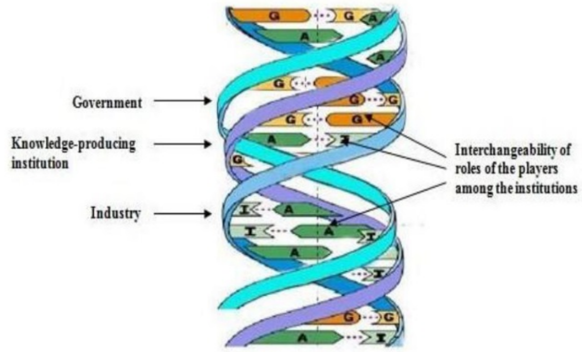

Mapping Distribution & Concentration of Capabilities and Value Added Along the Global Value Chains

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bcned

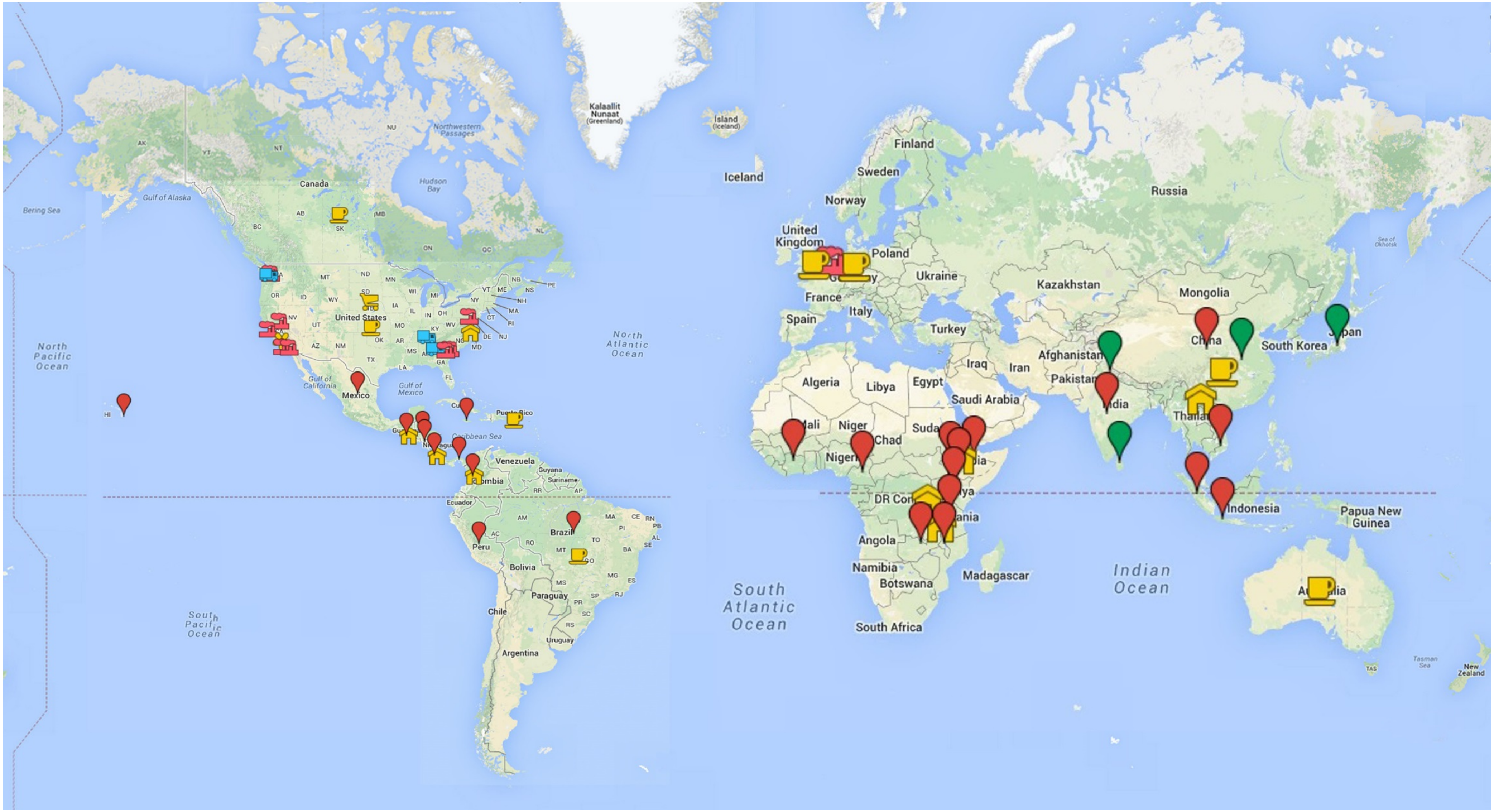
Multilateralism & Global Integration

‘The world has become a Hum of Interconnected voices and a Hive of interlinked lives.’

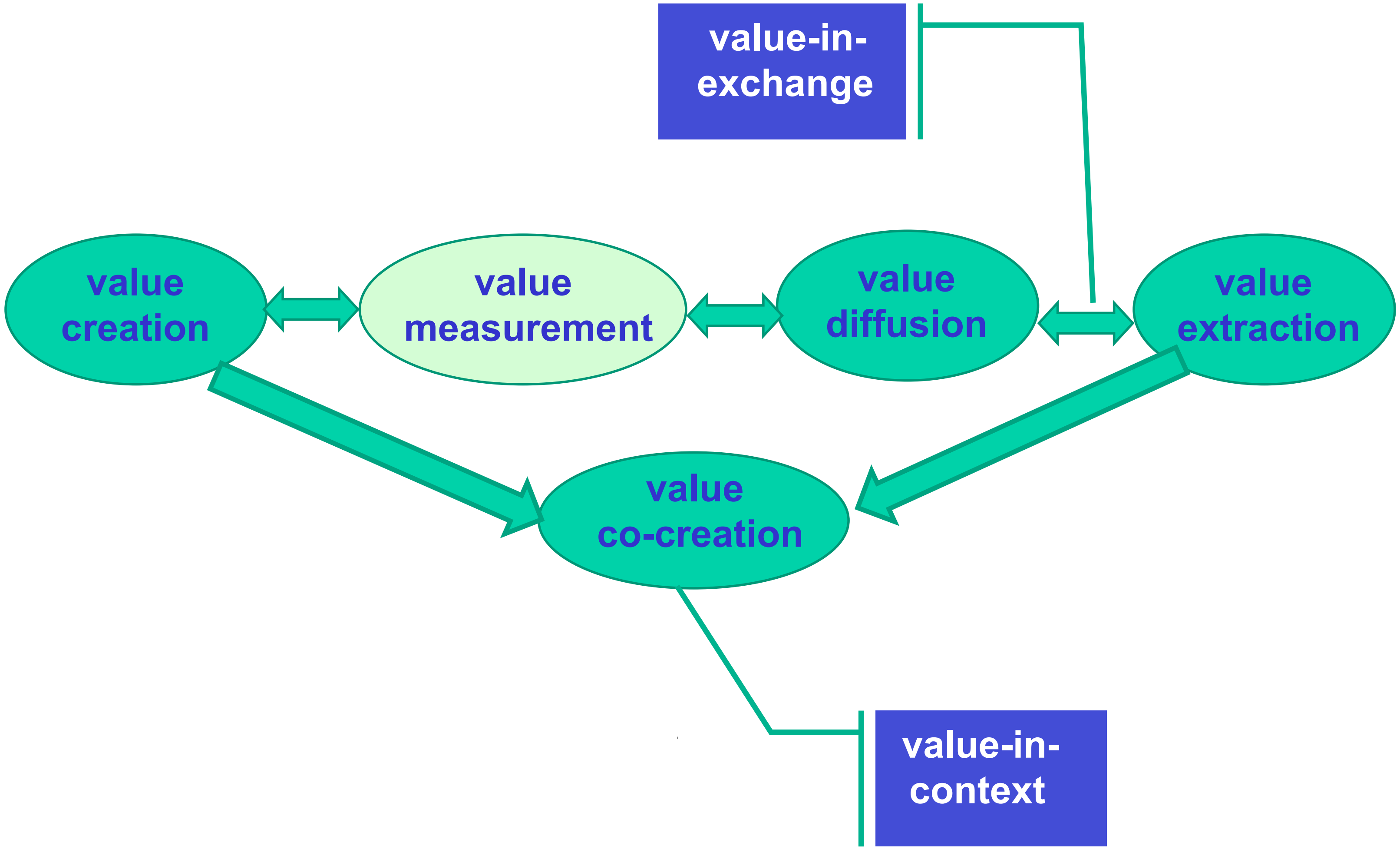
Christine Lagarde, 4/2/2014

- In 1950 – the emerging markets and developing economies accounted for hardly 25% of the Global GDP – now it is 50%, and in 2020 it is likely to be 2/3
- More then half of manufacturing output are **intermediate products**
- More then 70% of integrated services (imports) are **intermediate services**
- MNCs control 2/3 of global trade
- 12 MNCs 31 Global cities sit among the top 100 global bodies in terms of size

