

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

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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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- Model to Model Relationships

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The Shifting Focus of Change:

Workforce Issues

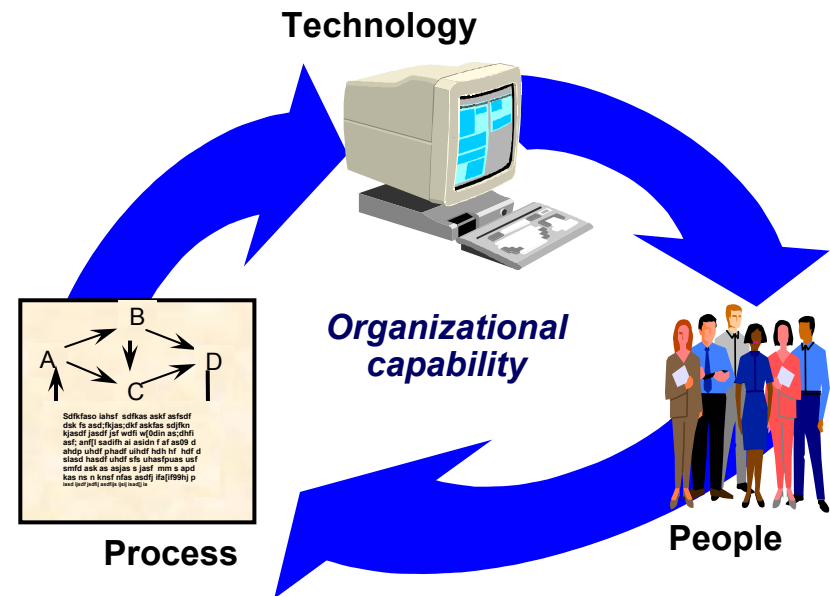
Managing a Changing Workforce



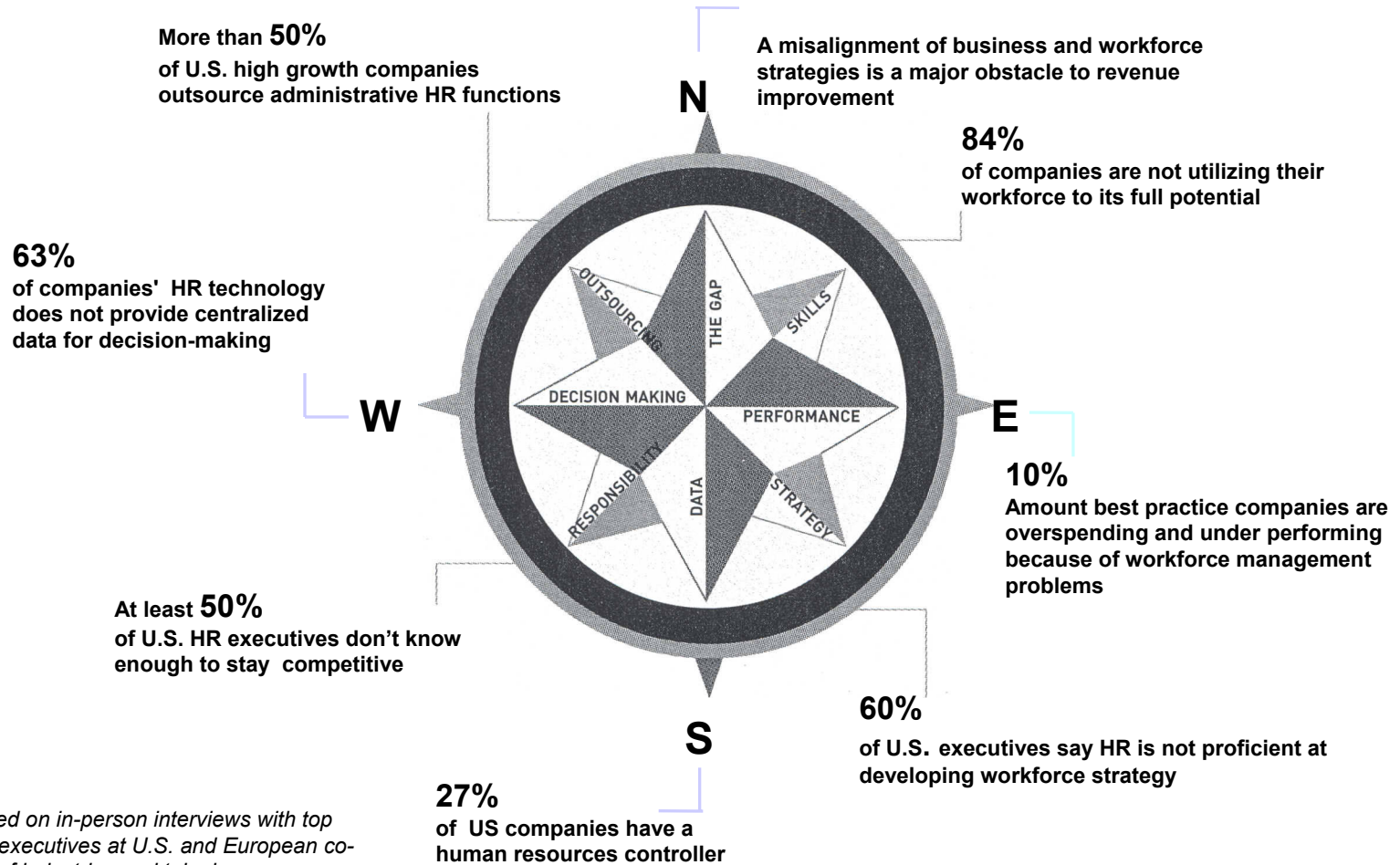
The Shifting Focus of Change

“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



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

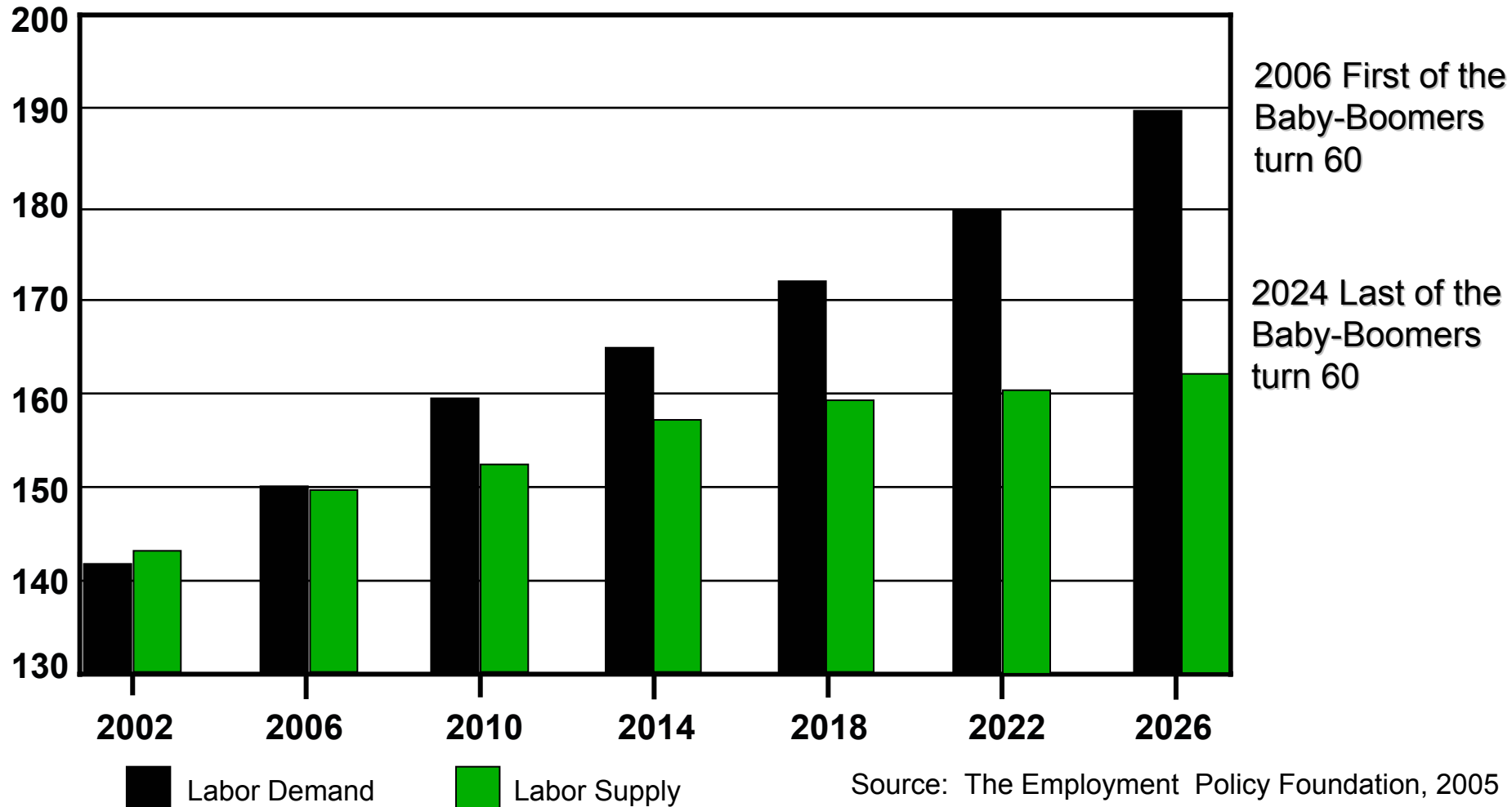
Top down control → Decentralized decisions

