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Business Process Standards

Most people in most companies don't care about standards. They simply do their jobs without thinking about the fact that their work is greatly simplified by the many conventions and agreements commonly understood and agreed to regarding how things are done. It doesn't make any difference whether we drive on the right or the left side of the road, but it's critical that everyone within a particular geographical area agrees to do one or the other. Similarly, we all benefit by having a limited number of screw head formats so that two sets of screwdrivers will work in almost all cases.

I have discussed Geoffrey Moore's technology adoption lifecycle model in other Advisors. (See Figure 1.) In essence, Innovators take new technology just out of the universities and labs and try to use it to make breakthroughs that will give them a significant competitive advantage. They are willing to invest considerable resources to figure out how to make the technology work for them. Early Adopters take technologies that are a little further along and try to develop applications before their competitors do, giving them a competitive advantage. Early Majority companies wait until after a technology has proven itself before adopting the new technology, choosing to avoid the costly efforts associated with experimenting with a new technology and struggling with immature tools. More important, they prefer to wait until standards are in place. In other words, standards development, at least in technology domains, is an activity that is carried on by vendors and sophisticated users during the Early Adopter phase of the technology lifecycle. It isn't something that most companies are interested in working on - they expect it to be completed by the time the technology is ready for widespread use. In some cases, technologies that fall into the Chasm and disappear are those that fail to develop workable standards during their early years.

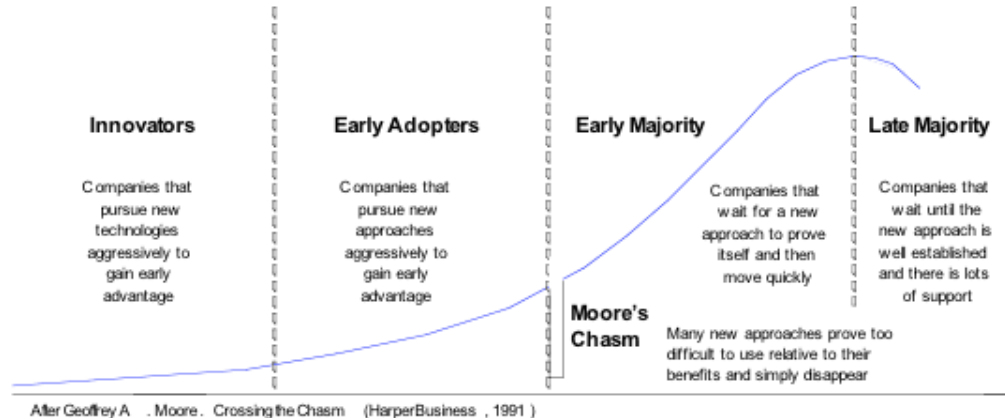


Figure 1. Geoffrey Moore's Technology Adoption Lifecycle

Another thing to keep in mind when thinking about standards is the difference between a *de facto* standard and a *de jure* standard. *De jure* (in law) standards are established by standards groups or industry consortia. *De facto* (in practice) standards are defined by communities without any formal agreement. Windows is the Microsoft operating system that over 90% of PC users depend upon. It is the *de facto* standard for operating systems and any vendor that wants to sell software for PCs would be well advised to support it. In complex and rapidly evolving environments, *de facto* standards are often more important than *de jure* standards, which usually take longer to develop. Put somewhat differently, if leading vendors can't agree on a common standard, the market decides, and the vendor that is the *de jure* standard wins.

With these considerations in mind, I want to spend a few minutes considering the standards in the business process world today. To organize the discussion, I'll divide standards into three broad sets, according to who uses them.

Enterprise Level standards are used by business managers to assist in analyzing and organizing enterprise initiatives.



Process Level standards are used by business managers and business process practitioners when they undertake business process change projects. This area is the most difficult to organize because the individuals who undertake business projects vary so much. In some cases, business managers undertake business improvement projects. In other cases, IT business analysts and other IT-oriented individuals undertake process automation projects.

