

# ICT applications for innovative global freight systems

*How to implement a global system:  
Standards, systems, and services  
that make freight management work*

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and the International Transport Forum*

# Challenges



## Challenges

**Lack of integration** within and **ease-of-use** of co-modal transport chains

**Standards & solutions** were developed to support these issues (**Freightwise, Smart-CM / Integrity, Euridice**)

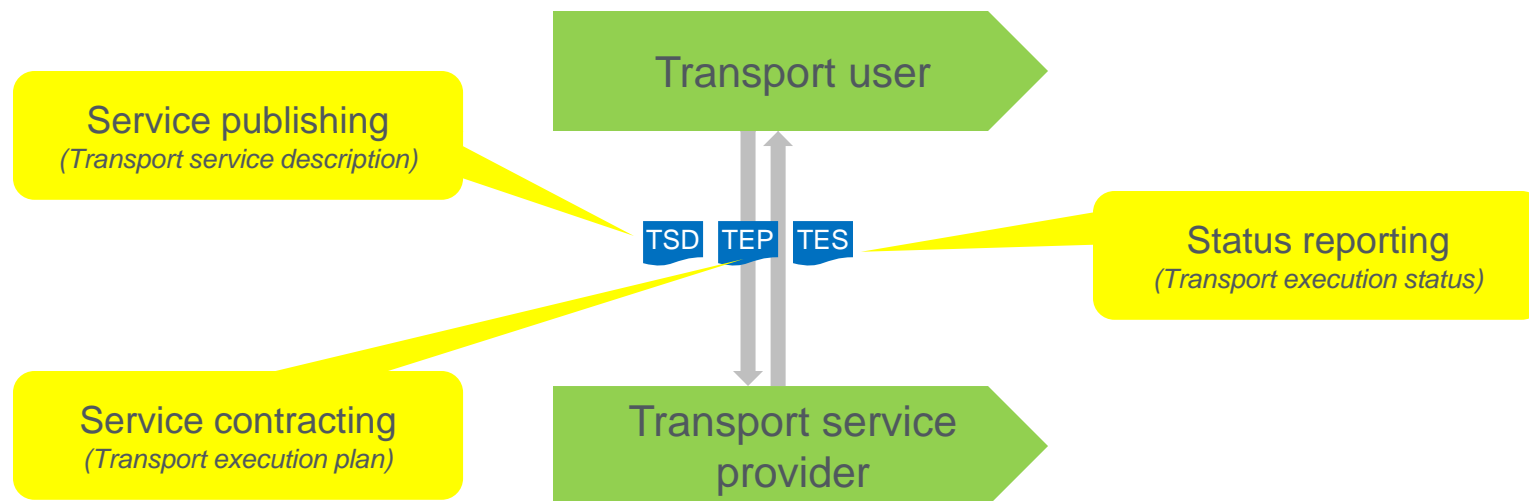
EU wide & worldwide deployment of such measures poses new challenges:

- 1) **Decentralization**
- 2) **Transparency**
- 3) **Interoperability**

# Standards



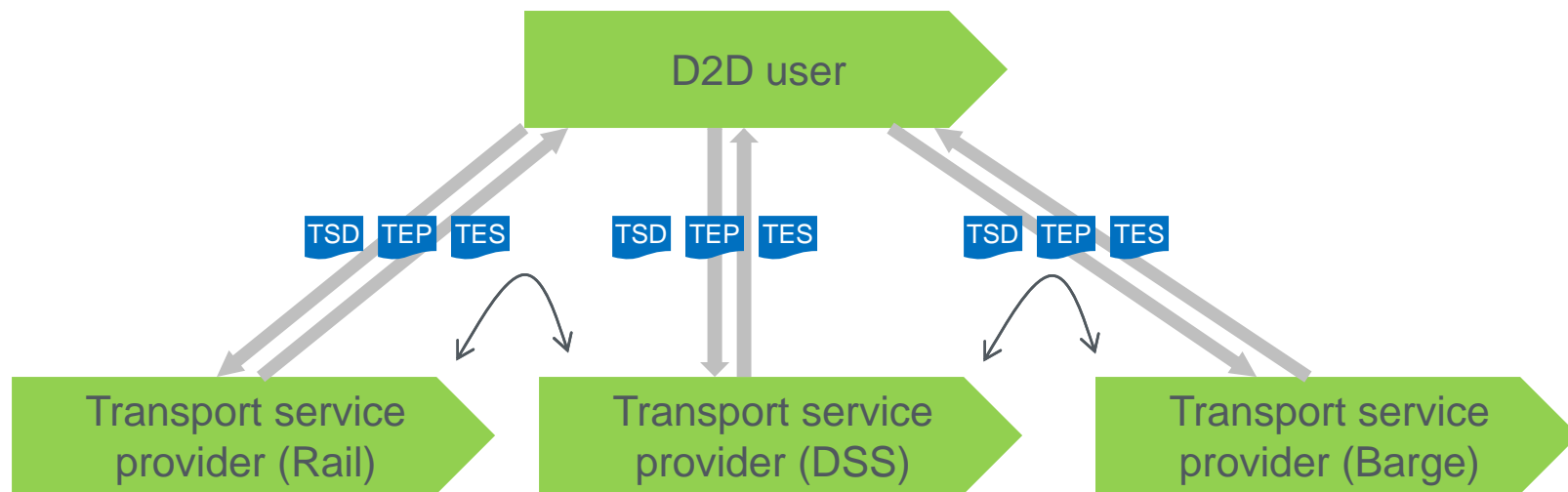
# Freightwise transport service concept: Separate between service and operational aspects



