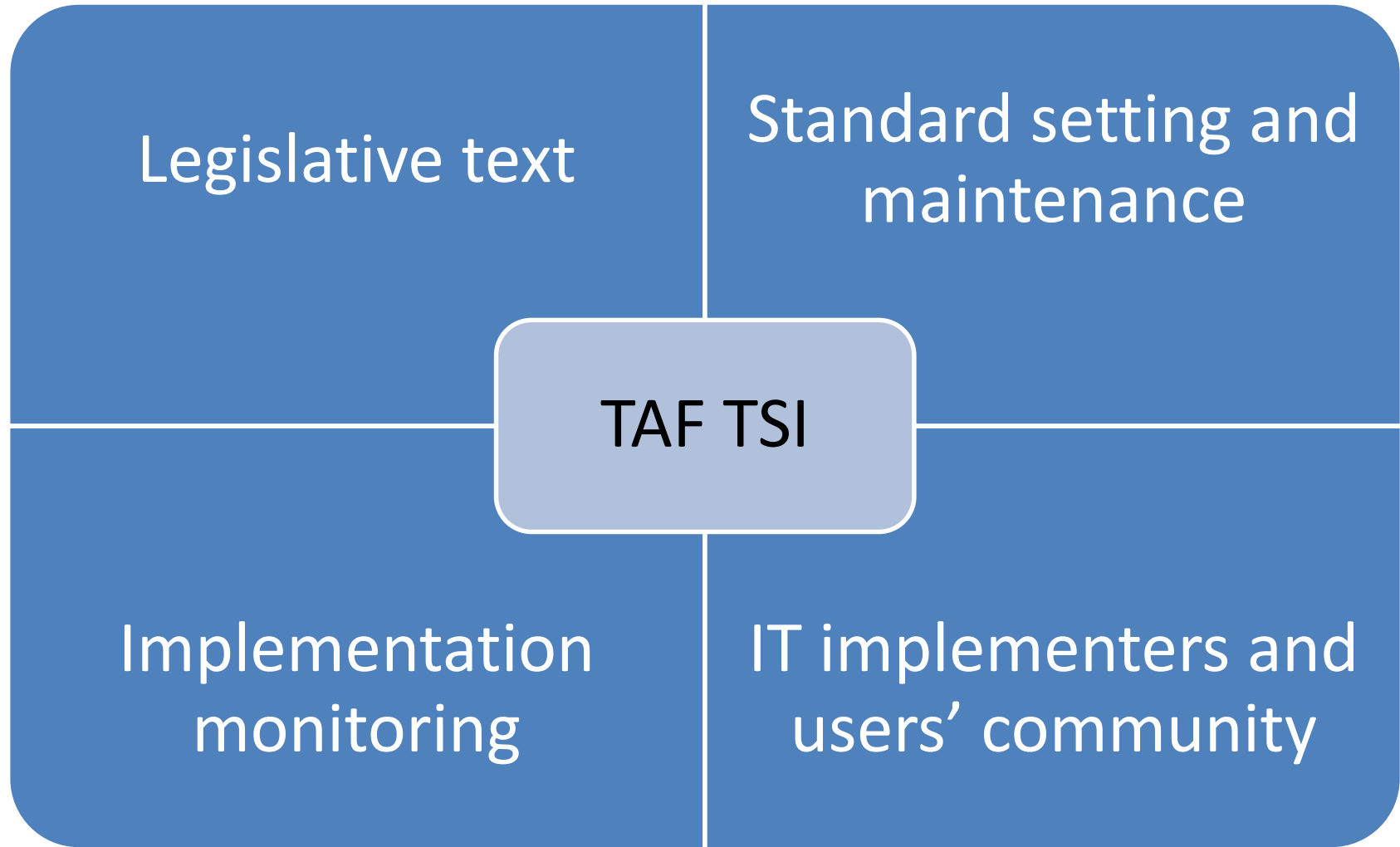


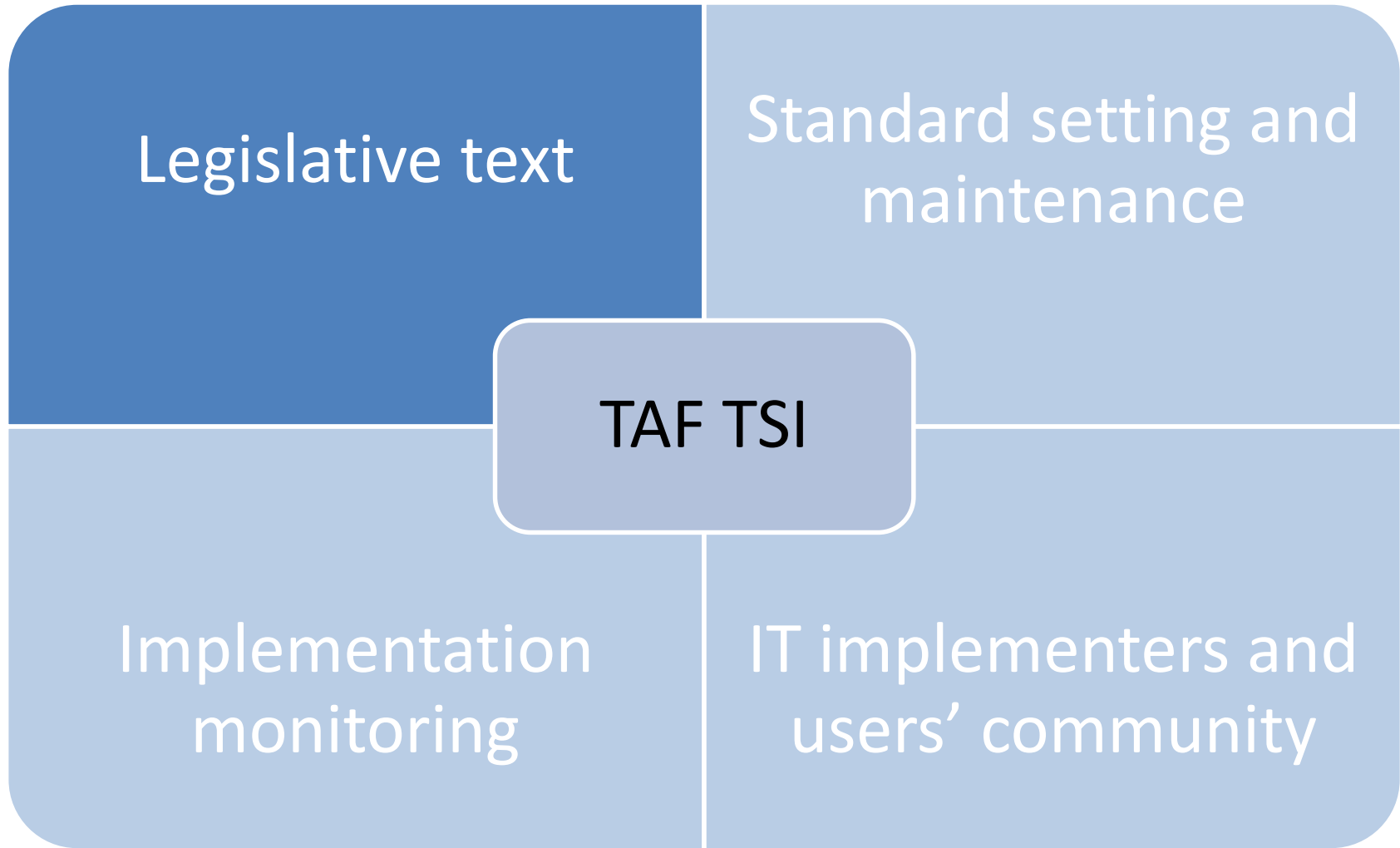
Telematic Applications for Freight (TAF TSI) and Link to (EL)ETA

ELETA Project External Advisory Board

Frankfurt, 22 February 2018







European Union Agency for Railways

« to make the railway system work better for society »

Strategic Priorities

- 1 Regulatory framework harmonized for Safety
- 2 Simplified Vehicle Authorisation
- 3 Only 1 Train Control System in EU
- 4 Simplified Access for Customers

Agency Actions

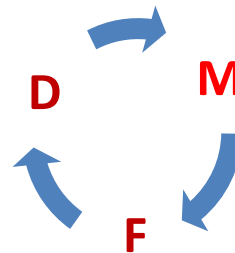
(against Annual Programming Document)

Development

Interoperability Rules *
Common Safety Methods
Databases and Registers

Monitoring / Review

Facilitate / Dissemination



Clients / Stakeholders

EC + DG MOVE
Member States/ RISC
European Parliament

Railway Undertakings (RU)
Infrastructure Managers (IM)
Wagon Keepers (WK)
Manufacturers

National Safety Authorities
National Investigation Bodies

* TSI

COMMISSION REGULATION (EU) No 1305/2014 of 11 December 2014 on the technical specification for interoperability relating to the telematics applications for freight subsystem of the rail system in the European Union and repealing the Regulation (EC) No 62/2006



TAF TSI

Railway Undertaking - Infrastructure Manager communication

Railway Undertaking:

- Path Request
- Train Preparation
- Train Running Forecast
- Service Disruption Information
- Train Location
- Interchange Reporting
- Data Exchange for Quality Improvement

Infrastr. Manager:

- Path Request
- Train Preparation
- Train Running Forecast
- Service Disruption Information
- Train Location
- Interchange Reporting
- Data Exchange for Quality Improvement

Railway Undertaking function

Same as "Railway
Undertaking -
Infrastructure
Manager
communication"

+

- Consignment Note data
- Shipment Estimated Time of Interchange / Arrival
- Wagon movement

Wagon keeper function

Rolling Stock
Reference
Databases

Common
Compo-
nents for
TAF TSI

Imple-
men-
tation

Moni-
toring



TAF TSI process

Planning...

Operation...

After...