The Value Chain Describes the Full Range of Activities That Firms and Workers Do to Bring a Product From its Conception to its End Use



Network Approach to Value Management



GVC – Interconnected Input-Output Markets for

- resources (*supply networks & trade of intermediate products*)
- skills (*outsourcing networks*)
- capital (*shareholder networks*)
- production technology (*R&D alliances*)

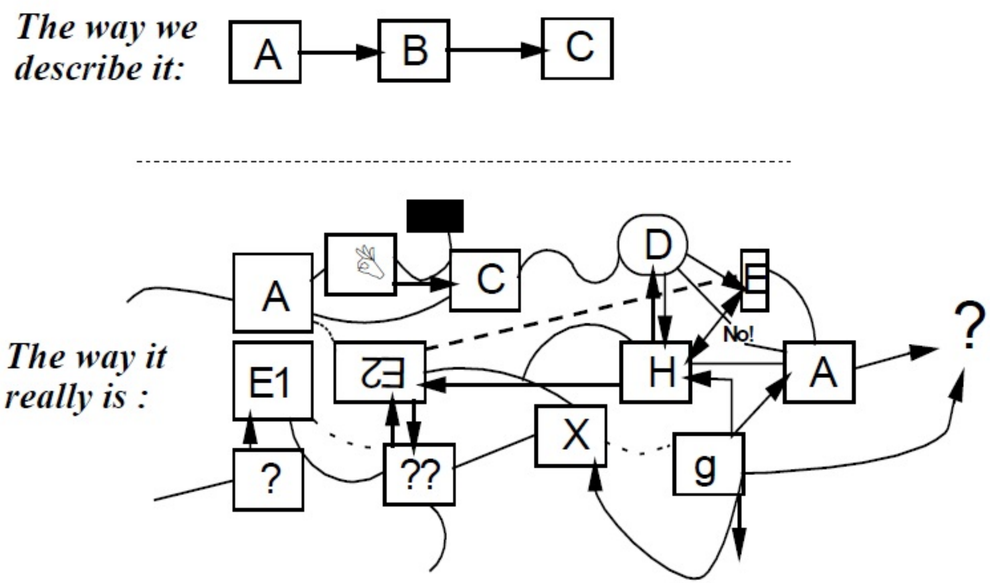
GVC – Organisation & Coordination

of production and value added activities across borders and firm boundaries

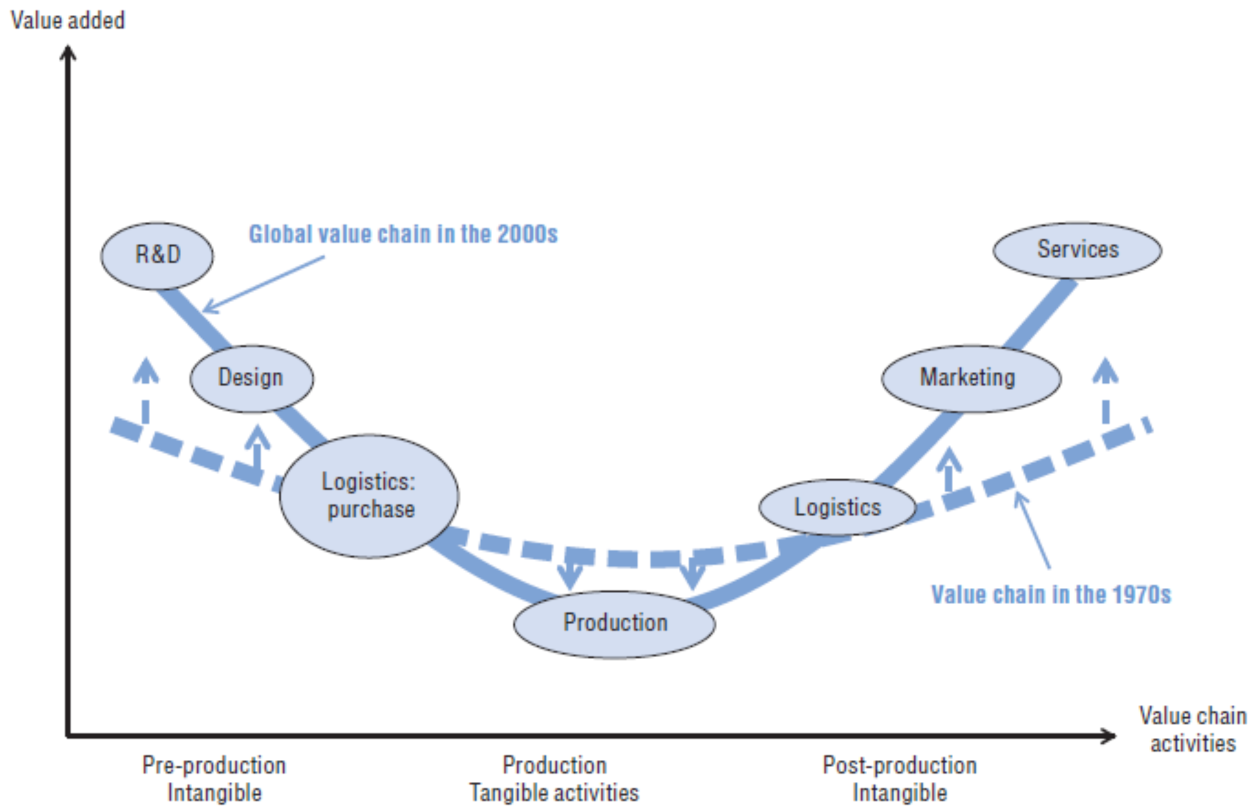
GVC – Interconnected Organised Production Capabilities and Country Resources

- Agents boundaries
- Location boundaries
- Activities
- Costs
- Value added
- Transfers, transactions

