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Value Nets and Value Chains

We ought to be able to conceptualize any company as a collection of the processes that the company uses as it generates its products and services. We cannot, however, easily summarize all of the processes that make up a large company. There are too many of them. One needs an organizing principle to arrange and relate all the business processes into some kind of easily understood whole. Put a different way, a Business Process Architecture is an organized overview of the processes that comprise an organization. Thus, in essence, we are about to consider how one might organize a Business Process Architecture.

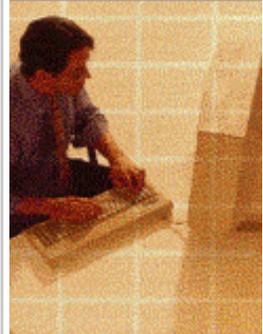
For the last twenty years the organizing principle that most process analysts have relied upon has been the Value Chain. The Value Chain concept originated with the Harvard professor, Michael Porter, and was first described in his book, *Competitive Advantage*, in 1985. Michael Hammer relied heavily on the concept in *Reengineering the Corporation*, which he published in 1993. He urged companies to begin their process work by identifying their Value Chains and, then, as needed, to reengineer each Value Chain. Figure 1 provides an overview of a Value Chain as described in *Competitive Advantage*.



Figure 1. Michael Porter's Value Chain

A Value Chain supports a product line, a market, and its customers. If your company produces Jeeps, then you have a Value Chain for Jeeps. If your company makes loans, then you have a Value Chain for loans. A single company can have more than one Value Chain. Large international organizations typically have from 5-10 Value Chains. In essence, Value Chains are the ultimate processes that define a company. All other processes are defined by relating them to the Value Chain. Put another way, a single Value Chain can be decomposed into major operational process like Market, Sell, Produce, and Deliver and associated management support processes like Plan, Finance, HR and IT. In fact, it was Porter's Value Chain concept that emphasized the distinction between core and support processes. The Value Chain has been the organizing principle that has let organizations define and arrange their processes and structure their process change efforts during the past two decades. [1]

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In the last decade or so, however, the Value Chain has come under attack in academic circles. Those who dislike the Value Chain approach argue that it is too rigid; that it was developed when most companies emphasized manufacturing operations and focused on making large-scale processes as efficient as possible. In other words, they argue that the idea of the Value Chain is another artifact of the over emphasis on mass production. As companies become more agile and respond to customers in more creative ways, they argue, companies need a more flexible way of representing a Business Process Architecture.

Value Nets

Most of those who oppose the Value Chain approach support an alternative model that is usually termed a Value Net. There have been several books published on Value Nets. The book that is most cited is David Bovet and Joseph Martha's *Value Nets: Breaking the Supply Chain to Unlock Hidden Profits*. (Wiley, 2000). I don't think most business analysts who had been working on process change would find the book very convincing. It certainly makes some good points. Companies are increasingly outsourcing processes and we need a model that let's us represent Value Chains that are, in fact, orchestrated business processes provided by multiple companies. In financial terms, Value Net theorists would argue, we are increasingly working with models that are more complex than the model Porter proposed, since Porter seems to assume that every core and support process will take place within a single organization. These and other objections to Value Chains are valid enough, but I suspect most readers would decide that the authors of Value Nets were working too hard to simply come up with a new name. The Value Chain model can easily be adjusted to accommodate most of the objections raised by Bovet and Martha. More telling, from the perspective of someone working in the trenches, Bovet and Martha don't really offer a systematic approach that one could use to organize a Business Process Architecture.

Recently, however, IBM's Global Services group has begun to urge companies to develop Component Business Models (CBM), which they claim derive from the Value Nets approach. IBM's Component Business Models offer a very specific and practical approach to organizing a Business Process Architecture, and thus they move the discussion of whether one should emphasize a Value Chain or a Value Net out of the academic arena and make it an issue that business process architects and practitioners will need to consider.

