

P4

Quick and Good

E352 – Retail Logistics



SCHOOL OF
ENGINEERING

What is Quick Response (QR)?



- A mode of operation in which a manufacturing or service industry strives to provide products and services to its customers in the **precise quantities**, **varieties** and **within the time-frames** that those customer require



(Gunston and Harding, 1987)

Driving Components of QR



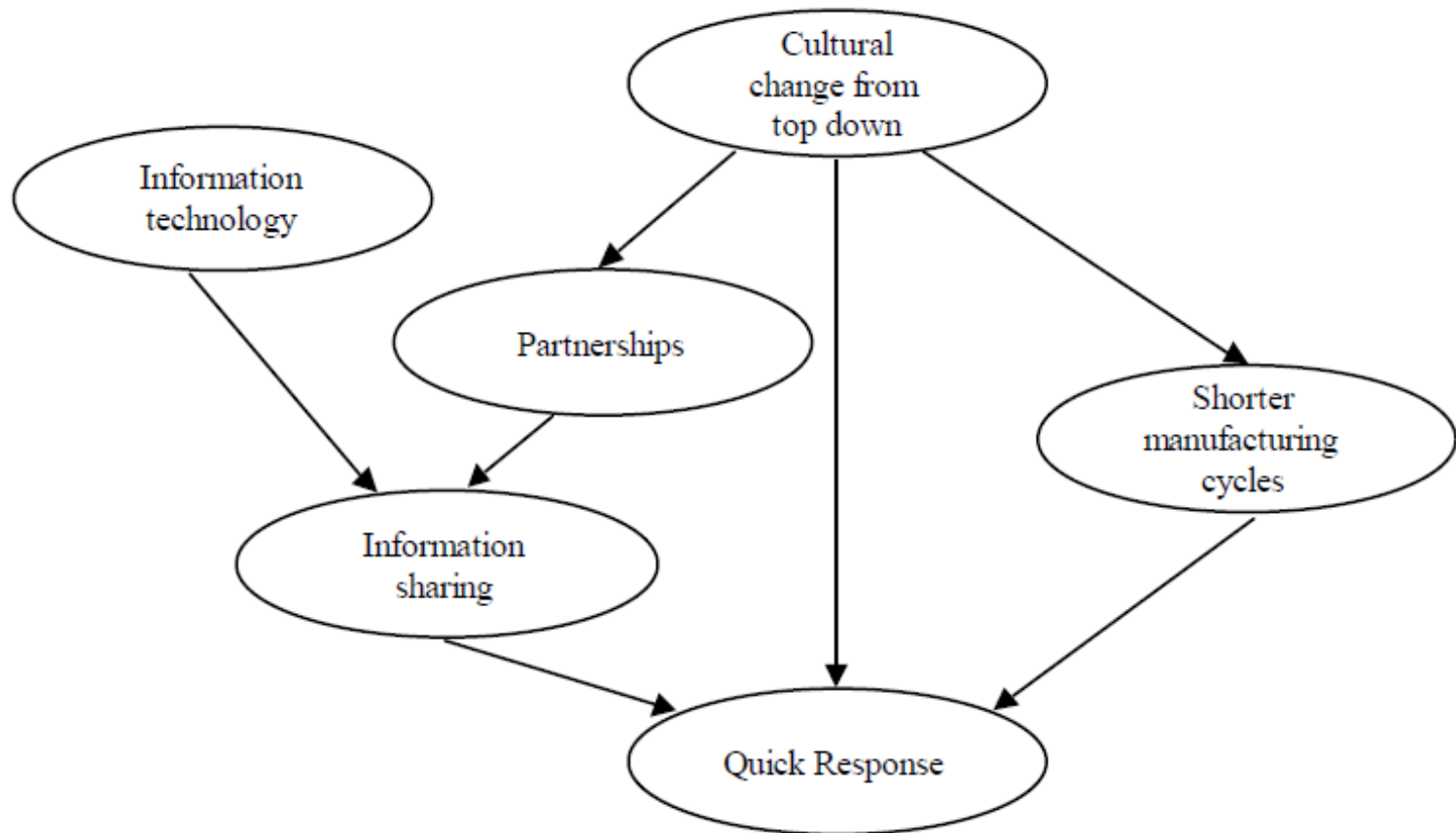
- Leadership and vision from top management
- Partnership between customer and supplier
- IT enabling information sharing between partners
- Reducing manufacturing time



