

Energy efficient supply chains - where planet meets profit

TREFF 2017

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24 August 2017

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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

Network

*Energy efficiency of logistics services:
“ELIN”*

Chain

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

Firm

Function

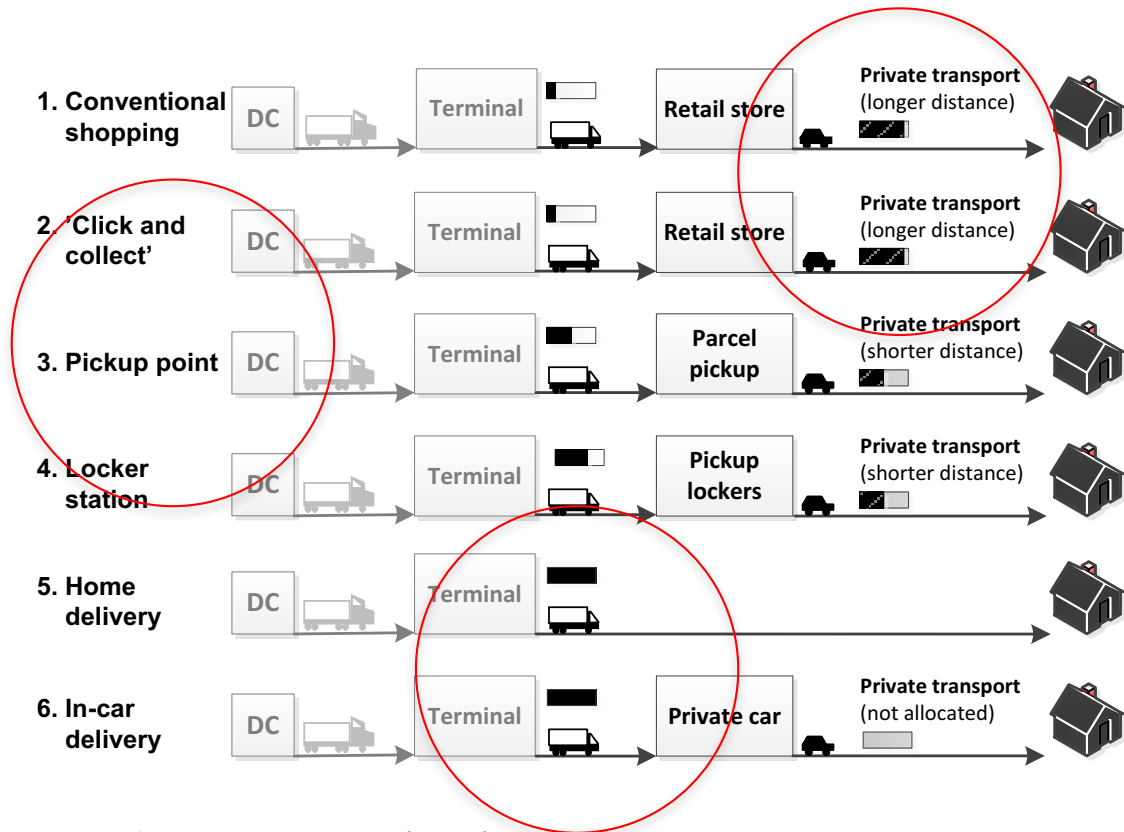
*Sustainable development of operations
→ **Lean Energy***

People



Energy efficiency

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



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

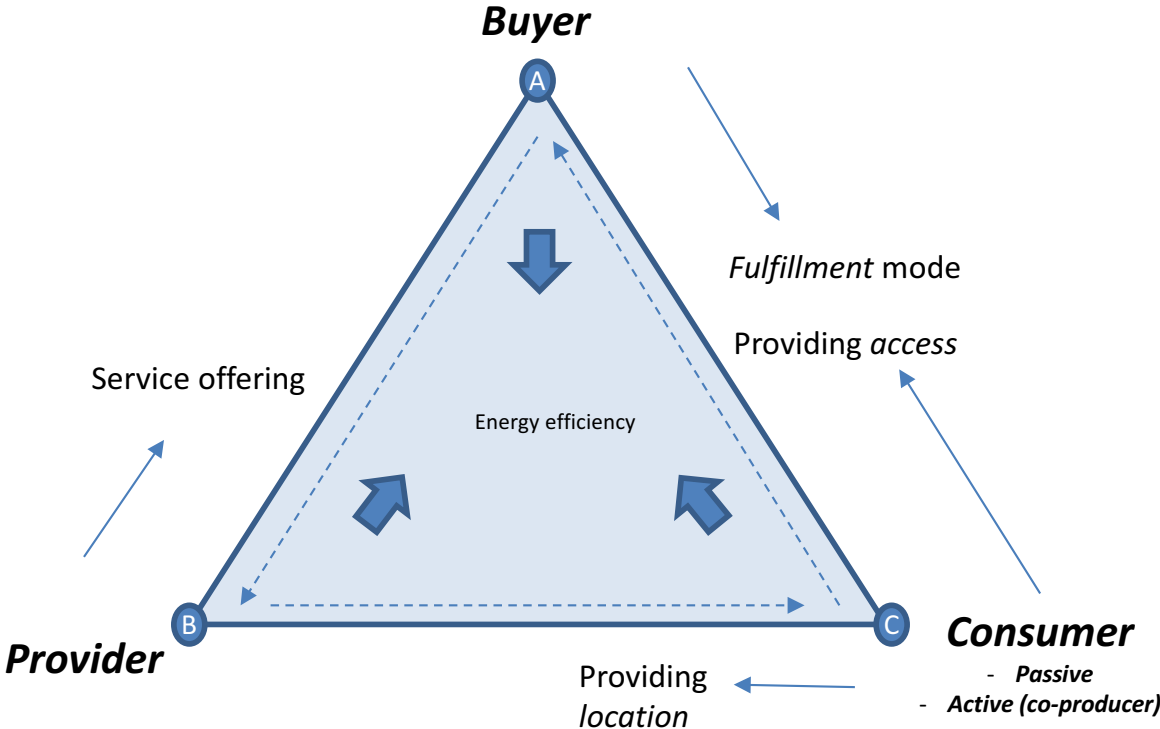
Source: Halldórsson and Wehner (2017)

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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