IBM's Value Nets/CBM Approach

Clearly, IBM has thought quite a bit about their Component Business Model approach. Two IBM publications trace the evolution of CBM. The first is a paper by Luba Cherbakov, George Galambos, Ray Harishankar, Shankar Kalyana and Guy Rockham entitled "Impact of Service Orientation at the Business Level." This appeared in the *IBM Systems Journal* in April 2005. It clearly lays out the Component Business Model, but seems to suggest that the CBM can be derived from the Value Chain, which seems to come first. The method has apparently evolved since then. In a white paper, "Component Business Models: Making Specialization Real", issued by IBM Institute for Business Value, in August 2005, and authored by George Pohle, Peter Korsten and Shanker Ramamurthy, IBM suggests that a CBM can be developed without reference to a Value Chain. Recent practice seems to rely on grouping similar processes based on interviews and statistics. In either case, the result of the IBM CBM effort is a diagram like the one pictured in Figure 2.



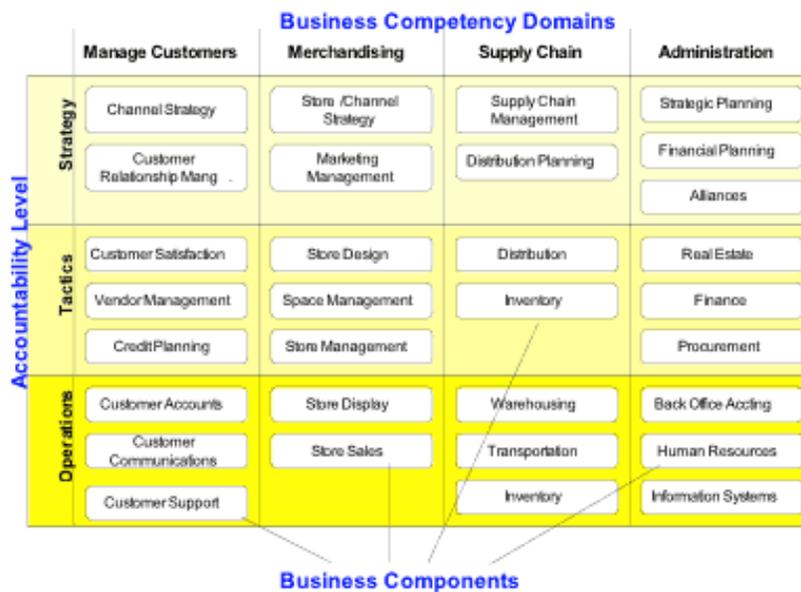


Figure 2. IBM's Component Business Model

An IBM CBM starts by grouping processes into broad categories, which it terms Business Competency Domains. The domains vary from company to company and seem to be an informal way to organize the specific company's large-scale processes. Typical domains include Managing Customers, Supply Chain and Administration. IBM subdivides these categories into three fixed Accountability Levels: Strategy, Tactics, and Operations, to form the basic CBM matrix. Both Strategy and Tactics level processes tend to be management processes. Operations level processes include both core and support processes.

No explicit relationships between the Business Components placed within the matrix are indicated. In other words, if we imagine a company with two Value Chains, each of which has an inventory process, both inventory processes would be merged into a single generic inventory process. Thus, an IBM CBM classifies a set of business processes (i.e. components) but does not suggest how they combine to provide specific value to particular customers. The whole point of the IBM CBM is to avoid showing specific chains of business processes in order to emphasize common, standard processes that are independent of any specific chain.

Reading the Value Net literature, one could easily conclude that Value Nets are primarily being used by consulting companies that are focused on how to assemble unique processes to support one-of-a-kind engagements. The Value Net is just the shelf they keep their skill and knowledge on before they assemble it to satisfy a given client.

On the other hand, we have encountered clients who increasingly focus on their management competencies and put less emphasis on their core or operational processes. This is often the case when companies outsource manufacturing to China and rely on distributors to market to customers. The traditional core capabilities of these companies have become commodities. Increasingly, their new core competencies consist of designing new products, assembling the capital and organizing the overall supply chain needed to bring new products or services to market. In other words, the core competencies of virtual companies are tactical and strategic management processes. For these companies, Value Nets feel comfortable as they seem to place more emphasis on the management processes and less on the traditional operational processes.

