

***“From resources to recycling –  
how supply chains work”***

Constantin Blome

# The Myth of the Flat Earth vs The World is Flat



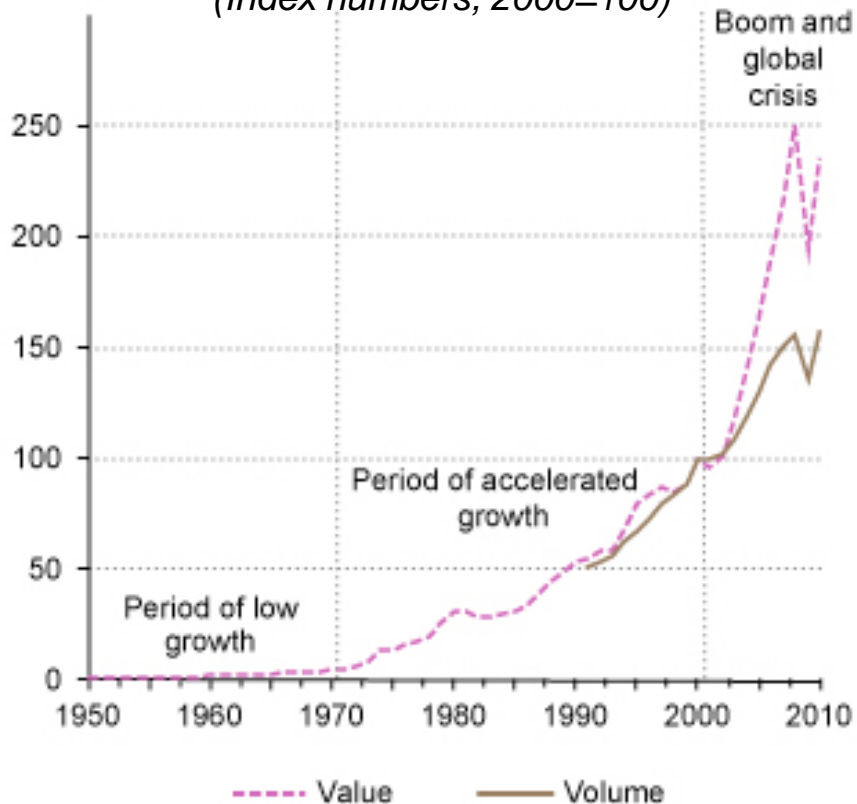
“Supply chains cannot tolerate even 24 hours of disruption. So if you lose your place in the supply chain because of wild behavior you could lose a lot. It would be like pouring cement down one of your oil wells.”

“The Dell Theory of Conflict Prevention argues that no two countries that are both part of the same global supply chain will ever fight a war as long as they are each part of that supply chain.”



