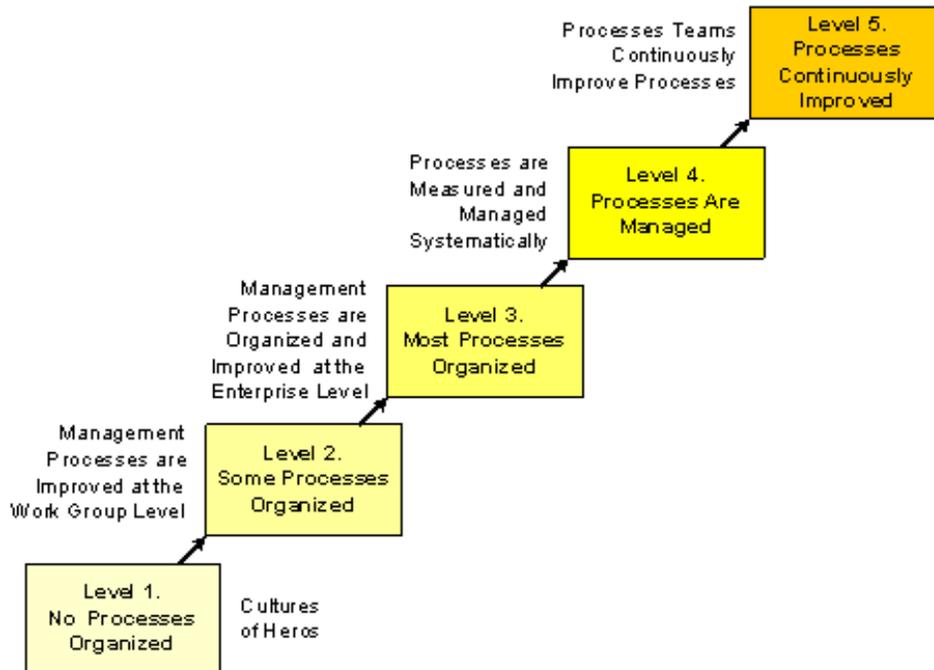## Process Maturity Models

Process Maturity Models continue to enjoy quite a bit of popularity. Indeed, there are more maturity models every day. There are not only maturity models for processes, but for business rules, SOA, software integration, project management and a variety of other topics. In this Spotlight, we are only going to focus on Articles published on BPTrends that relate to business process maturity - or to be more exact, Articles that describe how to determine the process maturity of an organization.

The idea of process maturity began, as far as we know, with the US Department of Defense and Software Engineering Institute (SEI) at Carnegie Mellon University in the mid-Nineties. The DoD wanted a way to evaluate which software development vendors were likely to deliver on time and budget. DoD asked SEI to study the matter, and SEI responded with the publication of *The Capability Maturity Model: Guidelines for Improving the Software Process*, in 1995.

The SEI's work came out of the quality control tradition and was inspired by Watts Humphrey, who had managed software development projects at IBM for 27 years before joining SEI. Humphrey and SEI believed that software organizations that understood their processes and could consistently execute those processes were the organizations most likely to produce successful DoD projects. Thus, SEI developed a number of process measures and developed the well-known five step model that describes the levels that an organization moves through as it evolves from an immature organization, without process discipline, to a mature organization where all processes are measured, managed, and consistently performed. (See Figure 1)

Figure 1. The CMM Model with Five Levels of Maturity

The CMM 5-level model is one model that most everyone seems to agree
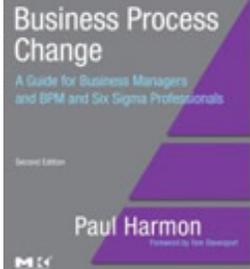
with - it's just common sense. Armed with the CMM model, SEI and the DoD proceeded to require that organizations bidding on software development for the DoD be able to certify its process maturity. Today, the SEI will arrange for a team of certified evaluators to show up at your organization and determine your current CMM maturity level.

