Strategic Session 3 - Digital transport & intelligent infrastructure: DIGITALISATION IN ROAD-RAIL COMBINED TRANSPORT
UIRR: the industry association of intermodal transport

PARTNERS

MoU PEERS

MANUFACTURERS PLATFORM

UIRR OPERATORS

UIRR TERMINALS

GOVERNMENTAL BODIES

INDUSTRY ASSOCIATION PEERS
Selected key drivers for CT digitalisation

**Role of Digitalization:**

**Pain or opportunity for combined transport?**

- **New Entrants increase logistics footprint**
  (e.g. Amazon)

- **Customers expect high reliability & valid information**
  (e.g. ETA, booking)

- **Shippers use advanced software to perform 3PL’s tasks**
  (e.g. BOSCH, Unilever, BMW)

- **Regulators push digitalization**
  (e.g. TAF – TSI, eFTI, digital market)

- **Improved communication & information richness**
  (e.g. 5G, Internet of Things)
Digitalization is the process of increasing the use of digital technologies and processes to transform the firm and other stakeholders through new value adding activities to achieve better efficiency and higher profitability.

Digitalization can affect all parts of a company. Mostly automation of processes, digital output and business model innovation are in focus. A wider view encompasses the whole system of interdependencies (incl. mindset, culture, standards and partners).
Shippers increasingly steer their logistics operations directly or via 4PLs to increase transparency, control and reduce costs and transit time.

**Software as a Service Solutions**

- **Strategic Network Planning**
- **Predictive Transport Optimisation**
- **Dynamic Transportation Management**
- **Transportation Management**

Increasing automation requires accurate information in real-time.

- Orders
- Timestamps (e.g. ETA)
- Documents
- Invoices
- etc.

**Shipper Supply Chain Control Service Centre**

Suppliers (incl. plant-to-plant) → **Shipper** → Combined Transport → LSP (last mile) → Customer

**Terminal** → **First mile** → RU-1 → RU-2 → RU-3 → Last mile → Terminal
ALTERNATIVE PATHS REQUIRE ALIGNMENT

1a Total freedom

- Own data
- Own customers

Pros
- No advanced alignment with other partners required
- Competition in all dimensions

Cons
- No group scale effects and competitive advantage
- Maximum effort for individualized interfaces for each partner (n:m)
- Highest costs base per interface

Examples
- Tracking information exchange w/o standardization (status/interfaces)
- Individualized booking processes

1b Common standard

- Own data
- Own customers

Pros
- Lower costs (standardization of data)
- Common understanding
- Clarity of data for customers
- Regulatory support and funds accessible

Cons
- Maximum standard interfaces for each partner (n:m)

Examples
- Harmonized ILU code, EDIGES
- ETA initiative
- IATA (e-AWB), IRU (e-CMR)
- Standard of registers (e.g. terminal and unit master data)

2 Common Platform

- Own data
- Own customers

Pros
- Lowest amount of interfaces (1:n) & costs
- Cost efficient standardized processes
- Common understanding (data + processes)
- Clarity of data and process for customers
- Regulatory support and funds accessible

Cons
- Governance and ownership controlled
- Initial coordination required

Examples
- Cesar (only partially open & only terminal-to-terminal not door-to-door logistics)
- Hacon LEIDIS (Germany)
- RNE TIS

Legend: TO = Terminal Operator; OP = CT Operator
COMMON STANDARD ON IDENTIFICATION: ILU-CODE

- **Mandate**
  - EN13044 appointed UIRR to be the Administrator

- **Marking**
  - UIRR members reported a +98% ILU- or BIC-Code compliance of the units they handled in 2016

- **Obligatory**
  - Modernised EU Customs Code makes it mandatory for all UCT
  - Revised Directive 92/106 will make it mandatory for all intra-EU UCT
  - TAF TSI requirements (Tracking & tracing, booking, consignment note)
Mandatory publication of information

Directive 2012/34 + Implementing Regulation 2017/2177 on access to service facilities and use of rail-related services

Regulation 913/2010 on Rail Freight Corridor

Further development of Common portal for permanent operation

Strategies and plans for
- Governance
- Business model
- Data collection / management
- Portal functionality development

Further portal (software) development
- User-friendly tool
- Changes in data model (compliance with regulations)
- User roles / management
- Editing/validation functions

Data Feeding
- Ensure usage + update of existing data
- Supplement /complete data ("critical mass")
- Optimise data input / update procedures

EU Service Contract: MOVE/C3/2017-198
Consortium: HaCon, IBS, SGKV, Triona, UIC, UIRR
Project period: 04/2018 – 05/2019
Real-time information about trains, wagons, goods and loading units are a key success factor. It was found that real-time information is already available for trains but legal and administrative barriers are sometimes hindering it. Some freight forwarders use GPS-like systems for track/trace; it is expensive but provides a service which is otherwise not provided.

Real-time information about trains should be accessible to all involved partners. The following needs were detected:

- Information should be available to IMs/RUs/Terminals/Shippers/Forwarders/Wagon Keepers/Intermodal/Combined Transport Operators etc.
- Mileage information, based on the real train run, would be needed.
- Link to wagons and/or loading units would be required.
- Long-term aim shall be a better ETAs (estimated time of arrival).

Barriers to opening real-time information to all involved partners should be removed. In addition, mileage information and a link to wagons and/or loading units will be developed.
Sharing of train tracking information and Estimated time of arrival – TOMORROW

**INDUSTRY / Door**

Logistics companies / Shippers

Contractor of the train
RU, intermodal operator, transport company, industry etc.

Leading RU

First mile
RU
RU
RU
Last mile

Raildata

TIS

Train Information System

IM
IM
IM

Delivery
Terminal

Delivery
Terminal

>> START

>> END

ETA means:
For IMs Handover at borders
For RUs Handover at delivery point
For terminal Arrival of train
For shippers Ready for pick-up

Data integration into TIS based on TAF-TSI standard
Customer data exchange standard Edges
Available status information:
• booked
• delivered in departure terminal
• loaded on wagon
• departed from departure terminal
• foreseen arrival at destination terminal
• ready for pick-up in arrival terminal
• pick-up completed in arrival terminal
• arrived for gateway in intermediate terminal
- Digitalisation means a **mental and cultural shift** (‘out of the box’ thinking)

- **Data democracy** (data sharing) – real-time data available for all involved freight players, free of charge and without restrictions/filtering

- Implementation of **interoperable systems and standards** to integrate all freight players in the logistics chain

- Access to European-wide **reference files** (loading units, wagons, infrastructure data, location codes)

- Customer information: **focus on ETA (pick-up time)** and smooth B2B integration
THANK YOU FOR YOUR ATTENTION

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