

ICT 700

Introduction To Business Information Systems



LECTURE 7

Enterprise Applications
**Business Communications, Use of Enterprise
Information Systems to Upgrade The Business
Processes**

Unit Coordinator:
Sajad Ghatrehsamani

Reading Chapter:

Chapter 8 - Baltzan (2019)



Learning Objectives

1. Explain the concept of Customer Relationship Management (CRM)
2. Explain the concept of Enterprise Resource Planning (ERP)
3. Explain the concept of Supply Chain Management (SCM)
4. Understanding SCM integrations and the role they play in connecting a corporation.
5. Describe supply chain management along with its impact on business.
6. Identify the three technologies that are reinventing the supply chain.



Customer Relationship Management

Customer relationship management (CRM) is a technology for managing all of your company's interactions with current and potential customers. The goal is simple: improve relationships to grow your business.

CRM Purpose

It is a software that helps track each interaction you have with a prospect or customer.

1. sales calls,
2. customer service interactions,
3. marketing emails, and more.

CRM Purpose

CRM can integrates with AI (artificial intelligence) to help better manage relationships across the entire customer lifecycle, spanning departments like marketing, sales, digital commerce, and customer service interactions..

CRM Case Study

The Salesforce logo, which consists of a blue cloud shape with the word "salesforce" written in white lowercase letters inside it.

salesforce

Case Study Discussion Salesforce

1. Discuss two challenges of using Salesforce?
2. Discuss two benefits of using Salesforce?

Enterprise Resource Planning

Enterprise resource planning (ERP) is a type of software system that helps organisations automate and manage core business processes for optimal performance.

ERP software coordinates the flow of data between a company's business processes, providing a single source of truth and streamlining operations across the enterprise

Why ERP is important ?

ERP system can improve your business:

1.Drive optimal performance. With solutions that use AI, you'll access insights that enhance your decision making and reveal ways to improve operational performance going forward.

2.Accelerate operational impact. By connecting processes and data, you'll bring more visibility and flexibility to employees, helping them take action quickly and deliver more value across the business.

3.Ensure business agility. Many ERP solutions are built to adapt to your needs and grow with you, helping you proactively prepare for—and readily respond to—any operational disruption or market change.

What business functions can be optimised with ERP?

The key business functions include:

- **Commerce**

Customers get a more personalised and seamless shopping experience through AI recommendations, while retailers increase employee **productivity**, help reduce fraud, and grow their business.

- **Finance**

Modern ERP increases profitability while driving compliance. It offers dashboards and AI-driven insights that give an overview of your **finances** to help you tap into the real-time information anytime and anywhere.

What business functions can be optimised with ERP? Continued

- **Human resources**

Modern solutions offer ways to manage company data and streamline employee management tasks like **payroll, hiring**, and other duties.

- **Manufacturing**

ERP capability is to improve business communication, automates daily processes through robotic process automation, and offers manufacturers the ability to fulfil customer needs and manage resources by accessing real-time data.

It also optimises **project management, cost management, and production planning**.

What business functions can be optimised with ERP? Continued

- **Supply Chain**

Assuming if a company is still entering information by hand and trying to track down stock in a warehouse, the employees can save time and money by automating these processes with ERP.

Modern supply chain solutions also offer dashboards, business intelligence, and even Internet of Things (IoT) technology to help you get a handle on your stock management.

Source: [https://dynamics.microsoft.com/en-au/erp/what-is-erp/#:~:text=Enterprise%20resource%20planning%20\(ERP\)%20is,business%20processes%20for%20optimal%20performance.](https://dynamics.microsoft.com/en-au/erp/what-is-erp/#:~:text=Enterprise%20resource%20planning%20(ERP)%20is,business%20processes%20for%20optimal%20performance.)

Case Study Discussion: ERP



Case Study Discussion

ERP

1. Discuss two challenges of implementing ERP?
2. Discuss two benefits of using ERP?

Supply Chain Management

Supply Chain Management (SCM)

is management of the flow of goods, data, and finances related to a product or service, from the procurement of raw materials to the delivery of the product at its final destination.

Source: [https://www.oracle.com/au/scm/what-is-supply-chain-management/#:~:text=What%20is%20SCM%20\(Supply%20Chain,product%20at%20its%20final%20destination.](https://www.oracle.com/au/scm/what-is-supply-chain-management/#:~:text=What%20is%20SCM%20(Supply%20Chain,product%20at%20its%20final%20destination.)

