

# Purchasing and Supplier Management

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**PPU426** 



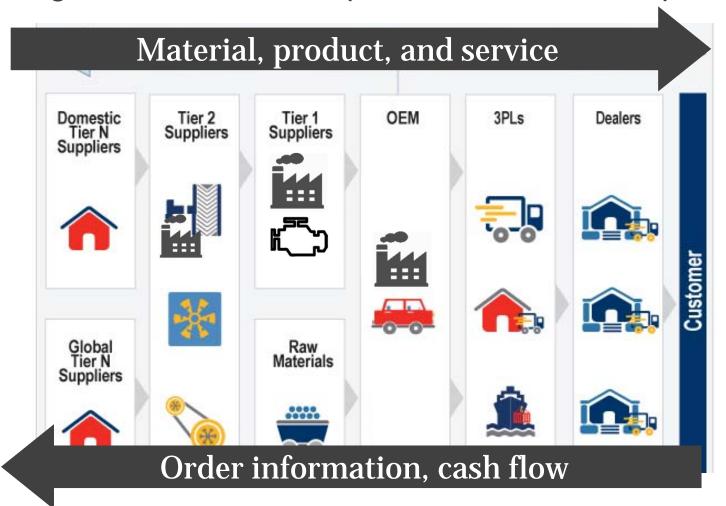
# Today's topic

- What is Supply Chain Management (SCM)?
- Managing supplier relationship
- Supplier relationship at different phases



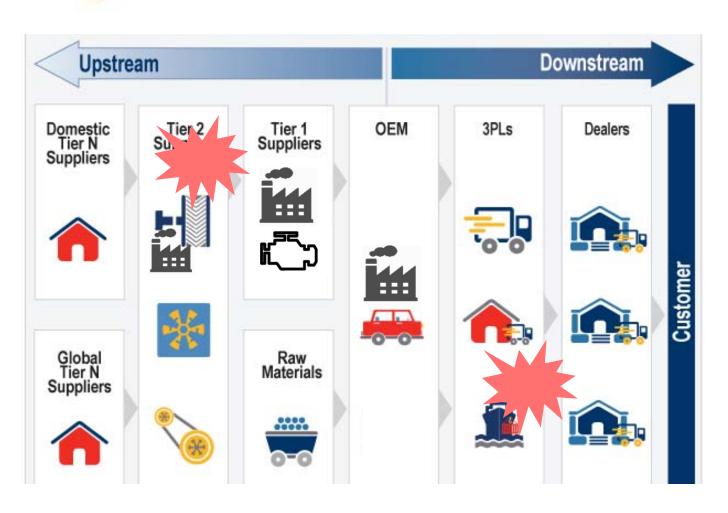
#### What is Supply Chain Management (SCM)?

- management of relationships between different operations





#### Performance measures in supply chain



- Quality
- Speed
- Dependability
- Cost



# Supply chain shut down









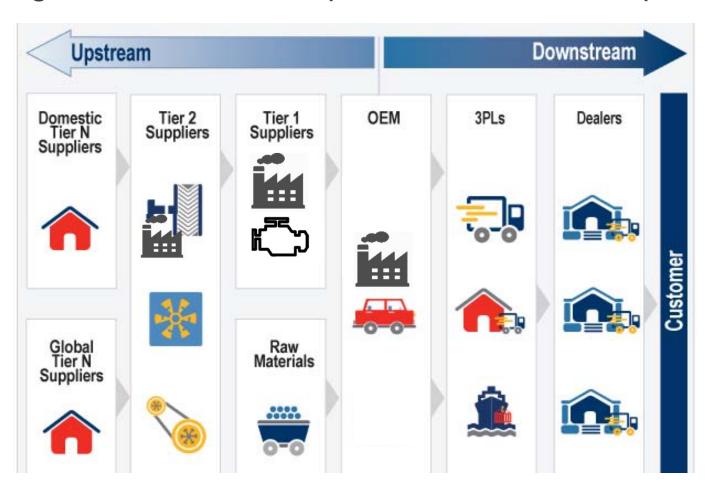
#### Supply chain design

- Vertical integration
- Outsourcing
- Offshoring
- Efficient supply chain and Responsive supply chain



