



IT 229: IT Entrepreneurship and Supply Chain Management

Course Details

- ▶ **Unit 1: Overview of Entrepreneurship**
- ▶ **Unit 2: Business Plan for a new venture-introduction**
- ▶ **Unit 3: Overview of Supply Chain Management**
- ▶ **Unit 4: Co-ordination in a Supply Chain**
- ▶ **Unit 5: Supply Chain performance: Achieving Strategic fit and scope**
- ▶ **Unit 6: Supply chain Drivers and Matrices**
- ▶ **Unit 7: Designing the supply chain Network**
- ▶ **Unit 8: IT in a Supply Chain**
- ▶ **Unit 9: Planning demand and supply in supply chain**
- ▶ **Unit 10: Supply Chain Globalization**
- ▶ **Unit 11: Entrepreneurial Supply Chain**

Unit 3: Overview of Supply Chain Management

Outline

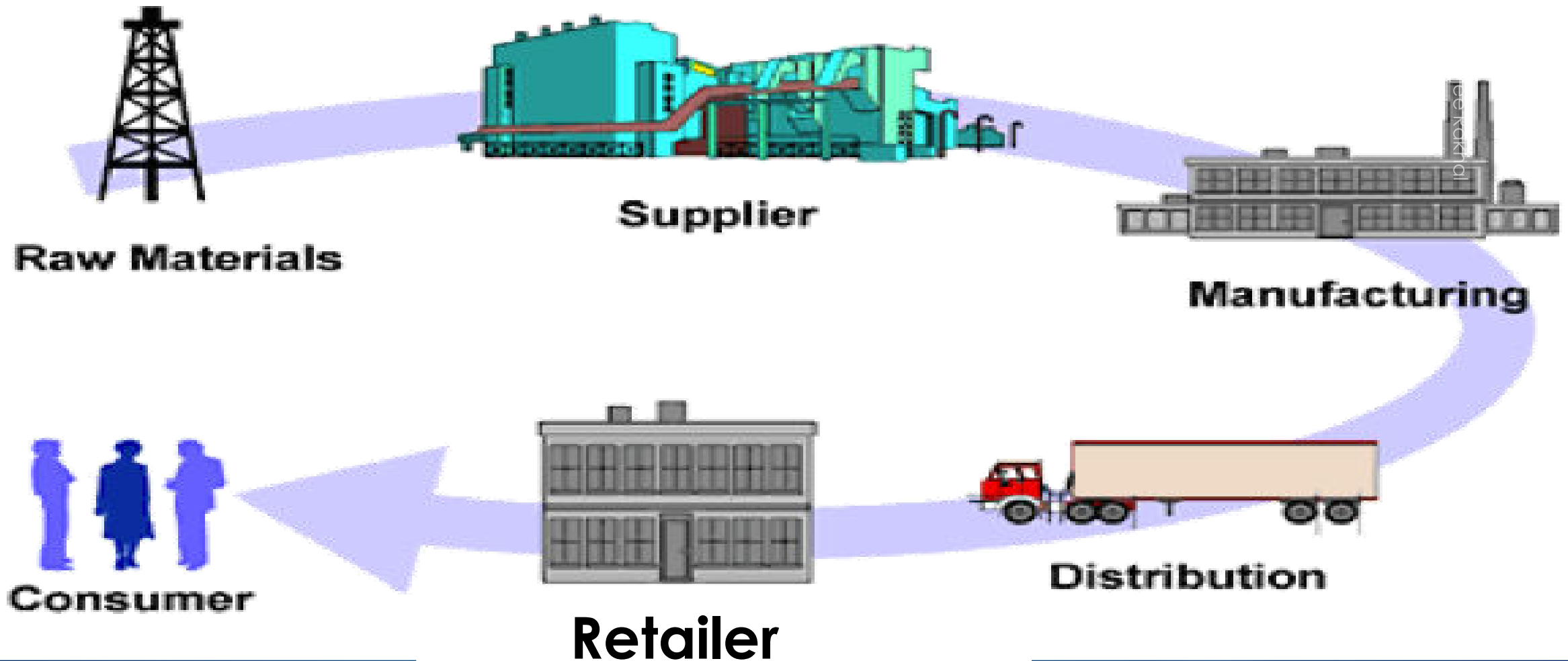
- ▶ Definition of Supply Chain Management
- ▶ Functions and Objective of a Supply Chain
- ▶ Decision phases of Supply Chain
- ▶ Process View of a Supply Chain - Cycle View and Pull/Push View
- ▶ The importance of a supply chain flows
- ▶ Pitfalls and opportunities in a Supply Chain

What is a Supply Chain?

