CHAPTER 3
ENTERPRISE MANAGEMENT SYSTEM

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TOPICS TO COVER

Enterprise Management Systems (4 hours)

- Enterprise management Systems (EMS)
- Enterprise Software: ERP/SCM/CRM
- Information Management and Technology of Enterprise Software
- Role of IS and IT in Enterprise Management
- Enterprise engineering, Electronic organism, Loose integration vs full integration, Process alignment, Frame work to manage integrated change, future trends

Enterprise management Systems (EMS)

Enterprise – an entire company

Management – The monitoring and controlling of entities

Systems – Information Technology Infrastructure, hardware and software, data, information, and processes

EMS

- is an information system designed to coordinate all the **resources, information and activities** needed to complete business processes.
- are designed primarily for large organizations, as the name suggests
- are usually **not suitable for small or medium organizations** due to implementation costs and the less complex IT infrastructure often found in smaller businesses.

EMS FUNCTIONS

- Financial processing,
- HR management,
- Customer Relationship Management (CRM)
- Supply chain management

Enterprise Software

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

Common uses of enterprise software:

- Order processing
- Procurement
- Scheduling
- Customer information management
- Resource management
- Accounting

Enterprise Software Tools

- CRM (customer relationship management)
- Project Management Tool
- BI (business intelligence)
- ERP (Enterprise Resource Planning)
- Marketing Automation

Let's read some interesting papers (BUSINESS INTELLIGENCE)

- https://www.klipfolio.com/resources/articles/what-is-business-intelligence
- https://technologyadvice.com/business-intelligence/
- https://www.tableau.com/learn/articles/business-intelligence
- https://www.cio.com/article/2439504/business-intelligence-definition-and-solutions.html
- https://www.ccstechnologygroup.com/real-world-examples-of-business-intelligence/#:~:text=Amazon%20and%20business%20intelligence%20go%20hand%2Din%2Dhand&text=Much%20like%20Starbucks%2C%20Amazon%20uses,tools%20for%20logistical%20business%20decisions.
- https://mopinion.com/business-intelligence-bi-tools-overview/

Business Intelligence

- "Business intelligence (BI) is a set of theories, methodologies, processes, architectures, and technologies that **transform raw data into meaningful and useful information** for business purposes.
- BI can handle large amounts of information to help identify and develop new opportunities.
- Making use of new opportunities and implementing an effective strategy can provide a competitive market advantage and long-term stability."
-


Projected sales of main products in 2013
N FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Distribution of market share among the major industry players
26% BN&T
74% IT&C
Distribution of market share among the major industry players: IT & C and BN & T was 74% and 26% percent respectively. A further change in the economic situation in the market will be characterized by a more equal distribution of market share major players
Share of market activity
Changes in the activity of the active and passive market is uncertain. Established positive trends in various market segments.
25%
75%
Passive market share
Projected sales of main products in 2013
350
300
250
200
150
100
50
0
300
250
200
150
100
50
0
45 26 78 151 30 220 257

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**
- ERP software integrates all faces of an operation including:

  product planning,

  development,

  manufacturing processes,

  sales and marketing.

Some of ERP's functions include

- Bookkeeping & Accounting
- Human Resource Management
- Planning Production
- Supply Chain management

