



Connecting the dots in the European Rail Freight Data Space

The birth of DP-RAIL...



**RAILFREIGHT
FORWARD**
EUROPEAN RAIL FREIGHT VISION 2030

Rail Freight Forward is a **coalition of European rail freight companies** that are committed to drastically **reduce the negative impact of freight transport** on the planet and mobility, through **innovation** and a more intelligent transport mix.



Gamechanger DP-RAIL

“

By 2025, we want to achieve a seamless data flow in European rail freight operations through a trusted digital ecosystem connecting key rail freight partners

”

7 Digital Solutions + 4 Digital Enablers

- ✓ Deliver convenient and compliant **access** to essential and high-quality **operational data**...
- ✓ **Break data silos** and **Improve coverage** by successively connecting railway undertakings...
- ✓ **Boost and incentivize innovation** to ensure the railway sector's **future competitiveness**...

Why are we doing this?



Alternative 1



Alternative 2

DP-RAIL ✓



Alternative 3



Alternative 4

- ...to enable seamless operational **data exchange** across borders and **between companies**
- ...to **avoid** multilateral, customized and **costly interfaces**
- ...to **reduce manual data efforts** for participating entities
- ...to **avoid hyper-fragmentation** in the rail freight **data landscape**
- ...to **allow low-cost integration** of non-incumbent players
- ...to enable **better utilization of wagon/train capacity**
- ...to **enable** future 3rd party **innovation**

We have collected feedback on our DP-RAIL concept from rail freight entities and ecosystem partners

Overview of contributors

ONGOING VALIDATION



ONE sector. ONE ambition. ONE voice.

Overall, strong endorsement on the need for digital platform with Digital Train Operations leading the pack

Overview of scoring results

INTERIM RESULTS

Average scoring per digital solution



Top findings

- Full support for a digital platform “by the sector, for the sector”
- No discrepancies between big and small entities, no geographical divide – similar needs and challenges expressed by all actors
- Trust, user-centricity, interoperability and plug-and-play data services listed as key enablers

1= not significant, no business impact
5= extremely significant, major business impact

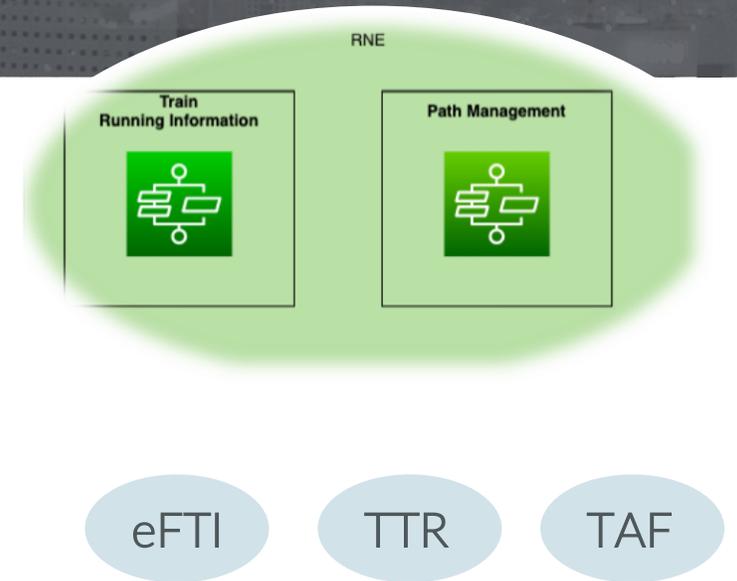
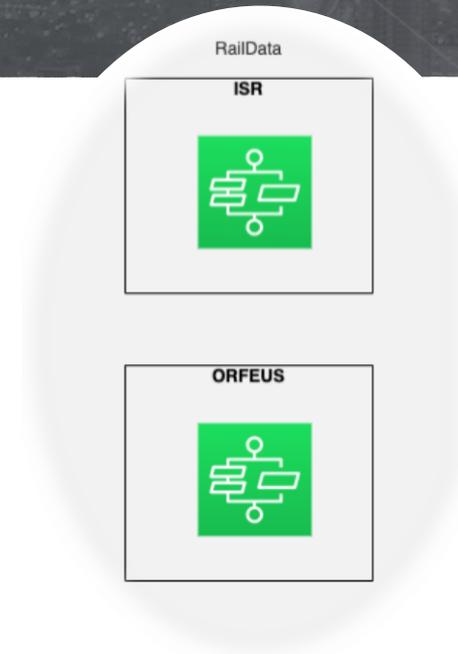
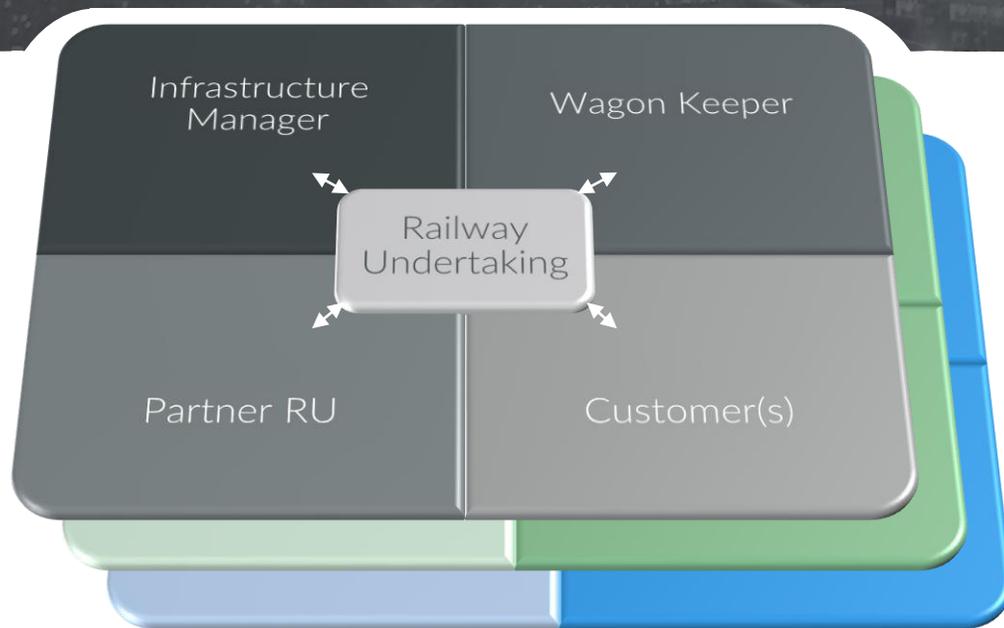
DP-RAIL allows us to move from a data patchwork landscape...