Implementation Level standards are specific to technologies used by those charged with developing solutions to process problems. Most of the standards in this area are IT standards that define how software is developed or how software tools interface. We can hardly consider all of the business process standards that exist or are being developed today, but we want to provide a high-level overview. Obviously, I've structured the discussion and assigned standards to categories that reflect my experience. Others would surely arrange some of these standards differently, and several of the standards that I consider in one category could just as well be placed in another category. But we need to simplify a bit to provide an overview.

Enterprise Level Business Process Standards

Enterprise Level Business Process standards are used by executives and senior business managers to help organize their overall understanding, evaluation, and management of the performance of the business. In addition, some organizations have BPM groups that report to executive committees and use enterprise level standards as tools to evaluate manager performance and to prioritize process interventions.

Probably the most widely used business process standard, at the enterprise level, is Kaplan and Norton's Balanced Scorecard approach to managerial evaluation. This is a de facto standard and predictably takes many forms. The various spin offs of Kaplan and Norton's approach have enough in common, however, that most companies can immediately answer "yes" or "no" if asked if they are using a Balanced Scorecard approach.

The most impressive business process standard, at the enterprise level, is the Supply Chain Council's SCOR framework and methodology. SCOR was developed by supply chain managers as a tool for building and evaluating multi-company supply chain processes. It is being rapidly generalized to serve as a standard for defining, benchmarking and evaluating the entire value chain. In its expanded version, it is either called SCOR+ or SCOR/DCOR/CCOR (for supply chain, design chain and customer chain operation reference models). I predict SCOR+ will grow in importance as more senior executives embrace a process-centric approach in the years ahead. VCOR is an alternative approach, which is very similar to SCOR+. eTOM is another framework that is tailored for the telecom industry. (I fully expect to see other industry specific frameworks in the near future.)

Another standard that is sometimes used at the enterprise level is the Software Engineering Institute's (SEI) Capability Maturity Model Integration (CMMI). Most companies use CMMI to evaluate the performance of their IT processes, in which case CMMI would be a process level standard. A few organizations, however, use it to evaluate all their business processes to determine how the entire organization is evolving and, in those cases, it can function as an enterprise level tool.

The US Government's various agencies rely on the Federal Enterprise Architecture Framework (FEAF). FEAF is, potentially, an enterprise tool, and is used that way by a few agencies. Most use it as an approach to IT architecture, in which case I would classify it as an IT implementation standard, like Zachman.

I've summarized some of the business process standards I'm considering in Figure 2.

