

Business Process Improvement Guided by the BPMMⁱ

In this first column, we introduce the idea of organizational maturity by describing the overall content of the Business Process Maturity Model (BPMM), a prescriptive organizational maturity model designed to help organization's determine how effective they are at utilizing business processes. The model was authored by Bill Curtis and Charlie Weber of TeraQuest, and Tony Gardiner of Nedbank prior to Teraquest's acquisition by Borland in January, 2005. Borland has recently proposed this model to the OMG as the basis for a Business Process Maturity standard.

Overview of the BPMM

The BPMM describes an evolutionary improvement path that guides organizations in moving from immature, inconsistent business activities to mature, disciplined processes. The BPMM consists of 5 stages of organizational maturity that represent plateaus in an organization's improvement journey. 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 the continual improvement of business processes. It helps identify process deficiencies in the organization and guides the improvements in logical, incremental steps. At each level the organization achieves a new stage of business capability, behaves differently, and exhibits a more mature culture.

The BPMM is based on the Process Maturity Framework originally derived by Watts Humphrey at the Software Engineering Institute at Carnegie Mellon University. The BPMM is compatible with other standards derived from this framework such as the CMM for Software, the People CMM, and CMMI, the global standard for evaluating the capability of systems development organizations. The BPMM was produced with support from Nedbank in South Africa in order to extend the process improvement guidance of the Process Maturity Framework to business processes throughout the enterprise. The BPMM consists of 5 maturity levels, each of which consist of a collection of process areas designed to establish the capability achieved at that level. Each of the process areas is designed to accomplish a limited set of goals and includes a set of practices that have proven beneficial in achieving those goals. For purposes of this overview, we will only describe the intent of the process areas at each level.

Maturity Levels in the Business Process Maturity Model

Level 1: Initial – This is the level at which most organizations begin their improvement journey. At this level the organization lacks consistent processes or practices for performing its business activities. People are often overloaded because management fails to balance the work assigned to a work unit with the resources available for accomplishing it. The problem is usually not that people are incapable of performing the work, but that management is engaged in constant firefighting and has not established a stable environment in which people can perform their tasks in a consistently disciplined and professional manner. Success in these organizations is usually more the result of individual heroics and not the result of sustainable processes. Although an organization at the Initial Level may contain many fine managers, there is considerable inconsistency in skills across managers and the organization is not systematically developing the management skills it needs. The hallmark of a Level 1 organization is inconsistency, both in business results and in the way business activities are conducted.

Level 2: Managed – The first step in most prescriptive organizational maturity models is to stabilize local work. Before trying to implement organization-wide solutions the organization needs to stabilize local activity in work units. If people are constantly overloaded, untrained, etc.

no organization-wide initiatives will have much impact, since people are too stressed to adopt them. The primary focus of Level 2 is to establish management control over the work unit environment, so that people will be able repeat practices or work procedures that they know how to perform successfully. At Level 2 there is no requirement that different work groups use the same practices or procedures, just that they have ways of performing their work that allow them to meet commitments. The role of process definition at Level 2 is to capture the “as-is” process in each work unit to identify best practices and to determine how much variation there is in work methods and procedures. The work measures taken at Level 2 should be those that help a work unit manager plan and track work activities against the unit’s assigned responsibilities. These measures are usually at the work unit level rather than the more granular process level.

The process areas that create a Level 2 capability include the following.

- Organizational Business Governance—establishes executive accountability for the management and performance of the organization’s work and results.
- Organizational Process Leadership — establishes sponsorship of the program to improve the organization’s business processes.
- Work Unit Requirements Management — establishes documented and agreed-to requirements (e.g., commitments, results, compliances) that a work unit will be held accountable for meeting and ensures that changes to the requirements are managed against existing work commitments and resources.
- Work Unit Planning and Commitment — establishes the plans for performing and managing the work required of a work unit to ensure that commitments are balanced with resources.
- Work Unit Monitoring and Control — establishes regularly monitoring of work assignments, resources, and other work factors in the work unit in order to make the adjustments needed to keep performance and results in line with the work unit’s requirements, commitments, and plans.
- Work Unit Performance — establishing the discipline and coordination among the individuals and workgroups within a work unit so that their aggregate efforts satisfy the work unit’s requirements, commitments, and plans.
- Work Unit Change Management — establishes change and version control over the content of work products to be delivered to other work units or customers.
- Sourcing Management — manages the acquisition of products and services from suppliers external to the organization.
- Process and Product Assurance — provides compliance guidance and objective review of the activities and work products within the organization to ensure they comply with applicable laws, regulations, standards, policies, process descriptions, and work procedures.

Level 3: Standardized – Once the organization has stabilized its work units and is able to manage commitments at the local level, then it is prepared to standardize its processes across work units. This standardization is achieved by integrating best practices from the local methods and procedures that are producing the best results along with importing best practices from outside to fill gaps in the end-to-end workflow. When the organization is using common processes, it gains an economy of scale in operations. The implementation of standard processes allows the organization to learn from its experience by establishing common measures at the process level, capturing and sharing lessons learned, and developing common competencies and learning activities. Guidelines are established from experience for tailoring the standard process for use in different circumstances. Standard processes and the capabilities they enable provide the foundation for a common corporate culture to emerge.

The process areas that create a Level 3 capability include the following.

