



# Soft Infrastructure measures

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# Outline

- Soft infrastructure for Green Corridors
- Problems to overcome
- Requirements from the freight transport industry
- Strategies to remove obstacles
- The Freightwise soft infrastructure

# Soft Infrastructure (SI)

- Networking of companies, improving competitiveness (solutions for e-marketplaces)
- Access to information (services available on line)
- Technological development (promoting initiatives towards Intelligent Transportation Systems)
- Efficient cooperation between operators (agreed standards to follow)
- Cultural and organisational changes (training and policies)

# SI for Green Corridors

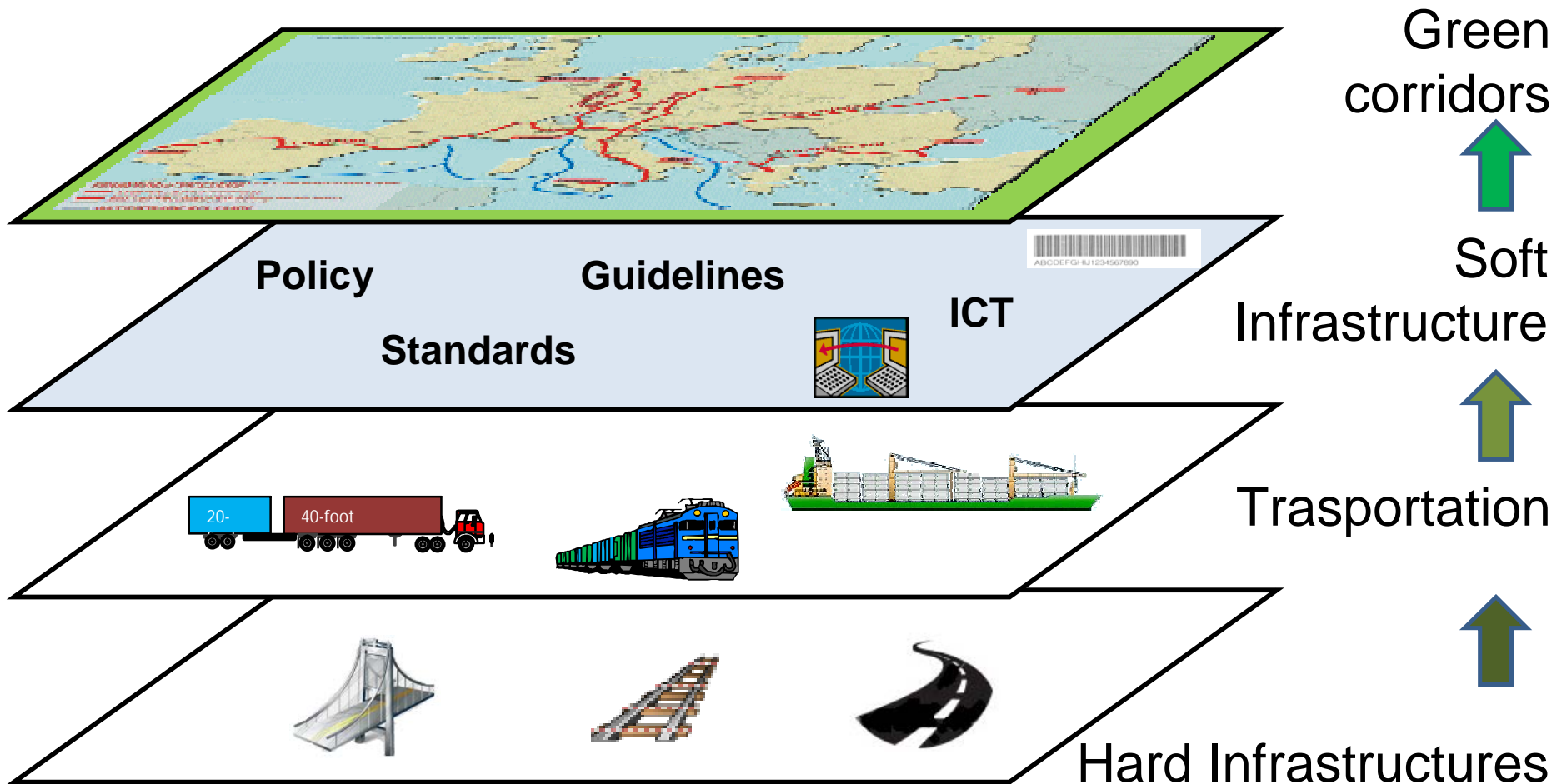
SI integrates ICT, business and policy approaches:

- Guidelines for easy implementation of co-modality in transport chains
- Non-prescriptive framework of operations
- ICT solutions based on common technologies
- Solutions for business and technical interoperability
- Standards (roles, messages and procedures)
- Dissemination actions

# SI potential benefits

- Interoperability of architectures from different modes (MarNIS, ARKTRANS)
- Efficient use of transport modes
- Telecommunication networks (eTEN, ITS)
- Traceability of single items transported (devices: RFID, barcodes; projects: EURIDICE)
- Cultural approach to sustainable transport (training and dissemination plans)
- Development of trans-national policies

