

The New CMMI[®] V2.0 Enhances Capability Improvement

Dr. Richard Waina
Multi-Dimensional Maturity

® CMMI is a registered mark of CMMI Institute.

This briefing has been created by Multi-Dimensional Maturity using portions of CMMI V2.0 published 4 December 2018, Copyright 2018,

© Multi-Dimensional Maturity 2019

CAPABILITY

the ability to perform
or achieve certain
actions or outcomes



CAPABILITY MATURITY

capability measured
against some
desired state or goal



Capability Maturity Model Integration (CMMI[®])

CMMI is a **process improvement approach** that provides a set of **effective practices** that addresses productivity, performance, costs, and stakeholder satisfaction.

CMMI practices describe the **“what”** not the **“how.”**

CMMI practices are organized for **systematic, evolutionary improvement** of capability or maturity in all or part of your organization.

CMMI is meant for **process improvement**, not process compliance.

CMMI can be used as a **benchmark** so that you know where you stand against competitors, can chart your progress, and can explain your capabilities using a widely accepted model.

CMMI Is a Toolbox



It has tools to address a number of problems government and industry have found significant over the years.

The CMMI[®] V2.0 Product Suite

Driving Performance
Through Capability



The CMMI V2.0 integrated product suite consists of five components that, when used together, provide a clear and proven path for organizations to build and benchmark the key capabilities that address their most common business challenges.