Elements of QR



Source: Blackburn (1991)



Principles of QR



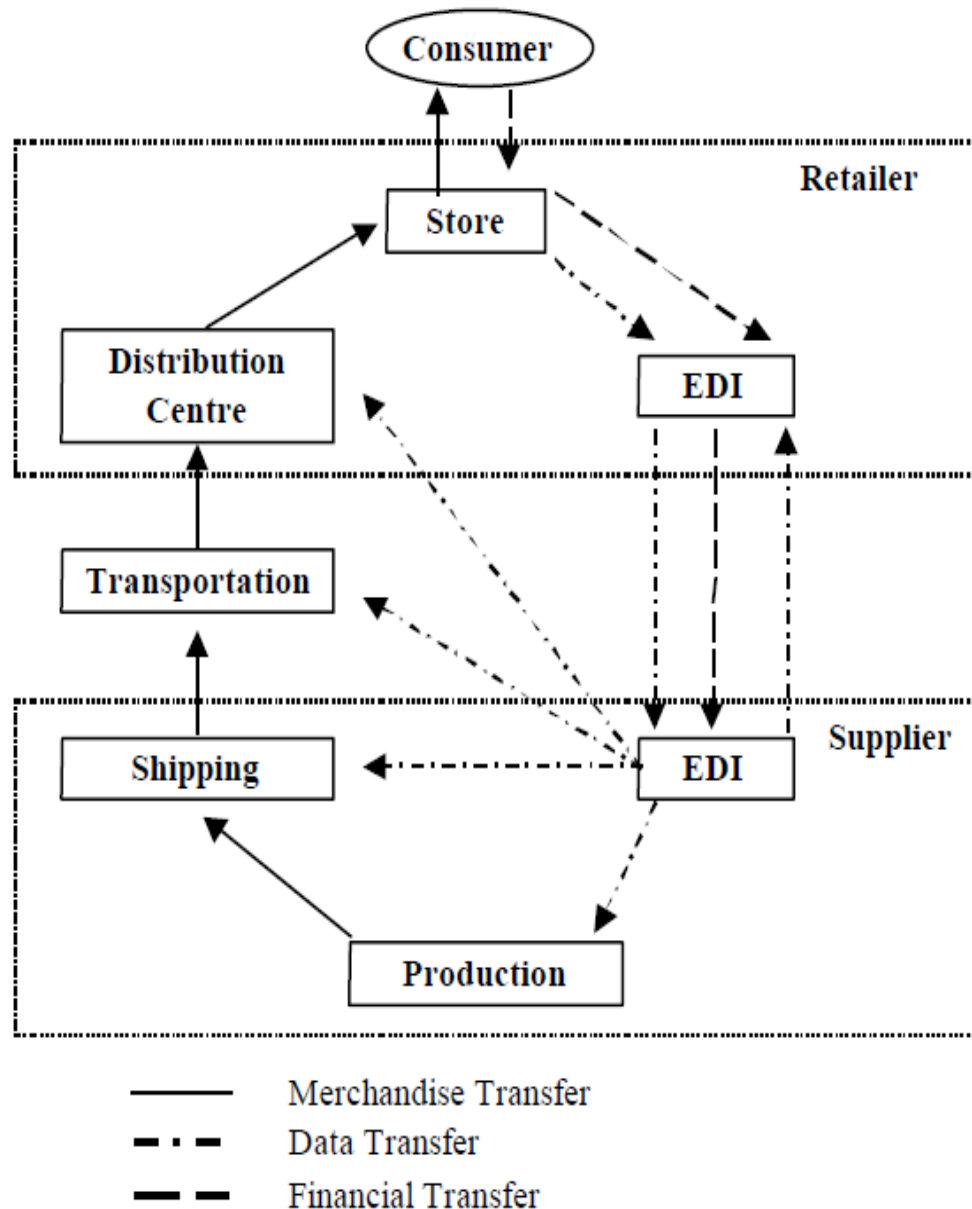
- QR is aimed at reducing the cost of operating a supply chain while satisfying the requirements of the ultimate customers
- QR depends on the integration of all the parts-raw materials, manufacturing and retailing into one consumer-responsive whole.
- QR requires the highest standards of product quality at all states to allow significant reductions in safety stocks and specification-testing times.

