

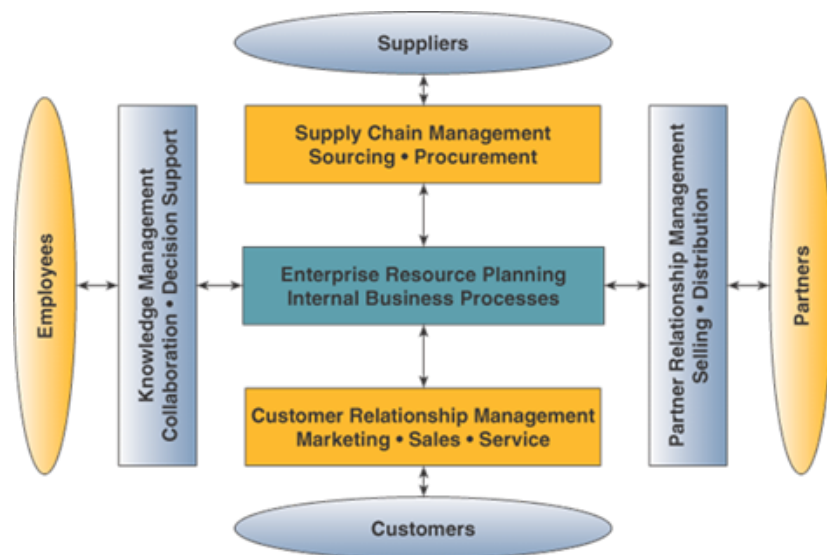
3.1 Enterprise Management System (EMS)

- EMS is concerned with control, monitoring and the management of IT infrastructure and applications in order to optimize IT service delivery in Company. EMS is wide information system designed to coordinate all the resources, information and activities needed to complete business processes.
- Enterprise – an entire company, everything, all-inclusive
- Management – The monitoring and controlling of entities
- Systems – Information Technology Infrastructure, hardware and software, data, information, and processes
- EMS are Large scale Application Software Packages that Support Business Processes, Information Flows, Reporting, and Data Analytics in Complex Organizations.

3.2 Enterprise Software: ERP/SCM/CRM

- Enterprise software is any software used in large organizations (whether business or government). It is considered to be an essential part of a computer-based information system, and it provides business-oriented tools such as online payment processing and automated billing systems. Enterprise software is also referred to as enterprise application software.

Enterprise Software Architecture



ERP (Enterprise Resource Planning)

- ERP is business process management software that allows an organization to use a system of integrated applications to manage the business and automate back office functions.
- ERP software integrates all facets of an operation, including product planning, development, manufacturing processes, sales and marketing.

Some of ERP's functions include:

- Book keeping & Accounting
- Human Resource Management
- Planning Production
- Supply Chain management



- It helps an organization to integrate information flows, operations and processes all resources accessible, for example, materials, work force, machine and money.
- The focus of ERP is on resource management within constraints to maximize the return on investment. These data are then stored in a unified database, which are the key for the success of this software solution.
- The ERP package design is built on the principle of Best Practices. ERP Software: SAP, Supply Chain Management, CRM
- The most demanding and successful solution for the modern business organization is an Enterprise Resource Planning software.

- Business Value of ERP



Benefits of ERP

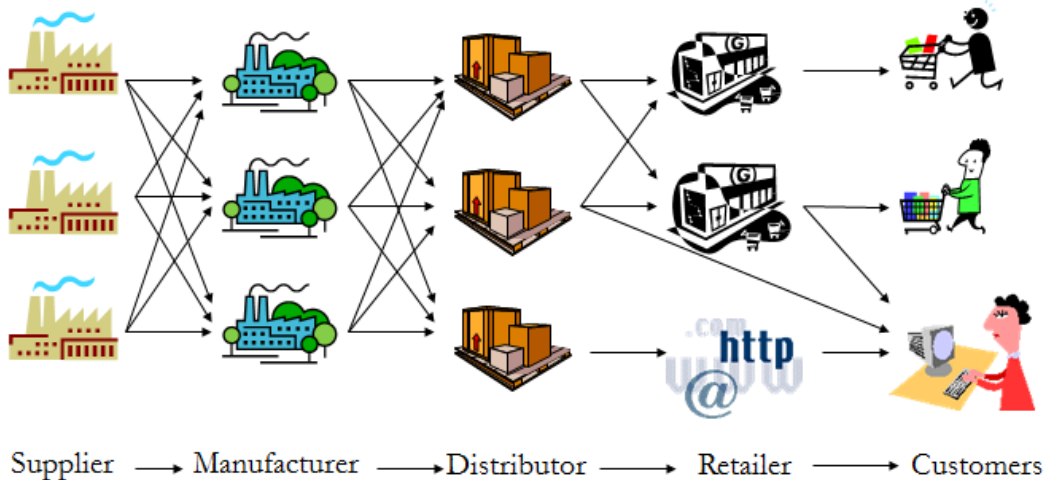
- Quality and Efficiency
- Decreased Costs
- Decision Support
- Enterprise Agility (power to move freely)