# Role of SI



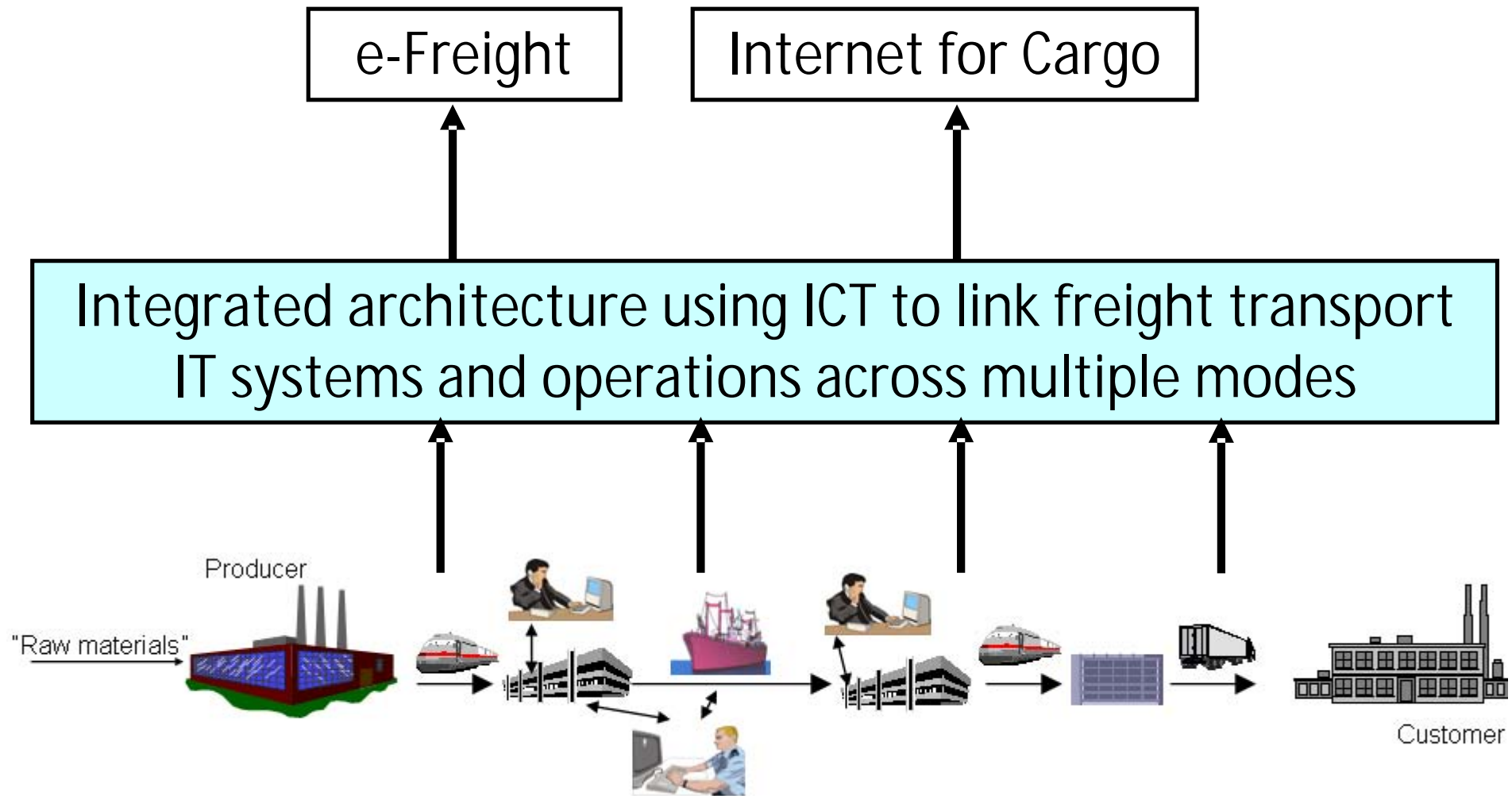
# Barriers to SI for GCs

- High complexity of intermodality due to number of players, including SMEs
- Lack of agreed standards in freight transport operations (TRIM, KAREN)
- Lack of interoperability (business and technical) between operators and their systems (ARKTRANS)
- Lack of communication interfaces
- Low market transparency (visibility of services and evaluation of alternatives)
- Lack of compatibility of IT systems with the in-house systems and monitoring technologies and devices

# Requirements from the freight transport industry

- Well structured information flows between logistics operators using standards and shared technologies ICT and logistics must be integrated to form the “smart supply chain”, embedded in a cross-border strategy
- IT systems to control all points in the chain including terminals and transshipment points
- Tools for global repositioning of loading units
- Co-operation and liabilities between transport operators
- Harmonisation of document handling and customs procedures, contracting, and permitting