- ✓ All stages involved, directly or indirectly, in fulfilling a customer request
- ✓ Includes manufacturers, suppliers, transporters, warehouses, retailers, and customers
- ✓ Typical supply chain stages: customers, retailers, wholesaler/distributors, manufacturers, suppliers
- ✓ All stages may not be present in all supply chains (e.g., No retailer or distributor for dell)
- ✓ All activities associated with the flow of transformation of goods from raw material to end users

Supply Chain

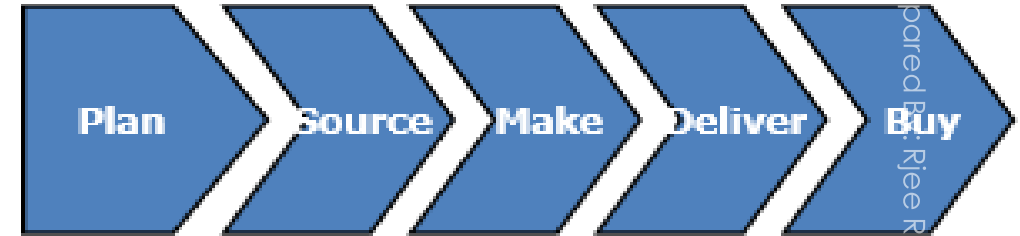
each stages of supply chain connected through the flow of products, information, and funds



What is supply Chain Management?

► A set of approaches used to efficiently integrate

- Suppliers
- Manufacturers
- Warehouses
- Distribution centers



► So that the product is produced and distributed

- In the right quantities
- To the right locations
- And at the right time

► System-wide costs are minimized and

► Service level requirements are satisfied

What is Supply Chain Management?

- ▶ Efficient integration of suppliers, factories, warehouses and stores so that merchandise (goods) is produced and distributed in the right quantities, to the right locations and at the right time, and so as to minimize total system cost subject to satisfying customer service requirements.
- ▶ Supply chain management has been defined 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.

Objectives of Supply Chain Management

- ▶ Objective is to maximize the overall value generated

- ▶ The *value* a supply chain generates is the

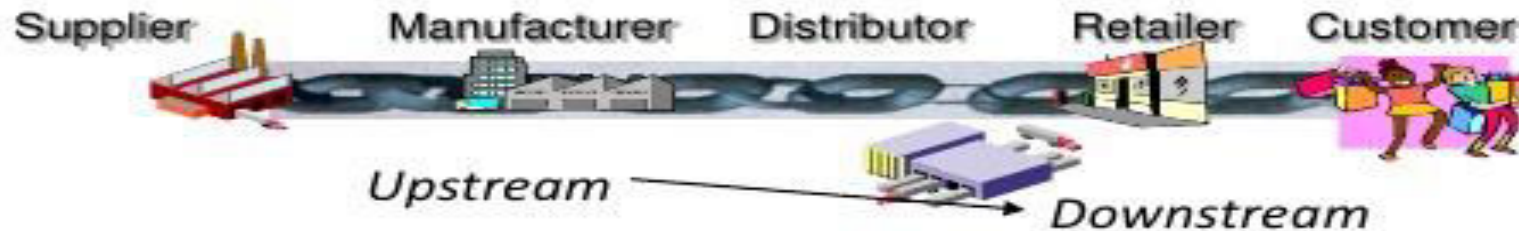
$$\text{Value} = \text{Final Product Worth to customer} - \text{Cost incurred in Supply Chain}$$

- ▶ Supply chain reduces costs – (information, storage, transportation, components, assembly, etc.)

- ▶ Supply chain profitability is total profit to be shared across all stages of the supply chain – Supply chain success should be measured by total supply chain profitability, not profits at an individual stage