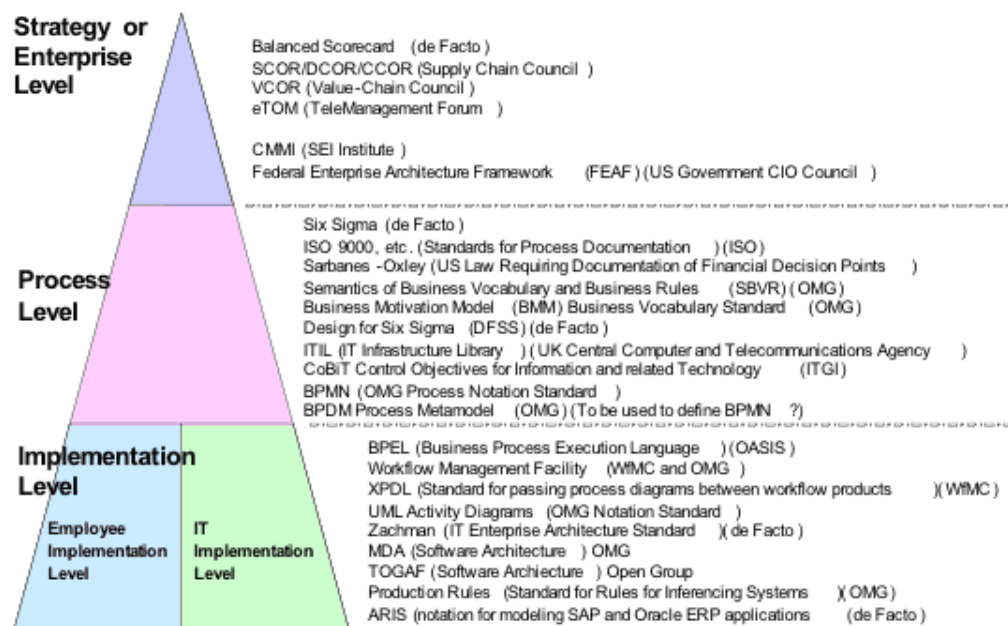


Figure 2. Some Business Process Standards Organized by Users

Process Level Business Process Standards

The Process Level is all about business process redesign and improvement projects. The standards on this level help managers, employees, business analysts, and human performance analysts change how specific processes work.

By far the most widely used standard at the process level is Six Sigma, another *de facto* standard that is defined differently by different companies and standards groups. Most of the variations on Six Sigma, however, bear enough of a family resemblance to be easily identified. Six Sigma provides a generic process improvement methodology (DMAIC) and a large collection of tools that process improvement teams can use to improve processes. Lean represents a separate methodology that focuses on eliminating waste from process flows and it is now generally considered one of the tools that Six Sigma teams ought to employ - so, perhaps, we ought to call this standard, "Six Sigma/Lean." In any case, many leading companies have trained a large number of their employees in Six Sigma and regularly undertake a large number of improvement projects guided by the overall Six Sigma/Lean approach.

Almost as widespread as Six Sigma is the ISO 9000 standard (This standard has many variations on 9000, but most people recognize it by this designation.) In essence, ISO 9000 is the International Standards Organization's specification for defining business processes. Many leading European firms and governments require companies to define their processes using ISO 9000. Unfortunately, this standard has become a "checklist" item and most companies create their ISO 9000 documentation rapidly and then shelve it. There are efforts under way to make ISO 9000 more meaningful for modern business process work, but, at the moment, ISO documentation has little impact on how processes actually work at companies.

In the US, most companies have worked to generate documentation for Sarbanes Oxley - a US law that requires companies to show they can track the processes that generate key financial decisions. Like ISO 9000, Sarbanes Oxley represents an opportunity for a firm to make a significant leap forward in understanding its processes. In reality, Sarbanes Oxley has been implemented too quickly and will most likely result in more shelfware that will sit on the shelf beside the ISO 9000 documentation.

The OMG has recently put its imprimatur on a rules standard (and an associated Business Motivation Model), originally developed by the Business Rules Community, that defines standards for defining corporate vocabulary and policies, and business rules. Financial companies are very active in this area and this standard will help those companies organize their ontology and their business rules efforts.

There are several business frameworks in industry or domain specific areas that are useful in helping a process team design or evaluate existing business processes. A good example is ITIL (a standard for IT support processes) and CoBiT (a standard for IT management processes). Both are of growing interest to companies that want to

standardize their IT processes throughout the company.

For years, business process modelers have used a wide variety of workflow notations, including, for example, IDEF0 and Rummler-Brache. Most of the popular process modeling tools support these two notations and provide variations of their own. Today, however, there is no *de facto* standard that a majority of business people rely on. When you consider that there are many companies that currently document their business processes with flow diagrams and have classes that teach employees to read the diagrams that describe the tasks they are to perform, you realize that a standard business process notation would be useful.

