Road map for moving from scm to e-scm

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Abstract

E-Supply Chain Management has redefined how companies will compete for their customers. But without an e-supply chain roadmap, the direction you take may not get you to the desired destination. This paper introduce a road map toward going from scm to e-scm and propose a way to reduce fail in this implementation e-scm project.

Key word: e- supply chain, strategy, roadmap, internet

1. Introduction

E-Supply Chain Management has redefined how companies will compete for customers. While the internet offers some exciting opportunities to improve Supply Chain Management effectiveness by lowering costs and increasing the speed of order-to-delivery. We start our paper by review of Cisco 'strategy and posses the question in this paper **.**

Cisco was founded in late 1984 by two computer specialists at Stanford University Who commercialized the router; Cisco enjoyed an extraordinary rate of growth, with annual revenues increasing from $70 million in 1990 to more than $18.9 billion in 2000. Cisco is fundamentally a product innovation company, but pays close attention to customer relations and operational excellence as well. Its product strategy is to provide an end-to-end single vendor networking solution . Cisco's product innovation strategy and networked organizational model are supported by extensive use of the Internet and e-commerce. Cisco integrates its customers, suppliers, channel partners, and service partners into its own information systems, blurring the boundaries between itself and those 'constituencies'. Cisco uses **Internet** as comprehensive resource for customers, suppliers, resellers, business partners, investors, and potential employees. It also has links to Cisco's extranets for suppliers and partners. CCO has five key components: **Marketplace, technical assistance and software library, Customer service, Internetworking Product Center, and Cisco supplier connection (**CSC) .Cisco uses extranet and Web-based EDI technologies to coordinate with its suppliers and CMs via the CSC, which is accessible to registered users from the Cisco website. **Intranet** designed to provide information and services to meet the needs of Cisco's employees. Cisco has used the Internet to implement its strategic focus and to leverage its virtual organization. Building on top of its core

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enterprise systems for manufacturing and order fulfillment. Adoption of those technologies without a carefully planned strategy can prove very costly, especially when the target is missed, or worse, not defined in the first place.

2. Research question:

The profit-making possibilities that e-commerce brings has significantly, and forever, changed the way management must view and serve its markets, some managements are eager to become early adopters to establish stature and market presence using Web-based e-Supply Chain operating strategies. Just throwing more software at the problem is not the answer to the core issues of supply chain management. The hard part is developing a strategy and plan for an e-supply chain that will improve your performance more than that of your competitors. But without an e-supply chain roadmap, the direction you take may not get you to the desired destination.
In order to answer the question raised, we introduce a road map toward going from scm to e-scm and propose a way to reduce fail in this implementation e-scm project .

3. PRINCIPLE AND DEFINITION:

3.1. Scm:

Supply chain management is the integration of key business processes from end user through original suppliers that provides products, services and information that add value for customers and other stakeholders.

3.2. Evolution of supply chain management:

3.2.1. Phase one: This includes paper copies of purchase orders, bills and invoices and represents most of the information flows

3.2.2. Phase two: This phase saw the development of EDI that had a dramatic effect on the automation of information flows and the elimination of many labor intensive processes and procedures in partner businesses. EDI limits the flexibility of suppliers who are connected to more than one customer since they are required to support specific technologies for each.

3.2.3. Phase three: Enterprise-wide systems and databases are integrated and coordination of IT operations takes place. An ERP system can potentially improve transparency across the supply chain by removing information distortions and increasing the speed of information by reducing information delays

3.2.4. Phase four: Here, the supply chain is defined by strategic supplier partnerships with extensive two-way information flows. The integration of information resources has therefore been enabled by the use of web development technologies such as XML and Java, which enable business partners to integrate their information resources and therefore to accelerate the decision-making on SCM processes. Supply chain management emphasizes the overall and long-term benefit of all parties on the chain through co-operation and information sharing. This signifies the importance of communication and the application of IT in SCM.