Summary of Supply Chain Management

- A supply chain consists of

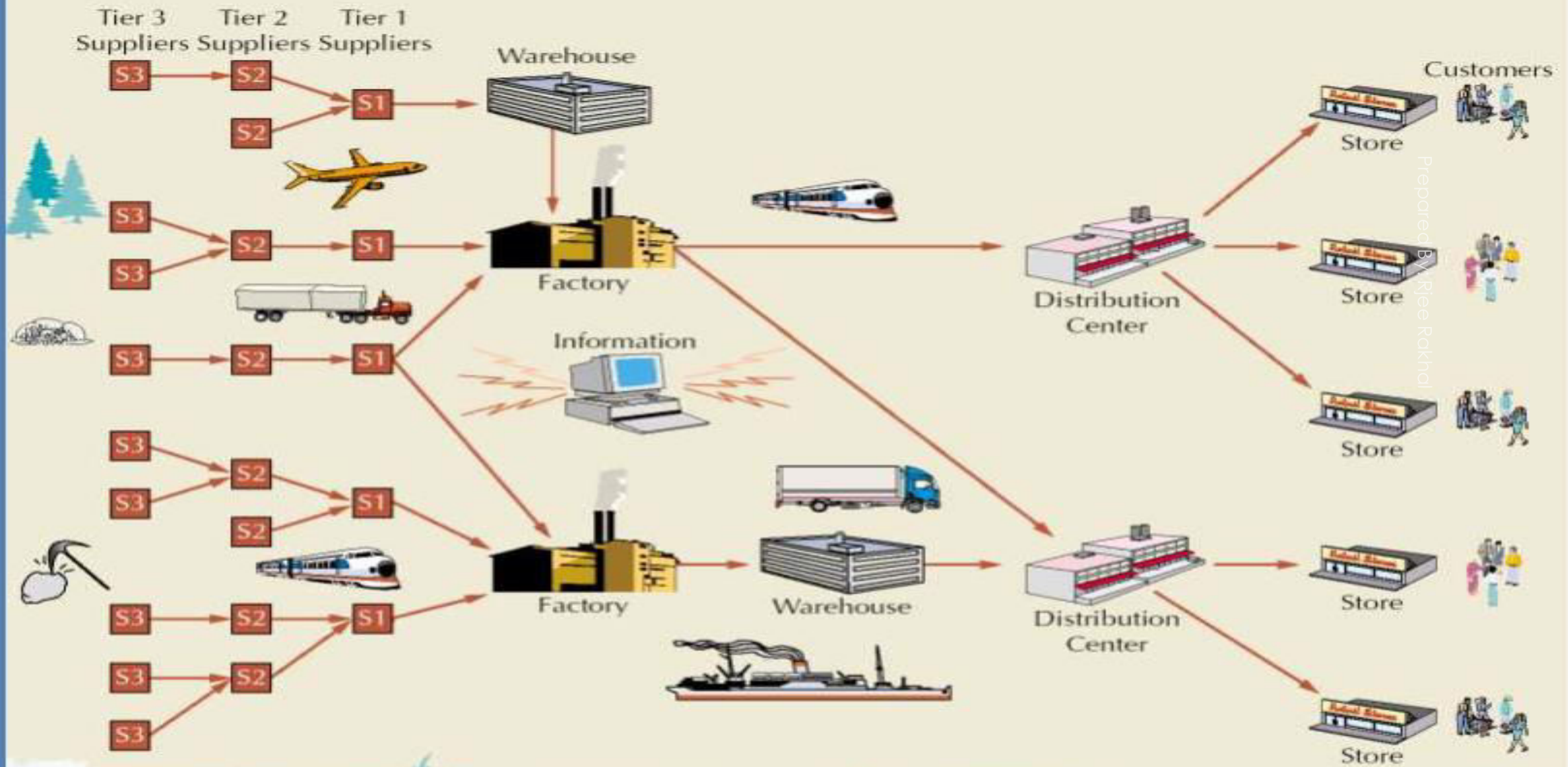


- aims to Match Supply and Demand, profitably for products and services



- achieves





Supply Chain Illustration

Importance of Supply Chain Flows

- ▶ Low Levels of Defects
 - ▶ Operational management / tqm, modes of distribution, warehousing, demand supply match
- ▶ Helps in achieving Success: Supply chain design, planning and operation help ...
- ▶ Proper Cash Flow Management
- ▶ Effective flow of goods and information
 - ▶ *About Demand and products*
- ▶ Reduces level of inventory with the manufacturer (*Dell: Sophisticated information exchange*):
 - ▶ *Minimum Inventory to No Inventory, cutting down middlemen*

Importance in Decision Making

- ▶ Synergic Effect
- ▶ Improve match between supply and demand
- ▶ To achieve economies of scale and scope – Costs are significant

Decision phases of Supply Chain

- ▶ ***Phase 1: Supply Chain Strategy or Design***
- ▶ ***Phase 2: Supply Chain Planning***
- ▶ ***Phase 3: Supply Chain Operation***

