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Enterprise Modeling


Any examination of where companies are on their process journey suggests that most companies are still working to define and improve their core business processes. At the same time, however, our surveys consistently suggest that BPM professionals are very interested in Enterprise Architecture issues. For most companies, however, an emphasis on Enterprise Modeling is a new and evolving effort, and not an accomplished fact.

Unfortunately, any discussion of Enterprise Modeling is complicated because there is considerable confusion about just what constitutes Enterprise Modeling. The largest source of confusion is the Zachman Framework. Zachman created a framework designed to classify the types of information one might want to store about the enterprise. In the abstract, there's nothing wrong with the Zachman Framework, but it has led many people to assume that Enterprise Modeling is really just another name for letting IT set up a database and then classify all the IT resources the company has.

At this point in time, it is probably easier for those engaged in enterprise level business process work to avoid the term "Enterprise Architecture" (leaving it for the IT folks) and to focus, instead on creating a "Business Process Architecture." There are certainly people who use the two as synonyms, but in most cases, if you hear the term "Enterprise Architecture" you are about to hear a discussion of you company's IT resources.

A Business Process Architecture, at least as the term is used by most business managers and business process practitioners, is a description of the organization's business model and strategy, its goals and its performance metrics. And, it's a description of the value chains and large scale processes used by an organization that shows how processes support organizational strategies and generate performance metrics.

Figure 1 provides one view of the US government's Federal Enterprise Architecture Performance Reference Model. If IT resources are considered at all, they fall near the bottom of the pyramid, well below missions and customer results, and quite a bit below the business processes themselves.



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A Guide for Business Managers and BPM and Six Sigma Professionals

Second Edition

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Figure 1. The US Government's Federal Enterprise Architecture Performance Reference Model

Figure 2 illustrates how BPTrends pictures a Business Process Architecture development effort. In essence, a Business Process Architecture effort—which usually takes several years to develop—is designed to create the tools required by Executive Management or by a Business Process Center of Excellence to enable the monitoring of process performance and process manager performance, and identification of opportunities for process change.

At a minimum, a Business Process Architecture should describe the overall architecture of the firm—what we'd term a Business Model or Organizational Model. It should also define the Value Chains that the organization supports and describe how each Value Chain supports the strategic goals of the organization, helps implement the business model, and how the success or failure of the Value Chain will be measured. It should also identify the management of the Value Chain. Most Business Process Architectures will not only describe the organization's Value Chains, but will also model the Level 1 and Level 2 processes that make up each Value Chain. For most companies, the creation of a detailed Business Process Architecture is a work in progress. Only a few leading-edge companies have a complete, comprehensive Business Process Architecture in place.

We draw a bold line on the right of the diagram to discriminate between the activities on the left that seek to change the business, and the activities on the right that seek to run the business on a day-to-day basis. Obviously, some Enterprise tools will be used to support the development of the Process Architecture tools, while others will be used on an on-going basis to monitor performance and plan for process change.