Consignment Note

Wagon trip plan

Path Request

Train Preparation

Train Running Forecast

Wagon Movement

Post-Trip

- Wagon loads
- Wagon release

- Price and transit times
- Wagon status and location

- Open Access
- One Stop Shop

- Train Composition
- Train ready

- Train Running and forecast
- Service Disruption

- Estimated Time of Arrival (ETA) or of Interchange (ETI)
- Wagon events

- To improve the quality and productivity

TAF TSI published on EU Journal: COMMISSION REGULATION (EU) No 1305/2014

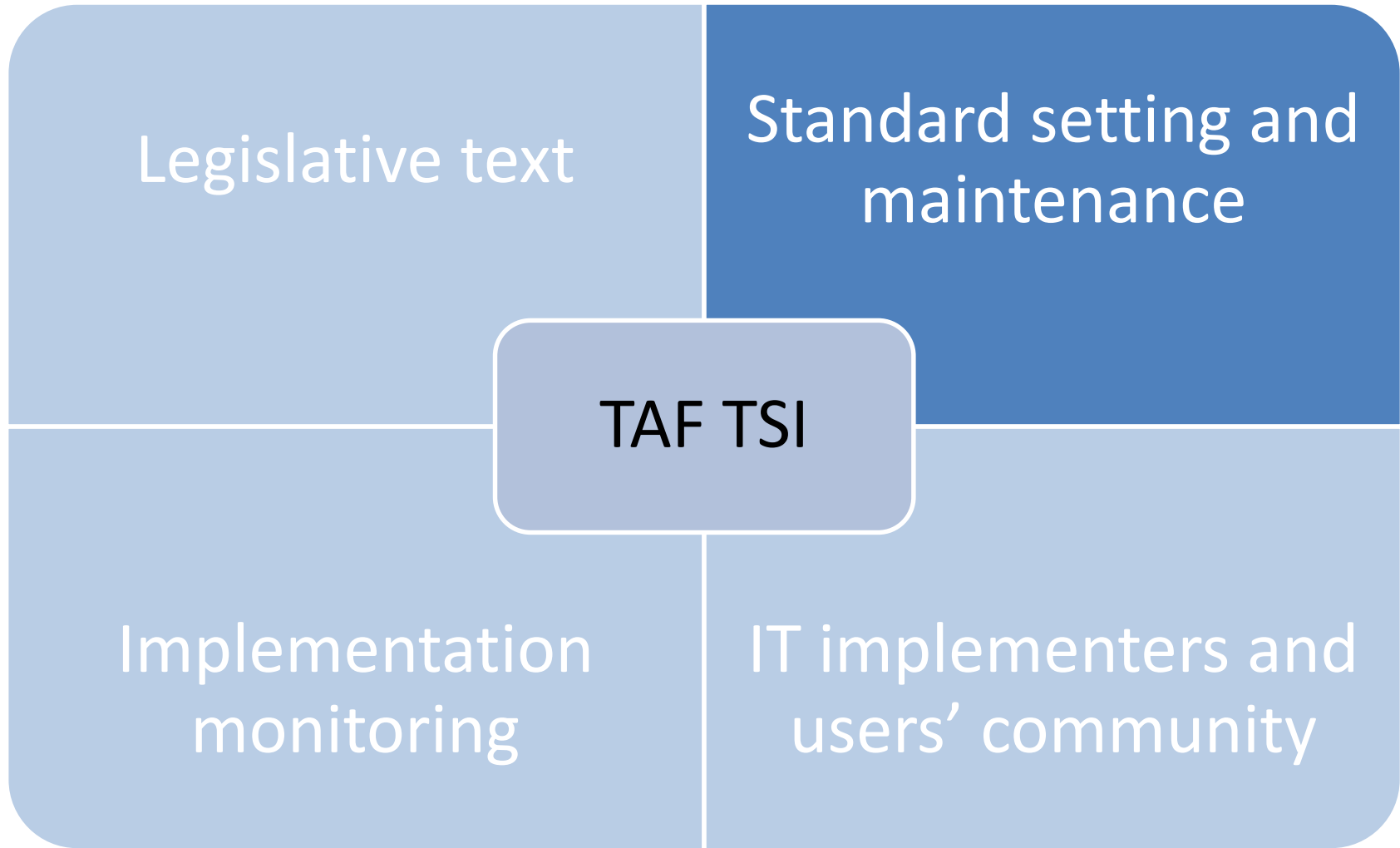
- Chapter 1.3 of TAF TSI: Infrastructure Managers and Railway Undertakings, Wagon Keepers, but also Intermodal Operators ...