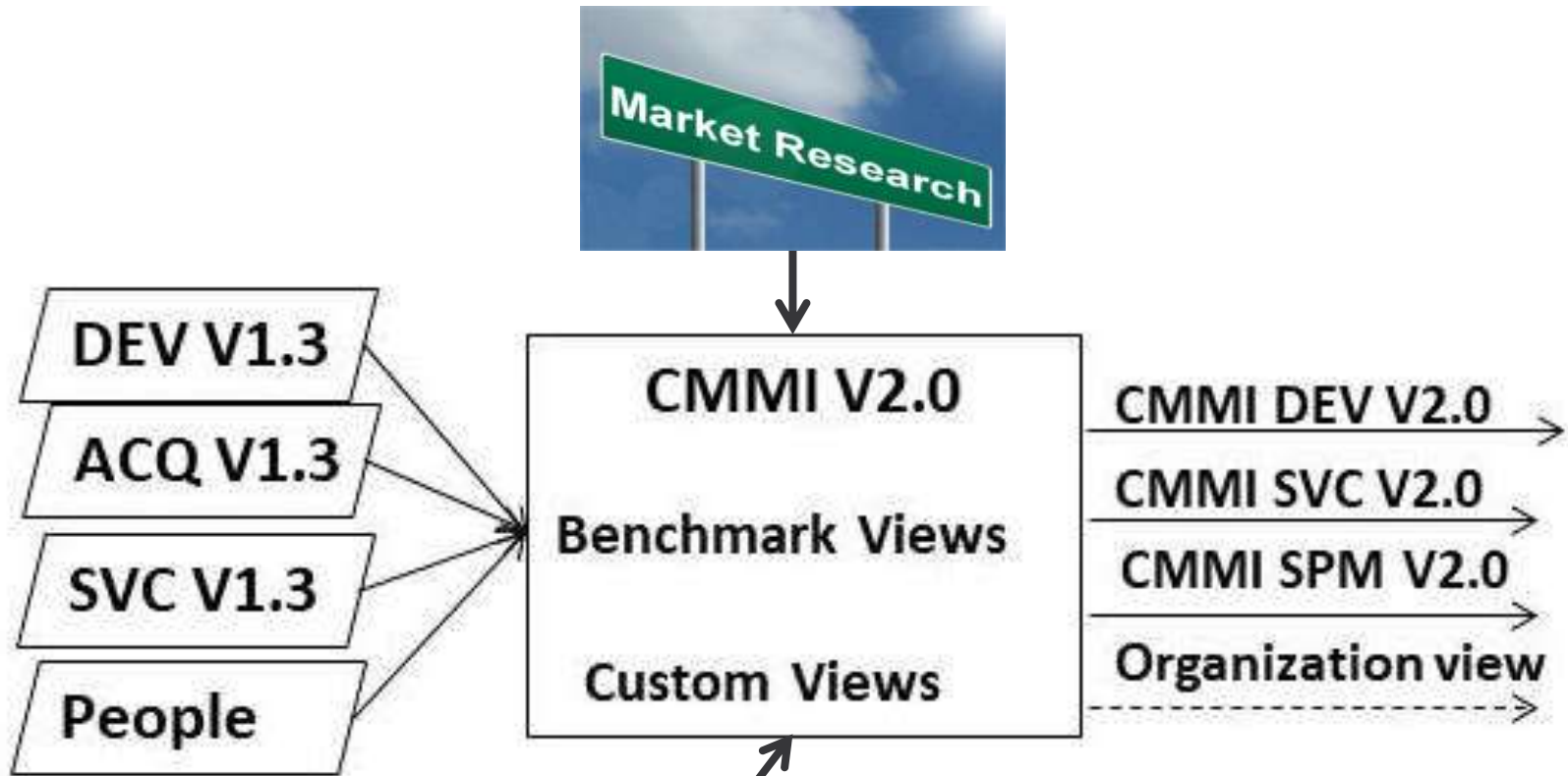
Get Started at cmmiinstitute.com/cmmi



CMMI[®] Institute

AN ISACA ENTERPRISE

How was CMMI V2.0 Created?



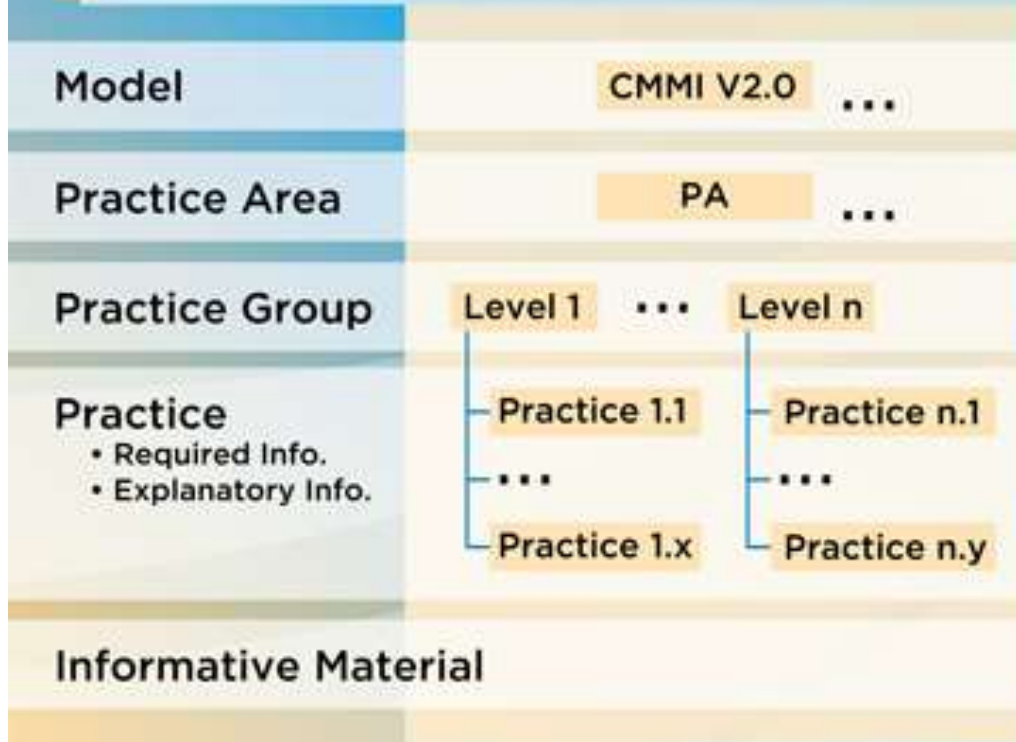
Developed by product teams
with members from industry
and the CMMI Institute



