

Business process orientation, supply chain management, and the e-corporation

Taking a business process

orientation can result in a key competitive advantage in the supply chain and this new economy

Organizations are faced with

intense global competition, demanding customers and employees, rapidly shrinking product life cycles, and shorter response times. Add the functionalities inherent in e-business and the Internet, and the trend accelerates exponentially. Forget about all those comfortable corporate frictions — geographic distance, price opacity, and unquestioning brand allegiance. Organizational inefficiencies can no longer be protected, and status quo jobs are disappearing almost overnight.

The old way of conducting business — pushing costs and compensating quality in order to achieve the lowest possible price — is out. A new paradigm is emerging with the integration of business partners and the focus on core processes, according to Bernard Teiling, assistant vice president of Business Process Integration at Nestle S.A.

As the “e-craze” of this decade (e-business, e-commerce, e-supply chain) replaces the re-engineering craze of the 1990s, business process performance and the horizontal nature of e-corporations are gaining importance. Corporations are extending outside their legal boundaries as a normal way of organizing. Partnering, functional outsourcing, business process outsourcing, alliances, and joint ventures are yesterday's requirements for success. In fact, competi-

tion in the future will increasingly occur between networks rather than stand-alone businesses. Management needs to promote the right conditions not only within the company itself, but within the organizations that are part of its value-adding network.

Many of the best companies — 3M, Cisco, Texas Instruments, and Dell — have embraced this new approach to business by becoming fast, flexible, and integrative, focusing on customers, competition, teams, time, and process management. Their organizations and those following their lead have been variously described as horizontal, process-centered, or process-oriented.

Processes, as never before, are now viewed as strategic assets. Consider how a dot-com such as Amazon.com is protecting its business processes through patents, such as its one-click ordering and



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an Internet customer-based referral system (better known by Amazon as “affiliates”). In fact, Amazon.com recently brought a court injunction against Barnes & Noble to drop its own one-click feature. Companies competing in the new economy will need to reassess the strategic importance of their processes, viewing their organizations as not just a collection of functions, but as highly integrated processes. In short, they will need to take a business process orientation.

nization while improving business performance. Moreover, companies with strong measures of BPO had better overall business performance. Our research also showed that high BPO led to a more positive corporate climate, including higher esprit de corps and connectedness and less internal conflict. Companies structured into broad process teams rather than narrow functional departments have less internal conflict and stronger team spirit.

define something in simple terms, you don’t really know what it is. With that in mind, the definition we used in this project was first the result of decomposing “supply chain management” into its constituent parts:

- ◆ Supply chain: The flow and transformation of raw materials into products from suppliers through production and distribution facilities to the ultimate consumer.
- ◆ Management: The process of developing decisions and taking actions to direct

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Business process orientation

Business process orientation is not simply a new business operations strategy. Rather, BPO emphasizes process as opposed to hierarchies with special emphasis on outcomes, particularly customer satisfaction. Business process orientation’s key elements include:

- ◆ Process management and measurement — measures that include aspects of the process such as output quality, cycle time, process cost, and variability compared to the traditional accounting measures.
- ◆ Process jobs — jobs that focus on process, not functions, and are cross-functional in responsibility (e.g., product development process owner rather than research manager).
- ◆ Process view — the cross-functional, horizontal picture of a business involving elements of structure, focus, measurement, ownership, and customers.

We developed a business process orientation measurement tool (a survey questionnaire measuring the components of BPO), to study more than 100 domestic and international manufacturing companies. These firms represented a broad cross-section of industries, ranging in size from approximately \$100 million to several billion dollars in annual sales.

The results of our research showed that BPO is critical in reducing conflict and encouraging connectedness in an orga-

BPO and the supply chain

During the past several years, the concept of supply chain management has been maturing in its theory and practice. Integrated supply chain management, supply chain optimization, and supply chain collaboration have become the focus of many organizations in the United States and around the world. Global supply chain management has emerged as a key competitive strategy. Therefore, we posed this question that guided our research efforts: To what extent is supply chain management influenced by a business process orientation?

