

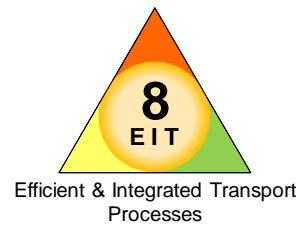
Efficient & Integrated Transport  
Processes

## ***EIT - Efficient & Integrated Transport Processes***

# ***e-FREIGHT 2011***

2011-05-11  
Sten Lindgren, Odette Sweden  
Bror Gustafsson, Meridion

# Agenda



- Introduction and background
- Project scope
- Consortium
- Project plan & work packages
- Collection of requirements
- Future safety and security requirements
- Future environmental data requirements
- EIT Reference Model and Transport Scenarios
- B2B Communications
- EIT Information Model
- Expected final result

# Introduction and background

**Pharos** EDI Guidelines for Transports have been available in Sweden/Scandinavia since the nineties. They cover scenarios like booking, instructions, status report and freight invoice. Pharos Guidelines are much used with some exceptions (one is automotive)

Pharos was published by the "Swedish International Freight Association, SIFA". For a long time SIFA and Odette Sweden have been looking for a way to update Pharos to take into account new requirements including automotive ones.

When Odette Sweden made a "painpoint survey" among automotive suppliers "*transport processes*" came up. (Lack of homogeneous transport processes )

The FFI program is sponsored by the Swedish government and automotive industry for joint funding of research, innovation and development concentrating on Climate & Environment and Safety. One part of the program covers "*Transport Efficiency*"

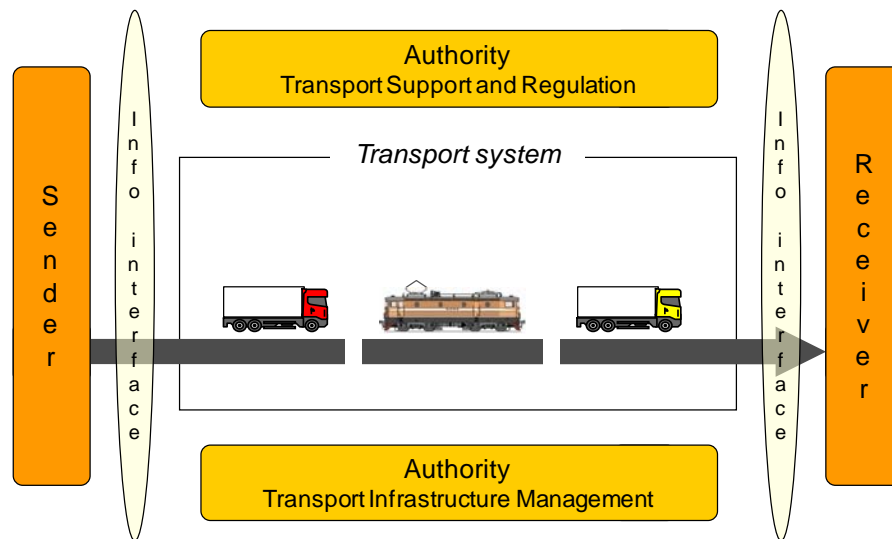
Discussions led to gathering of a strong consortium for developing a new recommendation for information exchange taking into account new requirements in logistics, transport safety and environmental aspects. An application to FFI was made and then approved.

# Project scope

## Aim and definition of the project

*Identify and analyze possibilities to develop and harmonize administrative processes, **business collaboration** and **process integration** between transport providers, industry and authorities to improve **transport efficiency** according to new requirements and applications in the area of **sustainable** and **safe transports**.*

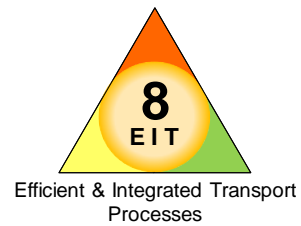
*Enabler for developing collaborative business models, business communication is **increased usage of IT and system integration**.*



### Project directives

- Industrial, repetitive and (long term) contracted transports
- Primary focus on process and information interface between the transport system and the sender/receiver
- Geographical view
  - Transport processes in Europe
  - General requirements for import and export from/to Europe
- Excluded transport modes
  - Air Freight
  - Deep sea shipping

# Consortium



Project Mgmt and support:



Industry Partners:



Forwarders:



Universities and research bodies:



Government:

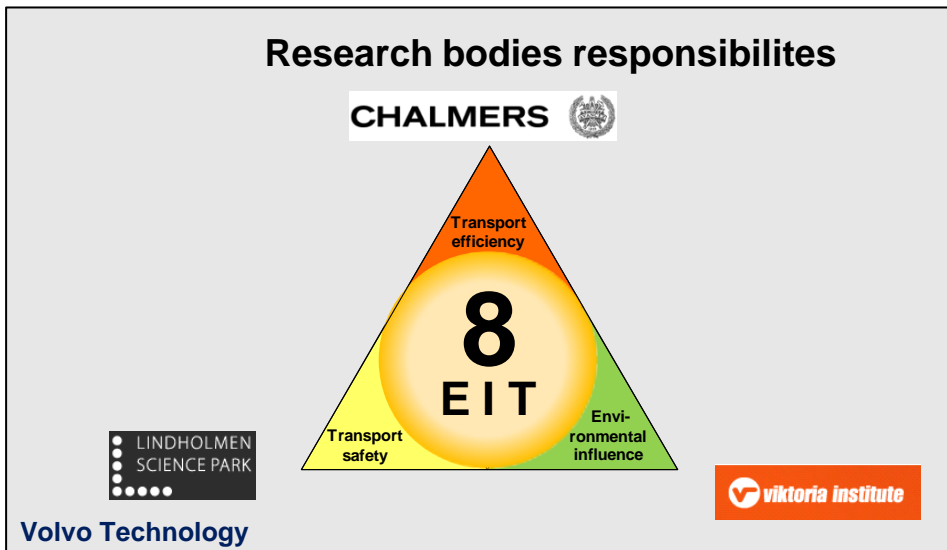


FKG represented by the following component suppliers:

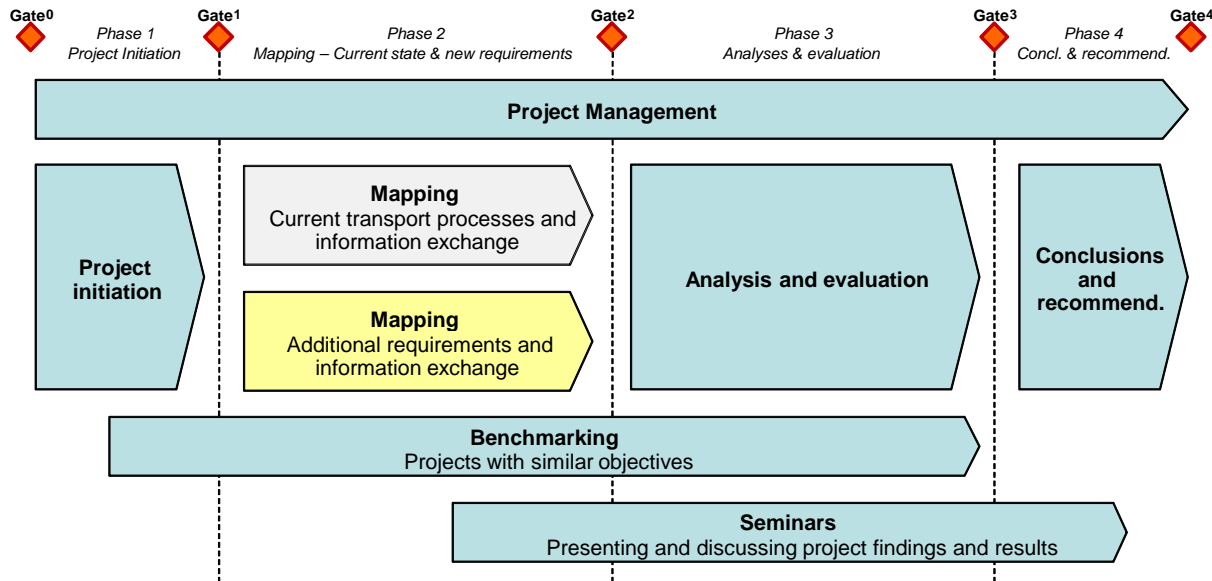
- Autoliv
- Bulten
- Gestamp HardTech
- Haldex
- Kongsberg Automotive
- Plastal
- SKF