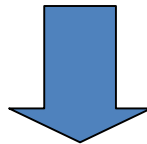
# Strategies to remove obstacles



# The Freightwise soft infrastructure

The Freightwise project (2006-2010), under the FP6 <http://www.freightwise.info>, identifies:

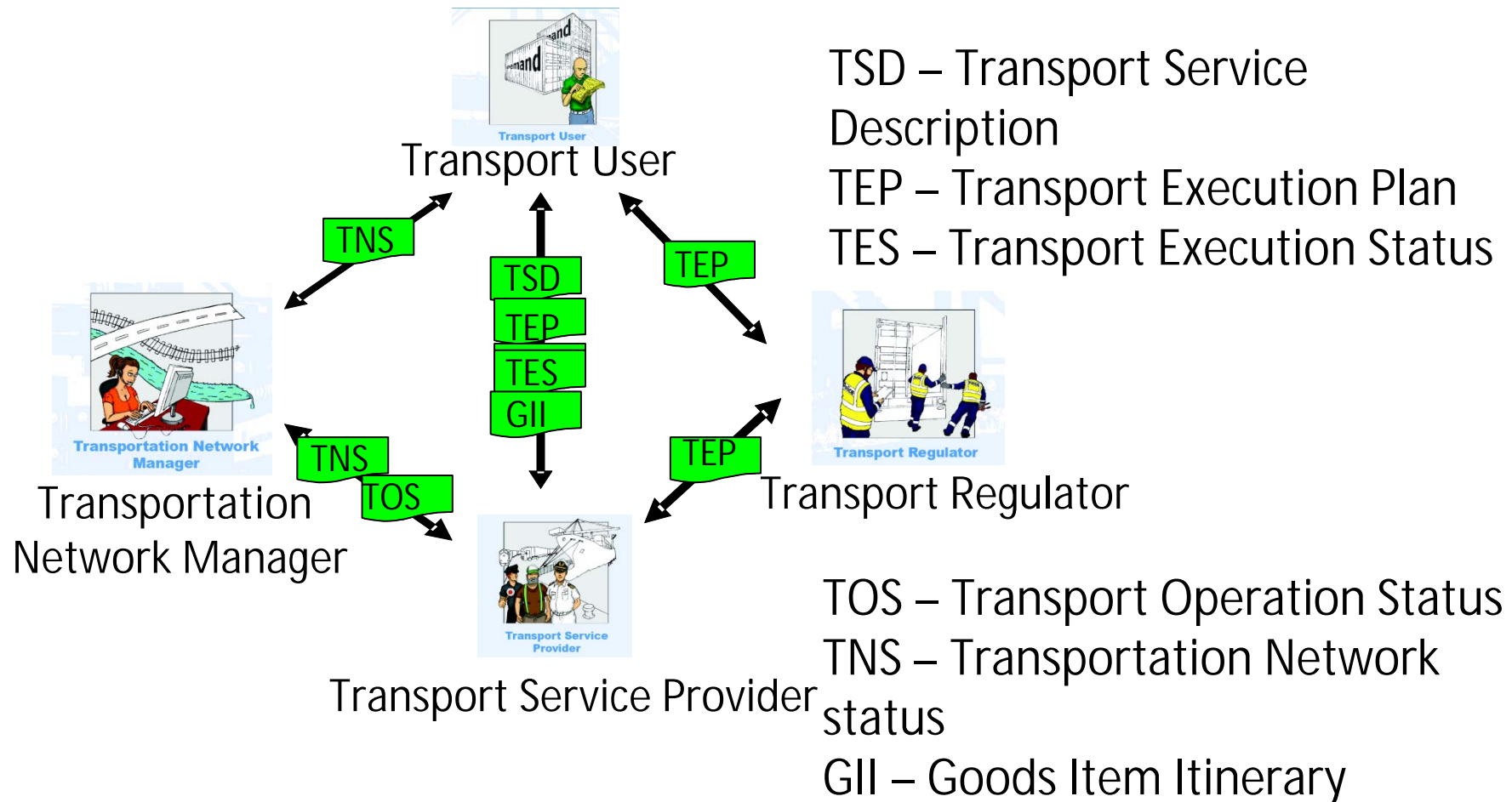
- roles (to be performed by actors);
- agreed processes along the transport chain;
- shared standard messages and information flow;
- ICT platform for communication between operators with communication interfaces.



Reference framework architecture involving operations and standards from all transport modes

# Electronic exchange of information

Actors exchange standard messages based on XML (the Information Packages).



# Added value of FW

- Creation of an open market for cargo based on transparency and easy access to information.
- Support to the easy implementation of intermodality by means of a cross-modes framework architecture.
- Interoperability between operators (operational) and their systems (technical).
- Information electronically exchanged.
- Standards valid for more transport modes.

# Conclusions

- Hard and Soft Infrastructures for Green Corridors
- SI address business, ICT and policy issues to support GCs
- Problems to overcome to implement GCs
- Freightwise: a reference architecture for intermodal freight transport working as a SI
- Benefits/added value achieved.

# Thank you!

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