



Why Should I Use the People CMM?

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Has your organization started a process improvement effort only to have it stall, or even worse, fail? Are you having trouble attracting and keeping the right employees? Are you seeing organizational skills walk out your door? Perhaps you have just finished a successful Capability Maturity Model® (CMM®) Integration (CMMI®) effort and are wondering, What's next? Then maybe you should try using the People CMM.

In the old Introduction to the CMM class, there is an interesting graphic (Figure 1). The figure consists of a three-legged stool. The seat represents the organization. One leg represents Technology, one leg represents Process, and one leg represents People. What the graphic shows is that, in order to have a stable organization, all three legs must be present. Without one or more of them, the stool topples over. The CMM for Software, and now the CMMI series, address the process concerns. Various methodologies (for example, Agile development, Microsoft certification, object-oriented design and development) address technology. But the one area often left unaddressed by organizations is people.

What Is the People CMM?

The People CMM was written to address the need to integrate effective people practices with process and technology. It is a staged maturity model that begins with a basic set of practices and advances through ensuing stages of sophistication and maturity (Table 1) [1]. The People CMM has been around in an earlier version since 1995 and was updated in 2002 based on best practices gathered from practical application in organizations. Although the model was originally written for the problems facing the software industry, the focus has now been expanded to any organization that depends on people to accomplish work – and *that* should be just about everybody.

There are five maturity levels, with each maturity level laying the foundation for the next maturity level. As each level (or stage) is achieved, the capability of the organization to do work, both now and in the future, increases. Each maturity level contains anywhere from three

to seven process areas (PAs). The PAs are a collection of best practices gathered from highly functioning organizations, grouped by a common theme into process categories.

- At Maturity Level 1, there are no PAs. Maturity Level 1 is characterized by chaos and inconsistency. Work is being accomplished, but no one is really sure how. Status, performance, and quality are unpredictable.
- Maturity Level 2 is the managed level. At this level, a disciplined approach (via following the sequence of best practices in the Level 2 PAs) is introduced into basic workforce practices to promote repeatable outcomes. However, each project, unit, or workgroup has its own way of performing tasks.
- Maturity Level 3 is the defined level. This level is characterized by having an organizational way of conducting business. Best practices from units and workgroups established at Maturity Level 2 bubble up to the organizational level, resulting in effective organizational policies and procedures. Managers and workers can tailor this organizational way of doing things as necessary, but the

original organizational process provides some structure and sanity to the way work is done.

- Maturity Levels 4 and 5 provide more autonomy to the workforce and provide *management by the numbers*. Quantitative data are used to align workforce practices with current and future business needs, and to chart a path of improvement that is measurable and highly predictable.

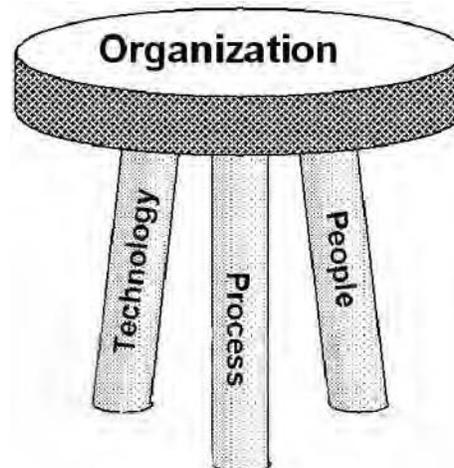
There are also PA threads documented in the model (see Table 2, next page) [2]. These threads show how the PAs are integrated and increase in sophistication as the maturity level increases. The PA threads are the following:

- **Developing competency.** Develop individual capabilities to perform immediate and future work in order to contribute to organizational per-

Table 1: *Stages of People CMM*

Level	Process Areas
5 Optimizing	<ul style="list-style-type: none"> •Continuous Workforce Innovation •Organizational Performance Alignment •Continuous Capability Improvement
4 Predictable	<ul style="list-style-type: none"> •Mentoring •Organizational Capability Management •Quantitative Performance Management •Empowered Workgroups •Competency-Based Assets •Competency Integration
3 Defined	<ul style="list-style-type: none"> •Participatory Culture •Workgroup Development •Competency-Based Practices •Career Development •Competency Development •Workforce Planning •Competency Analysis
2 Managed	<ul style="list-style-type: none"> •Compensation •Training and Development •Performance Management •Work Environment •Communication and Coordination •Staffing

Figure 1: *Quality Leverage Points*



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Levels	People CMM Threads			
	Developing Competency	Building Workgroups and Culture	Motivating and Managing Performance	Shaping the Workforce
5 Optimizing	• Continuous Capability Improvement		• Organizational Performance Alignment	• Continuous Workforce Innovation
4 Predictable	• Mentoring • Competency Based Assets	• Competency Integration • Empowered Workgroups	• Quantitative Performance Management	• Organizational Capability Management
3 Defined	• Competency Development • Competency Analysis	• Workgroup Development • Participatory Culture	• Competency Based Practices • Career Development	• Workforce Planning
2 Managed	• Training and Development	• Communication and Coordination	• Compensation • Performance Management • Work Environment	• Staffing

Table 2: *People CMM Threads*

formance.

