

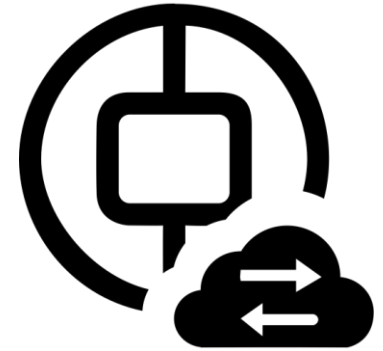
# COURSE: LOGISTICS MANAGEMENT

## Theme : THE SYNCHRONOUS SUPPLY CHAIN



Lecturer: Nargiza Nosirova

## THE SYNCHRONOUS SUPPLY CHAIN



- The extended enterprise and the virtual supply chain
- The role of information in the virtual supply chain
- Laying the foundations for synchronisation
- 'Quick response' logistics
- Production strategies for QR
- Logistics systems dynamics

supply chains

the chain tends

synchronization

shared  
information.

demand data  
and forecasts

production  
schedules

new product  
launch details

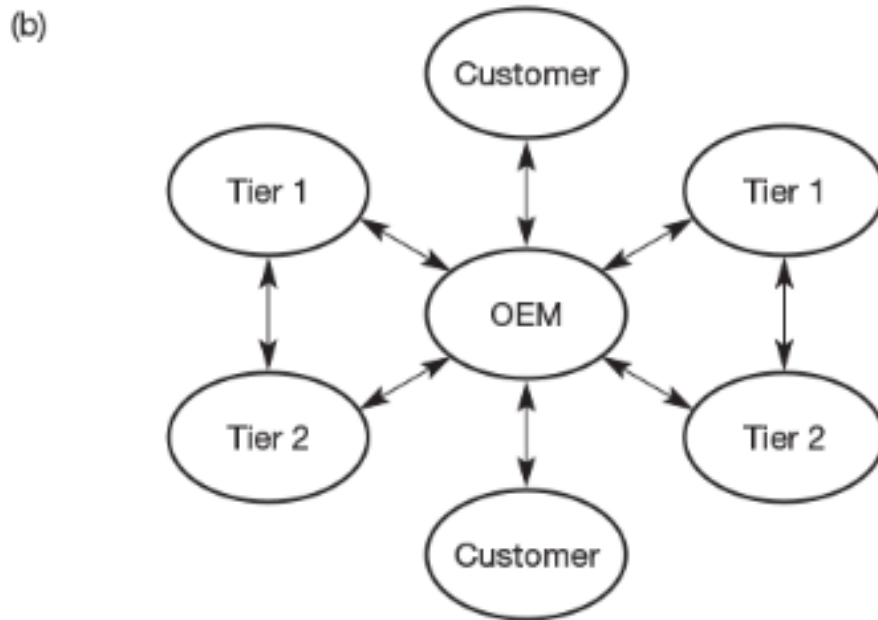
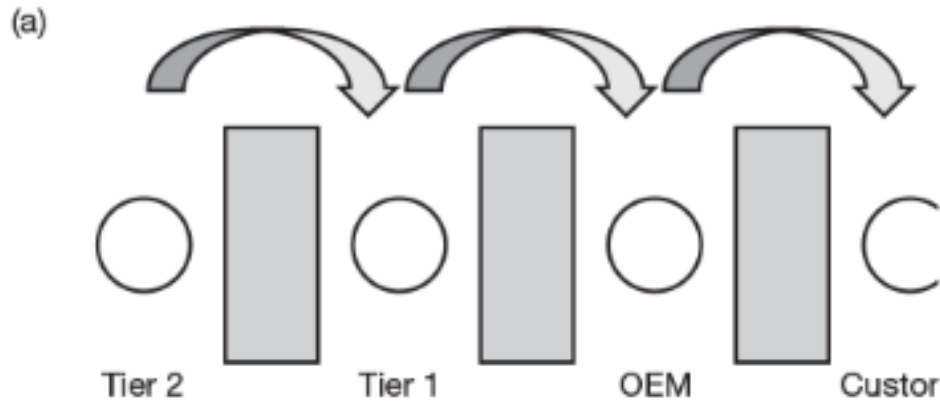
bill of material  
changes.