Integration Concept

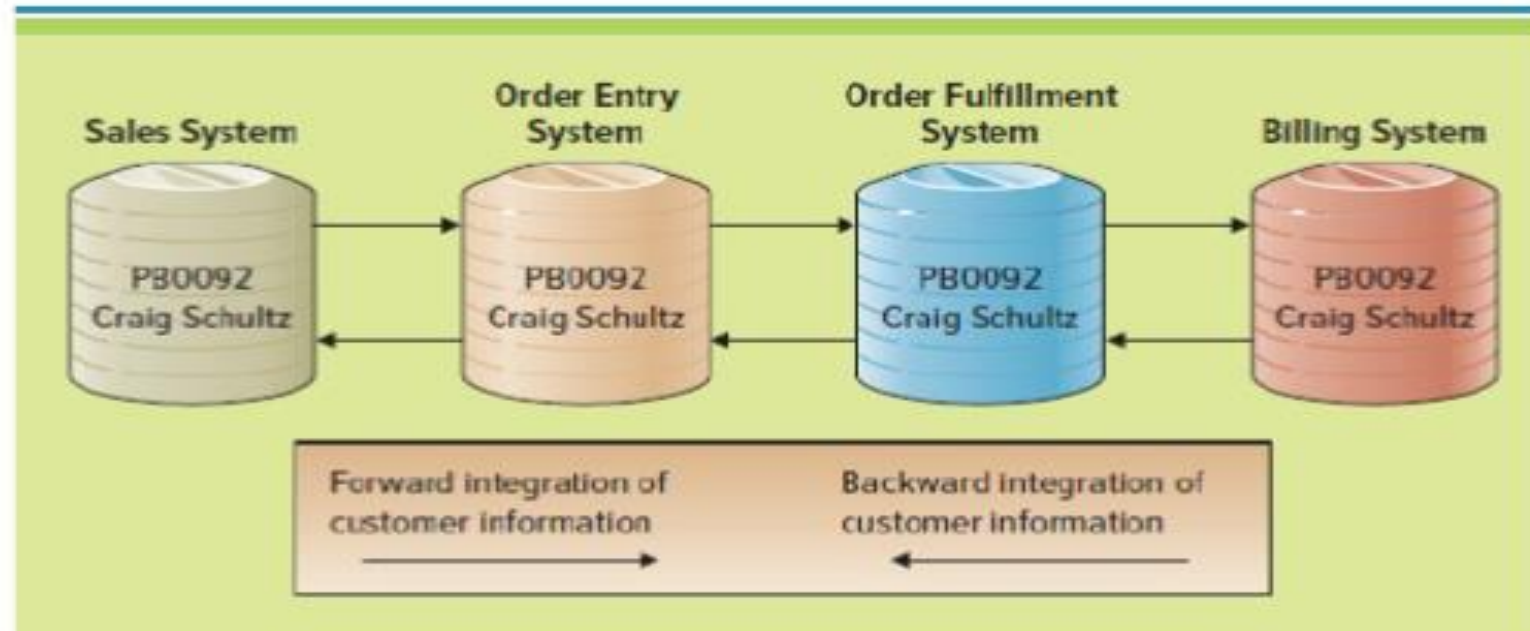
It allows separate systems to communicate directly with each other, eliminating the need for manual entry into multiple systems.



Integration Types

1. **Building integrations** : It allows information are two primary types of integration: sharing across databases along increases in quality.
2. **Application integration** : The integration of a company's existing management information systems.
3. **Data integration** : The integration of data from multiple sources, which provides a unified view of all data.
4. **Forward integration** : Sends information entered into a given system automatically to all downstream systems and processes.
5. **Backward integration** : Sends information entered into a given system automatically to all upstream systems and processes.

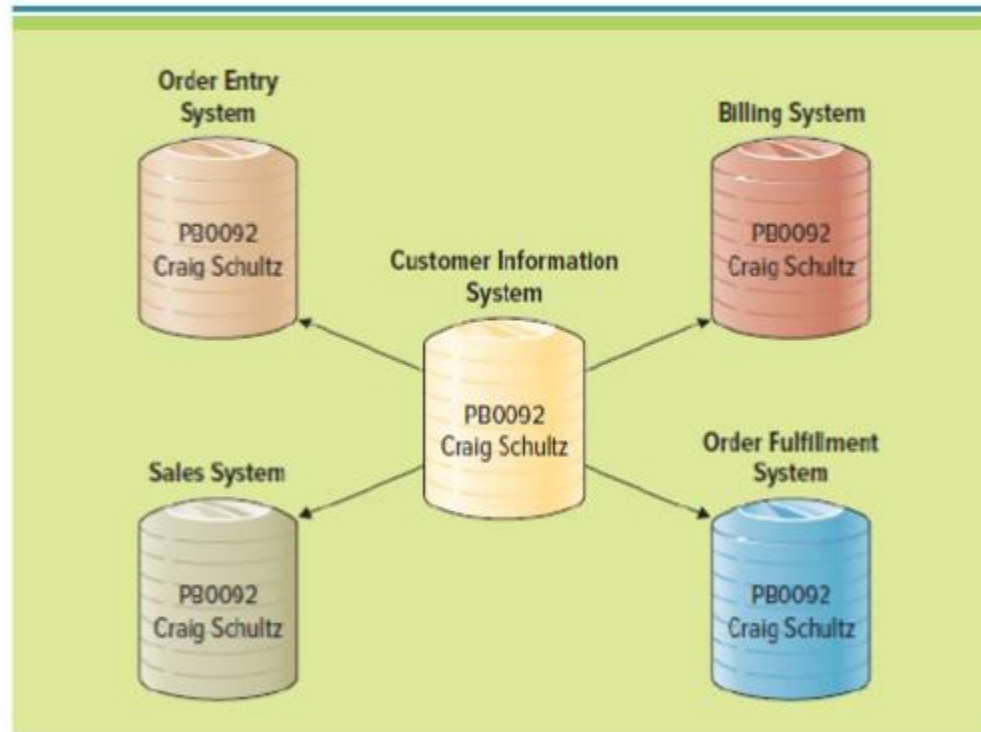
A Forward and Backward Customer Information Integration