*From a standard container to a standard service!*



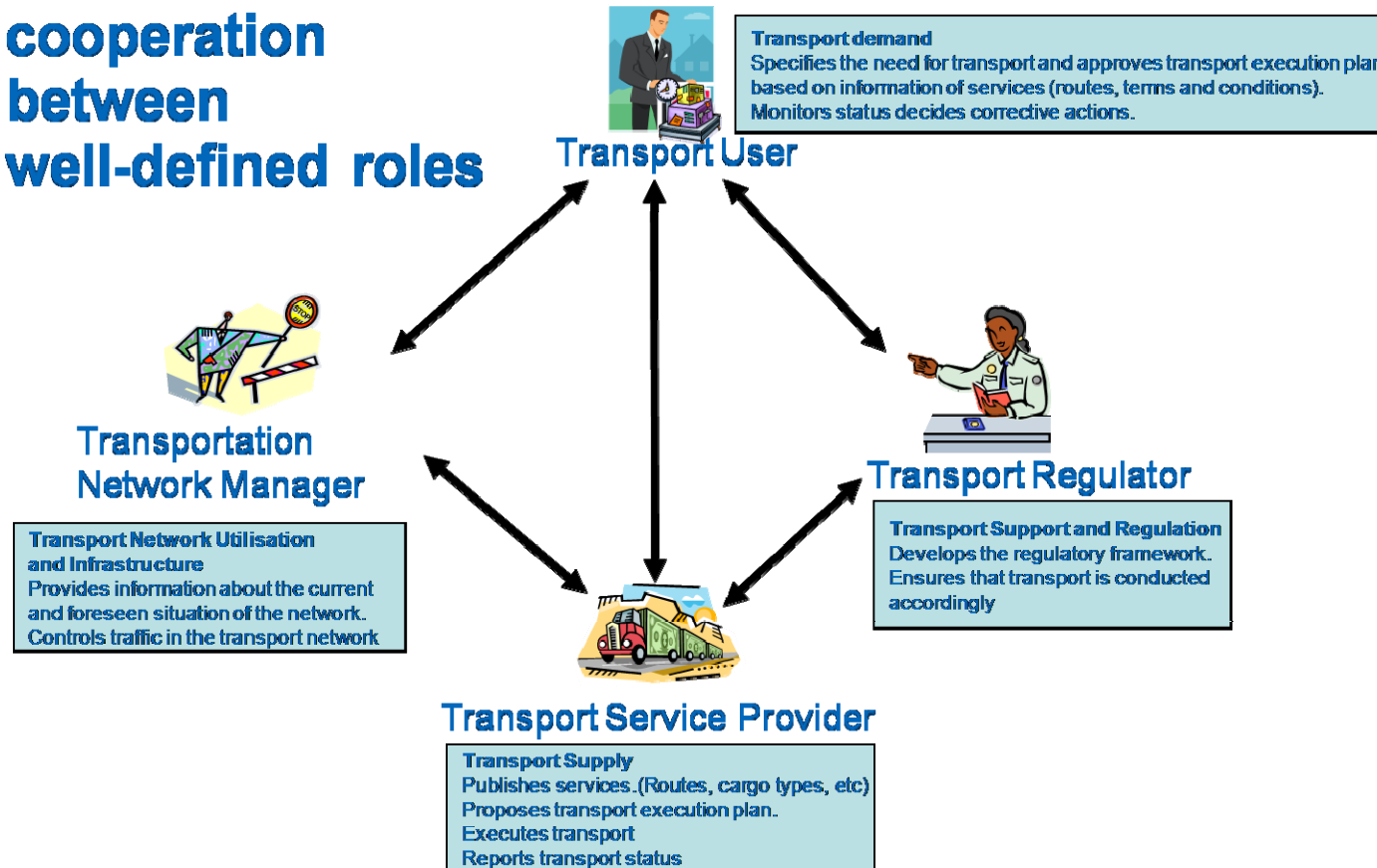
# Freightwise services versus D2D workflow