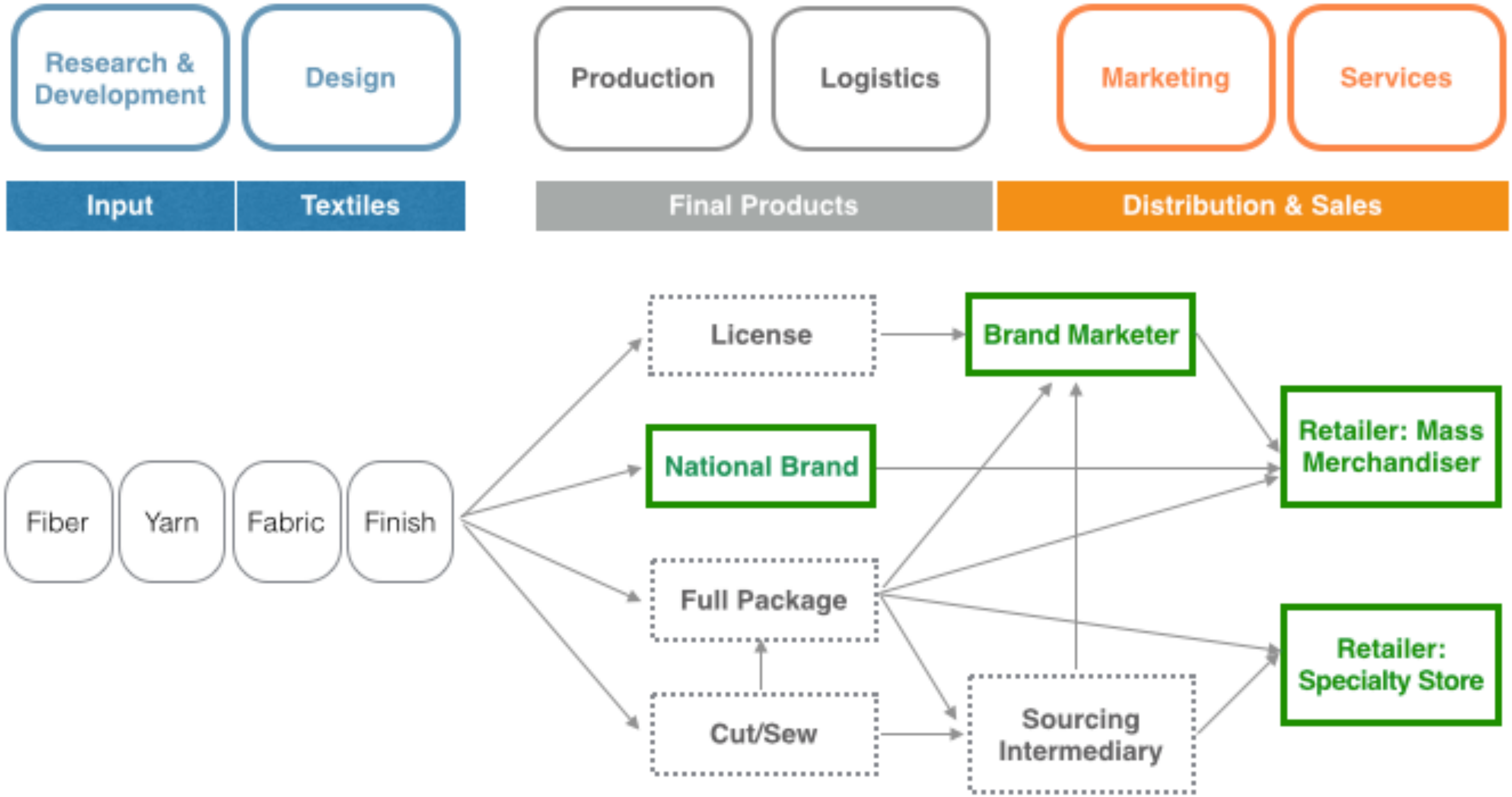
Value Chains



Representations of Value Added and Supply Chain Relationships

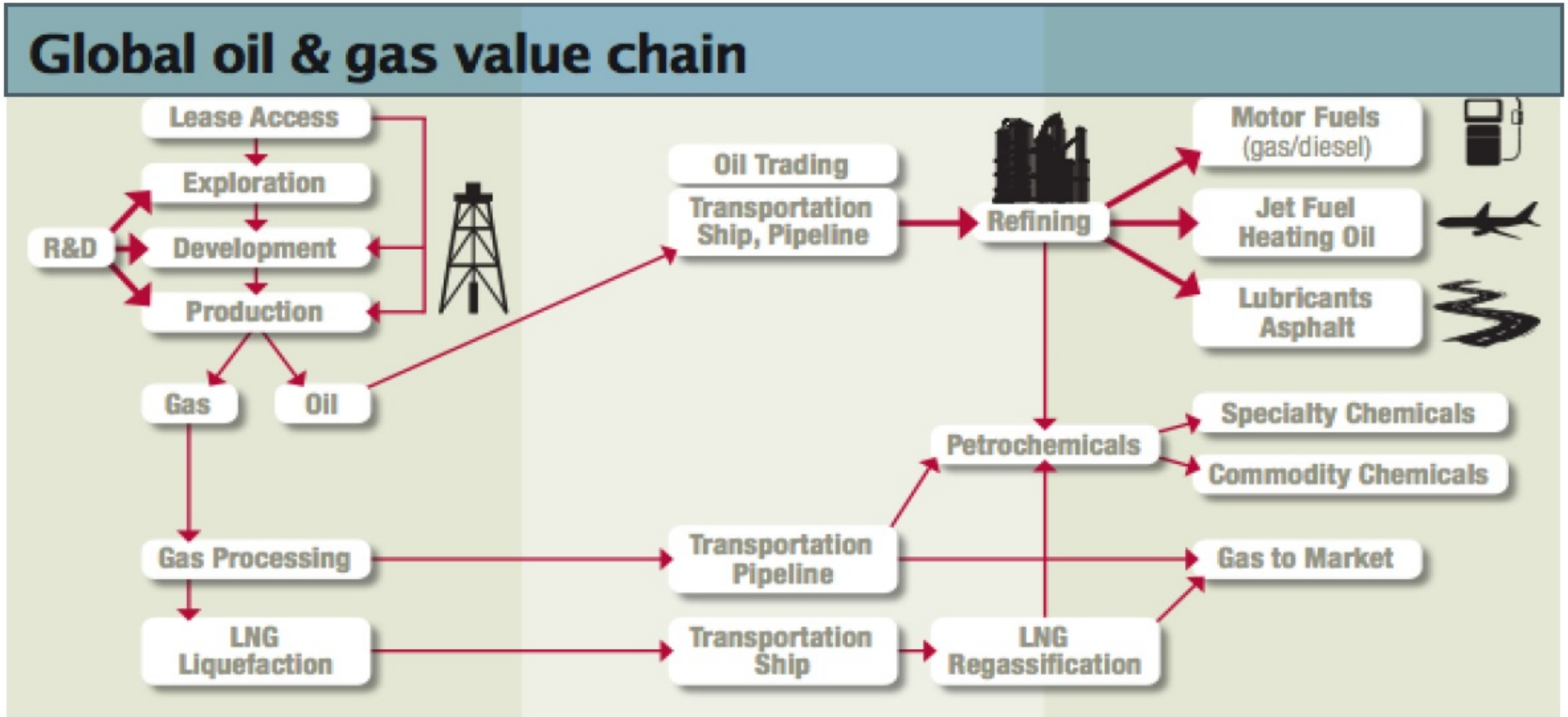


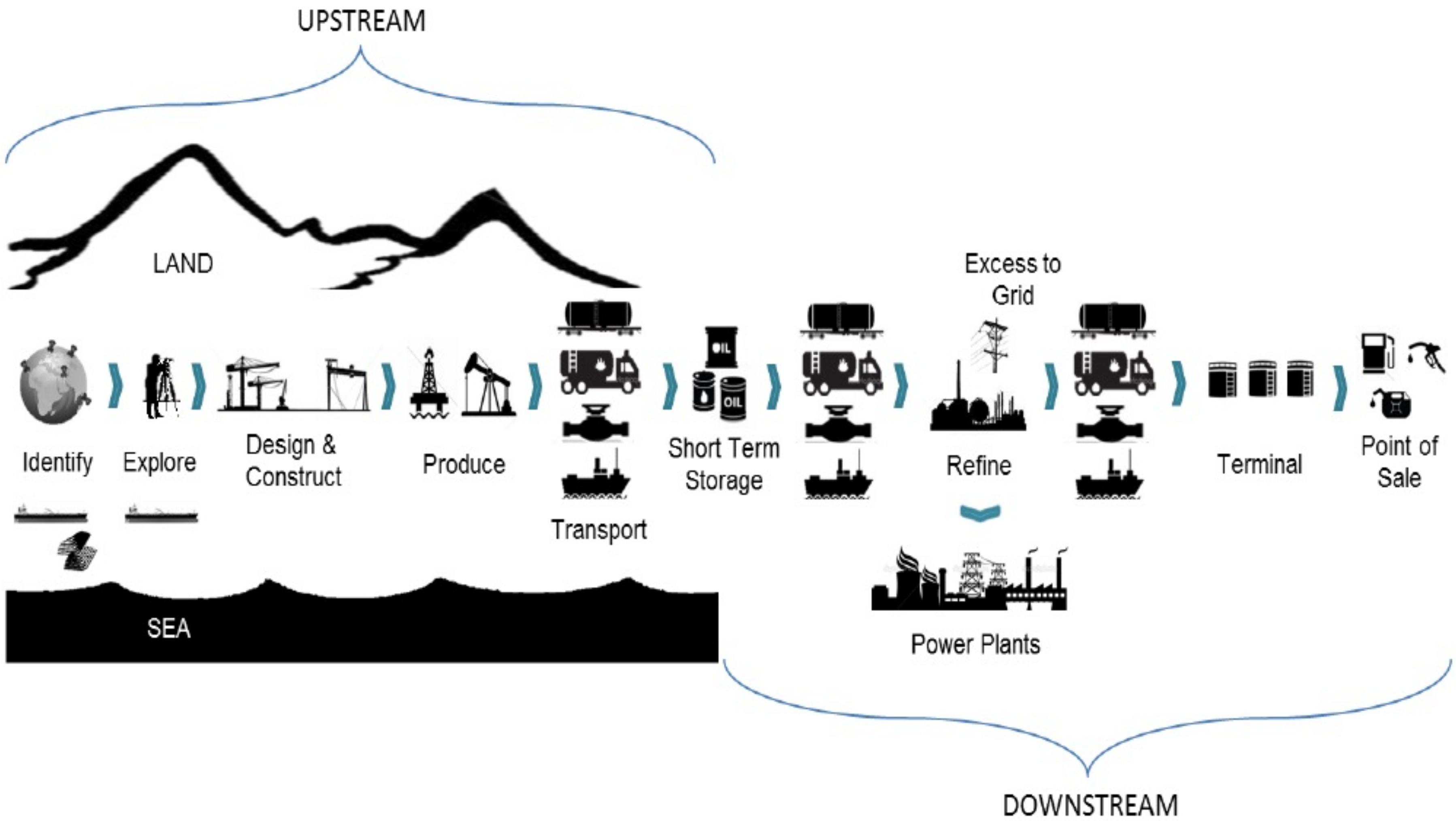
Source: Based on Shih (1992), Dedrick and Kraemer (1999), and Baldwin (2012).