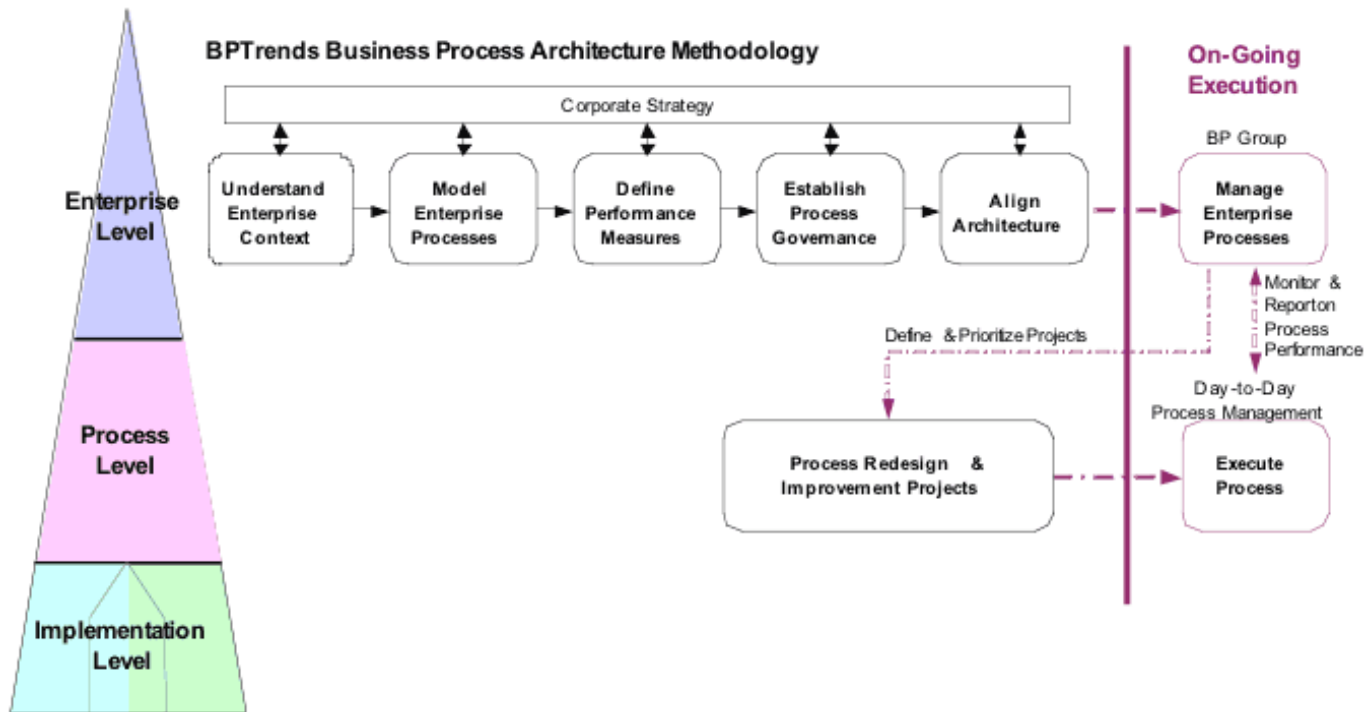


Figure 2. The BPTrends Business Process Architecture Methodology

Most of the leading process analysis and modeling tools were initially designed to support process redesign or software development. Most have been extended to support some enterprise level work. A Business Process team could easily use ARIS, Casewise, IBM Modeler, MEGA, ProVision, or iGrafx, for example, to do enterprise work. Similarly, if one developed a BPMS application using a BPMS tool to support Business Activity Monitoring (BAM), the BPMS application would provide data and a dashboard to the Business Process team. Rather than looking at any of these tools in detail, however, let's consider the features we would like to see in an Enterprise Modeling tool that would enable it to support a Business Process Architecture effort.

Reconsider the activities pictured in y in Figure 2 and think about the tools a Business Process Architecture team might need. As we see it, the tools are as follows:

1. **Tools for Strategy work** - Tools that can be used to define and document strategy statements, mission statements, goals, and policies. Tools that can define organization or business models and track stakeholders and their concerns.

There are a few tools that are designed to help support strategy efforts. One interesting effort is underway at the Ecole Polytechnique Federale de Lausanne (EPFL) to generate a Systematic Enterprise Architecture Methodology (SEAM). This effort, led by Alain Wegmann has created an approach and several people are working to develop tools to support it. See, for example: <http://blogs.epfl.ch/seambiz>

The OMG's Business Motivation Model (BMM) is also concerned with defining enterprise level concepts. Xactium sells a BMM modeling tool that runs in the Eclipse environment. Check www.xactium.com

Another academic effort is underway in the Netherlands, led by Jaap Gordijn from the Free University in

Amsterdam. Gordijn has developed a methodology, e3value, which models and simulates to help a team calculate the return on changes to a business model. A tool available from BiZZdesign supports e3value and aligns it with Adaptive's repository to provide a strong basis for analyzing high-level business models and processes. For more information, check www.bizzdesign.nl

Agilense is a Washington, DC-based company that specializes in business change management. Their tool, EA WebModeler, enables organizations to visualize and optimize alignment of strategy, process, and technology. This tool provides a nice example of the kind of simple, powerful interface needed for tools that executives can use to think about strategy and process architecture issues. Check: www.agilense.com