*process  
alignment*

collaborative  
working

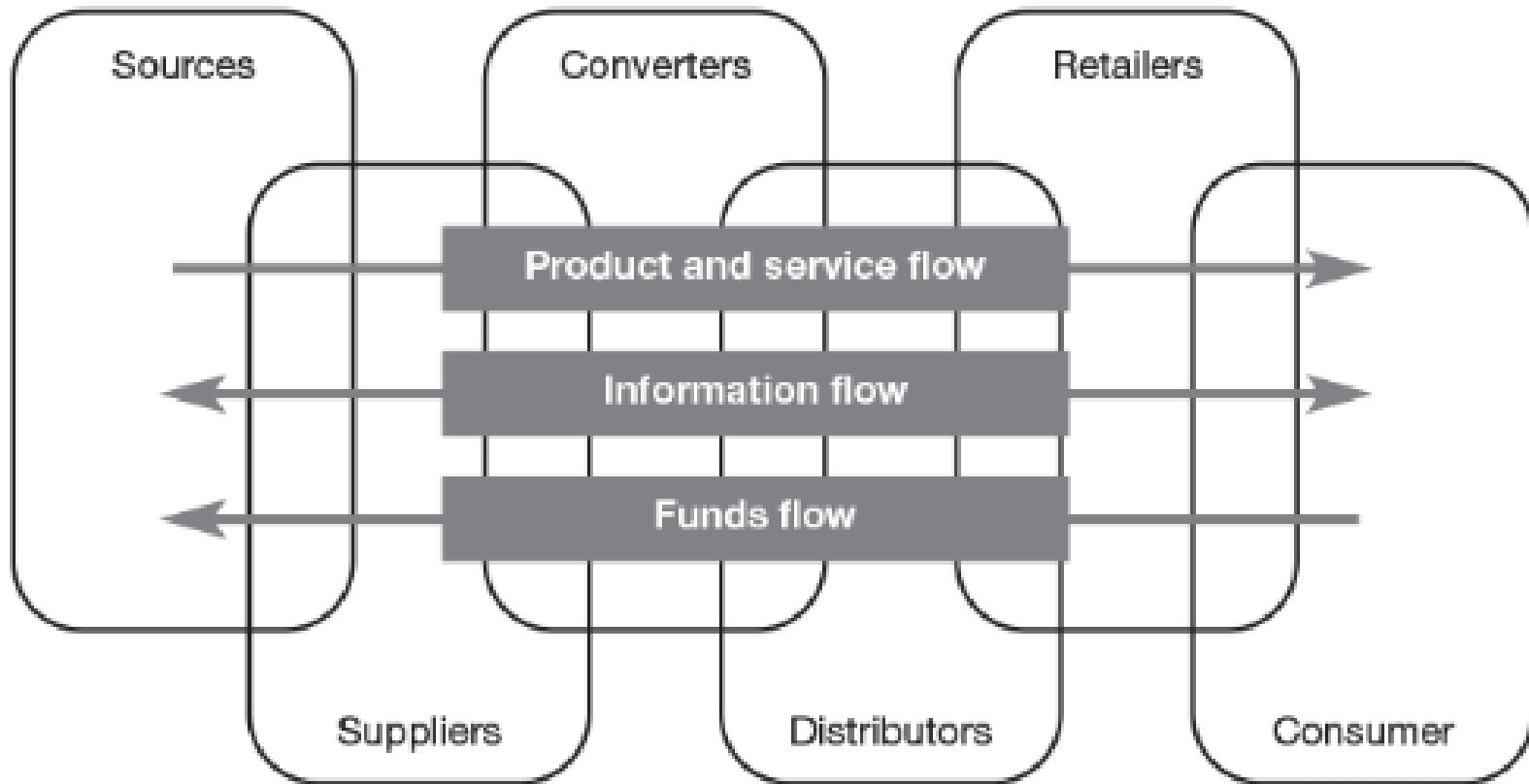


**Figure 8.1 Achieving synchronisation through shared information: (a) before synchronisation; (b) after synchronisation**

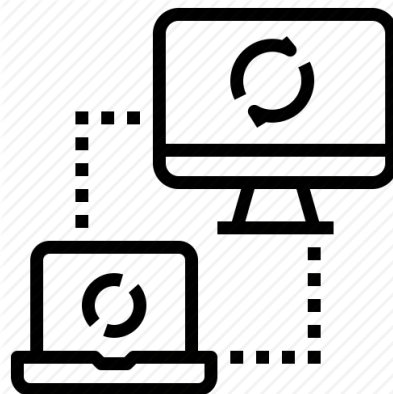


Key:  
OEM = Original equipment manufacturer  
Tier 1 and 2 = Supplier echelons

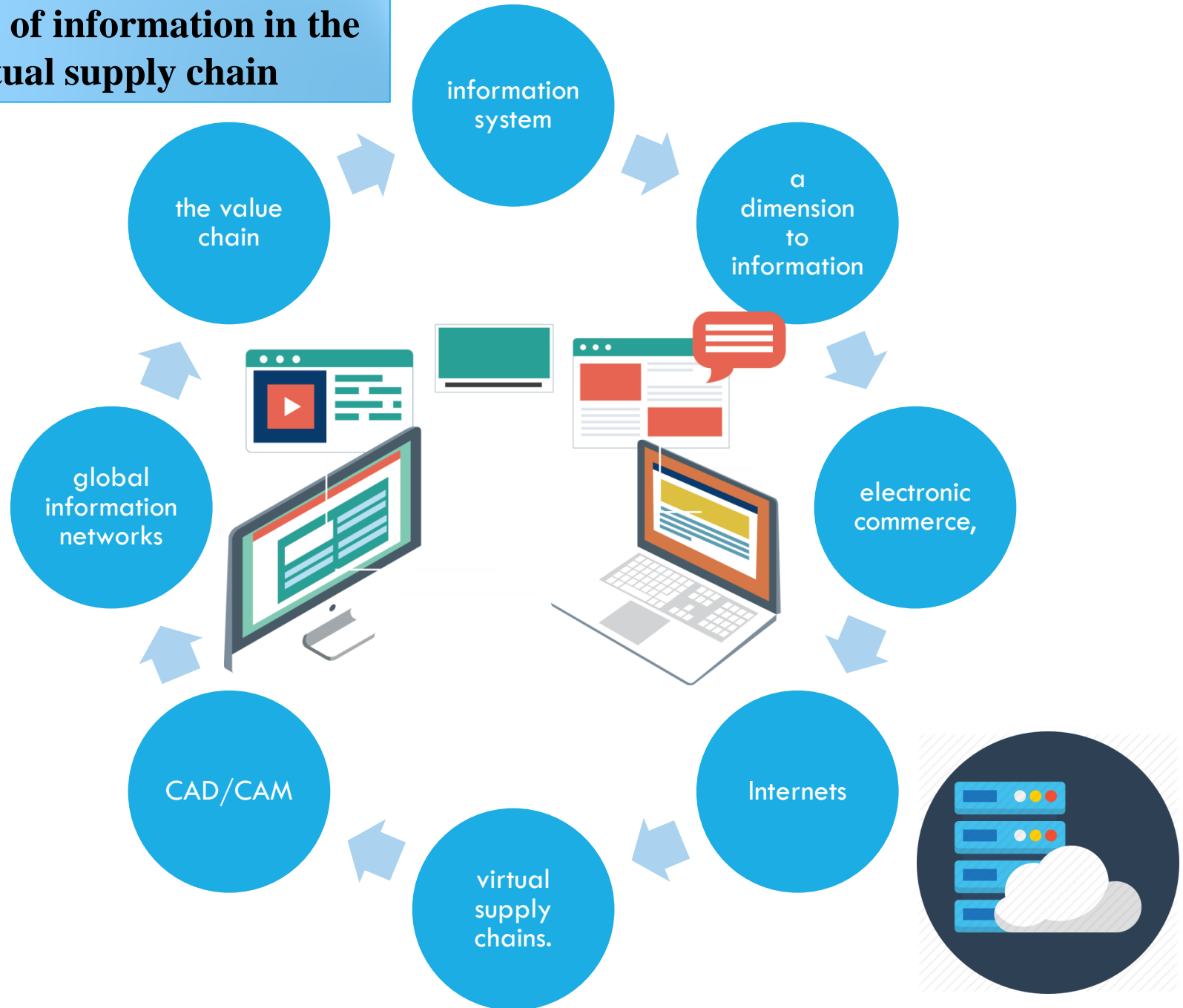
**Figure 8.2 The extended enterprise and the virtual supply chain**



