

Round Table on Information and Communications Technologies for Innovative Global Freight Transport Systems

Enrico Musso

Genoa - March 8, 2010



Alberto Cappato

Genoa - March 8, 2010

**Co-modality as a solution
to enhance modal shift in freight transport:
ICT applications can help**

The context

Congestion threatens the efficiency and effectiveness of freight transport

What is needed?

- Shifts in modal split
- Co-modality (intermodality)
- Integrated management of the supply chain
- High level of information, both pre-trip and in-trip

The context

“Optimal modal split”: allows the minimum overall cost for the amount of goods transported

Modal choice done by the operator (forwarder/shipper) based on comparison of:

- Direct monetary costs
- Times (and congestion)
- Reliability / Quality

Externalities are not taken into account. But they should be in the optimal modal split (transport sustainability)

The scope for information

Information in the logistic chain is crucial for decision concerning:

- The volume of goods to be shipped
- The time of the shipment
- The mode(s) to employ

Information is relevant for:

Modal choice

Route choice

Complementary services

Traffic conditions

The management of the trip

The management of the vehicle/fleet

Externalities

The scope for information

Information:

- reveals the generalised costs
- measures the externalities generated and promotes sustainable transport

Information	<i>Perfect (maximum)</i>	Operator's choice	Optimal modal split
	<i>Lacking (minimum)</i>	“You are here!”	Imperfect Internalization
		<i>NO (minimum)</i>	<i>YES (maximum)</i>
<i>Internalization of external costs (both pollution and congestion)</i>			

The scope for information

Precise and reliable information:

- For the operator
 - to choose the mode(s) with the lower generalised cost
 - to manage efficiently co-modality solutions
- For the policy maker
 - to be aware of external costs
 - To prevent bottlenecks and to plan infrastructures

ITS / ICT innovations

Major innovations often caused shifts from an era to another, yet

Innovations in ICT often faced barriers

Nevertheless, they could be even more important since new infrastructures are hard to implement due to financial straits and people's opposition

Sometimes transport needs more a process innovation of technologies already experimented in other fields

Best technology or most effective applications in terms of performances and large diffusion in a short period of time?

How to develop ICT applications in freight transport?
The Global Intermodal Transport System

Co-modality and ICT

Co-modality as a technique (process innovation) capable of reducing congestion and externalities, and enhancing effectiveness and efficiency of transport, given the infrastructural framework

Road congestion has major consequences on the effectiveness of the transport system, namely on port “hinterland leg” and competitiveness of ports

A “cultural revolution” is needed to change the attitude and behaviour of firms on the supply side (transport and logistics operators) and on the demand side (shippers)

From a technical point of view:

- Technical adjustments (e.g. standard cargo units)
- Coordination between different firms
- Innovative software solutions and ICT

ICT applications for a global freight transport system

A (ICT based) Global Transport System should

- perform all the necessary actions to manage and optimize the logistic chain
- ensure efficiency and neutrality for the different carriers

Collaboration between governmental bodies, industry partners and association is the key-factor, in order to

- Harmonize standards
- Help to provide the interoperability between all the existing applications
- Share research projects and best practices

The objectives of the Round Table

It is necessary to adopt all actions aimed at

- Increasing the degree of awareness of operators and shippers over all possible alternatives, including co-modality solutions
- Establishing a complete and updated information on times and (generalized) costs, including congestion costs, of all possible solutions
- Developing all improvements aiming at the interoperability of existing ITS / ITC applications

The general purpose is to set in place a global information system for freight transport ensuring “perfect” information and therefore “neutrality” vis-à-vis modal choices and modal split

This goal requires a coordinated effort from public and private bodies in providing a policy of guidance and in addressing critical issues