The best candidate, at the moment, is the BPMI/OMG Business Process Management Notation (BPMN). The good news is that the notation was developed by a team from the leading process modeling vendors, and, in its core version, provides the basic notation business people need. The bad news is that it is also designed to generate a business process execution language (BPEL) and that, to do that, it has lots of notation that business people clearly don't need or understand. In addition, now that BPMN is controlled by the OMG there will be an effort to merge BPMN with UML Activity Diagrams. In fact, in their simple forms, BPMN and UML Activity Diagrams are hardly distinguishable from Rummler-Brache diagrams and either could be used by business people. Both, however, are usually described in their more elaborate forms and quickly become overwhelming for business people. So, there are some standards for business modeling, but it isn't yet clear if one of them will become the *de facto* standard in this area.

Business Process Standards for Implementation

Once a business team has redesigned a process there are various groups that can become involved in preparing for implementation. HR teams may be asked to develop new job descriptions, hire new people or retrain existing employees. IT groups may be asked to develop software. Corporate property management groups may be asked to relocate plants, buy new trucks, or build new distribution centers, etc.

Most of the business process standards in the implementation area, at the moment, are IT standards. They are either designed to help IT professionals gather business requirements and design or tailor software applications, or they are designed to assure that companies can store process information in a common data format or pass models from one software tool to another.

BPEL, the OASIS process execution language, has gotten the most attention. BPEL is closely associated with BPM Suites, but, broadly speaking, only a few BPMS applications have actually been developed using BPEL, and none of them has been developed entirely in BPEL. The current version of the language is simply too limited to support sophisticated BPMS development and any vendor that uses BPEL supplements it with other code. This will change as the BPEL standard evolves, but, at the moment, BPEL is still a work in progress.

Closely related to BPEL are standards like XPD and the Workflow Management Coalition's Workflow Management Facility. These standards were developed to support workflow systems and will need, eventually, to be merged with BPEL or some similar language and expanded to support the BPMS applications we will start to see in the next few years.

The OMG's UML is clearly established as the notation system for those engaged in software development. MDA and TOGAF are both candidates for structuring the SOA oriented applications that BPMS tools are going to generate. And the OMG's Production Rule specification will eventually standardize the way business rules are stored in inference-based systems that are increasingly being used in financial companies to manage their business rules systems.

Zachman's Enterprise Architecture is the *de facto* standard for enterprise architects focused on cataloging the IT assets of the company but causes no end of difficulty when people confuse it with a business process architecture standard and try to use it as a business management tool.

Finally, ARIS, IDS Scheer's notation and tool, is the *de facto* notation for diagramming ERP applications. It is used by SAP for their diagrams and has been adopted by Oracle. In its ERP form, it's a notation that only software developers understand, and underlines the need for a different notation for business managers. It is, however, widely used by IT developers working on ERP-based process implementations. Just don't plan on showing an ARIS diagram of your new ERP application to your CEO.

The Future of Standards

I've only considered a few of the many standards being used by business process managers and developers. The variety is impressive. The key to developing standards is to understand what group will use them and what activities will be facilitated by the existence of a standard approach. When IT tries to get business people to use one of their software-oriented standards, it usually leads to an unsuccessful project. Similarly, when business people provide process models to IT, developed in one of their preferred notations, it usually means that the requirements are insufficiently specified. These problems will only become more complex as companies try to figure out how to use BPMS tools and create BPMS applications.

I am most hopeful about the SCOR+, VCOR, and eTOM notations and the idea that high-level value chain notations will make it possible for companies to create enterprise process architectures that will, in turn, make it easier for senior managers to understand processes, monitor performance, and prioritize their process improvement initiatives.

At the same time I think the OMG's MDA architecture has the potential to define how standards at different levels can interface effectively with each other while preserving the characteristics that make them valuable for their particular user groups.

As I indicated at the beginning, most business process managers aren't interested in standards. As time goes by, however, everyone will benefit if we agree to use some common conventions. Hopefully, the leading companies and vendors working on standards today will find ways to develop common conventions within a flexible architectural system that will make it possible for all of the different groups engaged in business process work to accomplish their work in the manner they find most effective, while still communicating with each other.

Till next time,
Paul Harmon

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