CMMI V2.0 vs. CMMI V1.3

- ❖ **The model is not a set of implementable processes.**
 - Each project or organization must understand how to implement processes to address their unique situation.
- ❖ Model is now on-line, with pdf available; have to buy a license.
- ❖ Designed to be understandable, accessible, flexible, and integrate with other methodologies such as agile.
- ❖ Strong focus on tying processes to performance and business needs.
- ❖ Now have Practice Areas vs. the Process Areas of V1.3.
- ❖ The architecture of V2.0 is now totally continuous vs. staged; no Goals.
 - But you can still be appraised against Maturity Levels.
- ❖ No Generic Practices; replaced by two Practice Areas focused on Implementation Infrastructure and Governance.
- ❖ New appraisal system will generate random sample from population of projects provided; no “cherry picking” of projects.

CMMI V2.0 Model Structure



View

Model

Select PA(s)

Select PG(s)

Select Practice(s)

Context Specific

There will be predefined benchmark model views for Development, Services, Supplier Management and People Management.

Practices Build from Level 1 to Level 5



Optimize performance to achieve quality and process performance objectives

Identifies and understands process variation

Uses organization standards, focus on project and organizational objectives

Simple but complete approach, monitor project progress

Initial approach, address performance issues

Model Organization

CMMI V2.0
Release 2.1 has:
4 Categories
10 Capability Areas
25 Practice Areas



Doing the Work

Ensuring Quality

Requirements Development and Management (RDM)

Process Quality Assurance (PQA)

Verification and Validation (VV)

Peer Reviews (PR)

Engineering and Developing Products

Product Integration (PI)

Technical Solution (TS)

Delivering and Managing Services

Service Delivery Management (SDM)

Strategic Service Management (STSM)

Selecting and Managing Suppliers

Supplier Source Selection (SSS)

Supplier Agreement Management (SAM)

Managing the Work

Planning and Managing Work

Estimating (EST)

Planning (PLAN)

Monitor and Control (MC)

Managing Business Resilience

Risk and Opportunity Management (RSK)

Incident Resolution and Prevention (IRP)

Continuity (CONT)

Managing the Workforce

Organizational Training (OT)

Enabling and Improving the Work

ENABLING

Supporting Implementation

Decision Analysis and Resolution
(DAR)

Causal Analysis and Resolution
(CAR)

Configuration Management (CM)

IMPROVING

Improving Performance

Process Management (PCM)

Process Asset Development (PAD)

Managing Performance and
Measurement (MPM)

Sustaining Habit and Persistence

Governance (SG)

Implementation Infrastructure (II)

Estimating Practice Area

Intent

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

Value

Estimation provides a basis for making commitments, planning, and reducing uncertainty, which allows for early corrective actions and increases the likelihood of meeting objectives.



Estimating Practice Area Practices

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

Level 1

1.1 Develop high-level estimates to perform the work.

Level 2

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

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

2.3 Based on **size estimates**, derive **effort, duration** and **cost estimates** and their rationale for the solution.

2.4 Record **rationale** for the estimates.

Level 3

3.1 Develop, keep updated, and use a **recorded estimating method**.

3.2 Use the **organizational measurement repository** and process assets for estimating work.

Practice Context

Not this: “What must I do to meet this Practice requirement?”



But rather: “What problem does this Practice help me address?”