Localized work → Networked problems solved

Measure for results → Measure for improvements



Labor Demand and Supply Projections



The Shifting Focus of Change:

Workforce Issues

Managing a Changing Workforce



What Does 'Manage' Mean ?

'Manage' in the dictionary:

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

'Manage' in the People CMM:

Man•age, 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





People CMM v2.0

CMMI-DEV v1.2



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

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



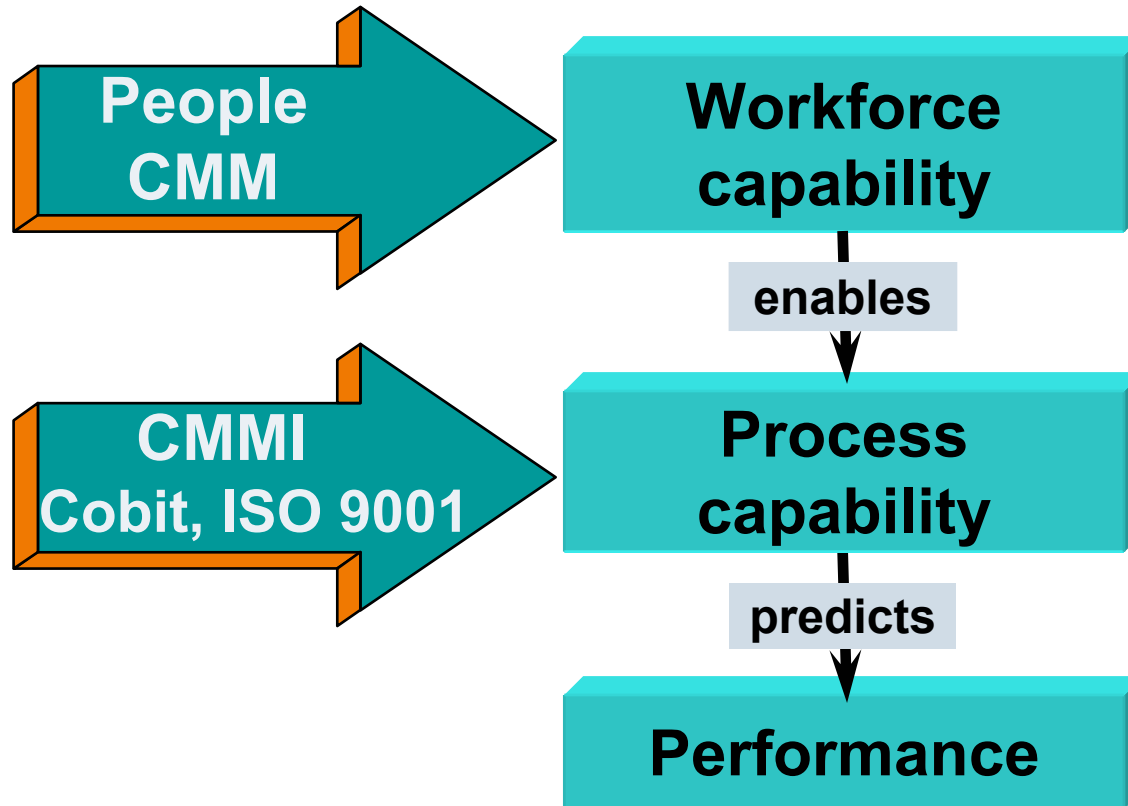
Synergy:

*Developing Capability to Predict
Performance*

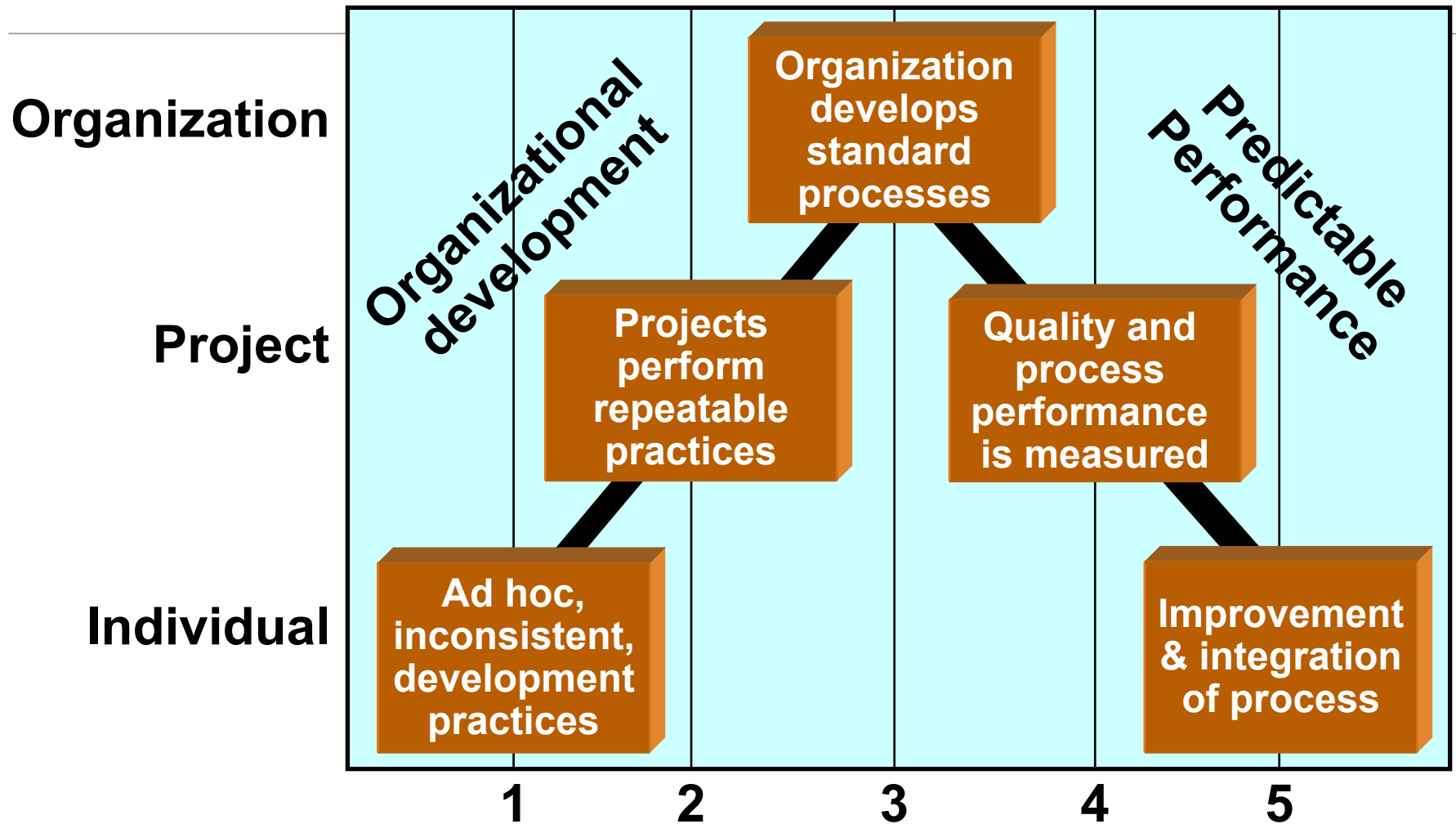
Model to Model Relationships



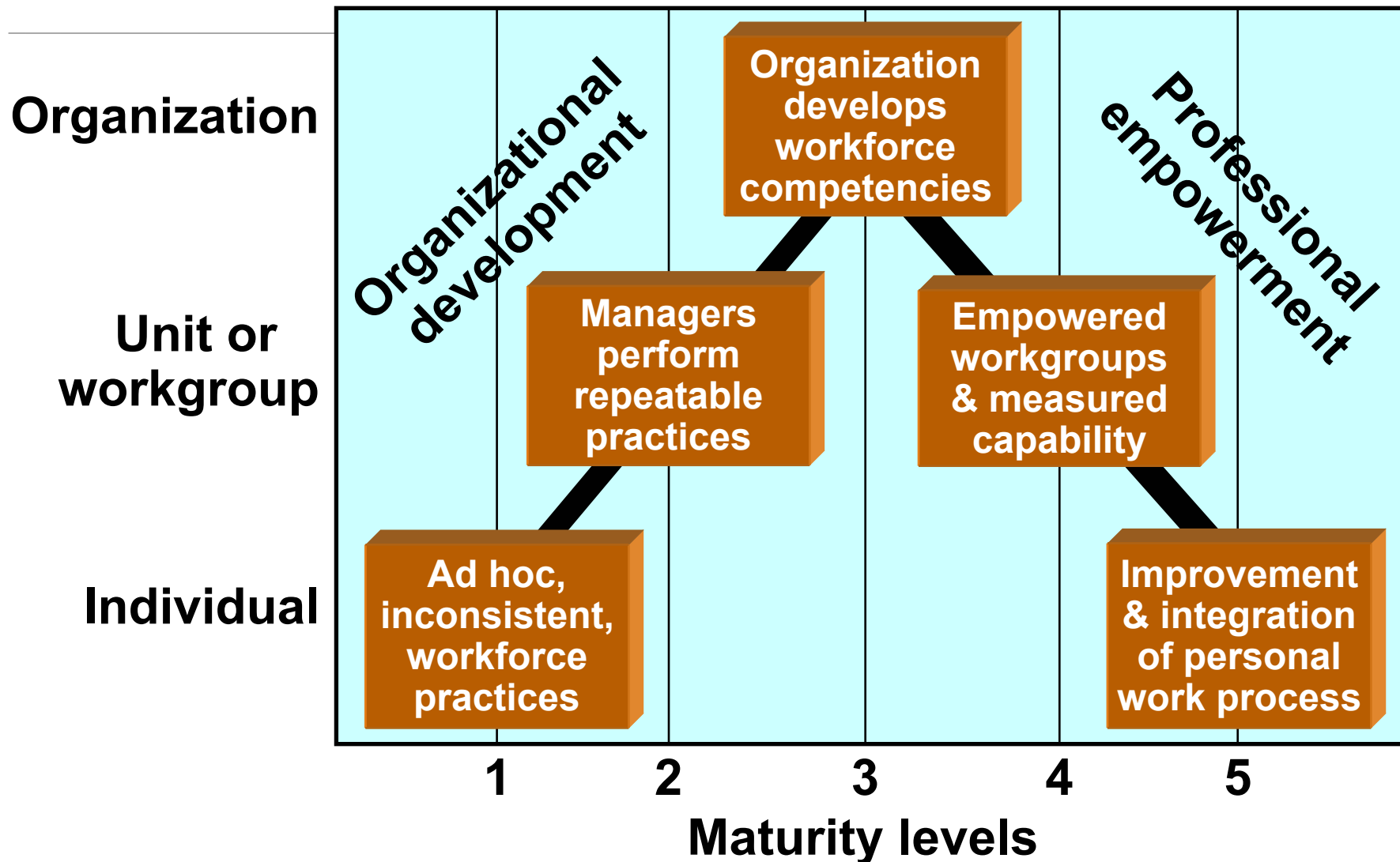
Developing Capability



Developing Capability – CMMI-DEV



Developing Capability – People CMM



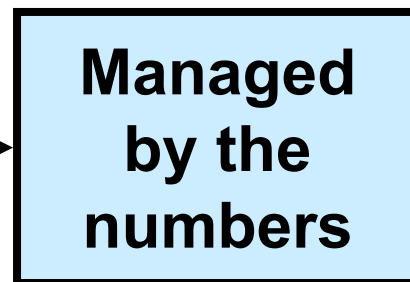
Shaping the Work – CMMI-DEV

Level 2

Level 3

Level 4

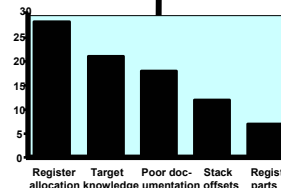
Level 5