BEAst has aligned with their own project (the Swedish Building & Construction Industry's Electronic Business Standard)



# Project plan & work packages



Project running from January 2010 to December 2011

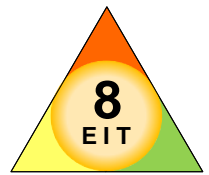
## Mapping current transport processes and information exchange

- Pharos
- Automotive OEMS and 4PL
- Automotive Suppliers, large and SMEs
- 3 PL and Forwarders
- Building & Construction incl. Distribution and Trade
- Retail
- Intermodal transports

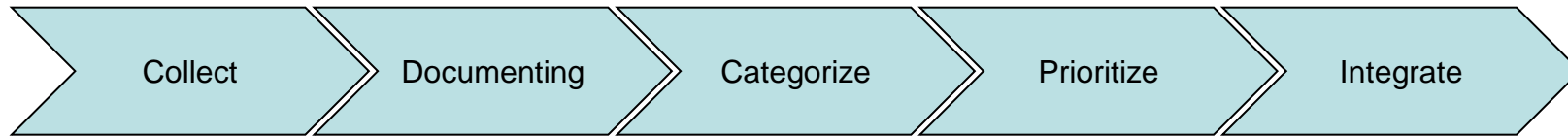
## Additional requirements and information exchange

- Intermodality (not supported in Pharos)
- Requirements derived from complex transport chain scenarios
- New Customer requirements on transports related to logistics and traceability
- Environmental information related to transports
- New Transport Safety information requirements
- Other legal requirements like ICS (Customs)

# Collection of requirements



Efficient & Integrated Transport Processes



- Identify requirement owner
- Identify positive effects with the new requirement

- Organize and document collected requirements

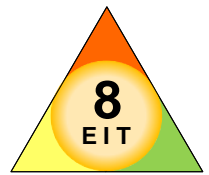
- Categorize requirements according to impact on efficiency, safety, environmental data

- Prioritize requirements (low, medium or high)

- Integration of prioritized requirements in EIT

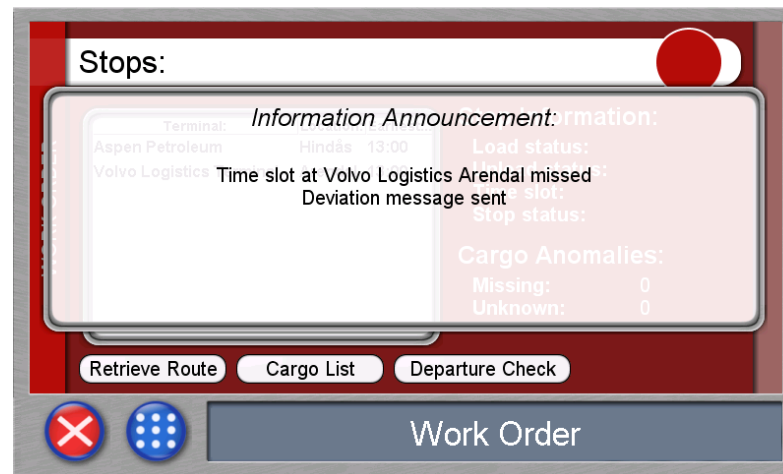
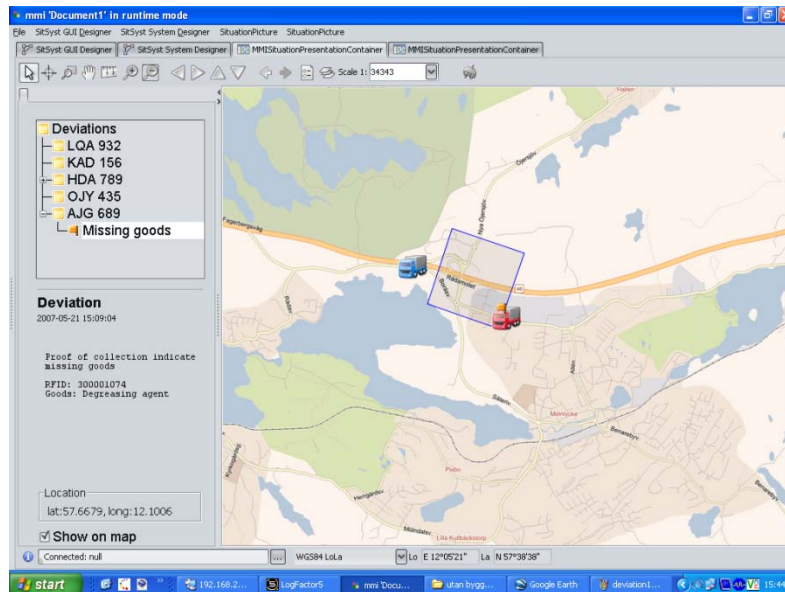
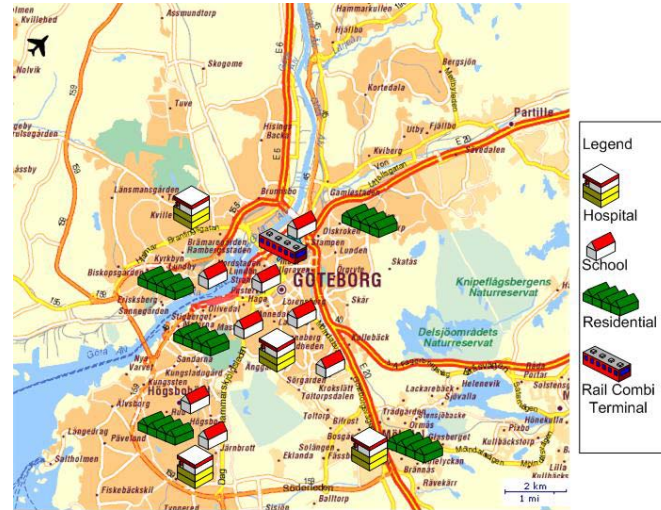
ID	Source	Requirement description	Relations	Category	Status	Priority	Responsibility	Comment
1	DB Schenker	Missing correct postal codes for collection and delivery of goods.	TSP/TU	Transport efficiency	Approved		WP2	
2	Customs	EORI-nummer (Economic Operator Registration)	Authorities/TSP/TU	Transport safety	Approved		WP2	
3	TA-suppliers	Common waybill for every transport mode	TSP/TU	Transport efficiency	Approved		WP3	

# Future safety and security requirements



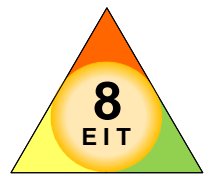
Efficient & Integrated Transport Processes

- Geo-fencing
- Time-fencing
- Track & Trace
- Proof of collection, POC
- Proof of delivery, POD

