Course: Logistics Management

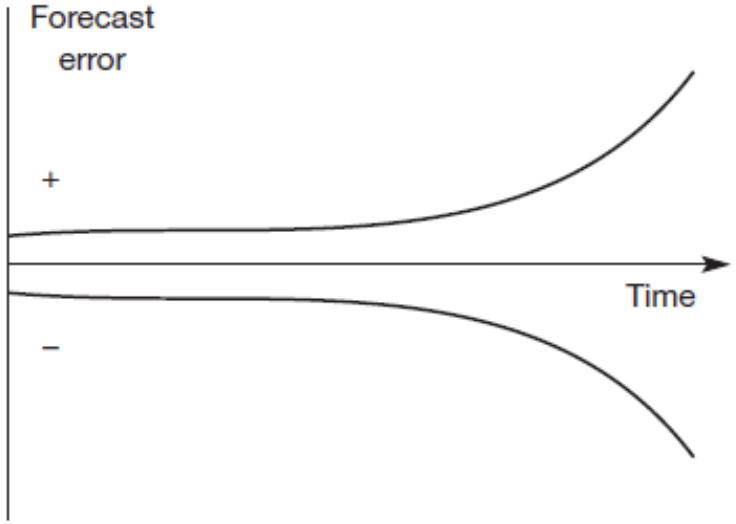
Theme: MATCHING SUPPLY AND DEMAND IN LOGISTICS

Lecturer: Nargiza Nosirova

MATCHING SUPPLY AND DEMAND IN LOGISTICS

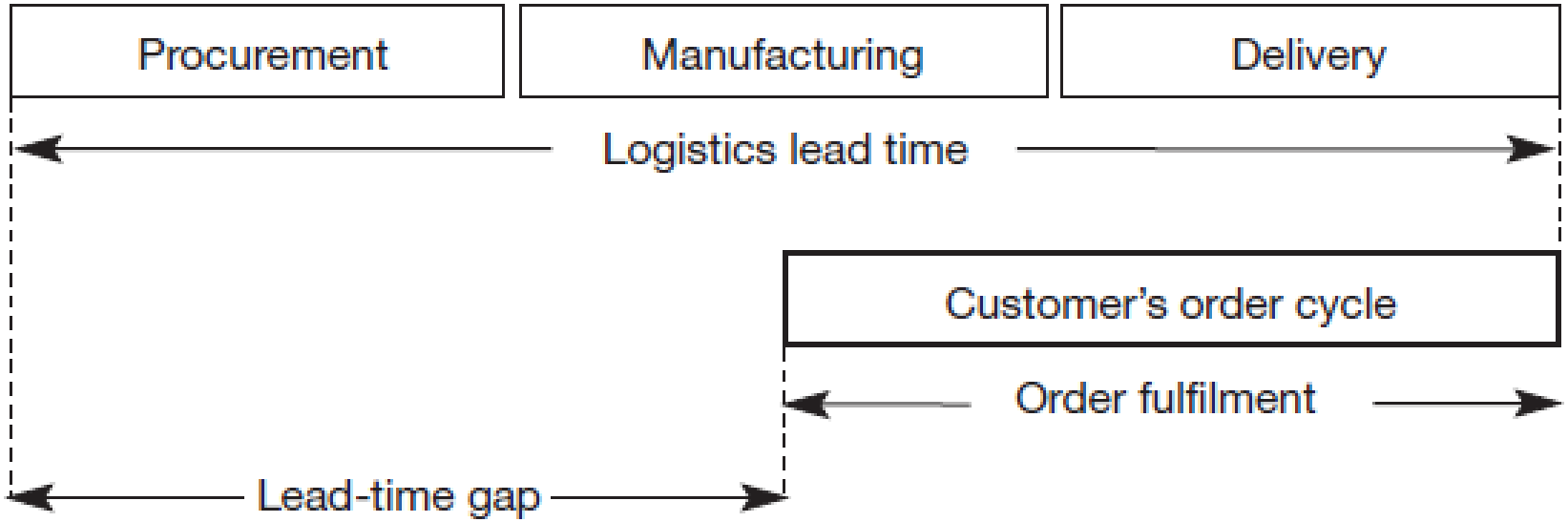
- The lead-time gap
- Improving the visibility of demand
- The supply chain fulcrum
- Forecast for capacity, execute against demand
- Demand management and planning
- Collaborative planning, forecasting and replenishment

