# Using Process Management Maturity Models

## A PATH TO ATTAINING PROCESS MANAGEMENT EXCELLENCE

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# Maturity Models

Many times, organizations implement process management and then ask: "Now what?" They are not sure what happens after the processes are up and running. Other organizations simply assume process-related work is done once the program is operational. Yet, mature organizations understand that the challenge has only just begun when process management is in place; they realize that that the focus must turn to gauging whether process is working and yielding the desired results. Further, they realize that processes can be optimized to yield even better outcomes. Although this can be a difficult challenge—knowing if and how process management is working—using a maturity model can give organizations direction for managing and improving processes as well as answer the question, "Now what?"

In an effort to ensure that processes are consistently applied, managed, and controlled across an enterprise, many organizations use a maturity model—a structure of capabilities and characteristics. These models offer a common point-of-reference with different levels (often between four and seven) that describe behaviors, practices, and processes that regularly produce desired outcomes. Maturity models are roadmaps that show the next steps to take when creating solid, sophisticated, repeatable process management capabilities and can direct organizations that lack process discipline on how to become highly organized and efficient. In essence, it is a benchmark by which one organization can compare itself against another by measuring the process management tools that have been implemented.

There are several reasons to use a process management maturity model in an organization, as they often:

- increase visibility to proven, systematic practices from best practice organizations;
- create a structure that determines what work gets done, when and by whom;
- facilitate a collaborative dialogue about process management; and
- generate a consistency of process capture and use.

# Levels of Maturity

Software Engineering Institute (SEI) is credited with developing one of the first maturity models, the Capability Maturity Model (CMM), which applied to software implementation processes. The organization developed five levels of maturity, each with different capabilities. Eventually, the CMM evolved into the Capability Maturity Model Integration (CMMI) model, which uses the same basic levels and also focuses on five factors including:

1. goals,
2. commitment,
3. ability,
4. measurement, and
5. verification.

There are five basic levels in the maturity models: initial, managed, defined, quantitatively managed, and optimized. Each level of the CMMI model is explained in subsequent sections[1].

## MATURITY LEVEL 1 - INITIAL

This level is characterized by ad hoc or chaotic processes. Success often depends upon the competence or heroics of the employees in the organization rather than on the use of proven processes. At this level, products and services work, but getting them produced often exceeds both the budget and schedule. Often these organizations over commit, abandon processes, or cannot repeat past successes.

## MATURITY LEVEL 2 - MANAGED

At this level, projects are planned, performed, measured, and controlled. Standards, process descriptions, and procedures may be different, yet the established process management discipline helps to ensure that existing practices are retained, and that projects are performed and managed according to documented plans. Requirements, processes, work products, and services are managed with specified delivery points. Finally, processes are reviewed and revised as needed, and they are reviewed and controlled to meet requirements, standards, and objectives. Generally, processes are not extended beyond a department or business unit, and there is often little or no executive support.

## MATURITY LEVEL 3 - DEFINED

An organization at the defined level utilizes processes that are defined, understood, and documented through procedures, tools, and methods. Standards, descriptions, and tasks stem from enterprise-wide processes, and they are performed consistently across the organization while variations are allowed per established guidelines. Processes are described in more detail and more rigorously than at maturity level 2. Further, they are managed with acknowledgement of interrelationships of the processes and measures, work products, and services. Processes are qualitatively predictable, but generally there are no measurements to enforce it.

## MATURITY LEVEL 4 - QUANTITATIVELY MANAGED

At maturity level 4, sub-processes contribute to overall performance, and they are controlled using statistical and other quantitative techniques. Performance measures are established for quality and performance, and they are used as criteria for managing processes throughout its entire lifecycle. Measurements are based on the needs of the customer, end users, organization, and process implementers in an effort to support future decision making. Process variations are identified and corrected, and performance is both controlled and predictable.

[1] From "SEI CMMI Maturity Levels." Tutorialspoint, 2013.

## MATURITY LEVEL 5 - OPTIMIZING

At this highest maturity level, processes are continually improved based on quantitative measures of common causes of variation in processes. The focus is on continually improving performance through both incremental and innovative technological improvements. Quantitative process-improvement objectives are established, revised, and used to manage process improvement. Improvements are evaluated against organizational objectives, and an empowered workforce executes them. The organization rapidly responds to changes and opportunities, and it openly shares learning and knowledge. Continual improvement is part of all employees' roles.