- **Building workgroups and culture.** Improve coordination and interaction among individuals and workgroups. (The term *workgroups* has replaced the term *teams* in this version of the People CMM.)
- **Motivating and managing performance.** Measure and develop individual performance; align that performance with organizational objectives.
- **Shaping the workforce.** Evaluate current workforce practices, individual capability and skills, and organizational needs and devise plans to address the gaps.

PA threads may allow organizations to follow an alternate path of improvement. For example, let us say that your organization would prefer to focus on building a truly competent and skilled workforce. There is a PA thread called *Developing Competency*. This thread begins at Level 2 with the PA *Training and Development*. It focuses on preparing an individual to improve his capability to perform his immediate assignments. At Level 3 in the Developing Competency thread, we come to *Competency Analysis*. The purpose of this PA is *to identify the knowledge, skills, and process abilities required to perform the organization's business activities so that they may be developed and used as a basis for workforce practices*. This PA focuses on identifying how various business areas in the organization currently conduct business, defining the processes used, and identifying any commonalities or gaps, in order to fulfill not only current business needs, but future business needs as well. The next PA in this PA thread is *Competency Development*.

Competency Development provides organizational opportunities to workforce personnel to improve their individual capability, and thus, the capability of the organization. As the maturity levels increase, so does the sophistication of the organizational concepts introduced. Other competencies introduced at various levels in various PA threads include mentoring (a formal, structured effort) and empowered workgroups (providing more autonomy to workers, freeing them to perform their tasks with less supervision, and freeing their managers to focus on more strategic business concerns).

It must be remembered, however, that the best way to achieve lasting improvement and organizational change is to implement all the PAs at Level 2 first, and then continue with all of the PAs at Levels 3, 4, and 5. Selecting a path based on PA threads increases the risk of not fully achieving improvement in organizational capability. If you look at the PA discussed as examples in the previous paragraph (Training and Development at Level 2 and Competency Analysis and Competency Development at Level 3), you will discover relationships or links from those Level 3 PAs back to the Level 2 PAs. And each PA that resides in a maturity level also has interdependencies with other PAs in that level. Your organization may decide to select one PA thread to concentrate on, but (because of the interdependencies among the PAs within its own level and outside the levels) you also will have to back up and pull what is needed from the PAs outside the thread you have selected. You also cannot pick PAs willy-nilly. Even when using the PAs thread concept, you must implement the PAs within Level 2 first,

then Level 3, then Level 4, and then Level 5.

So in reality, it is difficult to implement the model via PA threads instead of by PAs within a specific maturity level.

The Most Fundamental Level to Implement (or Bang for the Buck)

At Maturity Level 2 – the Managed Level – the People CMM PAs focus on instilling basic discipline into workforce activities to achieve repeatability. This level is the most fundamental to implement, as it is the basic building block for all ensuing levels.

Level 2 consists of six PAs. The PAs at Level 2 are the following:

- **Staffing.** Recruiting, selecting, and transitioning people into, and out of, assignments.
- **Communication and Coordination.** Ensuring timely communication for sharing information and coordinating activities.
- **Work Environment.** Providing physical working conditions and resources to enable work to be performed.
- **Performance Management.** Clear objectives used to measure and improve unit and individual performance.
- **Training and Development.** Ensuring that individuals have the skills required to perform their assignments, with relevant development opportunities provided.
- **Compensation.** Everybody's favorite – remuneration, rewards, and benefits based on contribution and value to the organization.

If you look closely at just the names of the PAs, you will probably draw the conclusion that these are the processes that need to be implemented to provide *incentives* for people to *join* your organization and then, to actually *stay* there. You will also notice that these are the areas that will most likely motivate your employees, offer them career opportunities, and provide them with an infrastructure that supports them in doing their work with the least amount of hassle.

You may also be saying, *Hey – Level 2 looks a lot like my organization's human resources department. I don't work there, so I guess the People CMM is not my problem.* Well, maybe – maybe not. It is true that in the People CMM, the process owners¹ of Maturity level 2 are Human Resources (HR) personnel. But just

because HR owns the Level 2 processes, ownership does not mean that they (HR) are the only ones affected by the processes and are the only ones that have to worry about the processes. HR professionals have stressed that a program based on the People CMM model should not be treated as just an HR initiative [3]. Good People CMM implementation means that individuals, teams, and management share commitment and responsibility [4]. And after all, HR policies are designed for – and affect – the entire workforce.

The remaining three maturity levels contain more advanced practices and basically build on the foundation laid at Level 2. At the higher maturity levels, more people from different areas in the organization get involved in People CMM-based process improvement, process ownership becomes more dispersed throughout the organization (not just HR), and interactions among HR, line management, individuals, and workgroups increase. So, implementing the People CMM is not just an HR effort.