3.3. Benefit

- lower inventory carrying costs
- lower production costs
- lower transportation costs
- lower investment in plant and equipment
- reduced assembly-line down-times
- more efficient use of production capacity
- more efficient lot sizes and scheduling
- reduced errors due to poor coordination across the supply chain
- reduced number of stock-outs
- reduced fulfillment times
- allow greater product customization, and thereby better match the exact needs of the customer

Mastered e-supply management has reduced transaction costs by as much as 90 percent; the purchase costs of goods and services by up to 6 percent; and renegade spend by up to 40 percent. Companies are now focusing on the strategic planning with the objective of developing long term plans and changes to their organization and in turn to improve their competitiveness. Planning for strategies require top management involvement taking into account both external and internal factors to an organization. Strategic planning of IT should support the long-term objectives and goals of SCM both in terms of flexibility and responsiveness to changing market requirements.

4. value proposition

The basis of every business enterprise rests upon two pillars: it's core competencies and the capabilities of channel trading partner the sum total out put of a business core competencies can essentially be described as constituting it's value proposition .the function of enterprise is can be summarized as it's ability to design, assemble, Constitute its customer value proposition .the structure of enterprise (knowledge, capabilities…) has essential affect on value proposition.

5. Structuring a competitive supply chain business architecture

Business architecture is the design of its structure are integrated and directed to realizing the goals of its function. Structuring competitive supply chain business architecture require strategic planner to view the supply chain from several perspective .dynamic channel consist of three interdependent dimensions: supply chain structure, business competency chain, supply chain technology.

5.1.1. **Supply chain structure** is the dimension details the physical composition and interconnection link of supply chain system.

5.1.2. **Business competency chain**: this process begin with definition of core capabilities and understand what capabilities of each member in supply chain contribute to the firm‘s value proposition.

5.1.3. **Supply chain technology**: refer to the potential robustness of the connecting links integrating and synchronizing each node in supply chain galaxy.

6. **Developing an e-Supply Chain Strategy**.

The hard part is discovering and thinking through supply chain opportunities and then developing a strategy and plan for an e-Supply Chain that will improve your performance more than that of your competitors. But without an e-Supply Chain roadmap, the direction you take may not get you to the desired destination. The biggest loss from missing the target can never be regained - time. It is essential to do it right the first time. Certainly, before taking a big leap into the e-Supply Chain, companies need to know why they are taking the leap. First we must to answer:

1. What business opportunities are available for us to improve market presence, sales, cost of operation, service, communication, cycle time, supply-base management, etc.?

2. Do we know and understand our supply chain priorities?

3. How should we structure internet-enabled linkages with our customers and suppliers for preeminent supply chain performance?

4. What e-Supply Chain approaches can we appropriately invest in for near-and longer-term business performance gains?

5. Do we have an executive-level champion providing the necessary linkage to top management for effective implementation of e-Supply Chain Management?

6. Have we carefully defined an action plan for pre-implementation preparation activities?

7. What are the missing technical links in our current system or our software of choice?

8. What planning and implementation tasks will be accomplished and when?

Do we understand the real benefits of an e-Supply Chain versus the cost to develop?

10. What e-Supply Chain strategy will give us the leverage to transform ourselves into marketplace leaders?

7. Preliminary step in e –scm strategy development

Assembling e-scm value network is also about dramatic shift in there mindset of companies .The goal of first step is to focus the enterprise on the impact of what e-business will mean to every one .executive team need to every one in channel know that going toward e-scm transfer their role. Achieving this point involve of five –step approach.

7.1. Step 1:energize the organization

Preparing the organization for e-scm is absolutely critical before a comprehensive business strategy can be articulated. Preparing the organization need two major human resource initiative: getting top management on board to spearhead the effort and energizing and integrating the company people organization into e-scm technologies. The following step need to inform and active the top management team:

- scm and e – business education: executive need to understand what e-scm means and how it can be used to respond to today ‘s competitive environment
- act as sponsor: it is a bout commitment of manager
- Develop a scm strategy: it often means both redesign the supply chain and integration in e-business technology business vision, e-commerce, and supply chain all have to be aligned.
- develop the firm human resources: designing infrastructure around cross – functional collaboration is significant challenge for must companies
- invest in supply chain improvement: it require improvement in budget

The second initiative in preparing for e-scm strategy development is energizing the company‘s people organization. There are 6 trusts to integrated e-scm and people.