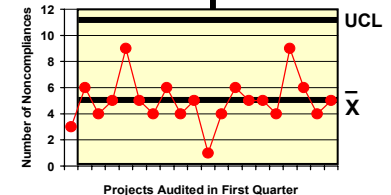
Project Manager



Organizational Focus



Organizational Capability



Improvement Opportunity



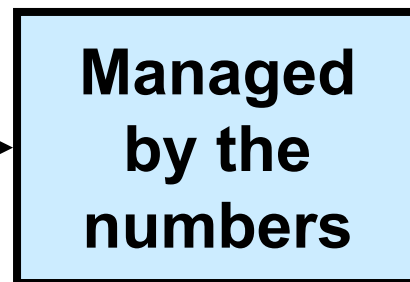
Shaping the Workforce - People CMM

Level 2

Level 3

Level 4

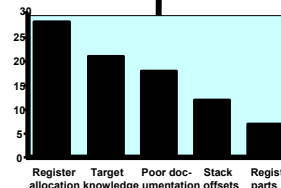
Level 5



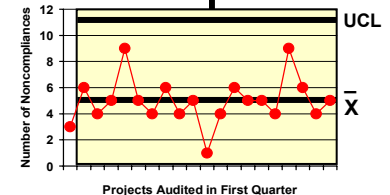
Manager



Competency community



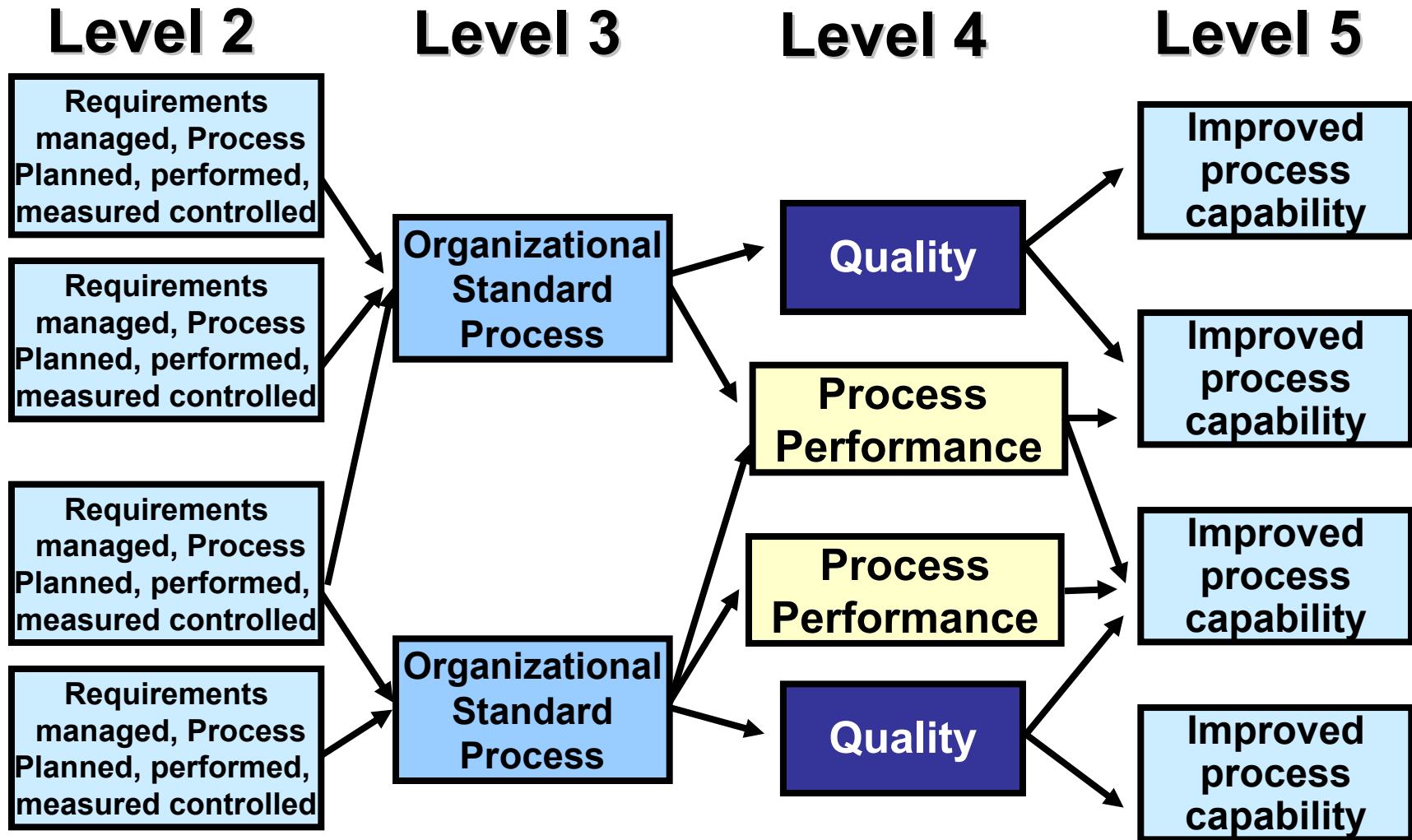