CMMI V2.0 Key Improvements

- ❖ Demonstrate the value and ROI of using CMMI.
 - Understand performance needs and goals
 - Track achievement of those goals
- ❖ Improve the overall value for CMMI appraisals and lower the effort and cost of the appraisal process.
 - Decrease appraisal preparation
 - Lighter weight sustainment appraisal
- ❖ Keep CMMI current and up-to-date with the latest methodologies used in the market.
 - Scalable architecture improves ability to include method guidance (such as agile) and add new content such as safety and security
- ❖ Make CMMI easier to use and more user friendly.
 - Non technical language
 - Online platform
 - Adoption guidance
 - Multiple languages

The Benefits of CMMI V2.0



**Improve
Business
Performance**



**Leverage
Current Best
Practices**



**Build Agile
Resiliency
and Scale**



**Benchmark
Capability &
Performance**



**Accelerate
Adoption**

01: Improve Business Performance

Performance practices are built into CMMI V2.0 at all maturity levels so that organizations can better understand their business needs and track, measure, and achieve their performance goals.

e.g. from MPM:

- 1.2 Identify and address performance issues.
- 2.1 Derive and record measurement and performance objectives from selected business needs and objectives and keep them updated.
- 3.1 Develop, keep updated, and use organizational measurement and performance objectives traceable to business objectives.
- 4.2 Select measures and analytic techniques to quantitatively manage performance to achieve quality and process performance objectives.
- 5.2 Analyze performance data using statistical and other quantitative techniques to determine the organization's ability to satisfy selected business objectives and identify potential areas for performance improvement.