*Source: A.T. Kearney*



# The role of information in the virtual supply chain



**Figure 8.3 Internet applications and the supply chain**

**Customer service**

- Information and support products and services
- Electronic help desk
- Mass customisation and order processing

**Marketing channel**

- Public relations and advertising
- Market research and test
- Electronic mails and catalogues

**Information retrieval**

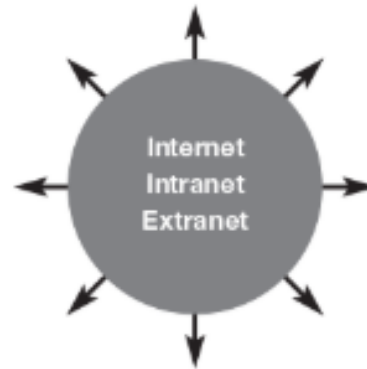
- Online news
- Statistics, reports and databases
- Data mining
- Competitive analysis

**Supplier relationships**

- Logistics
- Product search
- Electronic data interchange
- Ordering and payment
- Supply chain integration

**Financial transactions**

- Selling and payment
- Managing accounts
- Credit card payments



**Electronic distribution**

- Product, data, information

**Internal communications**

- Complete internal, external, vertical and horizontal communications
- Groupware
- E-mail
- Collaboration
- Knowledge transfer
- Telecommuting

**Human resources and employee relations**

- Job opening posting
- Expert search
- Employee training and support
- Distance learning

**Sales force automation**

- On-site configuration and order processing
- Sales process transformation

**Building strategic alliances**

- Newsletters, bulletin boards, discussion databases
- Sharing knowledge and experience

Source: A.T. Kearney





**Planning function**

- Stock management
  - By product/ customer
  - By location
- Demand forecasting
- Strategy planning



**Co-ordination function**

- Production scheduling
- Materials requirement planning
- Sales/marketing planning

**Database**

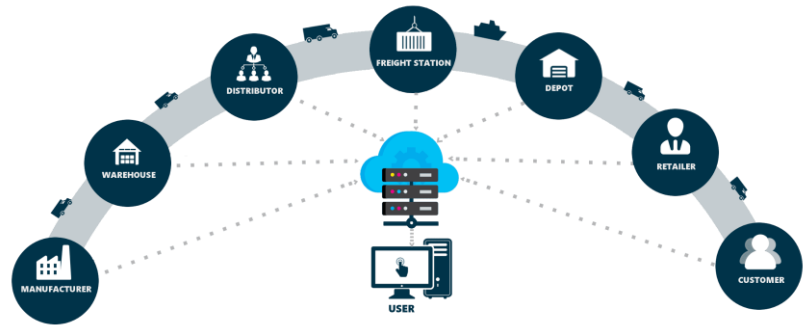
- External data
  - Customer orders
  - Inbound shipments
- Internal data
  - Production
  - Inventory

**Customer service communication function**

- Customer order status
- Inventory availability
  - By product
  - By stock location
- Outbound shipment status

**Control function**

- Customer service levels
- Vendor performance
- Carrier performance
- System performance