The People CMM as Problem Solver

Looking again at Maturity Level 2, the People CMM can improve an organization's ability to attract, develop, and retain individuals through such PAs as staffing, communication and coordination, and work environment (by establishing an environment that encourages people to join the organization, sharing organizational information of interest to new and prospective employees, and ensuring timely job offers and supportive recruiting practices); performance management and compensation (by appropriately evaluating and rewarding individual performance); and training and development (by motivating personnel by offering ongoing skills development and personal career advancement). Instituting these PAs appropriately makes people want to work in an organization. If people do not want to work in the organization, then they will leave, and the organization's reputation for being a *bad* place to work will leak out to the marketplace.

As part of classes and seminars, the Software Engineering Institute (SEI) collected data on *people* issues that organizations found most worrisome [5]. In addition to the problems discussed above, areas of concern included the following:

- Enabling people to deal with contin-

ual change in the organization.

- Changing organizational culture by moving to a team culture.
- Ensuring consistent communication between management and staff.
- Defining roles and responsibilities.
- Aligning personal goals with organizational goals and business objectives.

Briefly, the People CMM PAs that address these issues are the following [5]:

Enabling people to deal with continual change in the organization. *Staffing* introduces new employees into the organization in an orderly manner,

“You cannot expect your employees to do all of the extra work required to participate in process improvement activities perceived to be of no real value to them, or to achieve a formal maturity level ... if your employees feel unappreciated, undervalued, and abused.”

Training and Development orients employees to organizational practices, and *Competency Development* integrates employee skills with organizational competencies. Overcoming resistance to change is addressed by practices in *Communication and Coordination* that stresses communicating organizational values (including policies and procedures related to change) and expectations of managers and employees, and *Participatory Culture* empowers employees to suggest organizational improvements and make decisions related to their work.

Changing organizational culture by moving to a team culture (remember, the term *workgroups* replaces the term *teams* in this version of the People CMM). *Communication and Coordination* communicates organizational values regarding workgroups and identifies

dependencies to be coordinated among them. *Participatory Culture* and *Empowered Workgroups* empower workgroups to make decisions regarding the conduct of their work. *Competency-Based Practices* defines process abilities and skills that can be applied to workgroups, and *Workgroup Development* identifies opportunities for establishing workgroups and planning work around those groups.

Ensuring consistent communication between management and staff. *Communication and Coordination* contains practices that encourage the formation of communication mechanisms up, down, and across the organization. *Performance Management* uses the information communicated to effectively monitor and measure individual performance by managers and employees, and *Participatory Culture* uses the information communicated to allow individuals and workgroups to make appropriate decisions related to their work.

Defining roles and responsibilities. *Staffing* and *Competency Analysis* analyze the work to be performed, the knowledge, skills, and process abilities needed to perform it, and map roles and responsibilities to the work. *Training and Development*, *Career Development*, and *Competency Development* ensure that staff can perform their assigned work, as required by their roles and responsibilities. *Participatory Culture* defines who may make decisions under what circumstances.

Aligning personal goals with organizational goals and business objectives. *Performance Management* defines individual performance objectives. *Communication and Coordination* provides information about organizational performance to individuals. *Performance Management* and *Participatory Culture* provide ongoing feedback to individuals about their performance. *Organizational Performance Alignment* maps performance results at all levels to individual, workgroup, unit, and organizational goals.

Not only can these issues result in poor workforce performance, they can also cause process improvement efforts underway in organizations to stall or fail. Process improvement requires some level of participation from most of your organization. You cannot expect your employees to do all of the extra work required to participate in process improvement activities perceived to be of no real value to them, or to achieve a formal maturity level rating to keep your organization in business, if your employ-

ees feel unappreciated, undervalued, and abused. People will see that the only real opportunity offered in such an organization is to leave. And they will. It is easier to leave than stay and work in a nasty place that only cares about *building the business* and not building its people.

Conclusion

Why should we use the People CMM? Short answer – using the People CMM provides a structure for unstable organizations to become more stable. Has your quest for a CMMI level rating stalled? Is it in trouble? There are many potential reasons for the problems you are encountering, from lack of management commitment to inadequate resources and funding to the overcoming of resistance to change. Organizations have reported that when their CMM or CMMI efforts ran into trouble, concentrating on the lessons from the People CMM provided enough stability and enough guidance for organizational change to get their process improvement efforts back on track [3, 4].

Other organizations that have been successful in implementing the CMMI continue their process improvement journey by selecting and implementing the People CMM. Based on their success with the CMMI, these organizations are concentrating on supporting their workforce in order to continue successful CMMI practice, and to keep their employees excited about the work they are doing. These organizations see the need for improving the capability, not only of their technical processes, but also of their workforce practices. As such, they are using the People CMM as their guide [6, 7].

A very smart man in one of my classes finished his presentation as follows: *Why should we use the CMM? Because CMM stands for Can Make Money.*

I think that says it all. ♦

References

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Note

1. Process ownership may reside with an individual, group, or organization. Process owners coordinate various activities associated with process, such as writing processes, changing processes, ensuring that processes are implemented in an organization, and acting as the designated point of contact for process-related information and activities.

About the Author



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