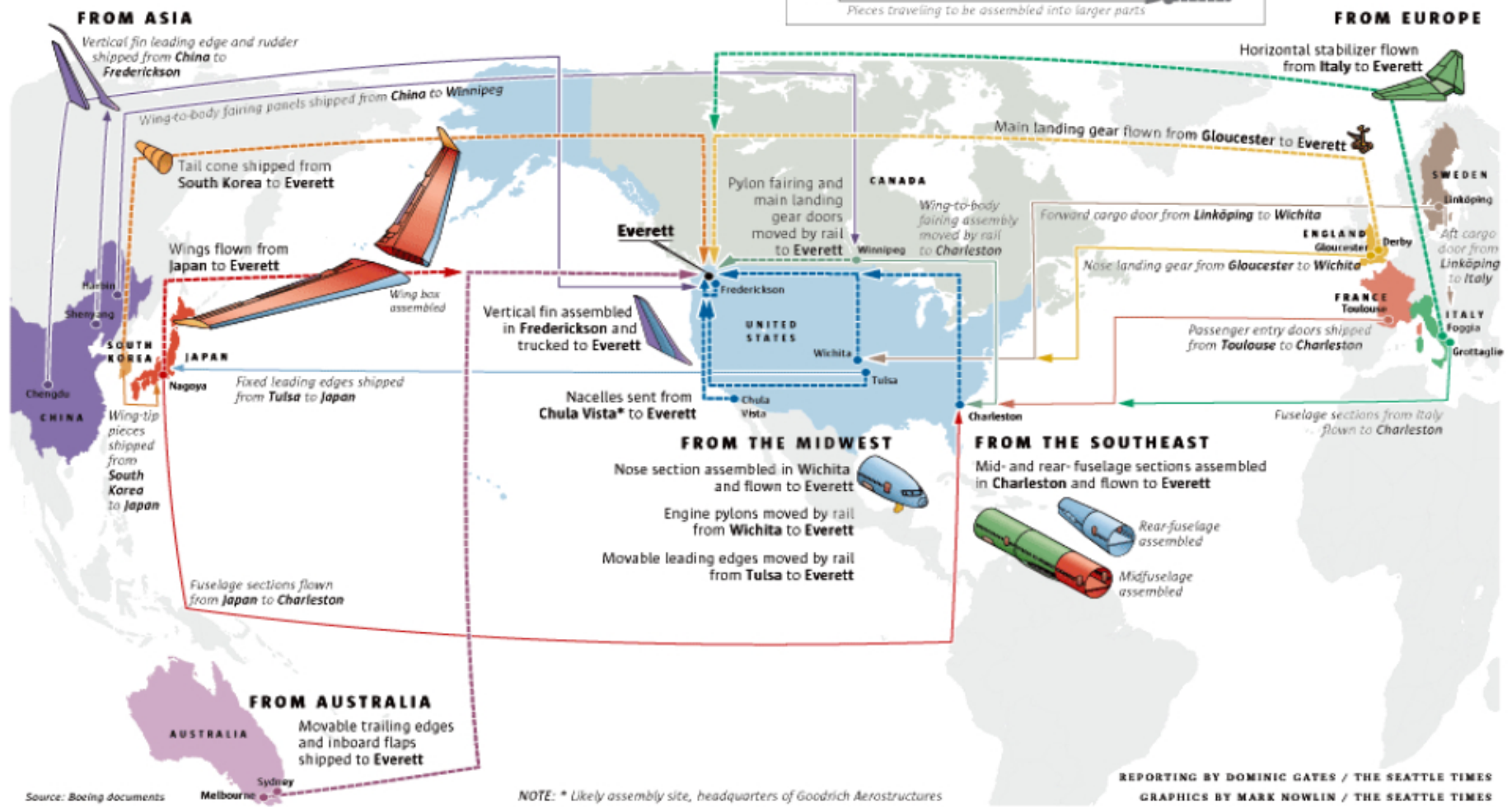
# Global Supply Chains are driver of and driven by international trade.

**Long-term trends in value and volume of merchandise exports, 1950-2010**  
(Index numbers, 2000=100)



- Trade grows faster than GDP.
  - Intermediate trade grows and becomes more international.
  - Within firm trade increases steadily.
- ⇒ Offshoring and Outsourcing drive supply chains.

# Bringing the parts together in Everett



Source: Boeing documents

# Supply Chain Management is a simple idea:

*Supply chain management (SCM) is the management of a network of interconnected businesses involved in the ultimate provision of product and service packages required by end customers.*

*(Harland, 1996)*

Logistics  
Provider

Cash

Products and Services

Information



## But pretty difficult in real life.



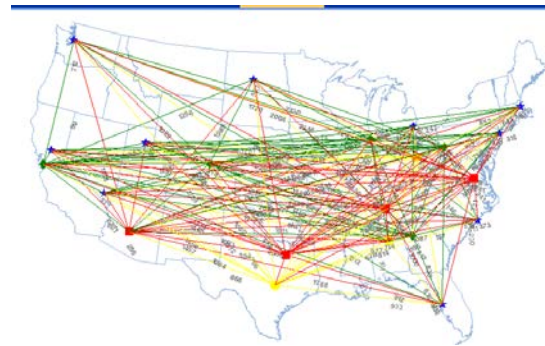
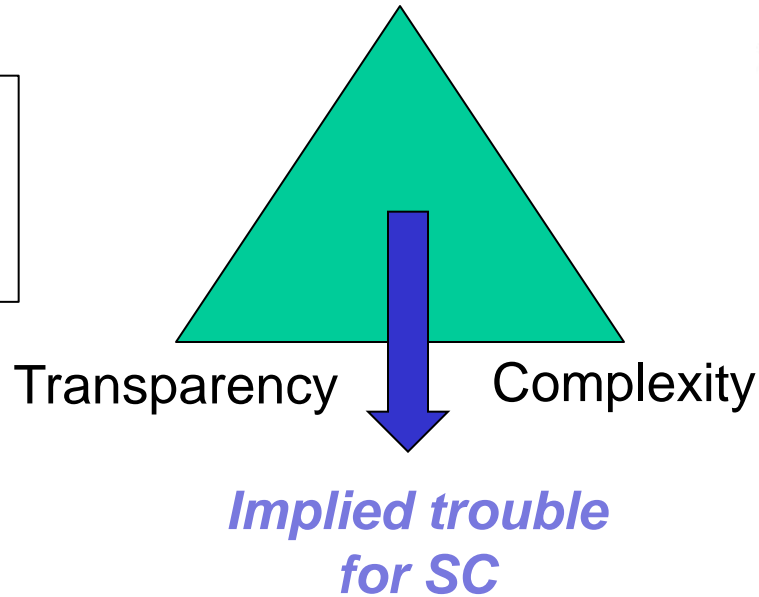
- Demand changes
- Numerous risks