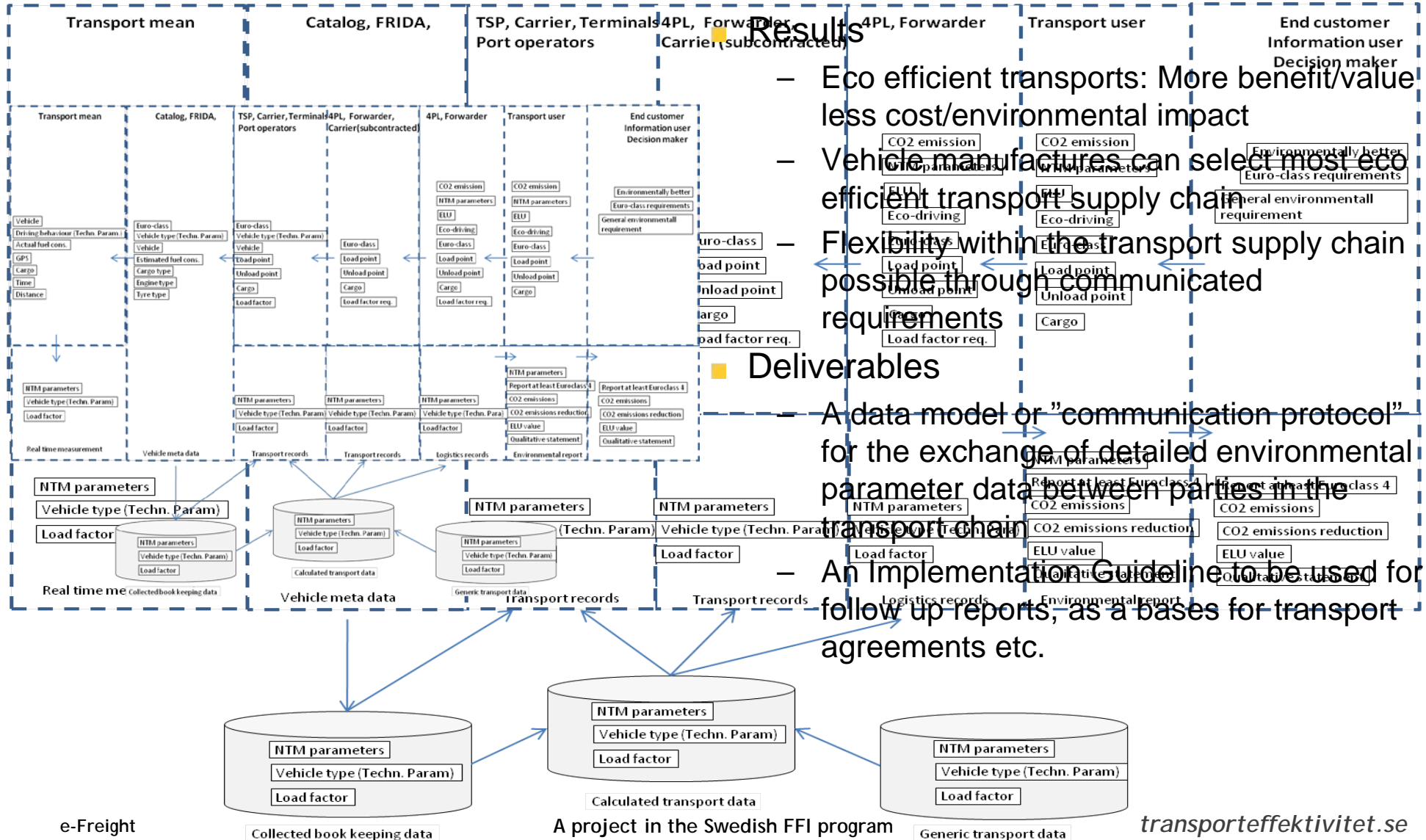




# Future environmental data requirements



Efficient & Integrated Transport Processes



- Eco efficient transports: More benefit/value less cost/environmental impact
- Vehicle manufactures can select most eco efficient transport supply chain
- Flexibility within the transport supply chain possible through communicated requirements

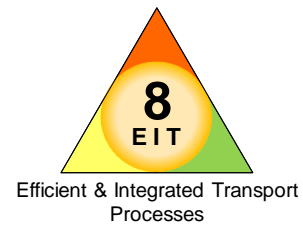
## Deliverables

- A data model or "communication protocol" for the exchange of detailed environmental parameter data between parties in the transport chain
- An Implementation Guideline to be used for follow up reports, as a bases for transport agreements etc.

# Findings

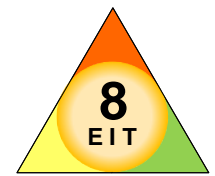
## Mapping current transport processes and information exchange

- Pharos
- Automotive OEMS and 4PL
- Automotive Suppliers, large and SMEs
- 3 PL and Forwarders
- Building & Construction incl. Distribution and Trade
- Retail
- Intermodal transports



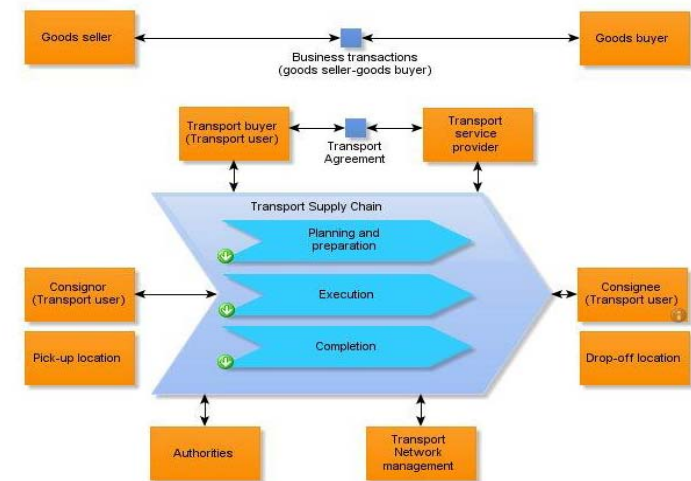
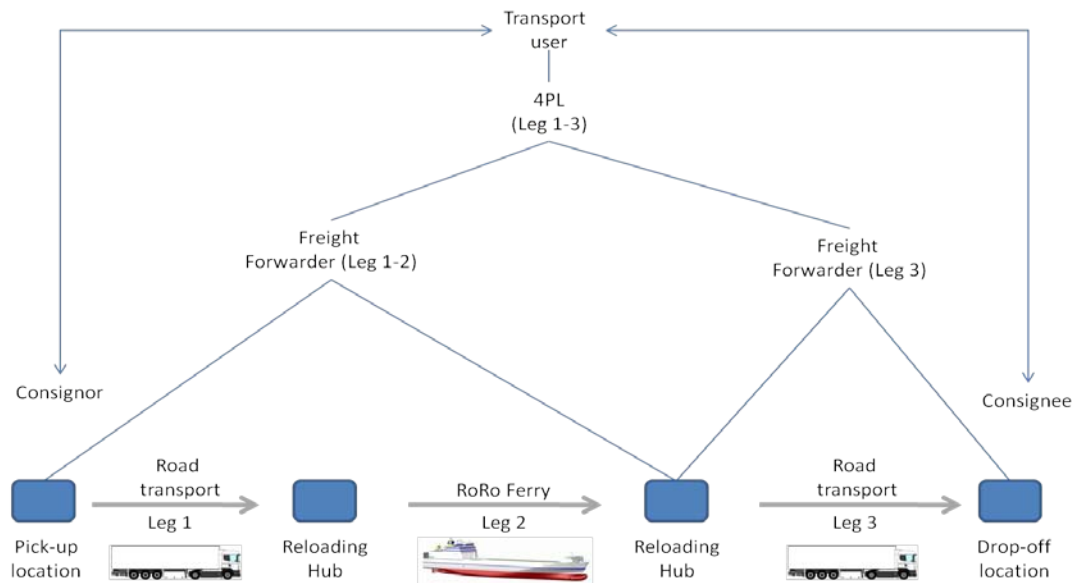
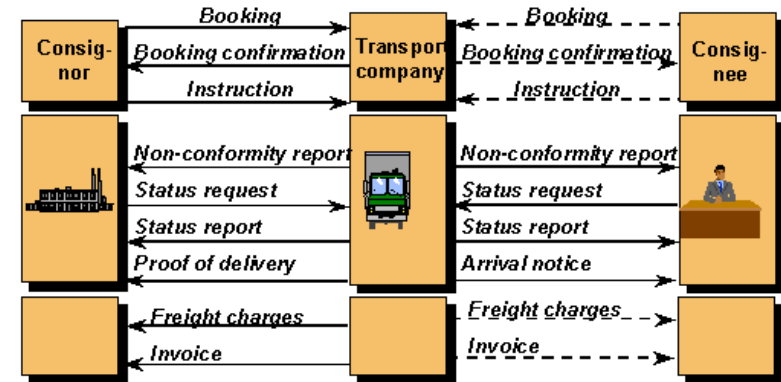
- Automotive OEMS and 4PL (Volvo Logistics, SKF Logistics, Scania)
  - Main entities (articles / packaging vs. shipments)
  - Track & Trace
  - Transport optimization and better use of capacity
  - Proactive actions when discrepancies occur
- Automotive Suppliers (Gestamp Hardtech, Kongsberg Automotive)
  - Inefficient transport booking procedures
  - Invoice control difficult (matching)
  - Low awareness of Customs declaration procedures