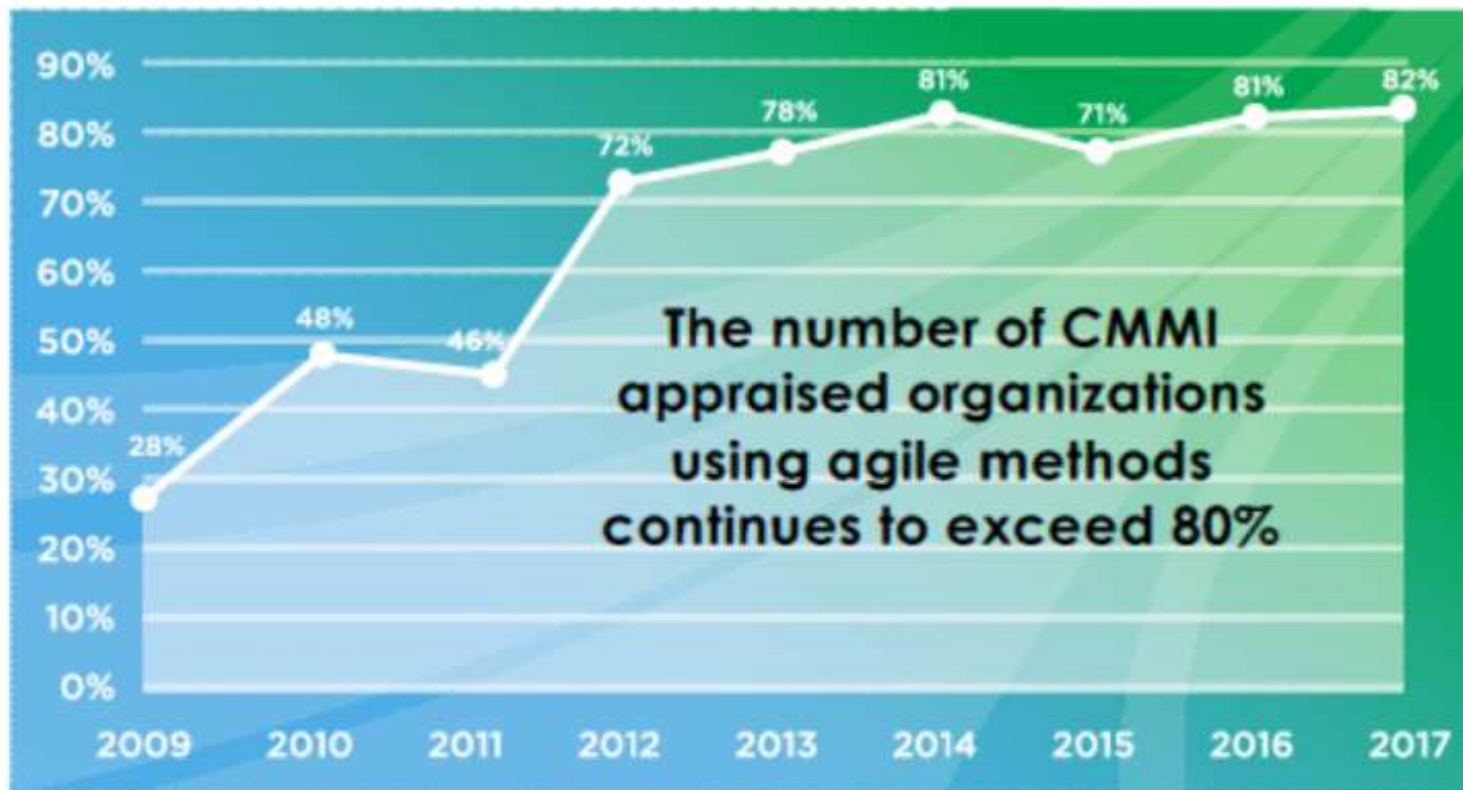
02: Leverage Current Best Practices

CMMI V2.0 is a trusted source of proven best practices that are continuously updated to reflect changing business needs on the new online platform.