SIMPLIFIED AS-IS

Inefficient

Unstructured

Slow to adapt

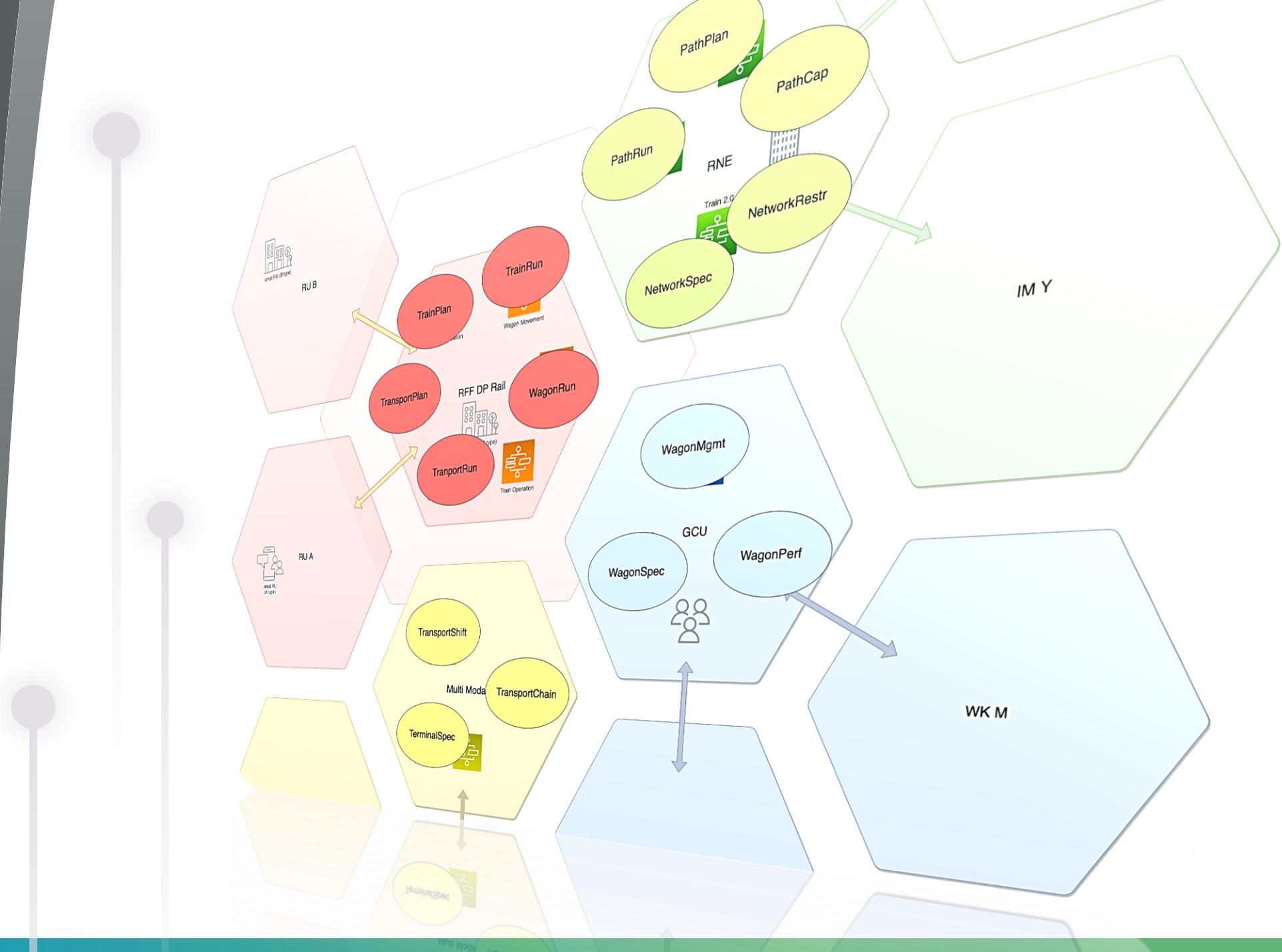


To ...

DP-RAIL as a central platform enabling communication between ecosystems in line with TAF-TSI