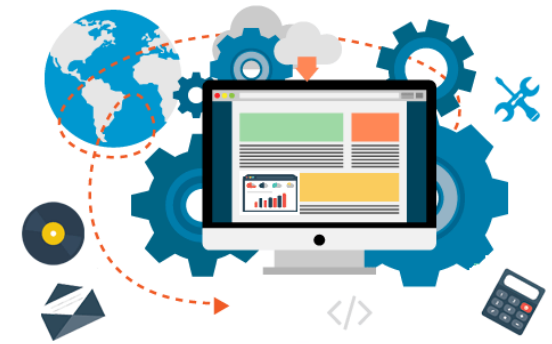
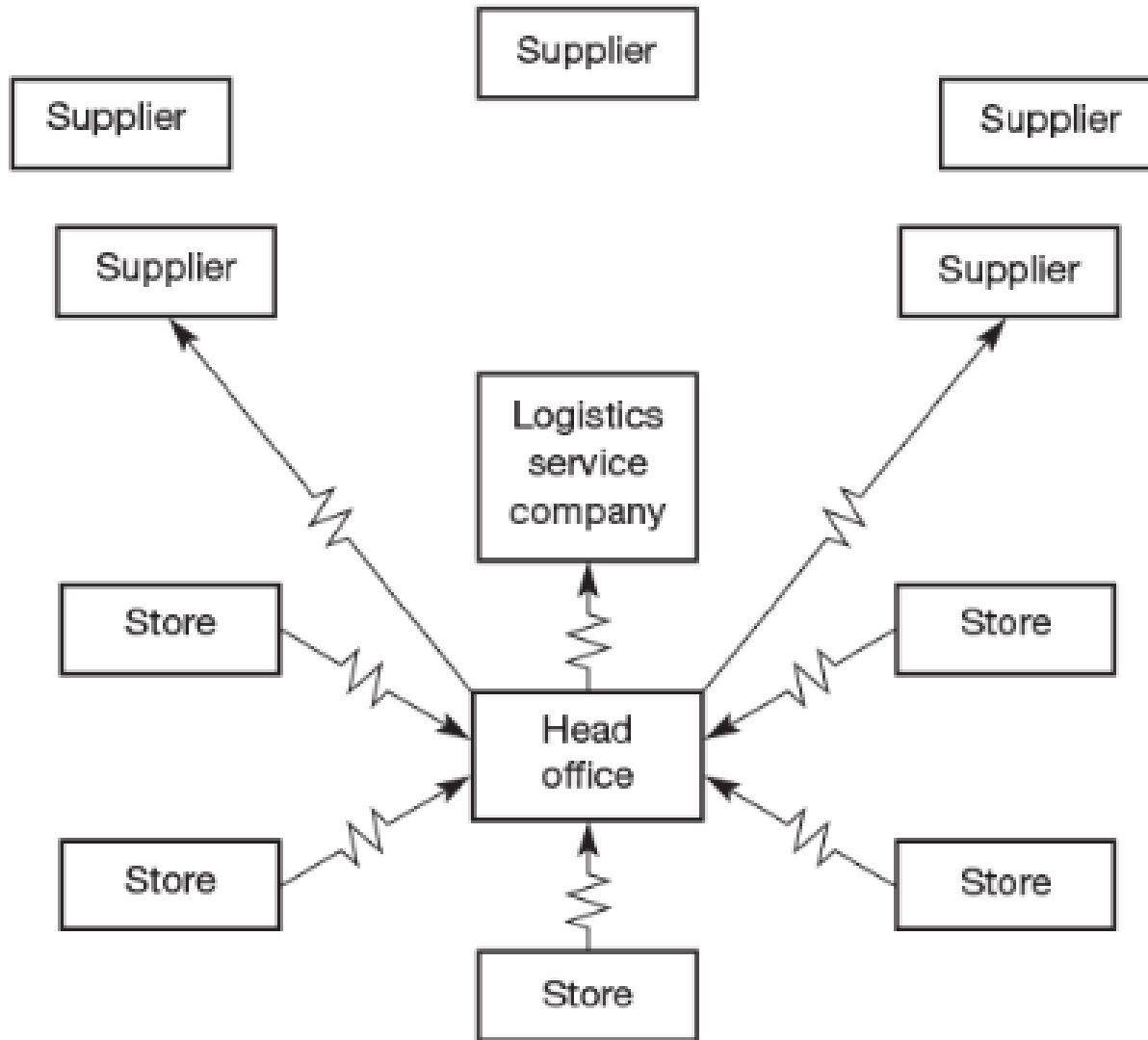


# SYNCHRONISED DELIVERY: HOW NISSAN MOTORS UK RECEIVES VEHICLE SEATS

## *Elapsed hours*

0.	Painted body passes to trim line in Nissan
	Precise vehicle specifications of next 12 vehicles transmitted by computer from Nissan to seat suppliers
	Supplier transfers information to picking lists
	Seat covers selected from range
1.	Covers prepared for assembly (in reverse order)
	Seat assembly from synchronised manufacture of sub-assemblies (frames, foams, finishers, plastic parts)
2.	Quality audit and load
	Delivery of seats to stock holding point by special purpose vehicle
	Stock to lineside
3.	Rear seats fitted followed by front seats (waiting stillages returned to empty wagon)
	Delivery frequency now every 15–20 minutes

