

From Intelligent Cargo to Intelligent Logistic Services

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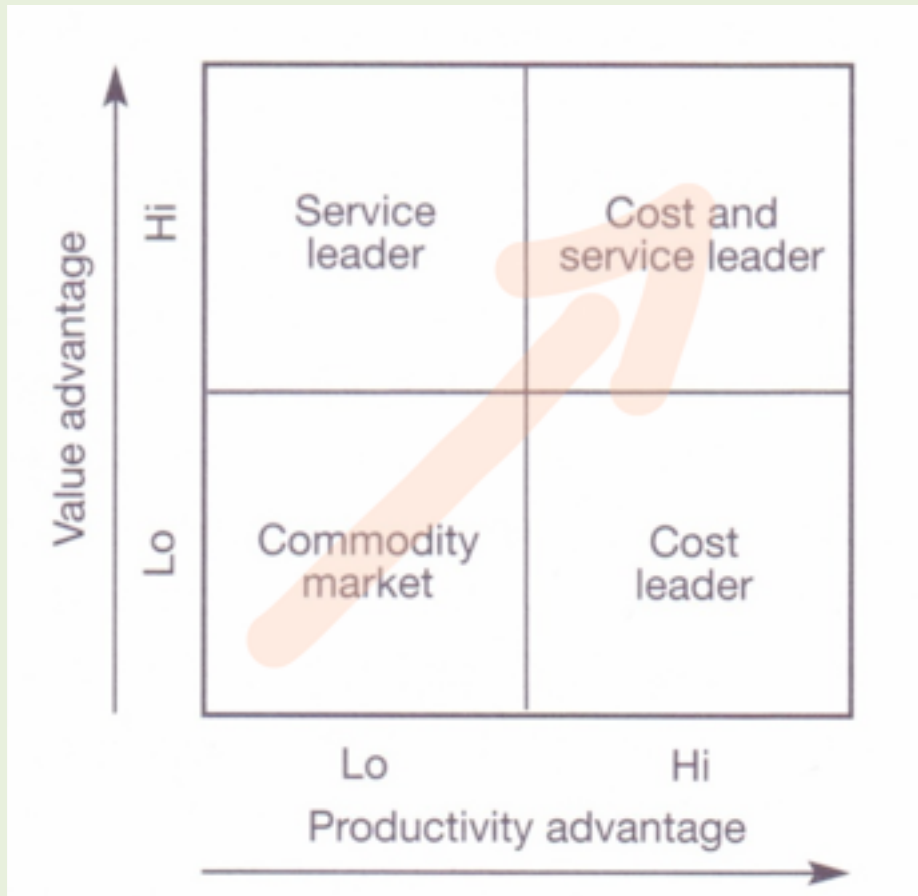
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Agenda



- **Cost and value of logistics**
- **Approach to ICT-based innovation**
- **Market changes**
- **Opportunities for innovative logistic services**

Logistics value proposition



Logistics as the key
to become cost and service leaders,
improving both
Value and Productivity

Back to the basics:
Martin Christopher's "Logistics and Supply Chain Management", 1992