ERP COMPONENTS

ENTERPRISE RESOURCE PLANNING SOFTWARE

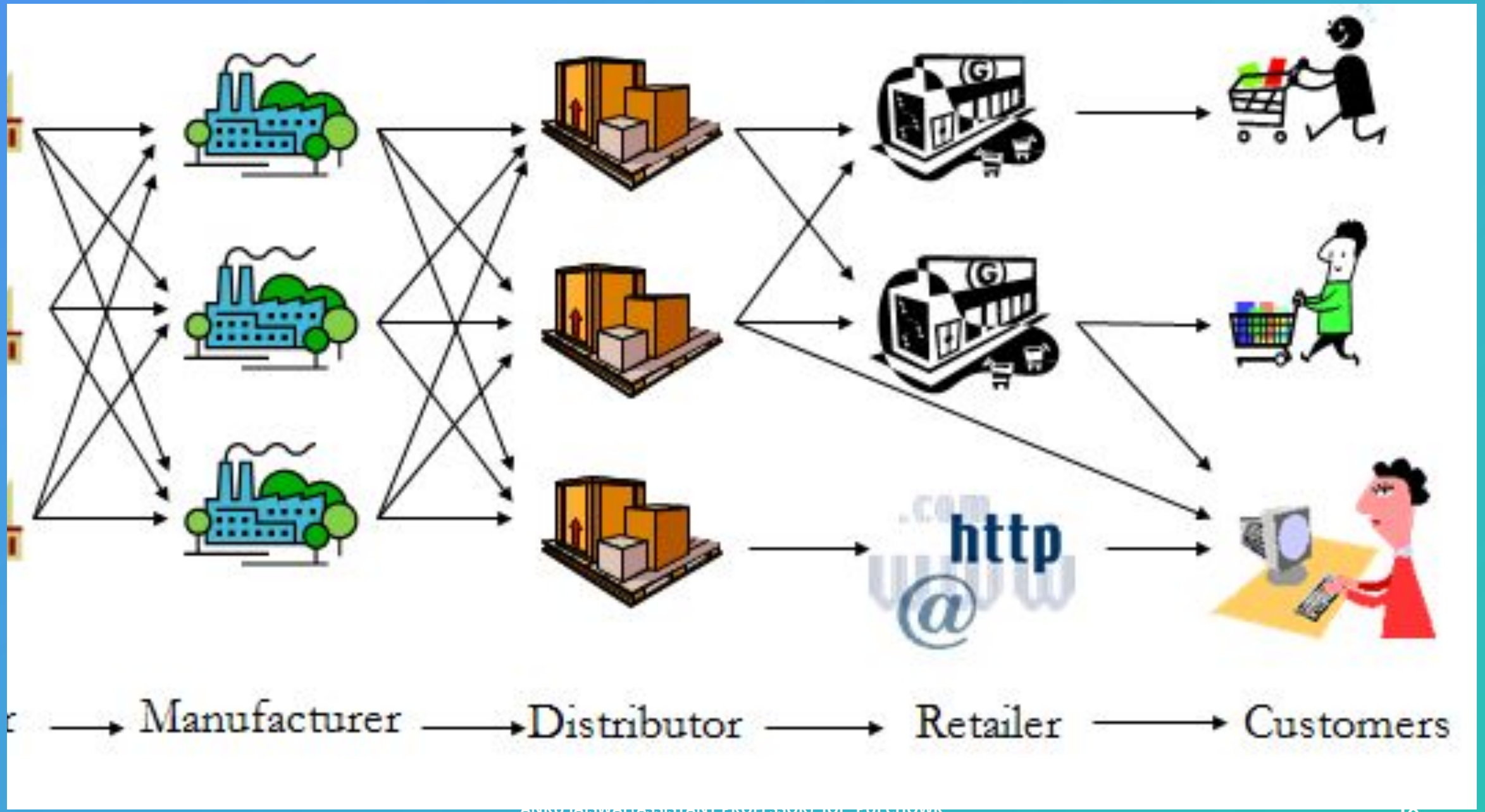
- is a **combination of applications** that manages core business processes, such as sales, purchasing, accounting, human resource, customer support, CRM .
- It helps an organization to integrate information flows, operations and processes all resources accessible, for example:

  Materials
  work force
  machine and
  money.