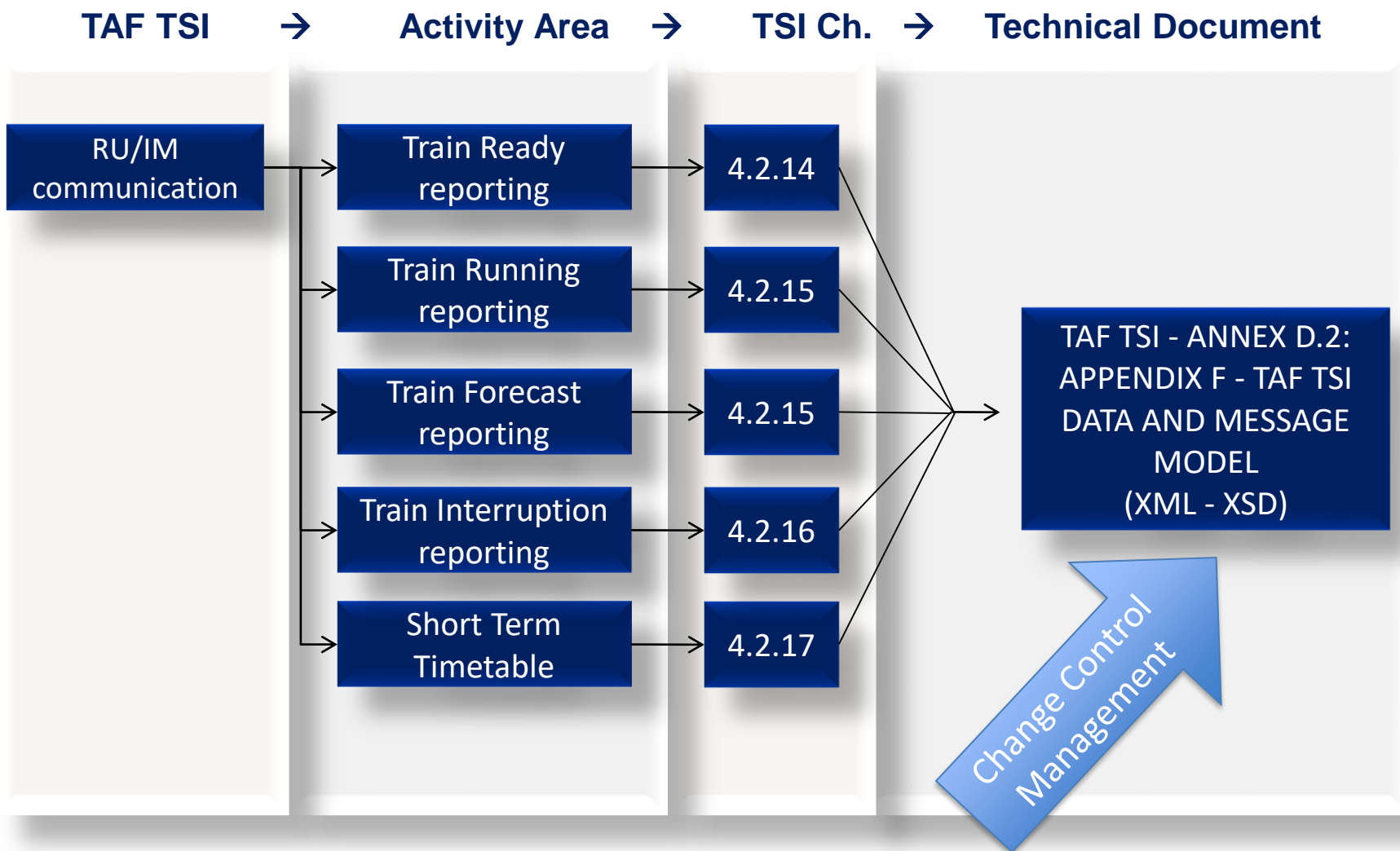


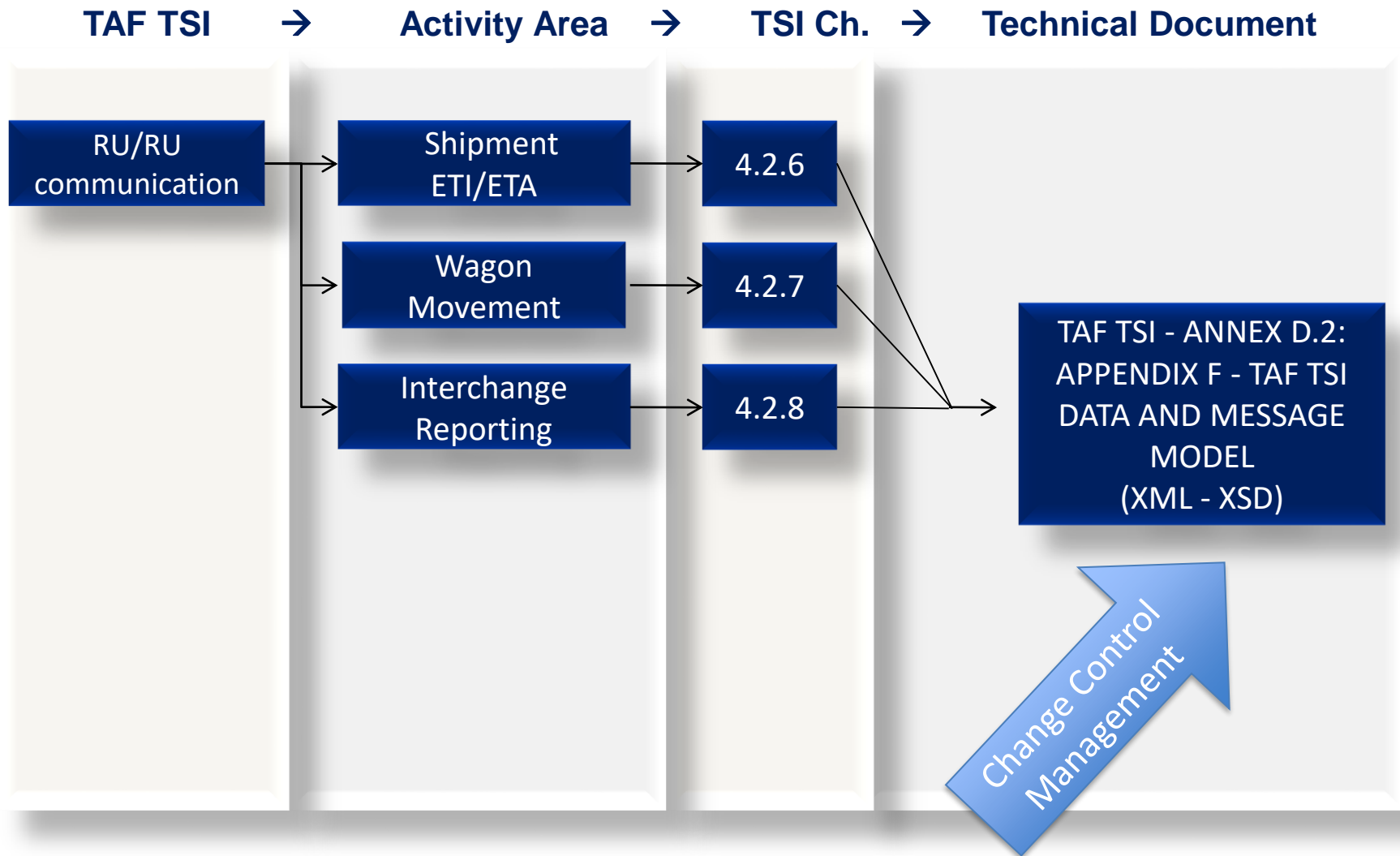
and even freight Customers (shippers, consignors of goods, forwarders etc .)

- Alleviate non-physical barriers allowing the adoption and Implementation of **inter-operable IT systems in Trade & Transport** (REBIS report).
- **Simplified Custom Procedures** with EU partners.
- Adoption of inter-connected IT systems in transit operations.
- **Development – EU Rail Freight Corridors.**
- **Open Source !**