How we lost the value dimension



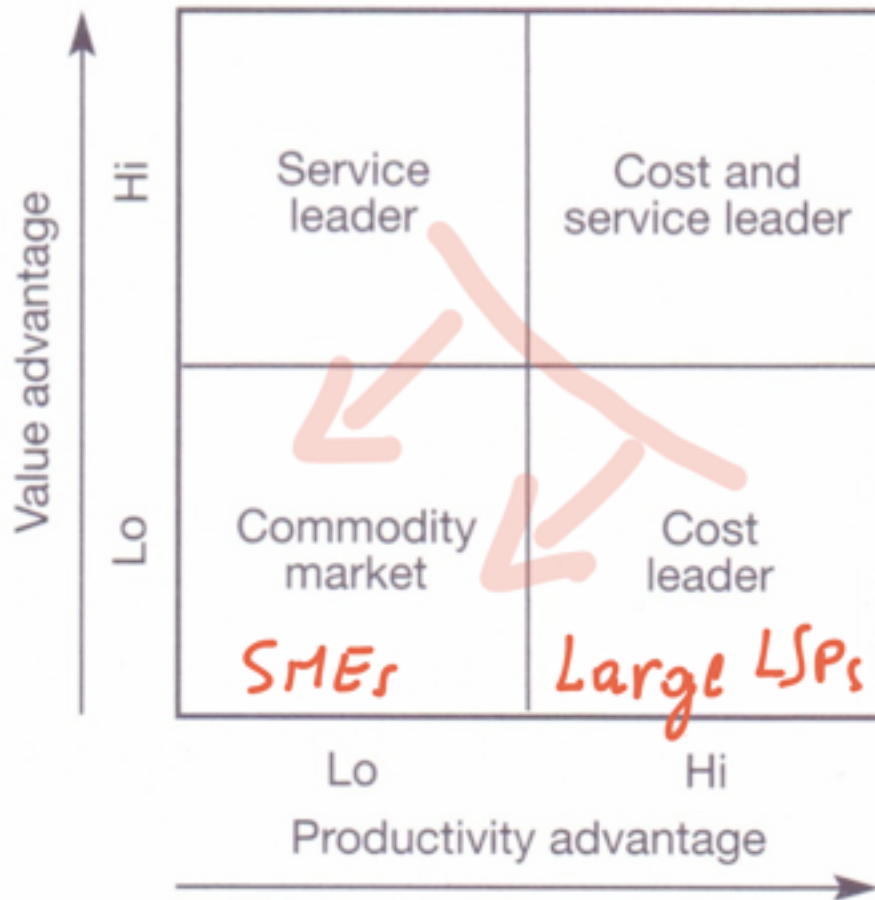
- **Logistics**

- Focus of the transport buyer, price is the discriminant factor
- Low-value, provides replaceable capacity
- Improve along the cost dimension only.