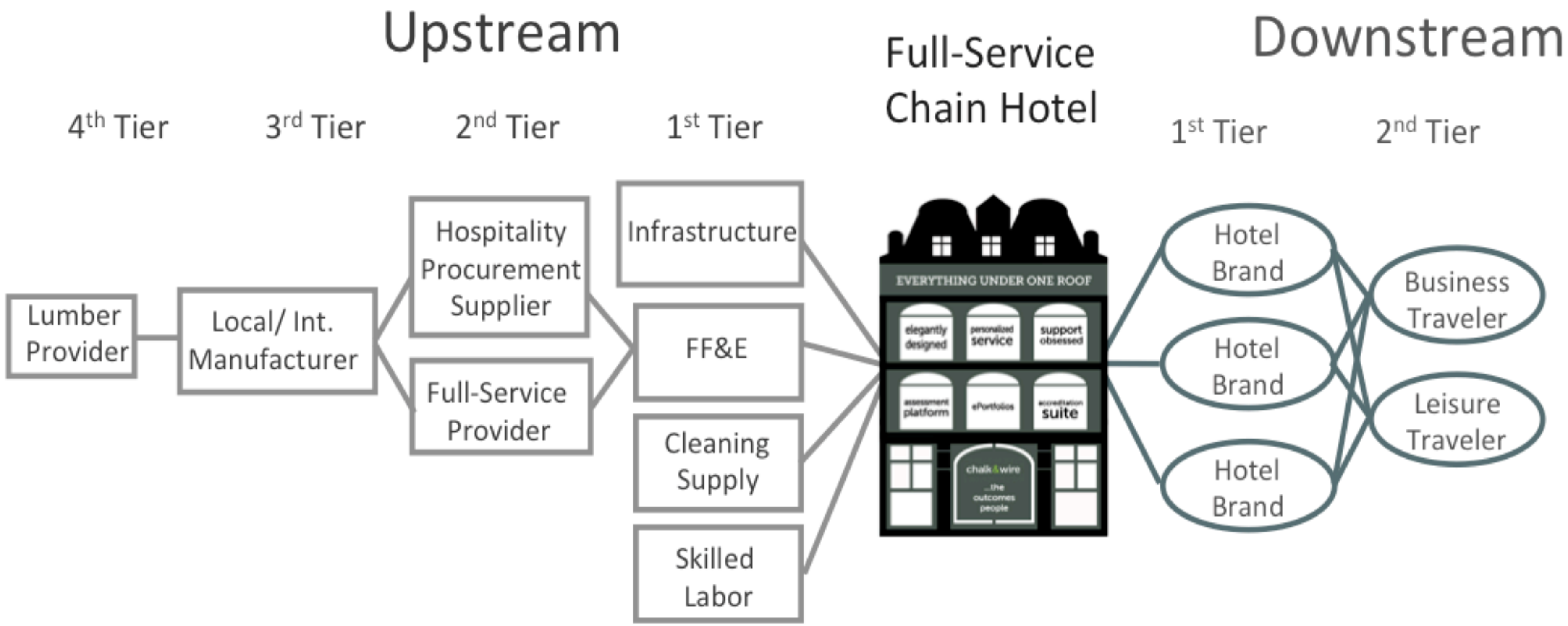


apparel supply chain: Forstater, 2010

Figure 1-3: Global supply chain of the airline industry adapted from (IATA 2013)


Global oil & gas value chain
Lease Access
Exploration
R&D
Development
Production
Gas
Oil
Oil Trading
Transportation
Ship, Pipeline
Refining
Motor Fuels
(gas/diesel)
Jet Fuel
Heating Oil
Lubricants
Asphalt
Specialty Chemicals
Petrochemicals
Commodity Chemicals
Gas Processing
Transportation
Pipeline
Gas to Market
LNG
Liquefaction
Transportation
Ship
LNG
Regassification

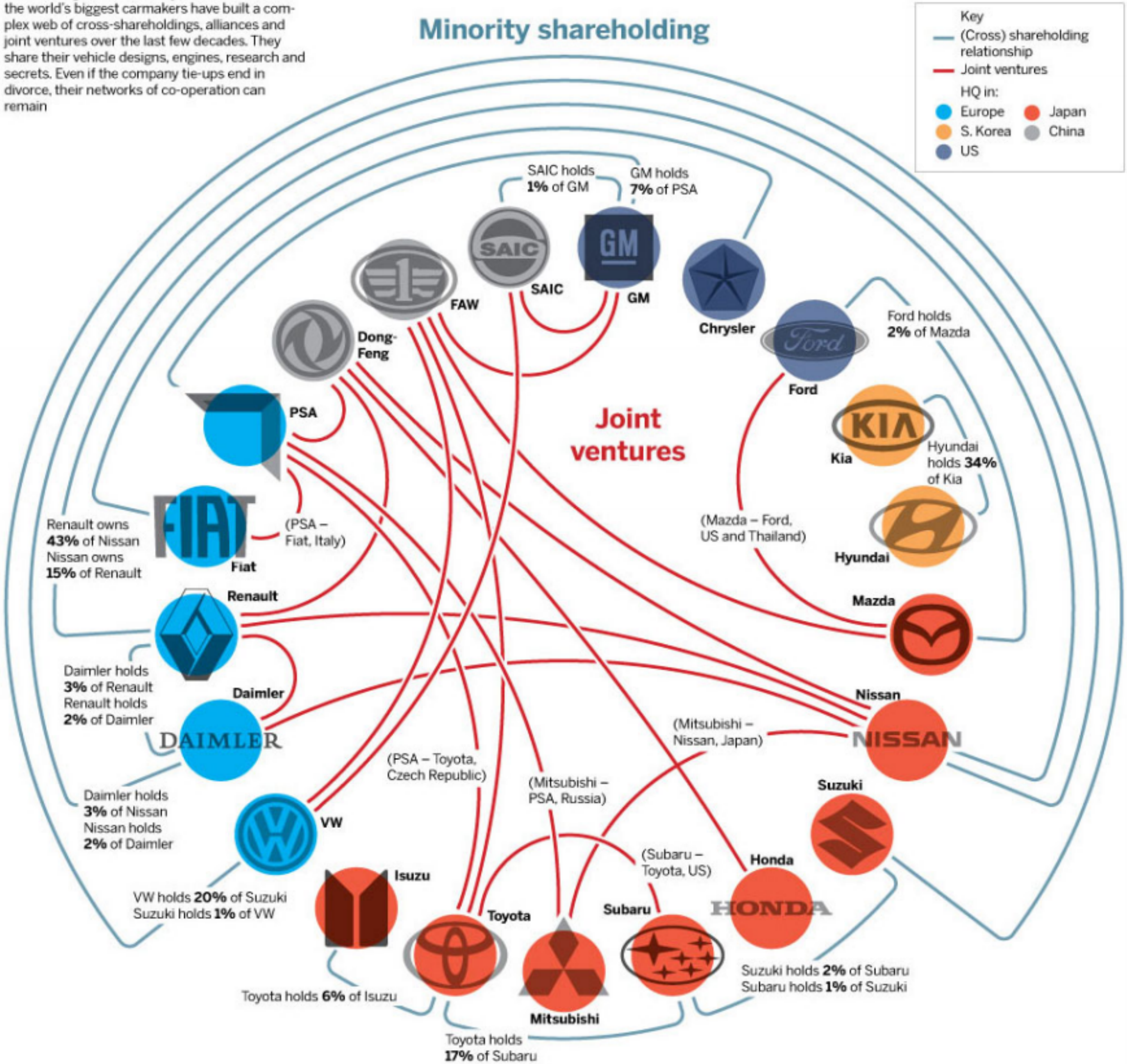

UPSTREAM
LAND
Excess to Grid
Identify
Explore
Design & Construct
Produce
Transport
Short Term Storage
Refine
Terminal
Point of Sale
Power Plants
SEA
DOWNSTREAM