Principles of QR (continued)



- QR demands frank and open dialogue between supplier and customer and relies on high levels of trust.
- QR is driven by comprehensive and rapid information transfer between the supply chain sectors, from retail point-of-sale back upstream.
- QR calls for the use of up-to-date hard and soft technologies to minimize work in process, offset the added costs of increased product diversity and to maximize responsiveness to the customers.

Merchandise, Data & Financial Transfer with QR



Importance of QR in retail



- Quick Response aims to respond rapidly to the customers at a minimal cost. This is important in retail where the customer satisfaction is the most important, particularly in basic goods, seasonal goods and fashion goods.
- It integrates information, production, & logistical system that obtain real time information on consumer actions.
 - Develop new or modify products
 - Manage channel-wide inventory levels
 - Lower total channel costs
 - Enable efficient production & distribution scheduling



❖ Point-of-sale tracking at retail

- To capture real-time sales data in the stores. These data can be shared among the whole supply chain to decide the production and replenish plan.

❖ Flexible short-run process operations

- To have fast response to the real-time customer requirements.
- Small batch of goods can be produced with higher frequency.
- Postponement of final manufacturing process can be adopted
 - Result in less inventory and faster response to changes

Operational practices in QR (continued)

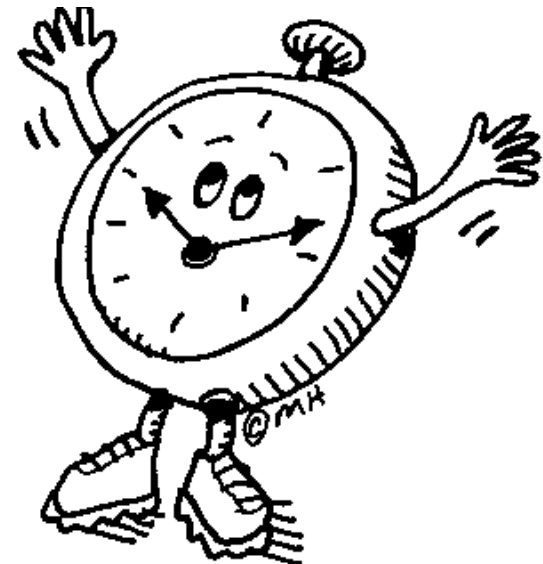


❖ Frequent buyer reorders

- To replenish the stores as soon as possible.
- To reduce inventory in the stores or warehouse.

❖ Just-in-time(JIT) shipping

- To have more frequent shipments and avoid out-of-stock cases.
- Can have direct shipment from the factory to the stores.



Information Technologies That Support QR



- Universal Product Code/European Article Number compliance
 - An unique item number (bar-code) for each different product is essential if a global, consumer-driven POS-controlled system is to be established
- In US and Canada, universal product code (UPC) is used. In other countries, a 13-digit European Article Number (EAN) symbology is used

Information technology (continued)



- Electronic Data Interchange (EDI) and Valued Added Network (VAN)
 - In addition to bar-code, information that can be conveyed electronically includes **orders**, **invoices**, **shipping notices** and a variety of other documents
 - EDI system allows manufacturers, suppliers and retailers to send and share these documents and information in a faster and more securer way
 - EDI is transmitted on the special valued-added network

Benefits of Quick Response



- Reduce lead time
 - By eliminating the need for paper transactions using the mail, overnight deliveries, or even fax. EDI in the QR system reduces lead time. Shorter lead time reduces the need for inventory because the shorter the lead time, the easier it is to forecast demand. Then the retailer needs less inventory
- Reduced inventories
 - The retailer can make purchase commitments or produce merchandise closer to the time of sale, its inventory investment is reduced. Stores need less inventory because they're getting less products on each order, but they receive shipments more often. Inventory is further reduced because the retailer isn't forecasting sales so far into the future.