- The focus of ERP is on **resource management** within constraints to **maximize the return on investment**.
- ERP Software: Supply Chain Management, CRM

Supply Chain

- 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.


http
Manufacturer
Distributor
Retailer
Customers

Supply Chain Management

- Supply chain management is the management of the flow of goods and services and includes all processes that transform raw materials into final products

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Benefits of using SCM

Higher Efficiency Rate

·Reduce Cost Effects

·Raise Output

·Raised Your Business Profit Level

·Lowers Delay in Processes

·Enhanced Supply Chain Network


Supply Chain Management
MATERIAL PLANNING
PROCUREMENT & INTEGRATION
WAREHOUSE & FULFILLMENT
DISTRIBUTION
REPAIRS & RETURNS

SUPPLY CHAIN TOOL

Customer Relationship Management (CRM)

- Customer Relationship Management is a strategy for managing all your company's interactions with current and prospective customers.
- CRM form a bond between a company and its customers.
- CRM enables your company to increase productivity and improve customer satisfaction and retention.


CUSTOMER CARE
ANALYSIS
DOCUMENTATION
ACQUISITION
PR
CRM
CUSTOMER RELATIONSHIP MANAGEMENT
COMMUNICATION
DATABASE
CUSTOMER LOYALTY

CRM STRATEGIES

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Let's Discuss

- Suppose you are a customer... What do you expect from a business owner or what will make you to continue with that particular shop ?

Let's Discuss

- Suppose you are a business owner... What do you expect from your customer or what message you want to convey as a business owner ?