Causes of ERP Failures

- Underestimating the complexity of planning, development, and Training needed .
- Failure to involve affected employees
- Trying to do too much too fast
- Over Reliance by company on claims of software companies

Supply Chain Management (SCM)

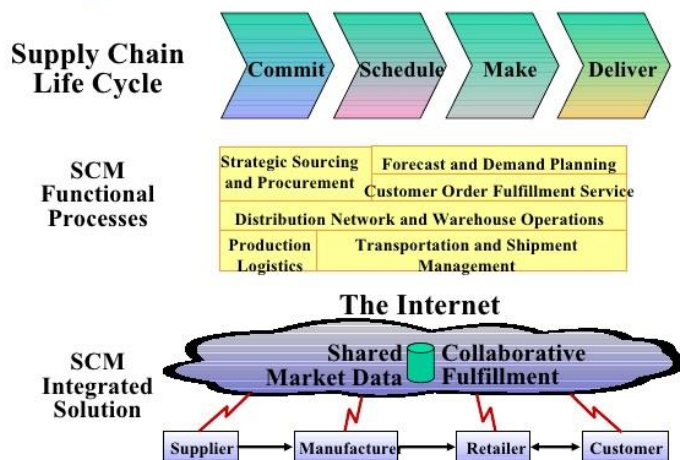
- A supply chain is the system of organizations, people, activities, information and resources involved in moving a product or service from supplier to customer.
- Supply chain activities transform raw materials and components into a finished product that is delivered to the end customer.



Supply Chain Management is the design and management of processes across organizational boundaries with the goal of matching supply and demand in the most cost effective way.

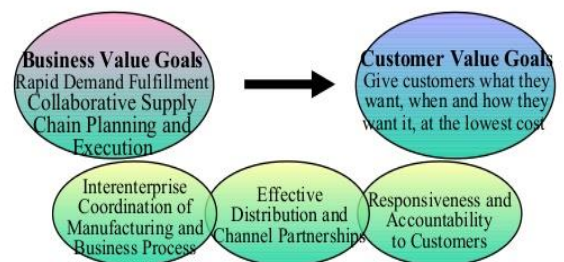
SCM: The Business Network

SCM Software Helps Firms Reengineer and Integrate The Functional SCM Processes



SCM: The Business Network

Objectives of Supply Chain Management



Supply Chain Management: A Top Strategic objective for many firms

- The right products
- The right place
- The right time
- In the proper quantity
- At an acceptable cost

Objectives of SCM Efficiently manage this process by:

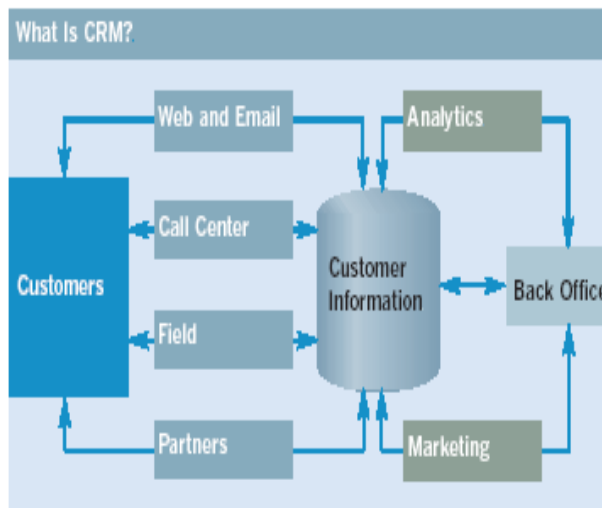
- Forecasting Demand
- Controlling Inventory
- Enhancing Business Relationship
- Receiving Feedback and status of every link of the chain

Benefits and challenges of SCM

- Lack of proper planning knowledge, Tools and Guidelines
- Inaccurate Demand Forecasts
- Lack of Adequate Collaboration
- Software Itself Immature

Customer Relationship Management (CRM)

- Customer Relationship Management is a strategy for managing all your company's interactions with current and prospective customers. CRM formation of bonds between a company and its customers.
- CRM enables your company to increase productivity, close more business, and improve customer satisfaction and retention.

