and Resolution

Estimating

ESTIMATING (EST)

Required PA Information

Intent

Estimate the size, effort, duration, and cost of the work and resources needed to develop, acquire, or deliver the solution.

VIEW: DEVELOPMENT V2.0 -- MATURITY: LEVEL 3 -- CONTEXT SPECIFIC: NONE   Back

level estimates to perform the work.

Level 2

EST 2.1 Develop, keep updated, and use the scope of what is being estimated.

EST 2.2 Develop and keep updated estimates for the size of the solution.

EST 2.1

Required Practice Information

Practice Statement

Develop, keep updated, and use the scope of what is being estimated.

Value

Ensures the entire solution is addressed which increases the likelihood of meeting objectives and avoiding rework.

- The addition of the intent and value statements

  ➢ The **Intent** statement provides insight into why the practice area is important to take into consideration in your process

  ➢ The **Value** statement explains the business impact achieved when the intent of the practice area and individual practices are met

CMMI® Institute

18

PERFORMANCE REPORT

- Each Benchmark and Sustainment appraisal needs to prepare a **Performance Report**. The intent of the report is to:

  - Link tangible business performance improvements to the use of CMMI

  - Make relationships among performance results, business benefits, and improvements more visible

  - Enable organizations to use evolutionary practices to focus on performance early

  - Emphasize performance throughout appraisal and improvement efforts

  - Align with results, but not impact ratings

CMMI® Institute

APPRAISAL PILOTS

- A number of Pilot Appraisals were conducted in 2017-18 examining different aspects of the changes to the Appraisal Method.

- Feedback was obtained from customers, lead appraisers and appraisal team members. E.g.

  - A lot of time-consuming low value activities were reduced to a minimum. The VP instructed internal staff that preparation to "beautify" anything was NOT allowed.

  - Mini-teams focused on the intents of practices based on subgroup's contexts, meant meaningful deep discussion with process practitioners were carried out to identify the root cause of strengths and weaknesses as well as suitability of recommendations. Value driven appraisal can close the loop with the value drive improvement.

  - Instead of "PIIDs" with links, an artifact index map was used by the team. This saved a lot of preparation time.
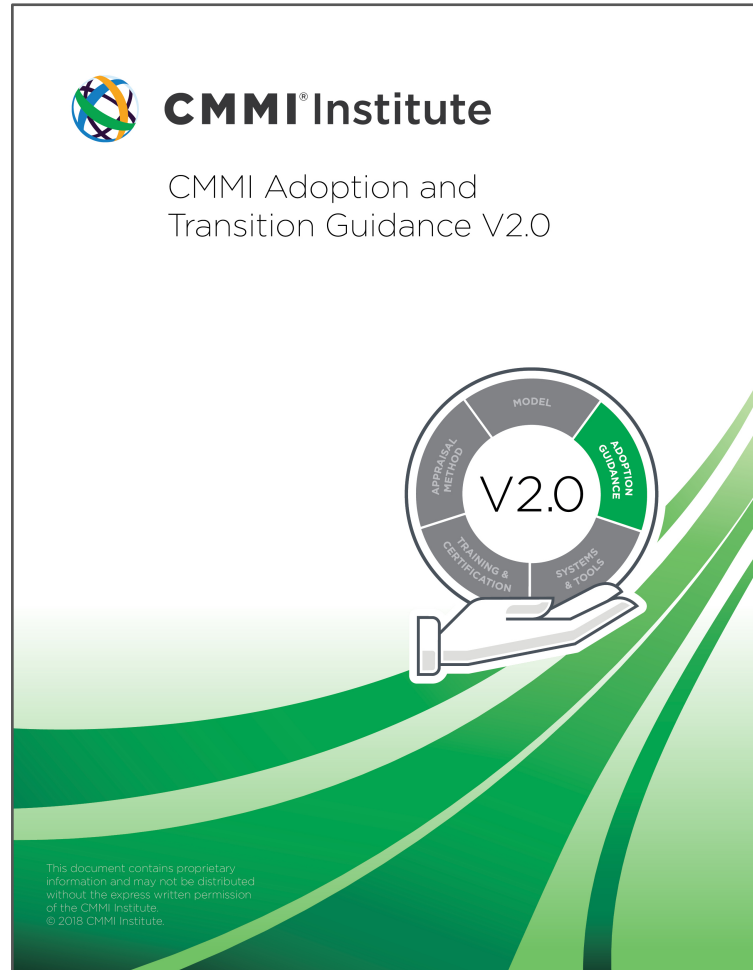
CMMI® Institute

OTHER PILOT FINDINGS

- Broader organisational coverage

  o Participation across organisation

  o Visibility of similarities and differences of implementation

- Spreads the workload

  o Data collection

  o Minimises disruption to individual groups

- Necessitates following process story threads across different groups

  o Add support functions, as needed

  o During appraisal (e.g. WP to WMC)

CMMI® Institute

CMMI ADOPTION AND TRANSITION GUIDANCE V2.0

CMMI Institute

CMMI Adoption and
Transition Guidance V2.0

MODEL

ADOPTION GUIDANCE

APPRAISAL METHOD

V2.0

TRAINING & CERTIFICATION

SYSTEMS & TOOLS

This document contains proprietary
information and may not be distributed
without the express written permission
of the CMMI Institute.
© 2018 CMMI Institute.

Audience
- Anyone facing business challenges and wants to address them using the Capability Maturity Model Integration (CMMI) V2.0.
- Anyone who would like to systematically, efficiently, and effectively improve the performance of their business by adopting the CMMI.

Why Use The Guidance?
- Put an organization on the right track to effectively apply CMMI practices.

CMMI® Institute

ADOPTION AND TRANSITION GUIDANCE - SIX STEP APPROACH

MPM

- **Step 1: LEARN**
  Learn how CMMI will benefit the organization
- **Step 2: ESTABLISH OBJECTIVES**
  Establish performance improvement objectives aligned to your organizational objectives.
- **Step 3: ANALYZE**
  Map current organizational processes to CMMI
- **Step 4: DEVELOP ACTION PLAN**
  Develop and follow action plans and keep them updated
- **Step 5: DEPLOY IMPROVEMENTS**
  Deploy improvements and measure results
- **Step 6: APPRAISE CAPABILITY**
  Appraise capability and assess performance

CMMI® Institute

Q & A

CMMI® Institute