

Chapter 2

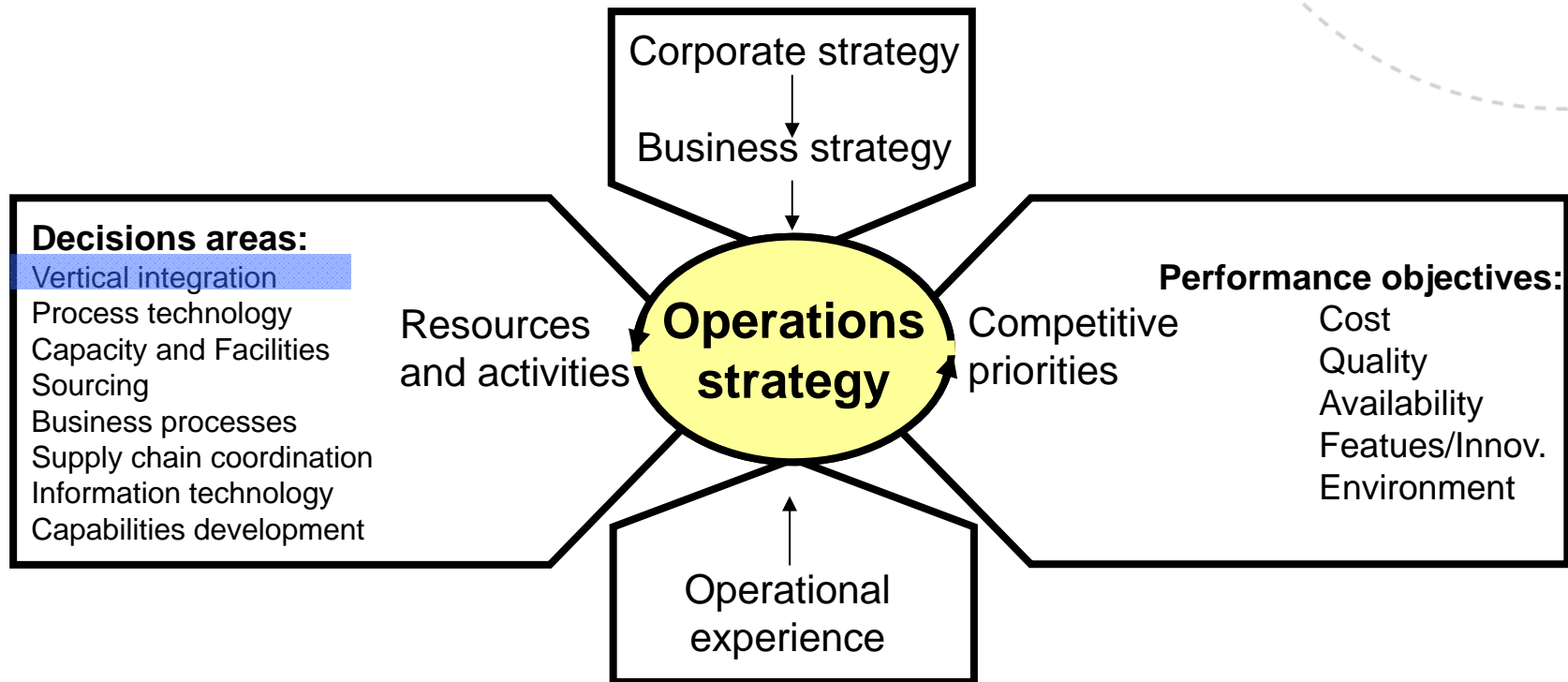
Vertical integration

TPK4180 Manufacturing Strategy
Heidi Dreyer, NTNU, 14.02.2013

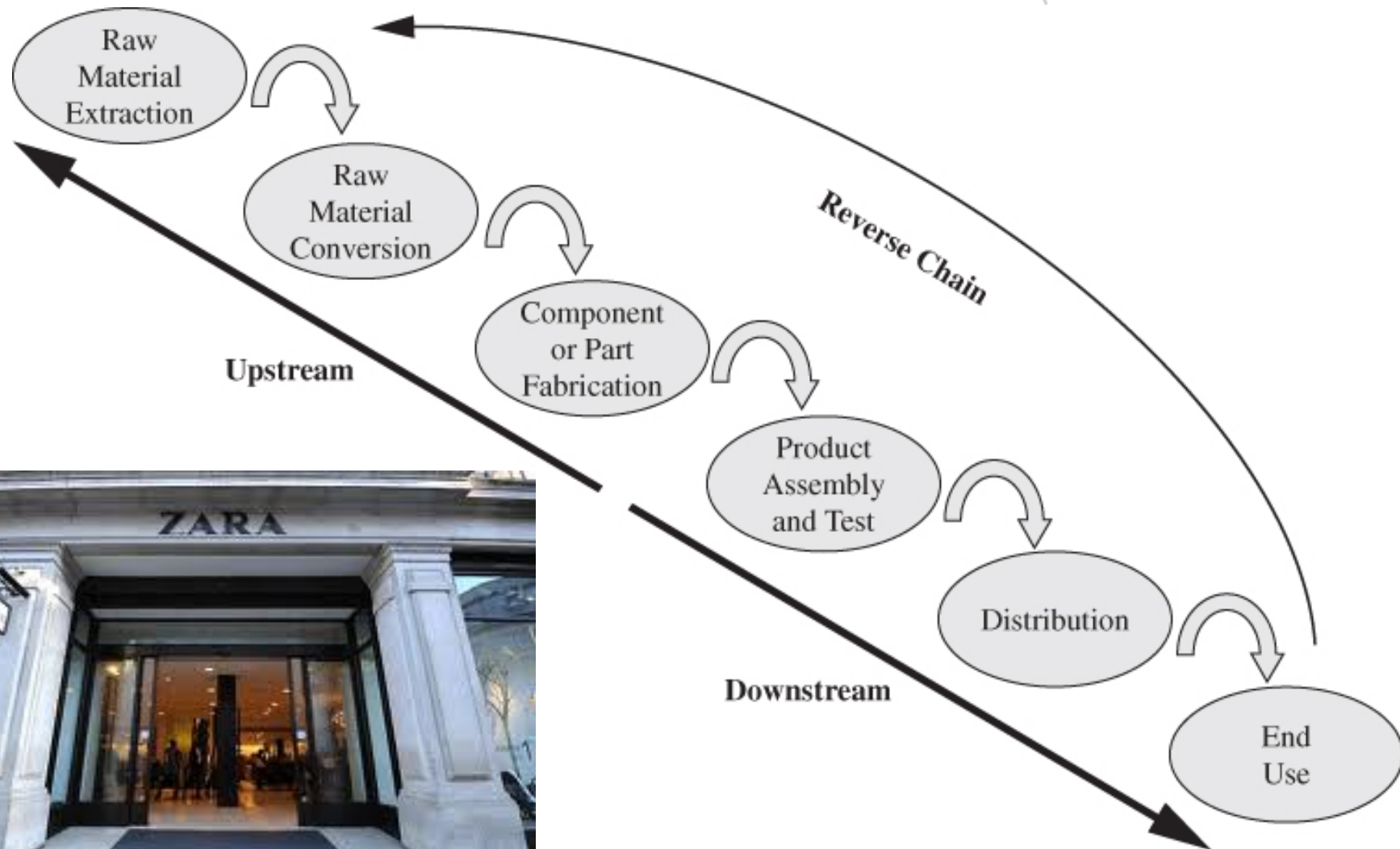
Outline

- Vertical integration 08:15-09:00
 - What is vertical integration
 - Examples
 - Key issues
- Sourcing 09:15-10:00
 - The importance of sourcing
 - The right number of suppliers
 - Supplier relationships
 - Contracts

Manufacturing strategy framework



What is vertical integration?