- **Supply Chain Management**

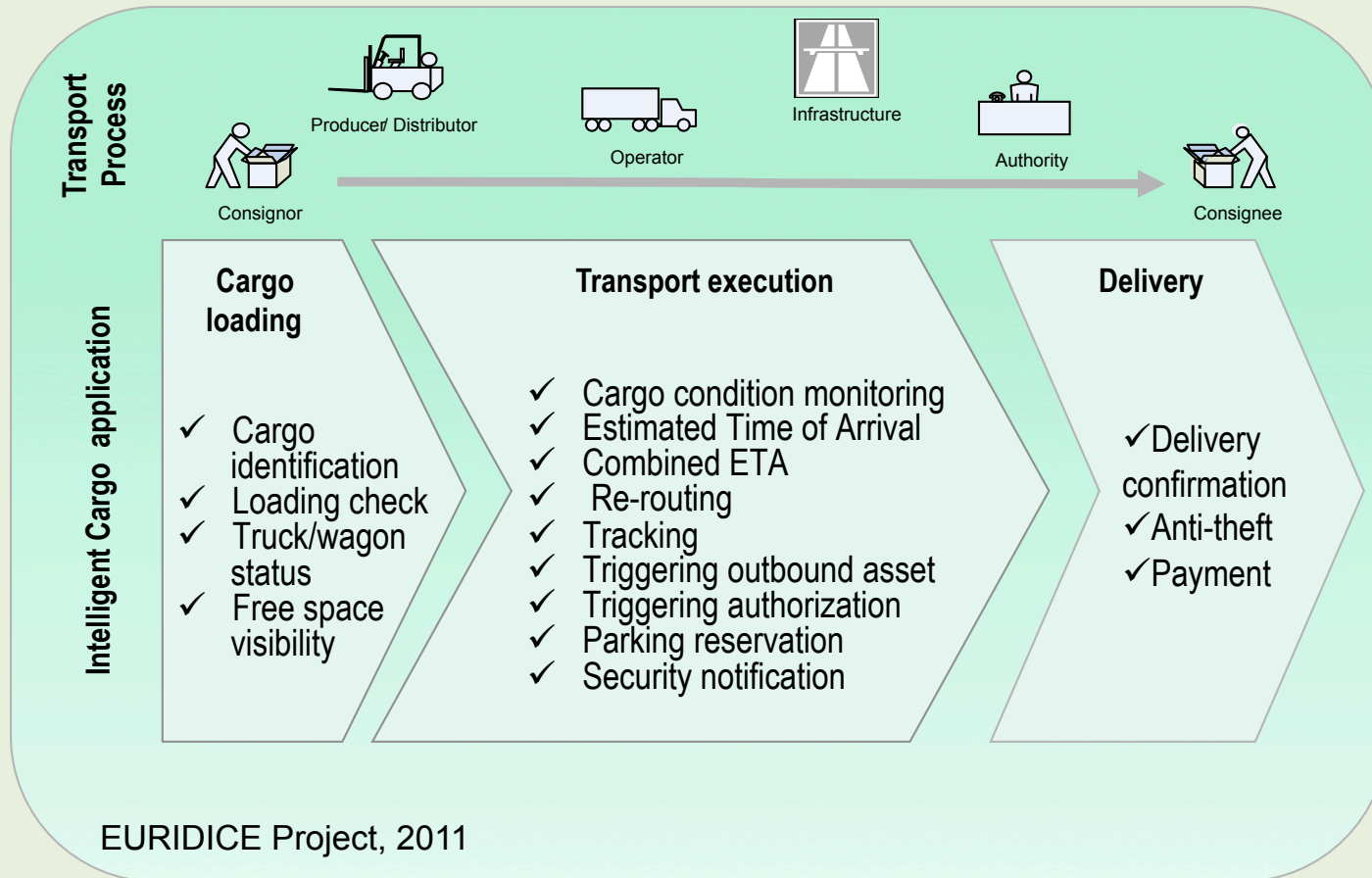
- Focus on the client, service is the discriminant factor
- High-value, ensures product availability
- Rarely outsourced, only from big manufacturer/retailer to big Logistic Services Providers (LSP) through long-term relationships.

Different stakeholders position



- Clients (LSC)
 - Pressure on reducing costs
- Regulators
 - Enforce eco-social sustainability
 - .. still more pressure on costs
- LSPs
 - SMEs in a low-margin commodity market
 - Large LSPs better at cost reduction through economies of scale

Intelligent Cargo



Value proposition:
sophisticated track&trace, automated monitoring, exceptions management

Complicated value proposition



- **Difficult to justify investments on cost / efficiency basis only**
 - Need in-deep assessment of processes to judge each and every application case

"The only ones making money out of the RFID buzz are consultants" (anonymous RFID integrator)
 - No dramatic improvements for large, stable chains

"We are already as efficient as we can." (Large European Automotive)
 - No business model changes

"I could do the same with 2 more employees and it would cost less." (Large Port Operator)
- **Motivating Intelligent Cargo is a difficult exercise if considering the cost dimension only**
 - Limited impact on customer value: better information support for exceptional cases (high-value goods, perishable, dangerous...)

Market changes call for innovation



- **Post-crisis scenario: selling less of more**
 - More products, from more sources, to more destinations
 - Lower volumes, less stable supply chains, less “economies of scale”
- **Logistic industry challenge**
 - Fixed, dedicated supply chains are valid for times of abundance, but are less sustainable when volumes decrease and variety increases
 - Need rethinking of logistic organizations that were conceived to move huge quantities of few products to few mass-market destinations
- **Restoring the value dimension**
 - Innovative logistics services are needed for more flexible, responsive and widespread distribution networks, fulfilling the need for fast and efficient deliveries

Why should we innovate?



