International Transport Forum at the OECD

- An inter-governmental organisation with 54 member countries focussing on transport

- A think tank for global transport policy issues

- An annual summit of Ministers
Key messages

- Take into account all elements of sustainability
- Focusing on reliability can improve sustainability of supply chains
- Reliability should be incorporated into transport policy
Sustainability and transport

- **Economic viability**
  - Efficiency is key in contributing to growth

- **Social welfare**
  - Safe and equitable access to jobs, education, healthcare
  - Impact on cost of goods

- **Environmental carrying capacity**
  - Transport consumes massive amounts of finite resources
  - Should not surpass key environmental thresholds
    > limit opportunities for future generations
Sustainability and supply chains: challenges

- **Economic viability**
  - Uncertainties (Volatility in oil prices, slack demand)
Global freight volumes suggest continuous uncertainty

USA external trade by sea, total (tonnes) (% change from pre-crisis peak)

-13%

EU27 external trade by sea, total (tonnes) (% change from pre-crisis peak)

-14%

Source: International Transport Forum statistics
Global air freight as a lead indicator

USA external trade by air, total (tonnes) (% change from pre-crisis peak)

EU27 external trade by air, total (tonnes) (% change from pre-crisis peak)

Source: International Transport Forum statistics
Supply chains and sustainability challenges

- Economic viability
  - Uncertainties (Volatility in oil prices, slack demand)
  - Congestion
Road Congestion

- Continued dependency on road freight
  - Options for shifting to other modes limited

- Infrastructure investments necessary but not sufficient

- Significant impact on efficiency

- Unmanaged road capacity no longer an option
  - Identify & target strategic bottlenecks
  - Regional planning key in port-hinterland networks

- Focus on managing networks for reliability, users’ needs
Supply Chains and Sustainability Challenges

- **Economic viability**
  - Uncertainties (Volatility in oil prices, slack demand)
  - Congestion

- **Social welfare**
  - Supply chain contribution to cost of goods
  - Impacts on safety
Road safety

- Around 1.3 million people die on roads every year
  - 20-50 million injured

- Truck involvement
  - 10-25% in OECD countries
  - Up to 70% in developing economies

- Multiple causes, including speed, non-respect of traffic laws, over-loading and equipment failure

- Huge cost for society and impact for well-being
Supply chains and sustainability challenges

- **Economic viability**
  - Uncertainties (Volatility in oil prices, slack demand)
  - Congestion

- **Social welfare**
  - Supply chain contribution to cost of goods
  - Impacts on safety

- **Environmental carrying capacity**
  - Energy use/GHG and air pollution (land and sea)
Air pollution

- Transport key contributor to the overall air pollution

- Control strategies are known but implementation lagging in non-OECD countries

- Need to address concentration of air pollutants in port cities and port areas
Responses

- **Regulatory**
  - E.g. mode-specific emission and energy efficiency agreements and standards

- **Reorganization of supply chains**
  - Shifts in production composition
  - Relocating production (especially for low value goods where transport component is large)

- **Operational**
  - Slow steaming
Supply chains are slowing down

“There is this big, ugly thing in the middle of the supply chain slowing down” – Ron Widdows, CEO Rickmers Holdings
Supply chains are slowing down - impacts

- Logistics business with inability to deliver goods on time

- Inventory levels affected – more stocks are held in compensation for uncertainties

- Companies need to adapt their operations either through the way they operate or building in buffer stocks
Reliability carries a premium

“We like speed but spend most of our time making the supply chain predictable” – Jeff Langenfeld, VP, International Logistics, Walmart
Reliability carries an premium

- Reliability may matter more than speed
  - Cost of unreliability rival those of congestion

- Users often face delays at interfaces

- Reliable but slow can be also greener
Shift in policy focus

Current focus in reducing average travel time

Future focus in reducing also variability
Choosing the low-hanging fruit

- A key policy challenge to create incentive structures that encourage cost-effective solutions

- Improvements can be delivered by both users and network providers
Transport is a component of process speed

- Easier to pay someone to move goods faster than to change the procedures within the company

“Own company actions” the most important source of delays

PIMP your transport policy

- Provision: Increase physical capacity either through supplying extra capacity or improving the quality of existing infrastructure.
Provision

- **Physical growth** through new, expanded or upgraded facilities (mostly bottleneck removal)

- **Higher network standards** can deliver higher reliability
  - E.g. long-life pavements reducing need for maintenance

- Providing additional capacity in infrastructure has limited remaining scope in traditional corridors
  - Time consuming, costly and politically difficult
**PIMP** your transport policy

- **Provision:** Increase physical capacity either through supplying extra capacity or improving the quality of existing infrastructure.

- **Information:** Informing users enabling them to mitigate the adverse effects of poor predictability.
Information

- Monitoring reliability is a policy signal and needed to inform policy

- Diverge information is needed for different users
  1. **Government** to design cost effective policies
  2. **Network managers** to enhance service provision
  3. **Users (carriers)** to adapt behaviour accordingly or to mitigate adverse effects of poor reliability
  4. **Logistics managers** handling the total trip not just part of the trip (supply chain)
“Fluidity index” by Transport Canada

Evidence-based information leads to greater accountability and transparency in the supply chain and will benefit all gateway users.

Source: Transport Canada – Economic Analysis & Research
PIMP your transport policy

- **Provision:** Increase physical capacity either through supplying extra capacity or improving the quality of existing infrastructure

- **Information:** Informing users enabling them to mitigate the adverse effects of poor reliability

- **Manage:** Better management of existing infrastructure
Managing existing infrastructure

“Before building new infrastructure, we need to make sure the existing works as it was meant”

– Catharina Elmsäter-Svärd, Minister of Infrastructure, Sweden
Managing existing infrastructure

- Pro-active management
- Active management

- Government can have a facilitating role

- Managing interfaces
  - Ports and hinterland connections
  - Borders
  - Network providers
  - Organizational interfaces
PIMP your transport policy

- **Provision:** Increase physical capacity either through supplying extra capacity or improving the quality of existing infrastructure

- **Information:** Informing users enabling them to mitigate the adverse effects of poor reliability

- **Manage:** Better management of existing infrastructure

- **Price:** Charging directly for reliability to achieve more efficient levels of reliability
Price-reliability spectrum, with circle size illustrating traffic volume (USA)

Source: Derived from The Tioga Group (2003).
Conclusions

- Take into account all elements of sustainability
- Focusing on reliability can improve sustainability of supply chains
  - Improves efficiency
  - Reduces congestion, cost of goods and environmental footprint
- Focus on interfaces and better management
  - Governments may have a facilitation role
  - Enhanced interface coordination and corridor management
- Provide information for all users
Thank you

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