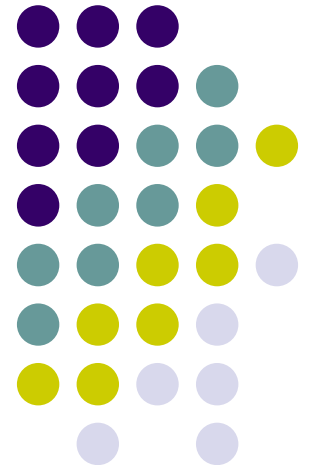


# ENGG1803

## Innovation and Entrepreneurship

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Globalisation of Innovation



# Factors Affecting the Ability to Create Value through Innovation

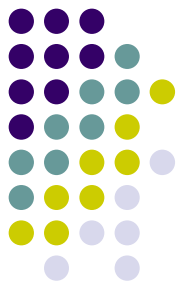


- The *national system of innovation* in which the firm is embedded, and which in part defines its range of choices in dealing with opportunities and threats.
- Its power and *market position* within the international *value chain*, which in part defines the innovation-based opportunities and threats that it faces.
- The *capability and processes* of the firm, including research, design, development, production, marketing and distribution.
- Its ability to identify and exploit *external sources of innovation*, especially international networks.

# Position

## Local versus global?

### 'Place matters'



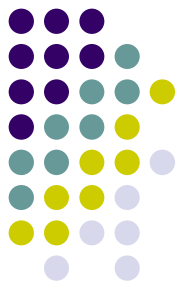
- Large firms perform 12% of R&D activities outside their home country eg Nokia, Nortel
- Most important factor is share of foreign production
- Most in US and Europe - not global
- Some European and Japanese firms locating R&D in US

# Factors Affecting Location of R&D

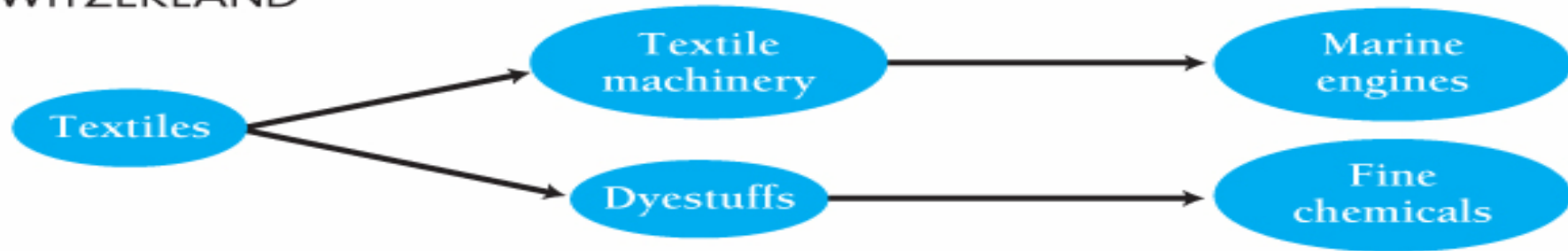


- The availability of critical competencies for the project;
- The international credibility (within the organization) of the R&D manager responsible for the project;
- The importance of external sources of technical and market knowledge (e.g. sources of technology, suppliers and customers);
- The importance and costs of internal transactions (e.g. between engineering and production);
- Cost and disruption of relocating key personnel to the chosen site.

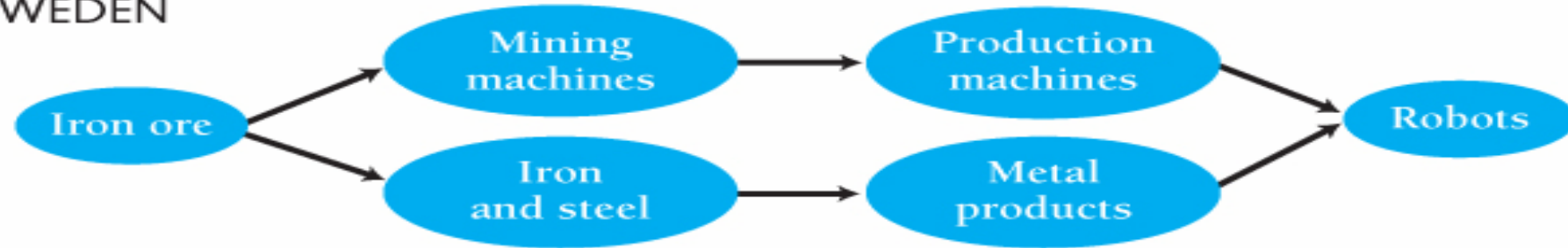
# Evolution from natural endowment to national specialisation



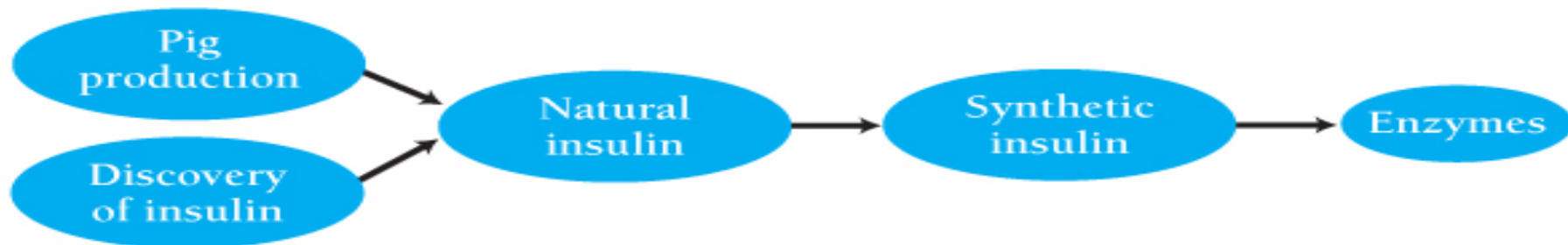
## SWITZERLAND



## SWEDEN



## DENMARK

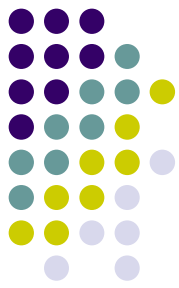


# The Nokia Story



<http://www.nokia.com/A4303002>

# Catch-up Strategies



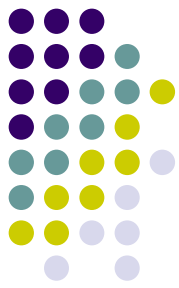
- OEM - original equipment m'fure
- ↓
- ODM - own design m'fure
- ↓
- OBM – own brand m'fure



# National Innovation Systems

- Components: research institutions, universities, companies, regulators, IP laws, venture capital
- Connections: networks, clusters
- Competences: comparative advantages, demanding customers, effective institutions of finance, management and governance, learning systems, capture of innovation benefits
- OR competencies, inducements and institutions

# Positions in Global Value or Supply Chains



- From selling products to consumers to selling into the supply/value chain
- The OEM-ODM-OBM transition – Samsung, LG, Hyundai
- Australian examples – Bishop Steering, BAE Aerospace Australia,
- BRIC examples - ?