# What is Supply Chain Management (SCM)?

- management of relationships between different operations





#### Offshoring

- moving a part of the operations outside of the country

**Employees** 

Universities



Parts suppliers

Equipment supplier

IT service

Foods

Infrastructures

Transport companies

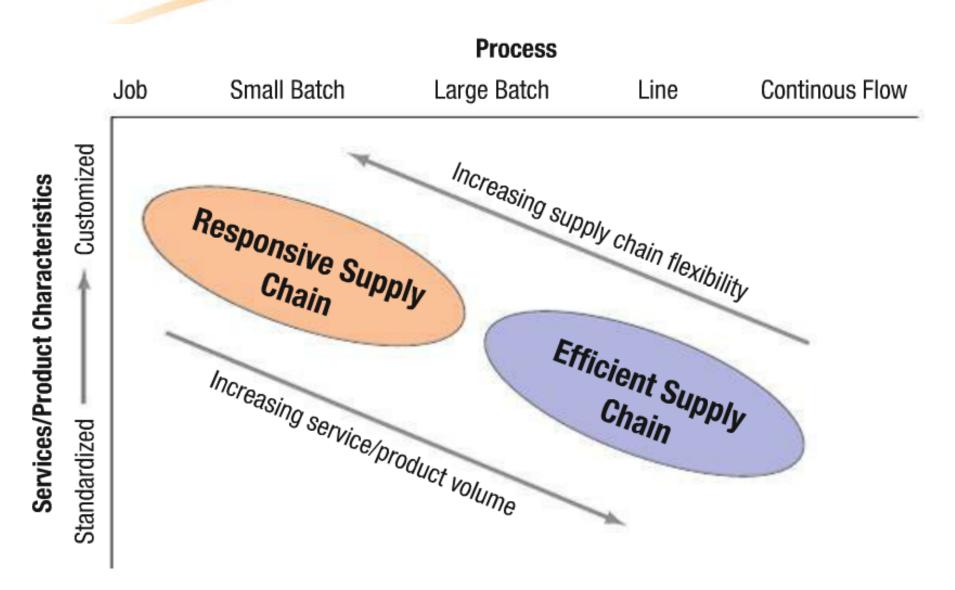


#### Efficient supply chain and Responsive supply chain

Factor	Efficient Supply chain	Responsive supply chain
Demand	Predictable, low forecast errors	Unpredictable, high forecast errors
Competitive priorities	Low cost, consistent quality, on-time delivery	Customization, volume flexibility, variety
New product introduction	Infrequent	Frequent
Product variety	Low	High
Supply-demand design	Build-to-Stock	Assemble-to-Order, Make- to-Order, Design-to-Order



#### Efficient supply chain and Responsive supply chain





#### Managing supplier relationship

Competitive orientation

Collaborative orientation

Emphasis predominantly on relationships

Emphasis predominantly on contracting

- Relation as zero-sum game
- Focus on price
- Short-term relation
- Detailed contract
- etc.

- Relation as partners
- Focus on co-operation
- Long-term relation
- Trust-based
- etc.



#### Managing supplier relationship

Competitive orientation

Collaborative orientation

Emphasis predominantly on relationships

Emphasis predominantly on contracting

- + Less component price
- + Quick to change suppliers
- + Exploiting innovation
- Low supplier loyalty
- Less co-operation

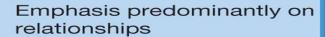
- + Strong co-operation
- + Co-development
- + Sharing information
- Difficult or costly to change suppliers



#### Managing supplier relationship

Competitive orientation

Collaborative orientation



Emphasis predominantly on contracting















#### Supplier relationship at different phases

- Sourcing (finding, selecting, contracting with suppliers)
- Handling day-to-day operations
- Improving supplier capabilities



# Categorizing sourcing items in terms of their strategic importance



Difficulties/cost of change suppliers



#### Using a preference matrix for selecting suppliers

#### In terms of QCDFE

Criterion	Weight	SCORE		
		Belfast	Hong Kong	Shreveport
Total Cost	25	5	8	9
On-Time Delivery	30	9	6	7
Consistent Quality	30	8	9	6
Environment	15	9	6	8

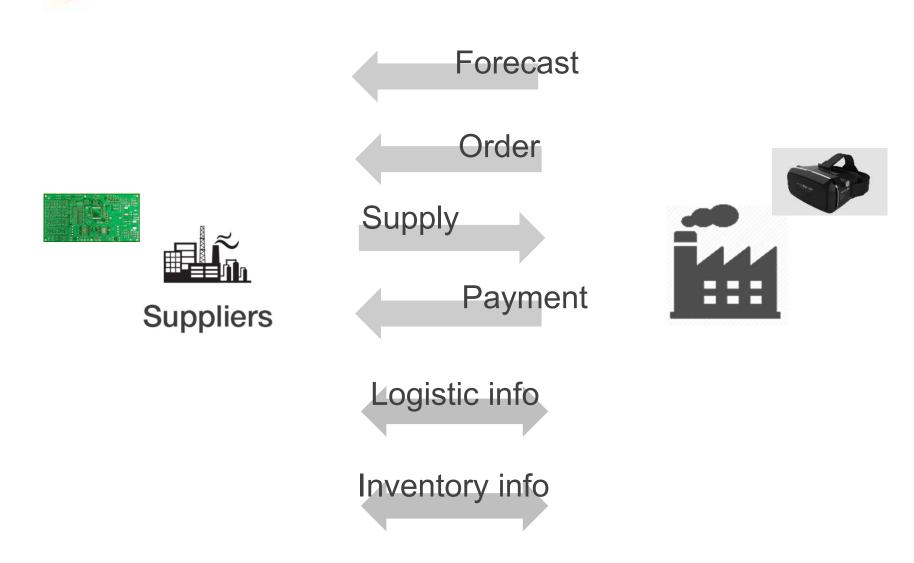
(1 = poor, 10 = excellent)