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

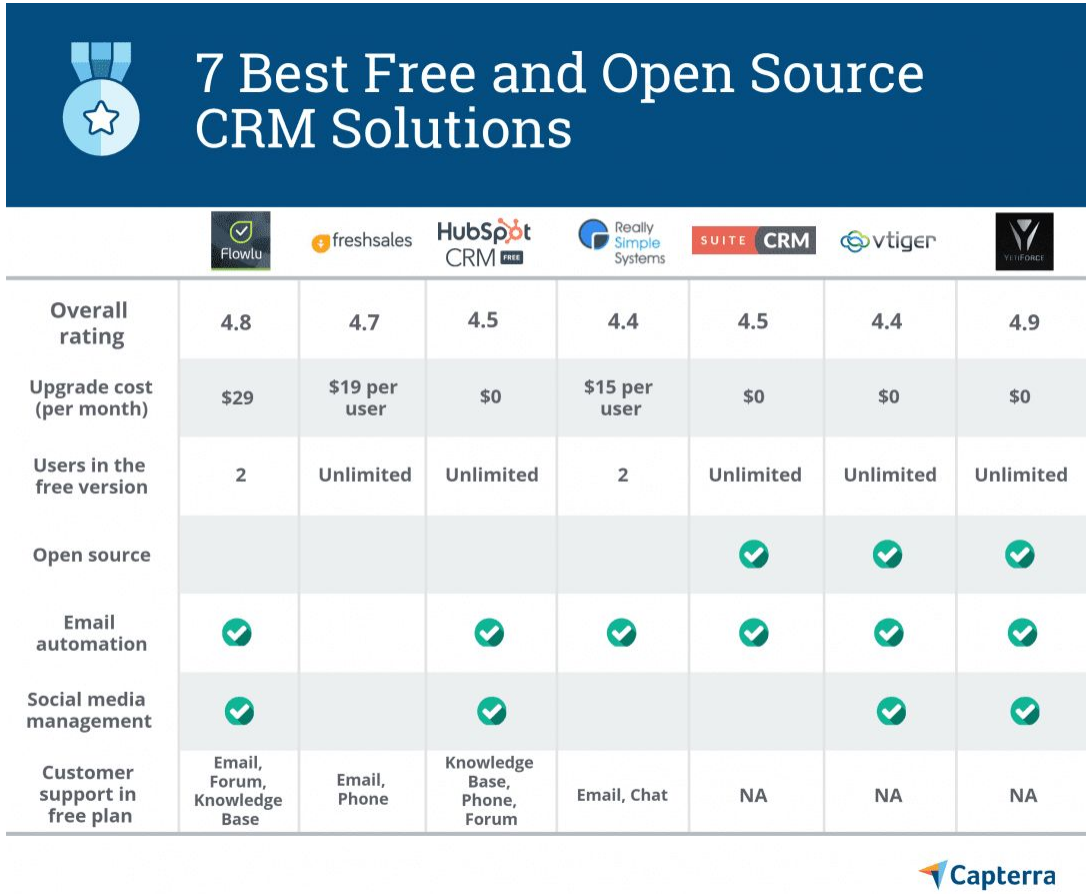
Goals of CRM

- **Consolidate customer information**: consolidate customer information and documents into a single database
- **Obtain better lead management**: more effective management of this data.
- **Automate tasks**: automating tasks associated with marketing, sales and call centers
- **Manage your workforce**: better manage and optimize the efforts of your sales and marketing teams.

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 TOOL



7 Best Free and Open Source CRM Solutions

	Flowlu	freshsales	HubSpot CRM	Really Simple Systems	SUITE CRM	vtiger	YetiForce
Overall rating	4.8	4.7	4.5	4.4	4.5	4.4	4.9
Upgrade cost (per month)	$29	$19 per user	$0	$15 per user	$0	$0	$0
Users in the free version	2	Unlimited	Unlimited	2	Unlimited	Unlimited	Unlimited
Open source					✓	✓	✓
Email automation	✓		✓	✓	✓	✓	✓
Social media management	✓		✓			✓	✓
Customer support in free plan	Email, Forum, Knowledge Base	Email, Phone	Knowledge Base, Phone, Forum	Email, Chat	NA	NA	NA

Capterra

Enterprise Information Management (EIM)

- **set of business processes**, disciplines and practices
- used to **manage the information** created from an organization's data.

Key Component of EIM framework

Enterprise Information Management (EIM), encompasses four key components:

- **Data management**
- **Information service(system)**
- **Information Technology**
- **Business processes:** A business process is a series of tasks or a set of activities performed by a group of stakeholders to achieve an organizational goal.

Benefits of implementing EIM in an Organization:

- **Business Insight:** optimized strategic analysis and decision-making
- **Information Governance:** Enforce information governance policies
- **Information Security:** Protect valuable enterprise information from outside intruders and inside leaks
- **Business Impact:** globalization, social decision making, and the "consumerization" of IT to create exceptional experiences for customers, users, and partners

Challenges of EIM

- Accurate
- Complete
- Relevant
- Timely

Enterprise IT Management (EITM)

- EITM is a strategy conceived and developed by Computer Associates International(CAI)
- which details how organizations can transform the management of IT in order to maximize business value.

Role IS in Enterprise Management

Automation of Manual Tasks

- Resulting in Saving time, money and resources.
- Enhances organizational workflow.
- Various Types of IS ranging from Robotic IS to Logistic IS automates manual tasks.

Hardware and Software Integration

- Merge Hardware and software systems as a scalable platform.

LOGISTIC IS: It interfaces with marketing, financial, and manufacturing information systems and provides information to top management to help formulate strategic decisions for the whole firm.

Support of a Multi-Processing Environment

- Access to various departments, divisions or branches of the system at the same time intervals.
- Results in improving productivity.

Role of IT in Enterprise Management

Communication

• Allows staff to communicate using emails(previously 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

Data Management

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

Management Information Systems

• Enables companies to track sales data, expenses and productivity levels.

Customer Relationship Management

• Captures every interaction a company has with a customer, so that a more enriching experience is possible.

• Analysis Resulting Better Productivity.

EIS (Enterprise Information System)

An Enterprise Information System (EIS) is a type of information system that by integration improves the functions of an enterprise’s business processes.

This means typically offering higher service quality, dealing with voluminous data, and is capable of supporting some large and complex organizations/enterprises.

Characteristics of EIS

Integrated- EIS combines vital elements of enterprise and information.

