

Logistics and Supply Chains

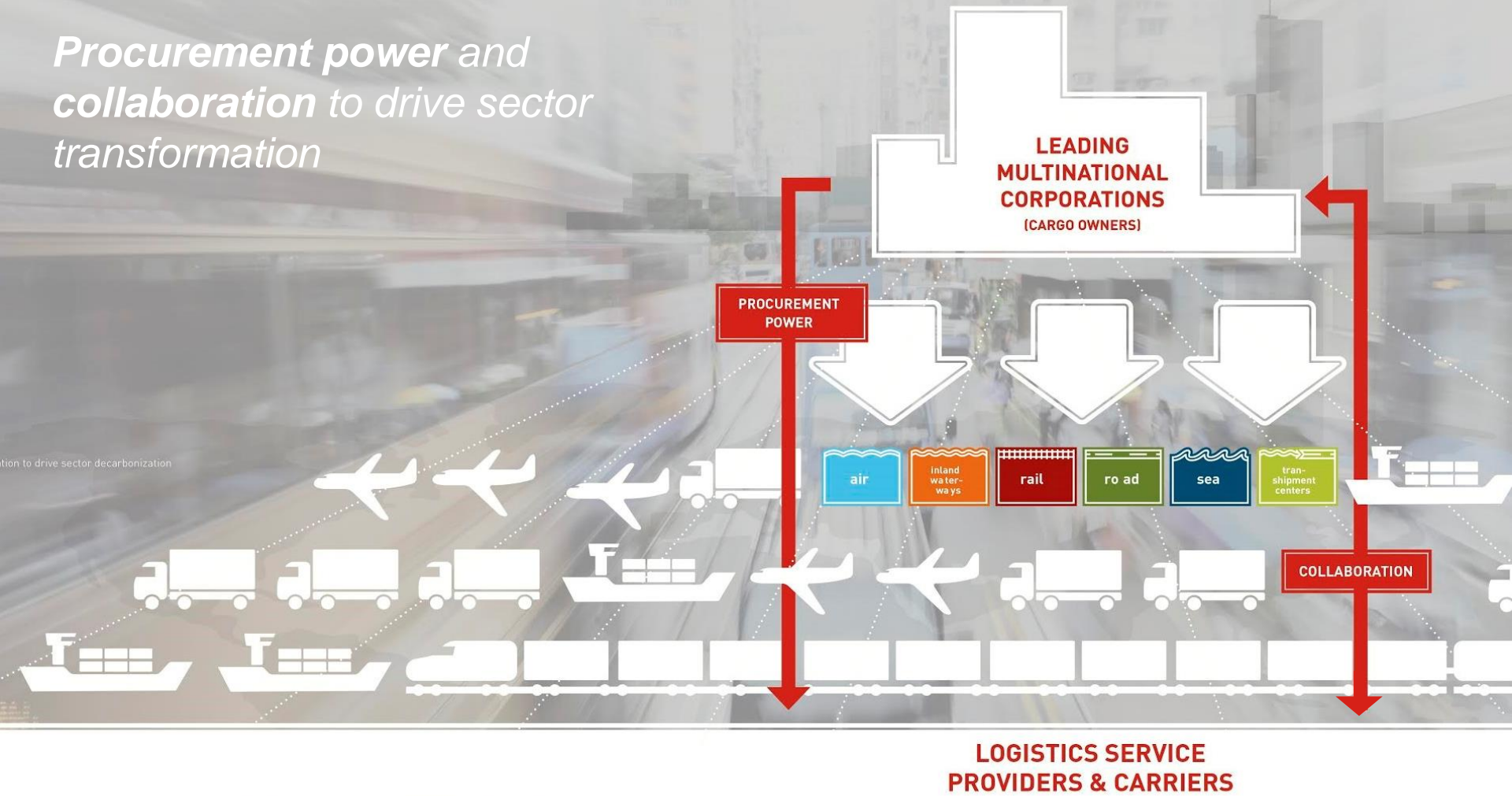
Sophie Punte, Executive Director, Smart Freight Centre

**ITF Decarbonising Road Freight Expert Workshop
28 June 2018**



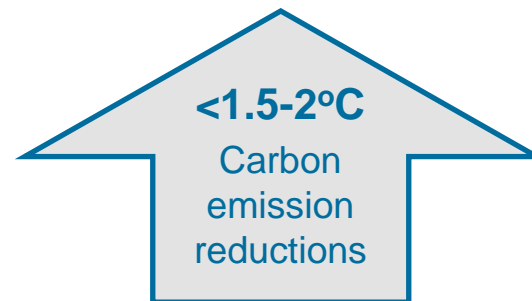
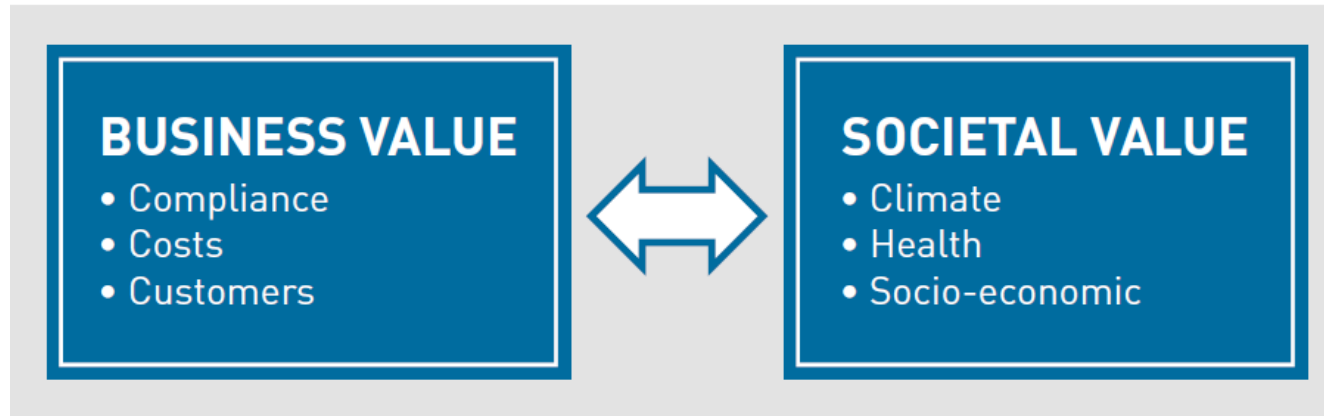
The key to emission reduction lies with business

Procurement power and collaboration to drive sector transformation



Business case: competitive advantage from smarter freight

SMART
FREIGHT
CENTRE



How companies can act as Smart Freight Leaders



Smart Freight Centre



Solutions to decarbonize freight

REDUCE FREIGHT TRANSPORT DEMAND



- Supply chain restructuring
- Standardized modules/boxes
- 3D printing
- Dematerialization
- Consumer behavior

OPTIMIZE FREIGHT TRANSPORT MODES



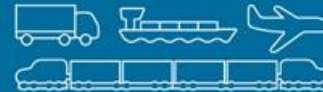
- Modal shift
- Multi-modal optimization
- Synchromodality

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

LOGISTICS AND SUPPLY CHAINS

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

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