Figure 4.1 Forecast error and planning horizons



THE LEAD-TIME GAP

Figure 4.2 The lead-time gap



The customer's order

Order fulfillment

The competitive conditions

The customer's willingness

The logistics lead time

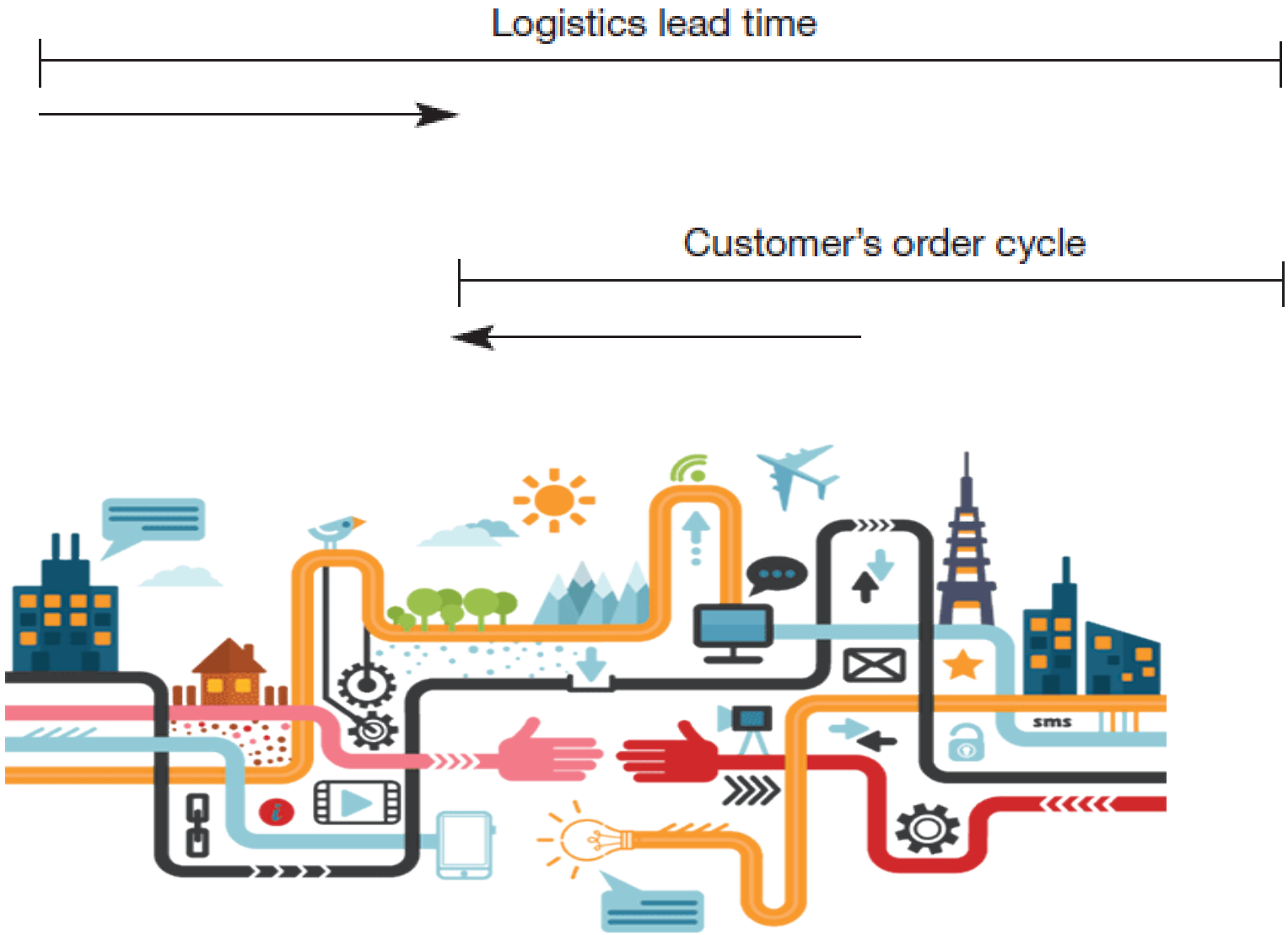
The customer's order cycle

Improving forecast accuracy

Sums of money

Energy