- One truth
- Stable interfaces
- Scalable systems

Booster for creation of European Mobility Data Space



Targets

Architecture principles

Reactive services

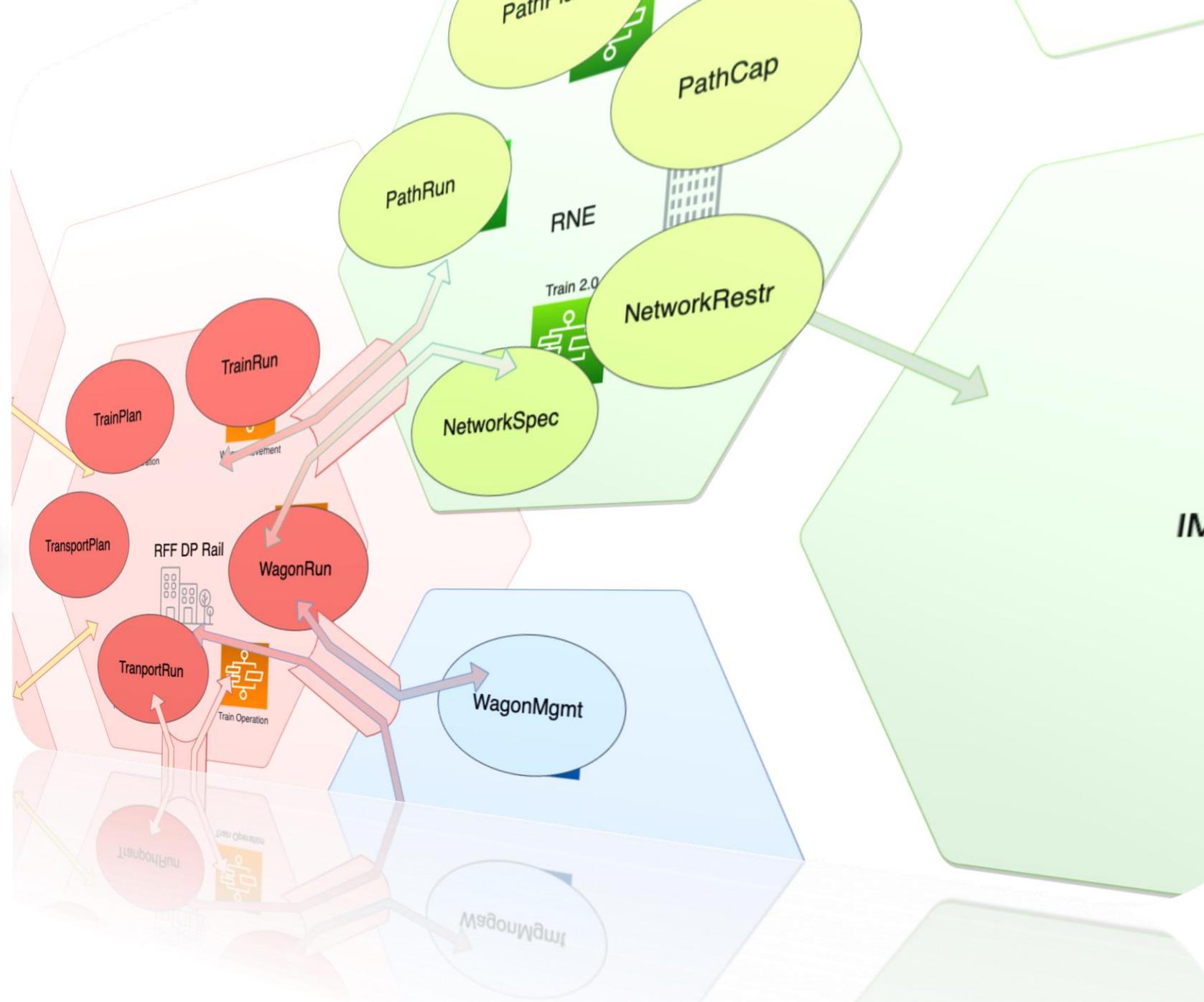
Encapsulation

Open data

Test driven

Definition of a
common data
catalogue

Relentless focus on
