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UIC launches industry-led initiative to make progress on rail service data exchanges

(Paris, 22 September 2026) **The International Union of Railways (UIC), together with a consortium of leading European railway undertakings is launching the Rail Service Data Exchange (RSDEX) initiative, an industry-led effort to explore and define a common standard for exchanging maintenance, engineering, and support information across the entire railway asset lifecycle.**

As railway operations and maintenance become increasingly digital, the seamless exchange of service information across the value chain has emerged as a critical factor in ensuring the sector's success. However, this exchange is currently still fragmented. Undertakings, manufacturers, component suppliers, and maintenance entities each work with their own data models and proprietary formats, making it difficult to share information consistently, plan interventions efficiently, or realise the full value of digital twin technology.

RSDEX is designed to close that gap. The initiative aims to define a common exchange standard that ensures data interoperability across maintenance, operations, asset management, and original equipment manufacturer (OEM) systems, supported by intermediation platforms capable of facilitating these exchanges and keeping practices consistent between stakeholders. This aim is to have better failure prediction, richer technical information for maintenance operations, more efficient intervention planning and lower whole-life costs.

Proven practice from the aerospace sector

The initiative draws directly on the experience of the aerospace and defence sectors, where the S-Series of standards – such as S1000D for technical documentation, S3000L for logistic support analysis, and S5000F for in-service feedback – has provided a structured framework for the exchange of information between aircraft manufacturers, engine makers and airlines.

These standards illustrate how common approaches to information exchange can support interoperability and efficiency across complex industry operations.

RSDEX aims to bring the similarly robust, standardised foundation to rail: one that promotes interoperability, reduces dependency on proprietary formats, supports cross-border operational efficiency, and reflects the real operational needs of the industry.

Industry-led, within the UIC framework

A recurring lesson from aerospace is that this type of standard cannot be imposed by any single technology seller, it must be developed and adopted by the industry itself. Building on the digital twin work, which is already under way across the UIC network, UIC will explore RSDEX as an industry initiative within its Work Programme, in coordination with existing efforts on common data modelling and AI-based predictive maintenance. As an initial step, UIC will work with participating stakeholders to develop a proof of concept aimed at demonstrating the potential value of the approach in an operational environment.

> *Interoperable service data is the foundation on which the digital railway will be built. By defining this standard together, as an industry, we will be protecting fair competition while unlocking shared value for operators, manufacturers and maintainers.*
>
> — Jean-Michel Evanghelou, Director Digital Systems & Innovation, UIC

Making the vision a reality

Crucially, the technology to realise this vision already exists. Digital continuity and Virtual Twin platforms can digitally support RSDEX – connecting engineering definition, in-service data and maintenance execution, and enabling multiphysics, behavioural, statistical, logistical and operational simulations to optimise availability and costs. Dassault Systèmes, whose solutions support the implementation of aerospace S-Series standards, is contributing its technological expertise to the initiative and providing a reference point for how such standards can be operationalised in complex industry environments.

> *The railway sector doesn't need to invent this from scratch. Aerospace has already shown that a shared standard, underpinned by the Virtual Twin, lets an entire industry collaborate on maintenance data without ever giving up its competitive edge. Dassault Systèmes is pleased to contribute its experience as the rail industry explores how a similar approach could be developed for its own needs.*
>
> — Guillaume Vendroux, CEO, DELMIA

Next steps

Stakeholders from across the rail sector will convene at an executive roundtable during InnoTrans 2026 in Berlin to explore the vision, share opinions, and discuss the scope, governance, and next steps for a connected, collaborative and future-ready railway service ecosystem. The discussion marks the start of a broader engagement between undertakings, OEMs, suppliers, and industry bodies to assess the initiative, define its scope and establish the appropriate governance framework for the development of a common standard.

About the RSDEX initiative

The Rail Service Data Exchange (RSDEX) initiative aims to give the railway sector a standardised framework for exchanging maintenance, engineering, and support data across the asset lifecycle. Inspired by internationally recognised aerospace practice, RSDEX is being developed as an industry-led initiative within the UIC framework, bringing together undertakings, manufacturers, suppliers and maintenance entities to enable interoperable service data exchange across the rail sector.

About UIC

UIC is the worldwide organisation for the promotion of rail transport and the collaborative development of the railway system. It brings together more than 200 members across all five continents and supports the sector through international cooperation, innovation, and the development of standards and guidelines.

About Dassault Systèmes

Dassault Systèmes is a catalyst for human progress, providing collaborative Virtual Twin experiences through its 3DEXPERIENCE platform. Its solutions transform the way products are designed, produced, operated, and maintained across industries, including aerospace, defence, and rail.

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