Figure 4.3 Closing the lead-time gap



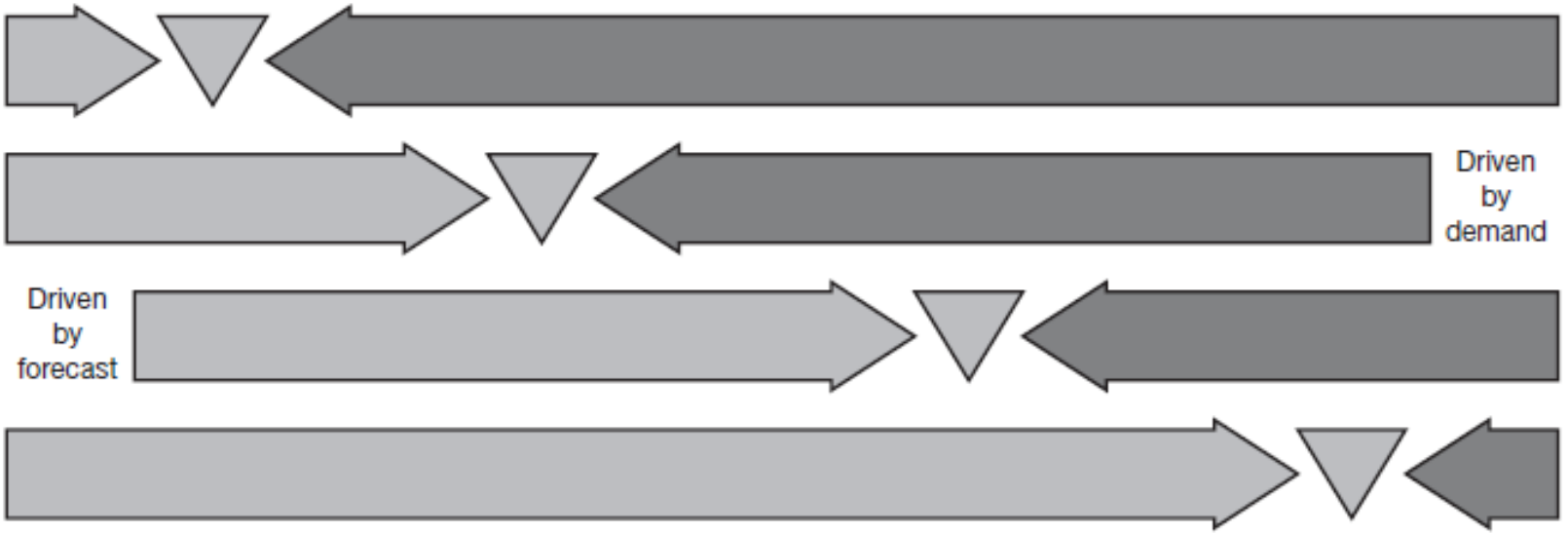
Improving the visibility of demand

‘visibility’ of real demand → ‘real’ demand → the ‘derived’

demand penetration point is too far down the pipeline and, secondly, real demand

decoupling point and is ideally the point in the supply chain where strategic inventory is held