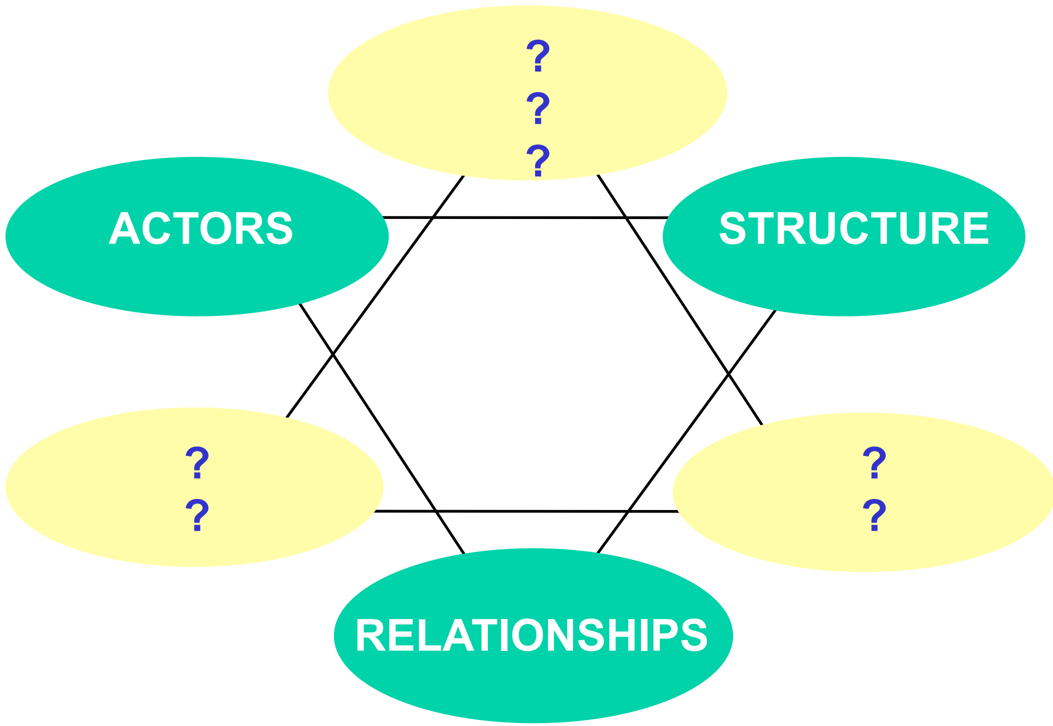
Upstream
Full-Service Chain Hotel
Downstream
4th Tier
3rd Tier
2nd Tier
1st Tier
1st Tier
2nd Tier
Lumber Provider
Local/ Int. Manufacturer
Hospitality Procurement Supplier
Full-Service Provider
Infrastructure
FF&E
Cleaning Supply
Skilled Labor
EVERYTHING UNDER ONE ROOF
elegantly designed
personalized service
support obsessed
ePortfolios
suite
chalk&wire
Hotel Brand
Hotel Brand
Hotel Brand
Business Traveler
Leisure Traveler

A tangled web

In a bid for greater efficiency, and even survival, the world's biggest carmakers have built a complex web of cross-shareholdings, alliances and joint ventures over the last few decades. They share their vehicle designs, engines, research and secrets. Even if the company tie-ups end in divorce, their networks of co-operation can remain



Chains and Networks



Emanuela Todeva (2006) *Business Networks: Strategy and Structure*, New York: Taylor & Francis.

Cluster Mapping Methodology as a Step-by-Step Approach

- Revealing actors,capabilities & activities
- Revealing linkages / relationship
- Visualising / Mapping linkages and configuration
- Developing linkages
- Upgrading linkages & Position

- Cluster Mapping
- Cluster Development (enhancement of capabilities)
- Cluster Internationalisation

UPGRADING CAPABILITIES
through innovation to increase value added

Different forms of upgrading:

- of products
- of processes
- functional
- inter-sectoral

Product Upgrading

Firms can upgrade by moving into **more sophisticated product lines** (which can be defined in terms of increased unit values).

Example: the apparel commodity chain in Asia upgrading from discount chains to department stores (Gereffi, 1999).

Process Upgrading

Firms can upgrade processes – transforming inputs into outputs more efficiently by re-organising the production system or introducing superior technology (i.e. footwear producers in the Synos Valley – Schmitz, 1999).

Functional Upgrading

Firms acquire new functions (or abandon existing functions) so that they increase the **overall skill content** of their activities. They might complement production with design or marketing, or move out of low-value production activities.

Example: Torreon’s blue jeans industry upgrading from maquila to “full-package” manufacturing (Bair & Gereffi, 2001).

Intersectoral Upgrading

Firms may apply the competence acquired in a particular function **to move into a new sector**.

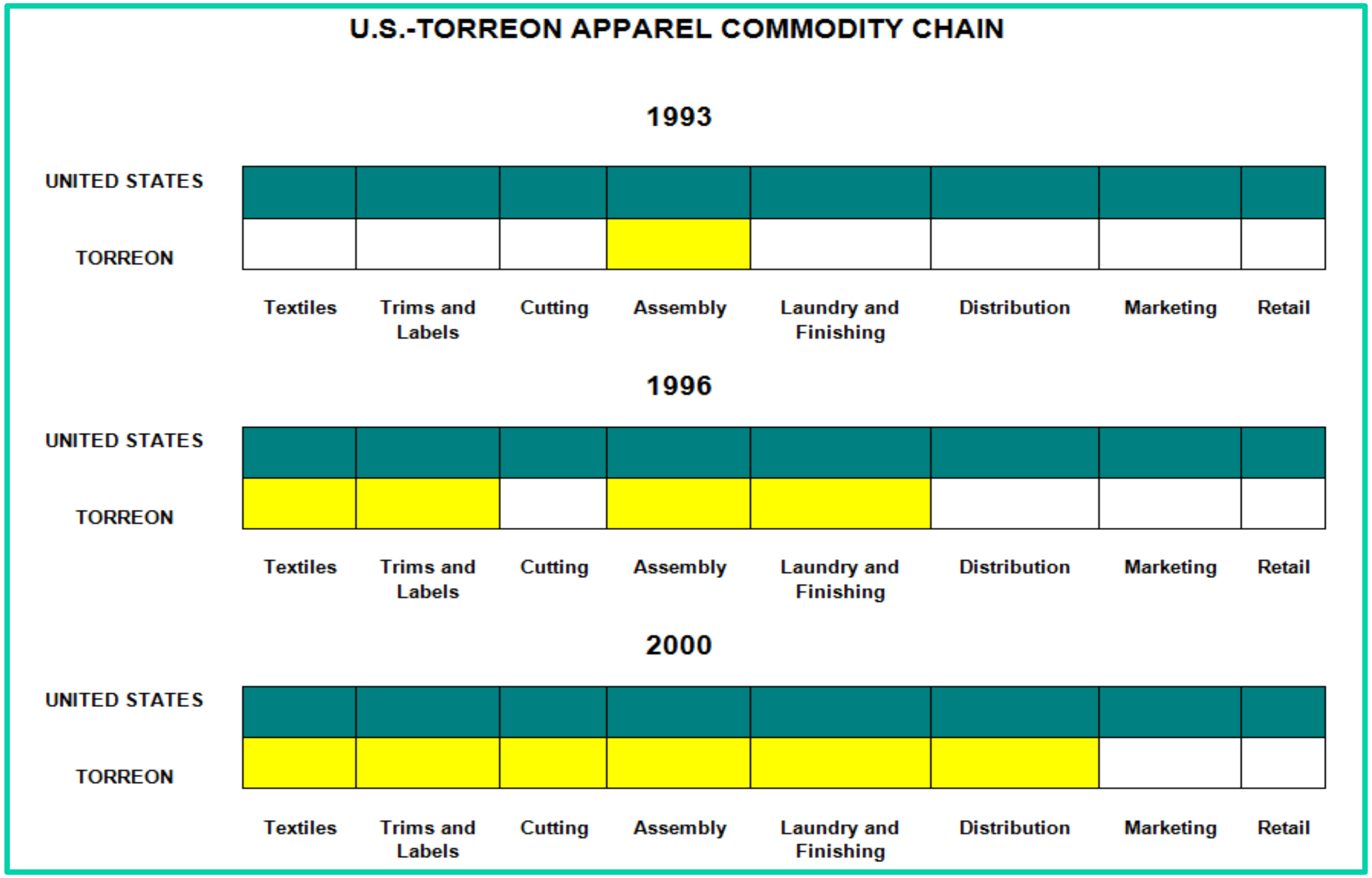
For example, in Taiwan competence in producing TVs is used to make monitors and thus move into the computer sector

(Humphrey & Schmitz, 2002, Guerrieri & Pietrobelli, 2004).