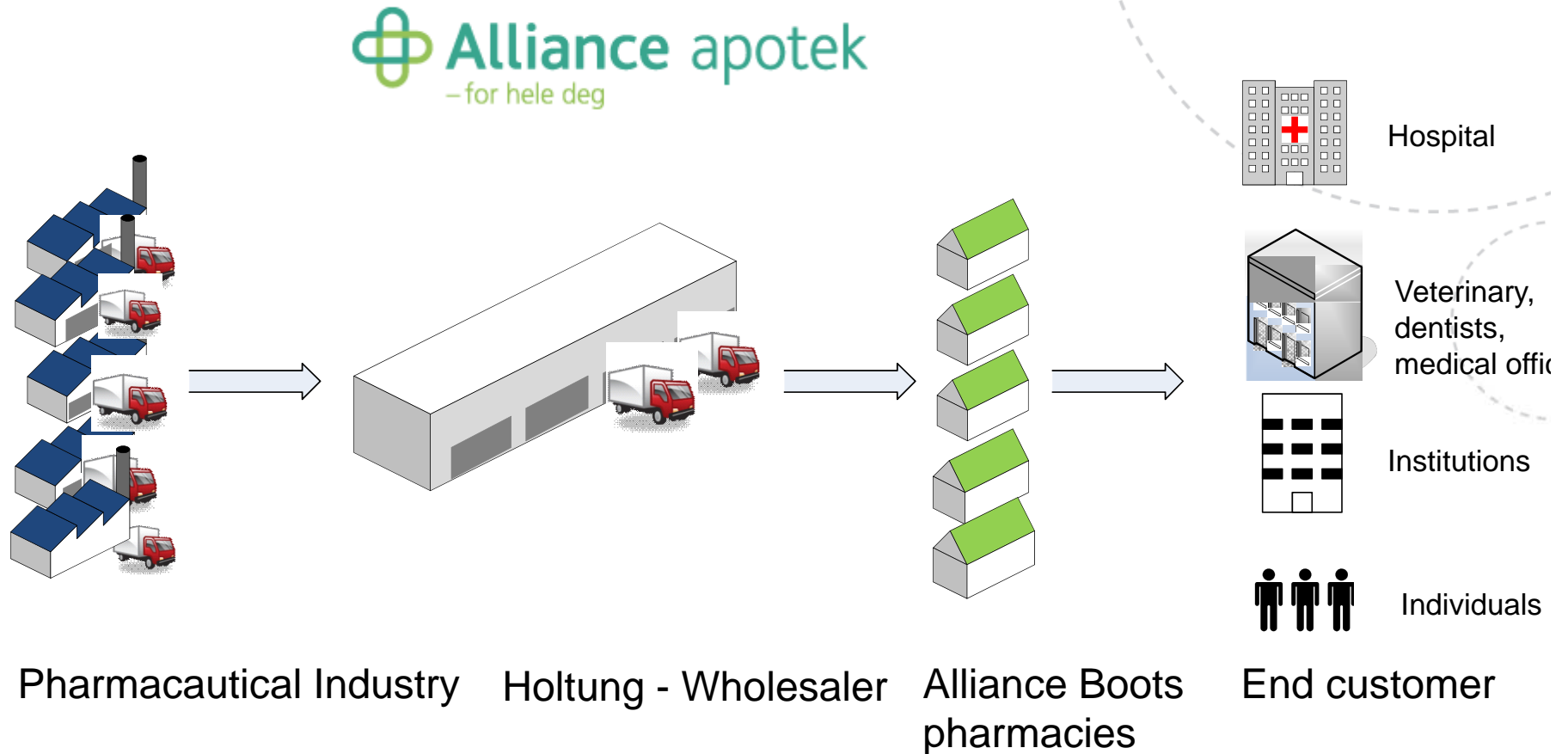


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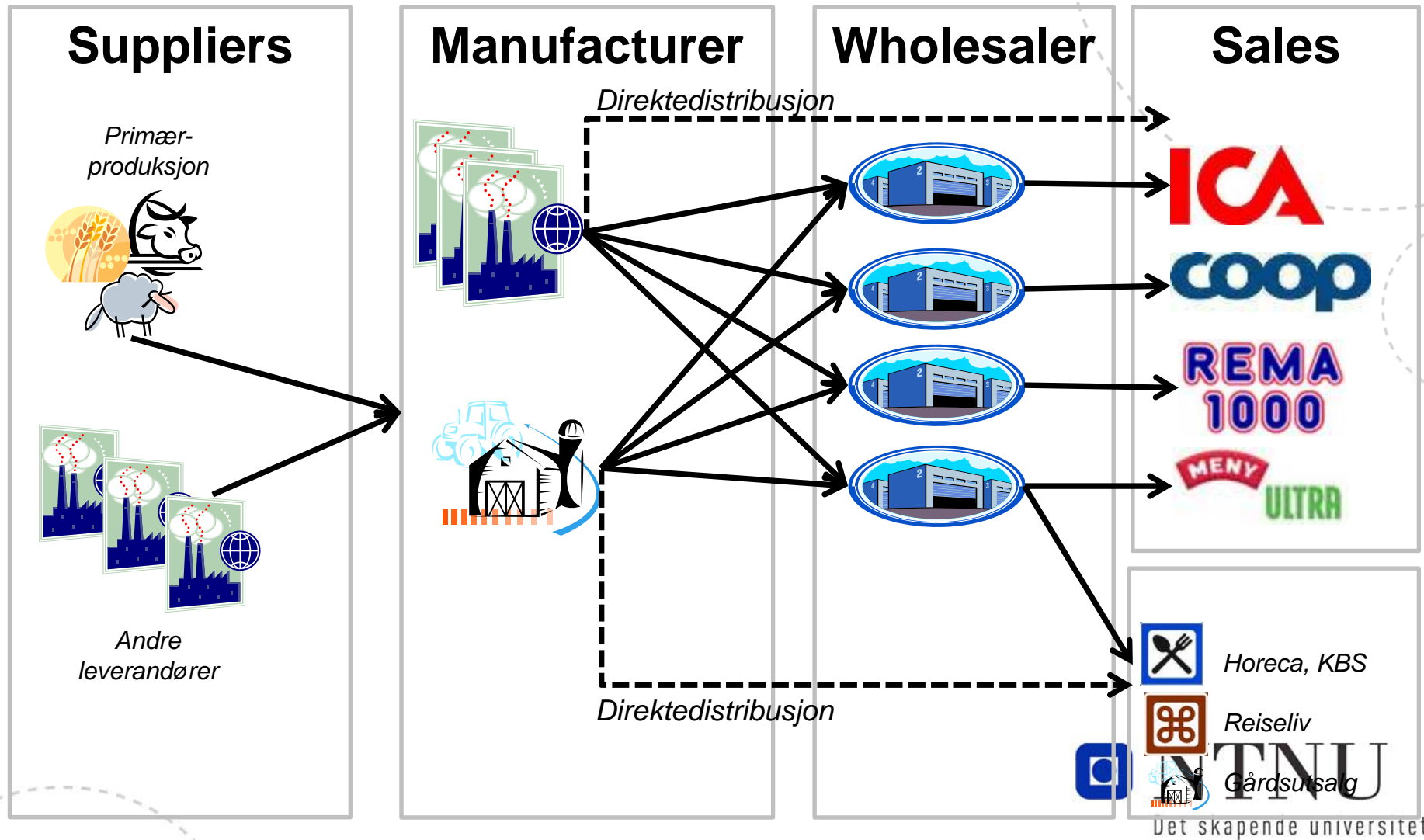
Levels of vertical integration

- Merge and acquisition
- Joint ventures
- Collaboration and long term relationship
- Coordination

Example: Alliance Boots Norway



Example: Food chain



- <http://www.aftenposten.no/okonomi/lca-overlater-forhandlinger-og-distribusjon-til-NorgesGruppen-7090810.html>

STOKKE®

Example: Stokke

- A Norwegian company with headquarters located at Ålesund. Provides worldwide distribution through selected retailers represented in around fifty countries