# EIT Reference Model

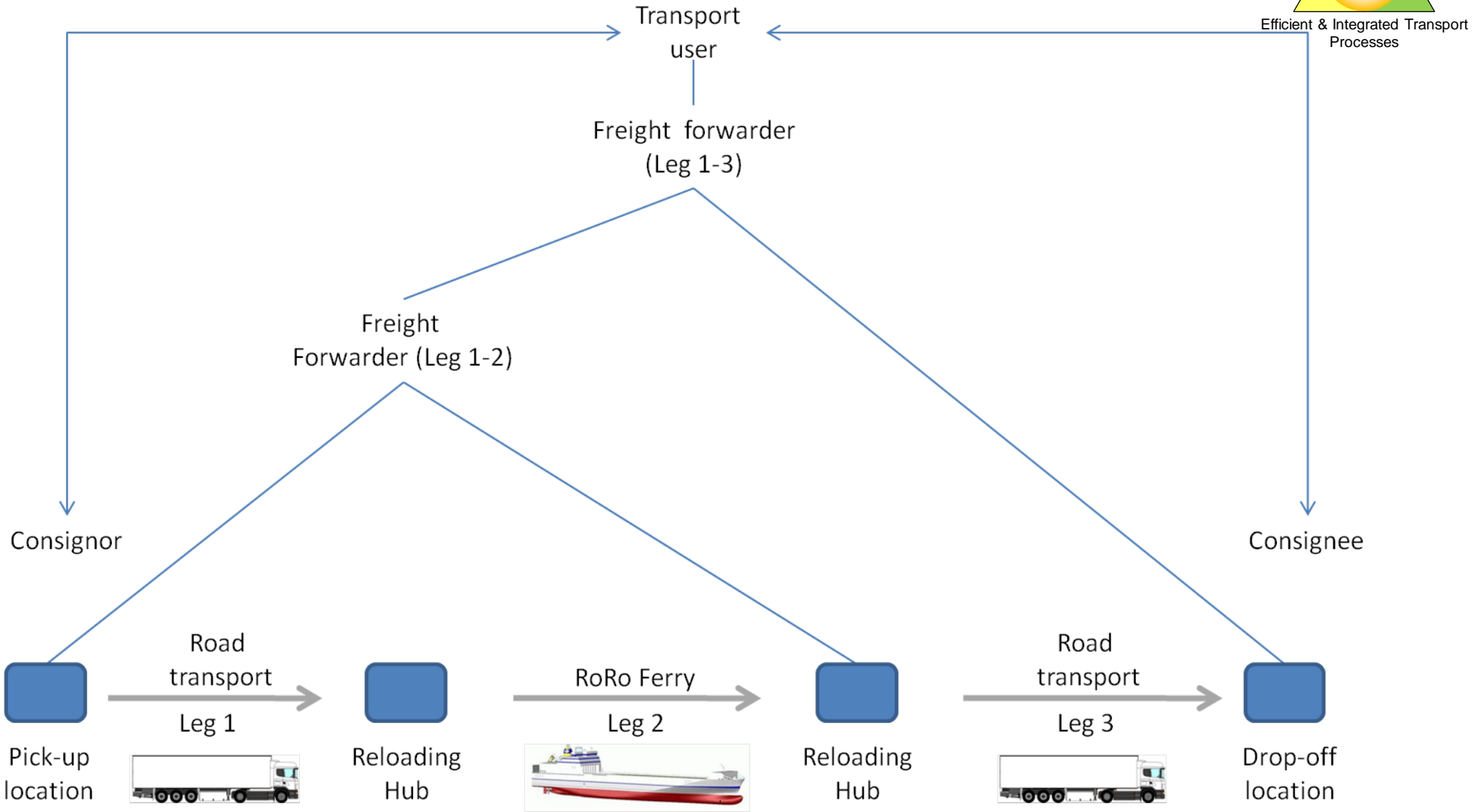
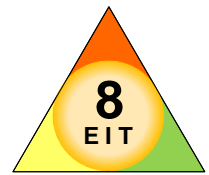


Efficient & Integrated Transport Processes

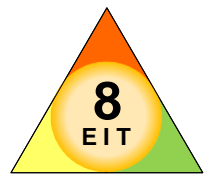
- Why is a new reference model needed?