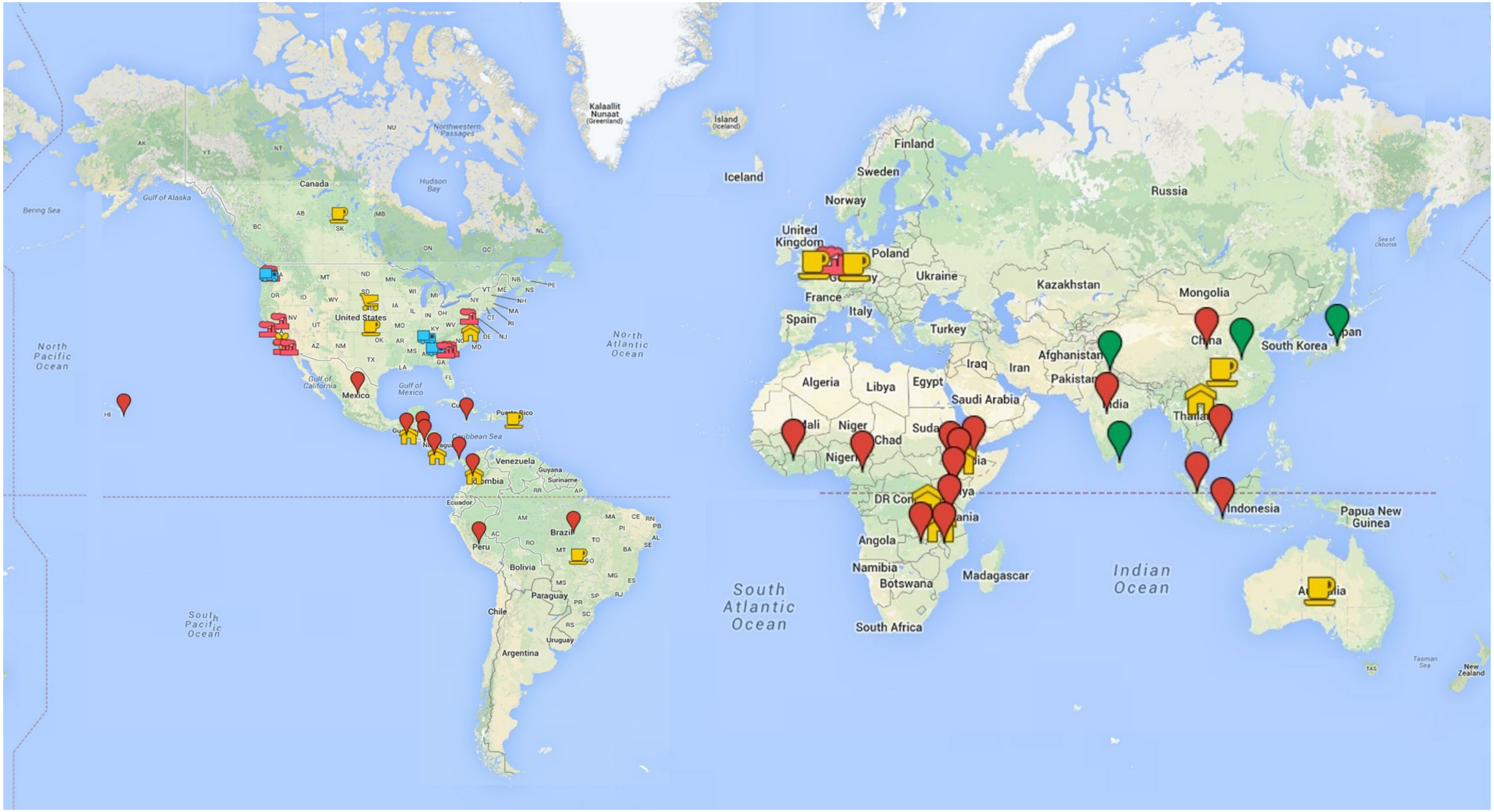
Upgrading

Upgrading refers to the acquisition of technological capabilities and market linkages that enable firms to improve their competitiveness and move into higher-value activities. Analyses of upgrading from a value chain perspective pay particular attention to the ways in which value chain linkages facilitate or obstruct upgrading.

- **Product & Process Upgrading**
- **Functional Upgrading**
- **Inter-Chain Upgrading**

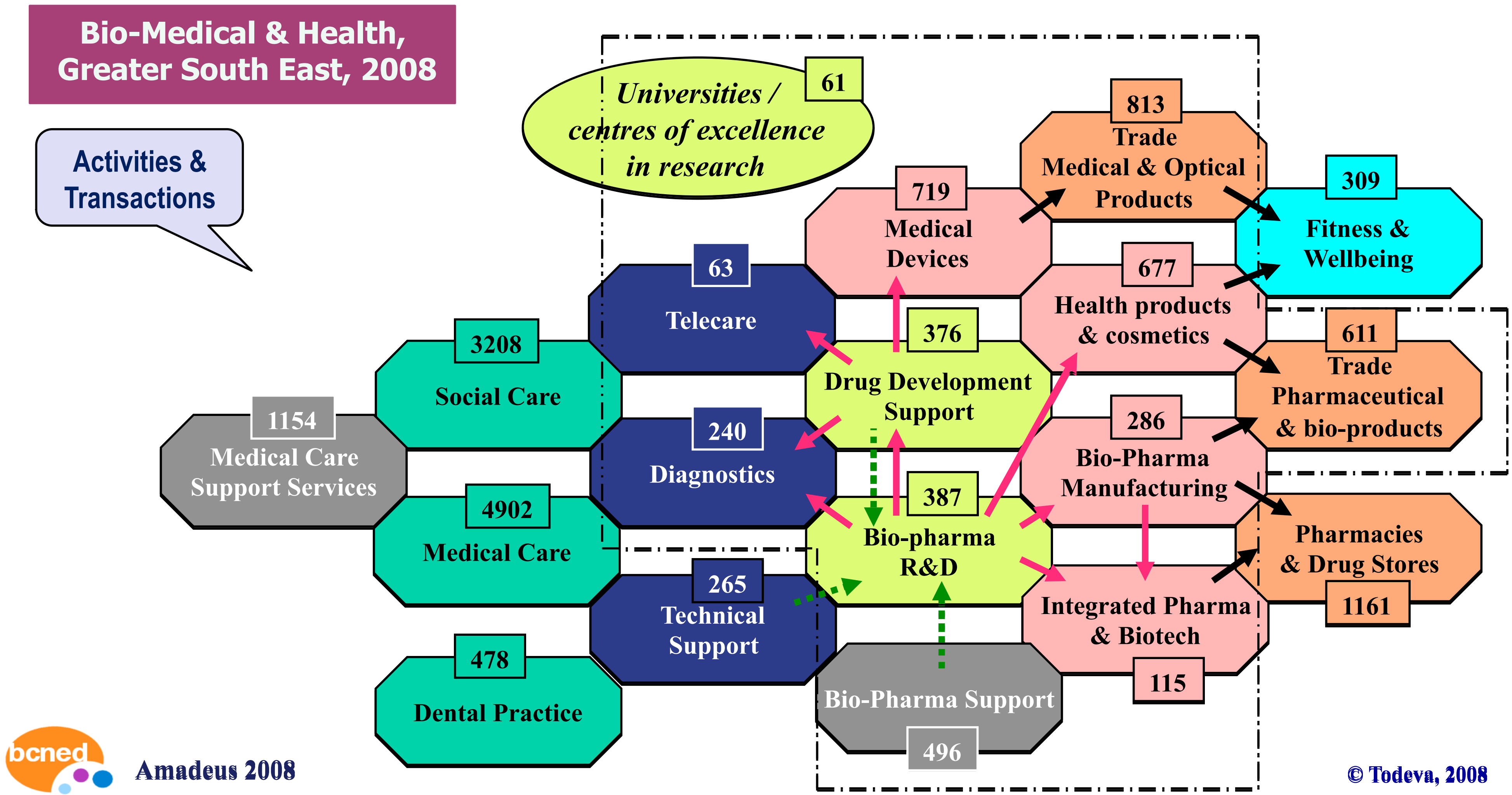


The Value Chain Describes the Full Range of Activities That Firms and Workers Do to Bring a Product From its Conception to its End Use



