



Information Technologies for Shift2Rail

Shopping
Real time
Innovation
Open Interfaces
Door to Door
Seamless Travel
Business Analytics

Digital

Multimodal
Ticketing
Tracking
Web of Transportation
Travel Companion
One-stop Shop

Connectivity

Technical Enabler

Cloud

Re-accommodation
Attractive Railway
Services

Interoperability





credit: Brigitte Baudesson

Project in a Nutshell

The “Information Technologies for Shift2Rail” (IT2Rail) project is a first step towards achieving the objectives of the long term IP4 -“IT Solutions for Attractive Railway Services”, one of the Shift2Rail Joint Undertaking’s Innovation Programmes. The project aims at providing a new seamless travel experience, giving access to a complete multimodal travel offer which connects the first and last mile to long distance journeys by:

- Transforming global travel interactions into a fully integrated and customised experience;
- Providing a door-to-door (D2D) multimodal travel experience, through services distributed by multiple providers;
- Helping operators to adapt their level of service, better to satisfy customer expectations and optimise their own operations.

Project Objectives

The main concept behind IT2Rail is to introduce a ground-breaking technical enabler based on two concepts:

- The traveller is placed at the heart of innovative solutions, accessing all multimodal travel services (shopping, ticketing, and tracking) as well as connected services (guidance, additional services etc.).
- An open published framework providing full interoperability whilst limiting impacts on existing systems, without the need for centralised standardisation. This technical enabler which will be entirely set within the context of Shift2Rail IP4 will already tackle the key concepts of IP4.

WP9 Project Management

WP8 Dissemination

WP7 Technical Coordination & Pilot

WP1

Interoperability
Framework

WP2

Travel
Shopping

WP3

Booking
& Ticketing

WP4

Trip
Tracker

WP5

Travel
Companion

WP6

Business
Analytics

Project Structure

The Interoperability Framework (WP1) will provide the IT2Rail functional applications with a 'web of transportation data' abstraction of the distributed resources they will need to operate. The 'Travel Shopper' (WP2) will overcome interoperability obstacles, by protecting the customer from the fragmentation of messaging and codification standards which make travel shopping so difficult and risky in today's travel marketplace. The extended interoperability between transport modes, operators and systems offered by the Booking and Ticketing (WP3) will provide door-to-door back-end services for seamless booking and payment, allowing for a complete multimodal door-to-door traveller experience. For example, it will give travellers the ability to go through heterogeneous transport networks using cutting-edge travel entitlement technologies. In parallel, the Trip Tracker (WP4) will intercept any traffic incidents (using real-time data), alert travellers about all relevant events concerning their planned journey and if need be, propose alternative solutions to cope with such eventualities.

The Travel Companion (WP5) will provide the IT2Rail services and allow the end-user to construct a digital, customised, integrated and operable representation of a seamless transportation environment. User interaction will be shielded from differences in local protocols, procedures, customs or physical facilities and unfamiliar access and validation devices.

Business Analytics (WP6) will focus on leveraging social, mobile, structured and unstructured data to obtain valuable, actionable insights that will allow rail operators, product/service providers, traveller/transport enterprises to make better decisions in order to increase quality of service and revenues, to adapt their level of service better to satisfy passenger demand and to optimise their operations to attract and retain more customers.



credit: Fred de Gasquet

Major Benefits

Some use cases will be defined as a specific instantiation of the project's open concepts, which will benefit from a completely scalable architecture fully demonstrated in IP4. This approach addresses all the key challenges of IT2Rail, supporting a complete door-to-door intermodal travel offer and proposes a seamless integration of the very diverse current and future services for planning, one-stop-shop ticketing, and real-time re-accommodation.

Moreover, thanks to an Interoperability Framework which insulates travel applications from the standards fragmentation in multimodal transport, IT2Rail will facilitate the development of new business models, helping assure the long-term economic sustainability of these e-services.

The positive impacts foreseen by the project are:

- Impact 1 – Improvement of the economics of the Travel Service Providers and customers ecosystem
- Impact 2 – Reduction of the time to market for innovations
- Impact 3 – Enrichment of passenger experience

Contribution to Shift2Rail

In order to maximise the exploitation of IT2Rail's initial research and innovation, the project's outcomes will be shared with relevant stakeholders, applying appropriate knowledge and data management mechanisms. During the project's life, some results will need to be made available to the Shift2Rail Joint Undertaking members that have committed to undertake research activities to transform IT2Rail into the future Technology Demonstrators with more complex and wider EU/system scope and impact. As IT2Rail specifications will be designed as open deliverables, concepts, choices and recommendations presented in these specifications, they will be directly re-useable and expandable within the Shift2Rail work streams. In addition, IT2Rail will promote similar concepts to Shift2Rail for the implementation of demonstrators, such as: distributed and web oriented architectures, reliance on semantic Interoperability Framework for interfaces between technologies etc.

Partners

Project coordinator



Technical leader





Facts and Figures

Total Budget:

€12

million

(€12m EU funded)

27

Partners

Duration:

30

Months

Project Start Date:

1st May 2015

Project End Date:

31st October 2017

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