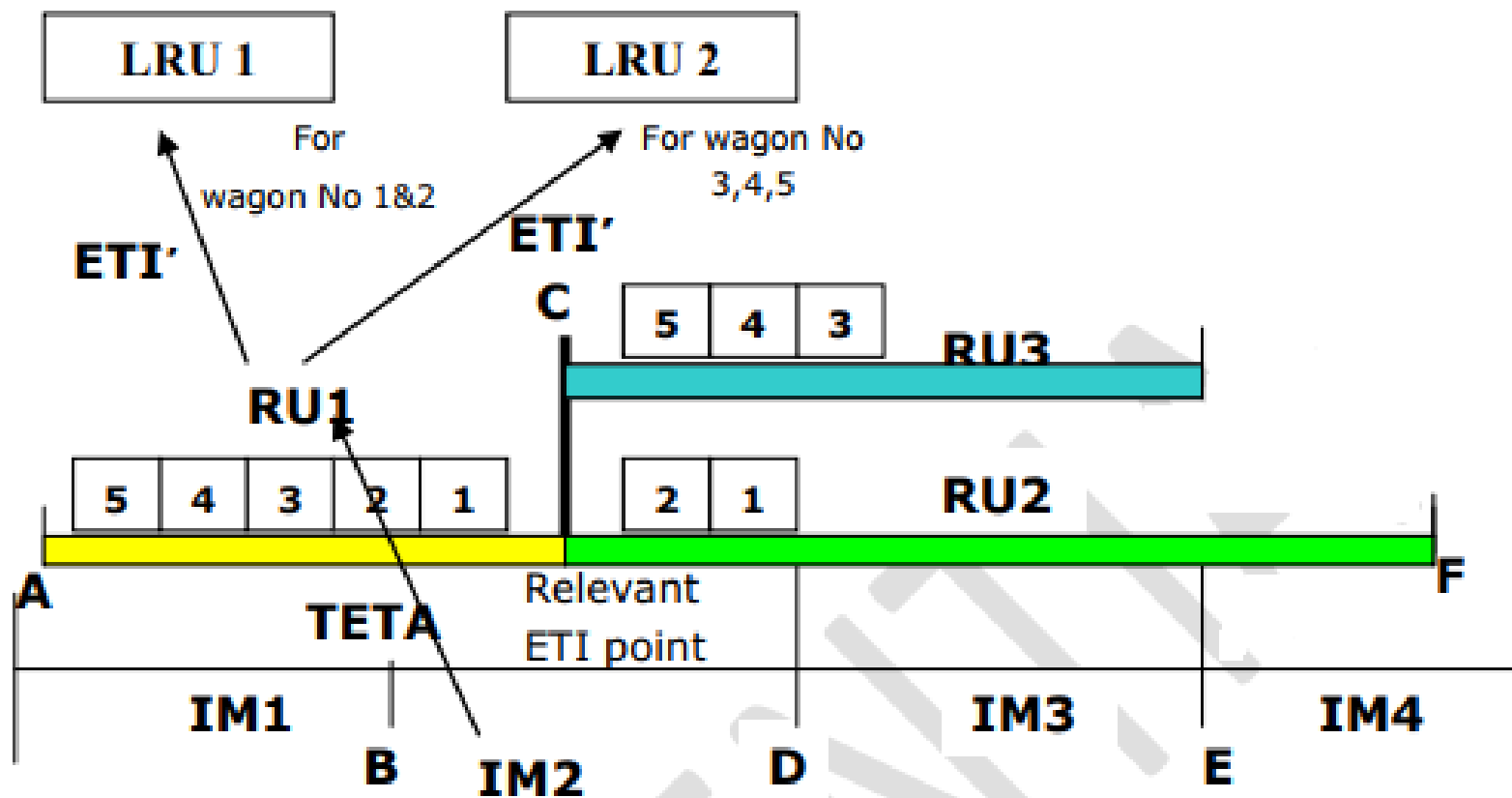


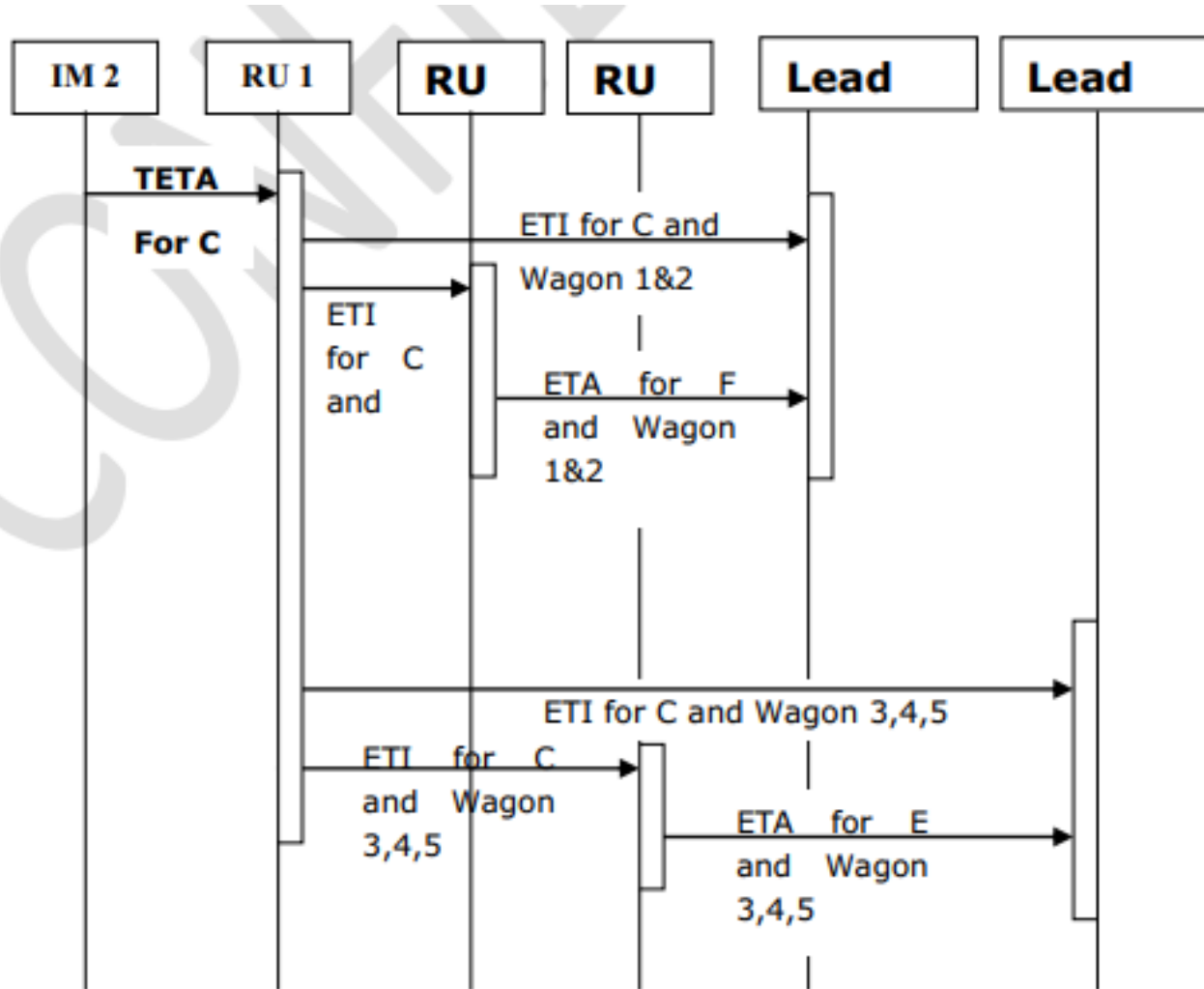
Appendix I – Technical Documents

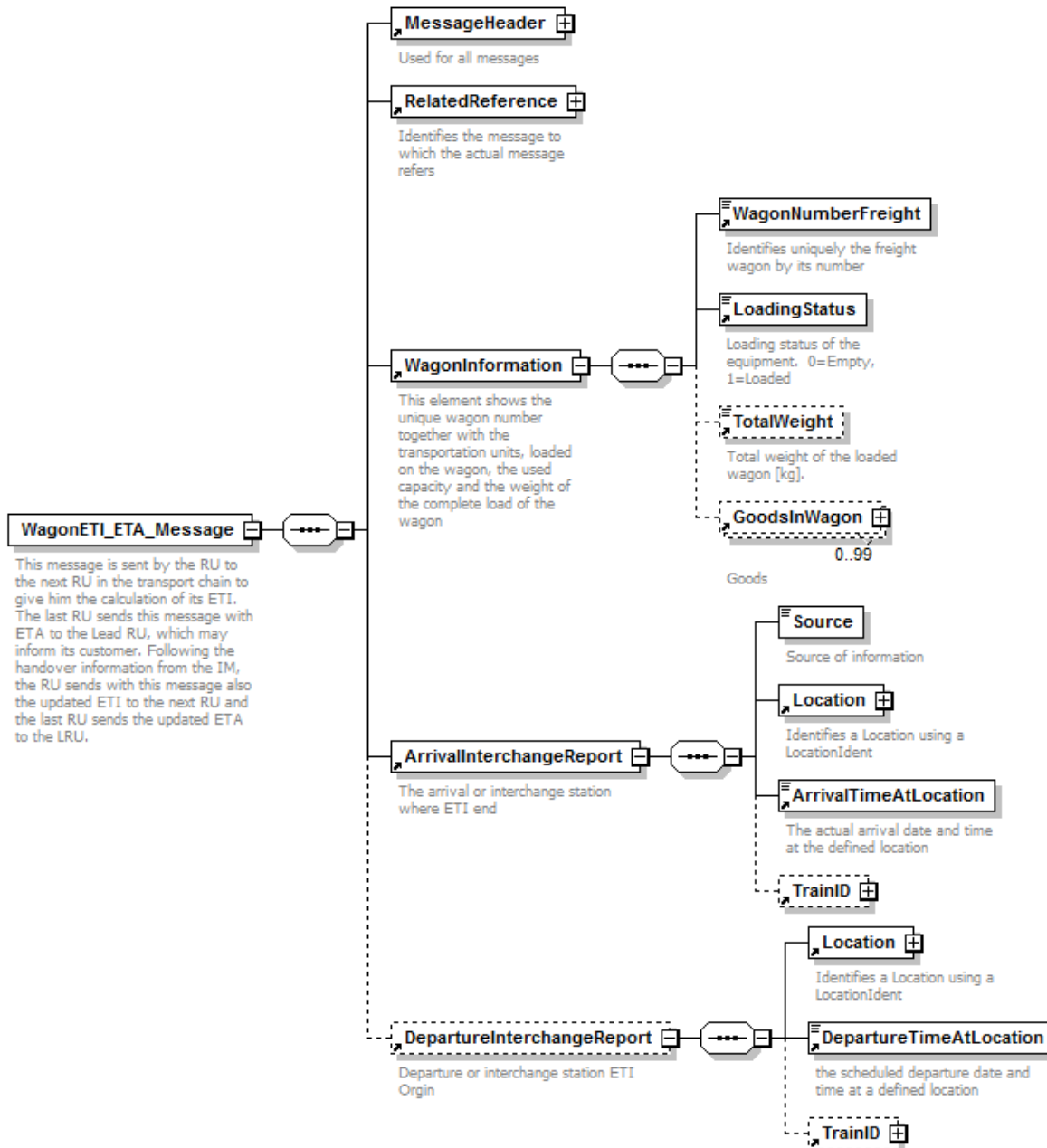
Appendix I

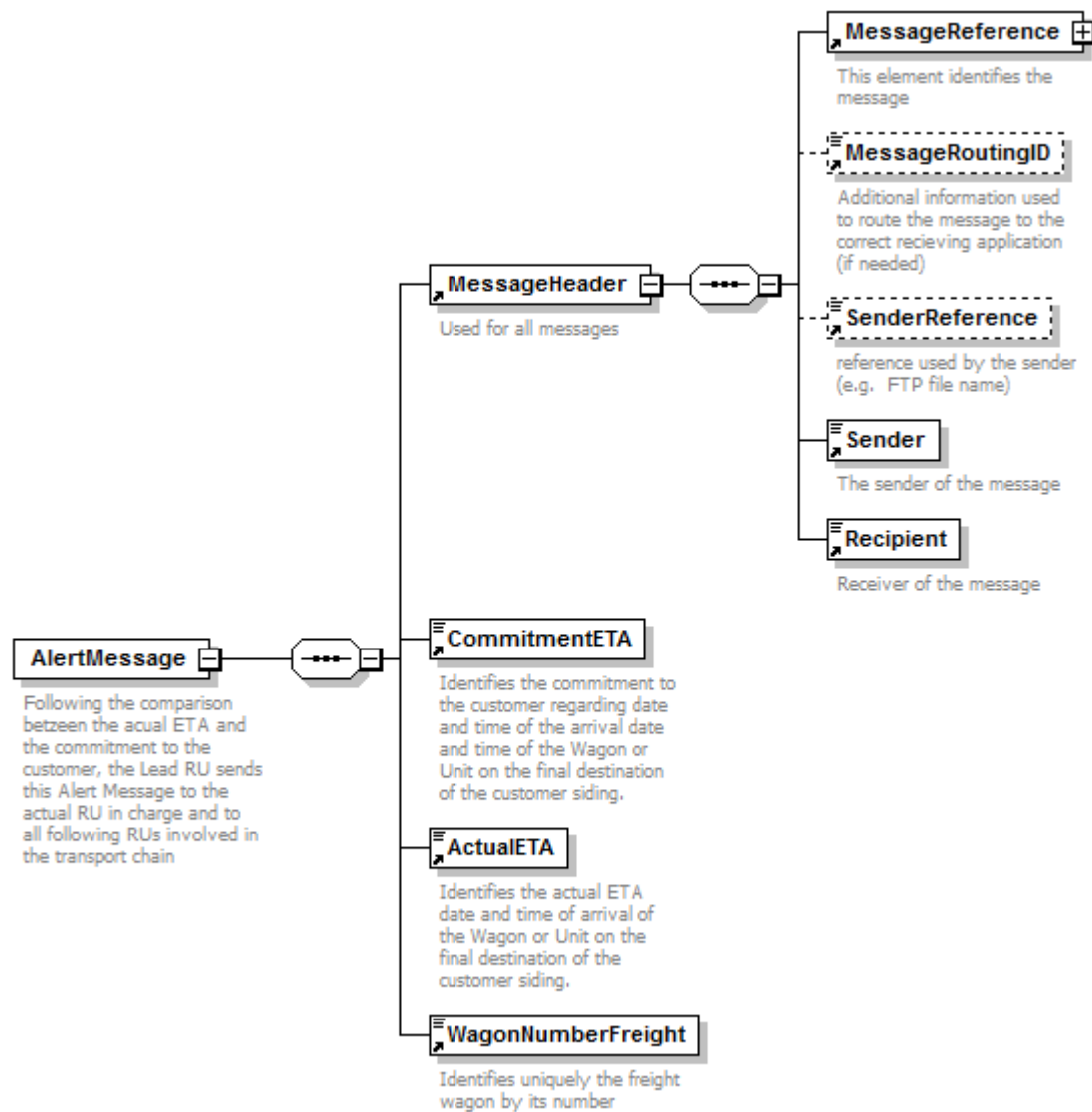
List of technical documents

No	Reference	Title	Version	Date
1	ERA-TD-100	TAF TSI — ANNEX A.5:FIGURES AND SEQUENCE DIAGRAMS OF THE TAF TSI MESSAGES	2.0	17.10.2013
2	ERA-TD-101	TAF TSI — Annex D.2: Appendix A (Wagon/ILU Trip Planning)	2.0	17.10.2013
3	ERA-TD-102	TAF TSI — Annex D.2: Appendix B — Wagon and Intermodal Unit Operating Database (WIMO)	2.0	17.10.2013
4	ERA-TD-103	TAF TSI — Annex D.2: Appendix C — Reference Files	2.0	17.10.2013
5	ERA-TD-104	TAF TSI — Annex D.2: Appendix E — Common Interface	2.0	17.10.2013
6	ERA-TD-105	TAF TSI — Annex D.2: Appendix F — TAF TSI Data and Message Model	2.0	17.10.2013