Phase 1: Supply Chain Strategy or Design

- ▶ Long Term in Nature
- ▶ What it involves:
 - ▶ Outsource or in-house
 - ▶ Location and capacities of production and warehousing facilities
 - ▶ Products to be manufactured or stored at various locations
 - ▶ The modes of transportation to be used
 - ▶ Type of information system to be utilized.
 - ▶ Data mining, Data bases, RFID
- ▶ It is based on Strategic Objectives
- ▶ Supply chain design decisions are long-term and expensive to reverse – must take into account market uncertainty

Phase 2: Supply Chain Planning

- ▶ Time frame considered is quarter to a year
- ▶ Definition of a set of policies that govern short-term operations
- ▶ Fixed by the supply configuration from previous phase
- ▶ Starts with a forecast of demand in the coming year

cont.....

Phase 2: Supply Chain Planning

Pre

- ▶ Planning decisions:
 - ▶ Which markets will be supplied from which locations
 - ▶ Planned buildup of inventories
 - ▶ Subcontracting, backup locations
 - ▶ Inventory policies
 - ▶ Timing and size of market promotions
- ▶ Must consider in planning decisions demand uncertainty, exchange rates, competition over the time horizon

Phase 3: Supply Chain Operation

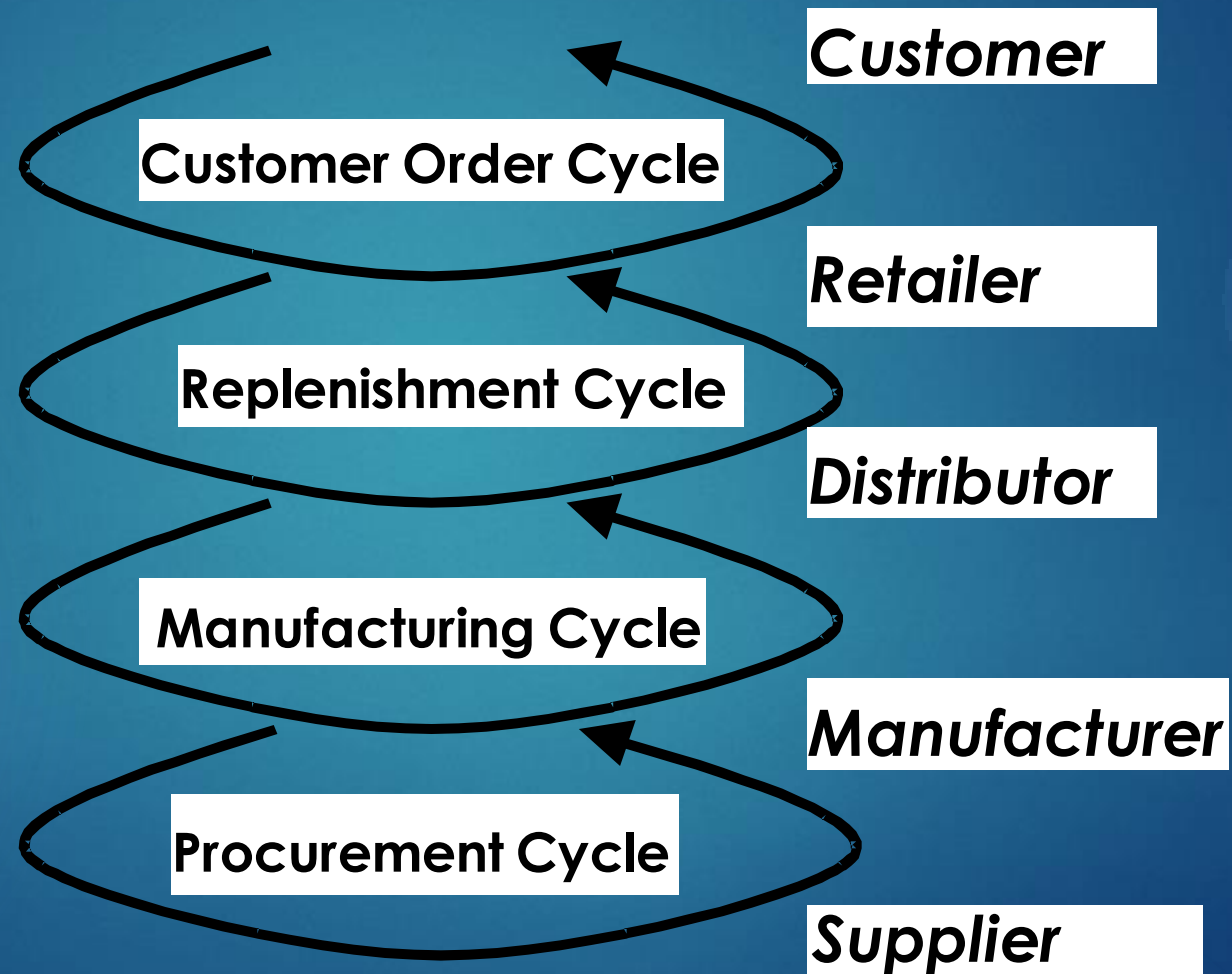
- ▶ Time horizon is weekly or daily
- ▶ Decisions regarding individual customer orders
- ▶ Supply chain configuration is fixed and operating policies are determined
- ▶ Goal is to implement the operating policies as effectively as possible
- ▶ Allocate orders to inventory or production to individual order, set a date that an order to be filled, generate pick lists at a warehouse, allocate an order to a particular shipment mode or and shipment, set delivery schedules of trucks, place replenishment orders
- ▶ Much less uncertainty (short time horizon)