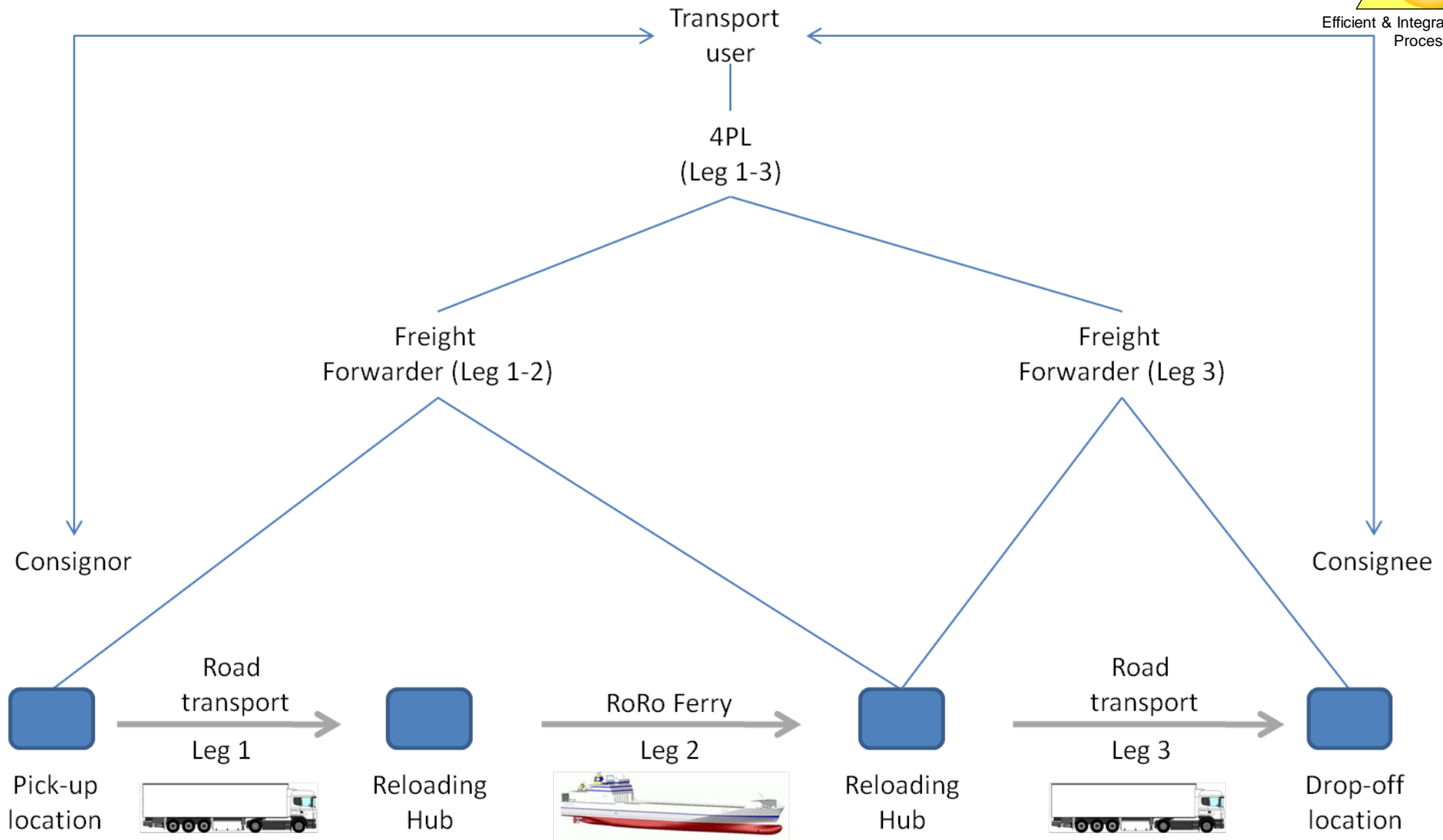
# Transport scenarios



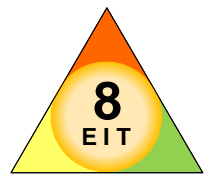
# Transport scenarios



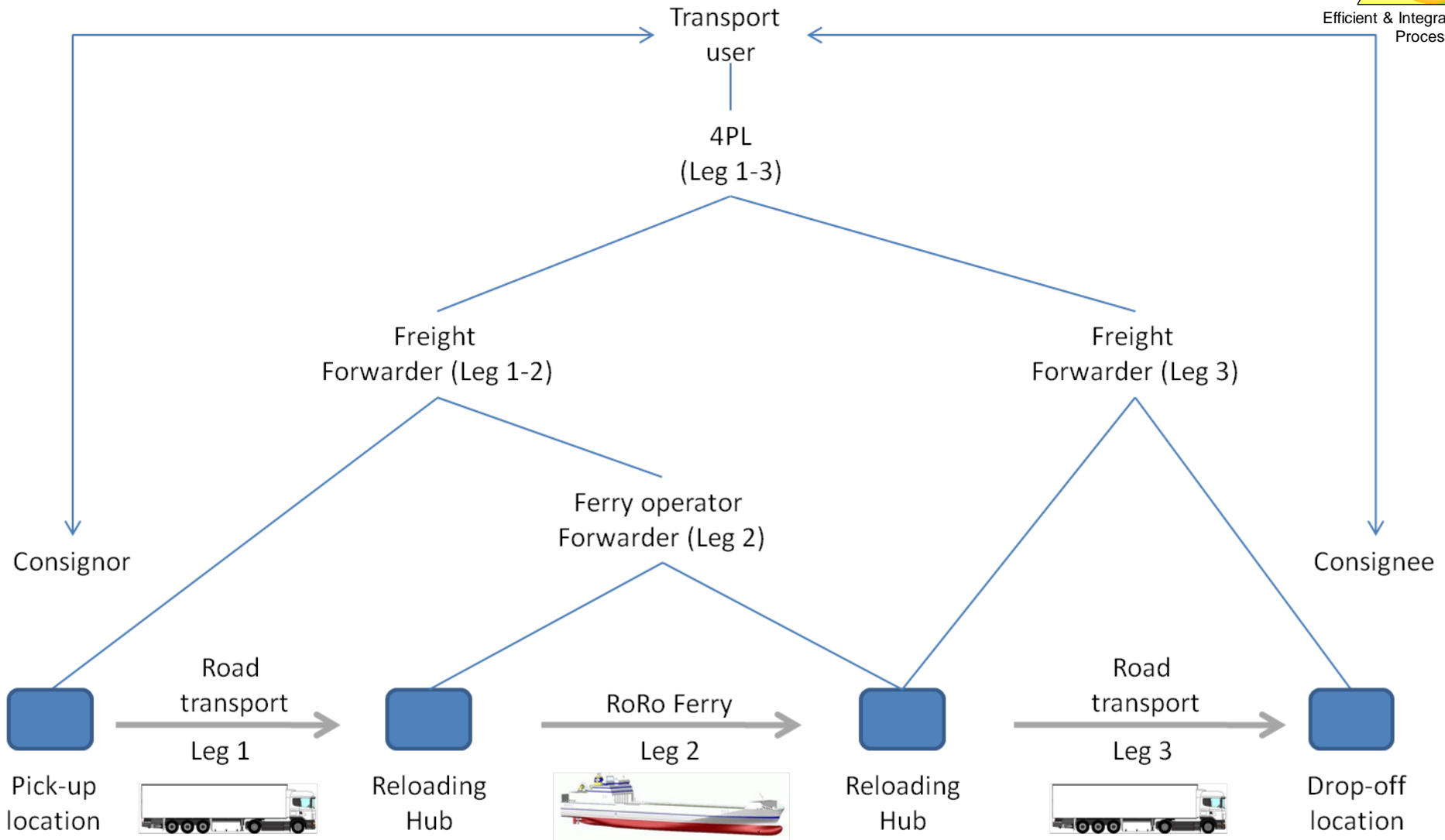
Efficient & Integrated Transport Processes