Still another Enterprise modeling tool is offered by Salamander, a UK-based software company that offers a tool that is especially good at modeling the company environment, stakeholders and customer concerns, while also providing a whole collection of techniques to capture high-level business processes. Salamander also offers simulation. For more information, check www.tsorg.com

In 1990, Geary Rummler and Alan Brache defined an Organization Map that one could use to define an organization's business model and its stakeholders. Several tools implement a variation on their organization diagram. Most allow you to define the organization, value chains, and some high level processes in a series of diagrams. See, for example, Metastorm's ProVision version of the Organization Map at www.metastorm.com/products.

2. Tools for Defining Value Chains and Level 1 and Level 2 Business Processes - Tools designed to model how high-level processes are organized

It's relatively easy to find modeling tools that can support high level processes. If we want to get more concrete, we might consider high level process frameworks, like the Value Chain Group's VRM framework, which is supported by a tool called ValueScape (www.value-scape.com). In a similar way, several tools support the Supply Chain Council's SCOR framework. A particularly good implementation is offered as an add-on for IDS Scheer's ARIS modeling environment.

3. Tools for Performance Monitoring and for Evaluating Managerial Performance - Tools that can capture process performance metrics and show how they are aligned through the process hierarchy. Tools that can be used to record and evaluate the performance of process managers.

Most companies use some variation on Balanced Scorecard to organize their performance monitoring efforts and to evaluate managerial performance. Earlier this month, I suggested how one could use a Balanced Scorecard to monitor, align and manage process performance and process managers. If you do this, then a tool like ADOScore from BOC Group provides a nice way to organize a Balanced Scorecard-based monitoring effort. (www.boc-eu.com)

4. Tools for Identifying and Prioritizing Process Change Efforts - Tools that can help a Business Process group track the performance of company processes and identify which processes would benefit from redesign or improvement efforts. Tools that can simulate changes and cost change efforts to help determine where the company will get the greatest return on a process change project.

Several of the tools cited above provide some support for documenting process problems, but I don't know of a tool that is really designed to manage a process portfolio, tracking process performance and assisting with the calculation of ROI if processes are changed. I suspect we will see some in the near future however, as BPM groups become more widespread.

5. **Tools for Identifying What Resources Are Associated With What Processes** - Tools that can track the number and cost of employees used for each major process. Tools that can help define which software applications and which databases are used by each major process. Tools that can make it easy for a Business Process team to determine the impact of a process change on levels of employment and IT resource utilization.

There are several tools for aligning IT resources with processes. I know of no tools for aligning employees and employee support efforts, like training, etc. with processes, but there probably are some. In any case, all of the major process modeling tools provide good support for this.

NOTE: For a detailed look at many of the BPM Modeling Tools, BPM Suites Tools and Rules Tools, see the [BPTrends Product Reports](#).

This has been a cursory survey of some of the tools that we might legitimately call Enterprise Modeling tools. Some are really mainstream process modeling and simulation tools that are being repositioned to handle enterprise issues. As BPMS vendors have been more successful in positioning themselves as a source of process level modeling, older analysis and process modeling tools have begun to shift and position themselves as tools that can help business managers with enterprise level process problems.

Other enterprise modeling products are new entries that focus on particular aspects of enterprise level work - defining business models, supporting high-level business process frameworks, or populating a BMM vocabulary. We expect to see a lot of these more innovative tools in the future, and fully expect that the older process modeling vendors will also be adding new enterprise features to their products.

A key to success in the Enterprise Modeling market, as we define it, is ease of use. These tools will be used by business executives and process specialists, who won't be willing to put up with technical interfaces. Tools initially designed for IT developers or business analysts will need to be completely redesigned to be usable by executives and Business Process team managers who will increasingly be managing processes for the enterprise.

Most companies know about process modeling tools but are only beginning to explore enterprise process work. As enterprise level process work expands, we fully expect to see a lot of interesting developments in this area.

Till next time,

Paul Harmon

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