

The Business Process Maturity Model (BPMM): What, Why & How

Overview

Today, management has no standards by which to assess the maturity of their business processes. As a result, they have no method to assess the risk immature processes pose to enterprise IT projects, or to identify the causes of weaknesses in their process workflows that, if addressed, could reduce cost and increase operating efficiency. To provide a needed standard for evaluating the capability and maturity of business processes, we developed the Business Process Maturity Model (BPMM). This model provides an open-standard roadmap for assessing process maturity and guiding business process improvement and is currently being promoted as an OMG standard by the Business Process Management Steering Committee within the Object Management Group (OMG). In our BPTrends Column, we will be discussing the value and use of BPMM as a model for planning, prioritizing, managing and optimizing a company's overall business process program. In this month's Column, we introduce the concept and discuss the major components of the BPMM.

Introduction to the BPMM

The BPMM describes an evolutionary improvement path that guides organizations as they move from immature, inconsistent business activities to mature, disciplined processes. The BPMM orders these stages so that improvements at each stage provide a foundation on which to build improvements undertaken at the next stage. Thus, an improvement strategy drawn from the BPMM provides a roadmap for continuous process improvement. It helps identify process deficiencies in the organization and guides the improvements in logical, incremental steps.

What problems does the BPMM address?

Adoption of the BPMM is expected to fill an unmet market requirement which strongly supports the OMG's mission as well as the products and services offered by vendors that implement the existing set of OMG standards. Organizations need a comprehensive and principled method for evaluating their business processes and organizational environment to determine the risks to successfully implement enterprise applications.

More than merely identifying risks, this method will provide a roadmap for making the improvements needed to increase the success and benefits of enterprise applications. The BPMM provides an evaluation framework based on an improvement roadmap that has proven successful with both system development and workforce development processes.

Introducing BPMM as a standard will address at least five current challenges to the success of enterprise systems:

1. Management has few standards for appraising the maturity of their business process workflows and needs proven methods for identifying the risks process weaknesses pose for deploying enterprise IT projects and achieving business objectives.

2. Management has few proven methods for appraising the fidelity between how tasks are actually performed and how they are described in model-based representations of process workflows. This problem compromises the validity of system requirements, the accuracy of use cases and model-based representations, and the effectiveness of the application in use.
3. Management is often unaware of the extent to which organic growth or acquisitions have resulted in multiple ways of performing similar tasks. The creation of standard, tailorable processes simplifies the requirements for enterprise applications and as a result will reduce the complexity of enterprise systems.
4. Organization's have few proven methods for appraising a supplier's capability for delivering outsourced IT and other business services within the parameters claimed in a proposal. Further they need a proven basis for specifying contractual requirements for improvements in a supplier's business processes.
5. Management needs guidance on how to implement the business process foundations required for organizational agility and lower operating costs.

The IT trade press is filled with articles about failed enterprise applications that wasted millions of dollars before being terminated. While some of these failures can be blamed on technology issues, the causes of many failures are rooted in the state of the organization into which the application is being deployed. Many, perhaps most of these organizational problems manifest themselves as weaknesses in the business processes that are the target of an enterprise application. Improving organizational readiness for technology deployment is the motivation for making the BPMM available as a standard.

What Is the Business Process Maturity Model (BPMM)

First formulated by Phil Crosby in his book, *Quality is Free* (1979), the modern use of maturity models began with Watts Humphrey's creation of the *Process Maturity Framework* at the Software Engineering Institute in the late 1980s (Humphrey, 1989) based on ideas he had developed with a group of colleagues at IBM (Radice, et al., 1985). Humphrey's framework was elaborated into the *Capability Maturity Model[®] for Software* (CMM[®], Paulk, et al., 1995) and later into *Capability Maturity Model Integration[®]* (CMMI[®], Chrissis, et al., 2002). It has become the preeminent standard for assessing the capability of organizations that develop software intensive systems.