As the years have passed, lots of other groups have gotten into the game. One group of the SEI folks, for example, led by Bill Curtis, developed a People Capability Maturity Model designed to evaluate the maturity of workforce processes. By 2003 there were so many variations on CMM that SEI brought them all together and created CMMI. CMMI generalizes from the original CMM descriptions of software development and describes process maturity in broader terms, extending the model to include many other processes within an organization. Today, CMMI can be used for evaluating the process maturity of any organization.

Meanwhile, other groups have also jumped on the maturity bandwagon. Here are some of the better known examples:

- Gartner's Process Maturity Model
- The Babson/Queensland University's Holistic BPM Maturity Model
- Michael Hammer's Process Maturity Model
- The OMG's Business Process Maturity Model (BPMM) standard
- Wipro's Technologies SOA Maturity Model that includes SOA and BPM

Although the examples we provide all refer to process maturity, they are, in fact, quite different. The SEI CMMI model was designed, initially, for large software organizations that wanted to sell services to the US Department of Defense. The model and the evaluation has been expanded and diversified since, but it maintains its focus on large organizations. The underlying assumption was that an organization's practices reflect its managers' knowledge and skills. Thus, if you look at what is evaluated in the course of a CMMI evaluation, you will see that they focus on what managers know and do. In other words, there is no effort to evaluate how specific existing processes might be broken, or how a business process team might alter those processes. You don't get a specific roadmap from a CMMI evaluation. You get a statement of where you are - an evaluation of what your managers know and do.

The OMG's BPMM standard is an adaptation of the CMM model created by Bill Curtis and Charles Weber. It incorporates various improvements over the CMMI standard, but, as far as we know, it has not been adopted by any organization. Apparently the world doesn't need a second heavy duty process modeling standard based on the CMM approach.

Most organizations, today, when they think about a maturity audit, are less interested in the kind of long term view that CMM and BPMM represents. They are more interested in an analysis of their existing processes that provides them with a roadmap for their near term development. The most sophisticated version of such a process maturity model is the Holistic BPM approach offered by Babson and Queensland University. This approach has the statistical rigor of CMM and BPMM but is designed to measure existing processes and to provide a practical roadmap for BPM groups that want to improve their ability to deal with process improvement.

In reality, however, most companies do not rely on a sophisticated maturity model. They are more interested in a more informal approach that simply provides them with an overview of where their strengths and weaknesses lie and where they should focus their attention in terms of next steps. BPTrends Associates uses a checklist to identify gaps between where companies are and the ideal, and reports the results using a light-weight version of the CMM stair step model. Michael Hammer published another variation of a smiliar informal checklist approach in the *Harvard Business Review* a couple of years ago and it is widely used by organizations that

need an overview and a roadmap.

In a similar way, Gartner uses an informal model developed by Jim Sinur that describes a set of steps that indicate where an organization is on its way to adopt BPM software. In this same spirit, Srikanth Inagnti and Sriram Aravamudan, at Wipro Technologies, have created a SOA maturity model that suggests how an organization becomes more mature in the use of SOA and eventually weds it with BPM.

A few organizations will want to do a formal analysis of their process position. For them, today, the Babson-Queensland approach is probably the best. For most companies, an informal model that will provide the organization with an overview and a roadmap is probably more cost-effective and useful and there are several approaches available.

BPTrends has published several Articles and Columns on maturity models over the years. Several leading maturity theorists have contributed publications providing readers with an understanding of what's involved and what options are available. Here is a brief sample of some of the best we've published on process maturity.

[CMMI: Guidelines for Process Integration and Product Improvement](#) - Paul Harmon - September 02, 2003 Software development groups have been using the Capability Maturity Model (CMM) for years to judge how well managed their software development processes are. CMM Improvement is an extended model that is more general in nature. This is the latest, definitive book on the SEI's CMM research and development program.

[Beyond Process Maturity to Process Competence](#) - Andrew Spanyi - June 01, 2004 Andrew Spanyi considers some efforts to create a process Maturity Model and goes on to suggest that, in many cases, the major obstacle to organizational change is the silo- focused thinking of senior executives.