The initial challenge we faced in our study was developing a clear, simple definition of the main concept of supply chain management. A review of the popular business literature revealed that “supply chain management” was becoming a phrase that lacked a clear, simple definition. If you can’t

the activities of people within an organization — planning, organizing, staffing, leading, and controlling.

The final definition used in this study combined these two statements: Supply chain management is the process of developing decisions and taking actions to direct the activities of people within the supply chain toward common objectives.

Before we could begin this study, we had to develop detailed definitions and operational measures for the practice of supply chain management. To accomplish this, we conducted interviews and focus groups with supply chain experts and practitioners. Questions were organized generally around the components of BPO but slightly expanded. The questions asked were specific to supply chain management but generally about process view, process jobs, process structures, process values and beliefs, process management and measures,

Category	Plan	Source	Make	Deliver
Process structure	0.7	0.6	0.5	0.6
Process documentation	0.6	0.7	0.5	0.5
Process value/beliefs	0.6	0.5	0.6	<0.5
Process jobs	0.5	0.5	0.6	<0.5
Process measures	0.5	0.7	<0.5	0.6
IT support	<0.5	<0.5	<0.5	0.7

Figure 1. Correlations of BPO components and core business process performance. Note that the closer the correlation coefficient is to 1.0, the stronger the relationship.

information technology support, and supply chain-specific best practices. The results of these focus groups and interviews were used to build an initial list of survey questions to be used in the research study.

The sampling frame used in our study was constructed from the Supply Chain Council's Supply Chain Operation Reference (SCOR) model. Participants were selected from the membership list of the Supply Chain Council. The practitioner portion of the list was used as the final selection since this represented members whose firms were in the business of supplying a product rather than a service and were thought to be generally representative of supply chain practitioners rather than consultants. This list consisted of 523 key informants representing 90 firms.

Correlations were performed on the data to determine the specific impact of BPO on supply chain management. Responses to the survey questions that were summed by BPO component category were then correlated with overall supply chain management core processes. Figure 1 reports correlation coefficients indicating the strength of the relationship between core process performance and each BPO component.

For classification purposes, we drew a line between strong and weak relationships. Above 0.5 are considered strong relationships and below 0.5 are considered weak. Correlations for all components other than information technology support were 0.5 or above in most areas.

Process structure appears to be slightly stronger than the other categories. When we asked respondents about this, we discovered that this was indeed true. The structure represents the span of involvement, influence, and authority in an organization. It is the base operating system for an organization. If the structure does not allow for multi-dimensional, cross-functional authority, then it is difficult to operate. This is particularly true in a management function that demands cross-functional action such as supply chain management. The basic process structure measures represented

cross-functional teaming, process integration, and cross-functional authority of the teams. This makes sense. If supply chain management is to be successful, the individuals involved must work as a tightly integrated group with shared authority to both make decisions and take actions.

Process documentation, according to our



research, is strongly related to supply chain management performance (0.5-0.7). This is slightly stronger than our original BPO research. One possible explanation is that in a cross-functional and possibly cross-company activity such as supply chain management, the documentation of the process to be used is more important than it is in other activities. A clear understanding and agreement of what is to be done seems to be important in supply chain management. This is usually achieved through process design and mapping sessions or review and validation sessions with the team. This is a clear message to those implementing supply chain management strategies: The time and money invested in designing and documenting the

processes to be used are critical to success. Omitting this step or allowing it to be done in an ad hoc way will negatively impact supply chain performance.

Process values and beliefs that were measured are actions representing customer trust, firm credibility, and inter-firm collaboration. These appear also to be strongly related to supply chain management performance (0.5-0.6). The deliver score, although slightly below 0.5, is still important. Trusting customers enough to team with them and to supply critical information is a very important factor in cross-company collaboration. Trust applies in a similar fashion when dealing with suppliers. For example, it is important that functional employees in an organization jointly participate on operations teams with their counterparts from the supplier firms. Our research shows that believing what you are told and acting upon it are critical in supply chain management. Why bother getting forecasts from customers if you don't



believe them or don't act upon them?

Process jobs reflect the assignment of broad process ownership. In this research we measured whether process owners were identified for each SCOR area of plan, source, make, and deliver as well as an owner for the overall supply chain. The correlation results of 0.5-0.6 means there is a strong relationship between process jobs and supply chain management perfor-

mance. Clearly, creating broad, cross-functional jobs with real overall supply chain authority is a key component of supply chain management performance.