## OTHER MATURITY MODELS

Over time, several other models have developed: PEMM from Hammer & Co., BPMM from OMG, and the Seven Tenets from APQC, to name a few. Many organizations have created their own version of process management models to better meet their goals and needs. One commonality among all models is the vision of what a mature organization is. In an immature organization, there is no objective basis for judging the quality of products or services or for solving problems. There is little understanding of how process steps affect quality. On the other hand, a mature organization effectively defines, performs, manages, measures, and improves its processes. Processes are documented, roles and responsibilities are defined, and work flows are updated when necessary. A disciplined process is consistently followed because all participants understand its value and an infrastructure exists to support it.

## THE MATURITY GAP

One of the biggest hurdles we find when evaluating process maturity is the process maturity gap or process management gap. In essence, organizations are often unable to make the transition between maturity levels 2 and 3. The majority of organizations fit into either level 1 or 2, while about 25 percent of organizations find themselves at level 3. Very few organizations make it to level 4 of 5. This occurs because an organization has failed to garner the senior management support required to move processes to an enterprise-wide concern. Other places experience this gap because they rely on the individual efforts of highly skilled employees who manage and perform the bulk of the work. Other organizations may experience this because they focus on tools and methods, rather than on process management. Figure 1[2] shows a five-level maturity model and where the process gap occurs.

[2] From Harmon, Paul. "The Process Management Gap." *BPTrends*, December 2011.

*Process Maturity Gap*

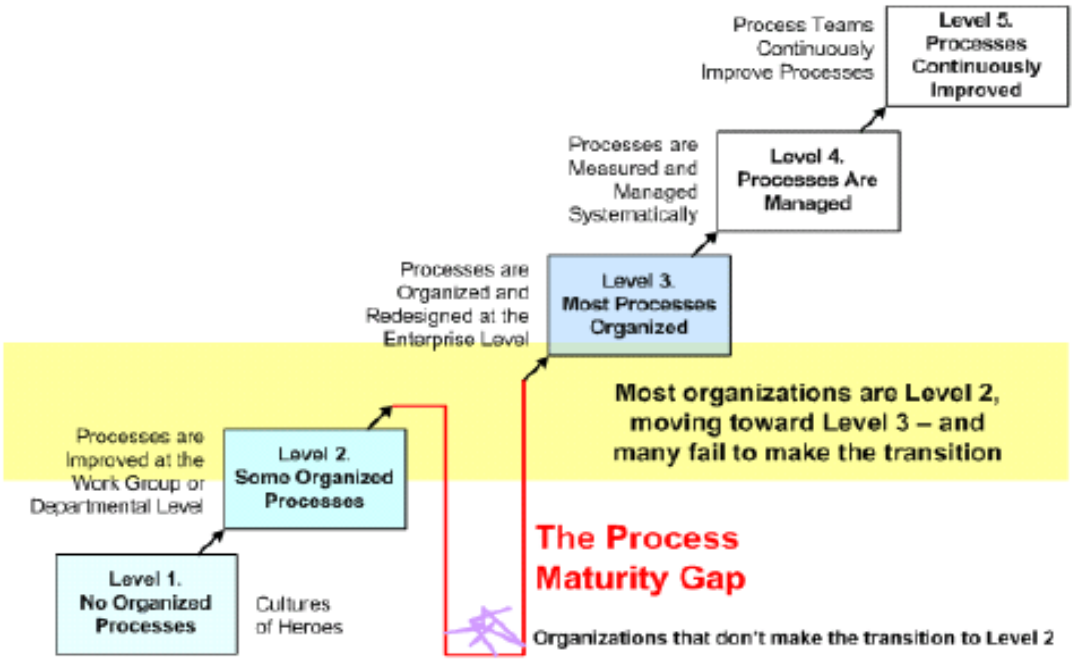


**Figure 1. The Process Maturity (or Management) Gap**

Figure 1

When organizations fall into the Process Maturity Gap, they are working on identifying and improving specific departmental processes, yet never manage to get the entire organization committed to process management. Many times, organizations that fall into the maturity gap get frustrated and replace the system with a different effort. A key to avoiding this pitfall is organizing and evaluating the effectiveness and efficiency of the entire organization. Mature organizations have a systems perspective, and they conceptualize the enterprise as a process. The organization uses sub-processes to create valuable outputs, which leads to process maturity.