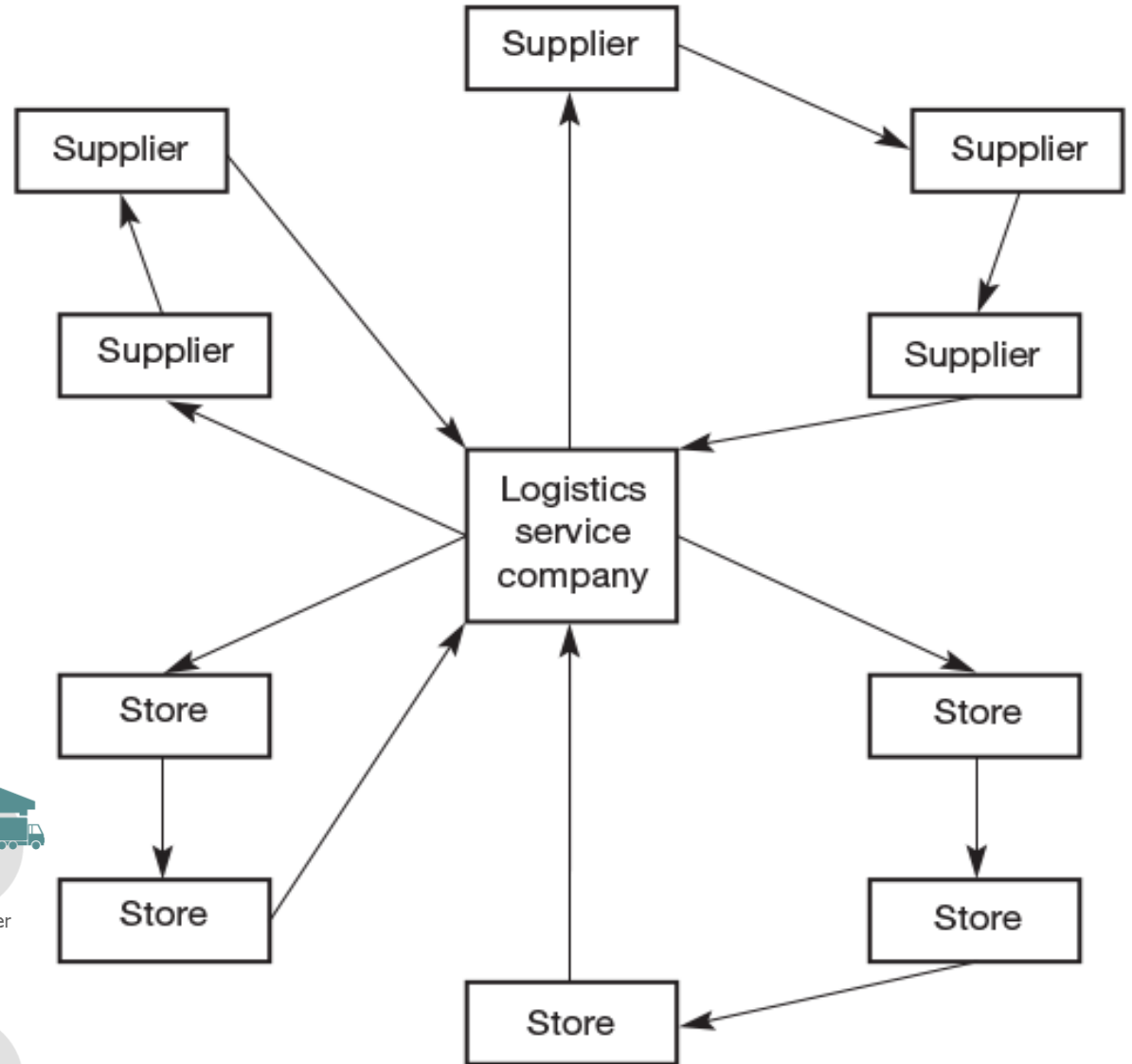
**Figure 8.5 Daily sales data drives the replenishment order system**



