



# **RSRD<sup>2</sup>** **Rolling Stock Reference Database**

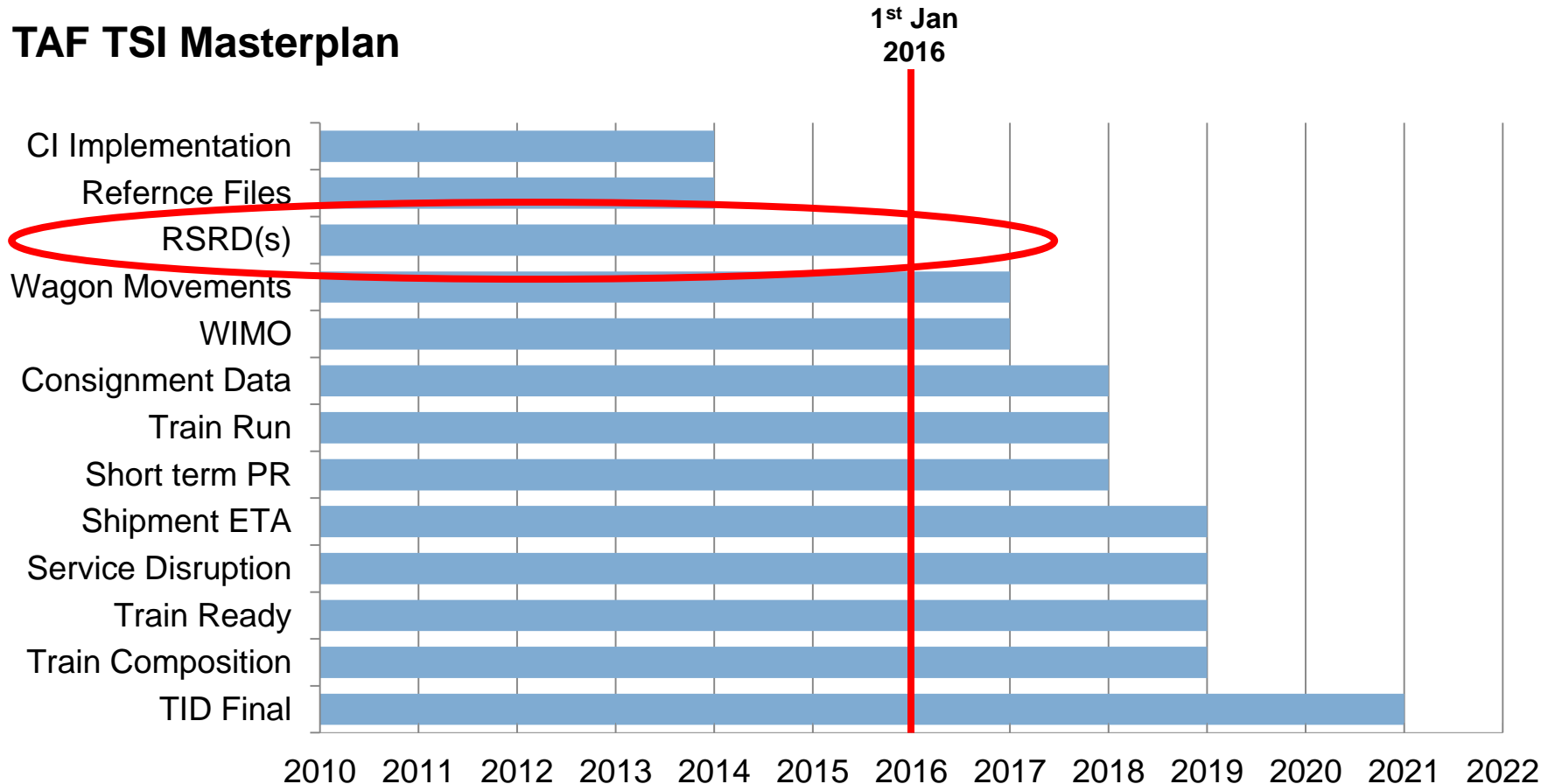
EUAR approved tool  
to fulfil TAF TSI RSRD requirements