- Flexible- EIS can provide results according to the user queries.

Effective- EIS enables an organization to make effective assessments and decisions to fulfill the short-term and long-term goals of the organization.

- Accurate- EIS provides the latest and most accurate information based on truthful data.

- Complete- EIS can provide absolute and relevant information in a summarized form.

- Predictor- EIS makes available the summarized reports on the organization’s present performance. Decision makers use these reports to observe and direct the business activities and predict future performance and opportunities.

Functions of EIS

Accounting and Finance:

Customer Relationship Management (CRM):

Supply Chain:

Inventory Management:

Manufacturing:

Human Resources:

Business Intelligence:

ENTERPRISE INTEGRATION

- **Enterprise integration** encompasses the technologies, processes, and team structures that connect data, applications, and devices from everywhere in your IT organization in order to better realize the business mission.
- Integration of markets
- Integration between several development and manufacturing sites
- Integration between suppliers and manufacturers
- Integration of hardware and software components

Types of Integration

- Loose Integration versus Full Integration
- Horizontal Integration versus Vertical Integration
- Intra-Enterprise Integration versus Inter-enterprise Integration

Loose Integration versus Full Integration

- Loose Integration - If two enterprise can merely exchange information with one another **with no guarantee that they will interpret this information the same way**
- Full integration - Two enterprise are fully integrated if and only if
  - both contribute to a common task, and
  - both share the same definition of each concept they exchange

Horizontal Integration versus Vertical Integration

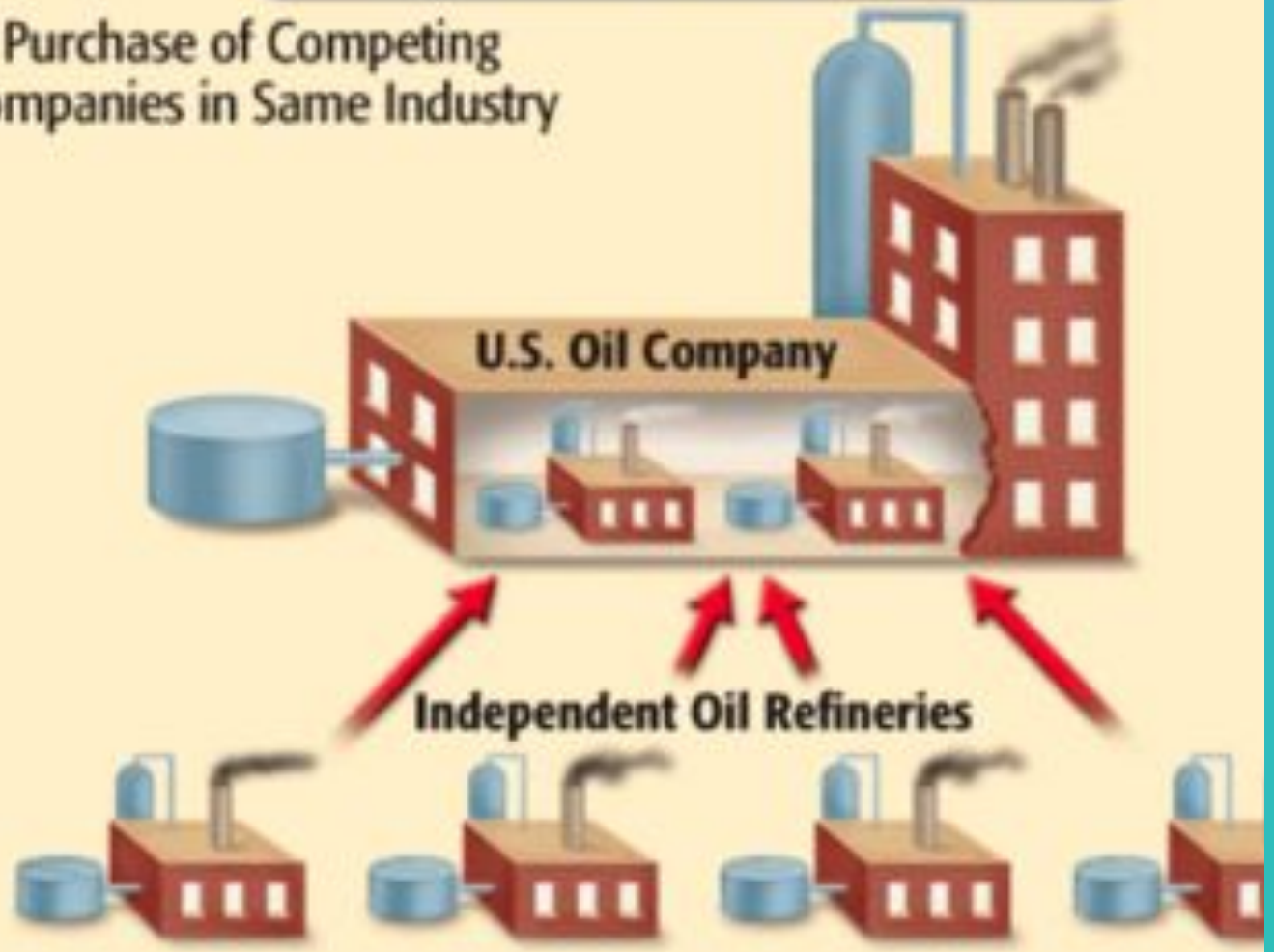
- **Horizontal integration** is when a business grows by acquiring a similar company in their industry at the same point of the supply chain.
- e.g. when a biscuit company decides to buy another biscuit company.
- **Vertical integration** is when a business expands by acquiring another company that operates before or after them in the supply chain.
- e.g. when a biscuit company decides to buy the trucking company that distributes the biscuits to retailers or decides to buy the company that provides the raw ingredients for the biscuits.

