Smart freight leadership opportunities for the automotive sector

Sophie Punte
Executive Director, Smart Freight Centre
Member of Green Freight Steering Group CCAC

UM Automotive Futures/
SMART Sustainable Supply Chains Conference
Detroit, 17 February 2016
The challenge and need for a global, coordinated approach and role of Smart Freight Centre
The global freight and logistics sector has challenges

Explosive growth
- Land freight up to 125% growth in OECD and 430% non-OECD countries between 2010 and 2050
- >3 million trucks sold in 2012 in China alone (25% of total fleet!)

Inefficient
- Logistics costs <10% of GDP in US/EU; 15-25% in Asia and Latin America
- 25% - 40% trucks are empty
- >90% of trucks companies in China are driver-owners

High impact
- 35% of transport fuel
- Logistics 6% of global and 15% of energy CO2 emissions
- Diesel emissions cause cancer
We know the solutions…

- Cleaner fuels
- Cleaner and efficient technologies
- Cleaner and efficient vehicles
- Inspection and maintenance

- GPS & ICT
- Driving behavior
- Fleet management
- Increase load factor
- Reduce empty runs
- Reduce trips
- Asset sharing
- Restructure supply chains

- Multi-modal freight optimization
- Shift from trucks to trains, barges, motorbikes, cargo bikes
- Infrastructure transport, fuels, ICT,
Growing awareness and activities…
... but there is lack of

Global standards to calculate emissions

Confidence in technologies performance

Leadership

Global coordination between key initiatives and players

Capacity

Infrastructure

Supportive policies

Collaboration between businesses

Access to financing

... and thus we do not see at scale adoption of solutions
Costs of mitigation: climate argument alone won’t make it

“Transport is more difficult to decarbonize than other sectors”
“Freight transport is more difficult to decarbonize than passenger transport”

Sudhir Gota (2016)
Need to link climate with SDGs

SUSTAINABLE DEVELOPMENT GOALS

1. NO POVERTY
2. NO HUNGER
3. GOOD HEALTH
4. QUALITY EDUCATION
5. GENDER EQUALITY
6. CLEAN WATER AND SANITATION
7. CLEAN ENERGY
8. GOOD JOBS AND ECONOMIC GROWTH
9. INNOVATION AND INFRASTRUCTURE
10. REDUCED INEQUALITIES
11. SUSTAINABLE CITIES AND COMMUNITIES
12. RESPONSIBLE CONSUMPTION
13. PROTECT THE PLANET
14. LIFE BELOW WATER
15. LIFE ON LAND
16. PEACE AND JUSTICE
17. PARTNERSHIPS FOR THE GOALS
Industry must do the heavy lifting but needs help from others

**Government**  
(international, national, provincial, local)

**Industry**  
(manufacturers, suppliers, associations, other)

**Civil society**  
(NGOs, academic/research institutes, development agencies, foundations, other)

**Cargo owner**  
(Shipper)

**Logistic Service Providers, Freight Forwarders, Carriers**

**Customer**

**Transport Modes:**  
Air, Sea, Road, Rail, Inland waterways

**Train**  

**Ship**

**Truck**

**Transhipment Centers:**  
Ports, Terminals, Airports, Cross docks, Distribution centers, Warehouses

© Smart Freight Centre
Smart Freight Leadership Framework

Leadership to set direction for transformational change

Government → Private sector → Civil society

Policies, Partnerships and Programs to enable action and innovation at scale

1. Set targets
2. Collaborate & Exchange
3. Implement Actions
4. Measure, Report and Verify

Business Value
- Policy influence
- Competitiveness
- Labels & Recognition

Societal Value
- Climate, air pollution, environment
- Socio-economic benefits

Smart Freight Centre
Smart Freight Centre
Leading the way to Smarter Freight
as a dedicated global NGO for a more efficient and environmentally sustainable freight and logistics sector

SMART FREIGHT LEADERSHIP
Drive industry leadership and take effective industry programs to a global level

GLOBAL LOGISTICS EMISSIONS COUNCIL (GLEC)
Create a universal way of calculating logistics emissions across the global supply chain

GREEN TRUCKS CHINA
Catalyze the sector-wide adoption of proven technologies and other measures

SFC Advisory Council (experts)

Alan McKinnon, KLU
Edgar Blanco, MIT
Jari Kaupilla, Int’l Transport Forum
Ruth Banomyong, Thammasat Uni
Jorge Tester, Instituto Tecnologico de Buenos Aires
Jan Fransoo, TU Eindhoven
Laetitia Dablanc, University Paris-East
Smart Freight Leadership opportunities for the automotive sector through multi-stakeholder initiatives
**Coalition of organizations working with the world’s most influential businesses and investors to accelerate the transition to a low carbon economy**

### Policy Asks

1. Net zero greenhouse gas emissions well before the end of the century
2. Strengthen commitments every 5 years
3. Enact meaningful carbon pricing
4. New and additional climate finance at scale
5. Transparency and accountability to promote a race to the top
6. National commitments at the highest end of ambition
7. Adaptation to build climate resilient economies and communities
8. Pre-2020 ambition through Workstream 2 under the Durban Platform

