Core versus Support Processes

One of the major events in the evolution of modern process thinking was the 1985 publication of Michael Porter's book, *Competitive Advantage*, which introduced the idea of the Value Chain. (See Figure 1.) A Value Chain describes all of the activities that an organization undertakes to satisfy a customer value proposition.
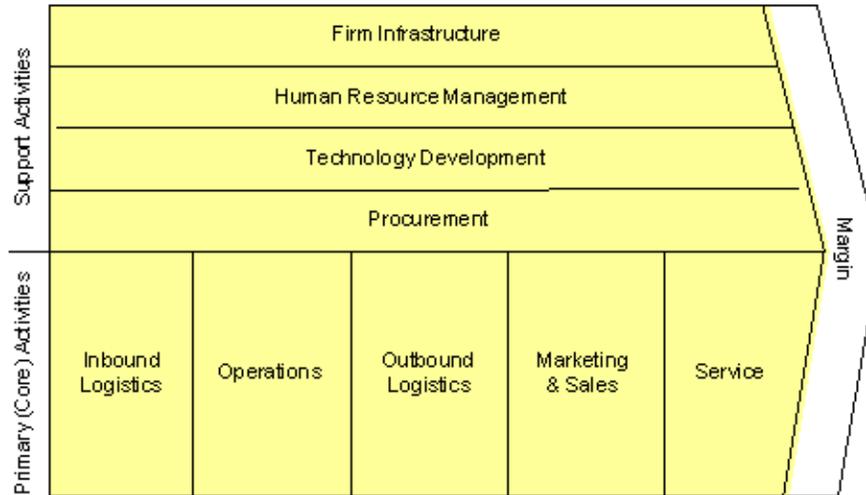
After Michael E. Porter, *Competitive Advantage* (1985). p 87.

Figure 1. Porter's Value Chain

One key idea to come out of the Value Chain model, as illustrated in Figure 1, is the difference between core processes, pictured flowing across the bottom of the figure, and support processes, pictured in layers above all of the core processes.

When most companies begin to think about business processes, they focus on core processes. They think in terms of the flow from order to cash, or they think of a chain that runs from the decision to generate a new product or service through new product development, marketing, sales, order fulfillment and collection. In any case, it is relatively easy to create a diagram that shows the overall flow of the activities that make up the core of the Value Chain. (Figure 2 provides an overview of a core process that shows both the generation of a new product and the successful sale of the product.)
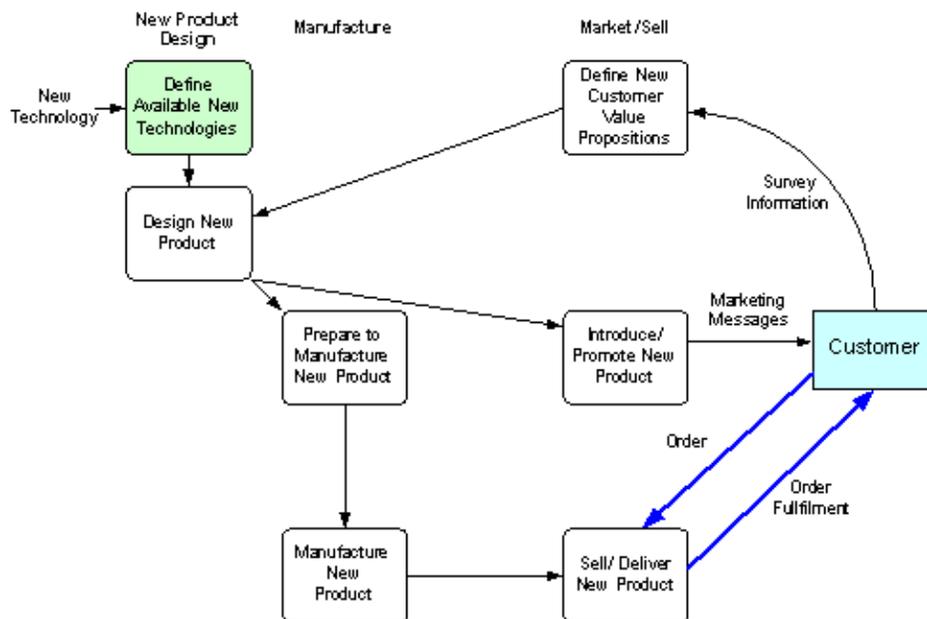
Figure 2. A Set of Core Processes that Design, Produce, Market and Deliver New Products.

We highlighted one of the processes, *Define Available New Technologies*, which really isn't a part of the loop. It would be easy to include others, like *Human Resource* processes that would be used to hire new employees for the *Manufacture New Product* process, or *IT* processes that would generate a customer database to support the sale and delivery of new products.

The question that confronts every team that tries to model a process is how much to model. In particular, should you model management and support processes? We suggest that, in general, you should not. It's acceptable to include some support processes in a high level diagram just to suggest important things that must happen to assure the core process succeeds. That's why, for example, we included the *Define Available New Technologies* on the diagram in Figure 2, but didn't include processes to hire new employees or to create and maintain customer databases.

Let's step back and think about this a bit more. Imagine the core processes at a national oil company that take oil from the ground and deliver it to customers at gas stations. We can easily get quite specific about the activities that occur within each of the major processes that make up the value stream. The arrows pictured in Figure 3 represent sequence, but they can also be labeled to show what flows where.

