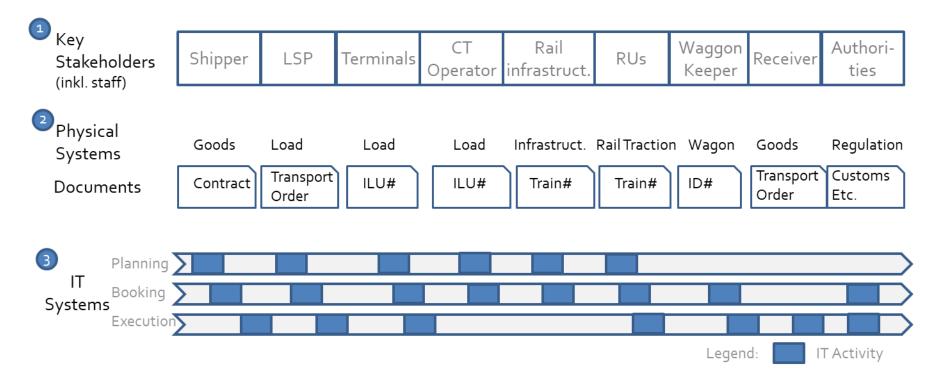**'Digitisation'**
is the process of converting information into a digital computer-readable format.

'Digitalisation'
means the use of digital technologies to change processes and provide new revenues and value-producing opportunities through enhanced products and services.
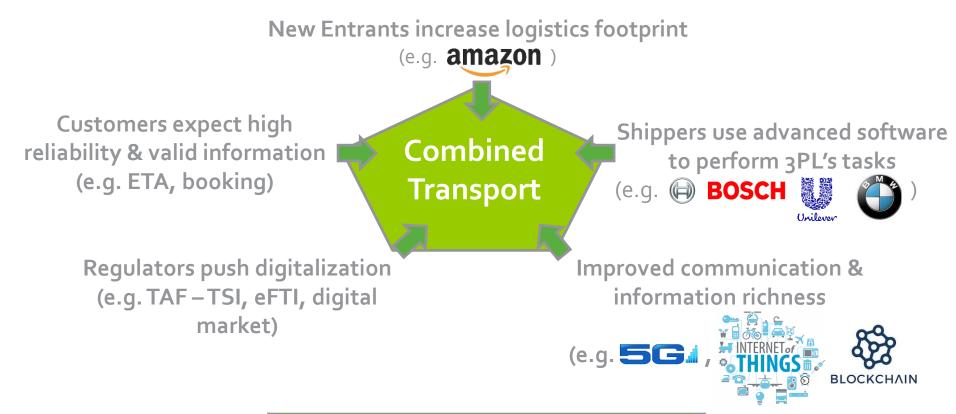
Combined Transport ecosystem

1 Key Stakeholders (inkl. staff)

Shipper	LSP	Terminals	CT Operator	Rail infrastruct.	RUs	Waggon Keeper	Receiver	Authori-ties

2 Physical Systems

Goods	Load	Load	Load	Infrastruct.	Rail Traction	Wagon	Goods	Regulation

Documents

Contract	Transport Order	ILU#	ILU#	Train#	Train#	ID#	Transport Order	Customs Etc.

3 IT Systems

Planning

Booking

Execution

Legend: IT Activity

New Entrants increase logistics footprint
(e.g. amazon)

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

Combined Transport

Shippers use advanced software to perform 3PL's tasks

(e.g. BOSCH Unilever BMW)

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

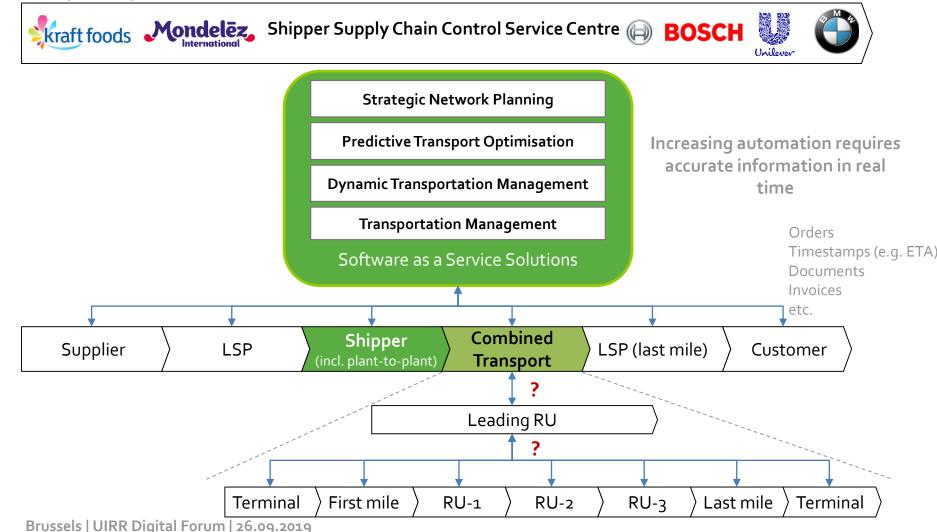Improved communication & information richness