Bucharest, 7<sup>th</sup> March 2018

# All European keepers must provide rolling stock reference data (RSRD) in a standardised format since 1<sup>st</sup> January 2016

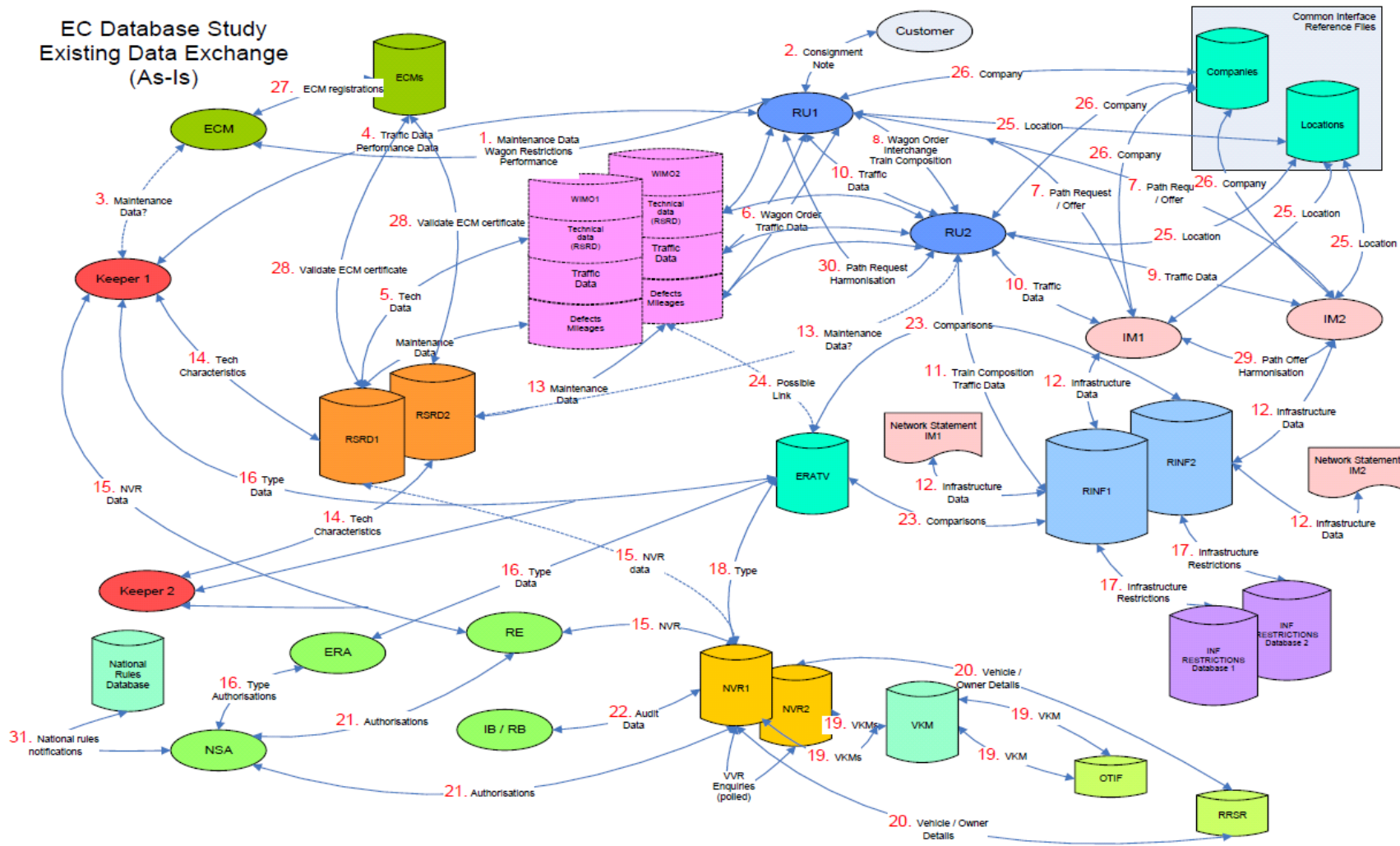