Bring your baby into
the heart of your family

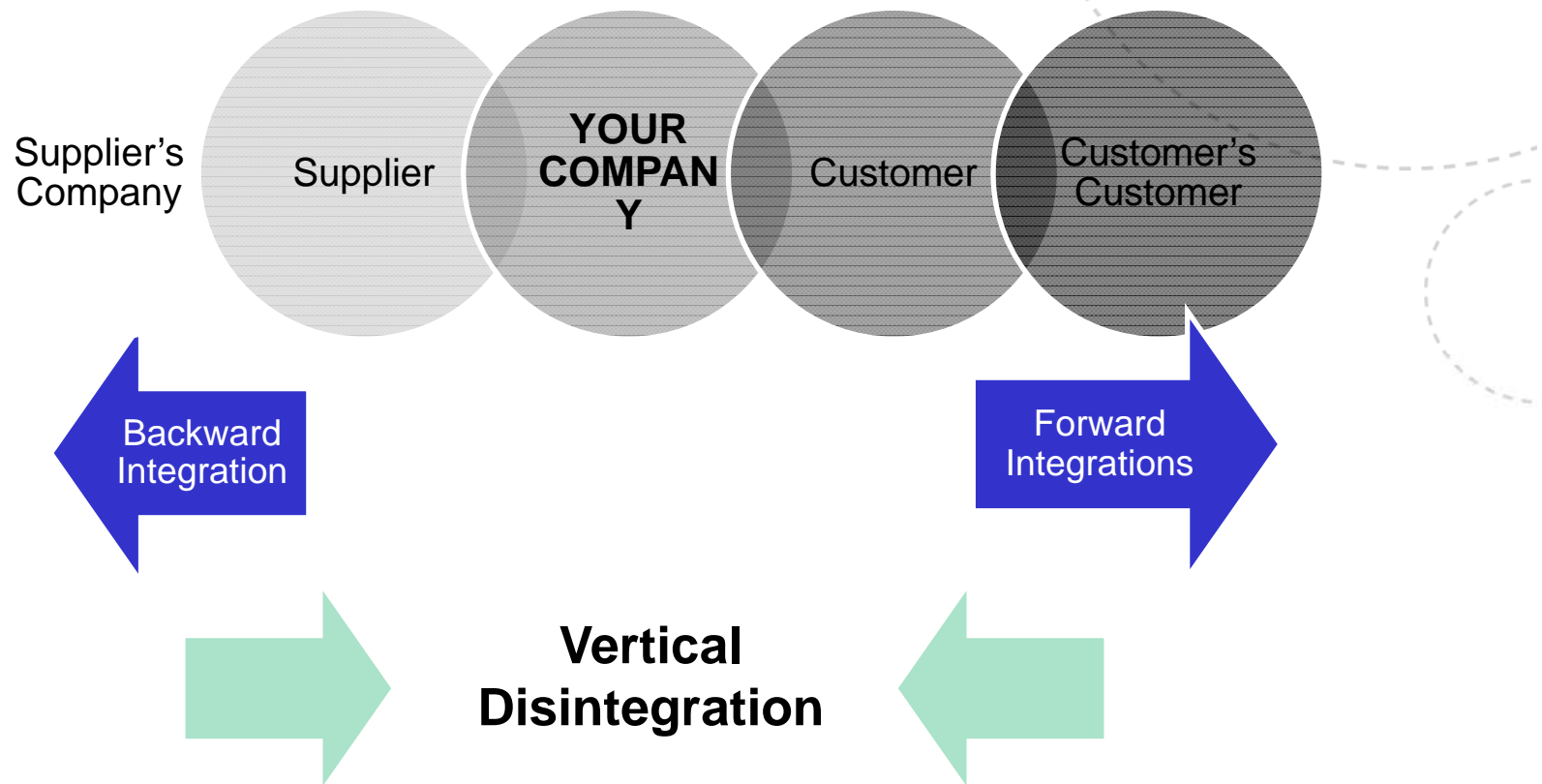