data quality



DeepDive MARS

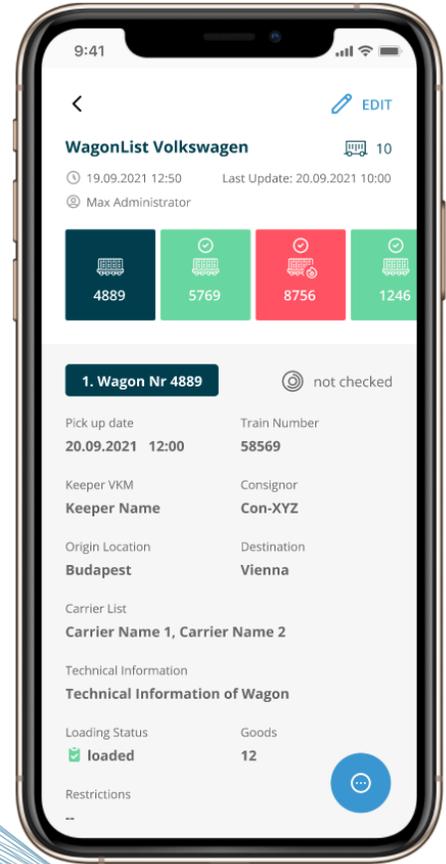
Mobile App for
Rail Freight Services



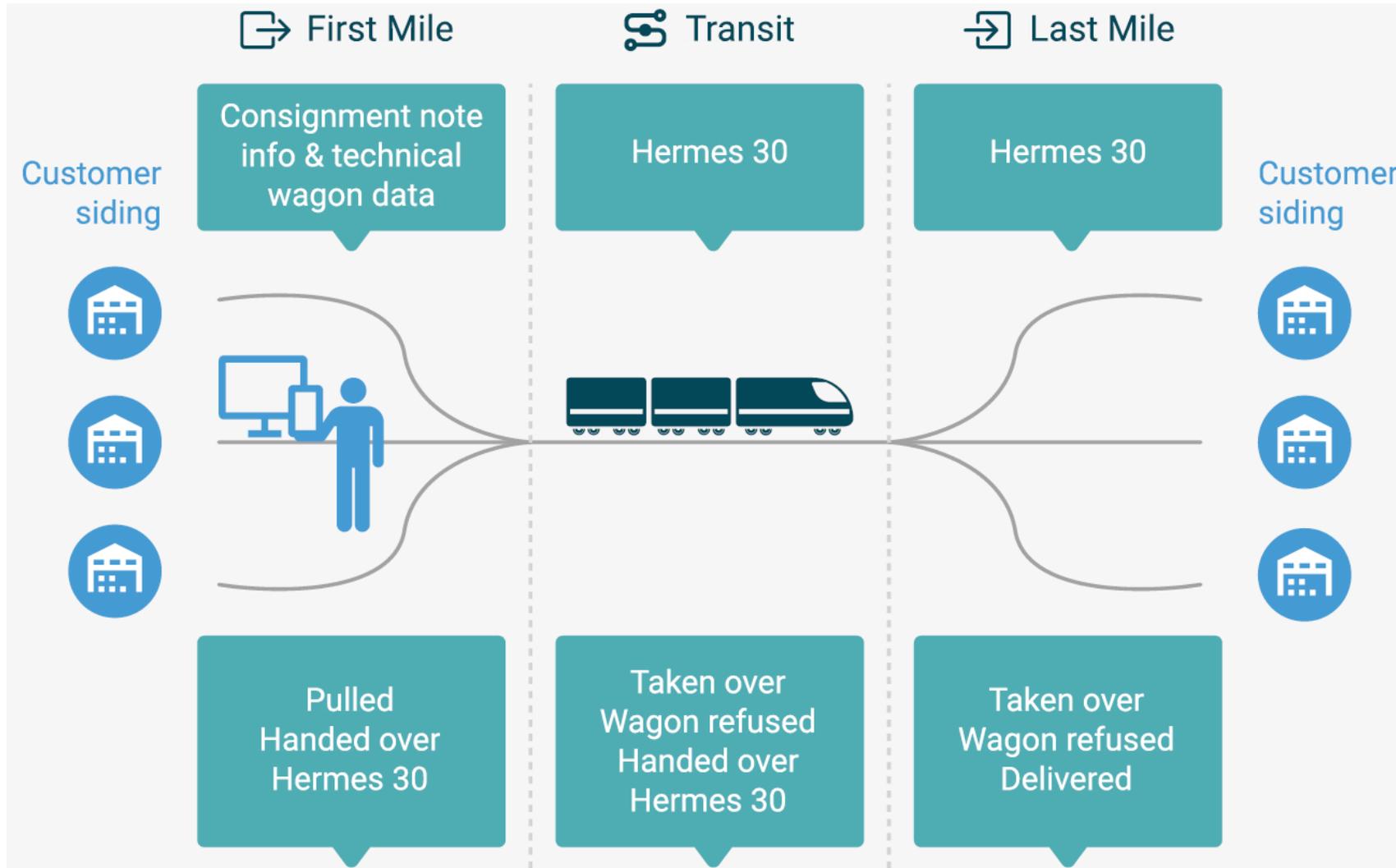
MARS application a result of the DP-RAIL initiative – enables partner RUs to digitalize first / last mile & transit operations