## TAF TSI Masterplan

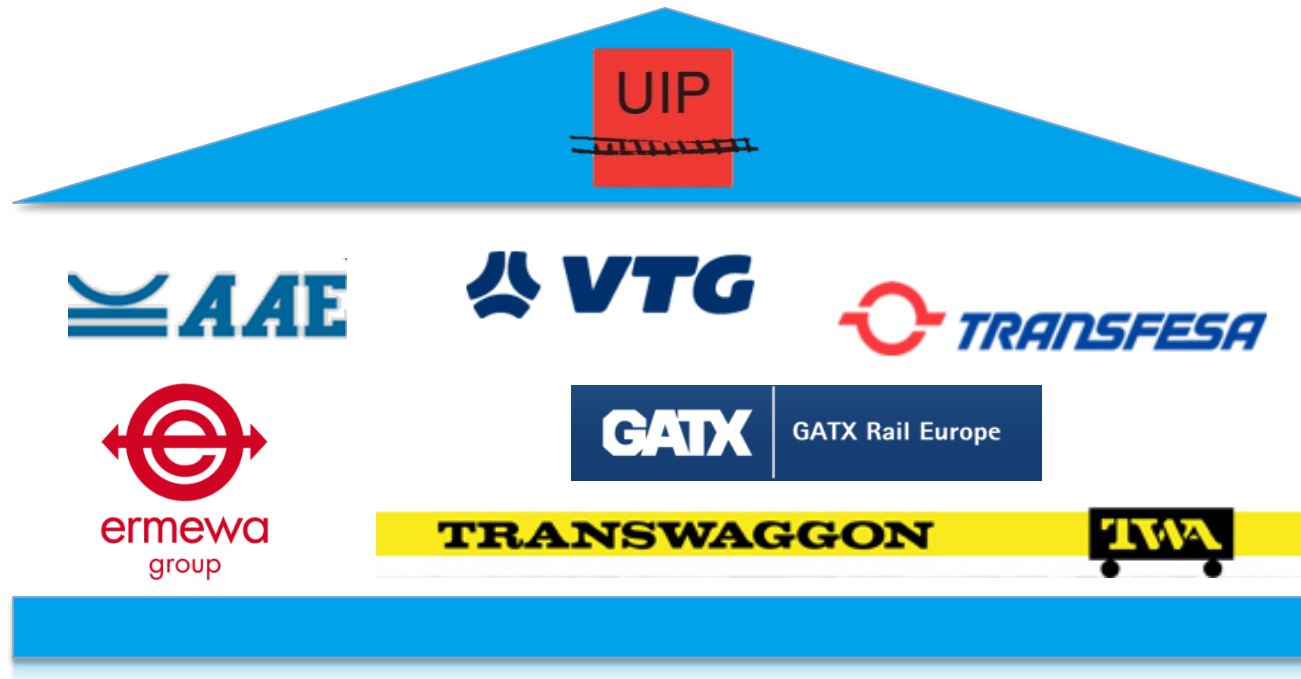


▶ **EUAR in collaboration with NCPs (National Contact Points) and JSG (Joint Sector Group) are monitoring the implementation of all TAF functions biannually**

