People CMM and CMMI Synergy: Maintaining Long-Term CMMI-Based Improvement through Enhanced Workforce Practices

Gian Wemyss
Senior Member of the Technical Staff
People CMM Team Lead
Software Engineering Institute

Agapi Svolou,
Visiting Scientist, Software Engineering Institute
Principal, Alexanna, LLC
Premise

With the help of the Capability Maturity Model Integration (CMMI) many organizations have made valuable improvements in their software and systems processes and practices.

These organizations have also discovered that their continued improvement requires significant changes in the way they manage and develop their people.

People CMM, coupled with CMMI-based process improvement programs enhances the ability of an organization to maintain improvements and preserve long-term business capability and competitive advantage.
Value of Improvement Models

People CMM improvement combined with CMMI-DEV improvement aligns workforce practices and development practices to:

• Increase an organization’s business performance (enhanced delivery of products and services, i.e., ability to better meet a product’s cost, schedule, and quality)

• Satisfy customers and employees (happy customers and involved, happy employees)
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The Shifting Focus of Change:

*Workforce Issues*

*Managing a Changing Workforce*
The Shifting Focus of Change

“When assets were physical things like coal mines, shareholders truly owned them. But when the vital assets are people, there can be no true ownership. The best that corporations can do is to create an environment that makes the best people want to stay.”

Business Week, August 21, 2000
Navigating Workforce Agility

- More than 50% of U.S. high growth companies outsource administrative HR functions.
- 63% of companies’ HR technology does not provide centralized data for decision-making.
- At least 50% of U.S. HR executives don’t know enough to stay competitive.
- 84% of companies are not utilizing their workforce to its full potential.
- 10% of US companies have a human resources controller.
- 60% of U.S. executives say HR is not proficient at developing workforce strategy.
- 27% of US companies have a human resources controller.

Note: Results based on in-person interviews with top human resources executives at U.S. and European companies in a range of industries and telephone interviews of human resources, operations and finance executives at approximately 300 companies.

PM Network, v.19, no. 1, January 2005
Trends Affecting the Workforce

From To

Doers differ from thinkers Doers must be thinkers
Assets are things Assets are people
Labor is an expense People are an investment
Lifetime employment Lifetime employability
Top down control Decentralized decisions
Localized work Networked problems solved
Measure for results Measure for improvements
Labor Demand and Supply Projections

2006 First of the Baby-Boomers turn 60

2024 Last of the Baby-Boomers turn 60

Source: The Employment Policy Foundation, 2005
The Shifting Focus of Change:

Workforce Issues

Managing a Changing Workforce
What Does ‘Manage’ Mean?

‘Manage’ in the dictionary:

Manage, v.t.—To control and direct; to administer; to treat, as a person, with caution or judgement.

‘Manage’ in the People CMM:

Manage, v.t.—To accept stewardship of a resource; to develop; to optimize the conditions affecting success.
The Immediate Retention Issue

Relationship with manager is the issue:

- affects morale
- represents the company

Performance management:

- clear objectives—cascaded if possible
- continuing discussion of the performance of the work
- manage performance problems
- reward outstanding performance

Implicit messages:

- work performance matters
- your abilities matter
- “I care whether you succeed”
The Long Term Retention Issue

Professional development:

- continued growth of competencies
- opportunities to use them
- new challenges

Technical careers:

- competence, not seniority or job based
- competence-based pay
- culture of professionalism

Core competency of the firm → Workforce competencies → Competency-based careers
CMMI-DEV and People CMM

CMMI-DEV

Establishes a foundation for continuously improving the development and maintenance practices applied to an organization’s products and services.

The process maturity framework was designed for application to practices that contribute directly to the business performance of an organization.

People CMM

Establishes a foundation for continuously improving an organization’s workforce practices.

The people maturity framework was designed for application to practices that contribute directly to the workforce performance of an organization.
CMMI-DEV and People CMM Processes

Process makes a difference in the quality of both workforce and development activities.

Sound workforce practices enable organizations to transmit and incorporate the culture’s quality values.

A synergy between development and workforce practices shapes an organization’s workforce and positions them competitively in the market via:

- Development of individual and organizational workforce and process capability and culture
- Motivating the workforce and continuing to build organizational workforce and process assets for use by all relevant stakeholders
- Shaping the workforce and building a business advantage by continually improving the critical aspects of the business (both people and development practices)
Connections: People CMM and CMMI-DEV

It is the workforce that implements and delivers the business strategy. Improved workforce practices are foundational on achieving project performance and enhance overall business performance.