You would not, however, want to try to describe *Human Resources* on the diagram. Take one HR subprocess, *Hire Employees*. That process is used, at one time or another, by every core process. If you were to try to show how the *Hire Employees* process fit within the flow of the overall process you would have to link it to every core activity. Moreover, you would need to do the same for all of the other support processes, from *Provide Employee Pensions* to *Provide Facilities* and *Provide Customer Database Access*.
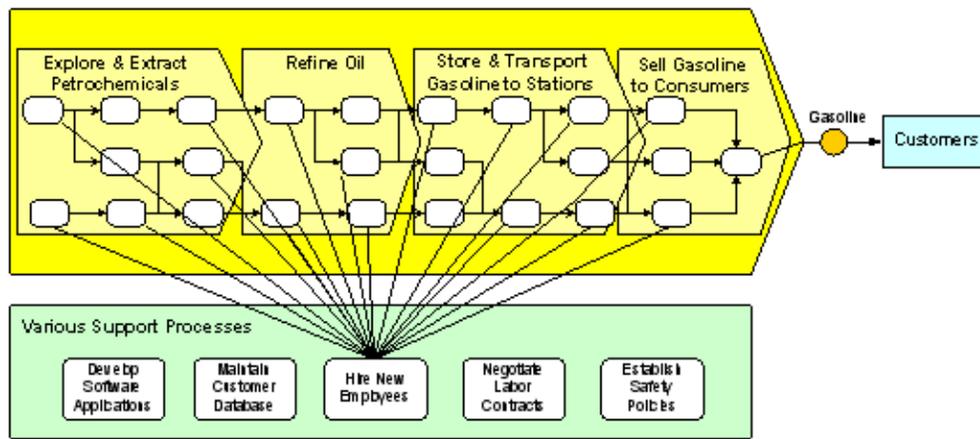
Figure 3. Core Processes and Support Processes.

The key to an enterprise-wide business process architecture is a good description of all of the core processes the organization supports. They may all lie within a single Value Chain, or in more than one, but the core processes in each Value Chain are linked from certain initial events to the delivery of products and services to the ultimate external customer.

Support processes are just as important to the success of the organization as core processes. The inability to hire key employees or the failure to properly account to government agencies can result in bankruptcy just as not satisfying customer needs can lead to failure. Often, however, there is no flow among the support processes that approximates the logical flow we observe in the core processes. Even the various processes within a given support group – like HR and IT – may have only tangential relationships to one another. HR and IT are collections of processes that may or may not be related to each other, but are linked to most of the core processes and used as needed.

We have heard arguments about whether a Value Chain is a sequence or a network. Obviously, it is both. There is usually a strong core sequence that defines the flow from inputs to the ultimate outputs. At the same time, there are many support processes and, if we were to diagram all their relationships with core processes, we would find that we have a very tangled network.

Different methodologists take different approaches to dealing with support processes in diagrams. BPTrends Associates uses an approach very similar to the approach developed and used in the Supply Chain Council's SCOR and the Value-Chain Group's Value Reference Model. We model the core processes, and then, when we are ready to focus on support processes, we model them only as they touch any one of the specific core processes. For example, if we were to proceed with an analysis of the various support processes used by one of the core processes shown in Figure 3, we would do it as we picture it in Figure 4.
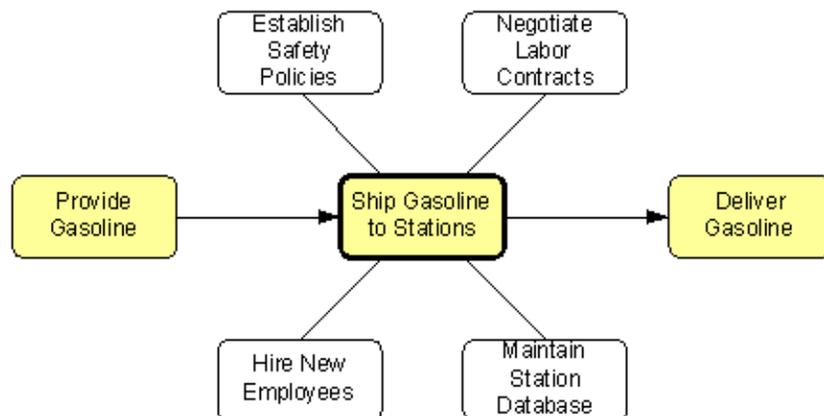

Figure 4. The Core, Support and Management Processes Related to the *Ship Gasoline to Stations Process.*

If we had 25 core processes and decided to explore management and support

processes, we would create a diagram, like the one shown in Figure 4, for each core process. We would picture the relationships between the core process and other upstream and downstream core processes, and we would show the relationships with all management and support processes. Figure 4 is only meant to be suggestive, as real diagrams are much more complex.

One key to doing this kind of analysis successfully involves being careful that all of the core and support processes you are depicting are at, more or less, the same level of granularity. You would not want to relate *Ship Gasoline to Stations* with *Interview Potential New Employees*, as it would result in way too many links between the core process and the hundreds of support processes.

If one takes this approach, one can begin with a core process diagram which shows the relationships between each core process and then move on to a number of more specific diagrams that show the relationships that exist between each core process and all of the management and support processes, of a similar granularity. In essence, one has one rather linear diagram that shows the core processes that generate value, and a sub set of diagrams that analyze which management and support processes are needed to support the core process.

Later, and independently, one can drill down into both the core and the support processes to see how their subprocesses are organized, without generating a single diagram that looks like a bowl of spaghetti. (Obviously all this is much easier to organize if you are using a good process modeling software tool, but conceptually, it works the same.)

Much of the confusion about process modeling and process architectures would be eliminated if everyone kept the distinction between core and support processes clearly in mind and avoided the temptation to try to capture too much in a single diagram.

Till next time,

Paul Harmon