

Introduction to logistics and supply chain management

- Porter developed theory of value chain and how it could create a competitive advantage.
- Megatrends are geo-strategic + macro-economic forces shaping the world we live in
- Must be responsible for external opportunities and threats



Globalisation

- Change business by moving towards an interrelated global company which led to intense economic and geopolitical environments.
- Leads to compression of time, distance, and the disappearance of traditional political boundaries

The Empowered Customer

- Customers more empowered and educated
- Internet allows access to e-retailers, online catalogues and social media platforms that provide a world of choices
- They compare prices, service, and quality with extreme accuracy
- Their service expectation is constant, playing pressure on logistics and supply chain.

Shift in Global Economic Power

- Western economic dominance is waning
- Rebalancing of global economic + business activity in transforming countries from being sources of labour and production to consumption-focused economies.
- New sources of supply leads to different competitor profiles

Demographic shifts

- Explosive demographic growth and decline contributes to resource scarcity, shifts in economic power and social norms.
- Trajectories differ among countries as society grows and shrinks.
- This increases pressure for job creation + affects business models

Rise in Technology

- Major force in changing the dynamic of business

- Tech makes it possible to tap into information globally which has created opportunities for collaboration
- Disciplines such as machine learning, artificial intelligence, nano-technology + robotics increase productivity
- New industries + markets created
- Grapple with how tech impacts business models and interactions.

Covid-19 Pandemic

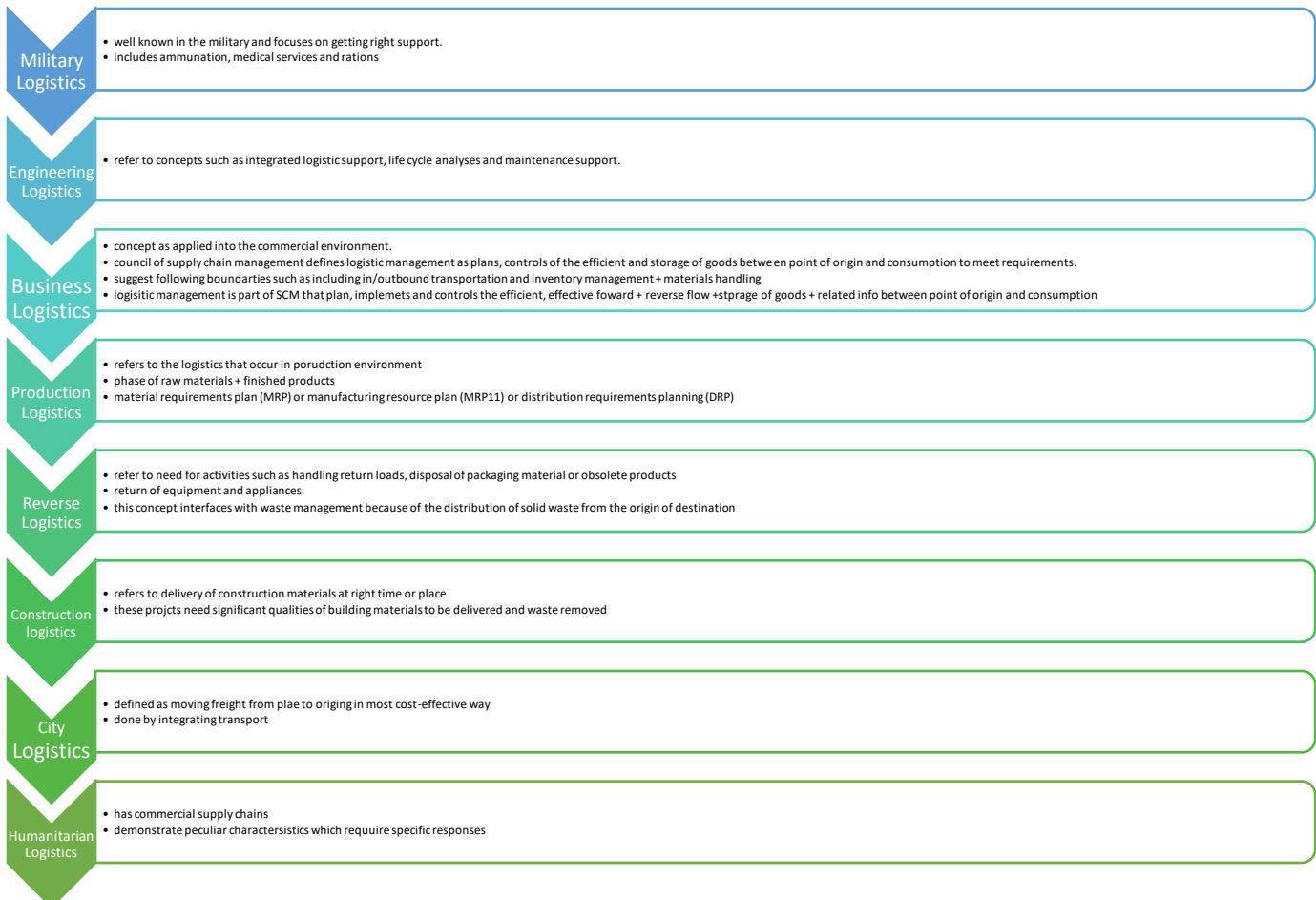
- Highly disruptive and a serious challenge to conventional thinking + practice in supply chains
- Sale of certain goods followed highly erratic pattern + principles of forecasting in inventory management completely changed overnight
- Demand fulfilment difficult and emergency items dominated the supply chain