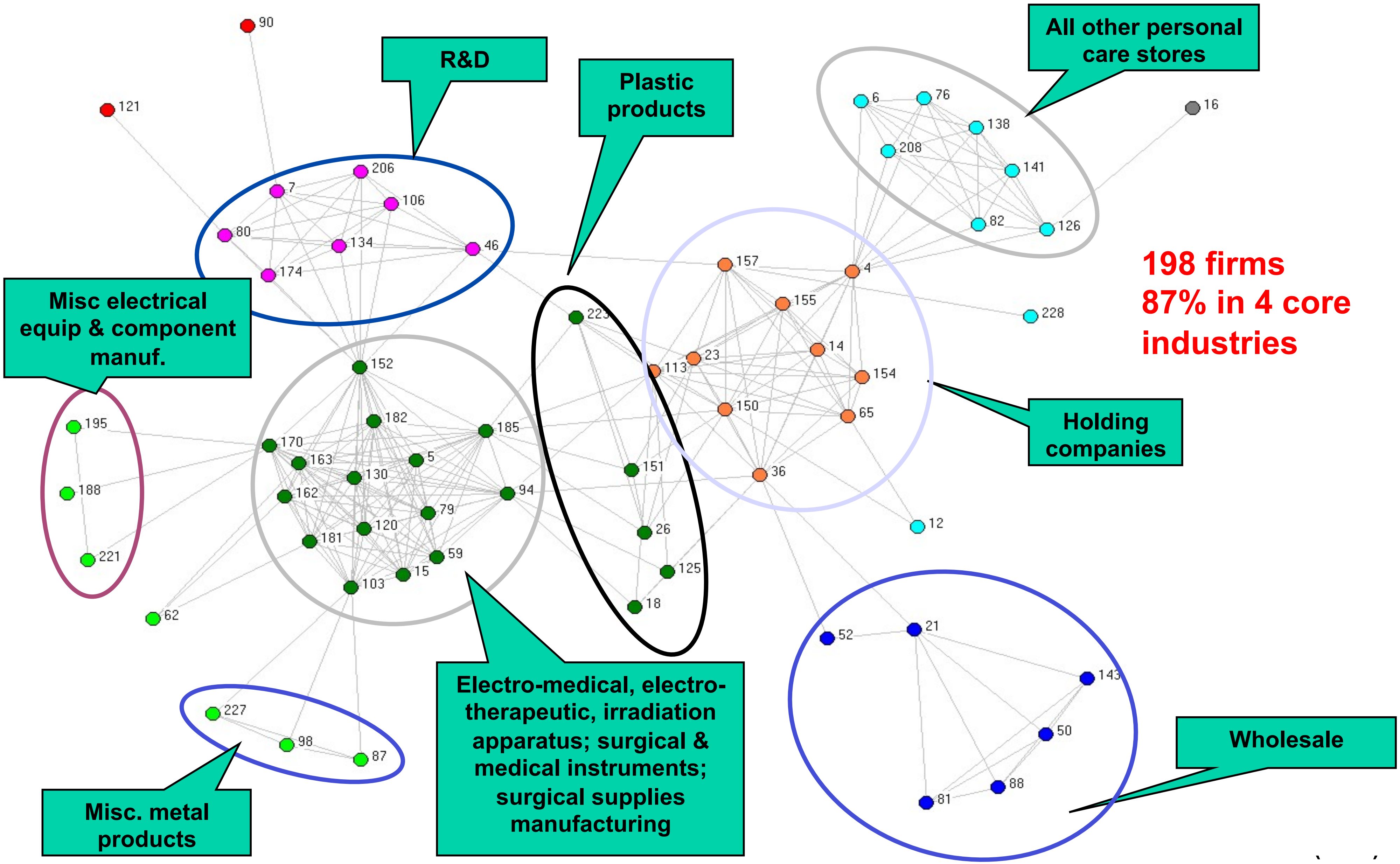
- The Use of complementary databases comprising of the entire population of firms and funded research projects
- Developed a Multi-Stage Cluster Methodology for Cluster mapping and analysis
- Investigating Brokerage, Intermediation, & Information sharing across firm / regional / country boundaries

Database Firms
'*Concentration of firms in the Value Chain in the Region*'
Greater South East, UK

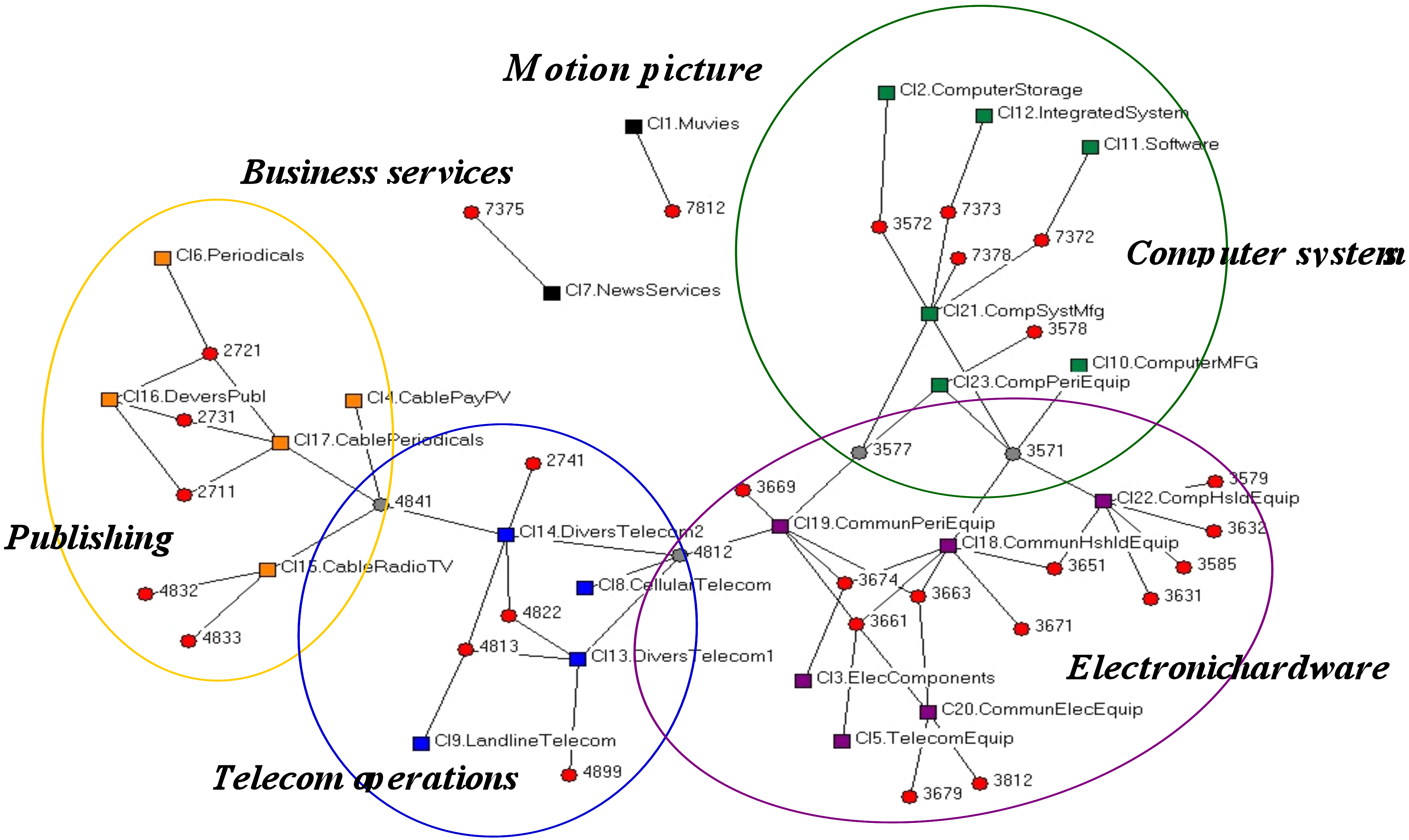


Cluster Value Chain: SURGICAL & MEDICAL INSTRUMENTS MANUFACTURING
(198 firms, ties between firms based on 5 or more shared industry codes)