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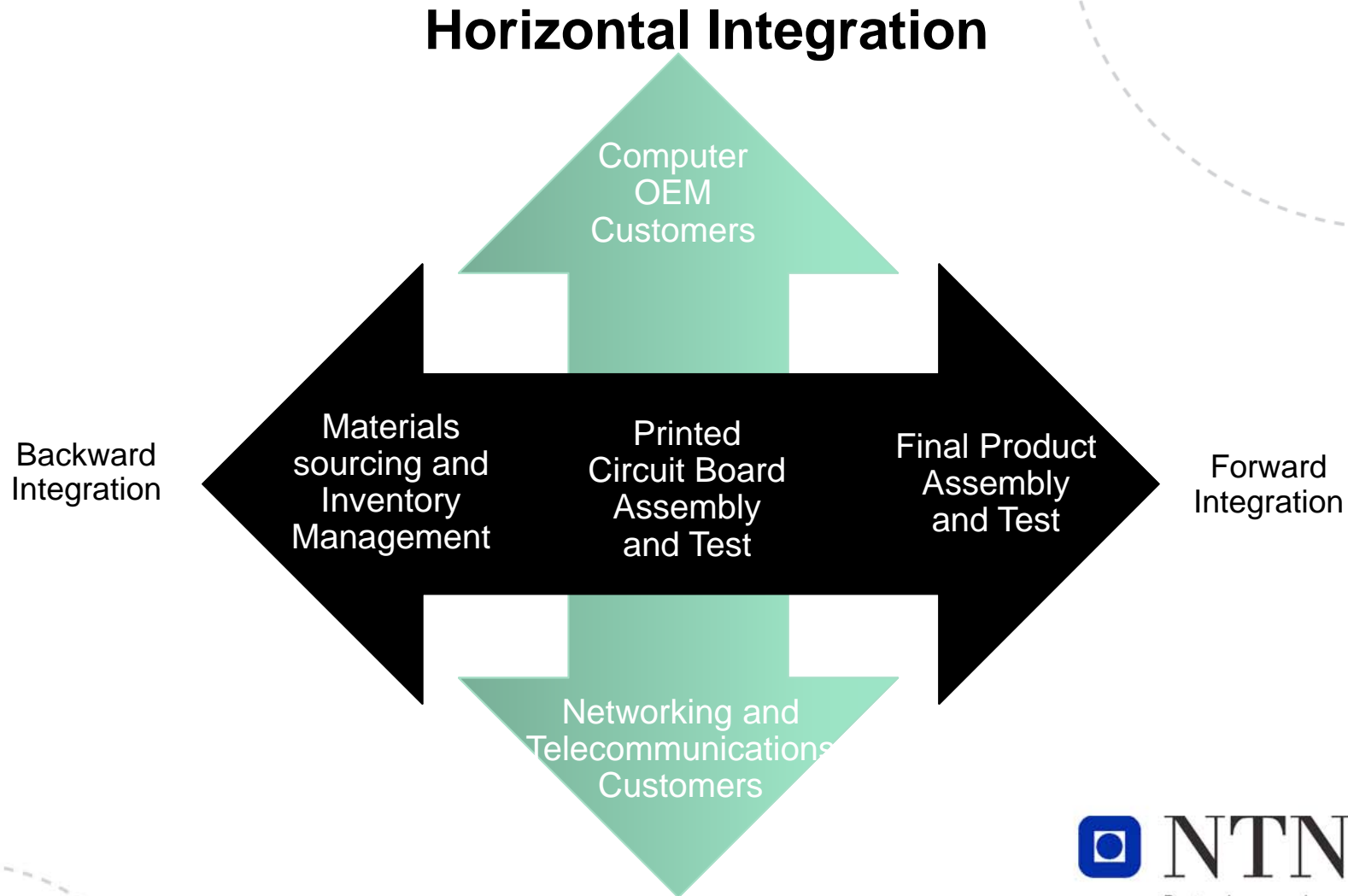


