

IT Enabled Supply Chain Management

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Definition of SCM

- SCM as the "design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally."
- (SCM) is the management of a network of interconnected **businesses** involved in the ultimate provision of **product** and **service** packages required by end customers (Harland, 1996).¹² Supply chain management spans all movement and storage of **raw materials**, work-in-process inventory, and finished goods from point of origin to point of consumption (**supply chain**).

Logistics - As a strategic tool

"The last great frontier for management to conquer is logistics & Supply Chain Management, it has become the sharpest strategic weapon in any company's armour to win commercial war in the new millennium." -- Peter Drucker

⊕ Shrinking business differentiators:

- Logistics holds the key.
- Paradigm shift from traditional business approach.

⊖ Wafer thin margins:

- Logistics can eat away 10-15% of a company's turnover.

Logistics - As a strategic tool

☒ The goal is to dramatically reduce Time to market, Increase cost savings and Replace inventory with information :

- Dramatically reduced TAT.
- Faster reach to market.
- Minimum operating costs.
- Speedy information to customers.

☒ Make PLCs (Product Life Cycles) as short as possible - Tremendous competitive advantages.

☒ Reach the End-customer - Cut down middleman.

☒ E-business - B2B & B2C.

WW SCM Strategies



- E-link - Link S.C Partners B2B & B2C
- Internet exchange
 - E-procurement portfolio
 - ✓ Hi-tech exchange of buyers & sellers / Internet trading hubs.
- Total Buy Aggregation
- Synchronization tools
 - Synchronize 'End to End Supply Chain' through replacing our 'Sequential Supply Chain' information flow with parallel internet connectivity.

Base Model v/s Strategic Model

☒ Economies of conjunction - Integrated supply chain.

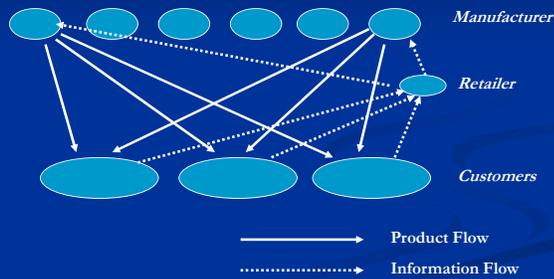
BASE MODEL



STRATEGIC MODEL

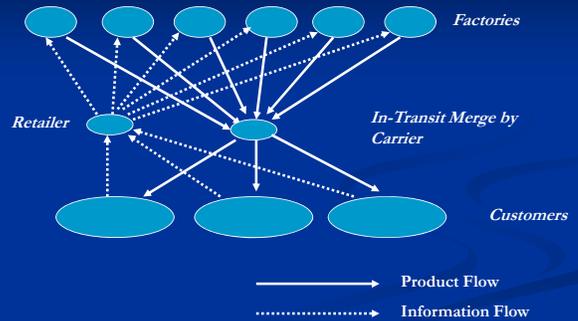


Manufacturer Storage with Direct Shipping



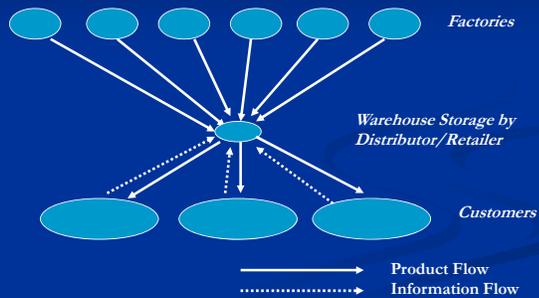
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In-Transit Merge Network



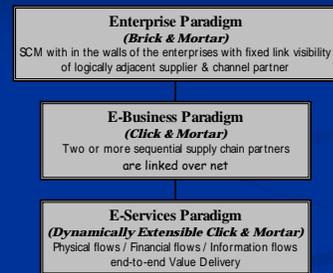
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Distributor Storage with Carrier Delivery



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Supply Chain Paradigm Shift



Key Success Factor in SCM

- Effective Communication (Phone calls, emails etc.)
- Order Management : Order Acceptance, Material Planning & Availability, delivery planning (Cost, TAT, & documentation)
- Execution of delivery with in TAT: Route Plan, Shipment tracking, Pre Alerts.
- Intact Delivery : Damages during loading/unloading & during transportations.
- Closure of Short /Damage shipments
- Acknowledgment of POD by Customer.
- Account Receivables (AR) management