Figure 4.4 Demand penetration points and strategic inventory



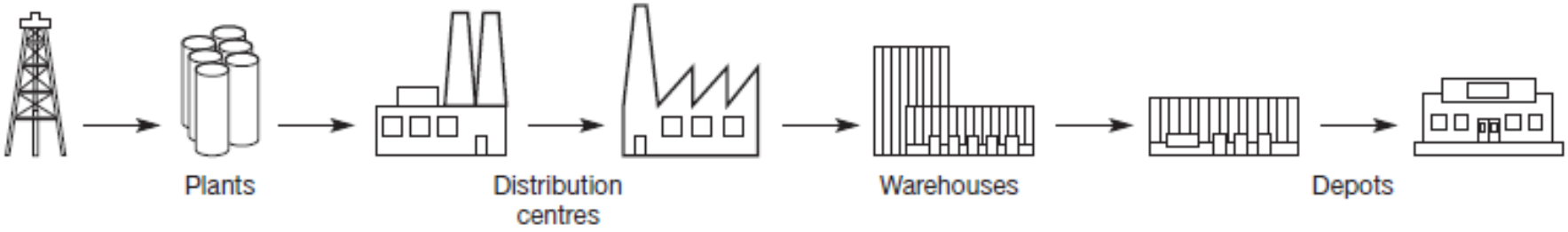
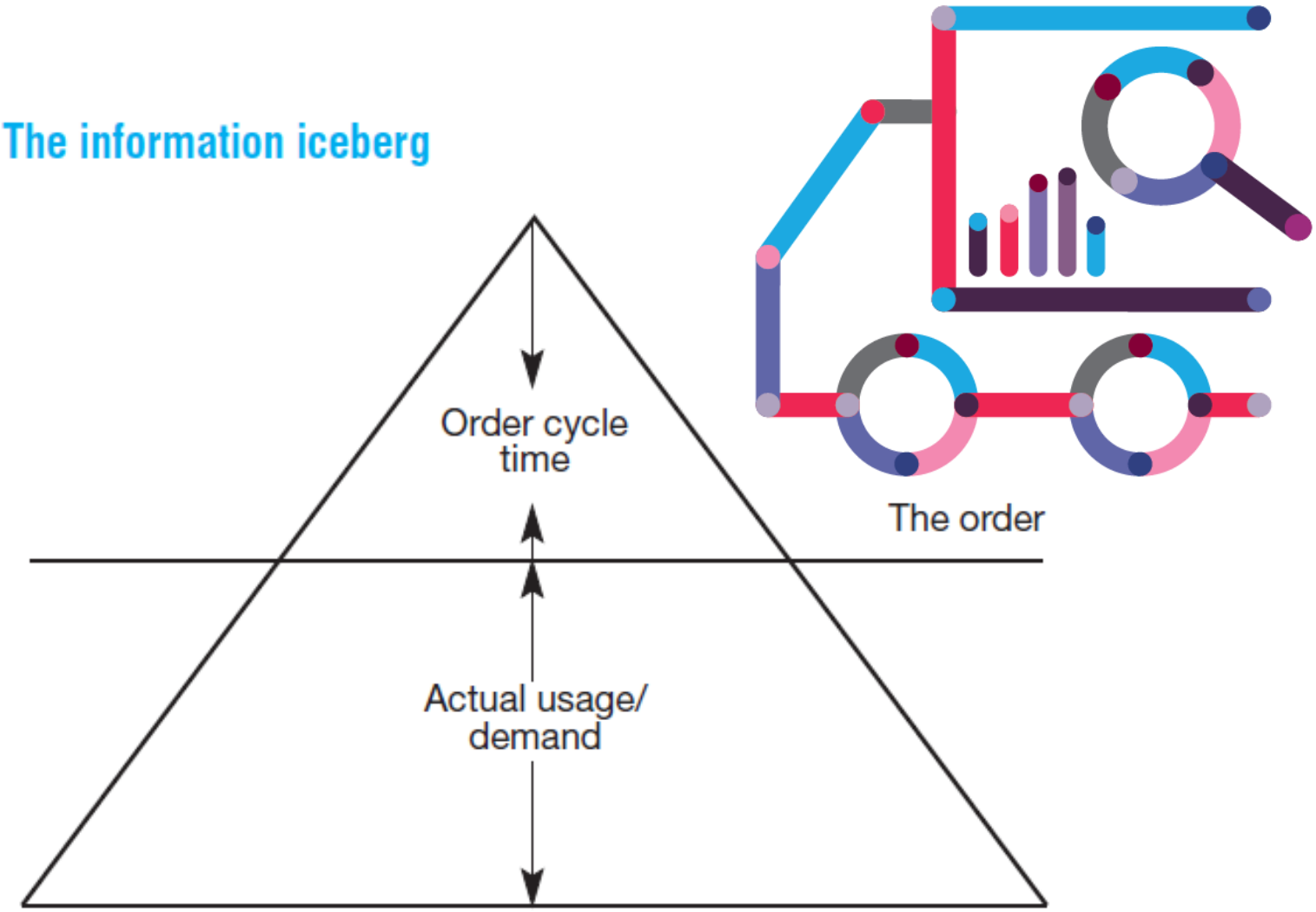


Figure 4.5 The information iceberg



the iceberg represents → usage of the product → transparent. → responsive to actual demand. → service to the customer → the supplier's costs → twin-pronged approach → substantial improvements