Vertical Integration

Purchase of Companies
t All Levels of Production

Horizontal Integration

Purchase of Competing
Companies in Same Industry



Intra-Enterprise Integration versus Inter-Enterprise Integration

- Intra-Enterprise Integration - the integration of the business processes internal to a given enterprise.
- Inter-Enterprise Integration - the integration of business processes of a given enterprise with business processes of other enterprises

ALIGNMENT PROCESS

- Developing a common understanding among the key stakeholders to achieve the goals of the project and avoid conflict.
- defined as the synchronization of business **process** objectives and performance measures with organizational objectives and strategies, with a view to avoiding conflicting, uncoordinated activities.

- It is important to accomplish this alignment during the initiation phase.
- Project managers usually conduct a start-up meeting that is sometimes called a kickoff meeting.
- The agenda and duration of the start-up meeting depends on the complexity level of the project.
- Projects with a limited scope and short duration may engage in a session start-up meeting over lunch.
- A medium-complexity project will require more-hour meeting while a high-complexity project cannot achieve alignment in a single meeting.
- Alignment can require several days of activities.

Objective of Alignment Process

- to develop a common understanding of the purpose, agree on the means and methods, and establish trust.
- discussions of the purpose, goals, participant roles, methods of tracking progress and costs, methods of managing change, and building trust.

ELECTRONIC ORGANISM

A digital or electronic organism is a self-replicating computer program that mutates and evolves. All Electronic organism:

- have to be complex, because they have to contain all the creative infrastructure necessary for their creation, reproduction, maintenance and action,
- 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 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.

- Digital organisms can be traced back to the game Darwin, developed in 1961 at Bell Labs, in which computer programs had to contend with each other by trying to stop others from executing.

- A similar perpetration that followed this was the game Core War.
- In Core War, it turned out that one of the winning strategies was to replicate as fast as possible, which deprived the opponent of all computational resources.