Model of Customer Relationship Management**CRM Strategies**

Customer Retention Marketing Techniques

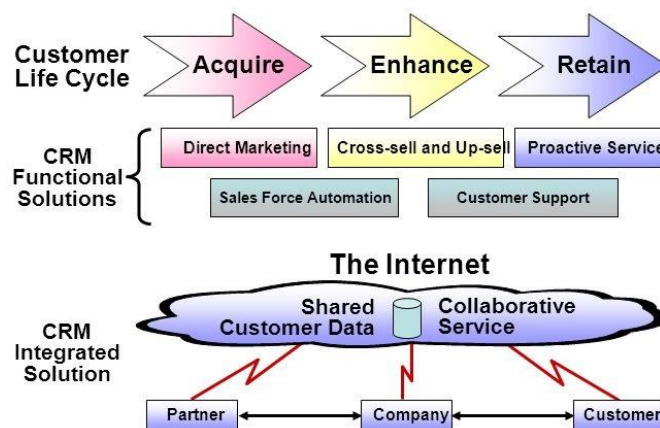
- Customization: Changing the product (not just the marketing message) according to user preferences
- Customer co-production: Allows the customer to interactively create the product
- Customer service tools include:
 - Frequently asked questions
 - Real-time customer service chat systems
 - Automated response systems

Benefits of using CRM

- Centralized customer interaction
- Improved customer support and satisfaction
- High rate of customer retention
- Increase revenue and referrals from existing customers
- Improve your products/services
- Measure and optimize your performance
- Boost new business

CRM: The Business Focus

Customer Relationship Management supports integrated and collaborative relationship between a business and its customers.



Benefits and Challenges of CRM

- Identify and target the best customers
- Customization and Personalization of Products and services
- Track Customers Contacts

CRM Failures

- 50 % of Applications Fail to meet Expectations
- 20% of the Time CRM Damaged Customer Relationships
- Lack of understanding and preparation is blamed.

CRM: The Business Focus
CRM Uses IT to Create a Cross-Functional Enterprise System

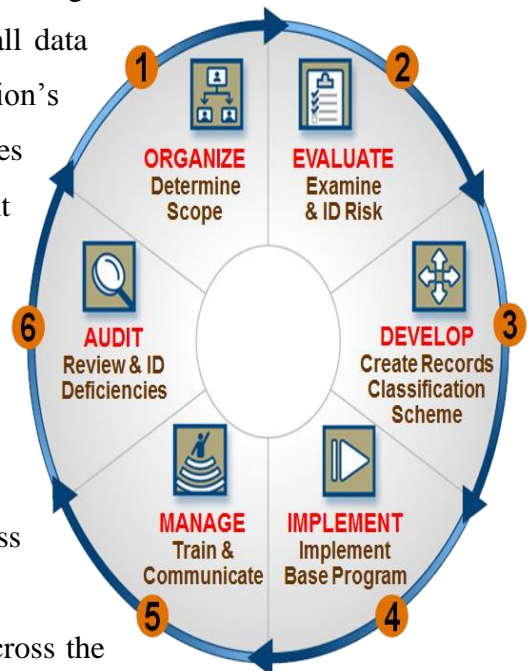
**3.3 Information Management and Technology of Enterprise Software**

- Enterprise information management (EIM) is a set of business processes, disciplines and practices used to manage the information created from an organization's data. EIM initiatives seek to build efficient and agile data management operations with capabilities for information creation, capture, distribution and consumption.
- The goal is to provide and preserve information as a business asset that remains secure, easily accessible, meaningful, accurate and timely.

- **EITM** is a strategy conceived and developed by Computer Associates International which details how organizations can transform the management of IT in order to maximize business value.
- Strategy for increasing the business relevance of the IT function, EITM considers the need for IT organizations to start operating as a service-based business.
- Ensuring investments are prioritized according to business strategy and that operational efficiencies can be more quickly realized and costs reduced when IT processes are integrated and automated.