The supply chain fulcrum

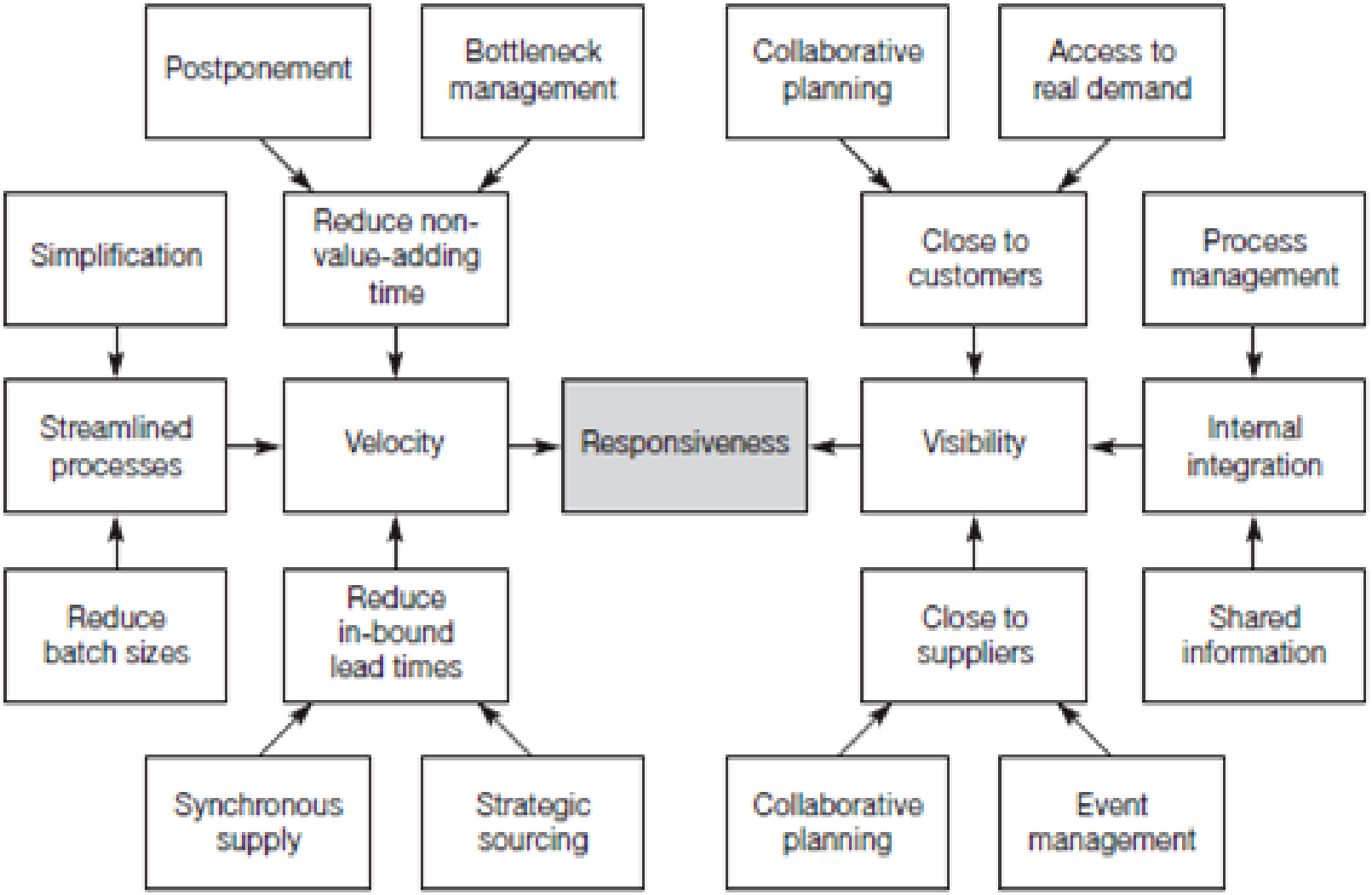
Figure 4.6(a)

Now imagine that the fulcrum is moved closer to the box marked 'D' as in Figure 4.6(b) below. Obviously the same amount of demand can be balanced with less inventory and/or less capacity.

Figure 4.6(b)

Figure 4.6(c)

Figure 4.7 Velocity and visibility drive responsiveness



Forecast for capacity, execute against demand

- the stock keeping unit (SKU) level.
- from a forecast-driven to a demand-driven mentality.
- the customer's order cycle
- aggregate volume
- conventional ways of balancing supply and demand
- 'de-coupling point' idea
- 'generic' inventory
- Zara's flexible
- 'forecast for capacity, execute against demand'.

Demand management and planning

a less-than-accurate sales

proactive stance.

