Topics

What is Multi-Model Improvement?
What Multi-Model Improvement is NOT
The Case for Multi-Model
A Multi-Constellation Look
The Multi-Model Improvement Strategy
The Improvement Continuum
What is Multi-Model Improvement?

A systematic approach to using different improvement models to ensure value to the organization

• Develop the process appropriate to the work being performed
• Develop the workforce appropriate to the work being performed
• Align objectives with overall strategy
• Implement and appraise

Using multiple improvement technologies

• Concurrently implemented
• At different hierarchical levels
• Across different organizational functions
• Leverage existing resources
What Multi-Model Improvement is NOT

Creating a master meta-model
Developing a:
  • new single technology that encompasses all other technologies
  • universal combination to suit every organization
Promoting any single combination of technologies as the best
All models implemented identically in all areas
(Necessarily) adding more technologies
The Case for “Multi-Model”

Alignment of processes and improvement activities with specific business objectives

- Business challenges are complex, often not monolithic, and require the ‘right’ combination of capability, targeted to business needs.

A Multi-Model approach is well suited to this environment.

- The different CMMI constellations (DEV, ACQ, SVC) can allow Orgs to achieve ratings appropriate to the type of work they do.
- P-CMM can support the development and retention of a world-class workforce.
- Resilience Maturity Model (RMM) can support resilience of the “systems” to security and other threats
- Multi-model improvement will create an Enterprise “profile” of qualifications to enhance offerings to customers, based on their need, and the ability of the Org to deliver real value.
The Case for “Multi-Model”

Create an Org-specific “constellation”

- Using the Org capability profile, identify an integrated set of process areas from the different models and constellations that can be used to create a unique model for the enterprise.
- As needed, create specific models for each Org that fit their specific process needs.
- Within some of the Orgs, if the process diversity is great enough, it may be beneficial to create specific models for sub-organizations of the Org.
- Using the Org capability profiles, identify an integrated set of workforce management practices that can be used to manage the workforce across the enterprise.


### A Multi-Constellation Look

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**Enterprise**

**People CMM**

Org 1  Org 2  Org 3

SO 1  SO 2  SO 3
Organization 1

Org 1 is primarily a development organization
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
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
Organization 2

Org 2 is primarily an acquisition organization
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
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
Organization 3

Org 3 is primarily a services organization
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
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
**Organization 1**

A profile for an organization that is assumed to be:

- Primarily software development
- With:
  - Helpdesk service
  - Some procurement
Organization 2

Org 2 is assumed to be:

- Primarily acquisition
- With:
  - Helpdesk service
  - Some software development
Organization 3

Org 3 is assumed to be:

• Primarily services
• With:
  – Some software development
  – Some procurement
A Tale of Three Orgs

A multi-constellation approach more efficiently and effectively supports the needs of different parts of the enterprise – no round pegs in square holes.
### A Multi-Constellation/Model Look

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A Multi-Model Look

Level 2
STF Staffing
CC Communication and Coordination
WE Work Environment
PM Performance Management
TD Training and Development
CP Compensation

Level 3
CA Competency Analysis
WP Workforce Planning
COMD Competency Development
CARD Career Development
CBP Competency-Based Practices
WD Workgroup Development
PC Participatory Culture

Software Engineering Institute
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<td>RTSE</td>
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<td>Incident Management and Control</td>
<td>TM</td>
<td>Technology Management</td>
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<td>KIM</td>
<td>Knowledge and Information Management</td>
<td>VAR</td>
<td>Vulnerability Analysis and Resolution</td>
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CL 1

CL 2

CL 3

RMM

Multi-Constellation/Model Tutorial
Rawdon Young and Alex Stall
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RMM Profile Examples

Your organization is required to be compliant with FISMA

Your organization wants to manage risks with cloud computing

Your organization wants to manage insider threat risks
Multi-Constellation/Model Tutorial
Rawdon Young and Alex Stall

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Information System

Provide decision support systems and services to the company. Involves:

- Development
- Management reporting
- Dashboards
- Analysis
- Assistance
Information System

Recruiting, refining, and retaining the workforce is a key factor in efficient and cost effective operations.
Recruiting, refining, and retaining the workforce is a key factor in efficient and cost effective operations. Involves:

- Staffing
- Communication and Coordination
- Work Environment
- Performance Management
- Training and Development
- Compensation
Successful process improvement requires

- Identifying what to improve
- Establishing a structure
- Planning the effort
- Training the people
Information System

Development project drivers are

- Requirement for FISMA compliance
- Make or break decisions are being made based on the information supplied so quality systems are paramount
- Not schedule driven
- Very diverse set of project types and environments
- Risks and measures are important
- Little procurement activity
Planning for Development is not the Same as Planning for Services

**Development**
- Tangible products
- Schedule oriented to producing products
- Schedule driven

**Services**
- Intangible services
- Schedule oriented to providing resources
- Event driven
Information System

Services Drivers are

- Make or break decisions are reliant upon the analytical services
- Measurements are important to this business
- Planning and CM are rather simple and non-critical

PCMM

CL 3

CL 2

CL 1

RMM
Providing Cloud Services

- People CMM for an effective workforce
- ACQ to procure the cloud services
- SVC for service delivery
- RMM for managing the security and other risks of cloud computing
Cloud Services

Procuring Cloud Services
- The procurement is critical to providing the right service level
- Focus on
  - Requirements
  - Selecting the right vendor
  - Verifying and validating the cloud
- Procurement is a rare activity for this organization
Cloud Services

Delivering Cloud Services

• Cloud services are critical to the company
  – User request for help or issues must be promptly addressed
  – Service must be 24/365 – no interruptions

• Services are not a focus of the company
Banking System and Insider Threat

Banking systems must:

- Operate correctly, quickly, and securely
- Be protected from developers and users who are a potential threat to security
Multi-Model Improvement Strategy

At the Enterprise Level

- Define Multi-Model Improvement
- Define overall objectives.
- What does Success Look Like?
- How do we sell to our customers?
- Benefits of Multi-Model Improvement
- Define an integrated set of workforce management practices for the Org.

At the Org Level

- Identify what models or process areas make sense for each Org
- Ensure alignment of PI objectives within each Org with overall Enterprise strategic objectives
  - Leverage other improvement initiatives wherever possible
- Identify areas of commonality and build on them
- Document the standard process architecture
- Revise and update PAL structure to minimize redundancy
  - Use existing resources to maximize value out of investment
- Use P-CMM practices to foster the organizational culture of change and improvement
Multi-Model Improvement Strategy -2

Plan the implementation and deployment
- Set achievable timeframes
- Assign responsibility and authority
- Plan appropriate training

Deploy and implement according to the plan
- Monitor progress and compliance
  - Measurements are critical here
  - Use “Voice of the Customer” to help evaluate effectiveness
  - Track progress to plan
  - Determine benchmark-readiness
- Keep stakeholders updated on the current effort, concerns and questions

Develop an appraisal approach, if applicable to performing a multi-model SCAMPIs
The Improvement Continuum

Characteristics of the continuum:

• Move from single model focus to an integrated approach that allows focus on specific improvement needs

• Emphasize the focus at the Org level
  • “What makes sense to do?”
    • “If I do primarily acquisition, does it make sense to implement SW development practices?”
  • More effective use of PI resources, minimize impact.
  • Leverage work being done in other initiatives.
  • Identify commonalities and best practices.

• Build the Enterprise Improvement Model based on what the enterprise does.
  • Streamline processes
QUESTIONS?
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