A Forward and Backward Customer Information Integration Example

Common Data Repository

Common data repository : Allows every department of a company to store and retrieve information in real time, allowing information to be more reliable and accessible.



Integration Tools

1. Enterprise Systems
2. Enterprise Integration Application (EAI)

Three Enterprise Systems



Three Enterprise Systems

Supply Chain Management Definitions

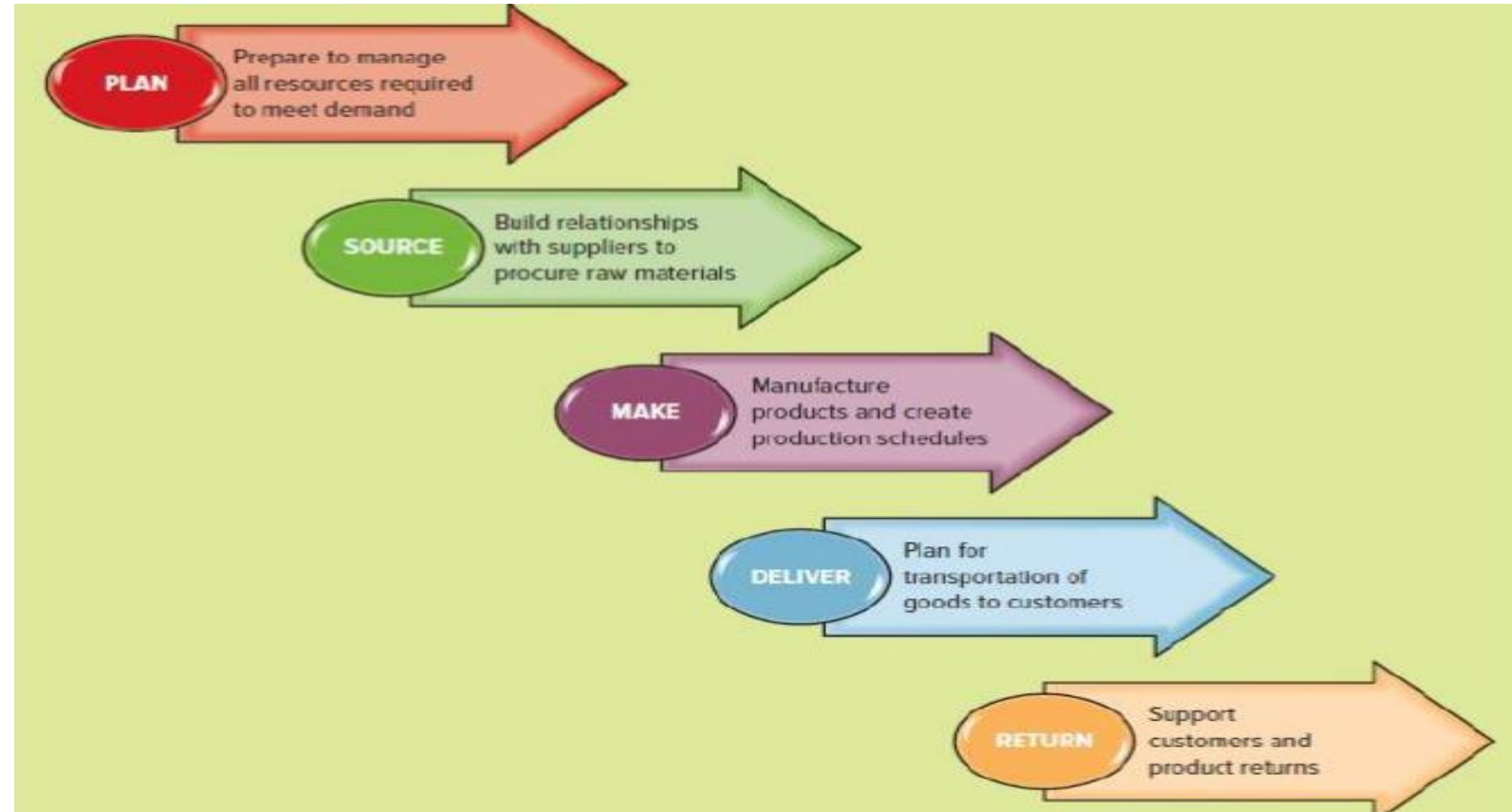
Supply chain management (SCM): The management of information flows between and among activities in a supply chain to maximize total supply chain effectiveness and corporate profitability.