Actions to move forward

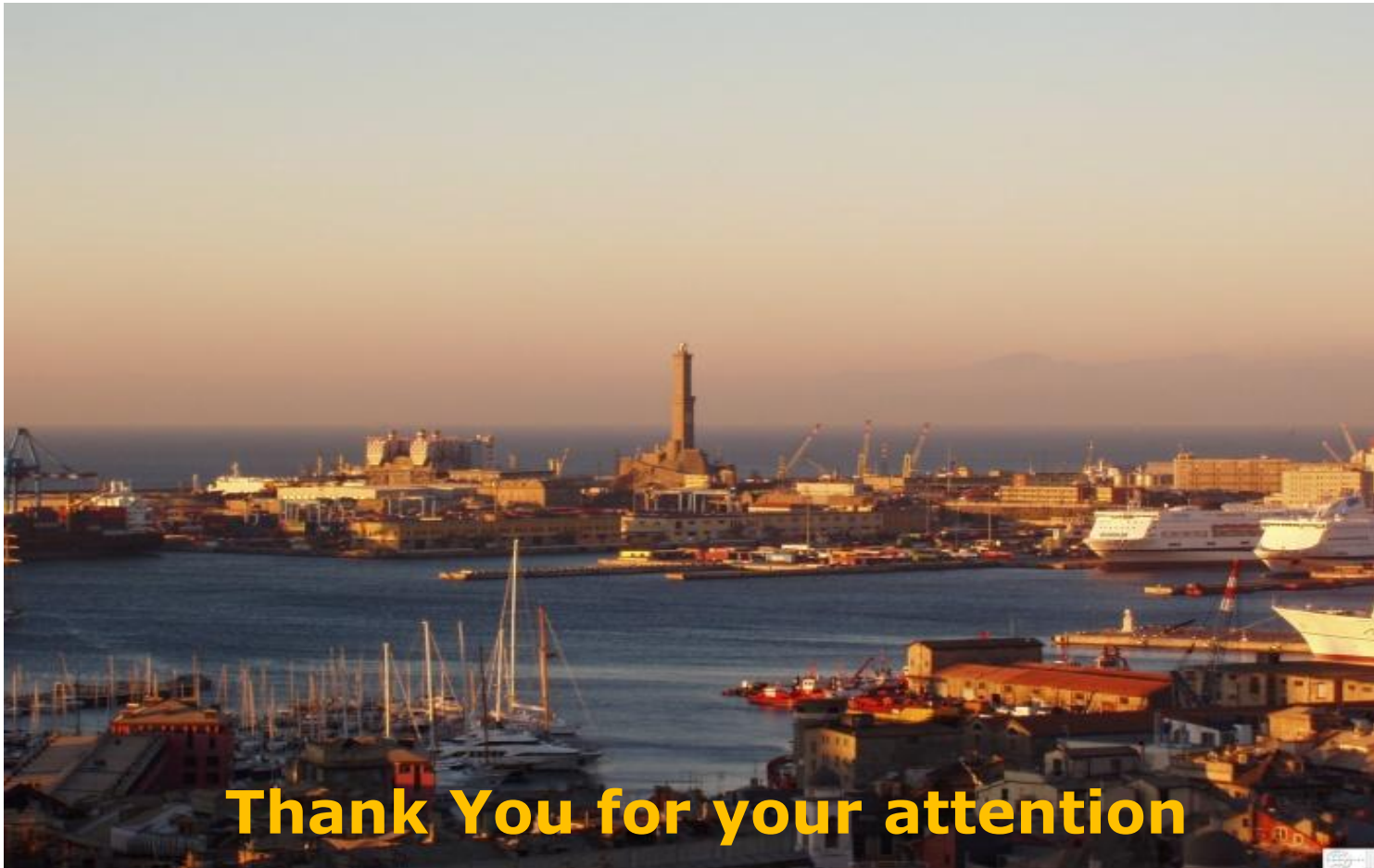
methods to employ new technologies to **improve the efficiency and effectiveness** of the transport

dialogue between experts and actions **supporting research, deployment, operations and maintenance** of a new brand of intermodal transport information system

technical features on the best methodological approach for **standardizing** Information System serving the logistic chain

learned lesson and **best practices**

improvement of quality through **standard reviewing processes**



enrico.musso@senato.it

cappato@iicgenova.it