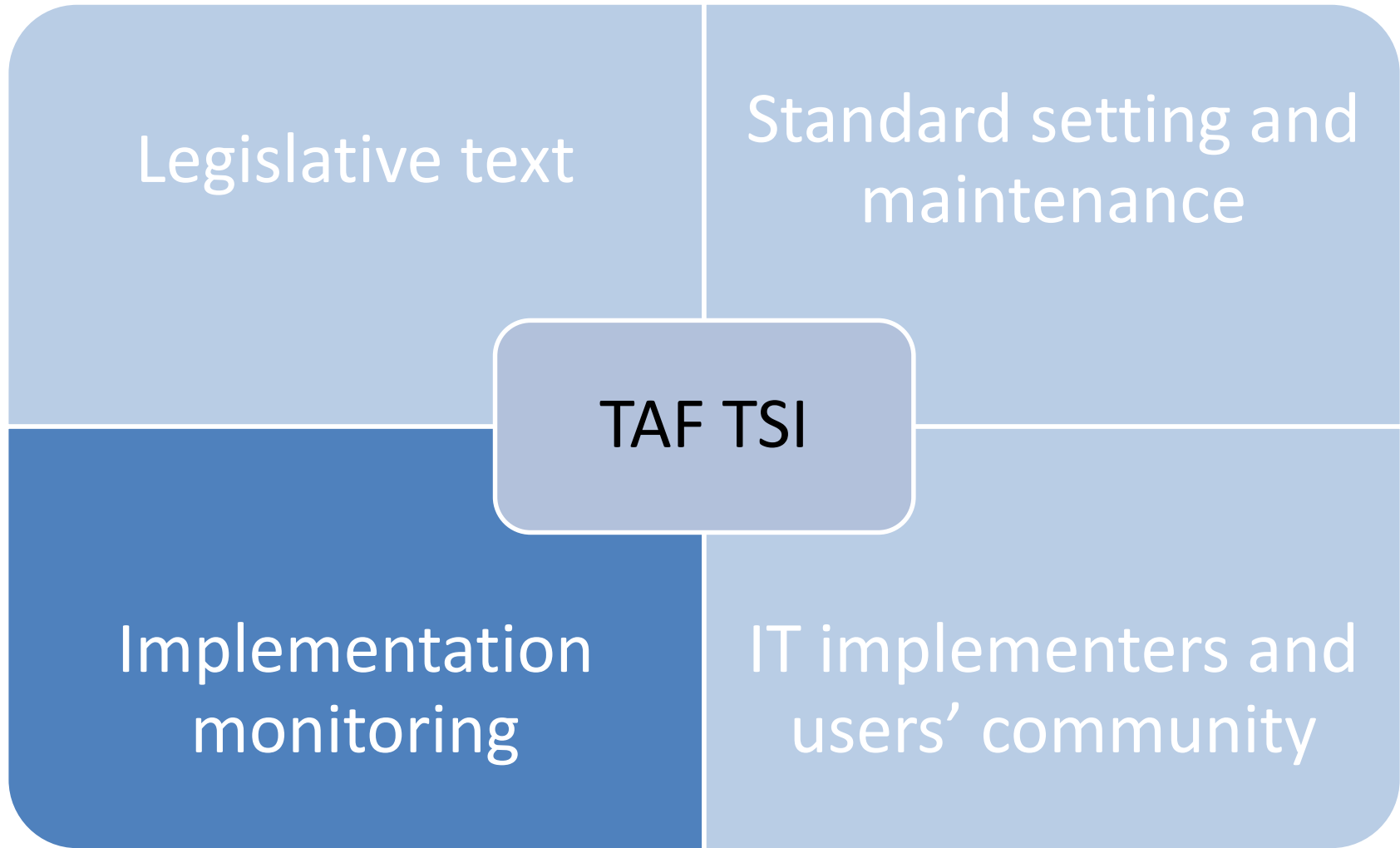








```
<?xml version="1.0" encoding="UTF-8"?>
<!--Sample XML file generated by XMLSpy v2017 sp2 (x64) (http://www.altova.com)-->
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http://www.era.europa.eu/schemes/TAFTSI/2.1" xsi:schemaLocation="http://www.era.europa.eu/schemes/TAFTSI/2.1
taf_cat_complete_baseline_2.1.xmd.xsd">
  <ns1:MessageHeader>
    <ns1:MessageReference>
      <ns1:MessageType>5007</ns1:MessageType>
      <ns1:MessageTypeVersion>2.1</ns1:MessageTypeVersion>
      <ns1:MessageIdentifier>12345</ns1:MessageIdentifier>
      <ns1:MessageDateTime>2017-12-17T09:30:47Z</ns1:MessageDateTime>
    </ns1:MessageReference>
    <ns1:MessageRoutingID>01</ns1:MessageRoutingID>
    <ns1:SenderReference>ftp://eleta.com/upload</ns1:SenderReference>
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    <ns1:Recipient ns1:CI_InstanceNumber="1">1084</ns1:Recipient>
  </ns1:MessageHeader>
  <ns1:CommitmentETA>2017-12-17T11:35:00Z</ns1:CommitmentETA>
  <ns1:ActualETA>2017-12-17T12:45:00Z</ns1:ActualETA>
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Expected benefits for Railway Companies:

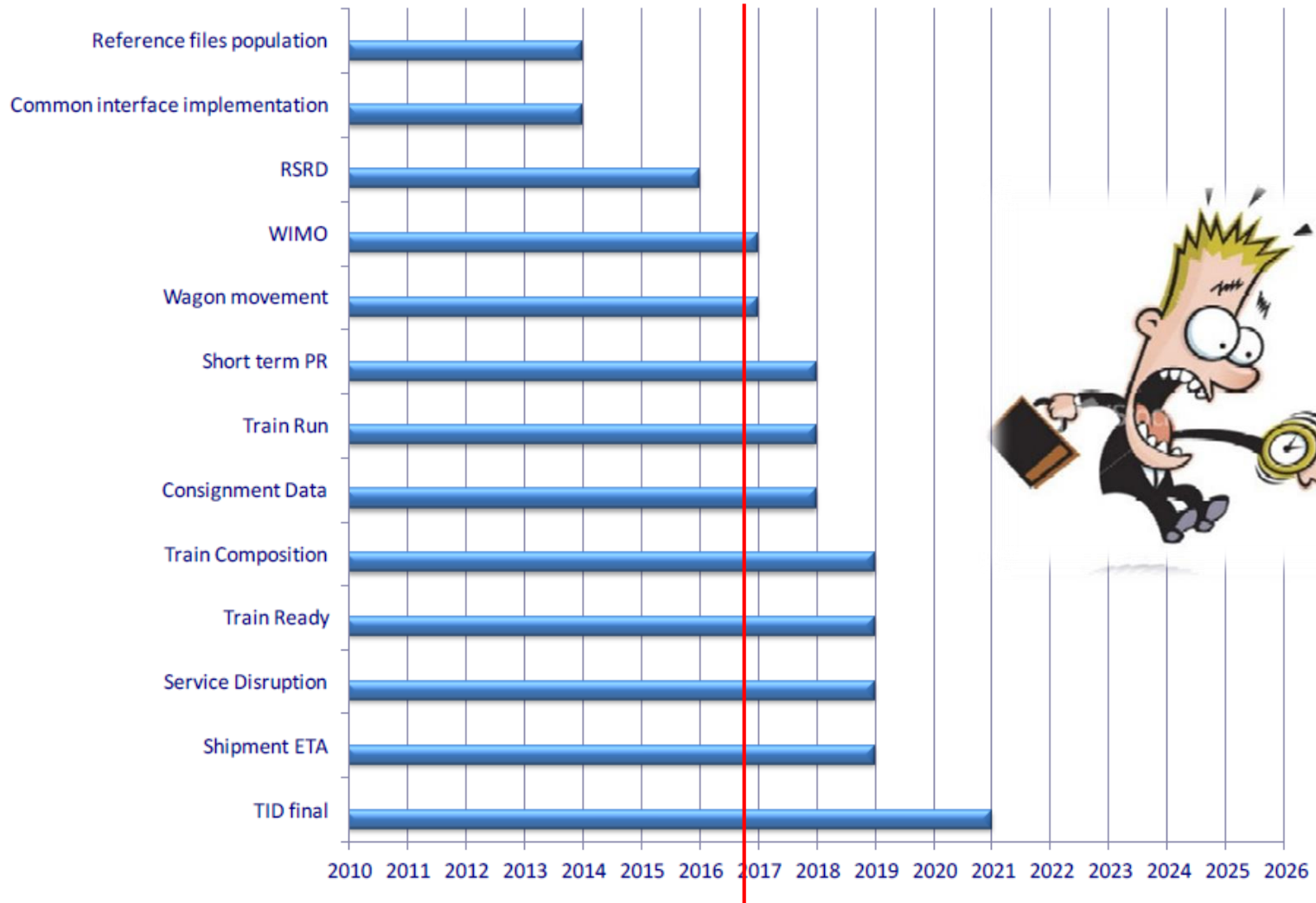
- 1 single communication system for all business cases an operator can find -> **Economies of Scale.**