Vertical disintegration



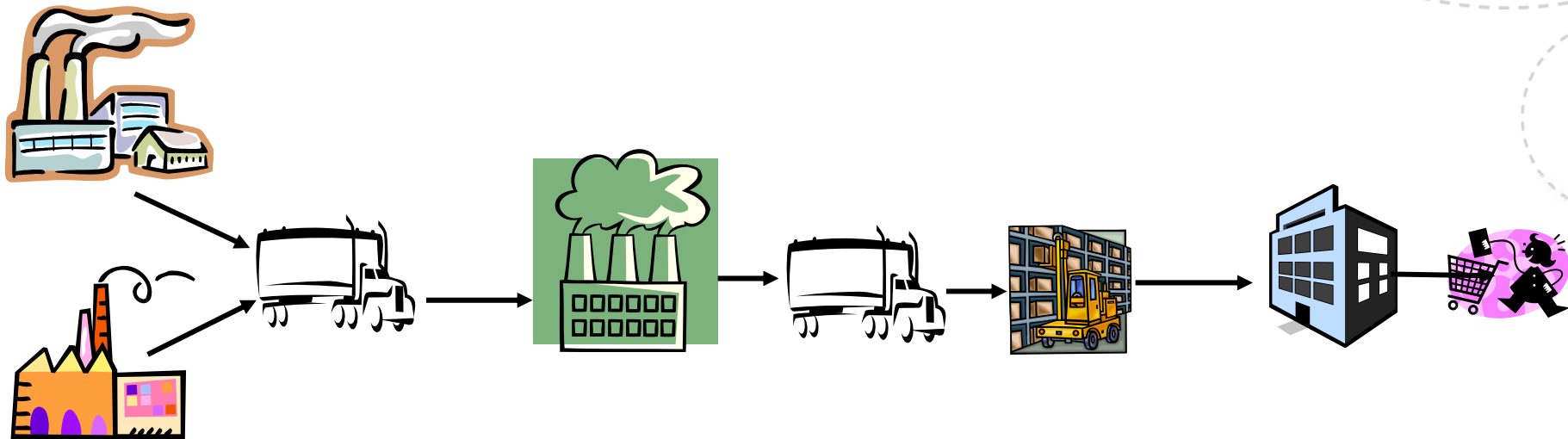
Source: Beckman and Rosenfield (2008)

Horizontal integration



What is the right size of a company?

Where is the company's natural boundary?



The nature of the firm, Ronald Coase, 1937

Transaction cost theory

- Oliver E. Williamson (1975): Markets and Hierarchies
- Autonomy or hierarchy?
- The characteristics of the transaction decide the most cost efficient way to organize: In the market, hierarchy or “in between”.
- The transaction:
 - Frequency
 - Uncertainty
 - Transaction specific investments

Matching transaction and relationship

		Transaction specific investment		
		Standard	Partly	Complete
Frequency	Repeated purchases	Market	Partnership	Joint venture or hierarchic
	Single purchase	Market	Market	Partnership or market

Key factors in vertical integration decisions

- Strategic
- Market
- Product, service and technology
- Economic

Strategic factors

- Core capabilities
 - **Porter, M.E. (1985): Competitive advantages**
 - The sets of activities that the company performs better than any other enterprise: Skills and system
 - Often derived from interaction with and reinforcement by other skills sets or systems
 - Current and future capabilities
 - In order to immediately get access to capabilities a company may need to source capabilities from outside

Core capabilities

- Apple – functionality, design, brand...
- Stokke – Product design and development
- Nike – brand, design and quality and reputation, market...
- Dell – customization, speed,
- Zara, low cost, design ...

Market factors

- **Market reliability**
 - The ability of a supply base to perform along cost, quality, availability, innovativeness, etc.
- **Economy of scale**
 - Decreasing unit cost of producing a good or delivering a service as the volume of that good or service increase
 - Scale from multiple sources
 - Scale by reducing the effects of variability and uncertainty – aggregated demand
- **Market power**
 - Concentrated power in the hands of a few
- **Asset specificity**
 - Site specificity
 - Dedicated assets
 - Physical assets
 - Human capital
 - Brand name capital
 - Temporal specificity

Product, service and technology factors

- Intellectual property
 - Can be transferred to competitors
- Technology differentiation
 - Achieving differentiation and accommodate technological changes
- Integral product architecture
 - Modular – each component plays a separate function with one-to-one mapping of components – Swiss Army knife
 - Integral – one-to-many mapping of components – motorcycles
 - The more integral a part is to a product or a service the more likely the organization will be to own the capability for producing that part