# QUICK RESPONSE' LOGISTICS

Scheduled  
pick-ups from  
suppliers

Transhipment  
centre



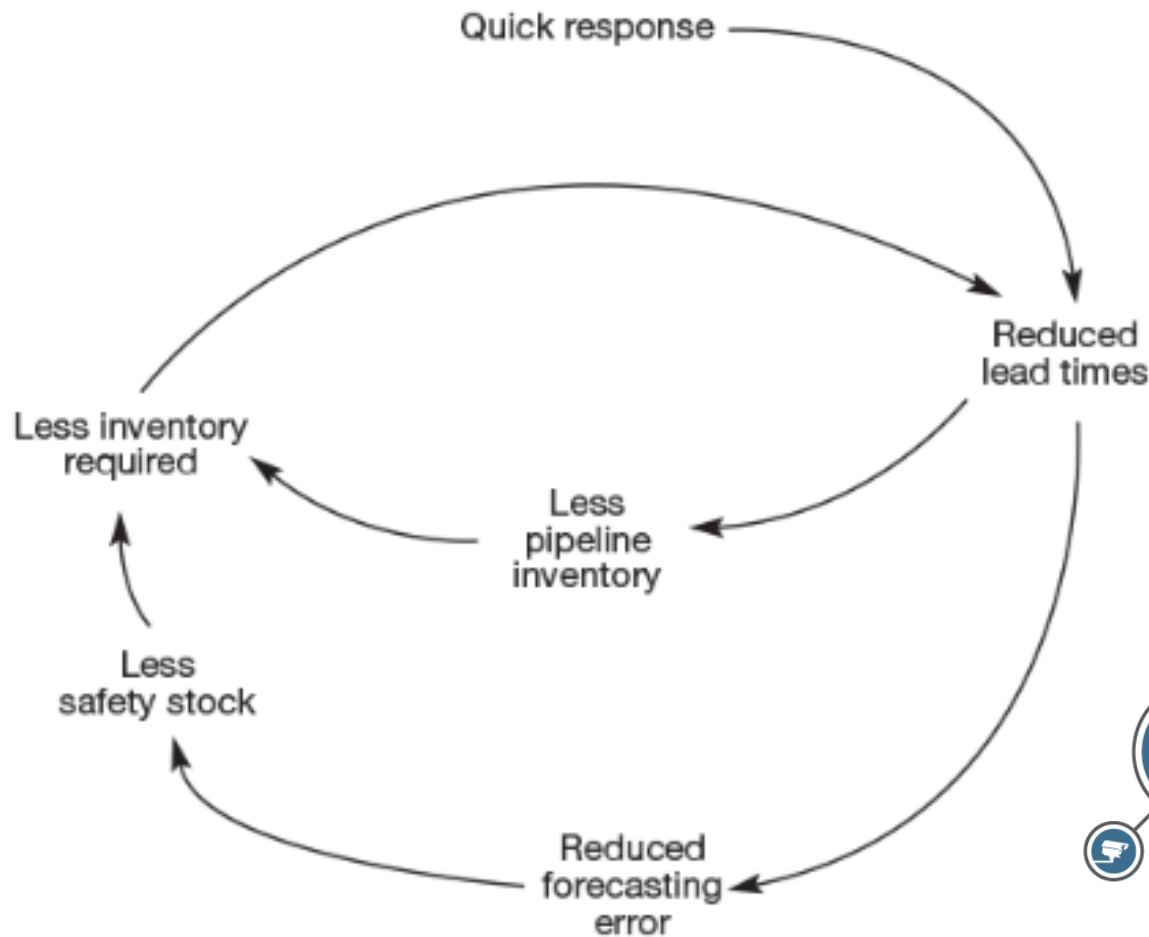


QR

EPOS  
systems

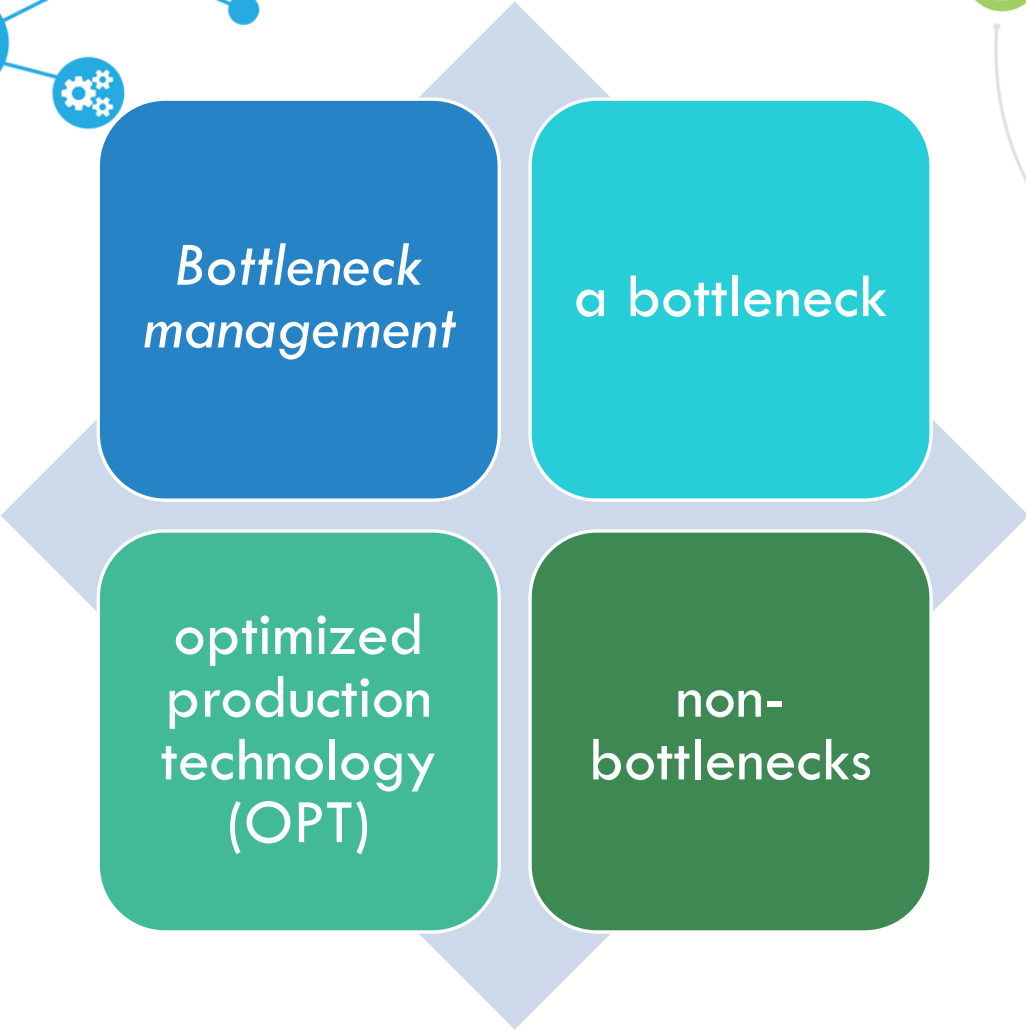


**Figure 8.7 Quick response system can trigger a ‘virtuous circle’ in logistics**

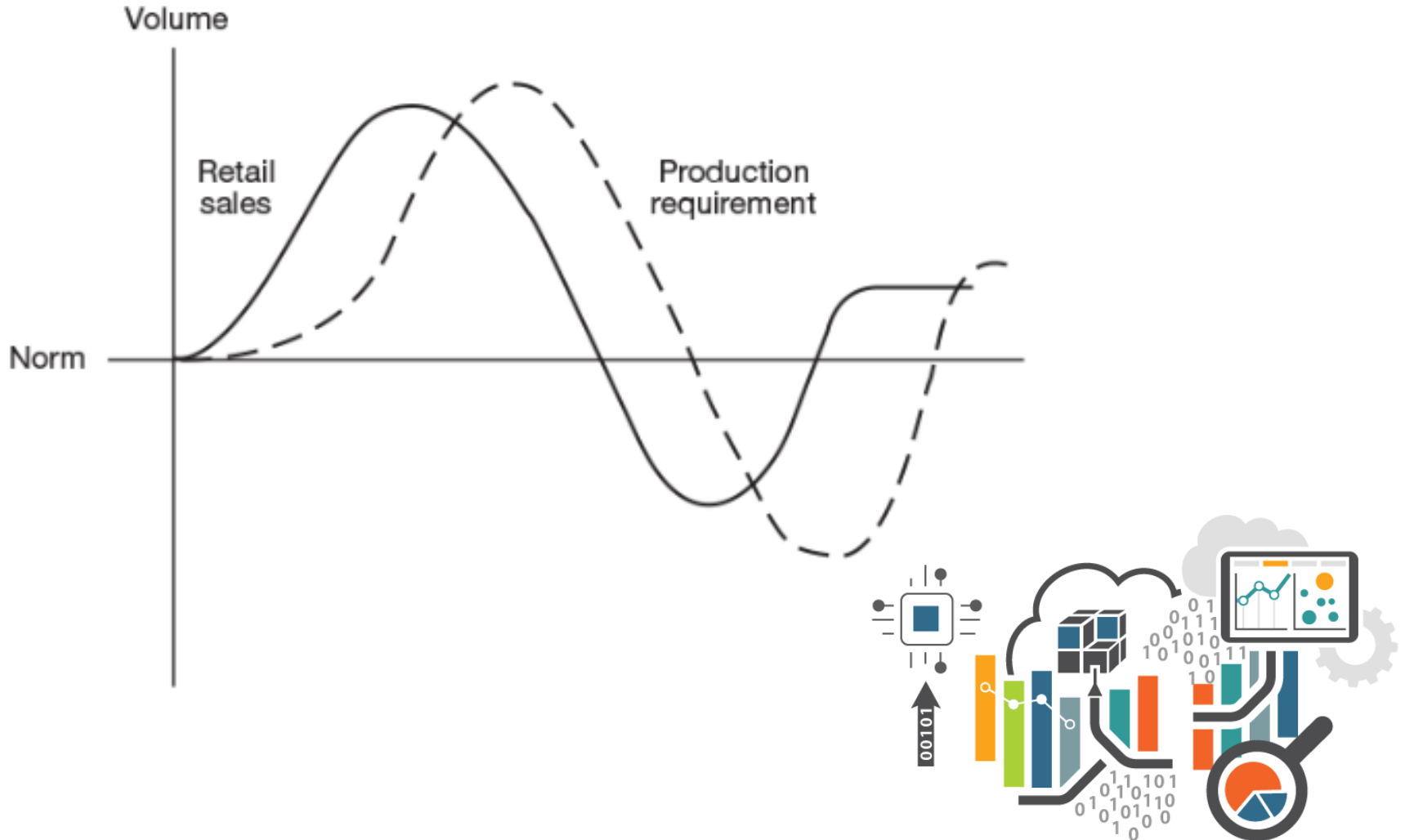




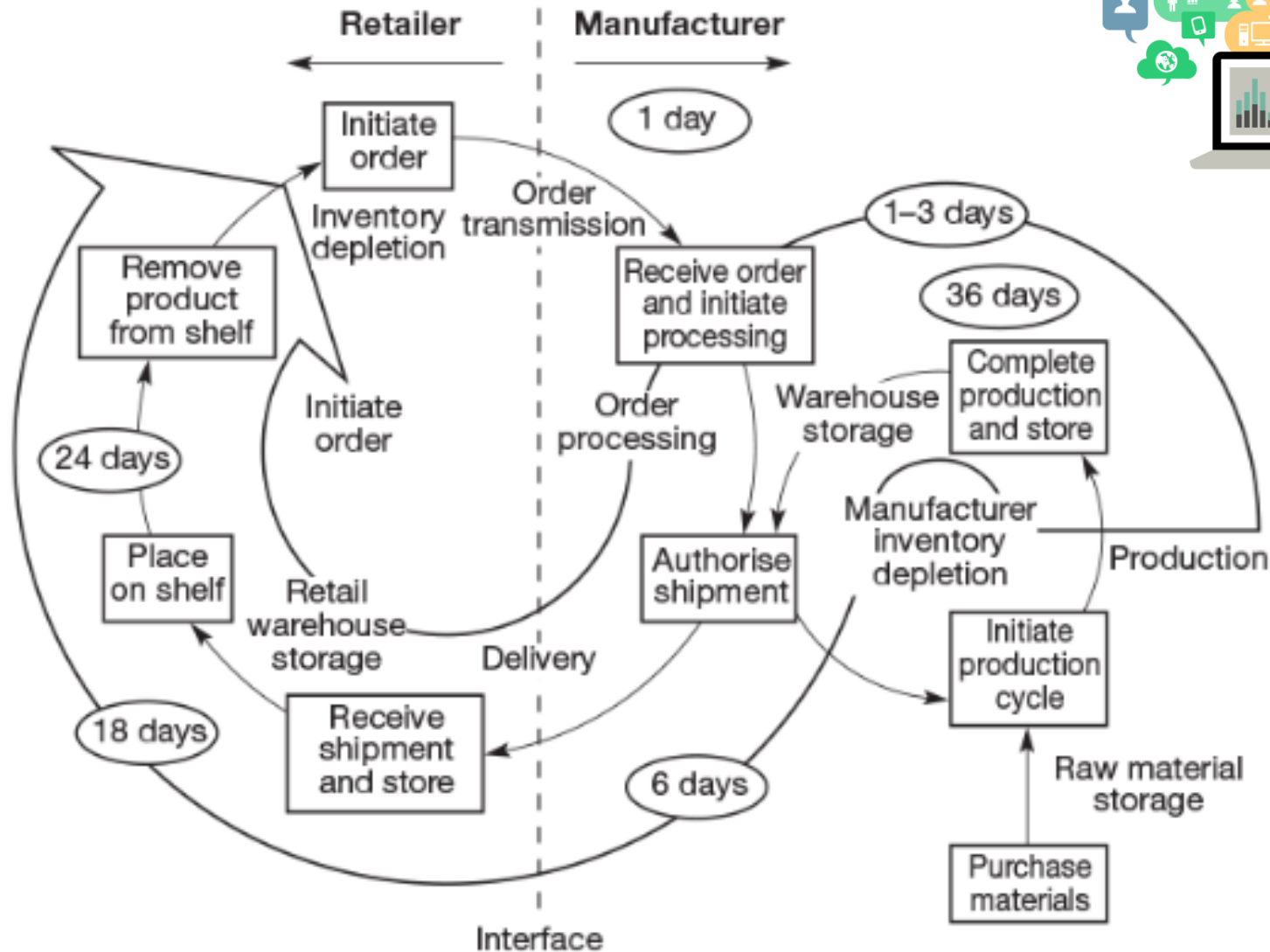
# LOGISTICS SYSTEMS DYNAMICS



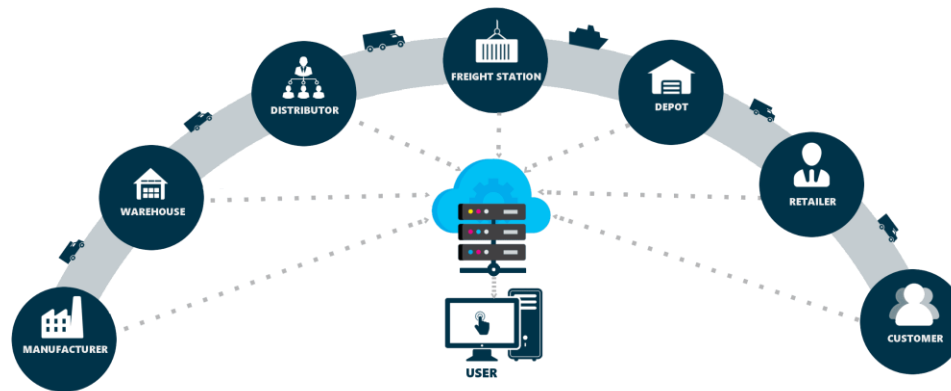
**Figure 8.8 The impact of promotional activity upon production