Tight Integration and Efficiency vs. Flexibility

Michael Porter argued that a company should work hard to integrate a Value Chain. [2] His primary concern was not efficiency, as such, but the fact that a tightly integrated Value Chain that focused on executing a specific strategy was much more difficult for a competitor to copy. In other words, you optimize a Value Chain, not only assure efficiency, but to implement a strategy in a manner that gives you a competitive advantage that competitors find it difficult to duplicate. The alternative, which Porter terms "operational effectiveness", tries to make each individual process as efficient as possible, while ignoring the integration of the processes.

The Value Net theorists and IBM's CBM approach argue that few companies, today, have the time to integrate and refine their Value Chains. New technologies and new customer demands keep coming faster and product lifecycles keep getting shorter. Thus, they argue, companies are better off conceptualizing their organizations as a set of competencies, refining these business processes and then combining them, as needed, to create the specific large-scale processes they need to satisfy ad hoc customer needs. Obviously, IBM's approach is very much in the spirit of the Service Oriented Architecture (SOA) that increasingly thinks of processes as assemblages created, as needed. It's also very much in line with efforts underway at companies that seek to standardize business processes throughout the company in order to support a single instance (or at least a few instances) of ERP throughout the company.

A tightly integrated Value Chain can usually produce outputs for the minimum price in the fastest possible time. A flexible Value Net, assembled quickly, probably can't produce outputs as efficiently or as inexpensively. On the other hand, it can be hard to change a tightly integrated Value Chain, although it can be done if one designs variation in from the start. In either case, efficiency and success will depend on anticipating the right scope and size of the business components one creates. Too large and they won't snap together to handle the various and changing demands one faces. Too small and one faces too many hassles when one seeks to assemble them for a specific purpose. Table 1 compares some of the obvious advantages and disadvantages of the two approaches.

Value Chain	Value Net (CBM)
<p>Advantages</p> <ul style="list-style-type: none"> ■ Defines an actual process undertaken by the organization ■ Identifies customer ■ Shows specific relationships among internal sub-processes ■ Allows you to measure results of chain and use that measure to evaluate the results of the internal processes that make up the Value Chain. 	<p>Advantages</p> <ul style="list-style-type: none"> ■ Defines all processes company has that could be used to assemble a new Value Chain ■ Identifies all processes that company supports that have competencies and that take similar inputs and make similar outputs.
<p>Disadvantages</p> <ul style="list-style-type: none"> ■ Defines a specific way in which processes fit together ■ May use similar processes in more than one Value Chain without identifying that fact 	<p>Disadvantages</p> <ul style="list-style-type: none"> ■ Does not identify specific process ■ Does not identify customer ■ Does not show relationships among business processes

Table 1. Advantages and Disadvantages of Value Chains and Value Nets.

The authors who have written about Value Nets have tended to be both defensive and over enthusiastic. They suggest that there is a sharp either/or difference between the two approaches and that everyone will want to shift to the "more modern" Value Net approach. In reality, we suspect, most large companies will want both. Most large companies have at least some large-scale processes that are done over-and-over. Success in these operations requires efficiency and tight integration. It makes sense to model these processes as Value Chains and to work hard to

make these processes as efficient as possible. At the same time, most large companies have other large-scale processes that change rapidly and that generate highly tailored outputs. It may not make sense to model these processes as Value Chains, or to spend too much time trying to integrate all the subprocesses.

At the end of the day, however, every company has customers, and, in our opinion, customer acceptance and satisfaction must be the touchstone of corporate and process success. It's hard to imagine how to evaluate the internal organization of a business component without having some idea of what the ultimate customer might value. We suspect that most companies will find it useful to move back and forth. Use a CBM approach to help standardize processes throughout the company. Use a CBM approach to place a new emphasis on the various management processes that are increasingly the source of the value the company provides. At the same time, however, think about the standard ways one is likely to combine the various component processes and ask yourself what the customers of those process chains will value. More important, most companies will want to study just exactly how much customers value flexibility and efficiency in a given situation and adjust their emphasis accordingly. The best companies will, predictably, evolve approaches that assure that their operations are both flexible and efficient.

Figure 3 reminds us that the two views are easily compatible.