# The data exchange within the rail sector is quite complex and would be further aggravated by numerous RSRDs



# The wagon keepers started an initiative to establish a central data cloud (RSRD<sup>2</sup>)

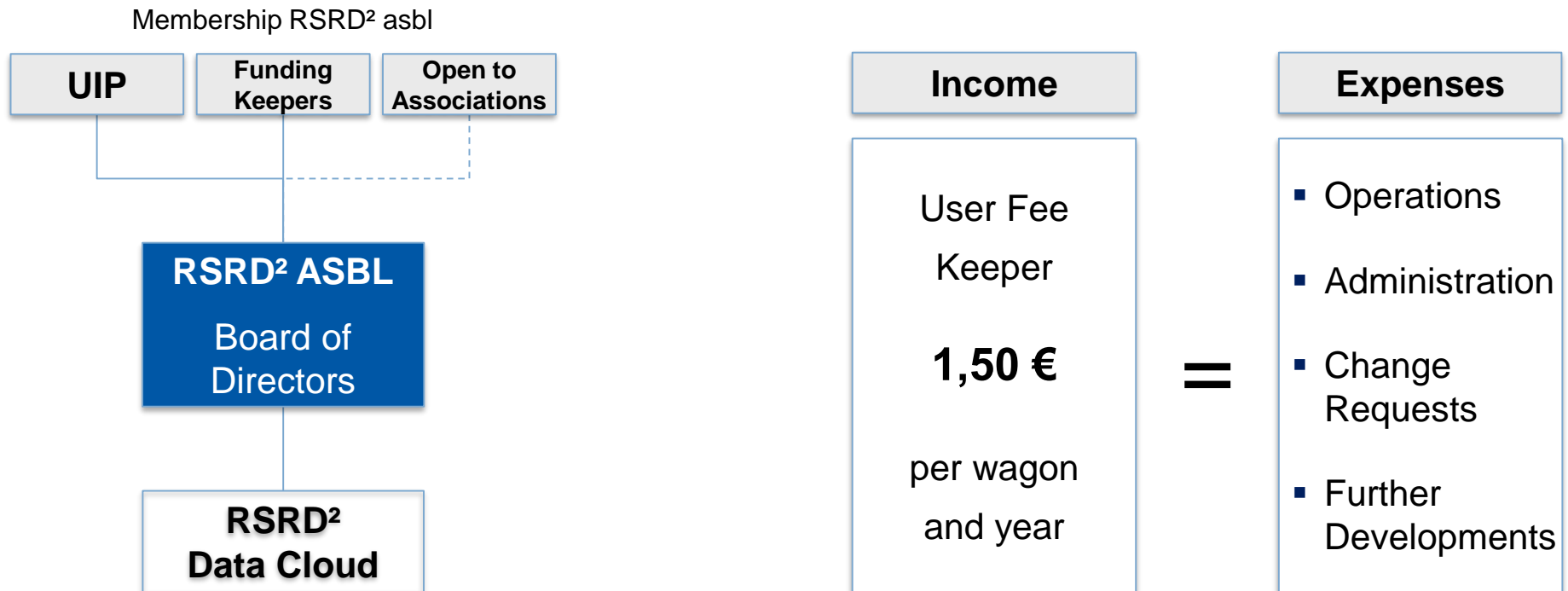


Benefits: share of costs, economies of scale, common standard, central data access, central collection of mileage data

The data cloud RSRD<sup>2</sup> is a non profit organisation and access is free of charge