“Supply chain management is the handling of the entire production flow of a good or service to maximize quality, delivery, customer experience and profitability” IBM Website <https://www.ibm.com/topics/supply-chain-management>

“The definition of the supply chain management is 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, synchronising supply with demand and measuring performance globally“

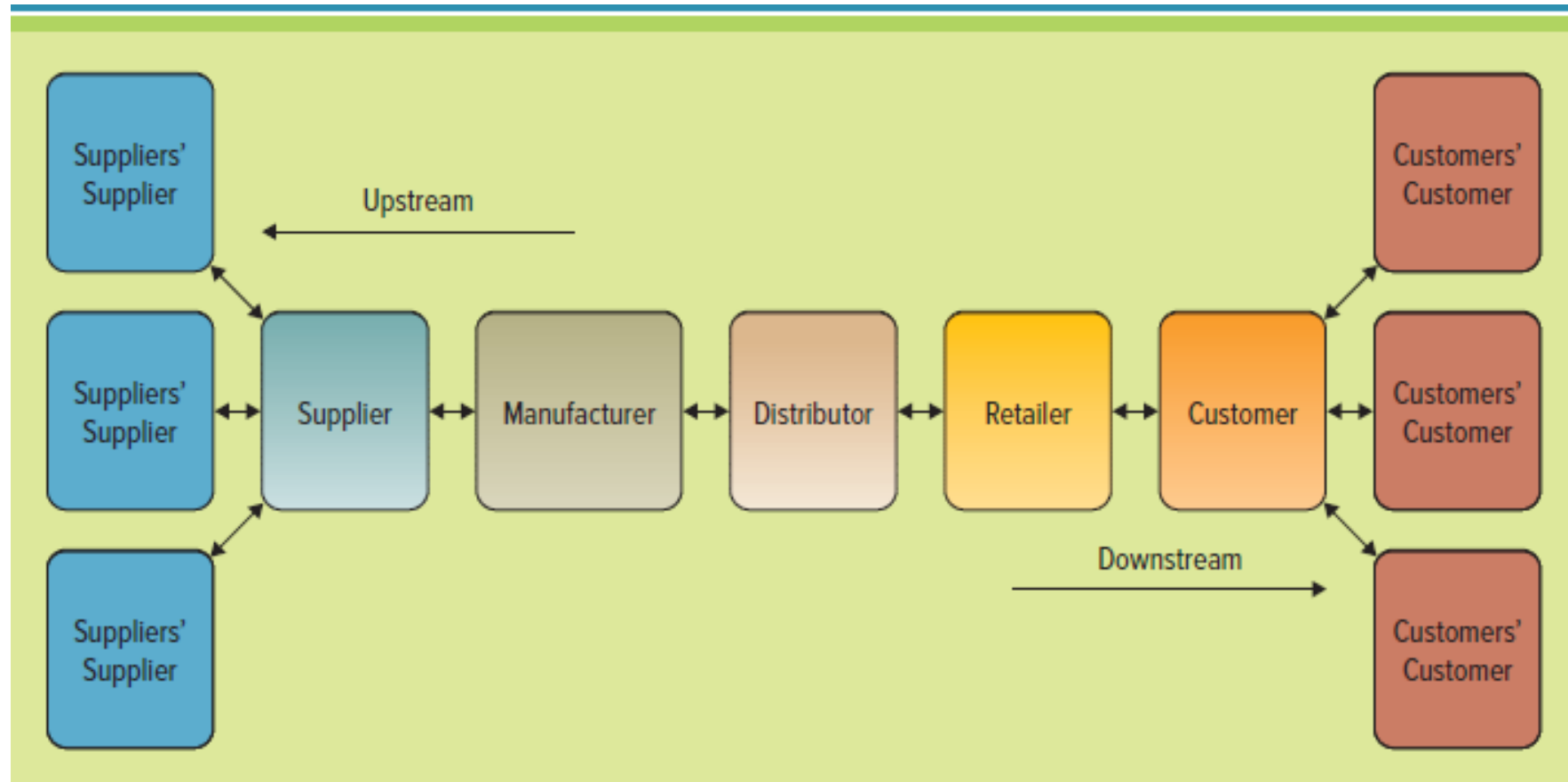
(Source:: https://en.wikipedia.org/wiki/Supply_chain_management)