Climate Change and Resource Scarcity

- Impact of climate change major concern
- Demand for water + energy constantly increasing
- The quest for sustainable solutions is often at odds with the need for resources to feed people + fuel growth
- Political tension and conflict about gaining control

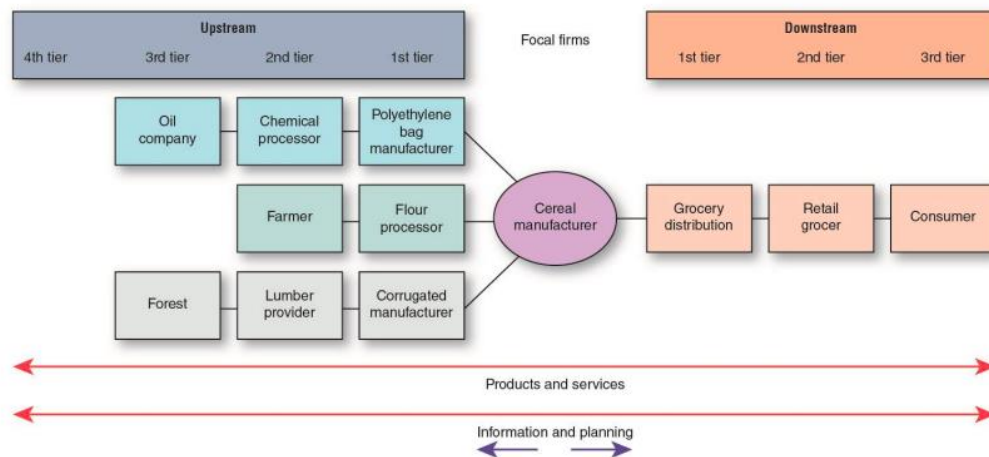
Defining Logistics

Logistics and SCM provide useful tools + techniques to prepare for and manage the impact of megatrends.