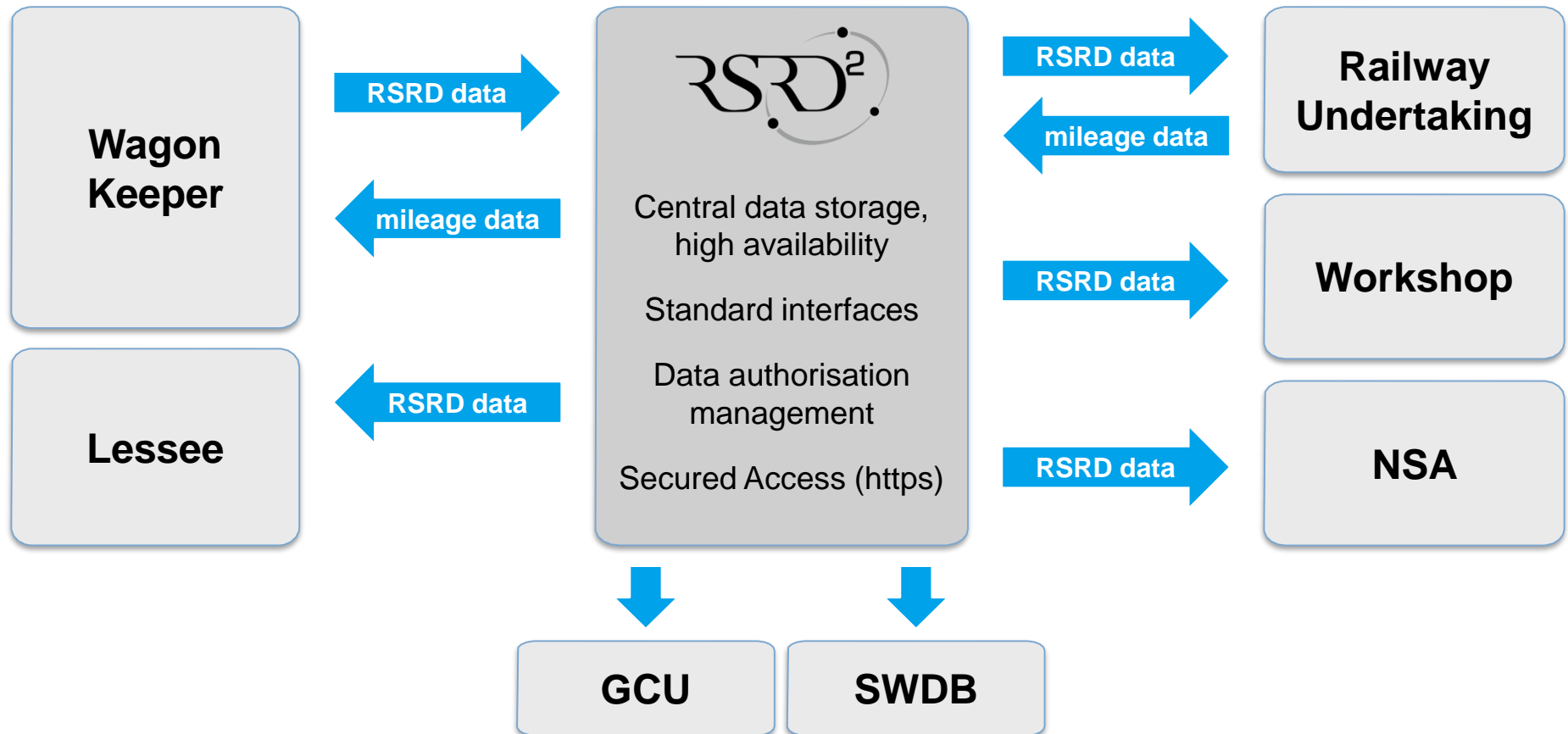
## RSRD<sup>2</sup> asbl Business Model



# RSRD<sup>2</sup> serves as master for rolling stock reference data and feeds other sector databases



## RSRD<sup>2</sup> Work Flow



# The RSRD<sup>2</sup> data catalogue includes all necessary wagon information required for train preparation and operation



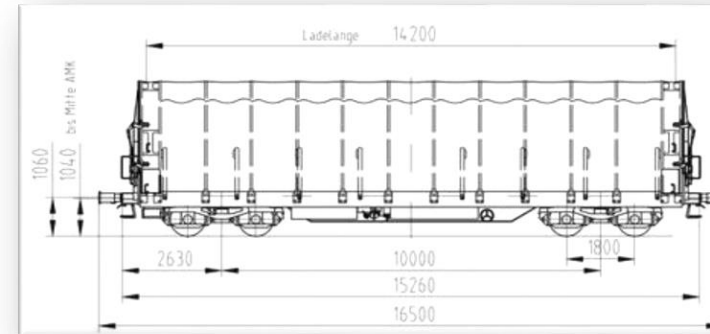
## RSRD<sup>2</sup> Wagon Data

### Registration/Authorisation



- Registration data
- Authorisation data
- ECM data (incl. certificate)
- ...