Process measures are strongly correlated to supply chain management performance (0.5-0.7). This study identified key measures in each SCOR area and asked respondents about the frequency of use. Measures such as supplier performance to agreements, inventory measures, and customer and product profitability were included in this study. The results clearly show that measures are very important in supply chain management just as in the original BPO research.

Since many software firms and consultants are emphasizing the importance of information technology in supply chain management, we considered the role it plays in supply chain management performance. Our research shows that IT support, although strongly related to delivery process performance, is only marginally related to overall supply chain management performance (<0.5). The strong relationship of IT support to the delivery process is perhaps because customer order processing and inventory management are usually part of the delivery process. These are very information-intensive processes and, by definition, very dependent on IT support. We have concluded that IT investments, by themselves, will not improve supply chain management performance, except in the delivery process area. Therefore, to realize a significant return, these investments must be in support of actions to improve the business process orientation of a supply chain management organization.



supply chain performance goals is definitely related to performance but seems to be difficult to implement. A great number of the participants in our research indicated little progress in this area. As supply chain management crosses company boundaries, this becomes even more difficult but may yield a potentially greater return. Process-oriented values and beliefs are also difficult to implement. Trust and credibility are built over time and should not be treated as a project. Trust takes place between individuals, not companies, and is established as a result of hundreds of successful interactions between individuals. Creating an environment that enables this to occur is the task of the leaders of companies in the supply chain and a critical success factor in implementing successful supply chain management.

Overall, our research has shown that BPO is a critical factor in supply chain manage-

BPO and the e-corporation

In this new economy, competition has shifted to networks of companies cooperating across boundaries to achieve market goals. This has been called the e-corporation. In the past, this was only possible in a few sections of the economy through vertical integration, the actual purchase of suppliers within the associated supply chain. Given new Internet technologies and the resulting decrease in integration costs, this integration is possible without having to purchase companies.

Since cooperation is not the norm outside of company boundaries (some may say even inside company boundaries), BPO helps engender dialogue and connect the dots in this network of cooperating companies, leading to a competitive advantage.

Building a common process view, a key BPO component within the virtually integrated networks of the e-economy, will be critical if companies wish to remain competitive. Gaining agreement on process terms, process activities, and outcomes is central to process integration within and between companies. Building a high-level network process map can further clarify these process roles and responsibilities.

Allocating resources based on process, a key component of BPO, is also critical to the new economy networks. Companies within the network have to invest in the cross-company processes to make the new networked business model work. Decisions concerning who owns the process and the investment necessary to support the

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The results of our research investigating BPO in the supply chain clearly shows that process measures and process-oriented values and beliefs are critical ingredients of supply chain management. Cascading measures used to link people's actions to

ment. When an organization's supply chain management becomes more business process-oriented, the better it will perform. This is true for the "old economy" linear supply chain and the "new economy" networked e-supply chain.

process are critical for moving forward in the BPO journey.

To move forward in building a new-economy business or an e-corporation, the network must first commit to becoming business process-oriented across the network. This commitment is critical since it will guide the hundreds of decisions about jobs, investments, and ownership. Some networks are joining together to form separate businesses called exchanges to house the investments and people supporting the cross-network processes. Independent investors are organizing independent exchanges that exist in the processes between companies in a market. These represent exciting new business models that may evolve into pure BPO organizations.

Conclusion

Inspired by the challenges in the new economy and from our own research, we have concluded that practicing a business process orientation can result in a key competitive advantage in the supply chain and

this new economy. The future competitive landscape is shifting from between companies themselves to between supply chains and networks. Understanding and mastering process design and change will be tantamount to achieving and sustaining a competitive advantage. To succeed in the future, corporations will have to weave their key business processes into hard-to-imitate strategic capabilities that distinguish them from their competitors in the eyes of customers. This is the very premise of our research. We believe that corporate survival in the Internet economy will depend both on the effectiveness of internal processes and their integration with supply chain partners and customers. Competitors can match individual processes or activities but can't match the integration of these processes between network partners. ♦

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