Process View of a Supply Chain

Process View of a Supply Chain

- ▶ **Cycle view:** processes in a supply chain are divided into a series of cycles, each performed at the interfaces between two successive supply chain stages
- ▶ **Push/pull view:** processes in a supply chain are divided into two categories depending on whether they are executed in response to a customer order (pull) or in anticipation of a customer order (push)

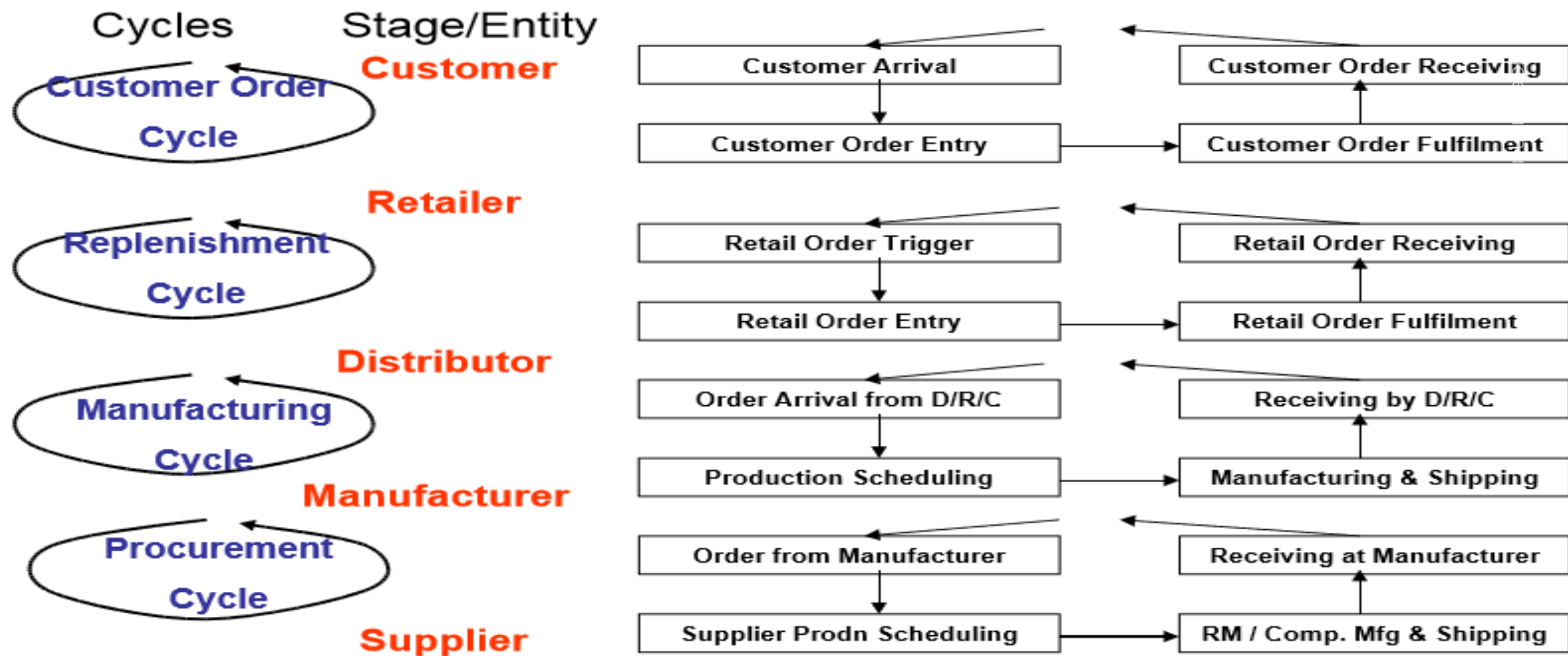
Cycle View of Supply Chains



Process View of Supply Chain Management:

Cyclic View

SC is a sequence of processes and flows that take place within and between different SC stages and combine to fulfil a customer need for a product / service. These processes are divided into a series of cycles (cyclic view), each performed at the interface between two successive stages / entities of SC.