#### Belfast weighted score

$$= (25 \times 5) + (30 \times 9) + (30 \times 8) + (15 \times 9) = 770$$



#### Managing day-to-day operations

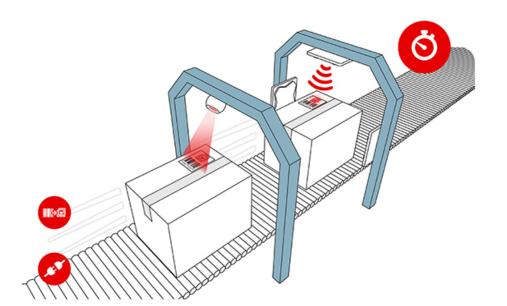




# Radio Frequency Identification (RFID)



RFID tag





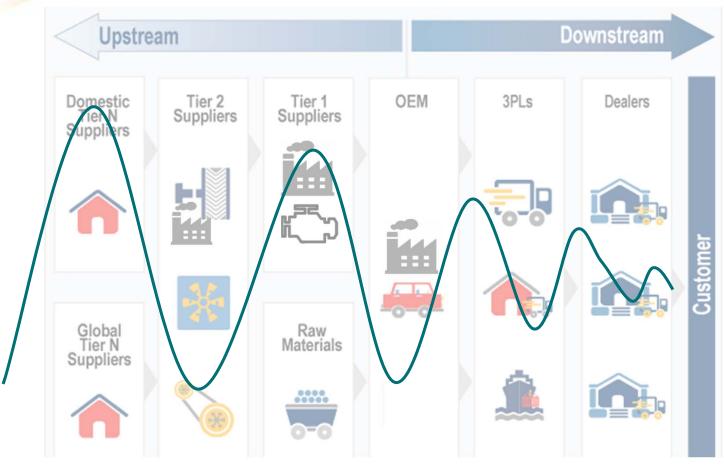


# Vendor Managed Inventory (VMI)





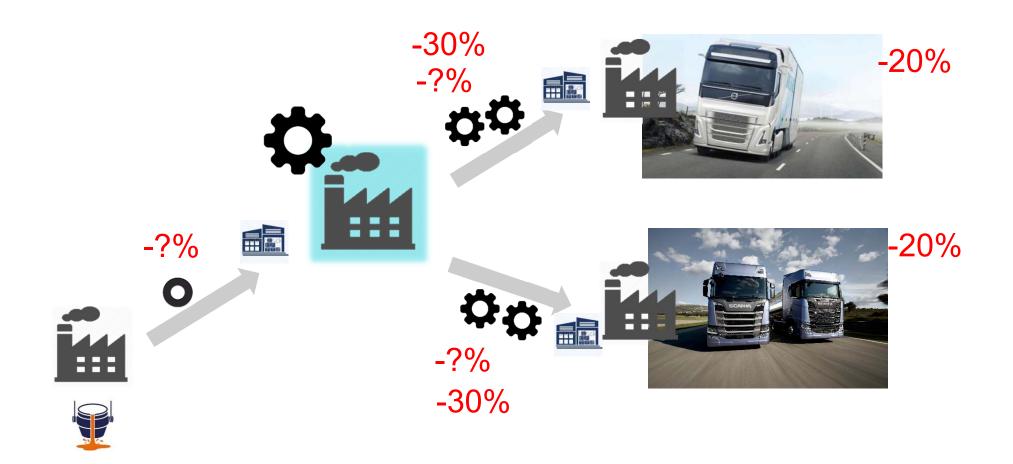
#### Bullwhip effect



A small fluctuation (often volume) at a downstream can cause a large fluctuation at a upstream