### Design



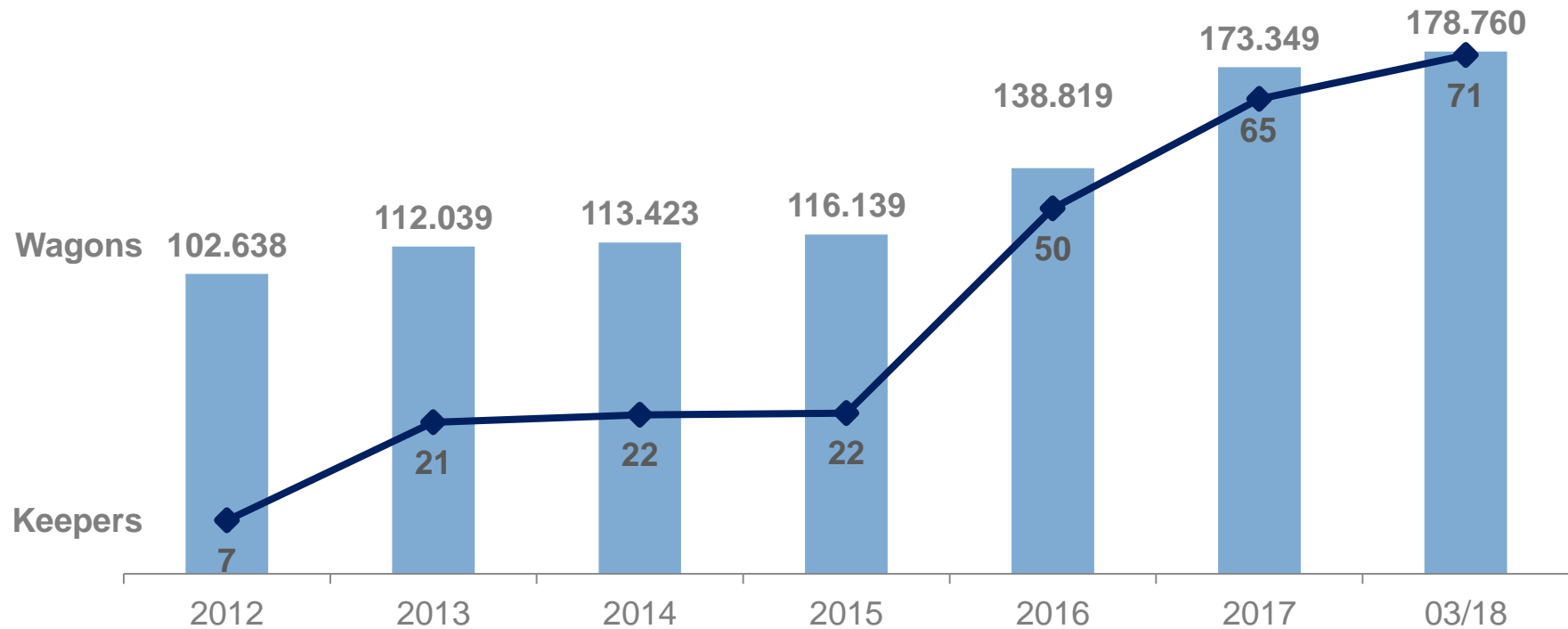
- Load Tables
- Brake information (incl. silent brakes)
- Maintenance dates
- ...

▶ The data catalogue comprises about 130 elements

In the meantime about 180k wagons from more than 70 keepers are registered in RSRD<sup>2</sup>



## Development wagons and keepers in RSRD<sup>2</sup>





The range of users is manifold and continuously growing, in February 2018 more than 400,000 queries were send to RSRD<sup>2</sup>



## Examples RSRD<sup>2</sup> User

### Wagon Keepers



### Railway Undertakings



### Others



# RSRD<sup>2</sup> allows data access via web portal (www.rsr2.com) or via system interface



## RSRD<sup>2</sup> Access Points

### Web Portal (GUI)

The screenshot shows the RSRD² web portal interface for wagon 218191170107. The page is titled "Wagon: 218191170107" and has a navigation menu with "Allgemein", "Lastgrenzrastr", "Untergestellt", "Aufbau", "Brems", and "Instandhaltung". The "Brems" tab is active, showing technical data for the wagon's braking system. The data is organized into sections: "Druckluftbremse" (Air Brake) with fields for "Anzahl Bremsen" (1), "Bremsbauart" (KE), "Bremsstyp" (G/P), "Lastwechsel" (Device with 1 changeover weight and 2 positions), "Bremsgewicht [t]" (15), "Umstellgewicht [t]" (22), and "Bremsgewicht beladen [t]" (26); "Handbremse" (Hand Brake) with fields for "Typ" (Platform operated hand brake), "Bremsgewicht [t]" (20.0), "Bremskraft [kN]" (22.0), and "Maximale Steigung [%]" (4); and "Bremsklotzsohle" (Brake Block Sole) with fields for "Bezeichnung" (Bg 320, GG) and "Einbaudatum Verbundstoff". The interface includes a header with the RSRD² logo and navigation links, and a footer with "Abbrechen", "XML", and "Excel" buttons.