(e.g. 5G , INTERNET of THINGS BLOCKCHAIN)

Role of digitalization:
Pain or opportunity for the CT ecosystem?

SHIPPER PERFORM LOGISTICS TASKS

SHIPPER PERFORM LOGISTICS TASKS
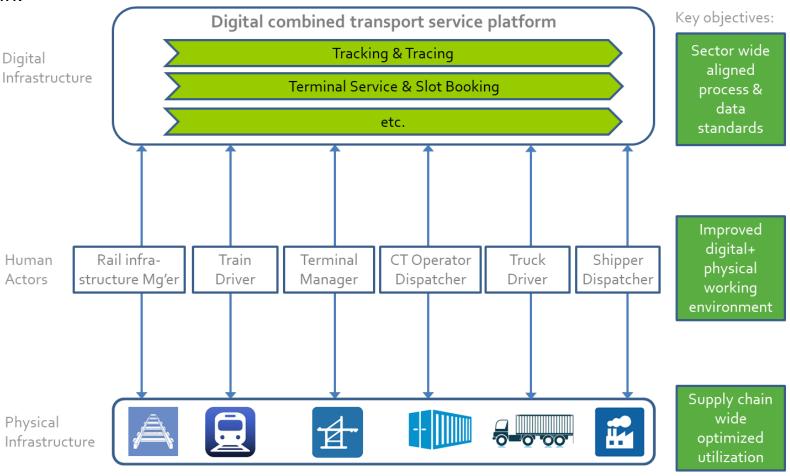
SHIPPER PERFORM LOGISTICS TASKS

{image}

Shippers increasingly steer their logistics operations directly or via 4PLs to increase transparency, control and reduce costs and transit time.
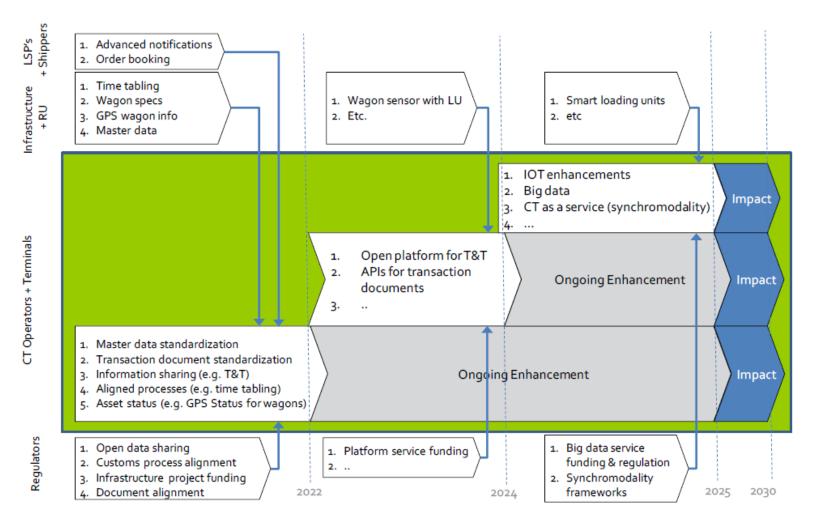
Shipper Supply Chain Control Service Centre

Strategic Network Planning

Predictive Transport Optimisation

Dynamic Transportation Management

Transportation Management

Software as a Service Solutions

Increasing automation requires accurate information in real time

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

Supplier > LSP > **Shipper** (incl. plant-to-plant) > **Combined Transport** > LSP (last mile) > Customer

?

Leading RU

?