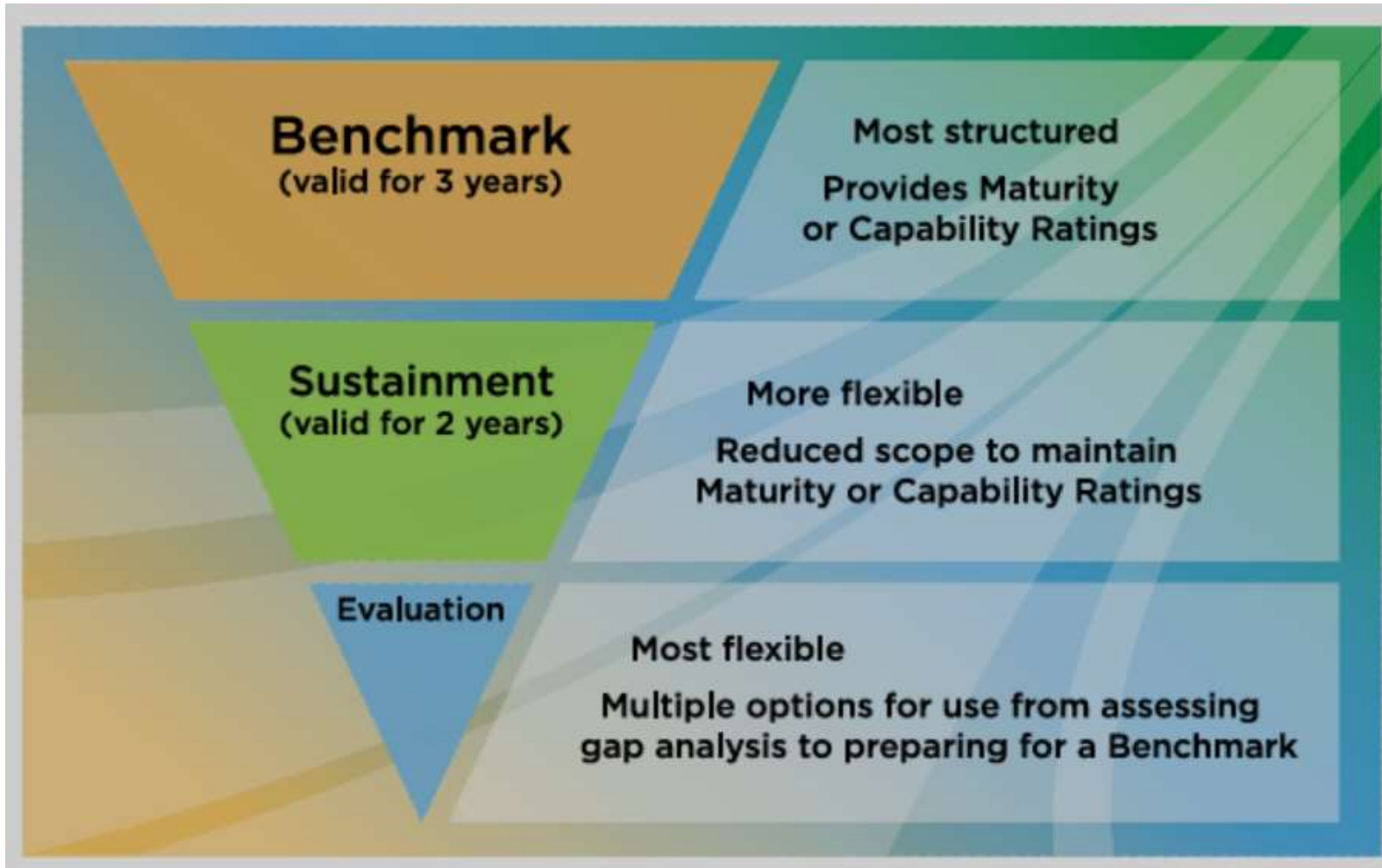


03: Build Agile Resiliency and Scale

CMMI V2.0 includes specific guidance to help organizations that use agile methods for development to strengthen their processes and scale their agile practices with a focus on performance.



04: Benchmark Capability and Performance



CMMI DEV ML3 Benchmark View (with SAM)

