HaCon | Update #6

TPS for Finland and Switzerland

HaCon Kids App and DRT Integration

Shift2Rail Travel Companion
HaCon provides cutting-edge software solutions for public transportation, mobility and logistics. Our three business units, HAFAS, TPS and Consulting, deliver more than 350 highly qualified specialists and more than 30 years of experience for your success. Since 2017, HaCon has been a member of the Siemens family.

From trip planning to mobile ticketing and fleet management; our HAFAS product suite covers all aspects of Intelligent Transportation Systems and creates the ultimate end user experience. Each day our apps and web-based solutions receive over 100 million requests from passengers who rely on HAFAS to empower their mobility choices; this is why our software is considered the highest industry standard for trip planning throughout the world and prompted the Massachusetts Institute of Technology (MIT) to honor HaCon as one of the “50 Smartest Companies” worldwide.

HaCon’s TPS solutions for train planning and capacity management enable network providers and operators to make the most of their infrastructure. For more specialized projects, our consulting team empowers our clients to manage complexity with ease and offers customer-specific solutions for rail freight and combined transport.

Headquartered in Hannover, Germany, HaCon also holds offices in Berlin, Paris, New York and London. www.hacon.de
TPS Solutions for Finland and Switzerland

HaCon’s TPS products for train planning and capacity management enable network providers and operators to make the most of their infrastructure and significantly improve their work and business processes regarding operative timetable planning and ad-hoc dispatching.

TPS Online, the new member of the TPS family, has been developed specifically for ad-hoc train dispatching that controls and optimizes everyday rail operations. Short-term disruptions such as delays, broken shunting points or signaling systems can be processed in real time. TPS Online detects conflicts that have an impact on the entire railway network and offers automatic, semi-automatic, and manual conflict resolutions. As a result, dispatchers can now immediately respond to disturbances, for example by advising trains to wait for each other, by redirecting them or by scheduling a change of track.

The Finnish Transport Agency, Liikennevirasto, was one of the first customers to opt for TPS Online. As infrastructure manager in Finland, Liikennevirasto is responsible for the rail network as well as roads and waterways. Now, they look forward to meeting all the requirements of effective short-term traffic management with TPS Online.

The Rhätische Bahn (RhB) in Switzerland operates one of the most spectacular railways in the world. The company acts as infrastructure manager and operator of passenger and freight traffic, running in parts through a UNESCO world heritage site and including the famous Glacier Express. RhB has already successfully introduced all the “classic” components of HaCon’s TPS architecture for all phases of timetable planning – including run-time calculation and conflict detection in microscopic infrastructure, the consideration of speed restrictions during planning as well as timetable simulation.

TPS completely replaces RhB’s legacy system and seamlessly integrates special functionalities, which were to be retained, into the new IT environment. Embedding into the existing RhB software infrastructure was realized by means of an adapted railML® export interface which ensures a smooth exchange of data. © Glacier Express
Into the Future with DRT

Public transport should be in line with the actual demand for it and especially in rural areas this makes a lot of sense. In urban surroundings as well, demand-responsive transport (DRT) is already available within the multimodal mix of public transport, sharing and rental services.

When the last bus of the night has already left and walking home is not an option, DRT services come into play. Particularly in low-demand areas or at less busy times, more and more public transport operators are currently improving their portfolios with flexible vehicle fleets or by working together with private providers, such as taxi services.

The success of on-demand traffic is experiencing a major boost – especially due to digitalization in the booking and payment process. Mobility apps already offer the convenient booking of DRT services with just a simple click, while the ticket price is automatically calculated and billed via Check-in/Be-out.

**MinRejeplan with DRT integration**

Under the lead of Denmark’s national trip planner Rejseplanen and in cooperation with Nordjyllands Trafikselskab (NT), HaCon has developed the new multimodal app MinRejeplan which integrates Flextrafik’s DRT services, taxis as well as carpooling. This ensures that, even in rural areas, mobility is possible – independent of private car ownership.

Just in time for the ITS World Congress 2018 in Copenhagen, MinRejeplan provides users with additional travel options – from train, metro and even a self-driving shuttle bus to ferries and sharing services. As a special highlight, the app will provide congress visitors with an electronic ticket granting free transportation with all public modes in Copenhagen and including special discounts for sharing services and taxis.

With the intuitive drag & drop function, finding connections from A to B is a true breeze. All travel options are displayed on the overview page, from pure public transport trips to combinations with alternative modes. The results can be filtered according to departure times, prices or the fastest connection. All integrated transport means can be booked via the app.
VBB jump’s main feature is the simple and intuitive user interface tailored to meet the needs and abilities of younger passengers. HaCon developed the new application based on qualitative analyses with numerous children and their parents, interviews at schools in Berlin and extensive usability tests. By conducting comprehensive research, a variety of factors were considered during the development process, such as insights into the preferred routes and means of transport that children use, as well as how they handle smartphones in general and navigation apps in particular.