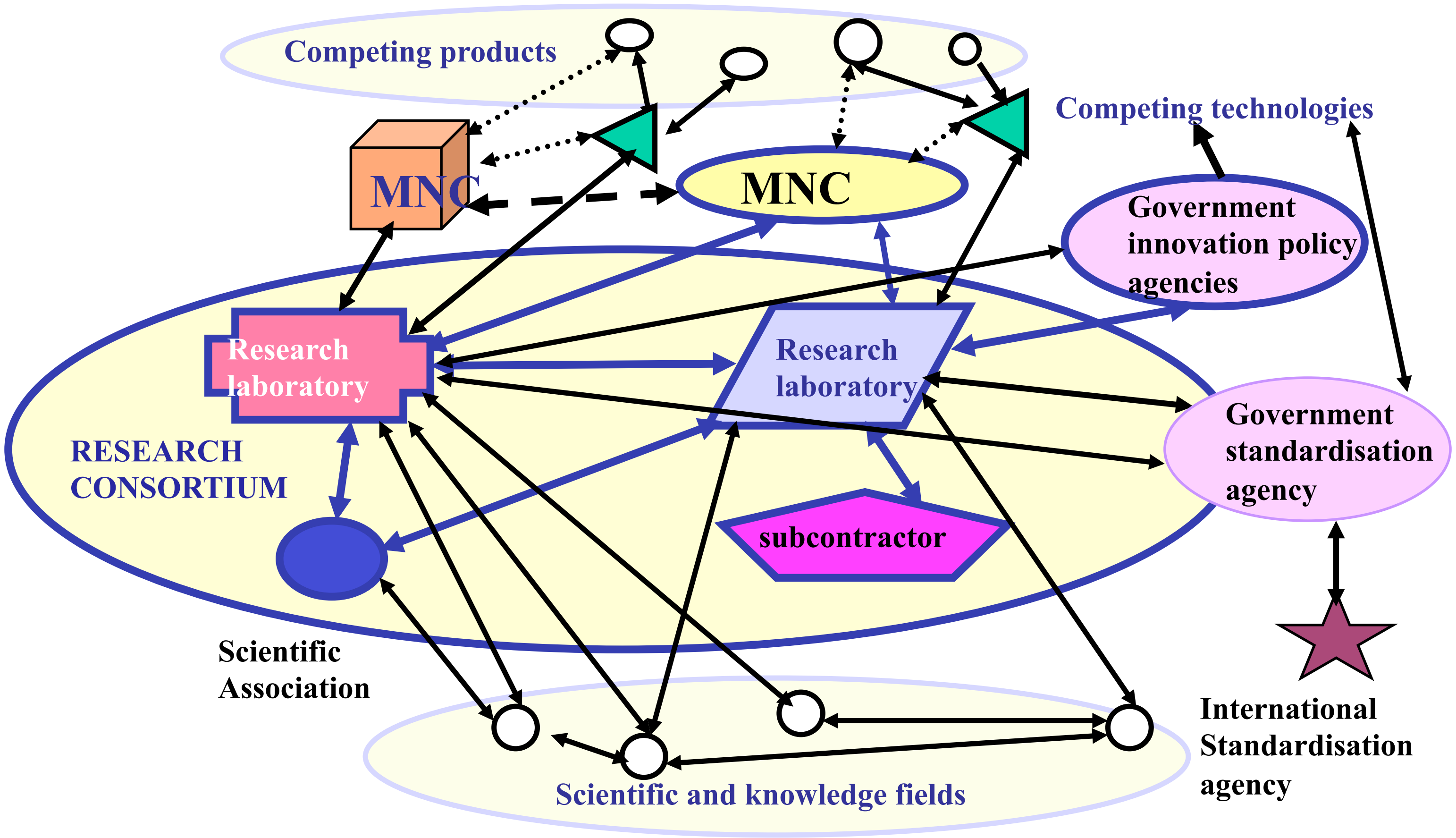
(87% of firms have the core industry codes: 334510 Electro-medical and Electrotherapeutic Apparatus Manufacturing; 334517 Irradiation Apparatus Manufacturing; 39112 Surgical and Medical Instrument Manufacturing; 339113 Surgical Appliance and Supplies Manufacturing)



The Global Information Sector, 2002



R&D Alliance Networks
Value Added Networks



Moving Up the Value Chain

- (1) Upgrading
  - Process upgrading
  - Product upgrading
  - Functional upgrading
  - Chain or inter-sectoral upgrading
- (2) Task bundling
- (3) Workforce development and innovation
- (4) Ensuring cost competitiveness
- (5) Improving the connectivity with international markets
- (6) Improving business and investment climates
- (7) Fostering innovation and building capacity

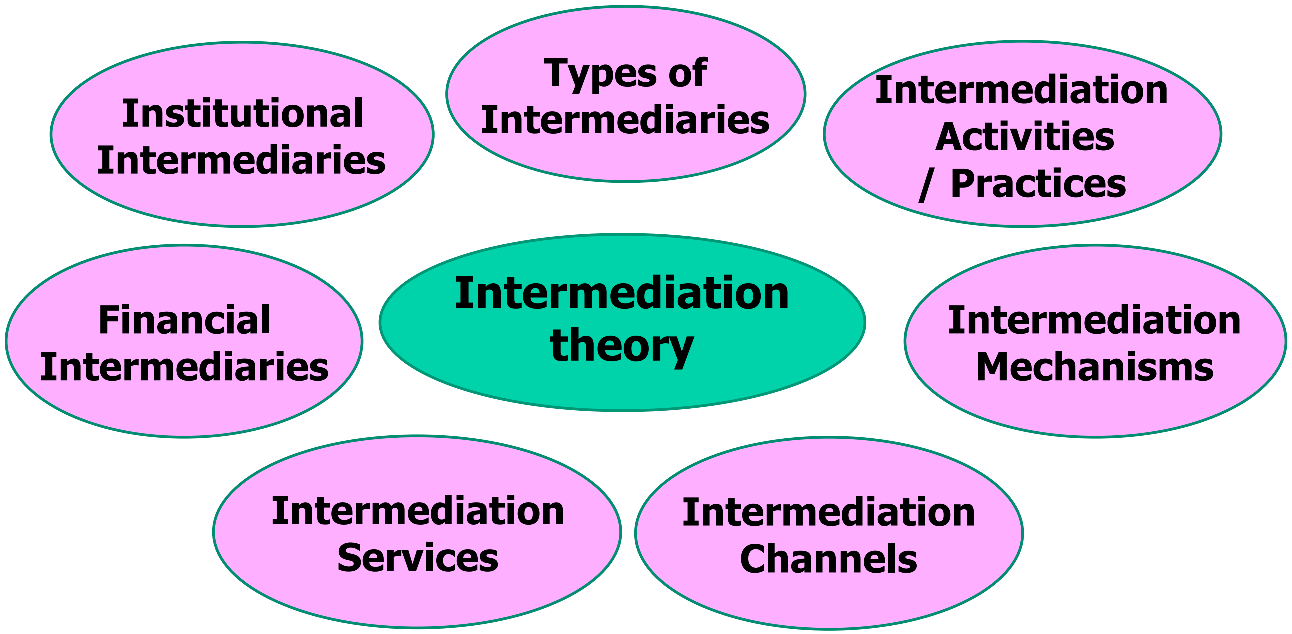
- ACTOR Upgrading
  - LINKS Upgrading
    - CONFIGURATION Upgrading

Mapping Distribution and Concentration of Activities

- Focus on capabilities - ***upgrading***
- Focus on the relationships among the different actors that are part of the chain - ***governance, coordination, intermediation***
- Focus on configurations - ***dependencies, risks, traps, value protection***

Conclusions – Supporting Cluster Development & Its Integration into Global Value Chains Through Intermediation & Facilitation

- prioritising and balancing between competition and cooperation
- bridging to enhance information transparency of suppliers and contracts
- creating effective institutions and intermediation practices
- New policy framework that provides incentives for networking & decision support
- Contract management support (platform governance & legal representation / protection)
- Strategic alliance management
- Market access management



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