Five Basic Supply Chain Activities

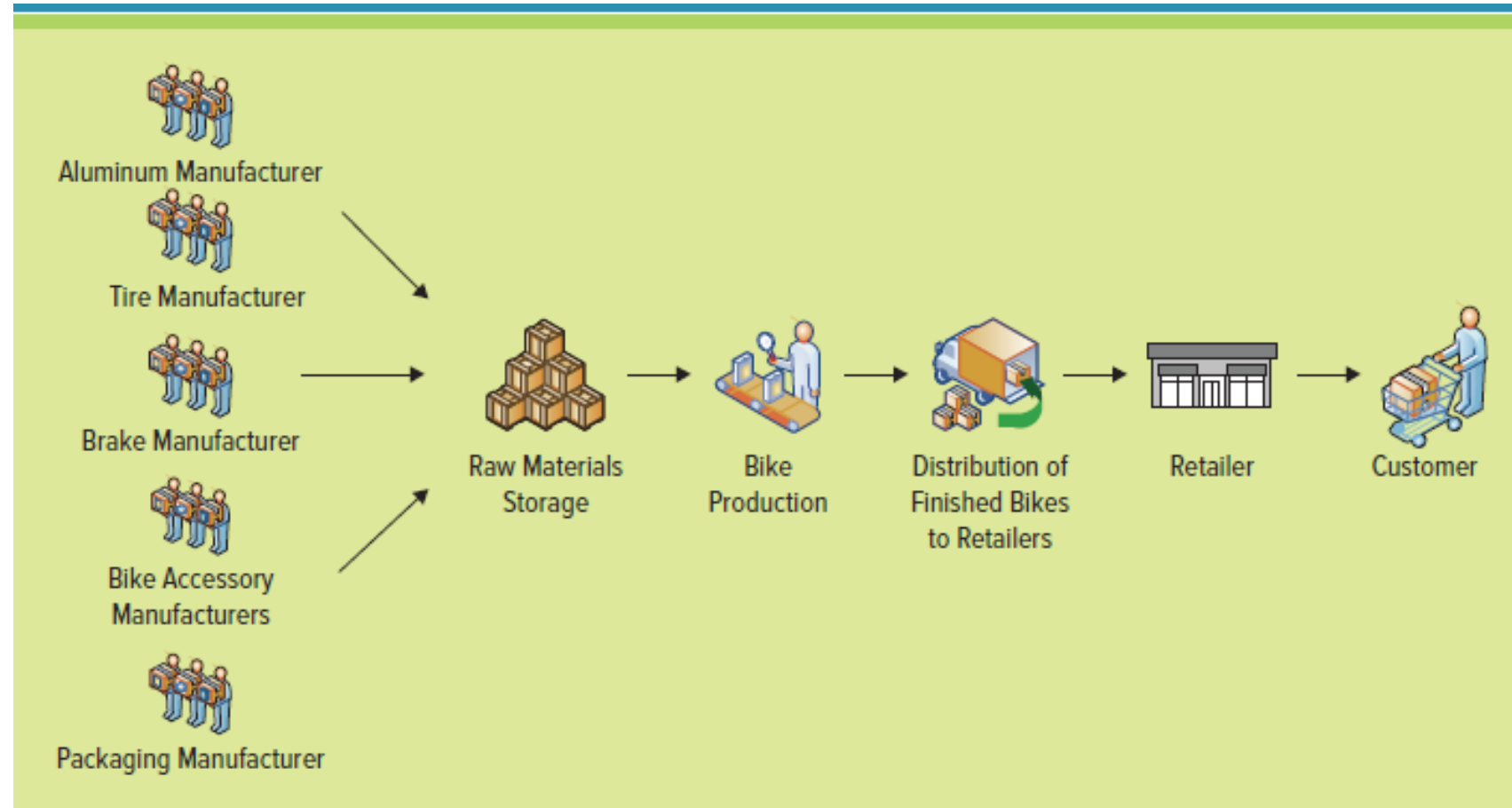


Five Basic Supply Chain Activities

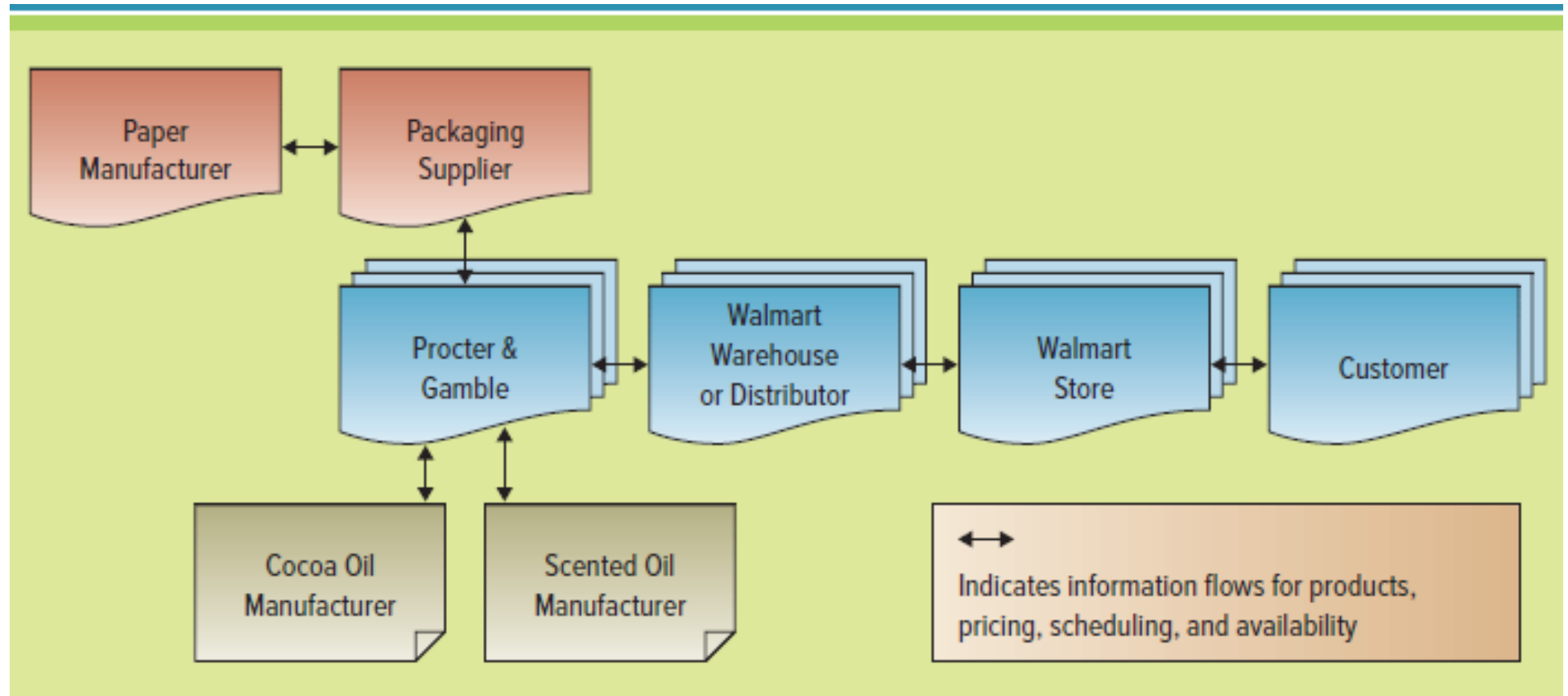
A Typical Supply Chain



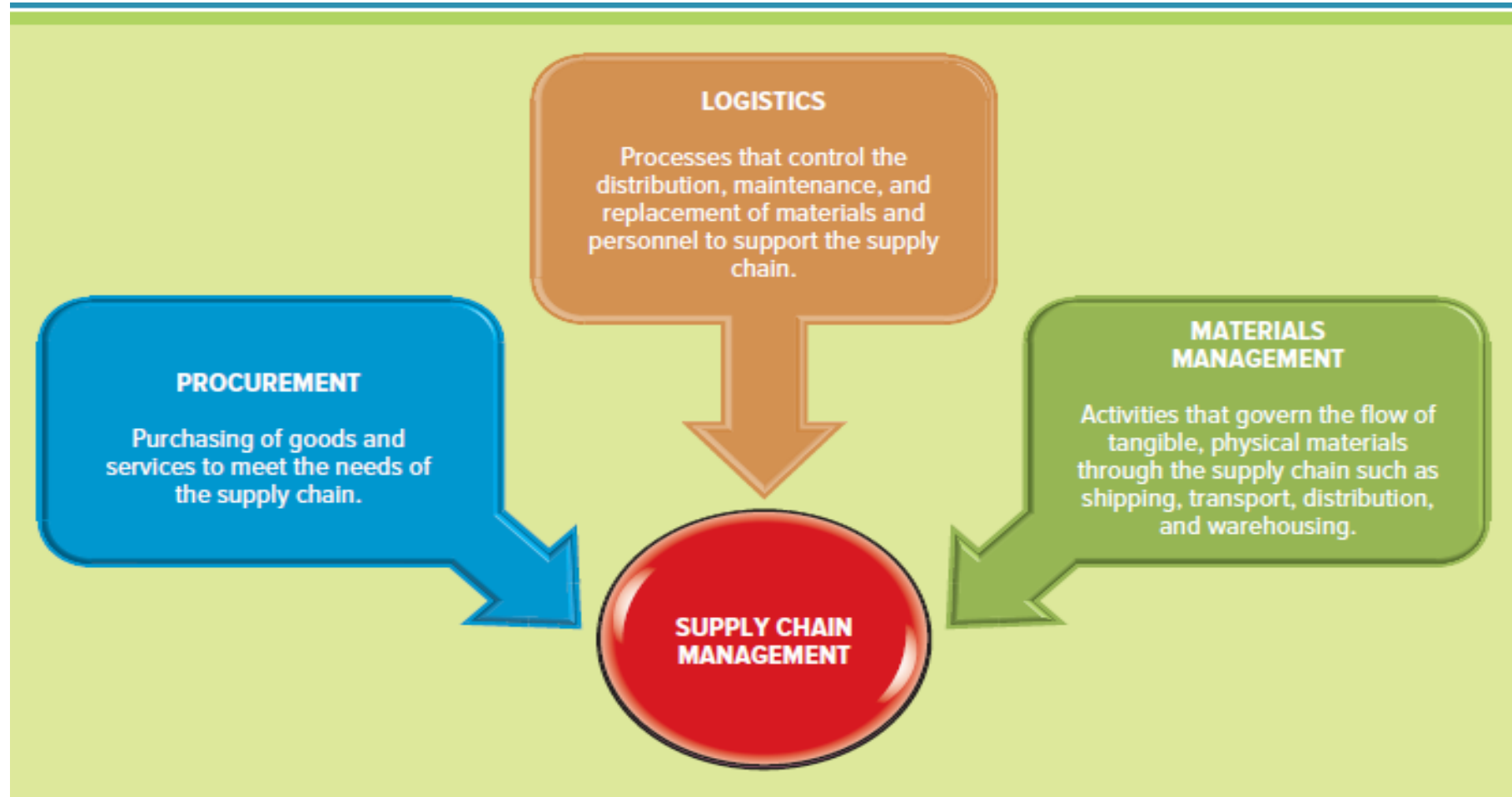
Supply Chain For A Bike Manufacturer



Case Study: Walmart



The Three Business Areas of Supply Chain



Procurement

Procurement: The purchasing of goods and services to meet the needs of the supply chain.

The procurement process is a key supply chain strategy because the capability to purchase input materials at the right price is directly correlated to the company's ability to operate. Procurement can help a company answer the following questions:

- What quantity of raw materials should we purchase to minimize spoilage?
- How can we guarantee that our raw materials meet production needs?
- At what price can we purchase materials to guarantee profitability?
- Can purchasing all products from a single vendor provide additional discounts?

Logistics

Logistics: Includes the processes that control the distribution, maintenance, and replacement of materials and personnel to support the supply chain. Logistics can help a company answer the following questions:

- What is the quickest way to deliver products to our customers?
- What is the optimal way to place items in the warehouse for picking and packing?
- What is the optimal path to an item in the warehouse?
- What path should the vehicles follow when delivering the goods?
- What areas or regions are the trucks covering?

Logistics

Inbound logistics: Acquires raw materials and resources and distributes them to manufacturing as required.

Outbound logistics: Distributes goods and services to customers. Logistics controls processes inside a company (warehouse logistics) and outside a company (transport logistics) and focuses on the physical execution part of the supply chain. Logistics includes the increasingly complex management of processes, information, and communication to take a product from cradle to grave

Materials Management

Materials management: Includes activities that govern the flow of tangible, physical materials through the supply chain, such as shipping, transport, distribution, and warehousing.

It can include the handling of liquids, fuel, produce, plants, and a number of other potentially hazardous items.

Materials management focuses on handling all materials safely, efficiently, and in compliance with regulatory requirements and disposal requirements.

Materials Management

Materials management can help a company answer the following concerns:

- What are our current inventory levels?
- What items are running low in the warehouse?
- What items are at risk of spoiling in the warehouse?
- How do we dispose of spoiled items?
- What laws need to be followed for storing hazardous materials?
- Which items must be refrigerated when being stored and transported?
- What are the requirements to store or transport fragile items?

Three Technologies That Are Reinventing The Supply Chain

1. Printing Supports Procurement
2. Drones Support Logistics
3. BlockChain

Disruptive Technology



3D Printing Supports Procurement

1. The process of 3D printing (additive manufacturing) builds—layer by layer in an additive process—a three-dimensional solid object from a digital model. 3D printing is made possible by using a manufacturing technique called additive process.
2. An additive process builds layer upon layer to create a 3D object.
3. A computer controls the process, turning the printer into a type of robot that can create medical implants, shoes, auto parts, toys, cars, houses, and just about anything.