- For sustainability

- Increased load factor
- Less emissions
- Better utilized resources



*Collaborative Planning,
Open logistic networks,
the “Physical Internet”*

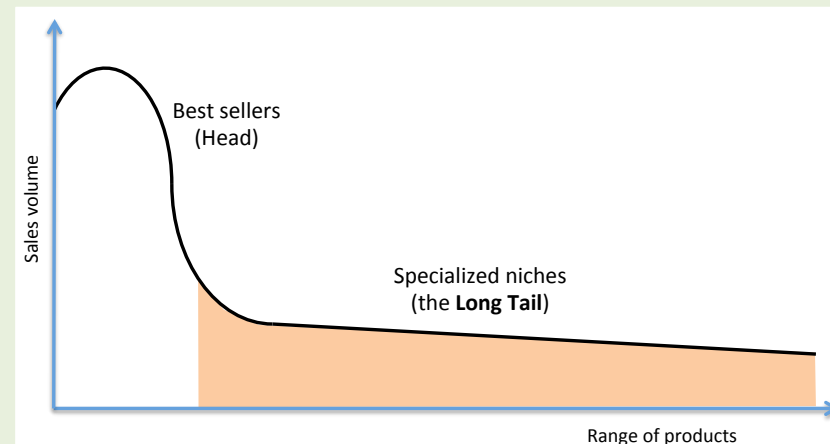
www.physicalinternetinitiative.org

- For market evolution

- Faster and more efficient delivery of smaller shipments
- Specialized logistic services, globally accessible, integrated but maximizing efficiency on a local scale



the “Long Tail” (C. Anderson, 2006)



The iCargo approach



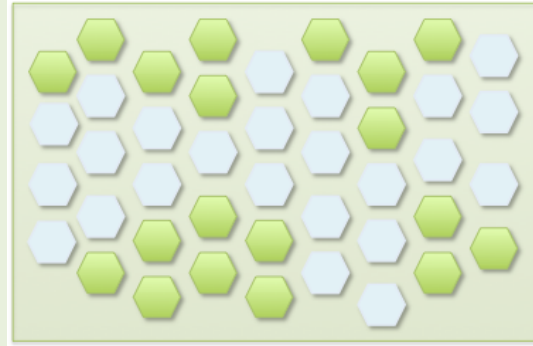
An **open freight management ecosystem**, where:

- Specialized logistic services are globally accessible,
- Services can be easily combined into door-to-door chains,
- Clients get acceptable performance and cost, regardless of the shipment size and frequency,
- Overall, less CO₂ is generated.

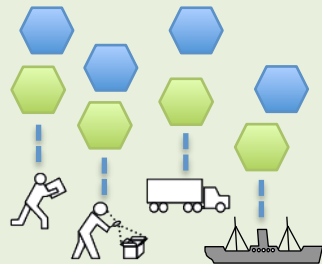
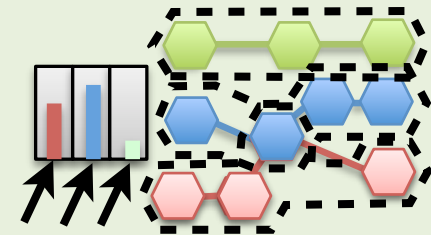
Access and combine services



