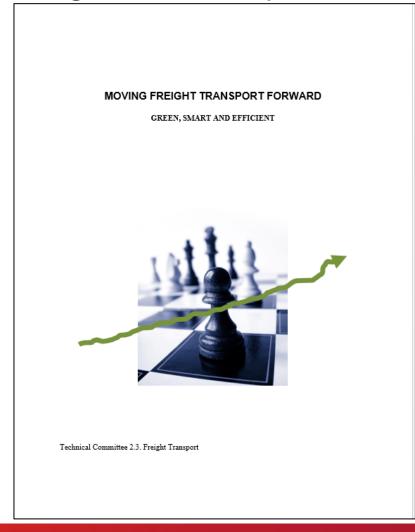
Multimodal Transport for people and Goods: Lesson learned from Piarc WG



Rikard Engström, Ph D Chief Strategist

# Piarc report on freight efficiency



Available in English and French on <a href="https://www.piarc.org">www.piarc.org</a> in december.

# Meeting the challenges



# Optimize all parts in the freight chain

- It is defined as the use of each transportation mode in its best configuration to optimize the whole transportation chain





## Cases collected

 The best practices focused on solutions and approaches where the government plays a leading role in implementation

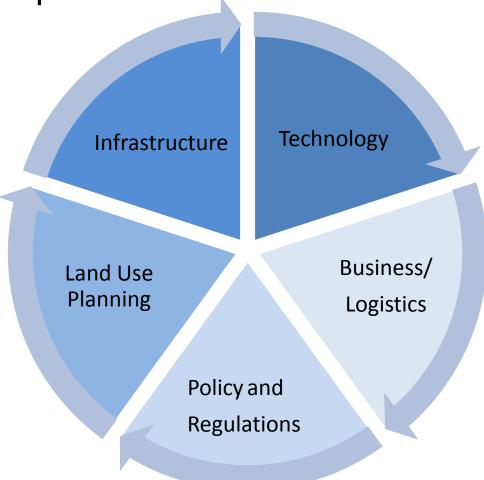
### Themes:

- infrastructure provision,
- infrastructure financing,
- demand/capacity management,
- ITS,
- interoperability/standardization,
- optimization of vehicles,
- optimization of nodes,
- cross-border transport,
- land use planning,
- regulation/legal framework,
- and cooperation.



Methodology: Areas of Importance for Improving

**Freight Transports** 



# 18 Case studies – all about efficiency, some relate to ITS

		STRATEGY CLASSIFICATION					OUTCOME		
Case Number and Title	Mode(s)	Policy	Technology	Infrastructure	Information & Education	Partnership	Informed Decision- Making	Improved Logistics	Modal Shift
Road Train Permits	Road	X	O,				· ·	Х	
Green Logistics	Road, Rail, Water	X						X	Χ
EcoEffect	Road	X			Х		Х	,,	
IQ Fleet	Road		Χ					Χ	
railCare	Road, Rail		Х					Χ	X
eHighway	Road		Χ	X				Χ	
Duluth Intermodal	Road, Rail, Water								
Project				X				Χ	X
Liege Trilogiport	Road, Rail, Water			Х				Χ	X
Adriatic Gateway	Road, Rail, Water			Х				Χ	X
EURO-CAREX	Road, Rail, Air			X				Χ	X
Fluidity Indicator	All				X			Χ	
Lean and Green	Road, Rail, Water				X		X	Χ	X
Multimodaal Vlaams	Road, Rail, Water								
Brabant					X		X	Χ	X
Fukuoka Logistics	Road, Water								
Platform						X		Χ	
Rail Freight Solution	Road, Rail								
for Northern France						X		Χ	
Multimodal	Road, Rail								
Transshipment Center				X				Χ	X
Auto-Con	Rail, Pipeline		Х	X				Χ	
Ecodriving-Quebec	Road	X				Χ	Χ		

# Examples (discussed in report and/or article)





















# **Findings**

- The potential of ICT/ITS as a means for handling the challenges related to efficiency in transportation is huge.
- Technology (vehicle and infra.) must often be accompanied by regulatory and behavioral changes in order to be successful.
  - Platooning vehicles
  - Autonomous vehicles
  - ERTMS
  - Terminal/port handling and communication
  - Driver behavior....
- There are large differences regarding the ITS uptake in different contexts
- ITS can be a trigger for modal shift

# Policy conclusion

- The freight transport markets are imperfect.
- Imperfect markets do not automatically come to a pareto efficient equilibrium.



 Policy is needed to lead the markets to the equilibrium, one such policy might be to stimulate technological development.

# Thank you for listening!

Feel free to contact me for further information about the forthcoming report!

Rikard.engstrom(a)trafikverket.se +46 702 91 91 48