- Improved communication between RU and IM (in terms of quality and speed) -> **Process Coordination.**
- 1 single standardized way of working, providing cost savings through better management quality system; establishment of homogeneous procedures; **Reduction in system maintenance costs.**
- **Standardized and Interoperable** communication interfaces.
- Participants can join a **strong and committed TAF Users' Community.**

Regarding the value chain passengers / freight customers:

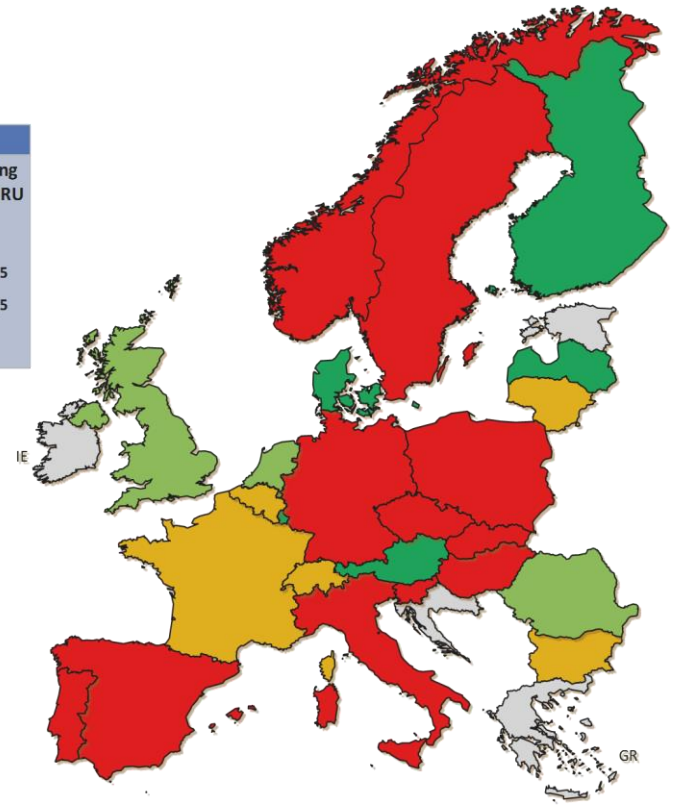
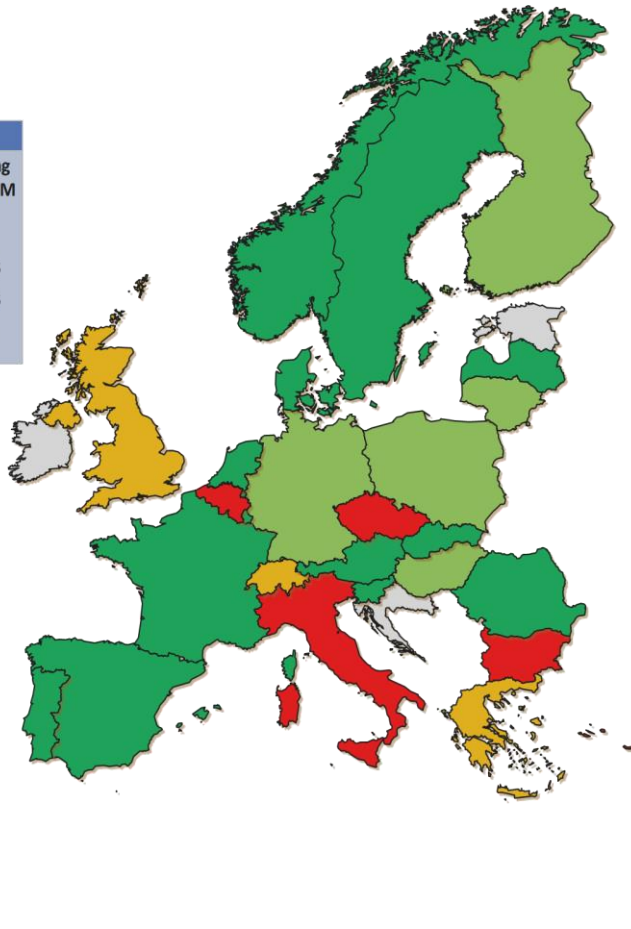
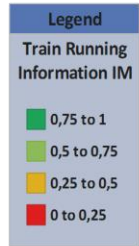
- Access to more transparent railway products -> **more efficient.**
- Monitoring becomes more transparent -> **no "black box".**
- **Quicker and better information delivery** to freight customers and business partners.

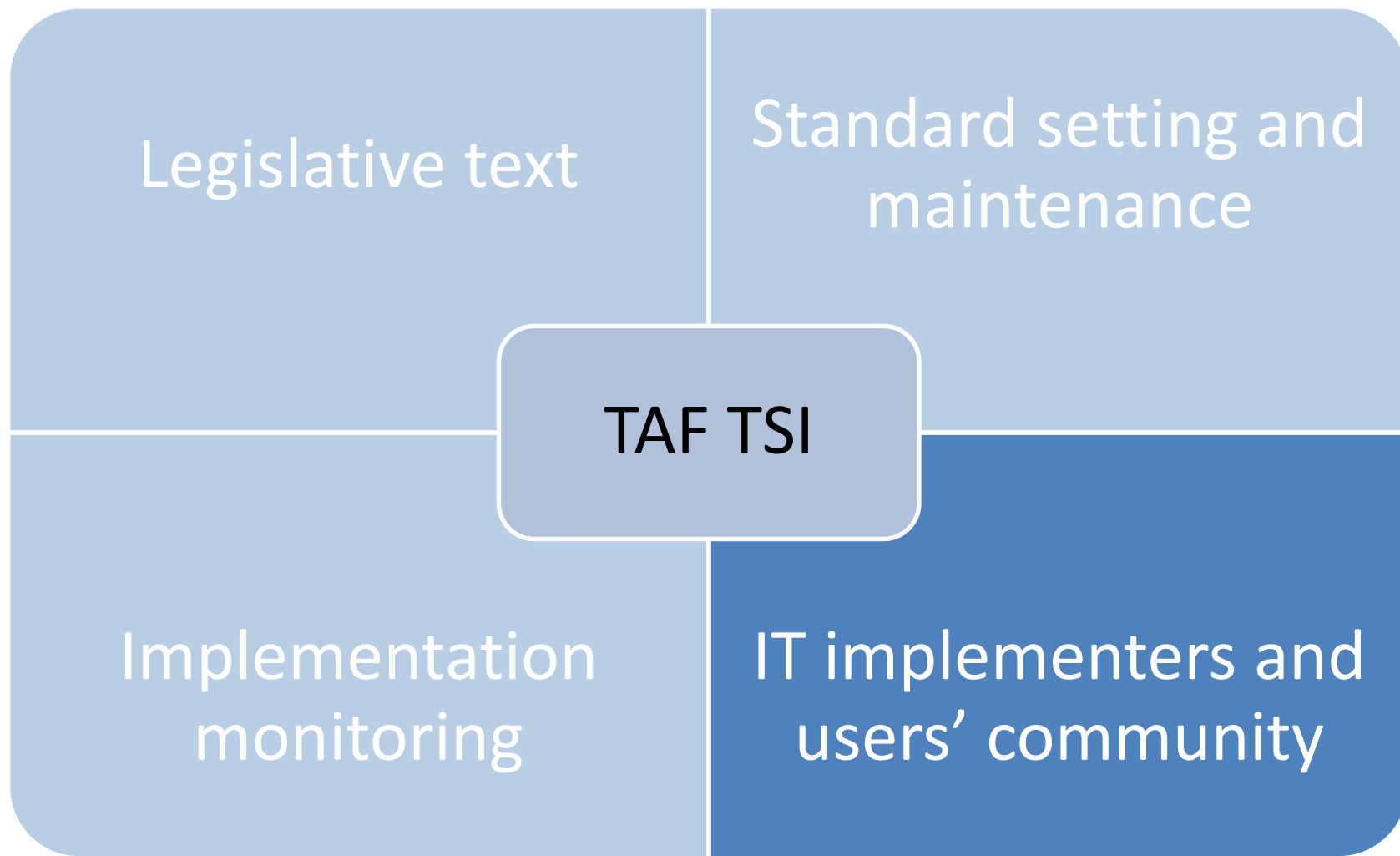


Implementation TAF Masterplan



Train Running Information function





- **Freight company codes**



- o Number of companies: 328

- **Train running information**



- o Countries covered: 22
- o Number of trains processed: 1.600.000 per year
- o Number of messages exchanged: 163.000.000 per year

- **Consignment notes + Wagon event reporting**