Thrust1: enhance the way in which people work

Thrust2: build powerful multi enterprise process with appropriate IT support

Thrust3: balance the role of people and technology

Thrust4: manage multi enterprise process flexibly and dynamically

Thrust5: manage knowledge strategically

Thrust6: enhance individual effectiveness

7.2. Step 2: **enterprise vision**: this step is about defining the nature of the competitive possessed within the current infrastructure and outside in the supply chain network. the essential factor is:

What process adds the most value to customer?

How have relationships with suppliers grown through time?

What is the nature of the internal organization? What is the strengths and weakness of business partner?

The goal of this process is to ensure deep degree of awareness, on the part of executive, what e-business means to the company, the step necessary to build an effective e-svm model and strategy, and how a new internet –driven value proposition would translate to specific value

7.3. Step3:supply chain value assessment

The decision to implement internet application must be driven by through understanding of critical business process should be moved to e-business. Only process are closer to vision or the process that deliver the most competitive advantage go to e- form. The best method to match internet initiative , business process, strategic visioning are SCVA supply chain value assessment).By scva we can prioritize which e-business initiatives should be undertaken that would provide the greatest enterprise and trading partner benefit. this method is collaborative with other partner in supply chain. the final goal is determining is it evolutionary or revolutionary.

- Evolutionary: focus on improving core business functions and sustaining the competitive advantage they drive.
- Revolutionary: create radically new supply chain network architectures that can actually transform internal core processes by trading partner.

7.4. Step 4:opportunity identification

The scva exercise should provide the collaborative e-business team with a map of possible choice s for the application of internet strategies. Perhaps the first activity in the step is to prioritize the possible e business alternatives as scva teams begin detailing and prioritizing possible e-business solution. Another critical dimension of prioritizing the results of the scva revolves around executives understanding the expanding degree of involvement required of supply chain partners as the e-business initiative from evolutionary to revolutionary. Finally scva team must be aware that , as the level of networking in the supply chain increase, the pressure on traditionally structured organization s will grow incrementally.

Step5: strategy decision

After completing opportunity map then we can begin the process of planning network initiative. in this stage we must consider on expected advantage.It is critical to understand that the technology accomplishes nothing ,and the real objective of e-scm initiative is to utilize the power of trading partner to amplify

existing marketplaces advantages or realize radically new way of providing value to the customer .At this point preliminary step for e-scm is completed.

preliminary step in e –scm strategy development

8. Developing the e-scm strategy

8.1. Constructing the business value proposition

It focus on selecting the internet technology solution at the very core of strategy selection is the business value proposition. Companies exist to satisfy a particular need or want of their customer. in defining an e-scm value proposition planner concerned with the performance of two major activities.

- In the first the customer segment to be served by an e-business initiative are identified, here the goal is to look for mismatch between the expected result of web technology to be implemented and to be implemented and the value of target marketing segment.
- Ensure that the technologies to be implemented will fulfill the service expected by the customer.

8.2. Definition the value portfolio:

To leverage the enabling power of the internet, companies need to closely align their e-scm strategy with operation capabilities to continuously provide the product/service wrap that satisfies the unique need of customer the following process development need to structure to effectively support the business value proposition.

8.2.1. Design: product and services impacted by continuously shirinking life cycles and accelerating new product/services introduction.

8.2.2. Cost: effective cost management requires companies not only to design product /services offering with an eye toward continuous process improvement and cost reduction ,but also be able to squeeze the time it takes from idea conception to sales.

8.2.3. Services: now (internet age)the product services is often more important than it self.

8.2.4. Quality: it is the capability of choosing between a multiplicity of product abnd services to today web driven requirement for product and services individualization.