Cycle View of Supply Chains

Customer order cycle

• Customer arrival • Customer order entry • Customer order fulfillment • Customer order receiving

Replenishment cycle

• Retail order trigger • Retail order entry • Retail order fulfillment • Retail order receiving

Manufacturing cycle

• Order arrival from the distributor, retailer, or customer • Production scheduling • Manufacturing and shipping • Receiving at the distributor, retailer, or customer

Cycle View of a Supply Chain

Prep

- ▶ Each cycle occurs at the interface between two successive stages
- ▶ Customer order cycle (customer-retailer)
- ▶ Replenishment cycle (retailer-distributor)
- ▶ Manufacturing cycle (distributor-manufacturer)
- ▶ Procurement cycle (manufacturer-supplier)
- ▶ Cycle view clearly defines processes involved and the owners of each process. Specifies the roles and responsibilities of each member and the desired outcome of each process.

Few Differences between Cycles

- ▶ In the customer order cycle, demand is external to the supply chain and thus uncertain. In all other cycles, order placement is uncertain but can be projected based on policies followed by the particular supply chain stage.
 - ▶ E.g. in the procurement cycle, a tire supplier to an automotive manufacturer can predict the demand precisely once the production schedule at the manufacturer is known
- ▶ As we move from the customer to the supplier, the number of individual orders declines and the size of each order increases.

Cycle View of Supply Chains

► Procurement Cycle

The Procurement Cycle occurs between the manufacturer and supplier. It includes all processes to ensure the availability of materials and components at the time and place required in the production and maintenance schedule. These processes include supplier production scheduling and component manufacturing, shipping, and receiving.

The cycle is triggered by requirements of the manufacturer's production schedule, the maintenance activity's repair schedule, or the restocking policy. This cycle may repeat several times between several tiers of suppliers.

► Manufacturing Cycle

The Manufacturing Cycle is found between a manufacturer or repair activity and the next downstream (toward the customer) member of the supply chain. This next downstream member may be a wholesaler, a retailer, or the customer. The cycle begins when a customer, retail activity, or wholesaler places a replenishment order, or when a manufacturer forecasts customer demand. Processes in this cycle include production and maintenance scheduling, and product repair, shipping, and receiving.

► Replenishment Cycle

The Replenishment Cycle occurs between the retailer and the distributor or wholesaler and includes all processes for replenishing retail inventory: retail order entry, fulfillment, and receipt. This cycle begins with the retail order trigger, which is a policy that starts the replenishment order placement.