- o Number of companies: 16
- o 2.500.000 consignment note messages per year
- o 144.000.000 train run messages per year



- **Path request**





- o Countries covered: 30
- o Number of companies: 166 RUs and 35 IMs
- o Number of messages exchanged: 2600 path dossiers per year

Available TAF TSI IT implementations

- RNE

- TIS (<http://tis.rne.eu/>) – train running 
- PCS (<http://pcs.rne.eu/>) - path request 
- Common Components for TAF TSI (<http://ccs.rne.eu/>) – location / company reference data  

- Raildata

- ORFEUS (<http://www.raildata.coop/ORFEUS.htm>) – eConsignment note 
- ISR (<http://www.raildata.coop/ISR.htm>) - wagon movement 

- UIP

- RSRD² (<https://www.rsrd2.eu>) – rolling stock reference data 

- HitRail

- <http://interoperability.hitrail.com> – path request + train running 

- UNIFE

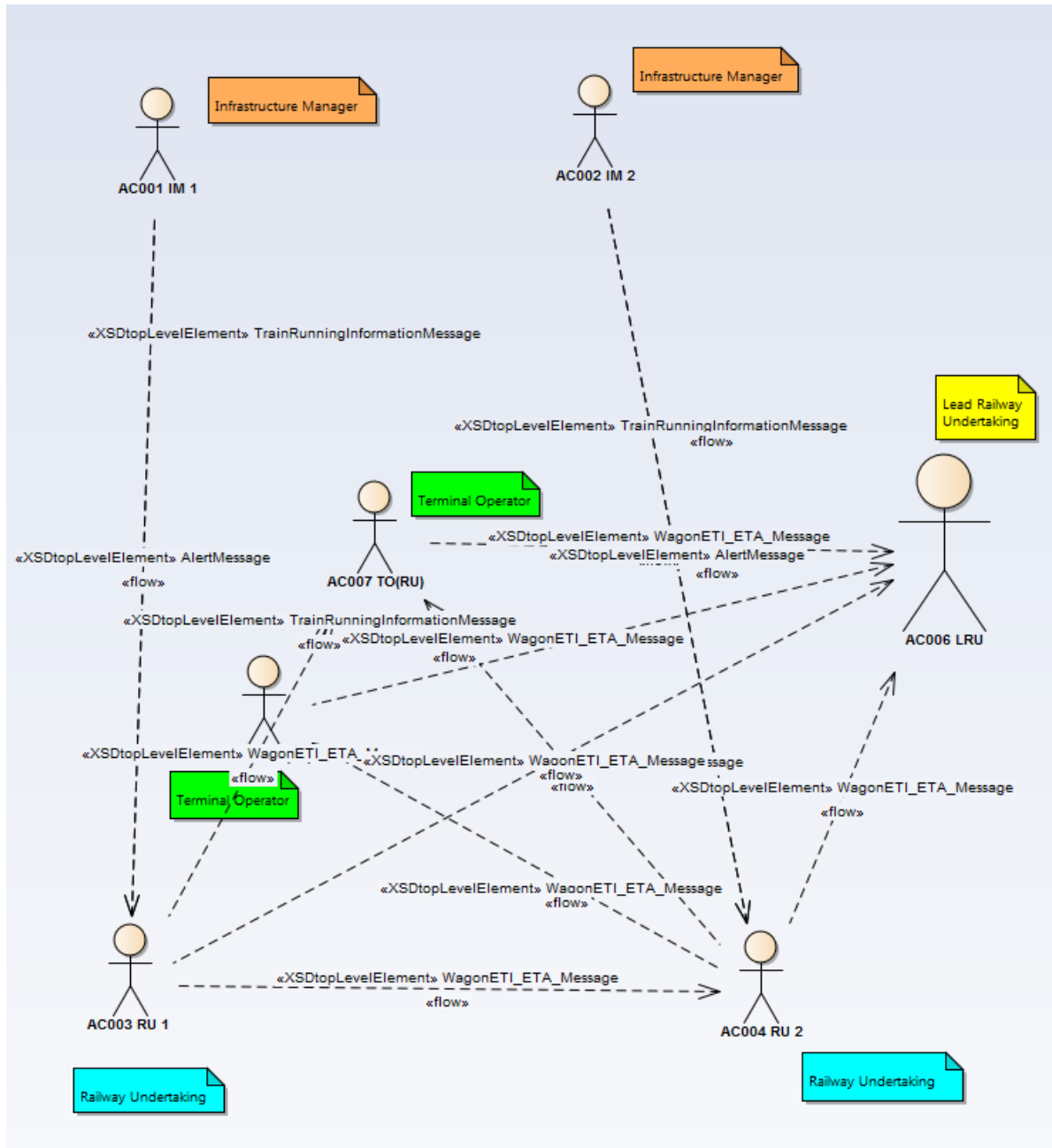
- <http://www.unife.org/> – path request + train running 

- TAF TSI Regulation EU 1305/2014: <http://www.era.europa.eu/Document-Register/Pages/TAF-TSI.aspx>
- TAF TSI Technical Documents: <http://www.era.europa.eu/Document-Register/Pages/Technical-Documents.aspx>
- TAF/TAP Reference Files (Company Codes and Primary Location Codes): <http://teleref.era.europa.eu/>