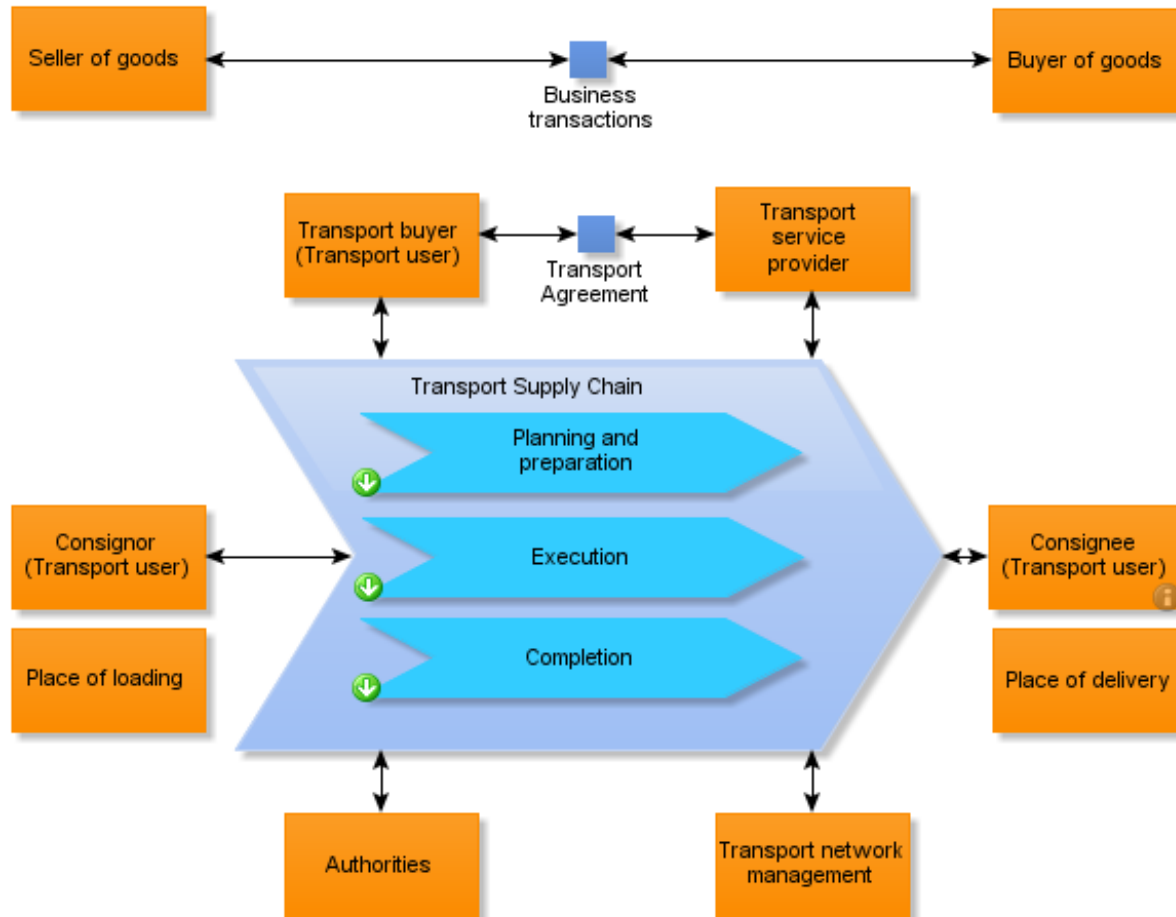
# Transport scenarios



Efficient & Integrated Transport Processes



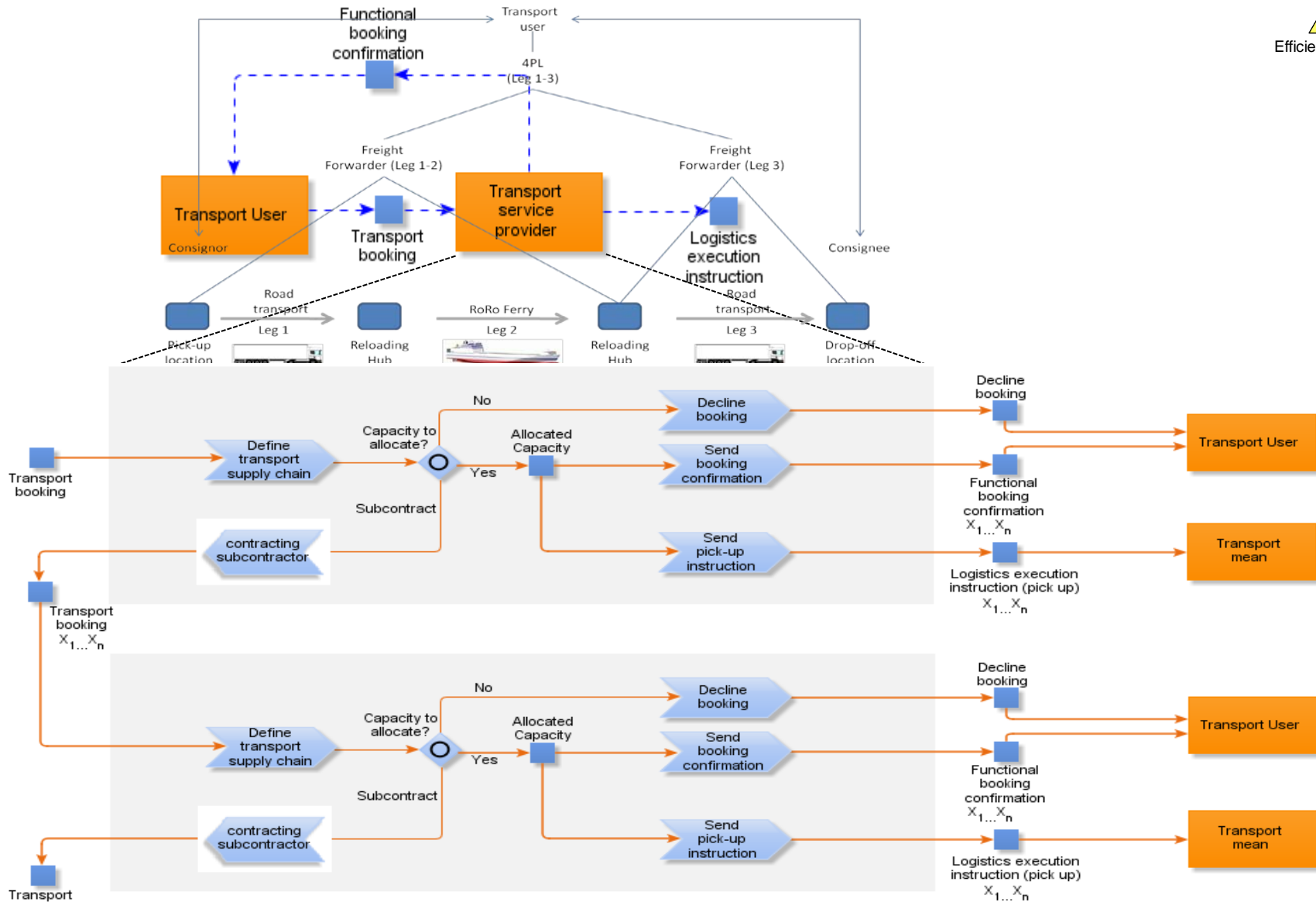
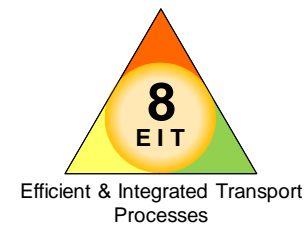
# EIT Reference Model (Draft)



## Business processes

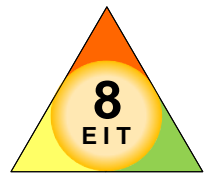
- Goods ordering and supply
- Transport service contracting
- Transport Planning and Preparation
- Transport Execution
- Transport Completion