### System Interface (web service/ftp)

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns1:RollingStockDatasetMessage xmlns:ns1="http://www.rsr2.com/xsd">
      <ns1:MessageHeader>
        <ns1:MessageReference>
          <ns1:MessageType>6003</ns1:MessageType>
          <ns1:MessageTypeVersion>RSRDM0100</ns1:MessageTypeVersion>
          <ns1:MessageIdentifier>DBSR2015-07-07-03.26.656623.xml</ns1:MessageIdentifier>
          <ns1:MessageDateTime>2015-07-07T14:22:00+02:00</ns1:MessageDateTime>
        </ns1:MessageReference>
        <ns1:MessageRoutingID>1</ns1:MessageRoutingID>
        <ns1:SenderReference>DBSR2015-07-07-03.26.656623.xml</ns1:SenderReference>
        <ns1:Sender ns1:CI_InstanceNumber="1">3241</ns1:Sender>
        <ns1:Recipient ns1:CI_InstanceNumber="1">2180</ns1:Recipient>
      </ns1:MessageHeader>
      <ns1:RollingStockDataset>
        <ns1:RSRD2MetaData>
          <ns1:VehicleContractNumber>ABC123</ns1:VehicleContractNumber>
        </ns1:RSRD2MetaData>
        <ns1:AdministrativeDataSet>
          <ns1:WagonNumberFreight>33852740000</ns1:WagonNumberFreight>
          <ns1:RegistrationCountry>DE</ns1:RegistrationCountry>
          <ns1:DatePutIntoService>2014-04-01</ns1:DatePutIntoService>
        </ns1:AdministrativeDataSet>
        <ns1:Authorisation>
          <ns1:NSACompanyCode>101002</ns1:NSACompanyCode>
          <ns1:NSAName>Bundesamt für Verkehr</ns1:NSAName>
        </ns1:Authorisation>
        <ns1:OwnerCompanyCode>110004</ns1:OwnerCompanyCode>
        <ns1:OwnerName>ÖBB Business Competence Center GmbH</ns1:OwnerName>
        <ns1:KeeperCompanyCode>110004</ns1:KeeperCompanyCode>
        <ns1:KeeperName>ÖBB Business Competence Center GmbH</ns1:KeeperName>
        <ns1:KeeperShortNameVKM>ÖBBCC</ns1:KeeperShortNameVKM>
        <ns1:ECMCompanyCode>110125</ns1:ECMCompanyCode>
        <ns1:ECM>SIGNON</ns1:ECM>
        <ns1:ECMCertificate>
          <ns1:EINNumber>
            <ns1:CountryCodeISO>AT</ns1:CountryCodeISO>
            <ns1:TypeDocumentEIN>34</ns1:TypeDocumentEIN>
            <ns1:CounterAccreditedRecognizedBody>0</ns1:CounterAccreditedRecognizedBody>
            <ns1:EINYear>0</ns1:EINYear>
            <ns1:EINCounter>0</ns1:EINCounter>
          </ns1:EINNumber>
          <ns1:ECMCertificateValidFrom>2014-01-01</ns1:ECMCertificateValidFrom>
        </ns1:ECMCertificate>
      </ns1:RollingStockDataset>
    </ns1:RollingStockDatasetMessage>
  </soap:Body>
</soap:Envelope>
```

# RSRD<sup>2</sup> and the keepers make great efforts to assure a high data quality in the system



## Data Quality Efforts

### EDI



More than 95% of recorded wagons in RSRD<sup>2</sup> are uploaded via system interface

### Daily Updates



Keepers with system interface mostly update wagon data daily

### Immediate Corrections



Reported safety critical failures must be corrected within 1 working day

### Data Validations



A multitude of data validations are performed during upload in RSRD<sup>2</sup>

# Join the group of users... and take advantage of the benefits of RSRD<sup>2</sup>!



## Benefits



- Fully complies with TAF TSI requirements
- No additional cost, e.g. licence fees for Common Interface
- Data input and queries manually via GUI or automatically via system interface
- Reporting about TAF implementation status to EUAR by RSRD<sup>2</sup>
- Just 1,50 € per wagon and year
- High standardisation and automation level
- Flexible data authorisation management by keepers
- Automatic GCU and SWDB update
- Collection of mileage data from RUs for keepers

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