Benefits of Quick Response (continued)



- Higher customer satisfaction
 - The ability to satisfy customer demand by being in stock also increases in QR as a result of the more frequent shipments. It's less likely that the store will be out of stock before the next shipment arrives
- Reduce cost
 - Retailers can reduce logistics expenses by cross-docking or negotiating a direct store delivery system. Cross-docking eliminates storage and some handling costs. Direct store delivery eliminates all distribution centre costs and transportation costs from the DC to stores

Benefits of Quick Response (continued)

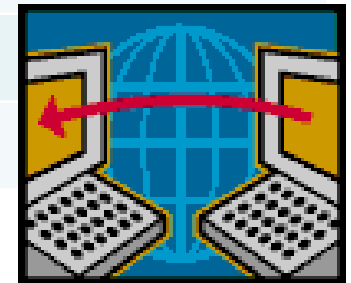


Retailer QR Benefits	Supplier QR Benefits
Reduced costs	Reduced costs
Reduced inventories	Reduce lead time
Faster merchandise flow	Frequency of orders
Higher customer satisfaction	Closer ties to retailers
Increase sales	Ability to monitor sales
Competitive advantage	Competitive advantage

Technological & Organizational QR Development Stages



Stage 1	SKU level planning
	Bar-code
	Use of EDI
Stage 2	Electronic communication for replenishment
	Cross-docking
	APR (Automatic Replenishment Programme)
	JIT delivery
Stage 3	Real-time sales data sharing
	Stock-out data sharing
	MRP (Material Resource Planning)



Case study: Zara



- Zara, located in Galicia, Spain, is now the third-largest clothing retailer in the world, with profits growing at 30 percent per year. It operates over 500 stores in 31 countries
- Zara's rapid growth is based on the dual objectives of **working without stocks** and **responding quickly to market needs**
- The process starts with the store managers, who report daily on what customers are buying, returning, and asking for but not finding in the company's design rooms to Spain



Case study: Zara (continued)



- The headquarter can response fast to these information. New products are designed and produced. They are distributed to the stores within short time period.
- Because Zara controls the entire production and design process, it can make products in very small lots. Instead of shipping new products once a season like many other fashion retailers, Zara makes deliveries to each of its store every few days.
- As a result, most of the customers will get what they want from the Zara stores. And new products can be updated ASAP.