# Freightwise Framework (FWF) Freightwise roles

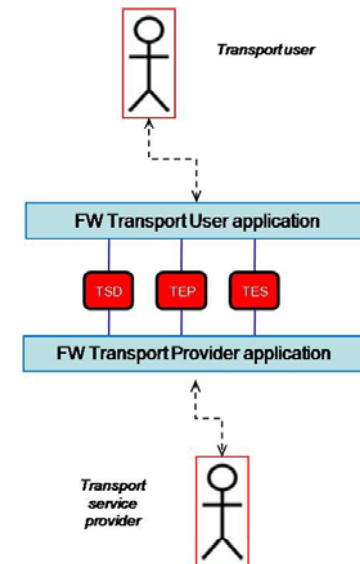
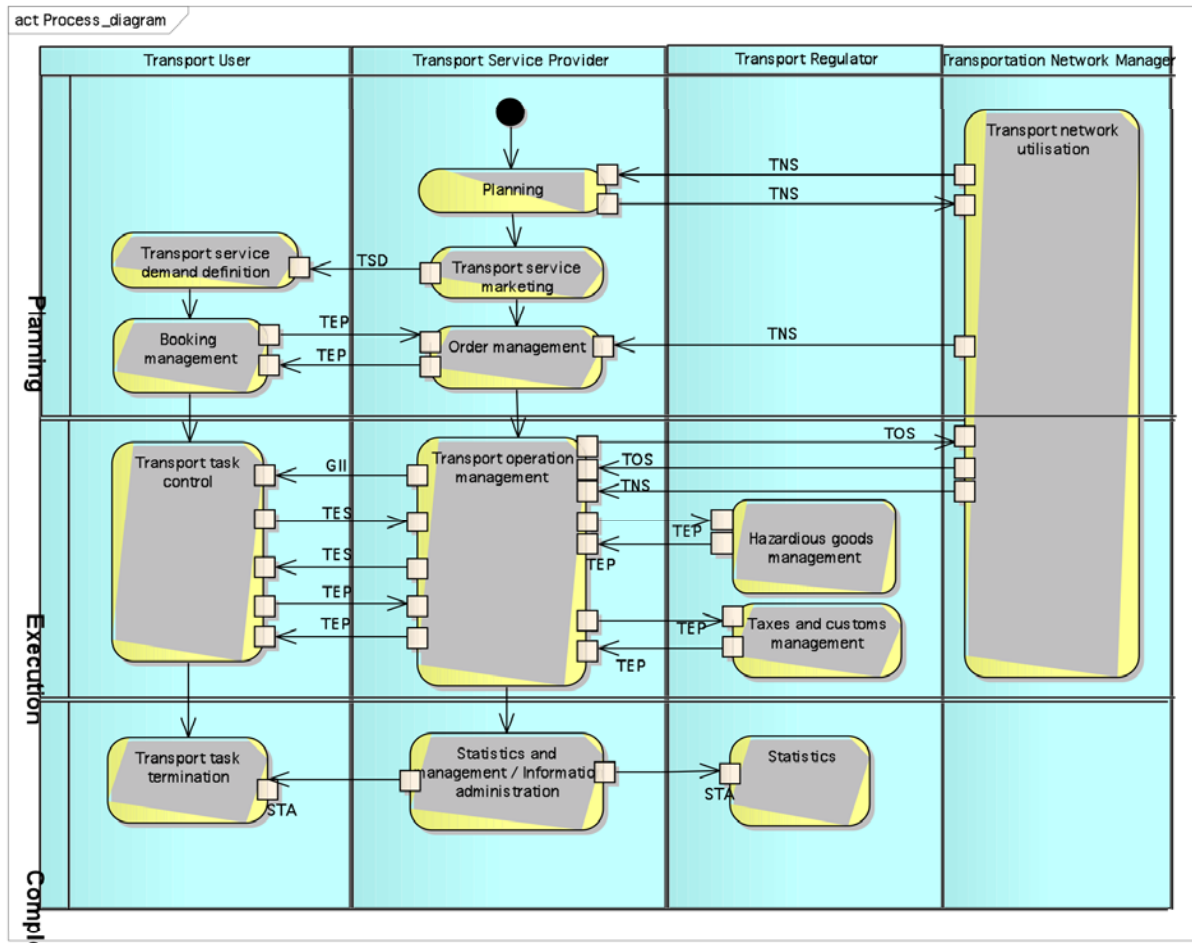