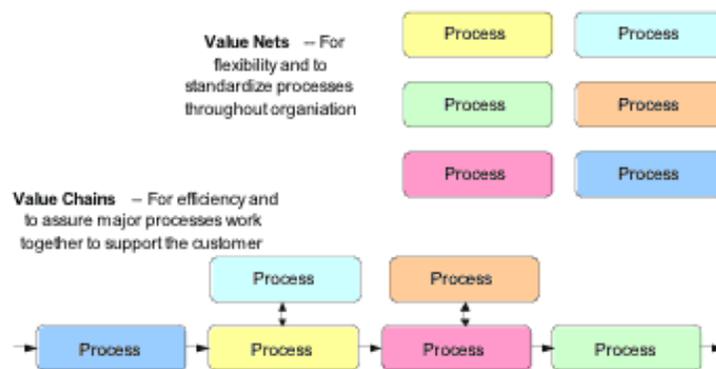


Figure 3. Most Companies Will Want Both Value Nets and Value Chains.

Some Personal Experience

Historically, we have always urged companies to begin by defining their Value Chains. Increasingly, we have encountered problems with this approach. First, many companies divide their non-value adding processes into two groups - management processes and support processes, and they rarely include these management and support processes in their Value Chain models. In other words, companies are more likely to draw Value Stream models [1] that show how core processes respond to customer requests than to develop true Value Chain models that really picture a Value Chain in the manner initially proposed by Michael Porter in 1985.

Secondly, companies are increasingly concerned with identifying processes that rely on similar competencies and provide similar services. They have these concerns, in part, because they want to simplify their ERP modules by assuring that similar processes are done in the same way and rely on a single instance of ERP. Similarly, they want to assure that similar processes are done in a similar way so they can standardize training and transfer employees from one process to another with minimal disruption.

Similarly, companies are struggling, increasingly, with the need to frequently change their processes in response to changing circumstances, and want an overview of their processes that emphasizes how they can combine existing responses to create new Value Chains.

Leaving aside, for the moment, how we arrive at a description of an overview of a company's business processes, we are convinced that creating a model that shows a company's major core, management and support processes, each defined as an independent process with its own core set of competencies, is a valuable exercise.

On the other hand, we are equally convinced that most companies will want concrete models of how specific processes work together to provide value to specific sets of customers. Most companies rely on standard Value Chains or Value Streams that they use constantly. Moreover, most companies want to define clear strategies for their Value Chains and do everything they can to integrate the Value Chain to maximize the efficiency with which the Value Chain produces value for their customers.

Thus, we expect we will increasingly recommend that clients rely on a combination of both Value Net and Value Stream models when they create a Business Process Architecture. Obviously, a good process repository could support either approach. We can imagine beginning with either model, depending on the emphasis of the client, and then generating the alternative model so that the company can use whichever it finds most useful at any point in time. No matter which way we start, it's hard to imagine that we won't rely heavily on specific Value Chains to provide employees with an overview of how and why things work as they do, and on Value Chain outputs to assure that the processes support the organization's strategy and that the company's business performance measures line up with outputs that are valued by customers.

We expect that this discussion between an emphasis on Value Chains and Value Nets will heat up in the years ahead and we suspect that everyone involved in business process work will want to consider the issues and arrive at an approach that works best for his or her organization.

Till next time,

Paul Harmon

[1] To keep this discussion from getting too complex, I have avoided discussing Value Streams - which are strongly associated with LEAN or Process Kaizen analysis. Some would argue that the Value Stream provided another way of organizing a Business Process Architecture. In my opinion, a Value Stream is just an alternative way of diagramming a Value Chain. The Value Chain is usually drawn as in Figure 1 above. It puts the emphasis on the core processes and the support processes. The Value Stream is usually drawn as a circle that shows the customer originating a process, which goes through a series of subprocesses and ultimately generates the product or service the customer desires. The Value Stream emphasizes the circular flow of a set of activities that begins with a customer request and ends with customer satisfaction. It isn't particularly good at showing management and support processes, or processes like New Product Development that, in some cases, actually initiate a Value Chain by seeking to identify new customer needs. There are certain circumstances in which a Value Stream diagram is very useful in communicating how a process works and emphasizing where problems can occur. In any case, both Value Chains and Value Streams represent a sequence of processes and both seek to help analysts increase the efficiency of the sequence.

[2] We reviewed Michael Porter's arguments for Value Chains and tight integration in our January 30, 2007 Advisor: "Once More: Porter on Competitive Advantage", which is available on www.bptrends.com.