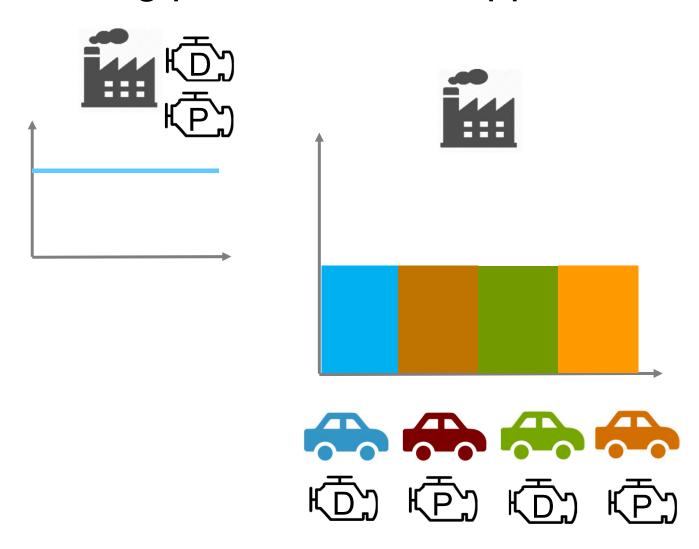


#### Bullwhip effect



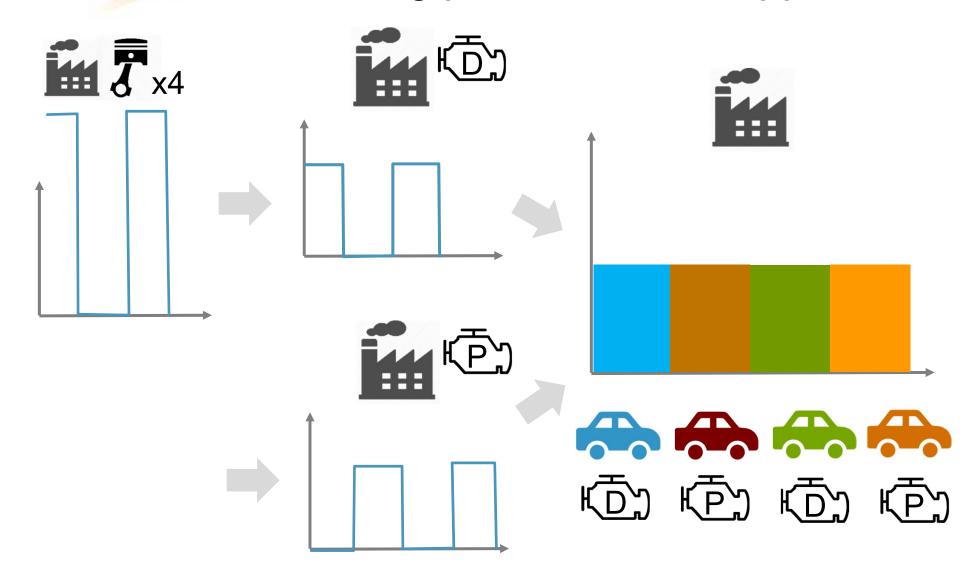


#### Effect of levelling production on suppliers



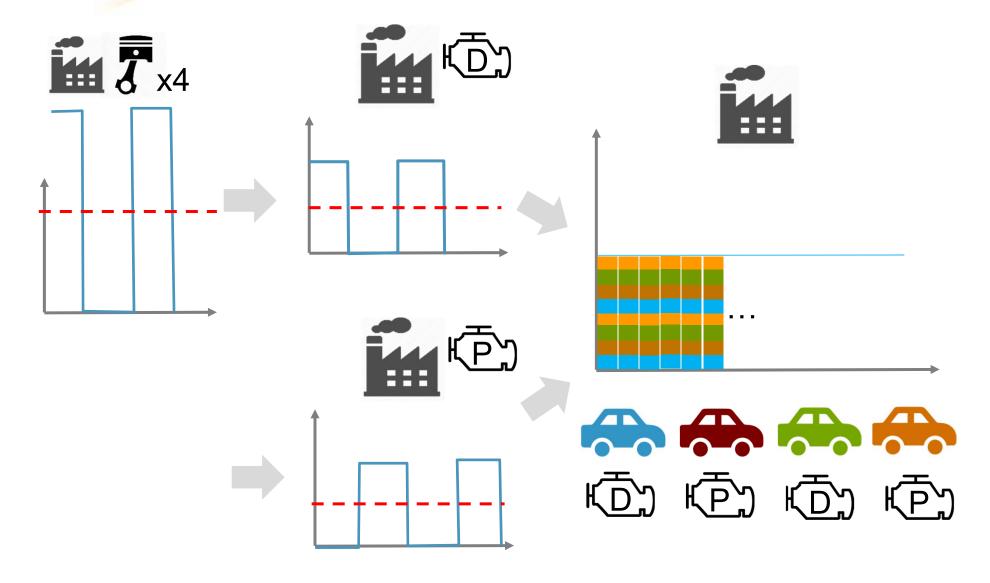


# Effect of levelling production on suppliers





#### Effect of levelling production on suppliers





#### Supplier relationship at different phases

- Sourcing (finding, selecting, contracting with suppliers)
- Handling day-to-day operations
- Improving supplier capabilities



# Improvement of supplier capabilities









Internal consultants help suppliers' improvement

Idea of cost reduction





Share the profit



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