**Efficient cooperation between well-defined roles**

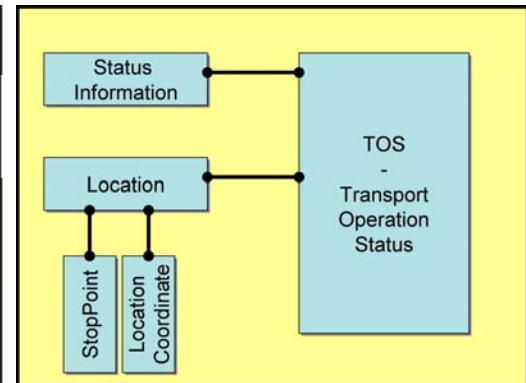
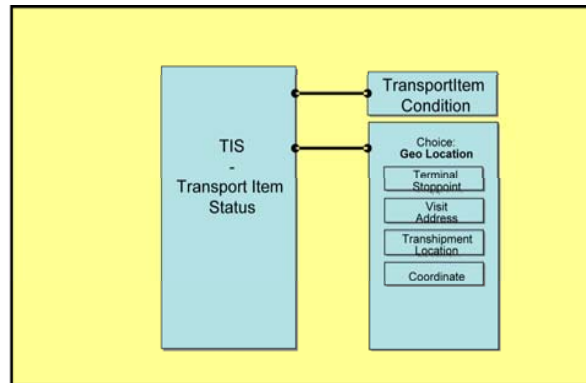
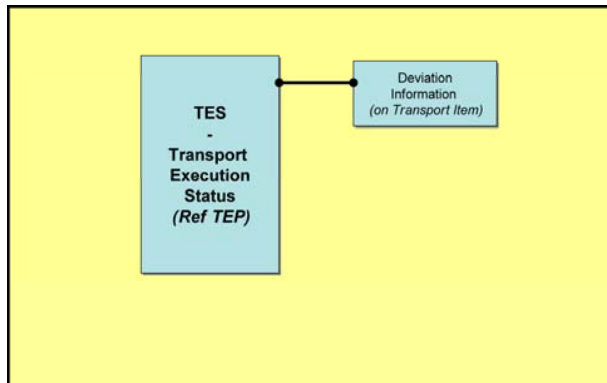
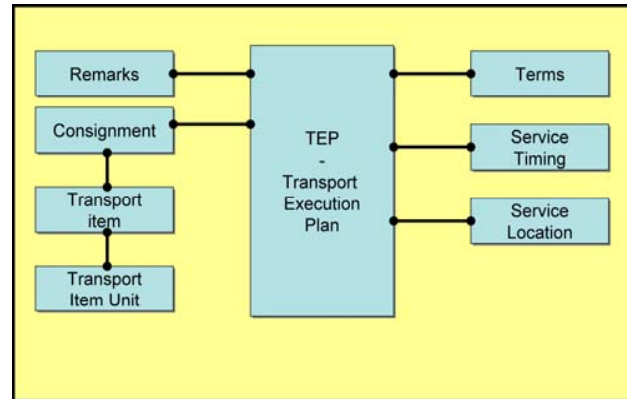
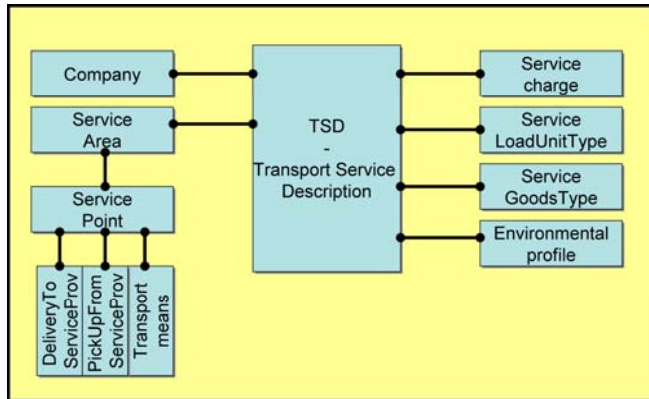


# Freightwise process model

Standardize data exchange, not systems



# Freightwise message information model



(Additional information package: Goods Item Itinerary)



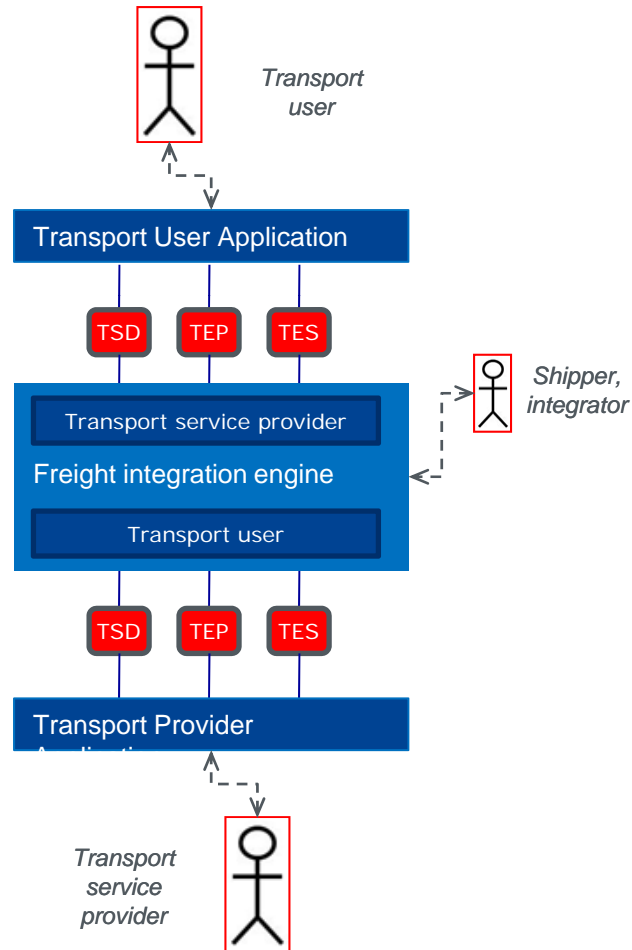
# Freightwise Framework (FWF) Freightwise website & conference