# EIT Reference Model - Planning (Draft)

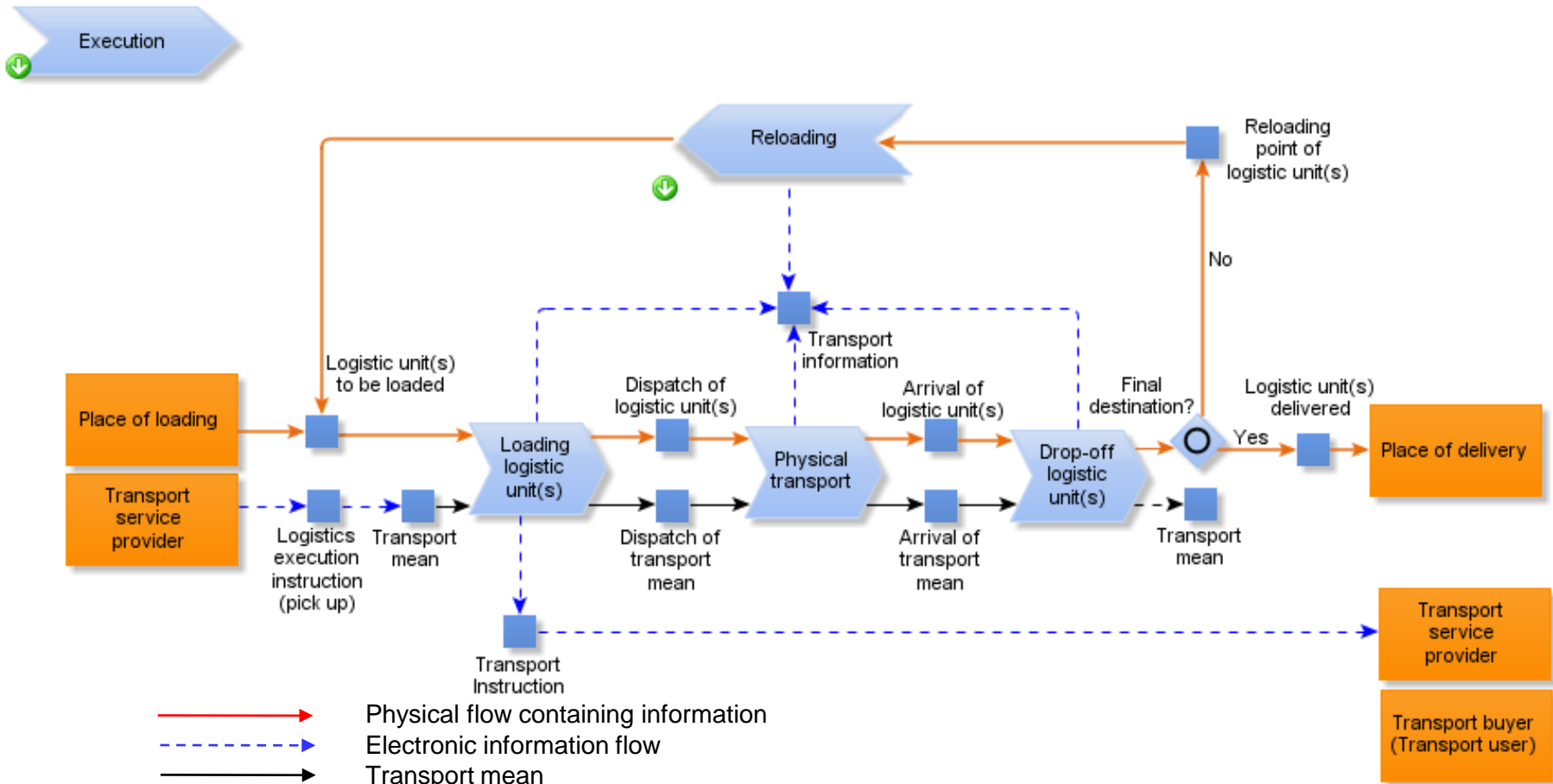




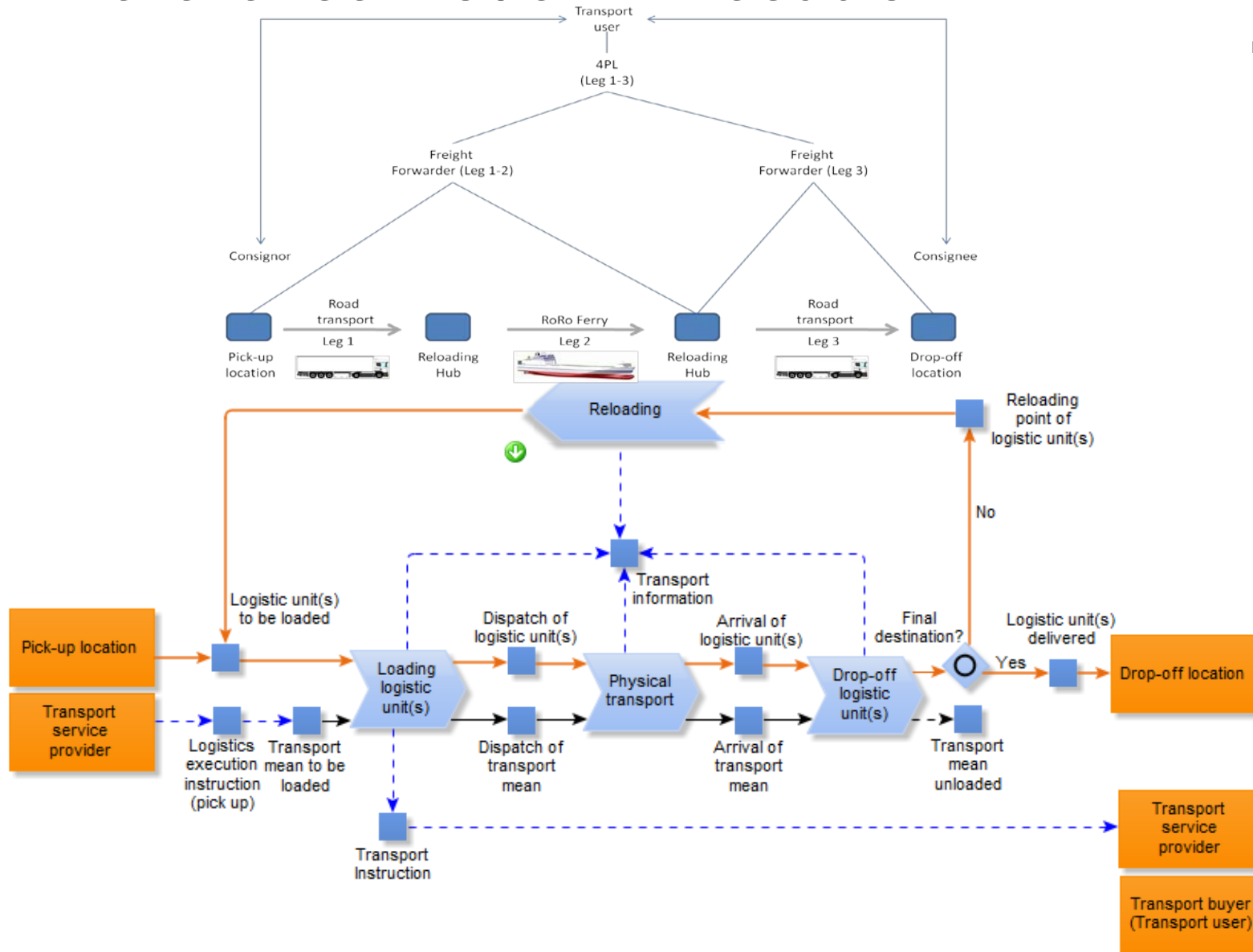
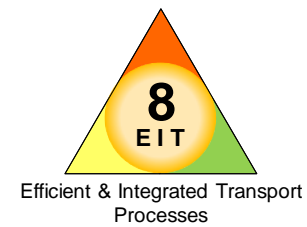
# EIT Reference Model - Execution (Draft)



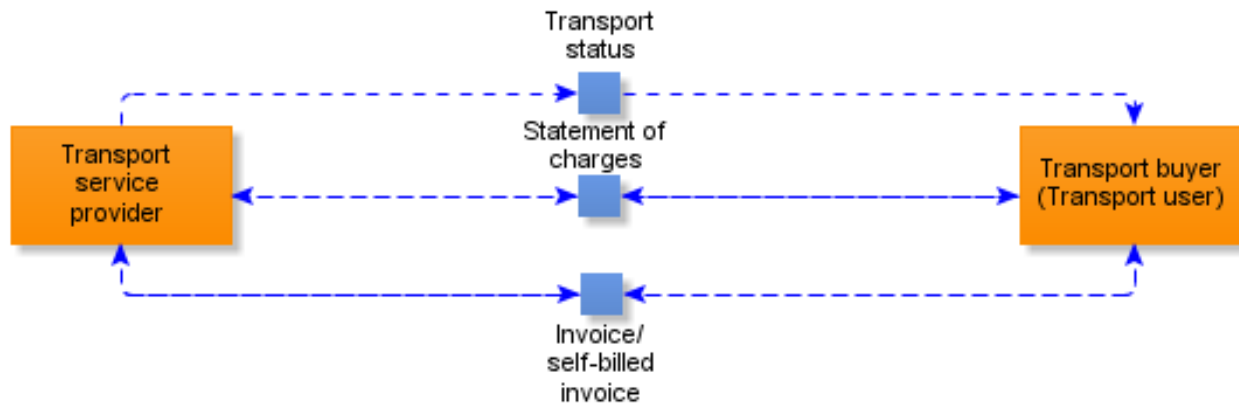
Efficient & Integrated Transport Processes