the business impact demand

Demand management

Demand planning

Figure 4.8 The sales and operations planning process

Generate aggregate demand forecast

Modify forecast with demand intelligence

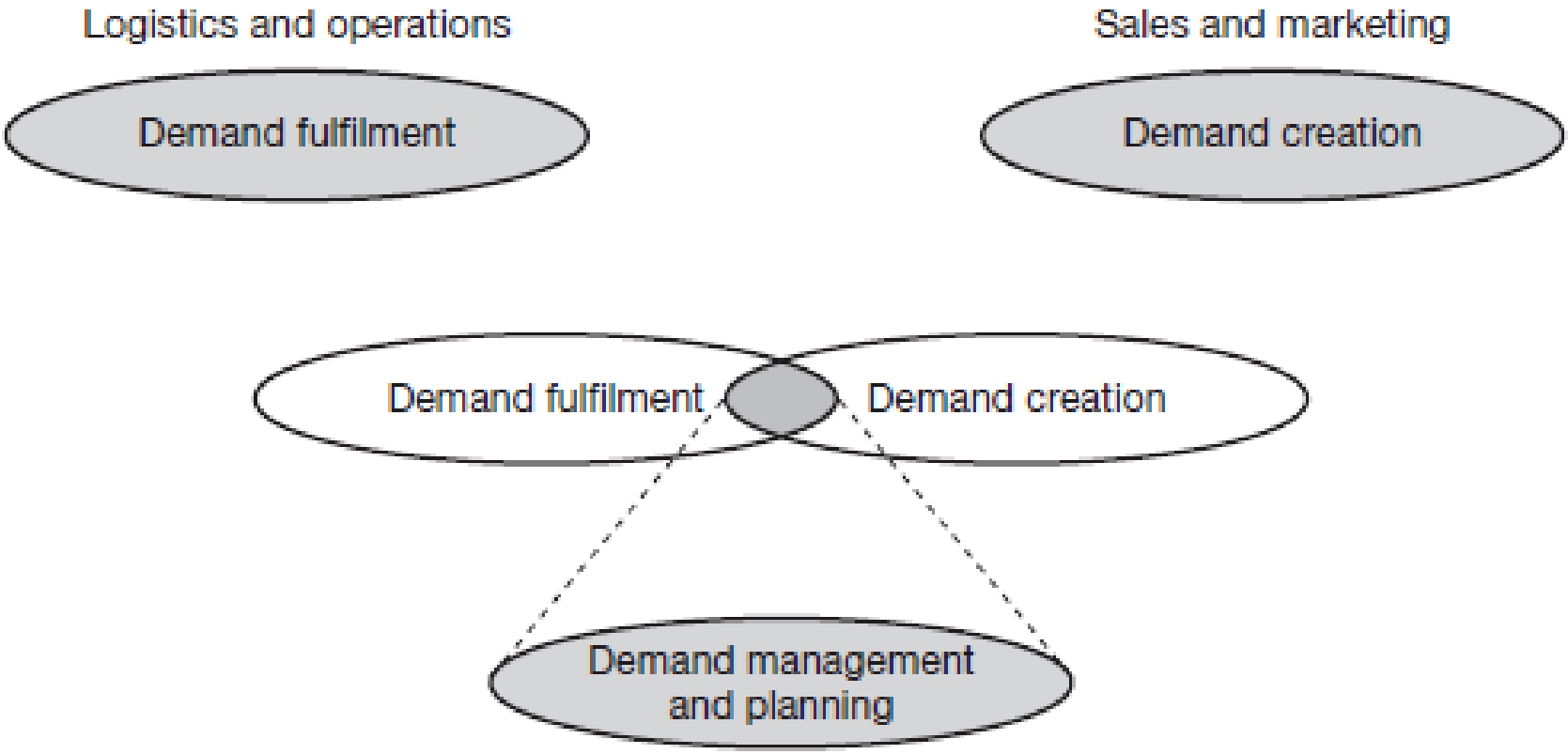
Create a consensus forecast

Create 'rough cut' capacity plan

Execute at individual item (SKU) level against demand

Measure performance

Figure 4.9 The focus of demand management and planning



Alignment of demand creation and fulfilment processes across functional and organisational boundaries

Demand management and planning at Dell

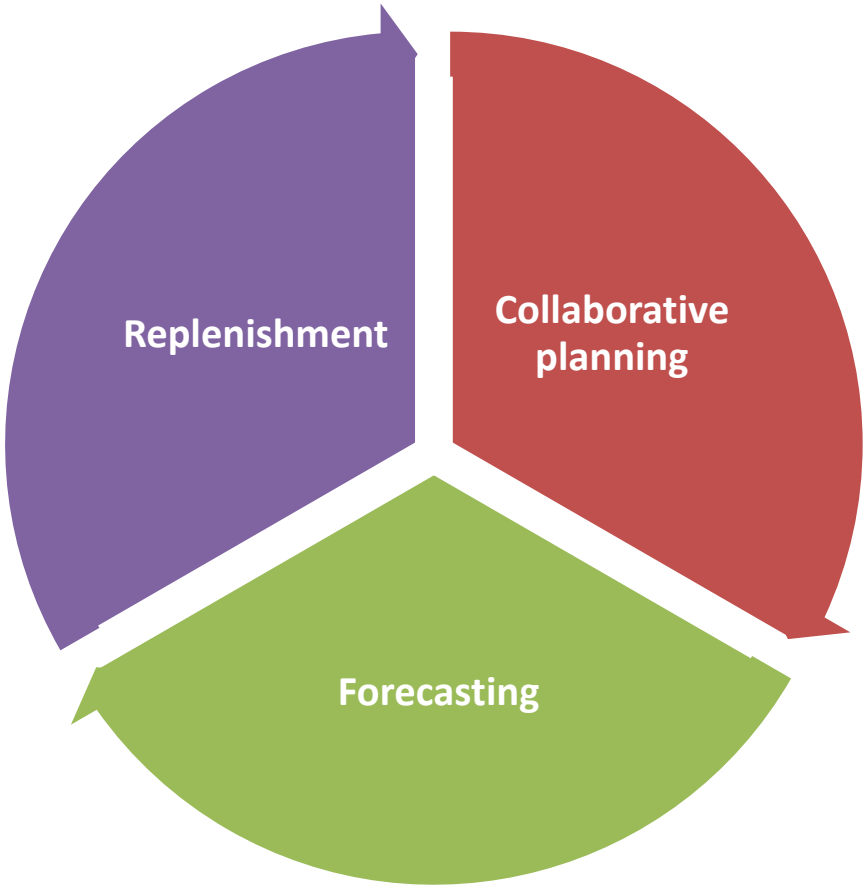
Products

- Desktops
- Servers
- Notebooks
- Netbooks
- Peripherals
- Printers
- Televisions
- Scanners
- Pen Drives
- Smart Phones