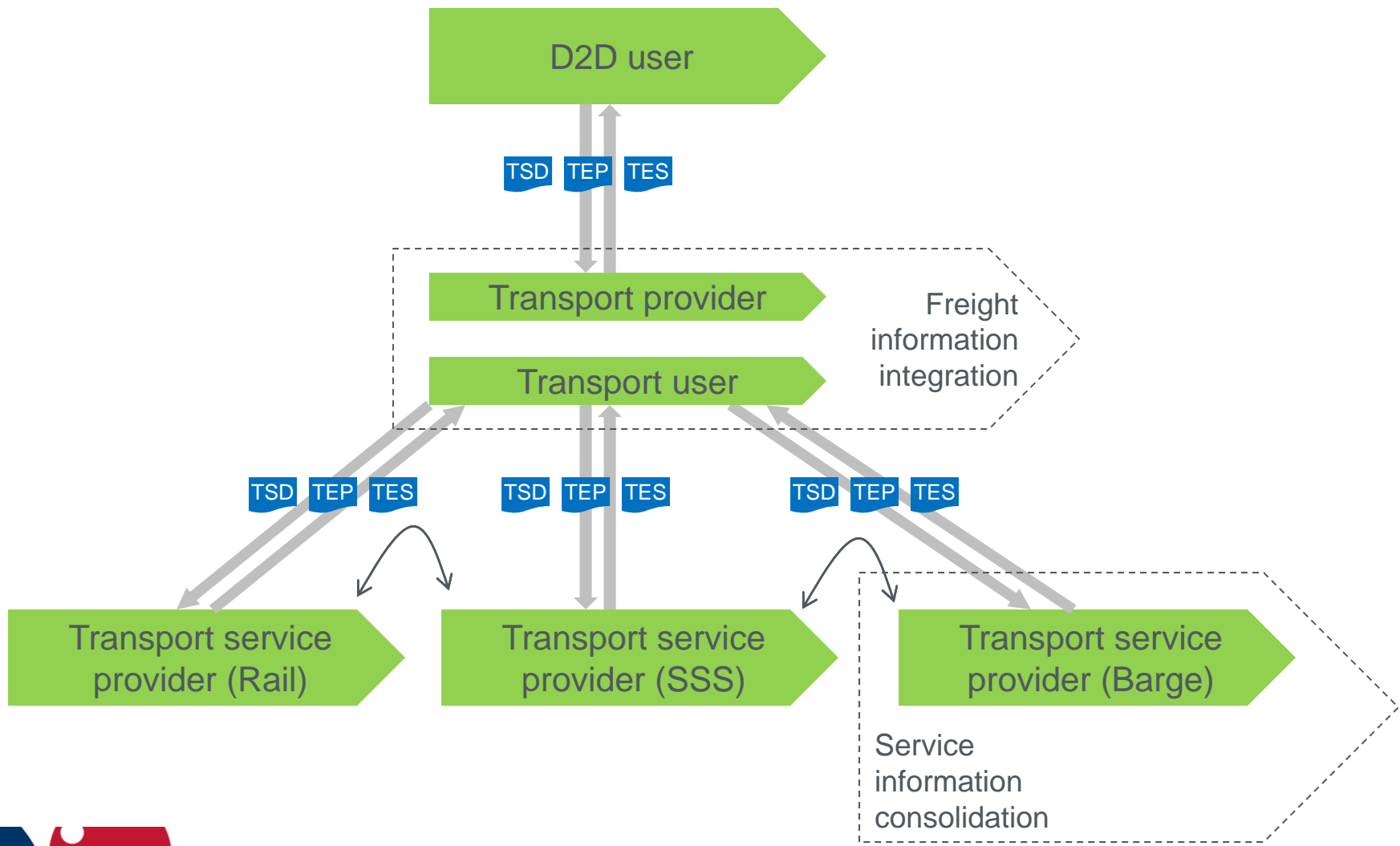
# Systems & services



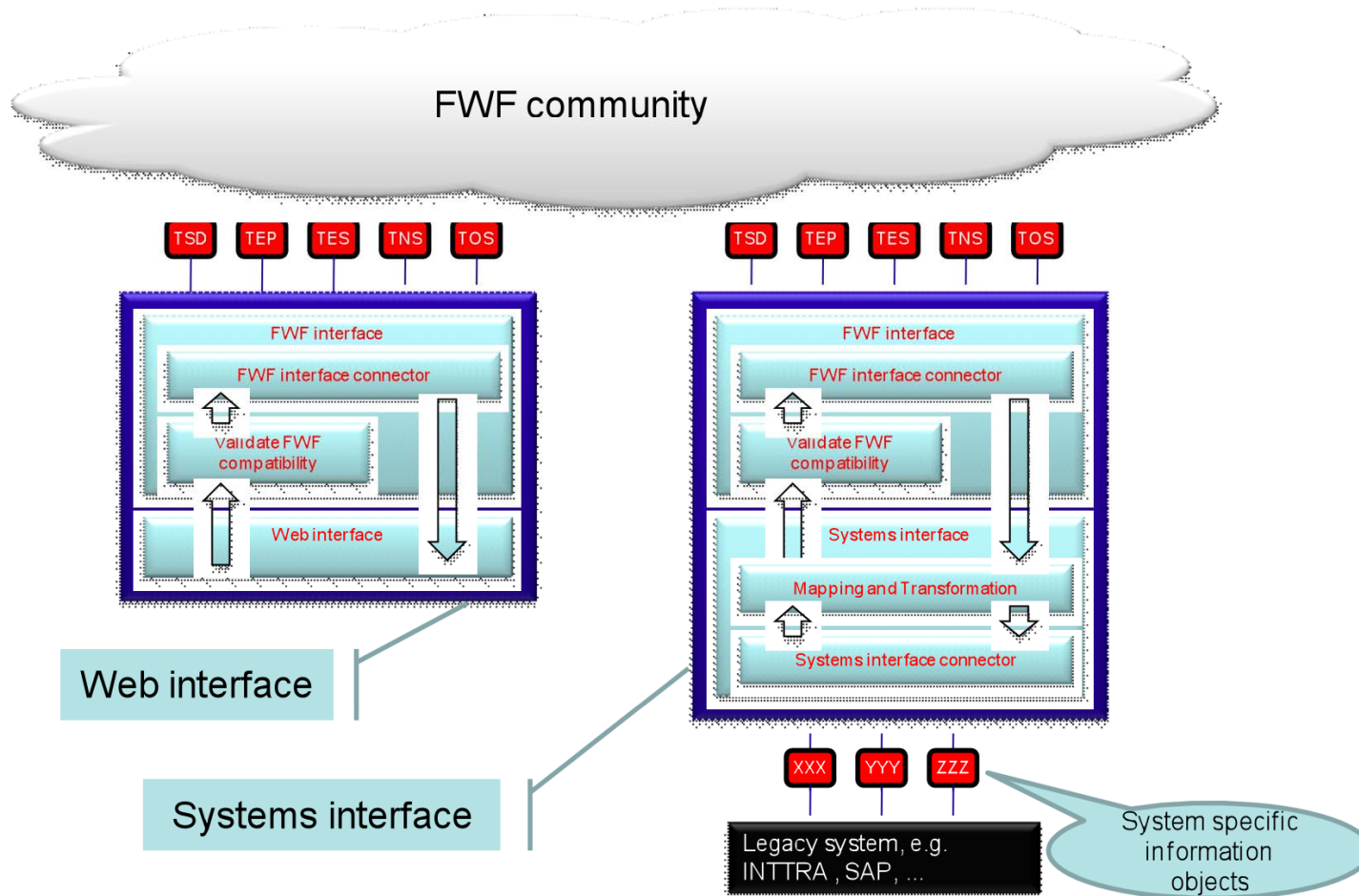
# Freightwise application model



# Single access points on freight & service information



# Interoperability services



# Examples

## Flanders business case



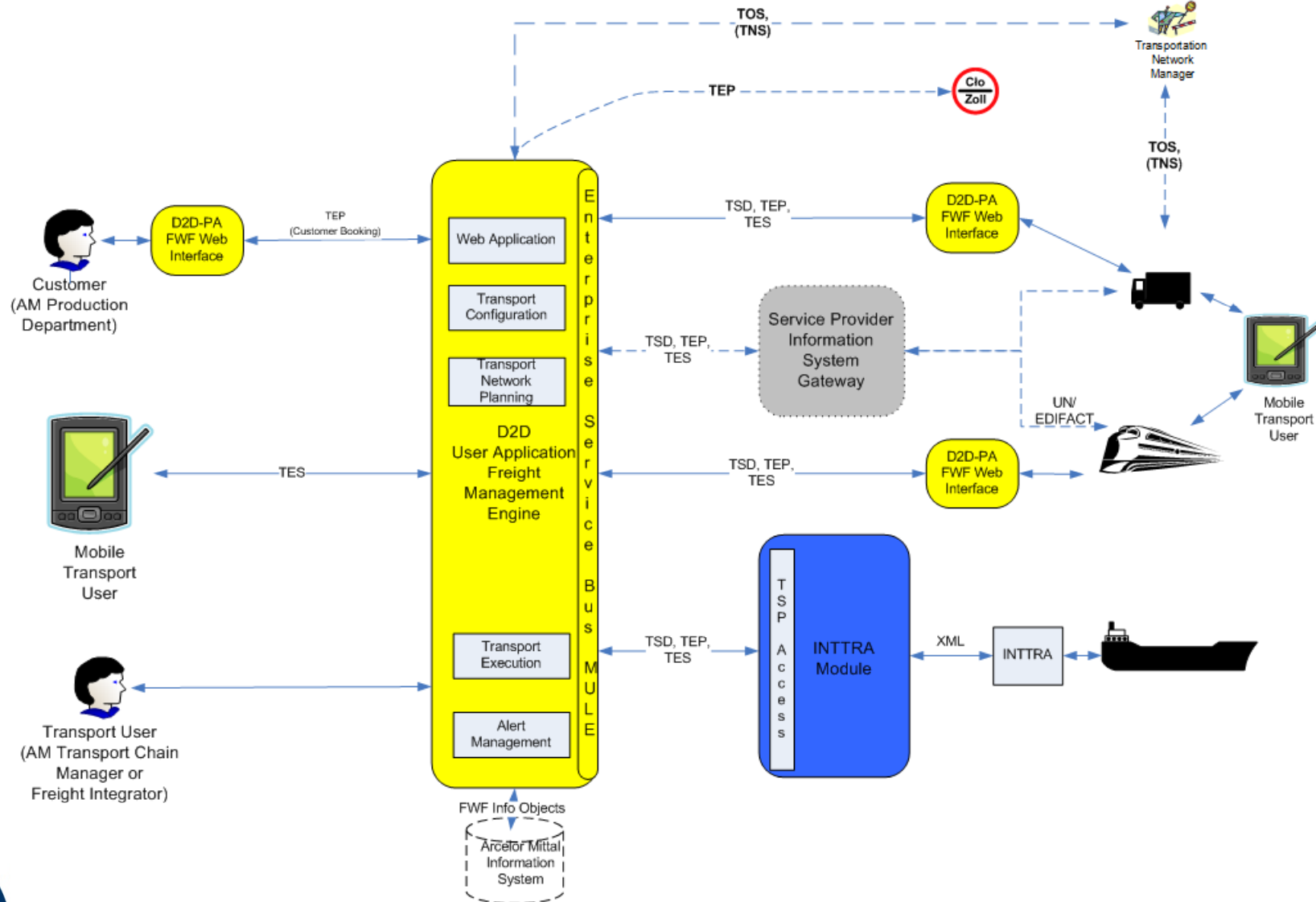
- The Flemish Government has selected Logit Systems to implement the visibility layer for the Flemish e-Logistics Platform (VeLP), a logistics visibility and customs facilitation platform for containerized transport over secured trade lanes (STL)
- Pilots executed from Brazil and South-Africa to the European distribution centers of Toyota and Scania in Flanders.