IT Enabled SCM

- EDI
- ERP
- E-Commerce
- Bar Coding & RFID Scanners
- GPS - Shipment Tracking
- Information & Communication Technology

Electronic Data Interchange (EDI)

- Electronic Data Interchange (EDI) is the inter-organizational exchange of business documentation in a structured form. It consists of standardized electronic message formats for common business documents such as request for quotations, purchase orders, invoices and other standard business correspondence documents.
- Electronic transactions sets enable the computer in one company to communicate with the computer in another organization without actually producing paper documents. All human efforts required to sort and transport the document are eliminated.
- The key benefits of EDI are :
 - * Accuracy of information as there is no repetition of data entry is involved.
 - * It reduces inventory and its associated costs like storage & administrative cost
 - * Critical information flow is instantly – speed of information
 - * EDI makes business processes customer friendly.

Enterprise Resource Planning (ERP)

- ERP is a comprehensive planning and control framework that has evolved over a thirty year time. It finds its genesis in materials requirement planning (MRP), manufacturing requirement planning (MRP II), relational Database management systems (RDBMS) and 4th generation computer languages (4GL). It also is influenced by just in time (JIT) and computer integrated manufacturing (CIM) and takes advantage of latest IT developments such as client-server computing and Internet.
- The key benefits of ERP are :
 - * ERP links all the activities in the organization with customer orders.
 - * An ERP system regulates the flow of goods from a number of manufacturing sites to the stocking points. It captures and consolidates related data from the retailer that can be used to change the production schedule quickly.
 - * ERP as a tool can enhance overall performance by reduction of costs, increased productivity and improved quality of goods and services with more predictability.

Internet or e-commerce

- Internet is transforming the entire nature of supply chains :
- By eliminating middlemen,
- By changing the manner in which the entire supply chain is managed today.
- By reducing entry barriers for the new entrants
- By reducing the costs of operations.
- By offering the customers a wider choice for selection.

Bar Coding & RFID Scanners

- In the supply chain, the accurate, rapid identification of products and use of this information in controlling the entire process have been key factors.
- Each product is identified by Bar Code labels.
- A bar code is a grouping of parallel bars (usually blocks) of varying widths separated by light spaces (usually white) of varying width.
- RFID Scanner is used to read the bars and spaces and it uses software to interpret their meaning.
- The following are the benefits of bar code technology in supply chain:-
 - * Speed data entry
 - * Enhances data accuracy
 - * Reduces materials handling labour
 - * Verifies orders at receiving and shipping
 - * Improves customer service

GPS – Global Positioning System

The **Global Positioning System (GPS)** is a space-based [satellite navigation](#) system that provides [location](#) and time information in all weather, anywhere on the Earth, where there is an unobstructed line of sight.

Shipment Tracking in Transit : It is being done by putting RFID (Radio Frequency Identification) Tagged boxes on RFID tagged pallets & transported in GPS enabled Trucks.

Advantage of GPS :

- Exact location of an item in Transit
- Monitoring of estimated Travel time of a shipment.
- Any Diversion or break down of Truck gets reported automatically as soon as movement is stopped.
- Sends alters to origin for any untoward incidents in Transit.

Information & Communication Technology

- Information and Communication Technology (ICT) plays significant role in enhancement of the supply chain performance through faster and widespread communication.
- Applications of radio frequency, satellite communications and image processing technologies have overcome the problems caused by product movement and geographic decentralization.
- Improved customer service is provided in the form of more timely definition of tasks, quicker transport tracing, and faster transfer of sales and inventory information.
- The availability of shared information has led to increase efficiency and effectiveness across the supply chain.

CONCLUSION

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In today's competitive global environment, the onus is now on supply chain management. Companies whose SCM is competitive would be able to survive in the long run.

IT enabled SCM makes significant improvements in productivity and competitiveness by providing the real time information flow through networking and electronic data transfer, faster response time.

Hence improved decision making is possible through timely availability of relevant information.

Thank You