- Organizational Process Management — establishes standard processes and related measures for the organization; develops repositories of experience, artifacts, and results from performing standard processes; and conducts improvement activities based on periodic appraisals of process strengths and weaknesses.
- Organizational Competency Development — develops the competencies within the workforce that are needed to develop, deploy, deliver, and support the organization's products and services using its standard processes.
- Organizational Resource Management — plans and manages the acquisition, allocation, and reassignment of the people, equipment, computing and communication infrastructure, supplies, and other resources needed to develop, deploy, deliver, and support the organization's products and services.
- Organizational Configuration Management — identifies, manages, and controls the content of and changes to product baselines that are released for external use and that are used in performing and managing the work efforts in the organization.
- Product and Service Business Management — plans and manages the integrated end-to-end work for developing, deploying, operating, and supporting the organization's product and service offerings using defined processes tailored from the organization's standard processes and the organization's process assets.
- Product and Service Work Management — understands the market for a product and service offering, defines the capabilities and features of the offering, establishes the overall business plans for the offering, and manages the business and financial aspects of the offering
- Product and Service Preparation — establishes the requirements for a product and service offering, develops it, and prepares it for deployment and use.
- Product and Service Deployment — installs, modifies, replaces, or removes the people, equipment, computing and communication infrastructure, supplies, and other resources used in operating and supporting a product and service offering
- Product and Service Operations — provides the customers of a product and service offering with the capabilities and features of the offering.
- Product and Service Support — maintains the physical infrastructure, equipment, computing and communication infrastructure, software, supplies, and other resources needed to sustain the operation and availability of a deployed product and service offering, and provides for handling incidents, disasters, and the continuance of business.

Level 3 can be tailored for application to specific domains of business process (procure-to-pay, customer relationship management, supply chain, marketing, finance, technology enablement, security, etc.) or industry types (financial, healthcare, automotive, pharmaceutical, etc.) by substituting domain specific process areas for the six process areas above that begin with the words 'Product and Service'. Those six process areas have proven adequate for many application of the BPMM, but the model can be tailored by including process areas, primarily at Level 3, that contain the best practices specific to the processes typically used in particular domains.

Level 4: Predictable – The implementation of common measures at the Standardized Level allows the organization to quantitatively manage its process. The primary objective of the Predictable Level is to be able to predict the results of the end-to-end business process at all points during its performance. To accomplish this predictability, the organization must work to establish statistically stable processes whose results provide good predictors of the end results. Thus, those performing the work strive to understand and control sources of variation in their processes, so that management can use their intermediate results to predict business outcomes. In addition, once the organization is using common processes the necessary foundation exists for reuse of the knowledge, experience, and artifacts produced in the business process. This is the full realization of a process for knowledge management, that is, the ability to reuse what has been

developed or learned in a different situation. Foundations for knowledge management have established at previous levels of the maturity model, and at Level 4 they come together to create a powerful organizational capability. The results of creating standardization at Level 3 are usually standardized functional processes that are integrated into a workflow. However, the processes are typically defined from the perspective of the functional specialty rather than from the perspective of an integrated line of business. This enables the next step at Level 4 which is to integrate functional processes into a single product and service process that incorporates functions as roles into an integrated process. This reengineering frequently offers extraordinary opportunities to make the business process more leaner and efficient.

The process areas that create a Level 4 capability include the following.

- **Organizational Common Assets Management** — identifies and exploits commonalities in the organization's current and future product and service offerings to improve the performance, quality, cycle time, throughput, and predictability of the organization's processes.
- **Product and Service Process Integration** — interweaves the standardized work processes of different disciplines and functions involved in a product and service offering as roles into an integrated product and service process to increase the efficiency and effectiveness of interdependent work.
- **Organizational Capability and Performance Management** — characterizes the capability of the organization's standard processes quantitatively, and develops and provides the capability data, baselines, and models to quantitatively manage the performance of the organization's product and service offering work.
- **Quantitative Product and Service Management** — plans and quantitatively manages the work involved in a product or service offering to achieve its quantitative performance and quality goals and to control sources of variation.
- **Quantitative Process Management** — statistically manages the end-to-end performance of work for developing, deploying, operating, and supporting a product or service offering to achieve its performance and quality goals.

Level 5: Optimizing – At level 4 the organization has stable and predictable processes, but these processes may not be capable of achieving the outcomes management needs from the business process. At Level 5 management sets in place proactive improvement activities to close the gaps between the current capability of its various business processes and the capability needed to achieve business objectives. These improvement opportunities may include automation, process engineering, improved training, R&D projects, and other actions to make the capability improvements necessary to meet business objectives. Continuous improvement is institutionalized so that change management becomes an ordinary business process, and continual improvement is encouraged at the organizational, workgroup, and individual levels. The emerging business system is continually evaluated to ensure that the improvements do not sub-optimize the performance of the business system or its resource expenditures.

The process areas that create a Level 5 capability include the following.

- **Organizational Improvement Planning** — sets the organization's quantitative performance and quality goals and establishes the infrastructure and strategy for making the improvements required to meet them.
- **Defect and Problem Prevention** — identifies and addresses the causes of defects and other problems that interfere with achieving quantitative performance and quality goals so that they do not recur.
- **Continuous Capability Improvement** — improves performance by encouraging all levels of the organization to continually identify and deploy incremental improvements in work processes.

- Organizational Innovative Improvement — formulates a complete improvement solution that, when deployed, will achieve specific quantitative performance and quality goals assigned to a planned improvement effort.
- Organizational Improvement Deployment — transitions improvements with demonstrated benefits into standard practice using institutionalized change management practices.
- Organizational Performance Alignment — maintains alignment of the organization's quantitative performance and quality goals and the improvement strategies at all organizational levels and across the organization's product and service offerings.

Summary

- Level 2 is characterized by stable work units performing repeatable local procedures
- Level 3 is characterized by standard, integrated, end-to-end business processes
- Level 4 is characterized by statistically stable processes with predictable outcomes
- Level 5 is characterized by proactive improvement actions to achieve the process capability required to meet changing business objectives

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ⁱ This is a much shortened version of a paper "The Use of Process Maturity Models in Business Process Management", written by Dr. Bill Curtis, Dr. John Alden and Charles V. Weber.