Logistics and Supply Chains

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The key to emission reduction lies with business

Procurement power and collaboration to drive sector transformation
Business case: competitive advantage from smarter freight

**BUSINESS VALUE**
- Compliance
- Costs
- Customers

**SOCIETAL VALUE**
- Climate
- Health
- Socio-economic

<1.5-2°C Carbon emission reductions
How companies can act as Smart Freight Leaders

Efficient and environmentally sustainable global freight and logistics sector

Competitive advantage

SMART FREIGHT LEADERSHIP

Calculate & report

Advocacy & public policy

Set targets & KPIs

Collaborate across supply chain

Business decisions & actions

Smart Freight Centre
Solutions to decarbonize freight

**Logistics and Supply Chains**

**Reduce freight transport demand**
- Supply chain restructuring
- Standardized modules/boxes
- 3D printing
- Dematerialization
- Consumer behavior

**Optimize freight transport modes**
- Modal shift
- Multi-modal optimization
- Synchronmodality

**Increase asset utilization**
- Load optimization
- Load consolidation and asset sharing
- Logistics centers and warehouse management

**Improve fleet energy efficiency**
- Cleaner and efficient technologies
- Efficient vehicles and vessels
- Driving behavior
- Fleet operation
- Fleet maintenance

**Reduce carbon content of energy**
- Cleaner and lower-carbon fuels
- Electrification
- Fuel management

Smart Freight Centre; categories based on A. McKinnon 2018
Public policy to create enabling environment (examples)

**Reduce Freight Transport Demand**
- Supply chain restructuring
- Consumer awareness program
- Rules on home delivery
- Standards for modules/boxes
- Packaging policy

**Optimize Freight Transport Modes**
- Infrastructure for lower carbon modes
- Intermodal connectivity
- Parking/delivery bays
- PPPs for infrastructure

**Increase Asset Utilization**
- Tolls/road pricing
- Restrictions city access/parking
- Night-time delivery programs
- Routing signage / driver information
- Logistics centers and warehouse

**Improve Fleet Energy Efficiency**
- Programs: I&M, tech verification, fleet renewal, green freight
- Technology mandates
- Driver /Fleet manager training

**Reduce Carbon Content of Energy**
- Fuel economy standards
- Infrastructure lower-carbon fuels
- Economic instruments

Smart Freight Centre; categories based on A. McKinnon 2018

**Logistics and Supply Chains**
Introducing our panelists

- Marc Verelst, Procter & Gamble, ALICE-ETP
  - Open network of hyper connected logistics clusters towards Physical Internet-Clusters 2.0

- Michiel de Bok, TU Delft
  - An empirical agent-based model for urban road freight transport (20 minutes)

- Nico Anten, Connekt
  - Lean and Green logistics