Integrate services
into the ecosystem



Discover and
compose services



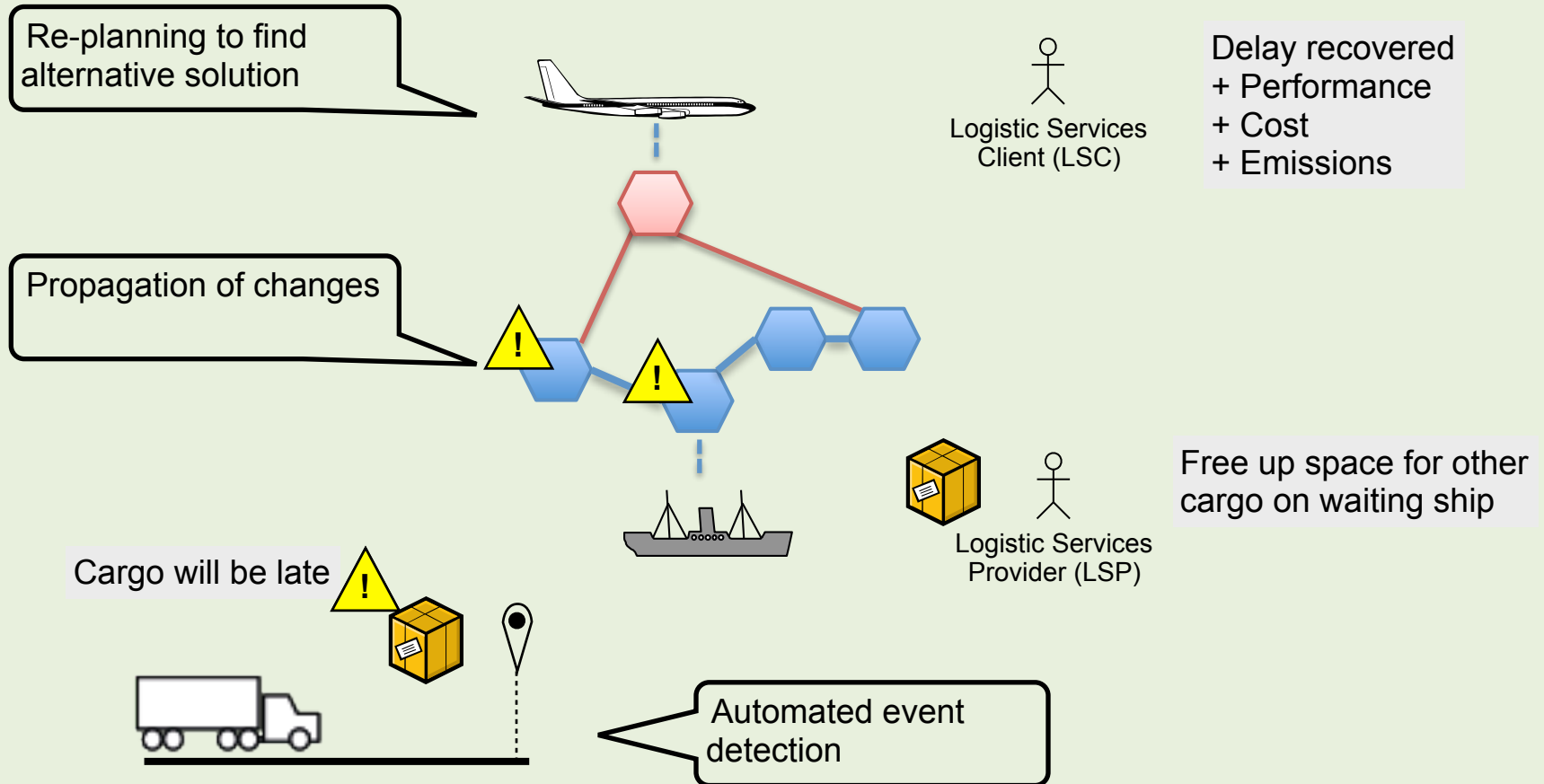
Publish services

Logistic Services
Provider (LSP)

Find best door-to-
door solution

Logistic Services
Client (LSC)

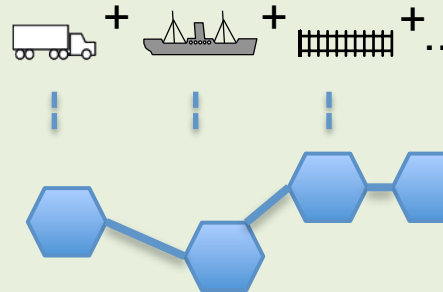
Execute door-to-door chain



Control emissions

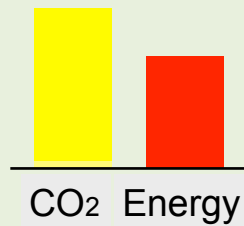


Transport chain emissions per shipment



Logistic Services Client (LSC)