[The Third Wave: Process Management Maturity Models](#) - Howard Smith - July 06, 2004 Howard Smith and Peter Fingar reflect on CMM-inspired models and how they relate to the Third Wave of business process management.

[The Business Process Maturity Model: A Practical Approach for Identifying Opportunities for Optimization](#) - David Fisher - September 07, 2004 David Fisher was the Managing Director at BearingPoint, and the author of a new book, Optimize Now (or else!) when he wrote this Article. In it, he shows how a Maturity Model can suggest a practical approach to identifying opportunities for optimization.

[Application of a Holistic Model for Determining BPM Maturity](#) - Michael Rosemann and Tonia de Bruin - February 01, 2005. Michael Rosemann and Tonia de Bruin report on the results of tests of their Holistic Model of BPM Maturity. This approach that considers a variety of different factors that affect the ability of an organization to deal with processes that has been developed at Queensland University of Technology, in conjunction with Babson University. This maturity model represents a major advance in sophisticated maturity evaluation.

[BPM and Organizational Maturity](#) - Bill Curtis - November 07, 2006 In their initial Column, John Alden and Bill Curtis provide an overview of the Business Process Maturity Model and describe the five levels of maturity

[Business Process Management and Organizational Maturity: The What, Why and How of BPMM](#) - John Alden - February 06, 2007 Read Bill Curtis and John Alden's Column this month to learn how the Business Process Maturity

Model (BPMM) can be used for planning, prioritizing, managing and optimizing a company's business process program.

Process Maturity Models - Paul Harmon - March 20, 2007 We hear more about Maturity Models all the time. Most people associate them with CMM, audits, and a five stage model of organizational development. Now, the OMG is considering adopting a Business Process Maturity Model (BPMM). A closer look at this Maturity Model suggests that it can function as a methodology for organizational transformation.

SOA Maturity Model - Srikanth Inaganti and Sriram Arayamudan - April 01, 2007 Believing that pursuing either technology or process in isolation will not produce the best result, Srikanth Inaganti and Sriram Aravamudan propose an SOA Maturity Model for assessing the effectiveness of processes, people, and technology options, as well as the maturity of the architecture.

BPM and Organizational Maturity: A Popular Misconception about the Maturity Model - Bill Curtis - April 01, 2007 Bill Curtis and John Alden dispute a common criticism of the Watts Humphrey's Process Maturity Framework - i.e., that it focuses on management practices rather than value-adding processes. Alden and Curtis dispel this misconception by examining all five levels of the Watts Humphrey's Process Maturity Framework.

Michael Hammer's Process and Maturity Model - Brad Powers - July 03, 2007 Brad Power presents a critique of Michael Hammer's article in the Harvard Business Review on PEMM (Process & Enterprise Maturity Model). While he believes that Hammer's PEMM may be useful to business process people, he points out what he considers to be some weaknesses you might want to consider.

BPM and Organizational Maturity: Maturity Model du Jour - Bill Curtis - October 02, 2007 Bill Curtis and John Alden argue in favor of consolidating rather than expanding the number of Maturity Models. They contend that the world needs only a handful of maturity model's and propose some means to achieve that end.

SOA Maturity Model Scenarios - Srikanth Inaganti - December 04, 2007 In this article Srikanth Inaganti simplifies the Maturity Model and demonstrates that a successful SOA Transformation Process, from Level One through Level Five, depends on wide-ranging IT processes. All who are interested in understanding Maturity Models will want to read this article.

Best BPM Application that Demonstrates the Best Return on Investment: US Military Entrance Command (USMEPCOM) Tony Maravola - April 07, 2009 The genesis of the USMEPCOM BPM and SOA project was a business requirement to make the exchange of data real time and more efficient. The original project, named by the functional proponent as Data Exchange/Top Of System Interface Process (DE/TOSIP), was intended to address the interface with the Armed Services. The Office of the CIO saw an opportunity to expand beyond the Armed Services and to address all of the data interface requirements of the command. BPM and SOA were seen as a way to provide an agile and flexible architecture to meet this growing requirement, increase data quality, and reduce the cost and risk of adding new capabilities.

Till next time,

Paul Harmon

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