8.3. Structuring the scope of collaboration: in determining the scope of Collaboration we need to pursue this step :

8.3.1. determine the collaboration dimension:
This collaboration have vertical and horizontal dimension.

- in vertical dimension partner that assist in sourcing a business input and delivering its output,
- horizontal channel partner that enhance or reinforce a fir's value portfolio and customer relationship

8.3.2. collaboration intensity: collaboration can pursue in many level

- Low level is focusing on making information available to partner without or little change in technology or in organization.
- High level of collaboration need to symbiosis of fundamental process and share goals are complex and expensive

Four level of collaboration:

- Arms length relationship
- Information sharing
- Sharing and creating knowledge
- Sharing and creating new insight

8.3.3. Technology level: information technology capability play important role. Here are four possible technical responses to meet connectivity needs to support collaboration strategies.

- Non internet technology: edi ,fax…
- visibility open system approach in which all information broadcast to the channel network .web based tools is useful in this stage
- server to server : in large scale transitions of data it is used
- process management: the goal is to configure web solution that provide for real time work flow sharing

8.3.4. out sourcing

it is critical part of the scope collaboration is the decision to outsource functions currently performed by firm. The advantage of out sourcing:

- return on assets
- personal productivity
- customer services
- Information technology (such as asp…)

8.4. ensure effective resource management:

the content of an enterprise's resource consist of its assets and core competencies .in general these resource can be divided into three major area the value that reside in human knowledge tha capital invested in physical assets the value to be found in physical assets and human knowledge of customer ,supplier & other partner.

8.5. Pursuing growth management

8.5.1. Focus on supply chain cost:

In some industry supply chain cost can equal to 50 % company revenues. many company have developed strategies that focus on cost reduction .cost centered supply chain strategies can be considered as anchored on three model

- Basic model: this model use in stable environment
- React supply chains: this model primarily act to fulfill demand by responding to and supporting trading market sales and market strategy
- Efficient reactive supply chain: this model moderate competitive positioning to trading partner. This system link company with its supplier.

8.5.2. Focus on supply chain value

Developing e-scm strategies that go beyond cost reduction and optimization and actually leverage the resource and competencies of trading partner to support the generation of value .Creating e-scm strategies that will leverage the supply chain network to generate value for the firm will require a dramatically higher level of commitment, collaboration, and integration .

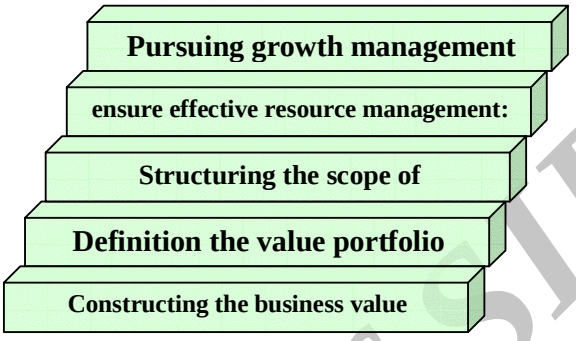
8.5.3. Focus on performance of supply chain

In this stage concerning on performance measurement to review the effectiveness of their chain. performance measurement is a effectiveness and efficiency in accomplishing a given task in relation to how well a goal is met In the context of SCM, performance measurement involves not only the internal processes, but also requires an understanding of the performance expectation of other member firms in the supply chain, backward from the suppliers and forward to the customers .

Among the extant SCP conceptualizations, the supply chain operations reference model(SCOR) developed by the Supply Chain Council (cf. Stewart, 1995) provides a useful framework, that considers the performance requirements of member firms in a supply chain. The SCOR model views activities in the supply chain as a series of interlocking inter organizational processes with each individual organization comprising four components: plan, source, make, and deliver.