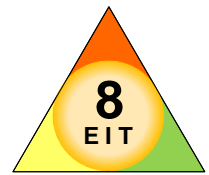
# EIT Reference Model - Execution



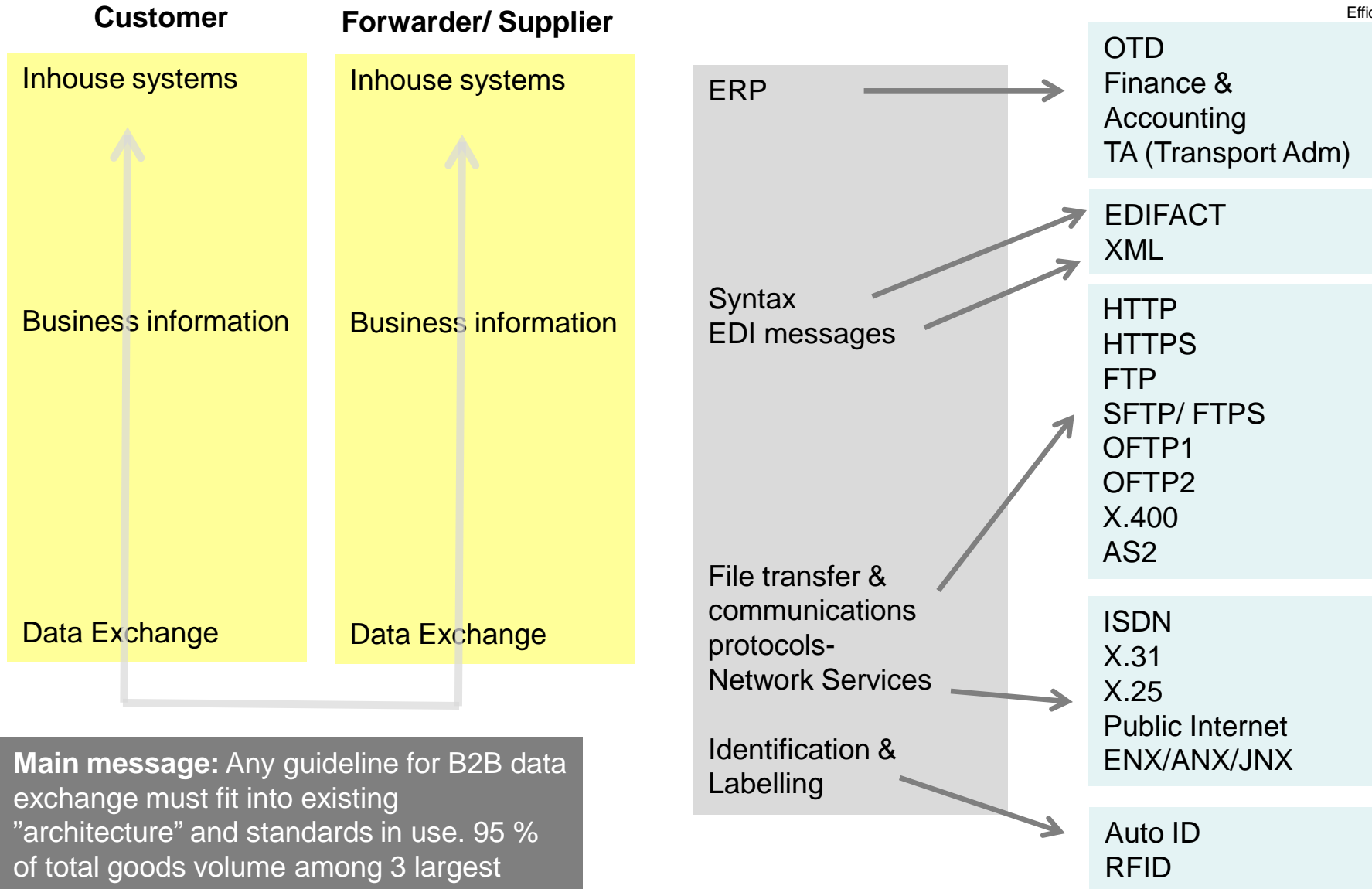
# EIT Reference Model - Completion (Draft)



# B2B Communications

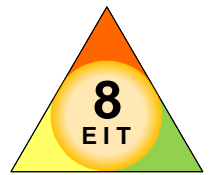


Efficient & Integrated Transport Processes



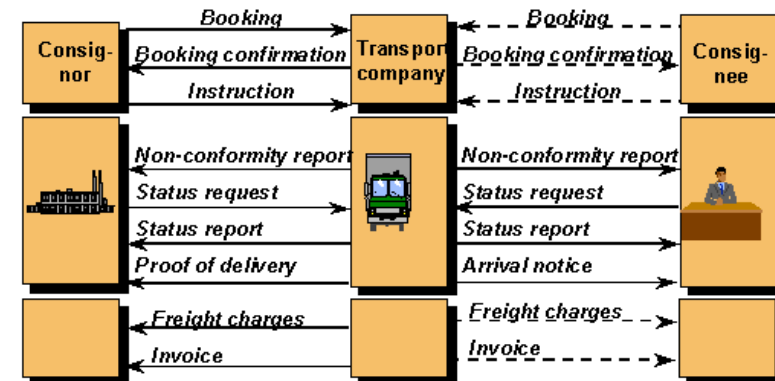
**Main message:** Any guideline for B2B data exchange must fit into existing "architecture" and standards in use. 95 % of total goods volume among 3 largest forwarders in Sweden is handled by EDI

# EIT Information Model

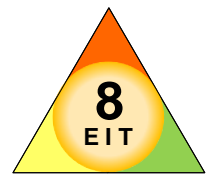


Efficient & Integrated Transport  
Processes

- EIT is using a data modelling tool (GEFEG FX) for the creation of the EIT Information Model
- The Information Model builds on a Business Process Model
- An Information Model contains a description of relations between entities
- Entities are defined in a standardised Glossary of Terms
- As a first step EIT has developed an Information Model that reflects functionality as described in the old PHAROS framework
- To this will be added all agreed new requirements
- The Information Model could then be used for specifying detailed EDI specifications in a chosen syntax, like EDIFACT or XML



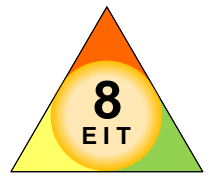
# Expected final result



Efficient & Integrated Transport Processes

- A **generic Transport Business Process Model** with various scenario descriptions
- A Guideline on how to apply detailed **Environmental Data Parameters between Trading Partners in the Transport Chain** – as part of the normal commercial data exchange
- An **Information Model** based on standardised business entities from a Glossary of Terms, also listing what messages could be used for data exchange





Efficient & Integrated Transport  
Processes

# Thank you for listening

[sten.lindgren@odette.se](mailto:sten.lindgren@odette.se)

[bror.gustafsson@meridion.se](mailto:bror.gustafsson@meridion.se)