DELL

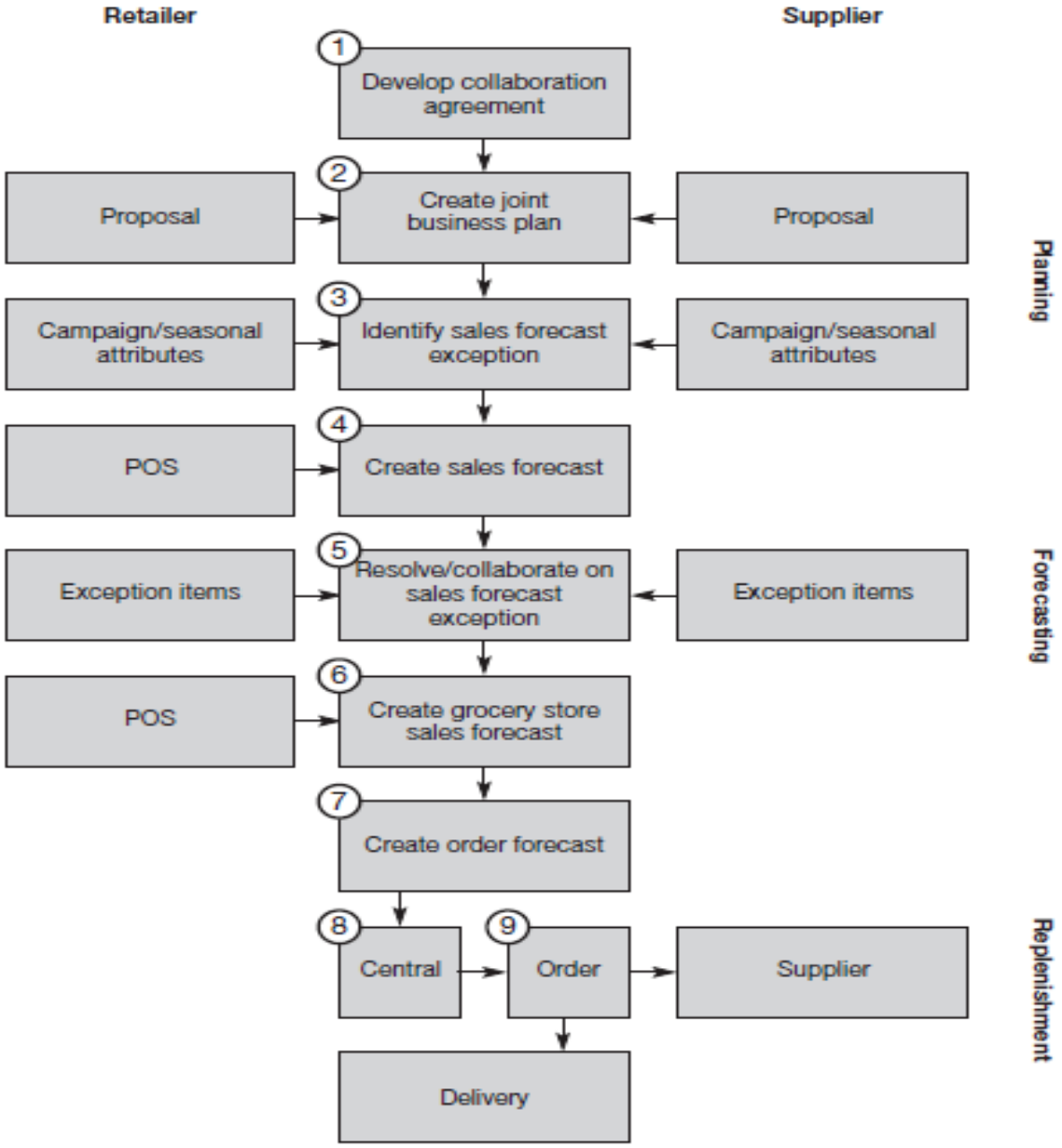
The power to do more

Collaborative planning, forecasting and replenishment (CPFR)



Vendor managed inventory (VMI)