8.5.4. Focus on Supply Chain Optimization

The optimization especially on supply chain can be, irrespective of incoming product or service, augment information flow, logistics, sales forecasting, inventory management and sourcing. By six-sigma enables cost reduction by harmonizing technology, people and processes. The cost reduction is possible by strengthening the operational execution through information architecture comprising of work flow, interfaces and hosting infrastructure.



Developing the e-scm strategy

9. essential keys to help unlock e-supply management

Few companies have reaped the result they had hoped for from their initial investment in e-procurement. There is more to achieving results through e-supply management than technology adoption; company need to install a new mindset throughout the organization five essential keys to help unlock e-supply management's full potential:

9.1. links technology strategy to the overall supply management strategy :

many company fail to achieve substantial result from e-supply management because they don't blend it with supply management organization .e-supply must be an integral part of overall procurement strategy .e- supply chain management encompasses six core component : E-design collaboration, E-sourcing, E- category , E- ordering , E-logistic , E- supply data management

- E-design collaboration: incorporate the idea of supplier to create new technology
- E-sourcing :such as online auction and e-rfx tools help take strategic sourcing to the next level by improving efficiency and effectiveness of traditional strategic sourcing effort
- E- category management :focus on transparency so they can develop better strategy and mitigate risk
- E- ordering
- E-logistic collaboration :cross functional collaboration with supplier

- E-Supply data management: extend clean, accurate, and timely expenditure data to the individual part or purchase service level.

Web tools make e-logistic possible by enabling customer and supplier to conduct joint demand and capacity planning and track order's and good's in transit.

9.2. Understand true sources of value

All company that has tried e-supply have discovered value it provides by automating activities. the most value is in sourcing and design. E-sourcing is delivering the most value of all e-supply management process it brings immediate cycle and resource reduction . GE, DELL have all made e-sourcing .technology as integral part of their strategic sourcing process .the greatest potential for e-supply management lies in the design stage through cross enterprise collaboration to be a powerful follow up; they can improve margins by identifying waste through supply chain .for example an automotive supplier archive 120 million in annualized cost reduction in its product lineup through collaborative product redesign and improve implementation process.

9.3. ensure effective integration

Integration of transactional and decision support is key to realizing the vision all value leakage points. Experience show that technology linkage are most crucial at two points throughout the order to cash transaction cycle and in data feed to support sourcing initiative. the company has good infrastructure has success factor but unfortunately it is reality that technology integration is difficult and time consuming .

9.4. consider three dimensions—technology, categories and organization—with a heavy focus on change management

to successfully implement e-supply chain management need to recognize that the effort is ultimately not about changing technology 'but about effecting change .change must be occur along three key dimensions : technology ,categories, supplier and organization and user. Change technology is simple .for category and associated supplier its less clear especially as supplier have become overwhelmed by multiple, conflicting, technology enablement requirement from customer. The biggest challenge in organizational change .it requires adoption and compliance across the entire organization and be scaleable and have broad adaption to achive acceptable ROI.

9.5. TRACK AND CAPTURE VALUE

Company must track the value generation way .initiative can be derailed when they hit hurdles or cost pressures, especially when their champion lack a credible means to convey the benefits already achieved or still to be tapped. Non price saving from e-supply chain can be more difficult to track.

9.6. Time to commit:

Increasingly becoming a source of competitive differentiation, e-supply management is a topic companies cannot afford to pursue half heartedly. leader are also achieving a higher level information access and transparency (e-supply data management and e-category management) that coupled with Good management capabilities help them make insightful and timely decision.

10. **conclusion:**

the rise of internet era prompted most corporation to reexamine their strategic logic and the role of information technology in their business strategy .by the application of internet has caused revolution in supply chain activity. Structuring effective supply chain business architecture require strategic planner to view from all aspect. Structuring effective e-scm require 2 step process. First preliminary activity to prepare enterprise to suffer e-scm this step includes some cultural ,educational, and treatment readiness in the organization and second structuring actual supply chain strategy . Then we analyze why most of enterprise failed in implementing e-scm and proose the way to reducing the failure risk.

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