## HOW A MATURITY MODEL IS USED

Through either self-assessment or external assessment, an organization receives a level rating that indicates where the organization best fits according to the selected maturity model. This gives direction about how the current state of process management impacts the organizational culture. This is sometimes done via internal assessments, while others bring in outside help make the determination. Further, this analysis can lead to other organizational benefits including:

- comparing best practices and enabling benchmarking,

- identifying areas of improvement,
- assessing risk,
- organizing management practices in a clear direction,
- evaluate capabilities of suppliers, and
- meeting contractual requirements.

Once organizations receive a rating, they have a clear roadmap of the types of changes that will advance them to the next level. If, for example, an organization receives a rating of level 2, then the next steps are to develop processes and documented procedures that apply to the entire organization, rather than in isolated units. Compliance is evaluated through[3]:

- reviews of artifacts that are produced by performing a process,
- reviews of artifacts that support performing a process,
- interviews with individuals/groups who perform a process,
- interviews with individuals/manage or oversee the performance of a process,
- interviews with individuals who support the performance of the process,
- quantitative data used to characterize the state of the organization and/or the attitudes and behaviors of those in it, and
- quantitative data describing the performance of a process, its outcomes, and business results.

## Business Process Maturity Model (BPMM)

One of the most detailed process management maturity models is the BPMM, which was designed by Bill Curtis and John Alden. Like most other maturity models, the BPMM provides guidance on gaining control of business processes. It is evaluated on five levels that can be mapped onto the CMMI model. The main focus is on the culture of performance, improvement, and management excellence, and it differs from other models in that it guides improvement of business process management specifically. Workflows focus on processes and span organizational boundaries rather than project management.

Further, according to Curtis and Alden, there are five main business process challenges that the BPMM model attempts to address.

1. There are few standards for assessing the maturity of business processes. This method identifies risks and weaknesses when achieving business objectives.
2. There are few proven methods for appraising how tasks are performed and how they are described in process workflows. This discrepancy compromises the validity of system requirements, the accuracy of cases and model-based representations, and effectiveness of the applications.

[3] From Curtis, Bill and John Alden. "The Business Process Maturity Model (BPMM): What, Why and How." BPTrends, February 2007.

3. Organic growth and acquisitions can result in multiple processes. Creating standard, tailored processes simplifies the requirements for enterprise applications and reduces the complexity of enterprise systems.
4. There are few proven methods for appraising a supplier's capability for delivering services within defined parameters. Organizations need a proven basis for specifying contractual requirements for improvements in a supplier's business processes.
5. There is a need for guidance on how to implement the business process foundations required for organizational agility and lower operating costs.

Curtis and Alden also noted that the foundational principles of the BPMM are that:

- attributes of a process can be evaluated to determine its contribution to organizational objectives;
- processes cannot survive unless the organization is mature enough to sustain them;
- process improvement is best approached as a change program that stages the improvements to achieve successively more predictable states of organizational capability; and
- each maturity level lays a required foundation on which future improvements can be built.

There are several advantages to adopting the BPMM, and they include:

- understanding the activities that launch and sustain a process improvement program;
- characterizing the maturity of an organization's existing processes and identifying strengths and weaknesses;
- identifying critical issues for improving their processes, products, and services, and guiding them in defining and improving their processes;
- selecting qualified suppliers and monitoring the performance of suppliers; and
- introducing process improvements in stages.

## Seven Tenets of Process Management

Many organizations can find these models complicated and difficult to implement. To help address this concern, APQC offers organizations several tools that can help organizations better assess themselves. APQC has created a process management maturity model leveraging its Seven Tenets of Process Management. The Seven Tenets emerged after years of research that APQC conducted on process and process management. These principles take a horizontal and holistic view of how work is accomplished in an organization. The Seven Tenets are:

- strategic alignment,
- governance,
- process models,
- change management,
- process performance,

- process improvement, and
- tools and technology.