Terminal > First mile > RU-1 > RU-2 > RU-3 > Last mile > Terminal

Brussels | UIRR Digital Forum | 26.09.2019

The CT sector's vision: transformation from a pure road-rail freight transport service provider to **an integrated collaborative transport service provider** for the logistics supply chain.

Digital combined transport service platform

Tracking & Tracing

Terminal Service & Slot Booking

etc.

Digital Infrastructure

Human Actors

Rail infra-structure Mg'er | Train Driver | Terminal Manager | CT Operator Dispatcher | Truck Driver | Shipper Dispatcher

Physical Infrastructure

Key objectives:

Sector wide aligned process & data standards

Improved digital+ physical working environment

Supply chain wide optimized utilization

(1) Asset Management / IoT, (2) Master Data, (3) Transaction Document Standardization, (4) Information Sharing, (5) Shared Processes Support and (6) Business Intelligence

Mandate

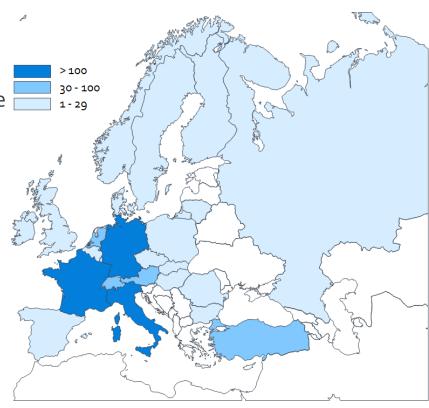- EN13044 appointed UIRR to be the Administrator

Marking

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

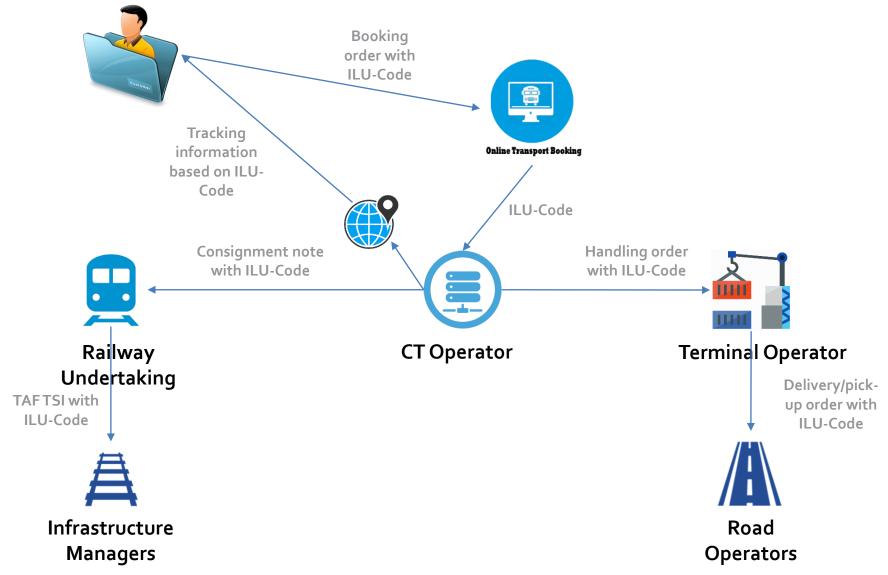- > 100
- 30 - 100
- 1 - 29

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

ILU-Code
identification of Intermodal Loading Units in Europe

UIRR Administrator of the **ILU-Code**

Booking order with ILU-Code

Online Transport Booking

Tracking information based on ILU-Code

ILU-Code

Consignment note with ILU-Code

Handling order with ILU-Code

Railway Undertaking

CT Operator

Terminal Operator

TAF TSI with ILU-Code

Delivery/pick-up order with ILU-Code

Infrastructure Managers

Road Operators

- Combined Transport – the most **dynamic market in rail freight**

- Digitalisation means a **mental and cultural shift** ('out of the box' thinking)

- Traditional vertical collaboration and partial integration must be transformed towards **a more integrated and interconnected CT ecosystem**

- **Success of the CT digital transformation**: smart and cooperative integration of all stakeholders into one commonly defined CT ecosystem supported by new commonly agreed concepts, processes, shared data hubs/platforms and digital solutions (assets, transport documents, data messages, registers).

THANK YOU FOR YOUR ATTENTION

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