Energy efficient supply chains - where planet meets profit

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Why is this an issue?

Logistics operations across the supply chain **consume energy:**

- **Supply chain practices** (global sourcing, time-based distribution)

- **Inefficiencies in the supply chain** (fill-rates, empty travel, excessive returns, over-deliveries; 50%)

- **Sustainability as part of value proposition**
Why “energy efficiency”? – Growing out of following projects:

- **Supply chain**

- **Energy efficiency of logistics services:** "ELIN"

- **Energy Efficiency Through Effective Freight Transport:** 
  *The Fifth Fuel*

- **Sustainable development of operations**
  → **Lean Energy**

- **Energy efficiency**
Fulfillment options/types of supply chains: energy efficiency

1. Private car
2. Flexibility to consume
3. A. % successful deliveries
4. Returns

Source: Halldórsson and Wehner (2017)
Steps forward?  
*Logistics service triads*

Example:

*In-car delivery of groceries*
Food for thought

• Possible to **avoid one-dimensional trade-offs:**
  – *Energy consumption and type of fuel* -> contains “profit” and “planet”

• Energy efficiency: **products** and logistics **processes**
  – *Example: returns of products that are then disposed (thrown away)*

• Current **practice**?
  – Load factor – a blessing or a curse?
  – Consumers as active co-creators?
Thank you!

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