By pairing levels of maturity and the Seven Tenets, an organization is able to better understand the individual elements that will help achieve a more rigorous, structured, and controlled process program. The table in Appendix A gives specific details about which actions are required at each level and for each of the seven tenets. For example, those at level 2 process improvement tenet will likely include individual or team capabilities on improvement (Lean, Six Sigma, etc.), a focus on high-risk or large change, and focus on project success over sustainable results. Alternatively, those organizations operating at level 3 process improvement tenet likely have visibility into improvement initiatives to avoid conflicts, common improvement approaches defined, and common method for individuals to identify and recommend improvement.

APQC also offers three types of reviews based on the organizations' current experience and status with a maturity model. First, there is the basic assessment that performs a quick, cursory evaluation that gives an overview and some suggestions for moving forward as the organization embarks on the maturity journey. This is an appropriate review for organizations that are just starting out with maturity models. It provides direction for initiating a program towards maturity. There is an intermediate assessment which gives a more thorough assessment that gives concrete steps organizations can take to advance their path towards maturity certification. Finally, there is a detailed assessment that is done with rigorous analysis of both documentation and operations within an organization to provide a more quantifiable measurement of maturity.

# Conclusion

Process management maturity is a useful tool that assists organizations in applying, managing, and controlling processes. By using this tool, organizations can yield a variety of benefits that include cost savings, more involved employees, and increased, predictable quality and productivity. By using the hybrid model of the BPMM and APQC's Seven Tenets of Process Management, an organization can focus on tangible actions that will lead to a maturing of process management capabilities.

# Appendix A

*Seven Tenets and BPMM Model*

| Tenet | Level 5 Processes |
|---|---|
| Strategic Alignment | ▸ Support created through organizational roles and collaboration<br>▸ Internal support created for process management effectiveness<br>▸ Process embedded into the culture<br>▸ Business strategies developed |
| Governance | ▸ Enterprise-wide authority<br>▸ External stakeholders included in governance<br>▸ Evaluation of overall value and impact (financial, efficiency, satisfaction, etc.) |
| Process Models | ▸ Standardized, periodic review and update<br>▸ Cross-industry benchmarks and best practices evaluated in process design |
| Change Management | ▸ External collaboration and leadership in promoting sustainable capabilities<br>▸ Certification approach created for competency (internal and external) |
| Process Performance | ▸ High performance and impact based upon external benchmarks<br>▸ Efficiency, effectiveness, impact, and satisfaction measured<br>▸ Competency levels tracked across enterprise |
| Process Improvement | ▸ Improvement toolkit created to allow agility<br>▸ Reviews and updates of improvement portfolio is standard and periodic<br>▸ External stakeholders involved in improvements |
| Tools and Technology | ▸ Evolving technologies proactively identified and evaluated to drive higher performance and sustainability<br>▸ Process automation extends to external participants |

| Tenet | Level 4 Processes |
|---|---|
| Strategic Alignment | ▸ Process roles formally aligned to organizational roles<br>▸ All staff have process role<br>▸ Initiatives receive strategic prioritization and implementation<br>▸ Sustainable process management is an established goal |
| Governance | ▸ Governance body formalized<br>▸ Representation is enterprise-wide<br>▸ Priorities for process initiatives<br>▸ Support for capability growth<br>▸ Initiative performance tracked<br>▸ Adoption and measures compliance promoted<br>▸ Non-compliance managed |
| Process Models | ▸ Systematic process design approach applied<br>▸ Simulation techniques available<br>▸ Process and system architecture documentation are linked<br>▸ Conflict checking standardized across documentation<br>▸ Review and update process created |
| Change Management | ▸ Collaboration and sharing across enterprise (networking) formalized<br>▸ Development plans for personnel created<br>▸ Formal communication and awareness efforts standardized<br>▸ Recognition of successes and expertise formalized |
| Process Performance | ▸ External benchmarking and best practices are shared<br>▸ Automated compliance is monitored<br>▸ Major processes measured and controlled<br>▸ Dashboards provided for visibility |
| Process Improvement | ▸ Opportunities identified from top-down and bottom-up<br>▸ Strategic prioritization and selection standardized<br>▸ Measures, history, and trends used for forecasting<br>▸ Continuous improvement approach promoted and tracked |