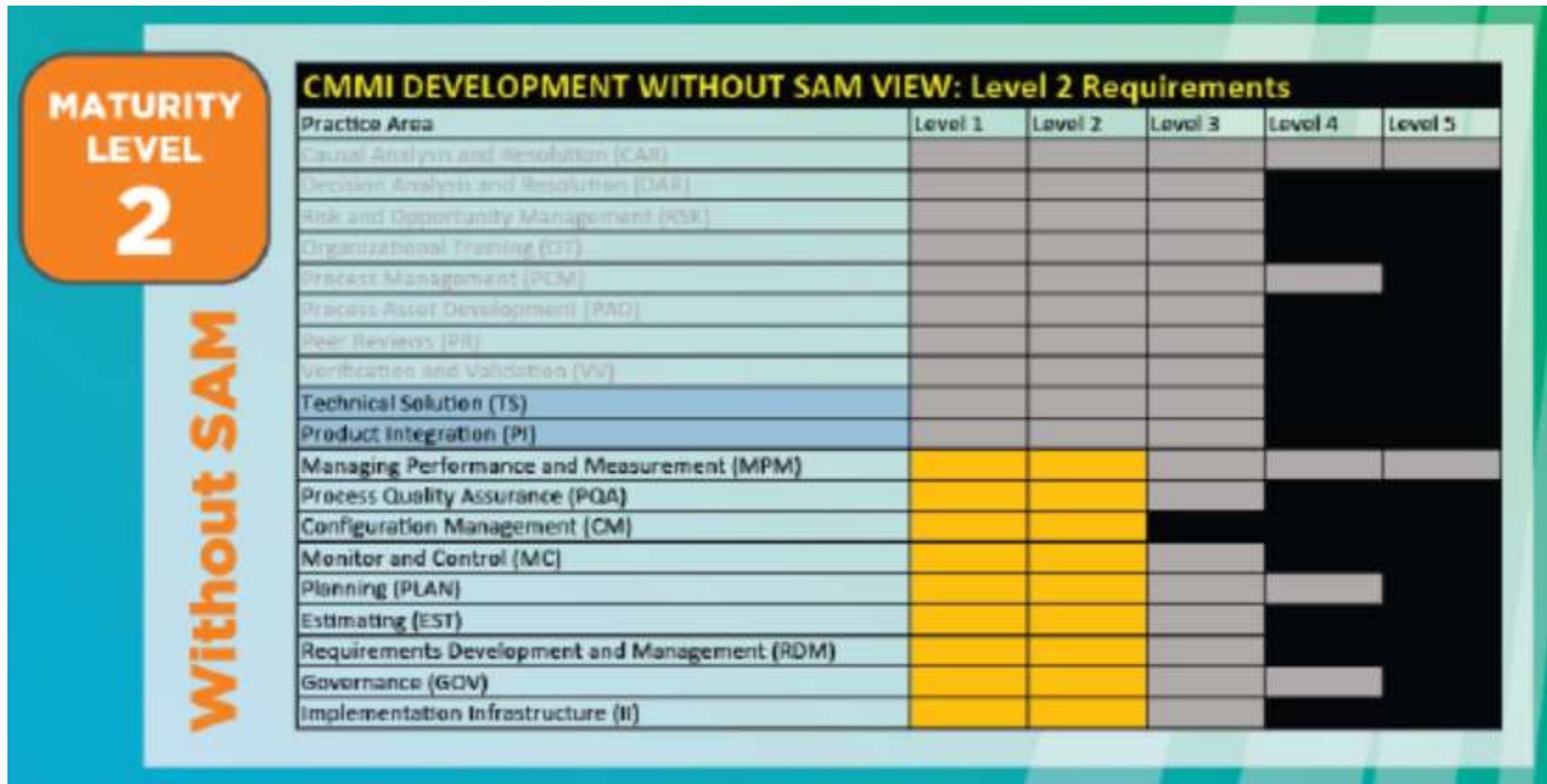
**MATURITY
LEVEL**

3

With SAM

CMMI DEVELOPMENT WITH SAM VIEW: Level 3 Requirements					
Practice Area	Level 1	Level 2	Level 3	Level 4	Level 5
Causal Analysis and Resolution (CAR)	█	█	█		
Decision Analysis and Resolution (DAR)	█	█	█		
Risk and Opportunity Management (RSK)	█	█	█		
Organizational Training (OT)	█	█	█		
Process Management (PCM)	█	█	█	█	
Process Asset Development (PAD)	█	█	█		
Peer Reviews (PR)	█	█	█		
Verification and Validation (VV)	█	█	█		
Technical Solution (TS)	█	█	█		
Product Integration (PI)	█	█	█		
Managing Performance and Measurement (MPM)	█	█	█	█	█
Supplier Agreement Management (SAM)	█	█	█	█	
Process Quality Assurance (PQA)	█	█	█		
Configuration Management (CM)	█	█	█		
Monitor and Control (MC)	█	█	█		
Planning (PLAN)	█	█	█	█	
Estimating (EST)	█	█	█		
Requirements Development and Management (RDM)	█	█	█	█	
Governance (GOV)	█	█	█	█	
Implementation Infrastructure (II)	█	█	█		