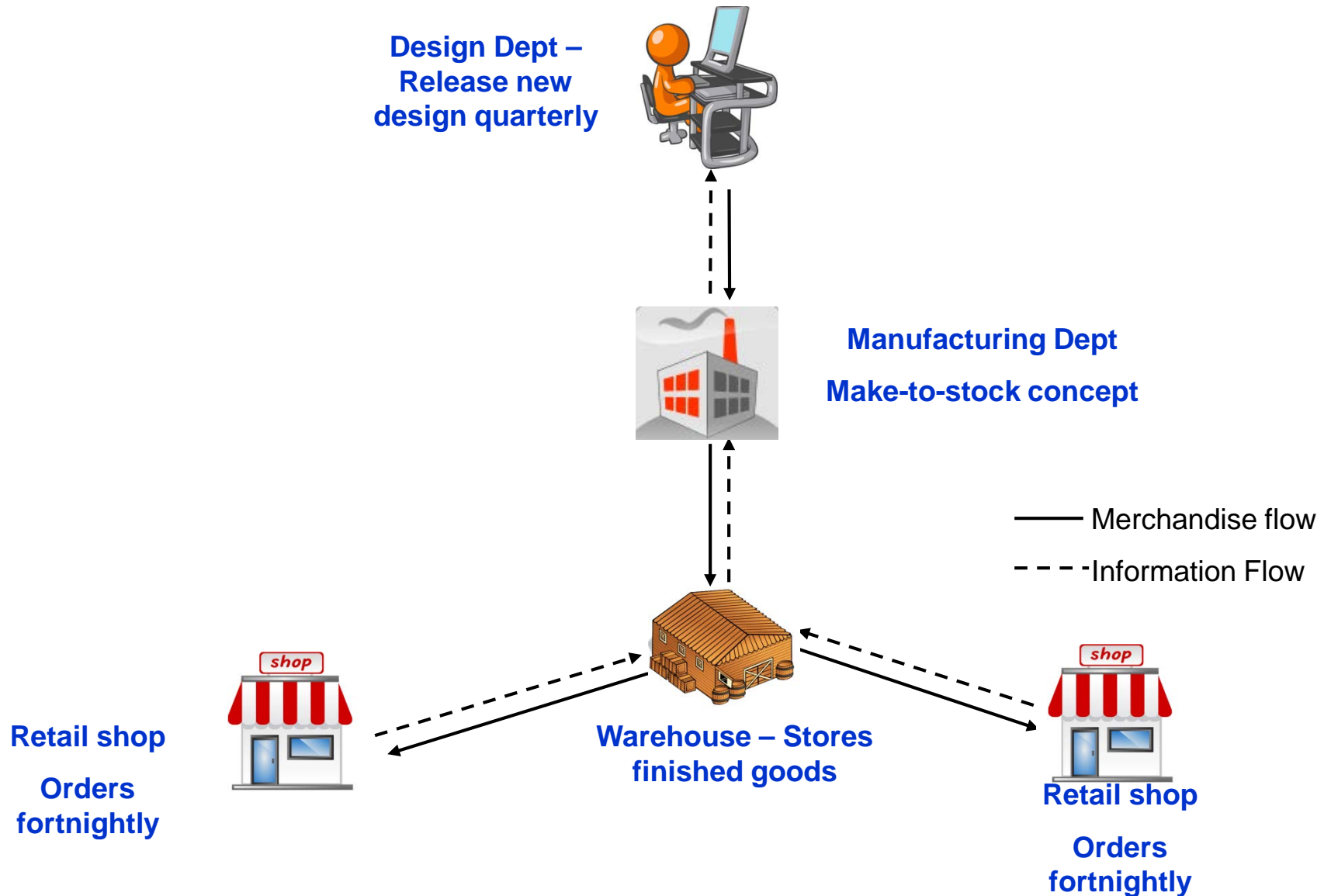
What we know from today's problem



- New designs are developed quarterly
- Manufacturing dept uses make-to-stock concept and only manufacture the new design once with large quantity
- Retail store orders monthly only if they have spaces in their store to keep the store
- Communication line between functions are only to their immediate upstream and downstream.