More accurate carbon footprint

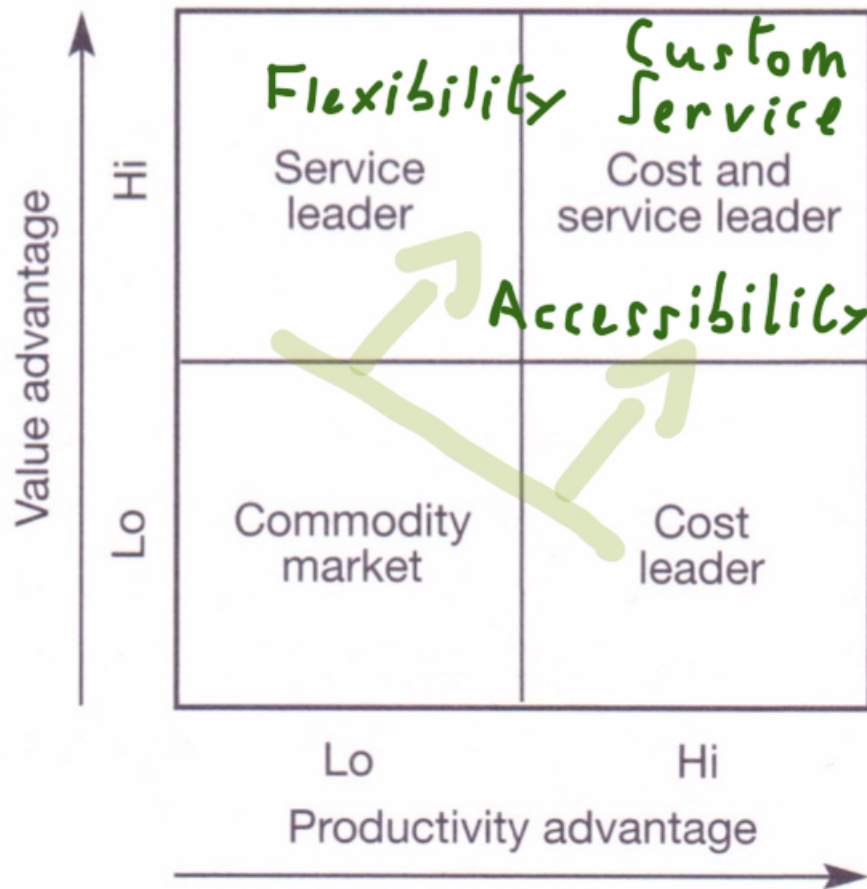


Automated monitoring of environmental parameters

Logistic Services Provider (LSP)

Certified emissions based on actual data

Logistics as a “long tail” market



- Specialized logistic services
 - Globally accessible
 - Maximizing efficiency on a local scale
- Value added services
 - Collaborative planning
 - Coordination between modes
 - Intelligent cross-docking (e.g., DHL-3M pilot in iCargo)
 - Postponement of demand-driven activities
 - ...

Final remarks



- **Injecting ICT innovations into traditional logistics processes can be a frustrating exercise**
 - Efficiency improvements are hard to prove, especially for SMEs
 - Marginal impacts on service (e.g., better track&trace) are not sufficient motivation, especially in times of crisis
- **The market itself is changing**
 - “Long Tail” phenomenon
 - Environmentally concerned customers
- **ICT as enabler of Business Model innovation**
 - Innovative logistic services for evolving client needs
 - Ecosystem approach to access, integrate and provide the services
 - Future projects should look at market changes requiring innovative ICT solutions (e-Commerce logistics, sustainable urban distribution, healthcare logistics ..)

Thank you for the attention!

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