Enterprise Information Management

- Enterprise Information Management (EIM) is a particular field of interest within information technology area that specializes in finding solutions for optimal use of information within organizations, for instance, supporting the decision-making processes for day-to-day operations that require the availability of knowledge and delivering the right information to the right person, in right format and right time.
- EIM is the effort and practice of reaching across all data and application storages embedded in the organization's operating infrastructure and binding those repositories together into one effective information management environment.
- EIM combines Business Intelligence (BI) and Enterprise Content Management (ECM) to overcome traditional IT-related barriers to manage information on an enterprise level.
- First and foremost, EIM exists to support business objectives.
- EIM is solely about managing information assets across the *entire* enterprise.
- EIM involves fostering, creating, and maintaining practices that allow the business to optimize data access and usage regardless of where the data resides and what functional



entity needs it. Agility, accuracy, and completeness of data delivery are the three primary objectives. EIM spans the entire corporation, regardless of size, from a small, 30-person garment maker to a 50,000-person, multi-national manufacturer.

1. Organize

- Establish Ownership
 - a. Executive sponsor
 - b. Steering committee
- Roles & responsibilities
 - ✓ Governance level
 - ✓ Implementation level
 - ✓ Administration level
- Determine program scope

2. Evaluate

- ✓ Conduct a thorough records inventory.
- ✓ Evaluate your existing program; its strengths, limitations and capabilities
- ✓ Determine the potential areas of risk and/or exposure to compliance regulations.
- ✓ Analyze your legal retention and access requirements.
- ✓ Build an overall master plan based on your assessments and all applicable compliance regulations

3. Develop

- ✓ Legally credible enterprise wide retention schedule.
- ✓ Standardized enterprise policies (like vital records, legal hold, privacy, etc.)

4. Implement

- ✓ Deploy I.T. systems.
- ✓ Apply the retention schedule.
- ✓ Assign standardized classification codes keyed to retention periods.
- ✓ Routinely move records to secure offsite records storage.
- ✓ Regularly review records to be destroyed. Destroy records whose retention period has expired.

- ✓ Mark records related to pending or current legal matters as “held” to prevent destruction.

5. Manage

- ✓ Manage the security, access and integrity of the data within the program.
- ✓ Training is an event – education a process.
- ✓ Enforce proper classification and disposal via reports, scheduled reviews, and other safeguards.
- ✓ Maintain training and communication programs.
- ✓ Ensure appropriate business unit oversight.

6. Audit

- ✓ Formal review program frequently and identify deficiencies
- ✓ Ensure that all records are being properly indexed and managed.
- ✓ Pay special attention to disposal practices
- ✓ Confirm that records whose retention period have expired and are not on “hold” are routinely destroyed.

Benefits of Implementing EIM in an organization:

- Business Insight Manages growing volumes of information across all formats and channels for optimized strategic analysis and decision making
- Process Velocity Integrate existing information ,processes and applications for increased process velocity, efficiency and agility
- Business Impact globalization, social decision making and the “ consumerization ” on IT- to create ,users and partners
- Information Governance Enforce information governance policies and ensure compliance
- Information Security Protect valuable enterprise information from outside intruders and inside leaks

3.4 Role of IS and IT in Enterprise Management

- Enterprise IT Management was developed in response to a growing need by IT organizations to gain more value from investments made in IT capabilities, infrastructure

and resources. EITM proposes a set of capabilities that enable IT to better govern, manage and secure the IT services delivered to the business. IT/IS as asset, “strategic weapon”, “nervous system” (strategic level) vs. tool, commodity (operational level)

1) Automation of Manual Tasks

- Resulting in saving time, money and resources
- Enhances organizational workflow
- Various Types of IS ranging from Robotics IS to Logistic IS Automates manual tasks

2) Hardware and Software Integration

- Merge Hardware and software systems as a scalable platform. An open Architecture IS allows for integration at all the levels throughout an organization. E.g.: Local Area Network (LAN) can integrate into a mainframe system that processes accounting information through a concept called a “gateway”

3) Support a Multi-Processing Environment

- Support a real-time multi-processing environment through the concept of time sharing application. Access to various departments, divisions or branches of the system at the same time intervals.

4) Provides Data for System Support

- Compilation of Data into Information for analysis of several areas and create scenarios through the information system for a desired result.
- Results in improving productivity

Communication

- Allows staff to communicate using emails (previous used), live chat systems, online meeting tools and video-conferencing systems.
- Voice over internet protocol (VOIP) telephones and smart-phones offer even more high-tech ways for employees to communicate

Inventory Management

- Tracks the quantity of each item a company maintains ,triggering an order of additional stock when the quantities fall below a pre-determined

Data Management

- Storage and maintenance a tremendous amount of historical data economically, and employees benefits from immediate access to the documents they need.