Defining Supply Chain Management

- Businesses aim to build strategic partnerships with specialists
- Businesses remain competitive from supply chain management
- SCM is most recent term to be added to logistics. It requires control of a complex web of organisations + operations
 - Describes the management of material flows
- Inter/intra-firm processes which produce and deliver G/S to customers
- Main difference between SCM and logistics is that logistics is focused on activities, processes, management in terms of flow of materials in specific firm.
- Logistics NEVER focused on interrelationships with up/down stream entities.
- SCM integrates elements that are beyond organisational borders and involves integration/coordination/collaboration



- Logistics viewed as adding value to supply chain process +customer value created through efficacy, efficiency, differentiation
- SCM encompasses the planning + management of all activities involved in sourcing + procurement
- Supply chain management processes
 - # Customer relationship management
 - # Customer service management
 - # Demand management/ order fulfilment
 - # Returns management/ product development

Third Party Logistics

- Management structure where 3P fulfils certain roles + responsibilities regarding provision of logistics services between supplier/customer
- Transportation/warehousing/packaging

Type	Characteristics
Transportation based	Offer transportation service
Warehouse + distribution based	Comprehensive warehousing services
Forwarder Based	Independent agent with forwarder role Non-asset owners
Shipper Based	Focus on management of shipping process Gives info such as data/matrix reports for better visibility Provides technology
Finance Based	Provides freight payment + auditing, cost accounting/control
Information Based	Significant growth + development in this category of internet-based, b2b and electronic markets

Fourth-party logistics

- 4pl provider gathers all constituent parts required such as transport providers/inventory management
- Present a solution that incorporates advantages of outsourcing/insourcing to provide maximum overall benefit

DIFFERS FROM 3PL IN 4 RESPECTS

: 4PL often separate entity established as joint venture/ long-term contract between a primary client /1+ partners

: acts as single interface between client + multiple logistic service providers

: all aspects of clients supply chain are managed by 4pl organisation

: also possible for a major 3pl provider to form a 4pl org within existing structure

4PL operates according to following models

Industry Solution Model: to coordinate/manage the distribution operations of its primary clients and other related companies

Supply Chain Partners Model: to manage an integrated industry supply chain, consisting of manufacturers/material suppliers
3PL management consultants



- It addresses strategic failures with a single point of contact to manage all aspects of client supply chain.
- Addresses financial failures by releasing capital.
- Addresses operational failures because the new entity allows the creation of a totally new culture.
- Realises revenue opportunities by selling supply chain services
- Retains corporate supply chain knowledge
- Improves accountability

Historical Development of Logistics

1. 1950-1960: distribution plans unformulated
2. 1960-1970: concept of physical distribution developed
3. 1970s: companies recognise need to include distribution in functional management structure of organisation
4. 1980s: rapid cost increases + clearer definition of true costs of distribution increased professionalism (need for integrated logistics + SCM recognised)
5. 1990s: relevant issues during this period included supply chain alignment with company + market culture and use of internet rather than dedicated electronic data interchange
6. 2000s: mobile technology with cellular communication providing access to the internet and highest form of communication
7. 2010s: volatility + global financial market, political instability + natural disasters major difficulties. Use of predictive analytics, planning tools & machine learning increased
8. 2020 + beyond: New industrial revolution with rapid manufacturing, advanced robotics & digitisation of supply chain in place. COVID 19 spread globally + challenges critical thinking/supply chains.

Porters Value Chain + Competitive Advantage

- Michael Porter Competitive Advantage: creating + sustaining superior performance
- Cost advantage & successful differentiation are found in chain of activities that a firm performs to deliver value
- Value chain categorises generic value-adding activities of an organisation. Include inbound logistics/operations/services

Primary Activities



Secondary Activities

Porter refers to procurement as secondary activity - purchasing raw materials, servicing suppliers, securing building leases

with technology development - activities such as product/process improvements, designing new services

human resource management - includes recruitment + education as well as compensation/employee retention

firms infrastructure - general management, public affairs, financial accounting can make a difference

Margin - reflects rewards in exchange for risks run by firm. all activities need to perform for total value generated by sum of its cost

Customer Value - function of factors that usually fall into 1/3 broad categories that differentiate, lower costs, respond to needs quickly. VC helps analyse contributions/ highlight NB of customer