- TAP TSI GIS Interactive Implementation Maps: <http://www.era.europa.eu/tools/TAFTSI/Pages/Home.aspx>
- TAF TSI Master Plan: <http://www.era.europa.eu/Document-Register/Documents/TAF-TSI-Master-Plan.pdf>
- TAF and TAP RU/IM implementation Joint Sector Group: <http://taf-jsg.info/>

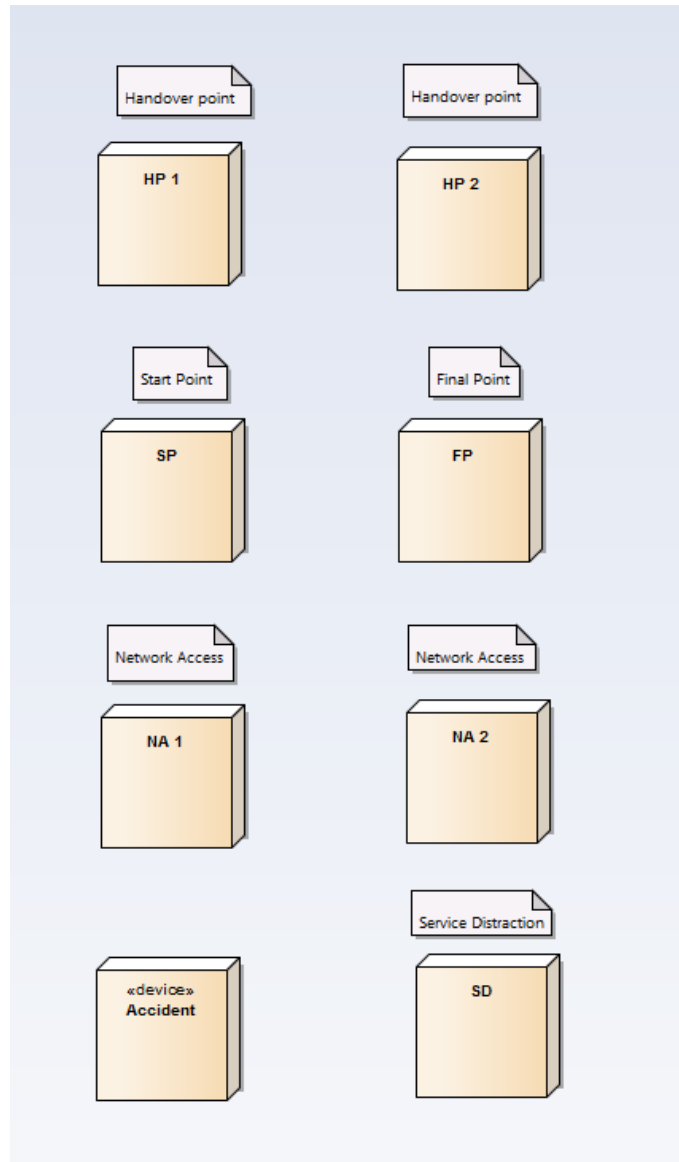




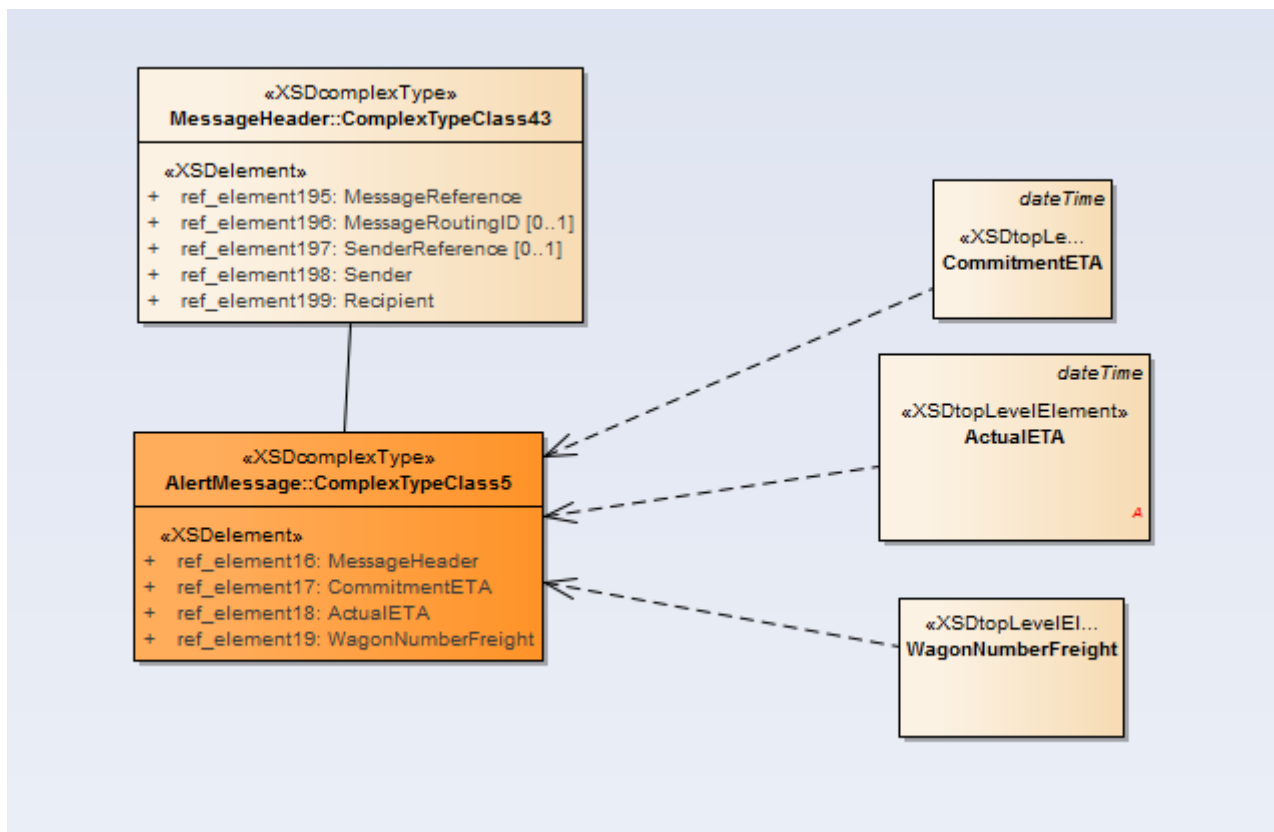
Let's talk ELETA modelling



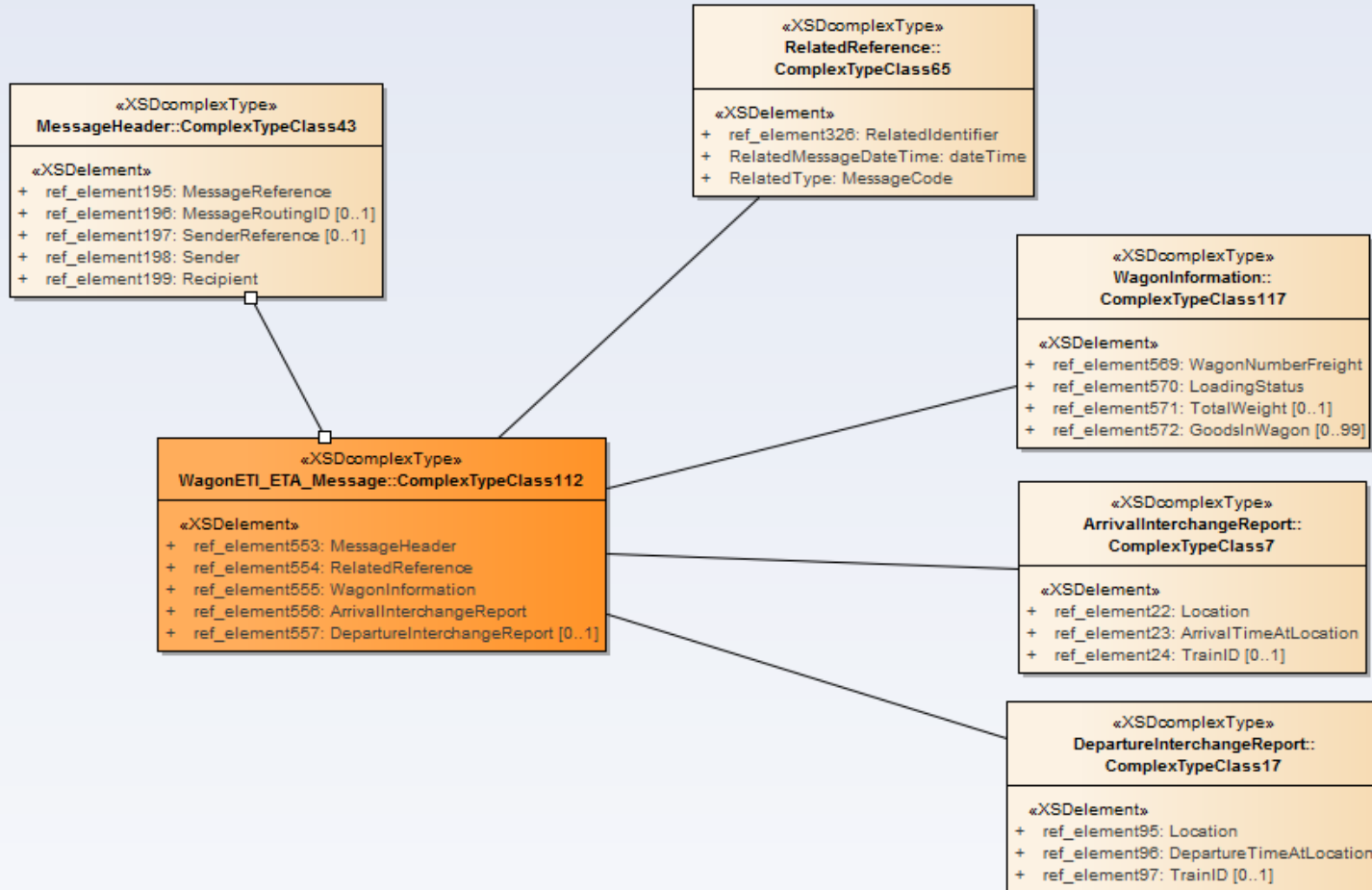
System elements



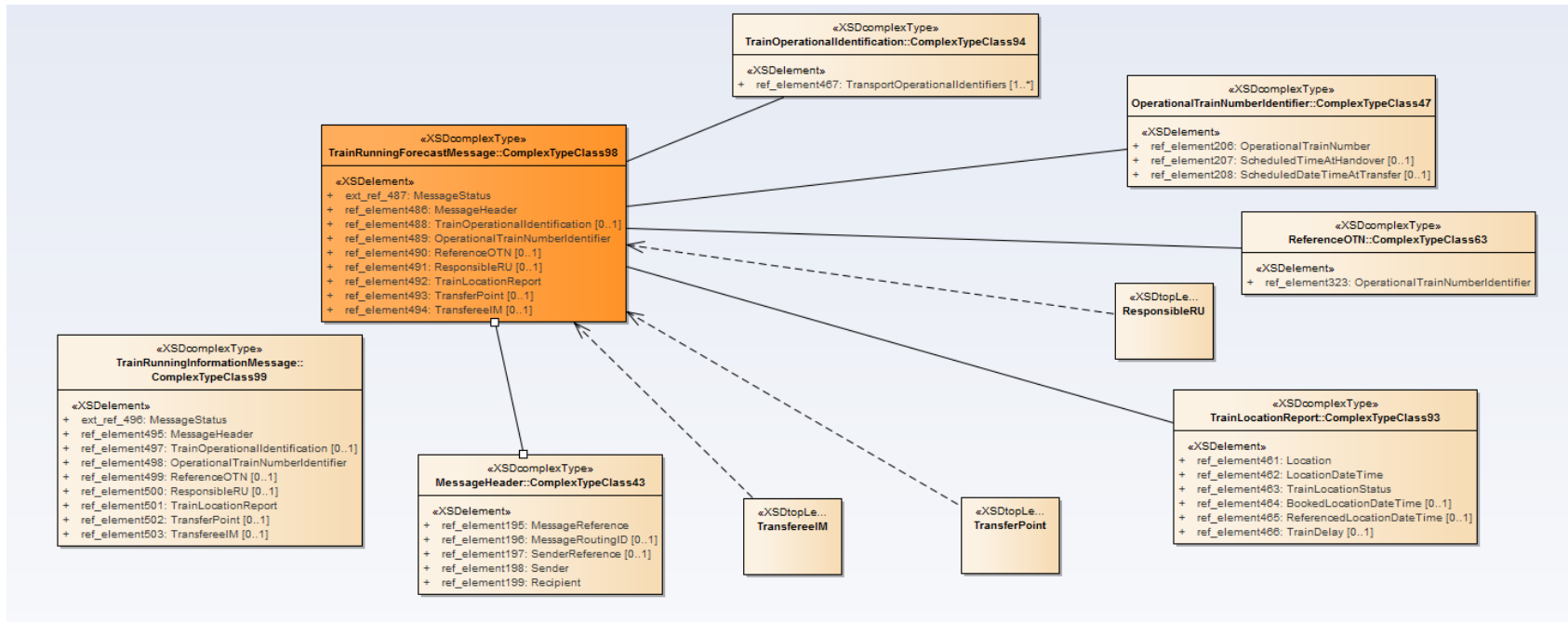
TAF Messages (1/3) – Alert Message

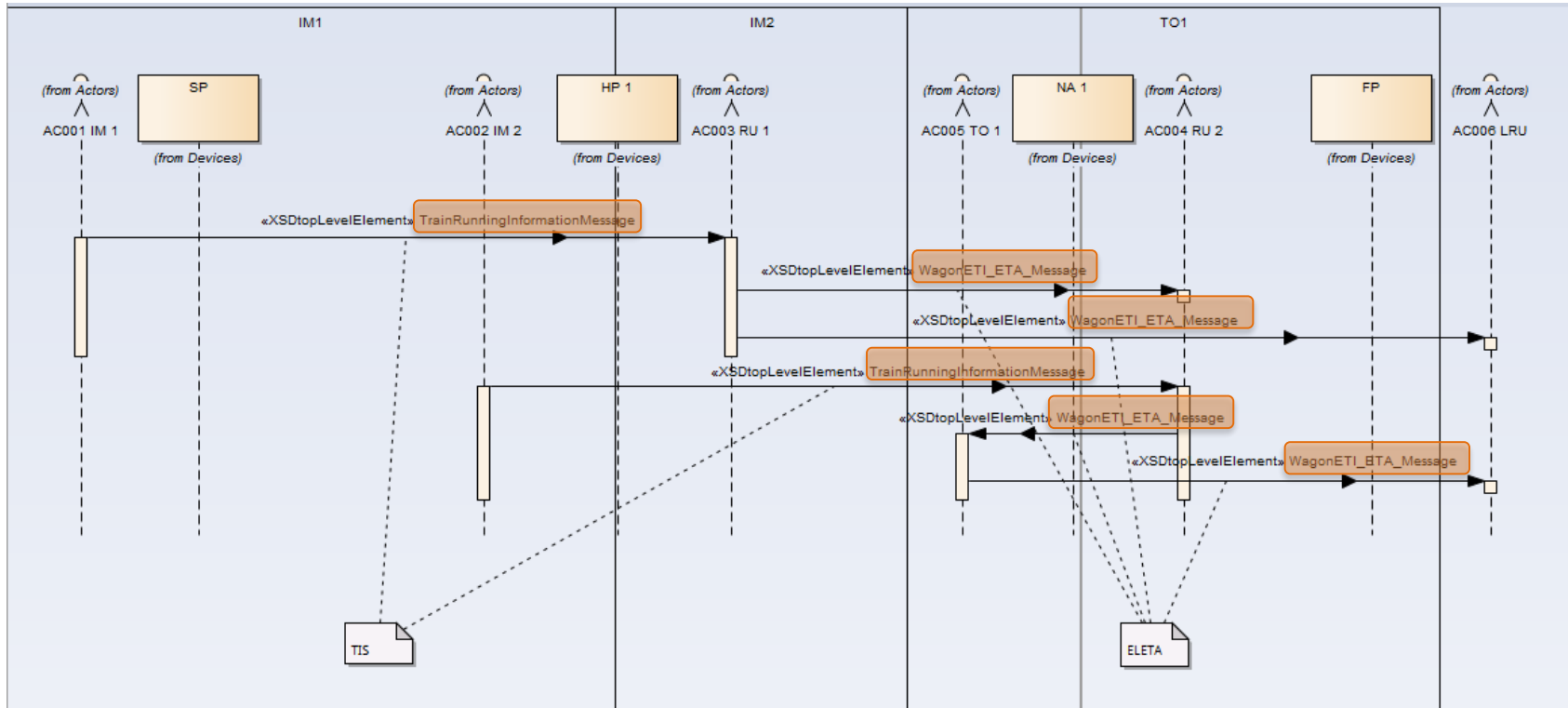


TAF Messages (2/3) – ETI/ETA message



TAF Messages (3/3) – Train Running Forecast message





Other Use Cases are in the back up slides !

Which use case ...



... can be best matched to the 12 ELETA trains ?

Thank you very much

European Union Agency for Railways

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Back-Up Slides

Useful terms from this presentation

Abbreviation / term	Meaning
RU	Railway Undertaking
EC	European Commission
EU	European Union
IM	Infrastructure Manager
IP	Internet Protocol
RNE	Rail Net Europe
TID	Train Identifier
UIP	International Union of Wagon Keepers
UNIFE	European Association of Rail Supply Industry
WIMO	Wagon and Intermodal Unit Operational Database
WK	Wagon keepers