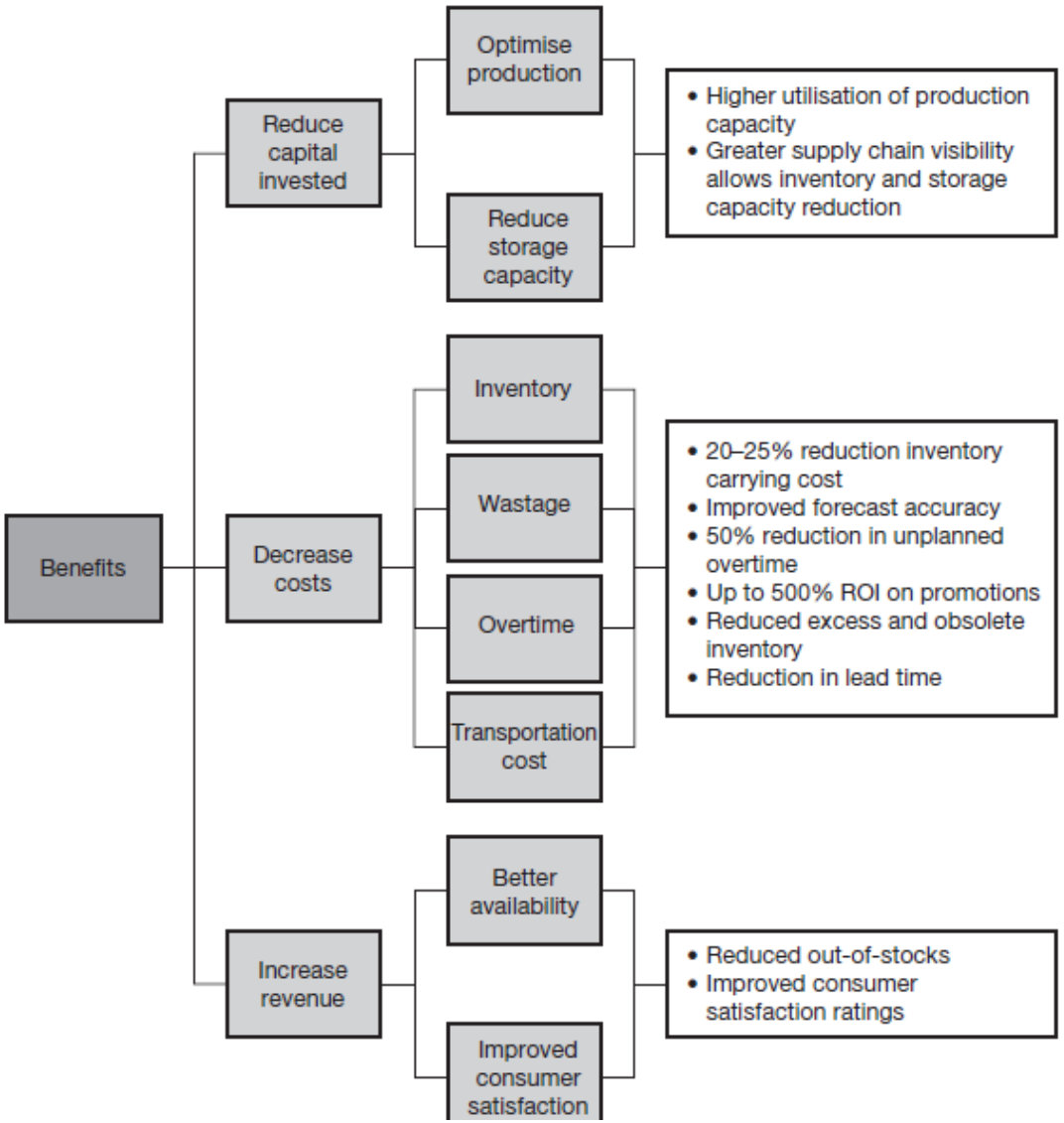
Figure 4.10 VICS-ECR nine-step CPFR model



Source: ECR Europe/Accenture, *European CPFR Insights*, 2002

Benefits of CPFR

Figure 4.11



- *Decrease cost of goods sold*
  The results from the pilots have shown that CPFR can significantly impact the cost of goods sold. In particular, reductions in inventory, product obsoletes, changeover times and transportation costs can be achieved. Based on an improved forecast accuracy and long-term planning, trading partners are able to reduce inventory levels along the supply chain, stabilise production runs, improve truck fill rates and reduce obsoletes after promotions.
- *Increase sales revenue*
  Reducing the incidence of out-of-stocks at the point of sale (increase in on-shelf availability) improves the service to the consumer and reduces lost sales. Furthermore, the continued availability of the products increases consumer satisfaction and therefore benefits store loyalty for the retailer and the product loyalty for the manufacturer.

SOURCE: ACCENTURE ECR EUROPE

Reference
1. Accenture/ECR Europe, *European CPFR Insight, ECR Europe, Brussels, 2000.*

Thank you for your attention!