Since the capability of an organization’s workforce is critical to its business performance, it would only benefit an organization to develop workforce practices along with the practices of the maturity framework.

Generally, the People CMM establishes a foundation for the building of a culture of process that facilitates the implementation of CMMI-DEV.

Additionally, People CMM strengthens and greatly extends the people issues that are only lightly touched in the maturity framework.
## Impact of Workforce Practices

<table>
<thead>
<tr>
<th>Project/Individuals</th>
<th>Organization</th>
<th>Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring committed work gets done in a timely manner.</td>
<td>Clear establishment of organizational values to help workforce align with their own.</td>
<td>Can expect to receive what they asked for, according to their needs, in a timely manner.</td>
</tr>
<tr>
<td>Development of interpersonal and communication skills enabling effective working relationships.</td>
<td>Respect of workforce opinions on working conditions.</td>
<td>Demonstration (externally) of professionalism and respect for diverse cultures.</td>
</tr>
<tr>
<td>Making informed decisions based on information sharing.</td>
<td>Building of a foundation for a participatory culture and empowered workgroups.</td>
<td></td>
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<tr>
<td>Building trust and confidence in others.</td>
<td>Increased productivity.</td>
<td></td>
</tr>
<tr>
<td>Emphasizing quality of work life.</td>
<td>Encouraging autonomy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establishment of respect for diverse cultures within workforce.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impact on business performance.</td>
<td></td>
</tr>
</tbody>
</table>
Synergy:

*Developing Capability to Predict Performance*

*Model to Model Relationships*
Developing Capability

People CMM

CMMI
Cobit, ISO 9001

Workforce capability

Process capability

Performance

enables

predicts
Developing Capability – CMMI-DEV

- **Organization**
  - Organizational development
  - Organization develops standard processes

- **Project**
  - Projects perform repeatable practices
  - Quality and process performance is measured

- **Individual**
  - Ad hoc, inconsistent, development practices
  - Improvement & integration of process
Developing Capability – People CMM

Maturity levels

1. Ad hoc, inconsistent, workforce practices
2. Managers perform repeatable practices
3. Organization develops workforce competencies
4. Empowered workgroups & measured capability
5. Improvement & integration of personal work process

Organization
Unit or workgroup
Individual

Professional empowerment
Organizational development

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Shaping the Work – CMMI-DEV

Level 2: Managed by project needs
Level 3: Managed by organization needs
Level 4: Managed by the numbers
Level 5: Managed by innovative practices

Project Manager
Organizational Focus
Organizational Capability
Improvement Opportunity
People CMM/CMMI Synergy
Gian Wemyss, AgapiSvolou
SEPG 2007, Austin Texas
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Shaping the Workforce - People CMM

Level 2: Managed by unit needs
Manager

Level 3: Managed by competency needs
Competency community

Level 4: Managed by the numbers
Workforce capability

Level 5: Managed by innovative practices
Improvement opportunity

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SEPG 2007, Austin Texas
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Developing Workforce Capability – People CMM

Level 2
- Training needs for current assignment
- Development for next assignment

Level 3
- Workforce competency

Level 4
- Mentoring
- Competency Based Assets
- Competency Integration

Level 5
- Personal capability
- Workgroup capability
- Workgroup capability
- Personal capability
Synergy: Developing Capability to Predict Performance

Model to Model Relationships
People CMM and CMMI-DEV synergies

Both models work together and promote process change via:

- Cultural enablers (policies, procedures, and guidelines that explicitly define roles and responsibilities, reward mechanisms and recognition of work)
- Organisational enablers (infrastructure)
- Capability enablers (training, process enforcement, workforce career path development)

In many cases People CMM extends what CMMI-DEV only lightly addresses (notably the people issues.)
Establishing Cultural Enablers

**Generic practices** that address establishment of policies, procedures, and guidelines that explicitly define roles and responsibilities

**IPPD addition** that addresses the effective use of multidisciplinary development teams, leadership commitment, appropriate allocation and delegation of decision making, and empowered individuals.