| | |
|---|---|
| Tools and Technology | ▸ Technology support (e.g., design, modeling, analysis, simulation, measurement, reporting and automation) approved and employed<br>▸ Process and system architecture technologies integrated<br>▸ Process automation optimized |

| Tenet | Level 3 Processes |
|---|---|
| Strategic Alignment | ▸ Process roles linked to organizational roles<br>▸ Comprehensive efforts (transition project-based to operational implementation) are created<br>▸ Initiatives tied to portfolio management |
| Governance | ▸ Governance body defined to develop capabilities<br>▸ Some enterprise representation<br>▸ Standards, methods, and technologies receive attention<br>▸ Some oversight across groups implementing process management |
| Process Models | ▸ Multiple groups apply standard documentation<br>▸ Common framework used to organize documentation<br>▸ Cross-functional (major) processes identified<br>▸ Process and system architecture documentation aligned |
| Change Management | ▸ Structured change management approach created for initiatives<br>▸ Standard competency model defined<br>▸ Training program in place<br>▸ Identified experts leveraged to grow competency |
| Process Performance | ▸ Business value of process management measured<br>▸ Process measures embedded into processes for “in the flow” control<br>▸ Process measures (input, process, output, outcome) balanced<br>▸ Compliance tracking is limited |
| Process Improvement | ▸ Improvement initiatives have visibility to avoid conflicts<br>▸ Common improvement approaches defined<br>▸ Method for individuals to identify and recommend improvement implemented |

| | |
|---|---|
| Tools and Technology | ▸ One or more technologies are approved<br>▸ Common process repository created with access and version control<br>▸ Process knowledge is accessible<br>▸ Process and system architecture documentation is aligned<br>▸ Operations and planning are automated |

| Tenet | Level 2 Processes |
|---|---|
| Strategic Alignment | ▸ Process roles loosely aligned to organizational roles at local level<br>▸ Strategy-driven, project-based process efforts occur |
| Governance | ▸ Individual or informal team pursues collaboration<br>▸ Multiple approaches pursued<br>▸ Limited or no authority<br>▸ Best practices promoted<br>▸ Some supporting standards for documentation exist, but are inconsistent |
| Process Models | ▸ Documented processes are at local level (pockets)<br>▸ Limited use of or no common framework (or multiple frameworks) |
| Change Management | ▸ Change management approach(es) informally used<br>▸ Training individually driven |
| Process Performance | ▸ Individual successes are evident<br>▸ Oversight and control focused on high-risk or high-volume processes |
| Process Improvement | ▸ Improvement (Lean, Six Sigma, etc.) at individual or team capability<br>▸ Focus on high-risk or large change<br>▸ Focus on project success over sustainable results |
| Tools and Technology | ▸ Documentation, modeling, analysis, and automation technologies used at local level<br>▸ Multiple technologies in use<br>▸ No common repository or storage approach in place<br>▸ Some transactional processes automated |

| Tenet | Level 1 Processes |
|---|---|
| Strategic Alignment | ▸ No BPM roles<br>▸ Ad hoc alignment of process initiatives<br>▸ Tactical selection of improvement |
| Governance | ▸ No defined governance approach<br>▸ Ad hoc development of capabilities<br>▸ Limited or no awareness of related efforts across enterprise |
| Process Models | ▸ Ad hoc application of documentation |
| Change Management | ▸ Ad hoc change management<br>▸ No defined process training approach |
| Process Performance | ▸ Little or ad hoc measurement of process |
| Process Improvement | ▸ Random acts of improvement<br>▸ Reliance on "heroes" to solve problems |
| Tools and Technology | ▸ No process documentation technology in place<br>▸ Ad hoc use of basic business tools<br>▸ Limited or no support for applying tools for process<br>▸ Limited or no process automation |

Figure 2

# References

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## ABOUT APQC

APQC is a member-based nonprofit and one of the leading proponents of benchmarking and best practice business research. Working with more than 500 organizations worldwide in all industries, APQC focuses on providing organizations with the information they need to work smarter, faster, and with confidence. Every day we uncover the processes and practices that push organizations from good to great. Visit us at www.apqc.org and learn how you can make best practices your practices.

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