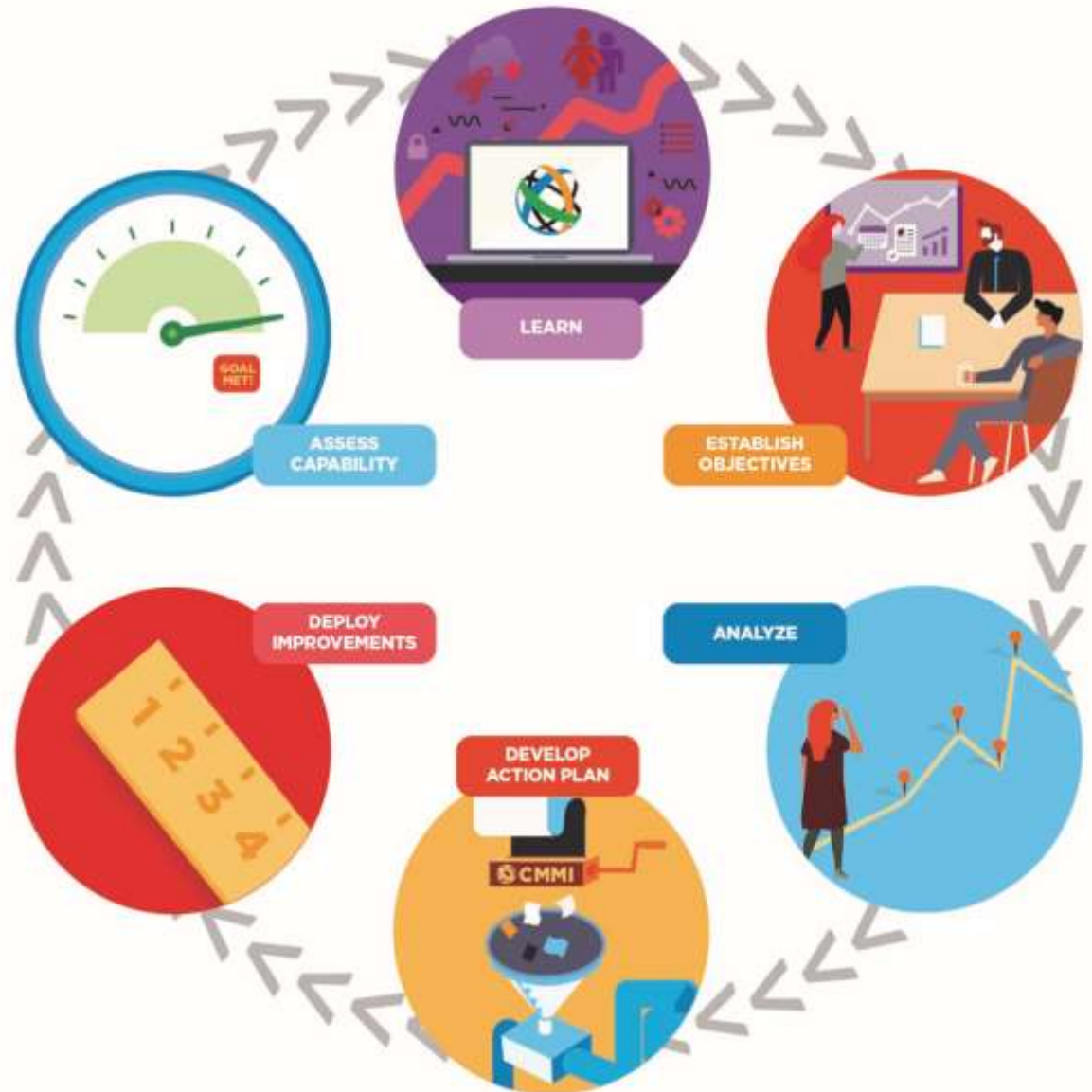
CMMI DEV ML2 Benchmark View (w/o SAM)



05

Accelerate Adoption

Step-by-step adoption guidance provides a clear path to get started with CMMI or to transition to CMMI V2.0 from CMMI V1.3.



Benefits of Using CMMI

- Organizations typically report productivity improvements of 10-50% and a return on investment of 4:1 (cost savings realized vs. process improvement dollars invested).
- Blue People (Mexico): Improved task hour efficiency from 55% to 84%
- Siemens: 25% increase in productivity
- Raytheon: 42% decrease in cost of rework
- GM: 70% increase in meeting milestones
- Allianz UK: 39% increase in on-time delivery; 123% increase in delivery within budget; 53% increase in customer satisfaction
- For more information on the results and benefits of using CMMI go to <https://cmmiinstitute.com/who-uses-cmmi>

For More Information:

To access the model go to

<https://cmmiinstitute.com/products/cmmi/cmmi-v2-products>

Richard Waina

mdmaturity@gmail.com

www.mdmaturity.com

214-457-2955