- Programs in the Core War game were also suitable to change themselves and each other by overwriting instructions in the dissembled memory in which the game took place.

- This allowed contending programs to embed dangerous instructions in each other that caused errors, enslaved processes, or indeed change strategies mid- game and heal themselves.

Read this article

https://www.walshmedicalmedia.com/open-access/an-overview-of-digital-organism-109518.html

ENTERPRISE ENGINEERING

Enterprise engineering is the body of knowledge, principles, and practices used to design all or part of an enterprise.

Enterprise Engineering is an integrated set of disciplines for building or changing an enterprise, its processes, and systems.

It integrates the most powerful change methods and makes them succeed.

It encompasses the application of knowledge, principles, and disciplines related to the analysis, design, implementation and operation of all elements associated with an enterprise.

In essence it is an interdisciplinary field, which combines systems engineering and strategic management as it seeks to engineer the entire enterprise in terms of the products, processes, and business operations.

The view is one of continuous improvement and continued adaptation as firms, processes and markets develop along their life cycles.

This total systems approach encompasses the traditional areas of research and development, product design, operations and manufacturing as well as information systems and strategic management

Goal of the Enterprise Engineer

Identify and integrate the most valuable and successful ways to change an enterprise

EIS

https://www.egyankosh.ac.in/bitstream/123456789/88408/1/Unit-10.pdf

PRACTICE QUESTION

- 1.What is difference between traditional Information system and Enterprise System Explain with example?
- 2.What do you understand by electronic organization (digital firm)? Discuss the concept of Enterprise management system.
- 3.What is the use of ERP system in enterprise? Discuss key feature and functionality of an ERP software system.
- 4.Explain in detail Enterprise Resource planning. Supply chain management is a top strategic objective for much organization. Explain.
- 5.Explain the role of IS and IT in enterprise Management System.
- 6.What do you understand by an Enterprise System Discuss the architecture of Enterprise systems? What reasons do you think that organization is motivated to establish enterprise system?
- 7.What is the use of CRM systems in enterprise? Discuss key features and functionality of a CRM system.
- 8.How does the Enterprise system differ conventional information system? Describe various IT tools that are used to enhance Customer Relationship Management (CRM) system in a web-based environment.
- 9.What do you understand by enterprise system? Discuss the architecture of enterprise System. For what reasons do you think the organization is motivated to establish enterprise system?
- 10.Write short note on: ERP, CRM, SCM
- 11. Differentiate:
- Loose Integration versus Full Integration
- Horizontal Integration versus Vertical Integration
- Intra-Enterprise Integration versus Inter-enterprise Integration
- 12. Discuss about 5 Supply Chain tool in detail.

- Discuss about various CRM strategies .Explain .
- Suppose you are a customer… What do you expect from a business owner or what will make you to continue with that particular shop ?
- Suppose you are a business owner… What do you expect from your customer or what message you want to convey as a business owner ?
- Discuss about various CRM tools.

CASE STUDY 3
BUSINESS INTELLIGENCE

- WHAT IS BUSINESS INTELLIGENCE ? HOW IT DIFFERS FROM BUSINESS ANALYTICS?

DISCUSS THE FOLLOWING:

- HOW IS BUSINESS INTELLIGENCE USED?
- ORGANIZATIONAL BENEFITS OF IMPLEMENTING BUSINESS INTELLIGENCE
- LIST 1O BUSINESS INTELLIGENCE TOOLS AND EXPLAIN ANY ONE TOOL.
- DISCUSS REAL WORLD EXAMPLE OF COMPANY USING BI.

CASE STUDY 4
A CASE STUDY ON INTELLECTUAL PROPERTY RIGHT

- **What is *Intellectual Property Right?***

Discuss about a real case of Intellectual Property Right. It should contain the following topics:

- **Title of Case**
- **Country**
- **History of Case**
- **Claim by the other party**
- **How was the case solved?**