Workforce capability



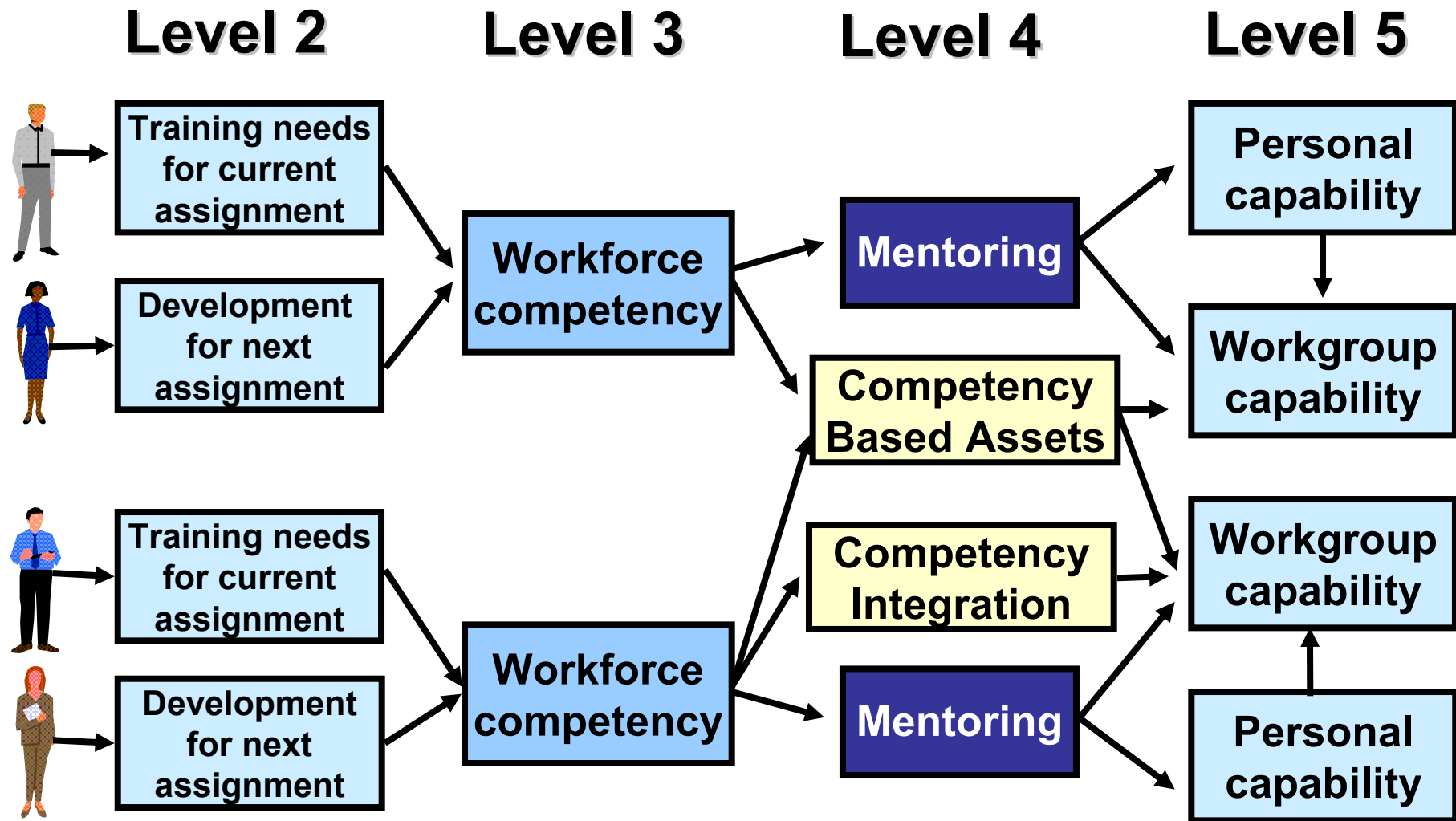
Improvement opportunity



Developing Process Capability – CMMI-DEV



Developing Workforce Capability – People CMM



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

CMMI-DEV

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

People CMM

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

CMMI-DEV

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

People CMM

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 -1

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

CMMI-DEV

OPD SG 2 Enable IPPD Management

People CMM

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 -3

CMMI-DEV

OPD SG 2 Enable IPPD Management

People CMM

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 -4

CMMI-DEV

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

People CMM

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 v2**

3-Day Course

**Intermediate Concepts
of the People CMM**

5-day Course

**SCAMPIsm with
People CMM**

5-day Course



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Conclusion:

More Information

Questions



Questions?





Software Engineering Institute

Carnegie Mellon