- Optimization along supply chain
- Chain of custody
- Carbon footprint



Photo: © Franz-W. Tranzelin

Uncertainty



- Supply Chain Integration
- Number of products/suppliers/customers/regions...



# Complexity: the case of Smart



# Supply Chain Risk



**TOYOTA**



**BOSCH**

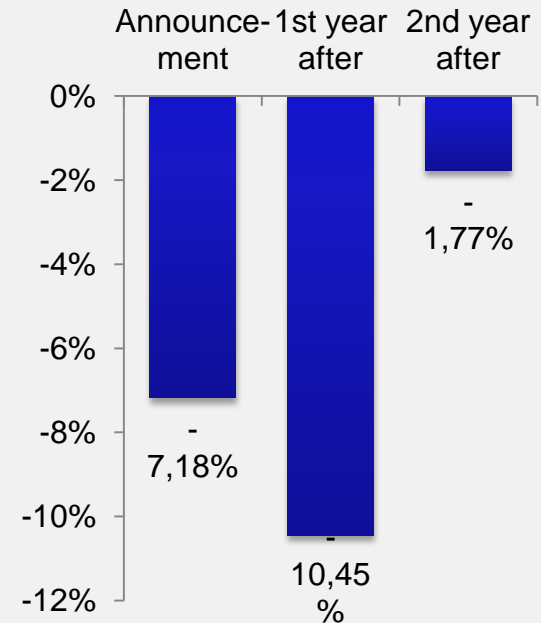


**MATTEL**



**LOUVAIN**  
School of Management

Average shareholder returns (%) of companies with major Supply Chain disruptions



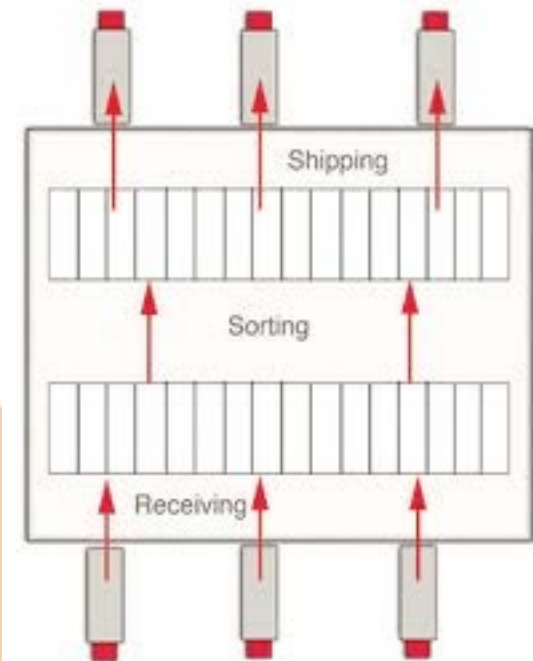
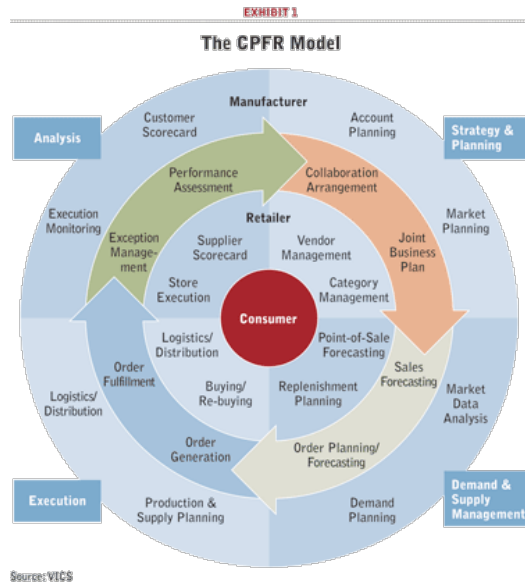
Source: Hendricks & Signal (2005)