► Customer Order Cycle

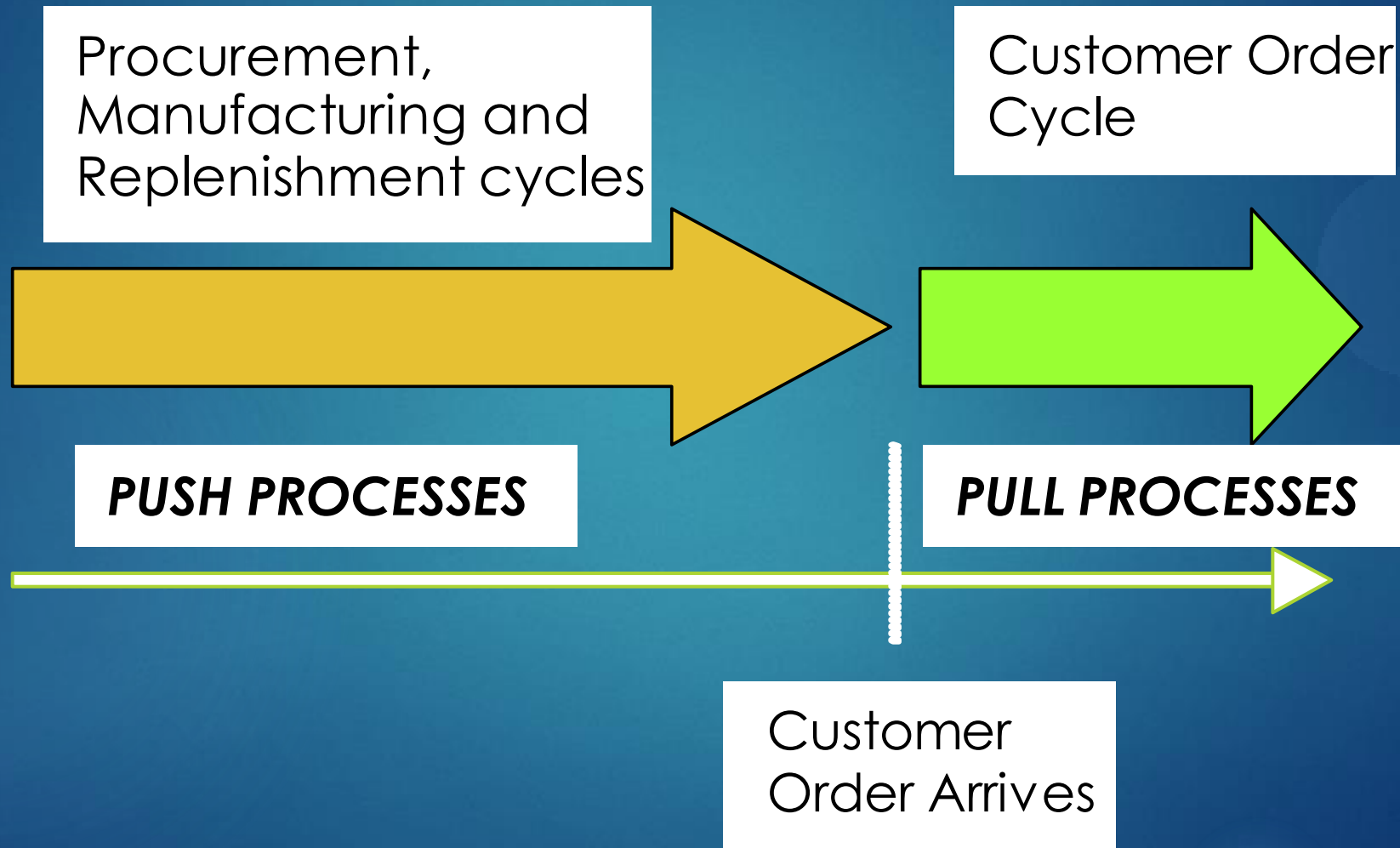
The Customer Order Cycle sits at the interface between the customer and retailer and includes all processes for receiving and filling of customer orders: customer arrival, order entry, fulfillment, and receipt." (2)

a cycle view of the supply chain is useful when considering operational decision because it clearly specifies the roles of each member of the supply chain

Push/Pull View of Supply Chain Processes

- ▶ Supply chain processes fall into one of two categories depending on the timing of their execution relative to customer demand
- ▶ Pull: execution is initiated in response to a customer order (reactive)
- ▶ Push: execution is initiated in anticipation of customer orders (speculative)