The screenshot shows the "Trip View" interface of the VeLP system. At the top, there is a navigation bar with tabs for "Container", "Trips", "Services", "Transport Lanes", "Administration", and "Logout: 'wagner'". Below the navigation bar, the "Trip View" section displays a table with columns for "Integrity", "Container ID", "Transport Lane", "Trip Started", and "Activation Status". The table shows a single entry with a "SAFE" integrity status, container ID "CSTLU000009", transport lane "SCABRA001", and a trip start time of "13 Sep 2009 07:00 GMT". Below the table, there are several icons representing different stages of the trip, including "Bas Remover de Caron", "Basen", "Antwerpen", and "Sittardus". A "Terminal services in Antwerpen" pop-up window is visible, listing services such as "CIS World Container Terminal Discharge", "Customs Control decision", "Planning", and "Customs Inspection". A "Cargo Information" pop-up window is also present, showing details for container ID "CSTLU000009", including "Actual status of container", "Door Status: closed", "Seal Condition: sealed", and "Container Trip Notified: No". The footer of the page includes the text "Flanders Institute for Logistics www.vl.be Jordaniestraat 25 - 2000 Antwerp - Belgium - VeLP, Version 2.2 - 2009-08-31 16:53".

The screenshot shows the "Container Status - Map" interface of the VeLP system. At the top, there is a navigation bar with tabs for "Container", "Trips", "Services", "Transport Lanes", "Administration", and "Logout: 'wagner'". Below the navigation bar, the "Container Status - Map" section displays a table with columns for "Integrity", "Container ID", "Transport Lane", "Trip Started", and "Activation Status". The table shows a single entry with a "SAFE" integrity status, container ID "CSTLU000009", transport lane "SCABRA001", and a trip start time of "13 Sep 2009 07:00 GMT". Below the table, there is a map showing the location of the container. A pop-up window is visible over the map, displaying details for container ID "CSTLU000009", including "Actual status of container", "Door Status: closed", "Seal Condition: sealed", and "Container Trip Notified: No". The footer of the page includes the text "Flanders Institute for Logistics www.vl.be Jordaniestraat 25 - 2000 Antwerp - Belgium - VeLP, Version 2.2 - 2009-08-31 16:53".