Management Information Systems

- Enables companies to track sales data, expenses and productivity levels
- Can be used to track profitability over time, maximize return on investment and identify area of improvement

Customer Relationship Management

Captures every interaction a company has with a customer, so that a more enriching experience is possible. Analysis resulting better productivity.

3.5 Enterprise Engineering

- **Enterprise Engineering** is defined as the body of knowledge, principles, and practices to design all or part of an enterprise.
- An enterprise is a complex, socio-technical system that comprises interdependent resources of people, information, and technology that must interact with each other and their environment in support of a common mission.
- According to Kosanke, Vernadat and Zelm, enterprise engineering is an enterprise life-cycle oriented discipline for the identification, design, and implementation of enterprises and their continuous evolution, supported by enterprise modeling. Enterprise engineering is a sub discipline of industrial engineering / systems engineering. The discipline examines each aspect of the enterprise, including business processes, information flows, material flows, and organizational structure. Enterprise engineering may focus on the design of the enterprise as a whole, or on the design and integration of certain business components.

Goal of Enterprise Engineer

- Identify and integrate the most valuable and successful ways to change an enterprise, and to take them into a professional discipline with a teachable methodology and measures of effectiveness.

Seven Components of Enterprise Engineering

- Procedure Redesign
- Value Stream Reinvention
- Enterprise Redesign
- Strategic Visioning
- Human and Culture Development
- Information Technology Development

TQM, KAIZEN

- Continuous change applied across an enterprise.
- Kaizen-Japanese term for continuous improvement.

PROCEDURE REDESIGN

- Discontinuous reinvention of existing processes

VALUE STREAM REINVENTION

- Discontinuous reinvention of “end to end” streams
- Breakthrough improvement for the CUSTOMER.

ENTERPRISE REDESIGN

- Discontinuous redesign
- Holistic change to a new world architecture, sometimes accomplished by building new business units of subsidiaries

STRATEGIC VISIONING

- Process ,People and Technology

Electronic Organism

- As systems become more complex, the design of these systems must be automated. Electronic organisms, in fact all organism, have to be complex, because they have to contain all the creative infrastructure necessary for their creation ,reproduction, maintenance and action
- But they can easily afford to be complex, because there is no need for detailed communication with a programmer.
- Electronic organisms have the ability to react immediately to unforeseen challenges without the need for a programmer to recognize the situation and deal with it by modifying a program
- Electronic Organisms do so by recurrence to fundamental goals and organizing principles, just as programmer do so now
- Electronic Organisms will live, grow and evolve in the rapidly growing world of installed computers and networks, just as microbes, plants and animals live in natural ecosystems.
- Strong forces are pushing technology towards electronic organisms.

Loose Integration vs. Full Integration

- **Loose**
 - ✓ Simple exchange of information
 - ✓ No guarantee of same interpretation
 - ✓ Dedicated interface
- **Full**
 - ✓ Specificities are known only the one system
 - ✓ Two systems contribute to a common task
 - ✓ Two Systems share the definition of items exchanged

Loose Integration - If two systems can merely exchange information with one another with no guarantee that they will interpret this information the same way

Full integration - Two systems are fully integrated if and only if

- ✓ the specificities of any one of these systems are only known to the system itself and not by the other one,
- ✓ the two systems both contribute to a common task, and
- ✓ the two systems share the same definition of each concept they exchange

Process Alignment

- Process alignment can be defined as the synchronization of business process objectives and performance measures with organizational objectives and strategies, with a view to avoiding conflicting, uncoordinated. “Business and IT working together to reach a common goal”
 -”the linkage between the goals of the business and the goals of IT”
 - NO IT Strategy formulation required
 - Goals focus on the whys and the hows
 - Integration of business and IT
 - Business strategy and IT strategy
 - Fit between business needs and IT priorities
 - Long time commitment and planning with impact on IT planning
 - Focused use of IT: improved performance
- “Communication of strategy is linked to successful implementation”

Framework to Manage Integrated Change

- Leadership and vision
- Communication and stakeholder Management
- Training and Development
- Organizational Structure
- Culture
- Performance Management and measures
- Change plan

**Future Trends**

Trends 1: Cloud deployment models that change application economics

Trends 2: Mobile technology accelerated business processes

Trends 3: Business process flexibility evolution via embedded modelling tools

Trends 4: Application user experiences advancement

Trends 5: Extensibility improvement via platform-as-a-service

Trends 6: Elastic computing platforms scaled transactions and analytics

Trends 7: Collaboration comes to applications in context via social tools