The foundational principles are:

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

The Business Process Maturity Model (BPMM) rigorously follows the principles of Humphrey's Process Maturity Framework and was developed by co-authors of the CMM for Software, CMMI, and the People CMM. The BPMM can be mapped to CMMI, but has been written **to guide** improvement of business processes which tend to be more transactional and are better characterized as workflows across organizational boundaries rather than the more bounded project orientation of CMMI. The BPMM incorporates improvements in coverage, structure, and interpretation that have been developed since the publication of its predecessor models. (see previous BP Trends paper, Business Process Improvement Guided by the BPMM)

The success of the CMM for Software in the 1990s has encouraged the development of maturity models for other processes, the most widely used of which has been the People CMM (Curtis, et al., 2002) which applied the maturity framework to the management and development of an organization's workforce. Most estimates of the number of existing maturity models run over 200. Few of these maturity models follow the principles established in the process maturity framework. Most often they describe states in deploying a collection of related best practices without providing the infrastructure of practices that constitutes the improvement roadmap.

How will compliance with the BPMM be appraised?

Effective appraisal techniques gather multiple, overlapping forms of evidence to evaluate the performance of the practices contained in the BPMM.

Compliance can be evaluated using following forms of evidence:

1. Review of artifacts that are produced by performing a process
2. Review of artifacts that support performing a process
3. Interviews with individuals or groups who perform a process
4. Interviews with individuals who manage or oversee the performance of a process
5. Interviews with individuals who support the performance of the process
6. Quantitative data used to characterize the state of the organization and/or the attitudes and behaviors of those in it
7. Quantitative data describing the performance of a process, its outcomes, and business results

There are four types of appraisals envisioned for the BPMM with varying levels of assurance that the practices of the model have been implemented in ways that achieve the intent of the practices and the goals of their associated process areas. These four appraisal forms include:

Starter appraisal — a lightweight, inexpensive appraisal lasting a few days to achieve an overview of compliance to the BPMM. Evidence is not reviewed in depth and limited interviews are conducted. Quantitative data is collected.

Progress appraisal — an investigation of all process areas and practices within the maturity level scope of an appraisal to establish progress toward achieving a maturity level or to anticipate the results of a confirmatory appraisal. This appraisal is time consuming, but does not involve the same level of rigor and completeness of a confirmatory appraisal. Quantitative data is collected and compared to the results obtained from interviews and reviewing artifacts.

Supplier appraisal — an appraisal normally performed during source selection that is identical to a progress appraisal except that the appraisal team includes no members from the appraised organization. Quantitative data is collected. The findings may be used to develop contractual commitments for improvements that can be verified during the period of contract performance by performing a Progress, Supplier, or Confirmatory appraisal. Quantitative data is collected to verify claims made in proposals and to establish contractual levels of performance or improvement.

Confirmatory appraisal — a thorough investigation of all process areas and practices within the maturity level scope of the appraisal. This type of appraisal involves investigating all seven types of evidence described above. Evidence is sampled broadly across the organization in order to assure that the appraisal team is able to appraise the breadth of compliance. Organizations can claim achievement of a maturity level only if established by a confirmatory appraisal.

How will the BPMM and its appraisal methods be used?

There are four primary ways in which the BPMM will be used and each will have different requirements for appraisals.

Guiding business process improvement programs — The BPMM is designed to guide improvement programs, and this is anticipated to be its most frequent use. Improvement programs should be initiated with an evaluation of the organization's current strengths and weaknesses.

Assessing risk for developing and deploying enterprise applications — The BPMM will be used to identify risks to the successful implementation of systems and to provide guidance on the actions to be taken to improve them prior to system deployment.

Evaluating the capability of suppliers — The CMM for software was originally developed to help DOD move beyond using lowest price as the basis for selecting among bidders. Similarly, organizations need a trusted and open standard against which to evaluate the capability of their vendors for meeting their service level, quality, price, and functionality commitments.

Benchmarking — Management may want to evaluate where they stand relative to the maturity of business processes in their industry segment.

How Does the BPMM Fit within the OMG Standards Context?

OMG provides a neutral, community environment for creating open standards that accelerate the market acceptance of new or changing technology. Although maturity models and in particular the proposed BPMM are a new type of standard for OMG, they will be valuable to technology consumers and will enable greater benefit to be achieved from system development standards and methods that implement OMG's technical standards. Indeed, as businesses move toward a modeled representation of their business processes, the blurred lines between business and technology will converge.

Through its BPM strategy OMG is setting the stage to foster innovations in applying technology. However, the benefits of these applications are diluted by immature business processes. In particular, the value of model-based representations of business processes is directly related to the maturity of the processes being modeled. Business process improvements guided by the BPMM will enable organizations to better exploit the technologies built on OMG standards and related business process standards from other standards organizations.