MARS overview

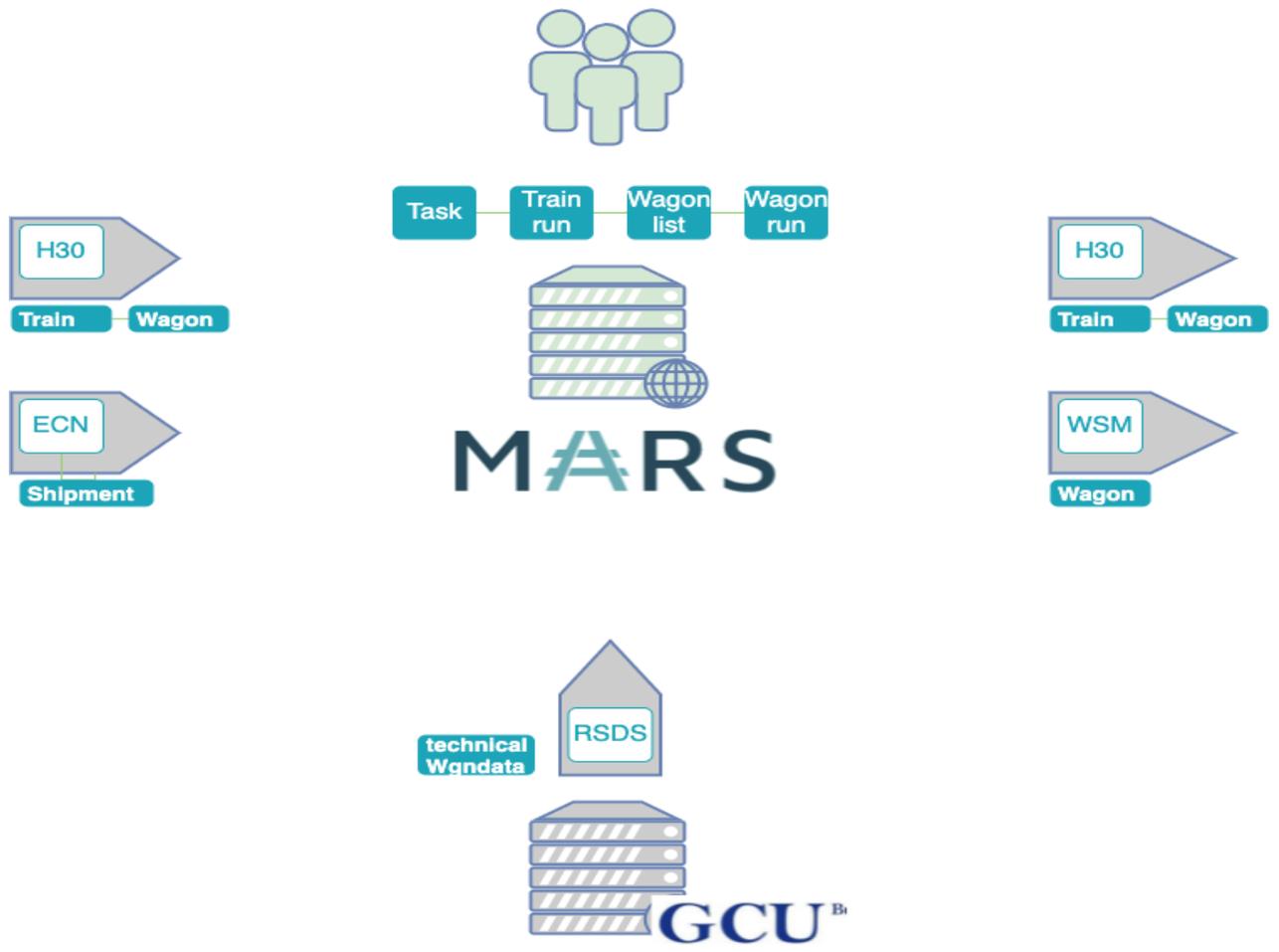
- Mobile Application for Railfreight Services (MARS) is a web application to facilitate communication between partners operating in the first mile, last mile and transit on behalf of a lead RU
- RUs operating first / last mile or transit RU will be able to produce wagon status messages and Hermes 30 (hand over advise)
- MARS meets the TSI requirements (wagon movement) and will support H30 2.0 and ECN 1.5 messages
- First MVP (minimum viable product) to be released in production Q4 2022



MARS to create wagon status messages and hand over advice H30 based on available data from ECN / GCU / H30



MARS BOM data model displaying the main data objects of the application



- MARS data model relies on external data sources as consignment note (ECN), GCU for technical wagon data and Hermes 30
- Open data access and transparency key principle within the DP-RAIL architecture
- Future version of MARS planned for:
 - Integration to common reference data base
 - Feedback loop to the data sources to improve data quality

Population of RU reference data in CRD and common definition of taxonomy to improve MARS

- Master data currently taken from RailData in MARS MVP – integration to common reference data base to be planned for future version
- TAF TSI subsidiary location codes (SLCs) for first and last mile to close gaps in MARS processes
- Issue today: Any RU can create a SLC for the same location
- RUs requesting having a RU ‘neutral’ and uniform codification of SLC codes (type 36,37,42), aligned with all involved RU’s and IM
 - Only one SLC to prevent double SLCs codes from multiple RU’s within a single PLC
 - Clear governance: RU can request a SLC to be created and a central entity makes sure there is no double

Description	Primary Location Code					Location Subsidiary Type Code	Location Subsidiary Code										Validity Start Date	Validity End Date	Name	Company Code						
	Country ISO Code	Numeric Code					AN1	AN2	AN3	AN4	AN5	AN6	AN7	AN8	AN9	AN10				Date	Date	Text max 255	AN1	AN2	AN3	AN4
Type	A1	A2	N1	N2	N3	N4	N5	N1	N1	AN1	AN2	AN3	AN4	AN5	AN6	AN7	AN8	AN9	AN10	Date	Date	Text max 255	AN1	AN2	AN3	AN4
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THANK YOU!



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