Technology Access and Integration

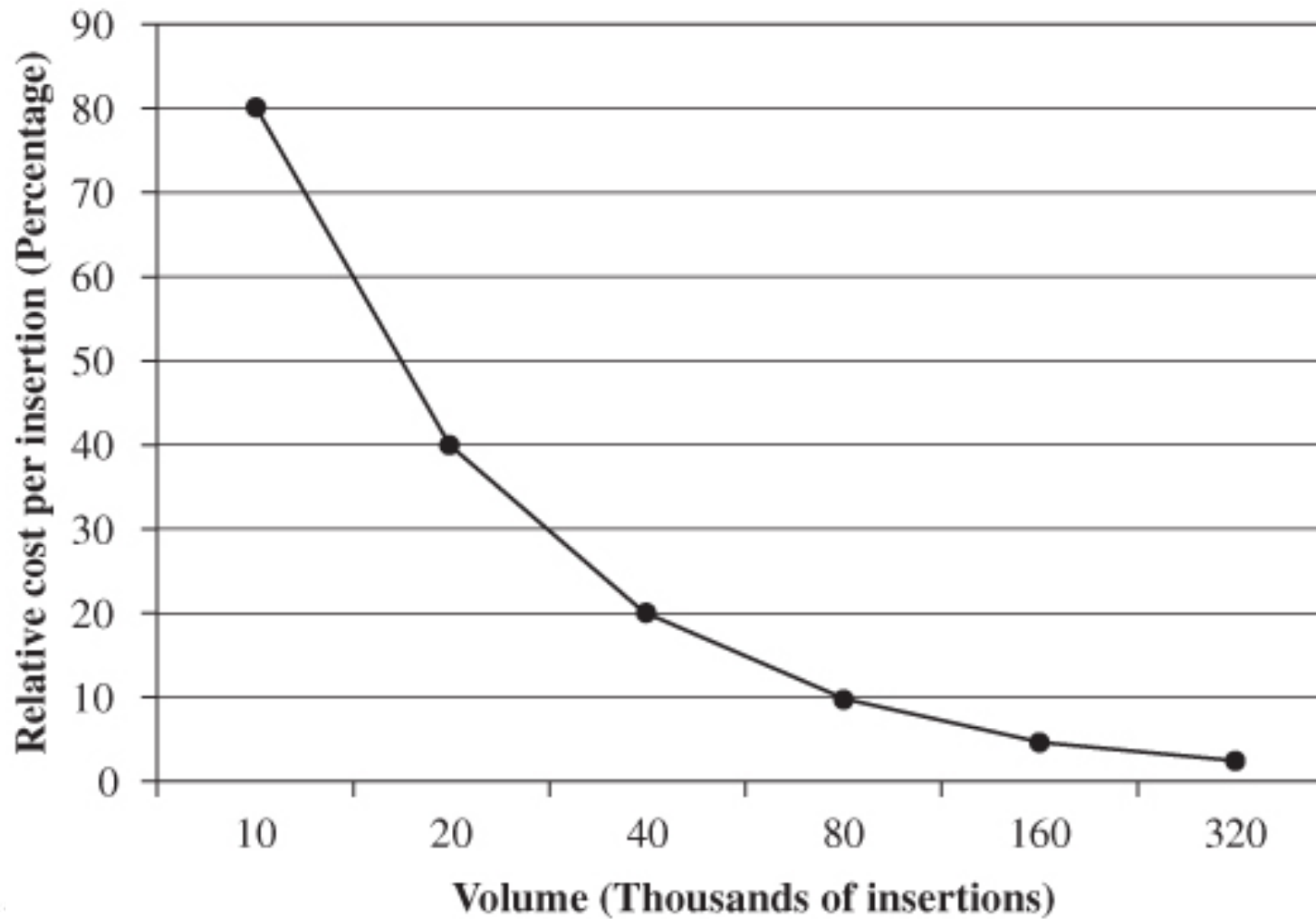
- Intellectual property
- Technology differentiation

	Capabilities Exist Outside	Capabilities Must Be Developed
Autonomous or Stand-Alone Technology	Do not vertically integrate	Ally with technology developer or bring technology in house
Systemic or Integrated Technology	Ally with technology provider with caution	Vertically integrate, bringing technology development in house.

Economic factors

- Transaction, coordination, transportation and investments
- Investments cost
 - What will the investments cost be?
- Design, production and delivery cost
 - Procurement cost
 - Material and direct cost
 - Overhead cost and indirect cost
 - Transaction costs

Economies of Scale



A simple tool...

Strategic importance

	<i>Operative</i>	<i>Strategic</i>
<i>High</i>	<i>Long term cooperation</i>	<i>Make in house</i>
<i>Low</i>	<i>Eliminate or buy</i>	<i>Buy</i>

Low High

Capability to make in house