**European  
Logistics  
Platform**



# Supply Chain Innovations



# The Responsiveness Spectrum

*Highly efficient*

*Somewhat efficient*

*Somewhat responsive*

*Highly responsive*



Integrated steel mill



The Gap



Most automotive production



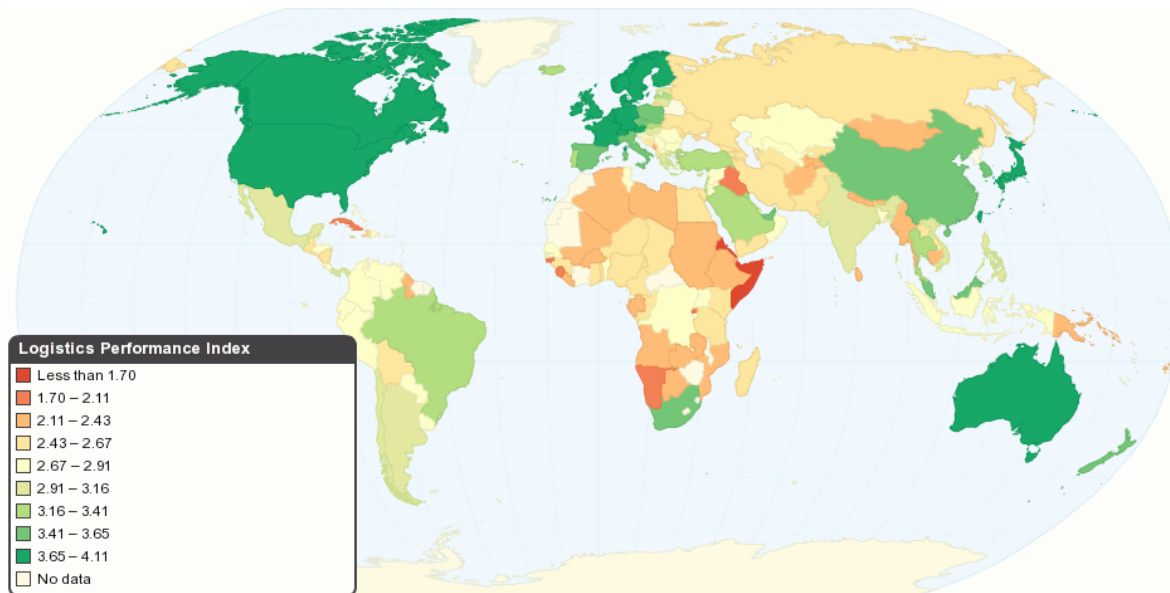
Dell



# The role of logistics in SCM

- Logistics is the major enabler of SCM, but also the biggest bottleneck (infrastructure, people skills)
- Excerpt World Economic Forum “Outlook on the Logistics & Supply Chain Industry 2012”: *Logistics, as such, is not a focus of negotiations or cooperation between governments.*

Logistics Performance Index by Worldbank



# Summary of key industry-specific trends

## Automotive & Industrial

- Local market presence is major driver
- Outsourcing trends will continue
- Product development outsourcing will help drive local market access and presence

## Consumer Goods

- Product innovation is a major driver
- Brand focus leads to higher product safety and sustainability concerns than in other industries
- Mass customization a challenge as companies seek emerging market growth

## Life Sciences

- Product cost emerging as major driver and concern
- Globalization has been forcing function for better internal collaboration
- External partner capabilities are seen as a major barrier

## Electronics, Telecoms, Services

- Overall SC maturity has declined as electronics supply chains have become more complex
- Highest level of physical globalization of all industries
- Flexibility is the major concern



The image features a dark blue background with a glowing green grid that curves across the frame. Overlaid on this grid is a complex network of white lines, some straight and some curved, connecting various points. The overall aesthetic is futuristic and technological.

The future of SCM? What's going to happen?

The past?



# Challenges

- Zero-Carbon footprint industry
- Humanitarian Supply Chains
- Risk Management (e.g. terrorist attacks, strikes, natural disasters etc.)
- Collaborative city replenishment
- Administrative burdens and controls (customs, security, phytosanitary controls)
- Tax efficient supply chains
- Cradle to cradle logistics & reverse logistics
- Lead times & availability