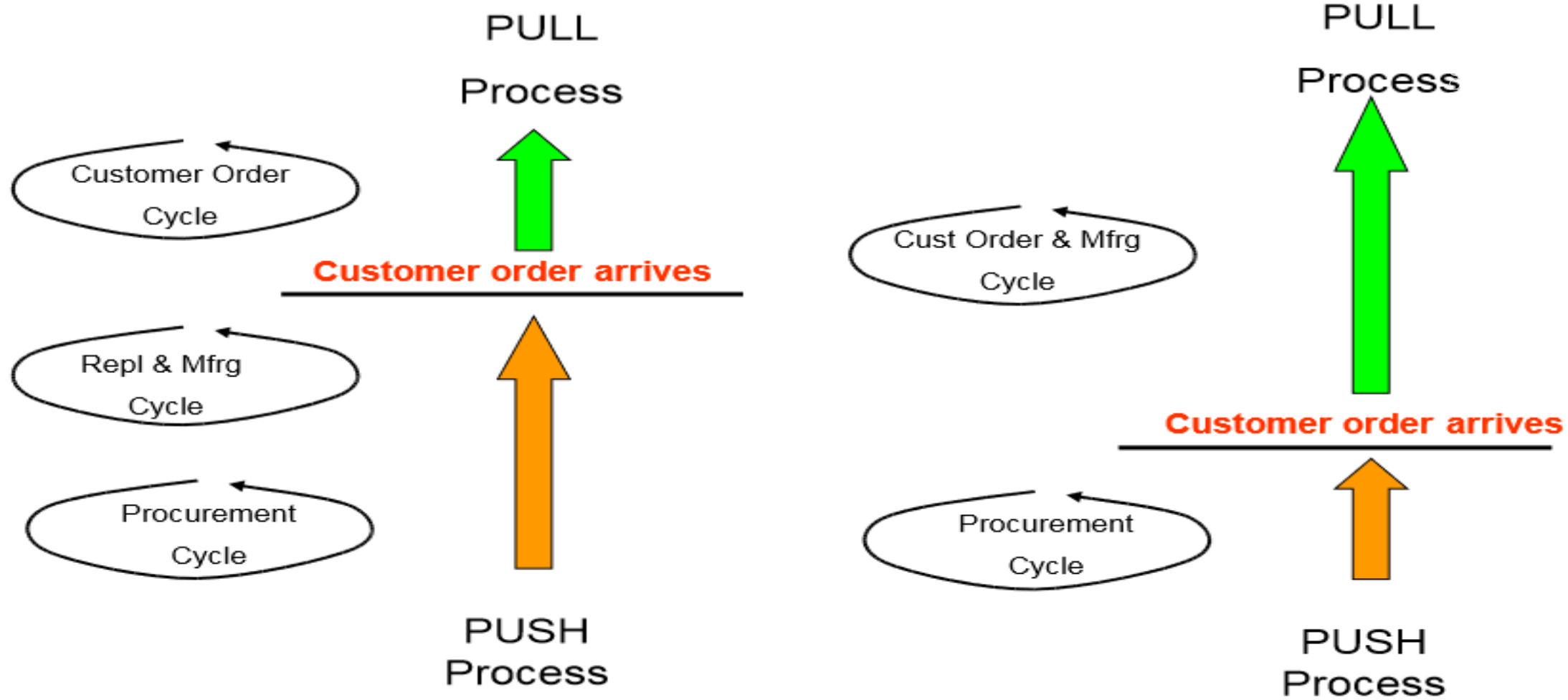
Push/Pull View of Supply Chains



Process View of a Supply Chain: Push – Pull View

LL Bean

DELL



Example; Dell

Build to order computer manufacturer like Dell – All processes in the customer order, replenishment and manufacturing cycle at Dell are classified as pull processes because they are initiated by customer arrival.

Dell, however, does not place component orders in response to a customer order. Inventory is replenished in anticipation of customer demand. All processes in the procurement cycle for Dell are thus

Push/Pull View of Supply Chain Processes

Pre

- ▶ Useful in considering strategic decisions relating to supply chain design
 - more global view of how supply chain processes relate to customer orders
- ▶ The goal is to identify an appropriate push/pull boundary such that supply chain can match demand and supply effectively.

Pitfalls and opportunities in a Supply Chain

Pitfalls

- ▶ Cost Control: while being responsive
- ▶ Planning and Risk Management
- ▶ Supplier / Partner Relationship Management: coordination
- ▶ Globalization:
- ▶ Shorter lead time, less inventory and better throughput
- ▶ Access to latest Technology
- ▶ Increased Regulatory Mandates
- ▶ Matching of Supply With Demand

Opportunities

- ▶ Players Taking The “First – Mover Advantage”
- ▶ Increasing Technology Adoption: cost control, information mgmt
- ▶ Online Retailing: removing stages and access of large number of customers
- ▶ Forecasting: collaboration with other stages of scm
- ▶ Customer Service: better customer service by managing scm activities

Logistic management

- ▶ Logistics management is a supply chain management component that is used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information, goods and services from origin to destination. Logistics management helps companies reduce expenses and enhance customer service.
- ▶ The logistics management process begins with raw material accumulation to the final stage of delivering goods to the destination

Logistics management involves numerous elements, including:

- ▶ Selecting appropriate vendors with the ability to provide transportation facilities
- ▶ Choosing the most effective routes for transportation
- ▶ Discovering the most competent delivery method
- ▶ Using software and IT resources to proficiently handle related processes

Logistic management

'Logistics' typically refers to activities that happen inside or between organizations in order to move items from one point to another'

FLOW OF LOGISTICS

- ▶ Flow of Materials
- ▶ Merchandise Flow
- ▶ Money Flow
- ▶ Information Flow

WELLIS THIS LOGISTICS ?



Prepared By: Pree Rakhal



ACTUALLY THIS IS LOGISTICS.



Assignments

► Old questions

Thank You!!!