World of Bags Current Process Flow



Suggested Solution



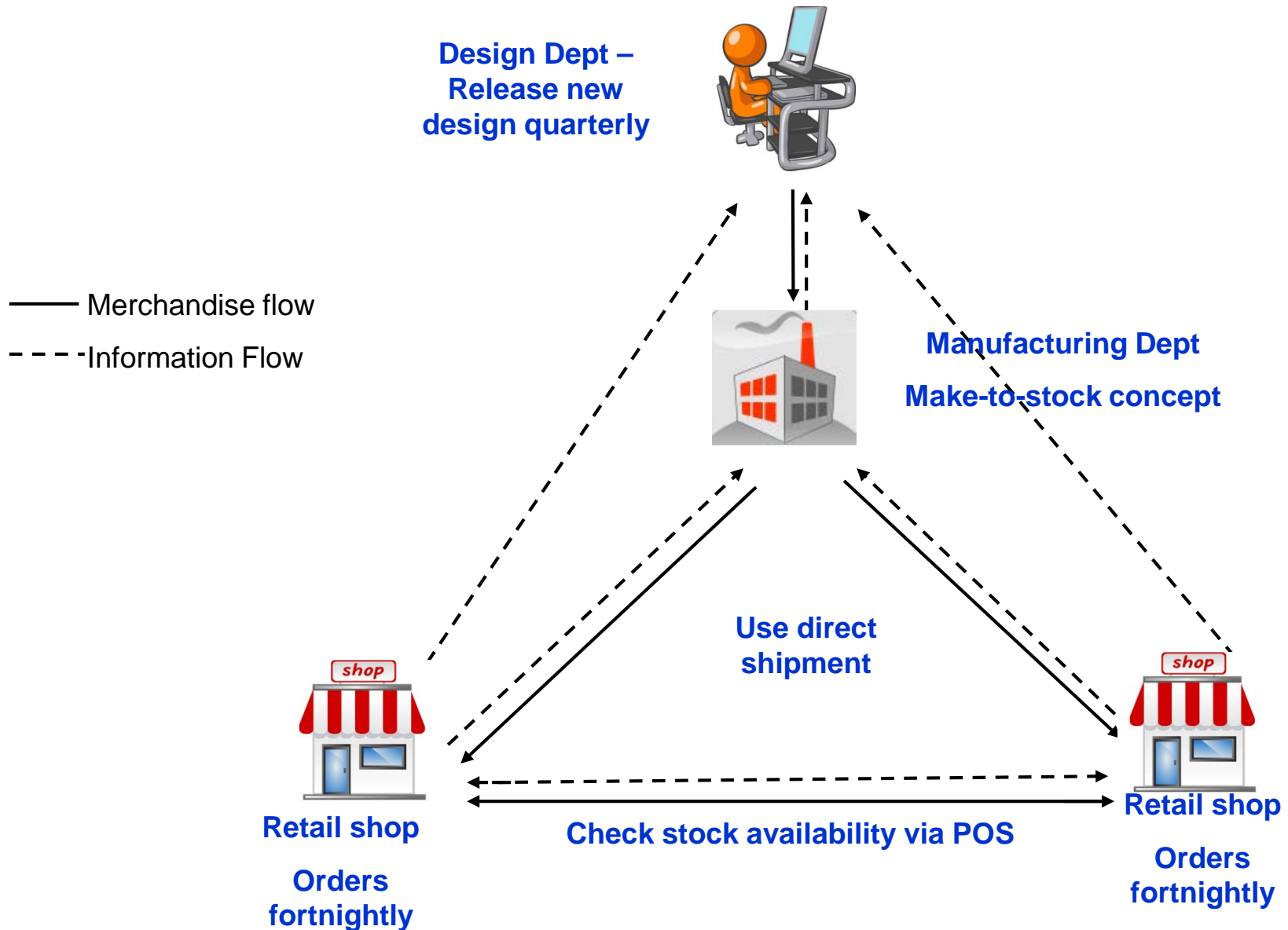
- Adopt QR methodology
- This entails business re-engineering
- For QR to work, World of Bags must look into the followings:
 - Improve line of communication. Sales data and trends gathered from the retailers should be shared to all functions.
 - Introduce POS, EDI to transfer the sales data
 - Design team must capture the needs and trends of customers and make changes quickly. They should communicate more with the retail end and even the end customers.

Suggested Solution



- For QR to work, World of Bags must look into the followings - cont
 - Plan the production fast based on the sales data
 - Production must be able to adopt small production size. Should not produce large quantity and store
 - Using postponement
 - Less stock will be needed
 - Faster reaction to customers' needs
 - Use direct shipment to eliminate the inventory in the warehouse
 - Increase shipment frequency to reduce the store inventories and maintain product currency.

World of Bags Process Flow after QR



Learning Outcomes



- Explain the definitions and functions of QR
- Describe the importance and benefits of QR
- Investigate various QR adoption practices