### Industry Commitments

1. Adopt a science-based emissions reduction target
2. Put a price on carbon
3. Procure 100% of electricity from renewable sources
4. Responsible corporate engagement in climate policy
5. Report climate change information in mainstream reports as a fiduciary duty
6. Remove commodity-driven deforestation from all supply chains by 2020
7. Reduce short-lived climate pollutant emissions

2. Support government policies, standards and plans that create a level playing field

- Vehicle emission standards (PM & NOx) for new HDVs
- Fuel economy standards for HDVs
- Vehicle and technology labels
- Freight plans

Source: International Council on Clean Transportation (ICCT, 2015)
3. Join Green Freight Programs that enable industry leadership on freight and logistics

- Harmonize existing and establish new green freight programs
- Incorporate black carbon and air pollution reductions into programs
The automotive sector can strengthen green freight programs (example Lean and Green)

Source: Jan van Rompay, Connekt, presentation 2014
4. Adopt the GLEC Framework as a universal way of logistics emissions accounting
GLEC Framework builds on existing methodologies and links to GHG Protocol.
Who is committed to GLEC?
www.smartfreightcentre.org/glec/what-is-glec

COMPANIES:
- DB Schenker
- DHL
- FedEx
- TNT
- Hapag-Lloyd
- HP
- Intel
- Kuehne+Nagel
- Maersk
- Maersk Line
- Ron Finemore Transport
- Sainsbury's

INDUSTRY PROGRAMS:
- Air Cargo Carbon Footprint / Airfreight Carbon Initiative,
  (via E. Blanco MIT)

ASSOCIATIONS:
- CLECAT
- ebu
- ESC
- EBSF
- FTA
- IATA

EXPERTS:
- Colin Smith (EST & GFE)
- Jens Froese (Green Efforts)
- Kerstin Dobers (Frauenhofer IML)
- Marc Cottignies - (ADEME, CEN)

INSTITUTES /OTHER:
- Clean Air Asia
- EICB
- ITBA
- TKBlue Agency
- Panteia
- STC-Nestor
5. Support carriers and LSPs to overcome barriers for uptake technologies and other measures

- Example: Green Trucks China project

<table>
<thead>
<tr>
<th>BARRIERS for carriers</th>
<th>SOLUTIONS tested with Beijing carriers</th>
<th>SOLUTIONS to scale up in Beijing and China</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Purchase behavior</td>
<td>- Business case for management</td>
<td>- Champion carriers</td>
</tr>
<tr>
<td>- Capacity</td>
<td>- Training fleet managers &amp; drivers</td>
<td>- Training system fleet managers &amp; drivers</td>
</tr>
<tr>
<td>- Information</td>
<td>- Data analysis</td>
<td>- ICT/TMS tool advice</td>
</tr>
<tr>
<td>- Access to partners &amp; finance</td>
<td>- Information materials</td>
<td>- Resource center: tools, info materials for carriers</td>
</tr>
<tr>
<td>- Government incentives</td>
<td>- Four-way partnership agreements: BTEC, Beijing carrier, tire agent, SFC</td>
<td>- Technology verification</td>
</tr>
<tr>
<td></td>
<td>- Award for pilot carriers</td>
<td>- Technology platform to connect suppliers &amp; carriers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Green freight partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Standards</td>
</tr>
</tbody>
</table>
SFC’s Green Trucks China project:
Using multiple channels to embed solutions to barriers

Industry
- Industry-led network & program for shippers, 3PLs and carriers

National
- Government-led program for road freight carriers
  - Industry associations
  - Shippers/LSPs
  - Technology suppliers / OEMs
  - Trailer leasers

Local
- Guangdong Province
- Government-led demonstration project for road freight carriers

Other:
- Beijing: Green Freight Strategy
- Shanghai: free economic zone trucks
- Wuhan: low carbon logistics centers
- 20 cities: Low Carbon Transport Pilots

Other:
- Industry associations
- Shippers/LSPs
- Technology suppliers / OEMs
- Trailer leasers
6. Collaborate with other initiatives (examples)

- Transport fuels:
  - Future of Fuels
  - Sustainable Aviation Fuels
  - Global Fuel Economy Initiative

- Technology/ICT initiatives:
  - Trucking Efficiency
  - Alice
  - New EC project on ICT and logistics

- Logistics platforms (examples):
  - JCtrans.net
  - JOIN Cargo
  - Free Freight
  - Coyote

- Freight data tools and modelling:
  - International Transport Forum
  - EcoTransIT
  - NTM
  - European Blue Agency

- Training courses:
  - SAFe
  - Safe and Fuel Efficient Driving
  - FleetSmart
  - SEST SENAT

- Truck replacement schemes: US, China, Mexico, Germany

Find out who is who:
www.smartfreightcentre.org/map

THE WORLD OF SMART FREIGHT

The World of Smart Freight in which SFC operates consists of initiatives, associations and leading institutes.
For more information:

www.smartfreightcentre.org
sophie.punte@smartfreightcentre.org