Establishing the foundation for **management practices** focused on projects

**Institutionalization practices** that address establishment of policies, procedures, and guidelines that explicitly define roles and responsibilities

**Building Workgroup and Culture Thread** found throughout the model (Work Environment, Workgroup Development, Empowered Workgroups…)

Establishing the foundation for **management practices** focused on people
Establishing Organizational Enablers

Organizational Process Focus
Planning implementing and deploying organizational process improvements

Organizational Process Definition
Establishment of a useable set of organizational process assets and organizational standards

Competency-Based Practices
Ensure all workforce practices are based, in part, on developing the competencies of the workforce.

Competency Analysis
Identifying the knowledge, skills, and process abilities required to perform the organization’s business activities.

Competency Development
Enhancing the capability of the workforce to perform their assigned tasks and responsibilities.

Competency-Based Assets
Capturing the assets in performing competency-based process.
Establishing Capability Enablers

CMMI-DEV

OPD SG 2 Enable IPPD Management
SP 2.1 – Establish Empowerment Mechanisms
SP 2.2 – Establish Rules and Guidelines for Integrated Teams
SP 2.3 – Establish Guidelines to Balance Team and Home Organization Responsibilities

Covers the establishment of organizational rules and guidelines that enable conducting work using integrated teams

People CMM

Work Environment
Establishment and maintenance of physical working conditions and resources that allow individuals and workgroups to perform their tasks efficiently and without unnecessary distractions.

Communication and Coordination
Develop skills to share information and coordinate their activities efficiently.

Workgroup Development
Organizing work around competency-based process abilities.
Establishing Capability Enablers -2

OPD SG 2 Enable IPPD Management

Participatory Culture
Ensuring a flow of information within the organization, incorporating the knowledge of individuals into decision-making processes, and gaining support for commitments.

Compensation
Providing all individuals with remuneration and benefits based on their contribution and value to the organization.
Establishing Capability Enablers

OPD SG 2 Enable IPPD Management

- Workforce Planning
  Coordinating workforce activities with current and future business needs.

- Competency Development
  Enhancing the capability of the workforce to perform their assigned tasks and responsibilities.

- Competency Analysis
  Identifying the knowledge, skills, and process abilities required to perform the organization’s business activities.
Establishing Capability Enablers

**IPM SG 3 Apply IPPD Principles**
- SP 3.1 – Establish the Project’s Shared Vision
- SP 3.2 – Establish Integrated Team Structure for the Project
- SP 3.3 – Allocate Requirements to Integrated Teams
- SP 3.4 – Establish Integrated Teams
- SP 3.5 – Establish Coordination among Interfacing Teams

**Communication and Coordination**
Develop skills to share information and coordinate their activities efficiently.

**Workgroup Development**
Organizes work around competency-based process abilities.

**Empowered Workgroups**
Invest workgroups with the responsibility and authority to determine how to conduct their business activities most effectively.
Conclusion:

*Last Thoughts*

*Questions*
Last Thoughts

• Improvement in development practices requires significant changes in the way people are managed: changes that are not fully accounted for in CMMI-DEV

• Integrating workforce practices into development practices provides organizations with a competitive advantage and better positions them toward the challenges of the future

• Integrating People CMM to process maturity frameworks speeds the emergence of a common culture based on common professional and business practices

• To survive in a constantly changing business world requires constant adaptation and learning

• High quality communication is key to sustaining the change effort

• Think about incorporating into your process improvement efforts a People Initiative now!
For Further Information

http://www.sei.cmu.edu/cmm-p/version2/

The People CMM, Guidelines for Improving the Workforce
Addison Wesley Book

The People CMM v2
CMU/SEI-01-MM-001

Introduction to the People CMM
3-Day Course

Intermediate Concepts of the People CMM
5-day Course

SCAMPI\textsuperscript{sm} with People CMM
5-day Course
Contacting the SEI

Gian Wemyss,  
People CMM Team Lead  
Software Engineering Institute  

- +1 412-268-8138  
- rgw@sei.cmu.edu  
- www.sei.cmu.edu/staff/rgw/  
- Software Engineering Institute  
  Carnegie Mellon University  
  4500 Fifth Avenue  
  Pittsburgh, PA 15213 USA

Agapi Svolou,  
Visiting Scientist  
Software Engineering Institute  
Principal, Alexanna, LLC  

- +1 412-551-1490  
- asvolou@sei.cmu.edu  
- www.sei.cmu.edu  
- Software Engineering Institute  
  Carnegie Mellon University  
  4500 Fifth Avenue  
  Pittsburgh, PA 15213 USA
Conclusion:

More Information

Questions
Questions?