# Systems ArcelorMittal business case



Systems

## Procter & Gamble business case



View demo



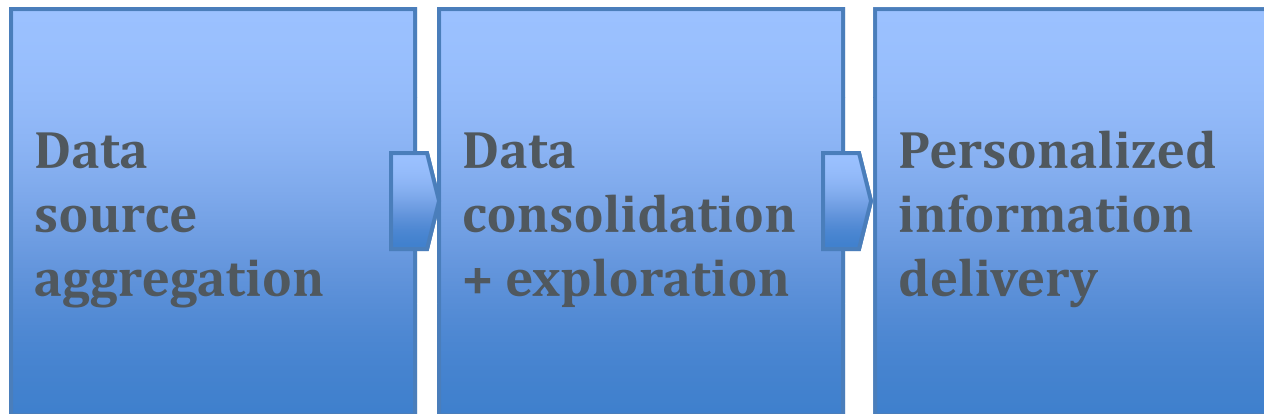
# Scenario

Single access points on freight & service information



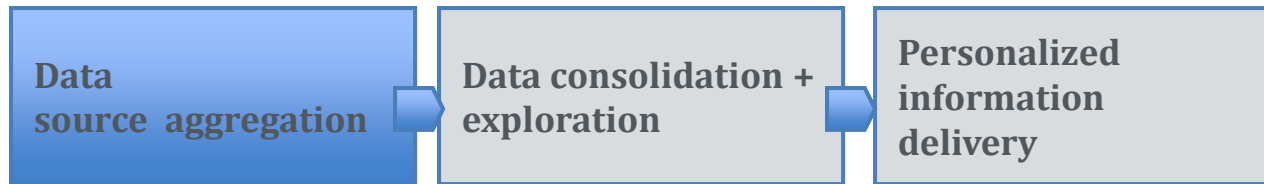
Scenario

## Single access point on freight & service information



Scenario

## Single access point on freight & service information



### *Data sourcing & aggregation*

*Unit generated information*

Load unit position/status

*Generic information*

Carrier information  
Carrier websites  
Load/discharge reports for sea terminals  
Vessel & barge tracking

*Customer generated information*

Web based reporting  
Mobile reporting  
Stuffing/stripping reports  
Commercial release  
Pick-up & delivery reports  
Preferred suppliers

*Hub generated information*

Load/discharge reports for inland terminals  
Customs release  
Traffic information (barge, VTMISS)  
Ship reporting  
Published services (maritime, hinterland)



Scenario

## Single access point on freight & service information



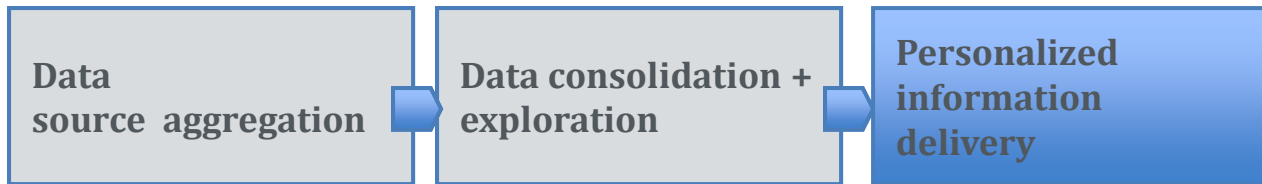
### *Data mining & intelligence*

- Plan end-to end processes
- Balance time, costs and footprint
- Consolidation
- Data integration
- Conflict resolution
- Impact on lead time (ETA)
- Target/actual comparison
- Cargo intrusion/damage detection
- Exception reporting
- Rescheduling
- Rerouting
- Status report archiving



Scenario

## Single access point on freight & service information



### *Personalized information delivery*

- Map view
- Chain visualization
- Operator/location view
- Exception reporting
- Event subscription
- Recovery approach
- Status report archiving
- (De)consolidation of cargo



# Policy support

To establish a soft infrastructure for co-modality

## How to support the challenges presented

### 1) Decentralization: Freightwise supports a decentralized approach

- Support initiatives that can utilize Freightwise standards and solutions:

A) On specific corridors: Secure trade lanes (global), Motorways of the sea (intra EU)

B) Main ports and inland logistics hubs, including their hinterland and the corridors they support

C) Mode specific platforms for publishing service offering

D) Individual logistics integrators organizing their internal network

### 2) Transparency:

- Use Freightwise standards to publish an up-to-date service offering
- Transport service providers to include environment footprint into their service specification
- Support a marketplace (single) access points to freight and service information, aggregating various data sources in real-time and delivering information as a service
- Specialized providers of application service:

A) Benchmarking/auditing quality parameters of services

B) Optimization on how best to combine services in chains and networks

C) Orchestration services to realize revenue sharing between actors in chains and networks

### 3) Interoperability:

- Support a marketplace for Freightwise compliant connectors to existing systems
- Support the further development of Freightwise within e-Maritime, e-Customs and UBL ([UBL2.1](#))





## How to safeguard neutrality

There will be not be a single system.

Each decides himself whether and what he wants to publish

Each is required to keep his data up-to-date

Each makes his own choice to whom he wants to publish information