requirement**



**Figure 8.10 Grocery industry product flow**

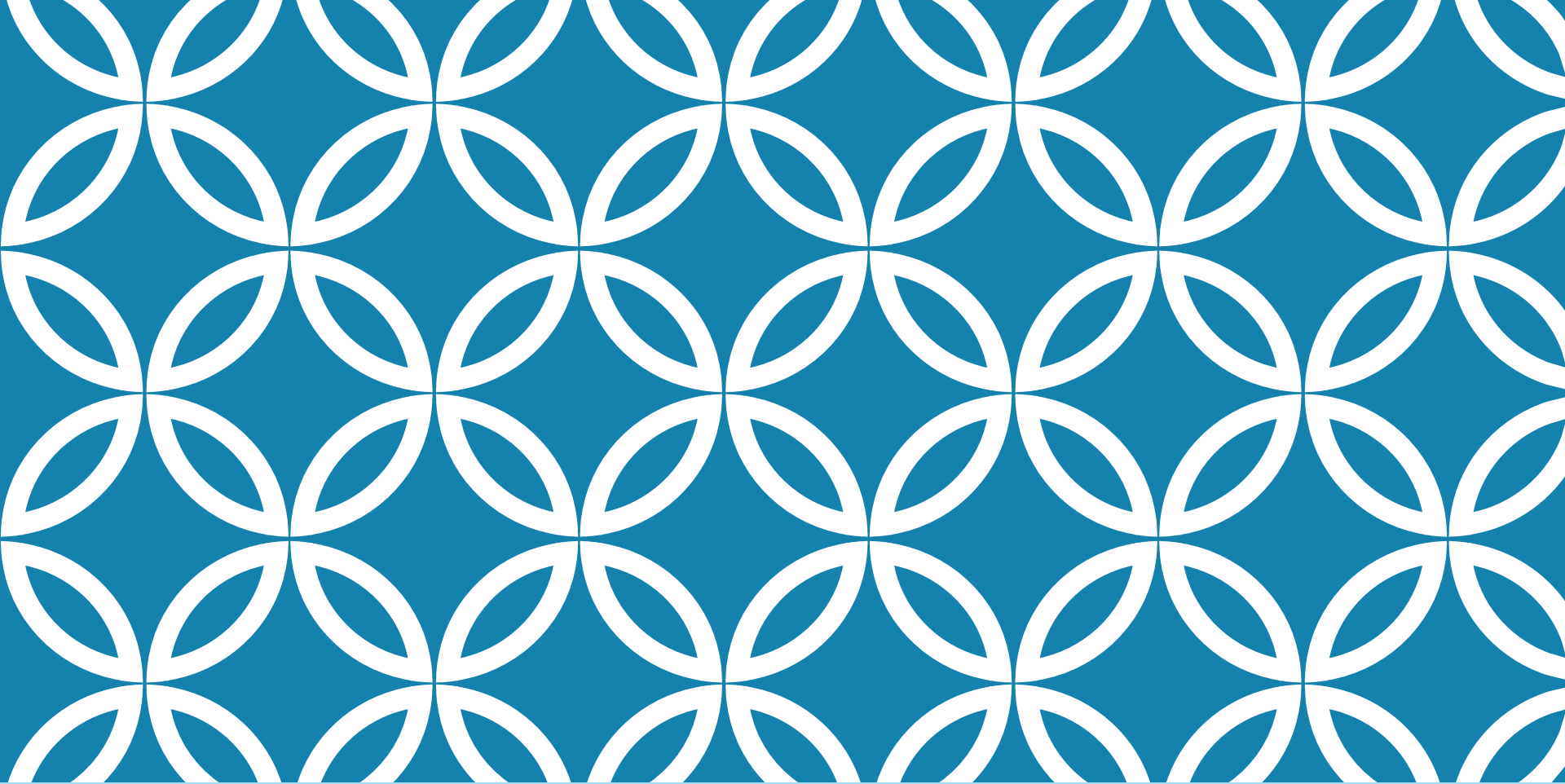


Source: Grocery Manufacturers Association of America



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**THANK YOU FOR YOUR ATTENTION**