Case Study

3D Printing Digital Denture



Drones Support Logistics

1. Drone: An unmanned aircraft that can fly autonomously, or without a human.
2. Drones are primarily used by the military for surveillance or equipped with missiles for precision strikes. Nonmilitary uses for drones include fighting forest fires, law enforcement, traffic control, film-making, and scientific research.

Drones Support Logistics

Drones operate with three primary capabilities:

1. **Sensors:** Drones are able to collect a wealth of information about the world via an array of sensors. Depending on the model, these can include cameras, radar, infrared imaging, lasers, and more.
2. **Navigation:** The drone commander sends instructions to the drone through an antenna on the remote, which sends radio waves into space. A GPS satellite captures the radio waves and bounces the instructions to the drone, which is fitted with a receiver antenna.
3. **Stabilization:** Drones come in all shapes and sizes and use a horizontal stabilizer with a propeller on the end to stabilize flight. The entire drone body is made of strong yet lightweight materials. Military drones draw power from an engine or solar power, but consumer drones run on batteries.

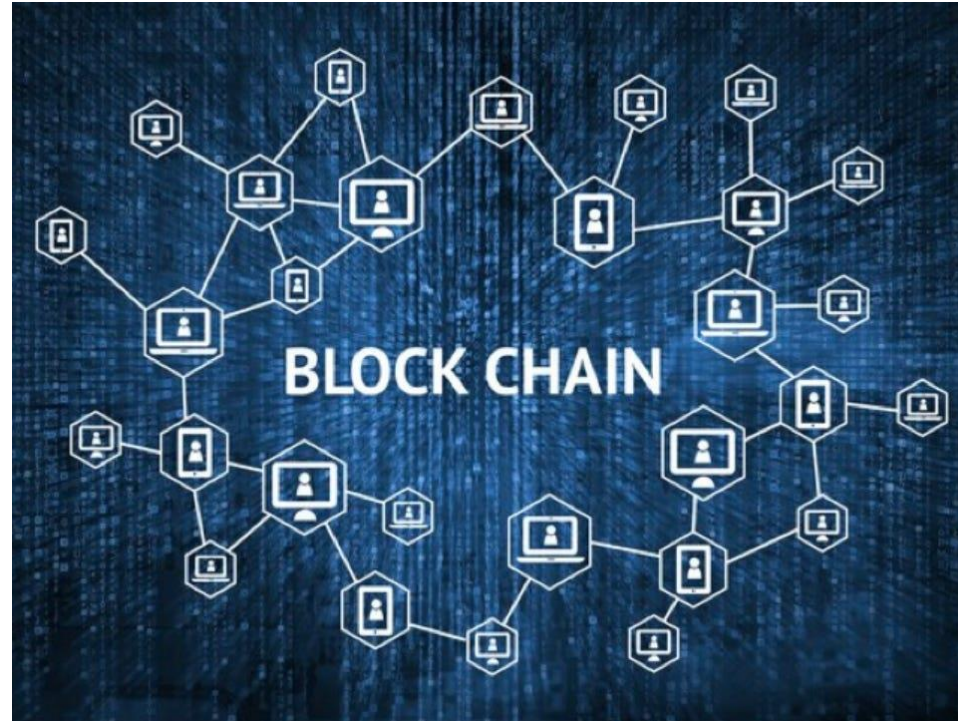
Case Study: Drones Support Logistics



Blockchain

1. Blockchain infrastructures can save the global shipping industry billions of dollars a year by replacing the current EDI and paper-based system, which can leave containers in receiving yards for weeks.
2. The advantages include identifying new ways to reduce delays and remove human error, saving both time and resources.
3. Blockchain can record the transfer of assets, as well as track receipts, purchase orders, and other associated paperwork.
4. It could also store other identifying data such as whether packages need to be handled with care or whether fresh produce is organic or not.
5. The data could also be shared throughout the company, enabling different departments to work more closely together toward a common goal. It could fundamentally change the way you work.

Case Study : Blockchain



Source <https://www.insiderintelligence.com/insights/blockchain-technology-applications-use-cases/>

Group Discussion

On May 6, 2013, Defense Distributed, an online open source sharing company, made files for the world's first 3D printable gun available to the public. The U.S. Department of Defense demanded that the files be removed two days later, but not before they had been downloaded more than 100,000 times.

Just think of cars, knives, guns, and computers: They are all used to break the law, and nobody would be allowed to produce them if they were held responsible for how people used them.

1. Do you agree that if you make a tool and sell it to someone who goes on to break the law, you should be held responsible?
2. Do you agree that 3D printers will be used to infringe on copyright, trademark, and patent protections? If so, should 3D printers be illegal?

In a group of four, brainstorm, discuss and present.

Any Questions?

Thank You for listening . . =)