In addition to a child-friendly interface and clear structure, both children and parents are excited about the new help function that is always visible in the app: If a child has boarded the wrong bus or needs help, he or she can quickly and easily reach parents or previously defined contacts via text message or a phone call. The app then automatically forwards GPS information regarding the child’s location and the cellphone’s current battery level.

Michael Frankenberg, father of two sons, explains the idea behind the new app: “Assuming that driver’s licenses and private cars will play even lesser roles for the young generation, the importance of public transport will continue to grow. This is exactly where our Kids App comes into play: With VBB jump, children will now intuitively and safely find their way from A to B. A great premiere together with our long-time customer VBB!”

VBB Managing Director Susanne Henckel added: “We want to get children excited about bus and rail travel at an early age and support them as much as possible. Sometimes it might be quite complex to navigate through our transport system. VBB jump makes digital trip planning a breeze and paves the way for children and maybe even elderly passengers to quickly and easily get around.”

Since summer 2018, VBB jump has been navigating a younger app user group from door to door. Based on the HaCon Kids App, which utilizes the latest in safety and child-friendly innovations, the new mobility app for the federal states of Berlin and Brandenburg is now available for mobile Android devices – in a first step toward safer travel for kids. The iOS version will follow soon.
Shifting to Rail throughout Europe

Shift2Rail is the first European rail initiative to seek both focused Research and Innovation (R&I) and market-driven solutions by accelerating the integration of new and advanced technologies into innovative rail products. R&I carried out under this Horizon 2020 initiative will develop technologies to complete the Single European Railway Area.

As an associated member, HaCon has been supporting the Shift2Rail initiative right from the start with its comprehensive software implementation and integration expertise regarding train planning, dispatching and operation as well as intermodal mobility planning.

Within IP4, one of five Shift2Rail Innovation Programmes that focus on IT solutions, HaCon and its project partners Amadeus, Ansaldo STS, Bombardier, Diginext, Indra, Network Rail and Thales proudly present a new demonstrator application for Android smartphones: “Travel Companion” helps users to travel all around Europe, with cutting-edge features like multimodal routing, travel alternatives and even location-based experiences, such as on-board information and third-party offers along the route.

Starting in November 2018, the new Shift2Rail project MaaSive will continue and complement the work accomplished within the previous projects in the areas of travel shopping, trip tracking, booking and ticketing, and follow up on the development of “Travel Companion.” The project will provide additional mobility offers like DRT services for the existing IP4 ecosystem and focus on the compatibility with the Mobility as a Service (MaaS) approach. In addition, MaaSive will enhance the IP4 ecosystem by including multi-user capabilities, time and product-based best-price calculations, ticket update mechanisms and the possibility to claim passenger rights.

**Use Case**

“Travel Companion” is built around a particular use case, namely a door-to-door trip from Madrid to Berlin:

- park&ride from a Madrid address via Atocha train station to Madrid airport;
- flight from Madrid to Amsterdam;
- connecting flight from Amsterdam to Berlin (gets cancelled);
- public transport in Berlin to exhibition grounds.

The app suggests a train ride as an alternative to the cancelled flight – Shift2Rail! Travelers can easily plan their trips, make seat reservations, book and pay the ride, and, if necessary, even cancel and request a refund.

This project has received funding from the European Union’s Horizon 2020 research and innovation program under grant agreement No 730822.
TPS: Train and Capacity Planning

As an integrated modular toolbox and high-performance software solution, TPS helps railway infrastructure managers and train operating companies to significantly improve their work and business processes regarding operative timetable planning. Whether for managing network capacities, identifying route conflicts or finding solutions – TPS creates everything regarding reliable timetables, from strategic long-term planning to real-time train dispatching.

TPS facilitates the process of managing network capacities according to the regulations of the European Union. Multi-user operation is a central element in the software architecture – rights, roles, groups and users can be precisely defined. TPS provides several automated interfaces and thus optimally interacts with other systems. Customer-specific functions can be easily integrated as well.

HAFAS: Trip Planner and Travel Companion

With HAFAS applications, riders enjoy an efficient and seamless travel experience. HaCon’s award-winning system has already been downloaded more than 200 million times worldwide and features door-to-door routing including all modes of transportation, real-time information and individual push notifications. In addition to buses, trains, trams, ferries and even planes, HAFAS provides car, bicycle as well as pedestrian routing. As an advanced platform for Mobility as a Service (MaaS), HAFAS allows intermodal trip planning and integrated ticketing in several countries and major cities, including Germany, Switzerland, Dubai and the United States. HAFAS has been deployed more than 80 times in high-density and high-speed European transportation networks, setting new standards in terms of comfort, feature richness and accuracy.

Consulting: Transport and Logistics Research and Development

HaCon consults and assists its customers with projects in rail freight transport and in particular combined transport. This interdisciplinary consulting team of transport engineers, geographers, lawyers and IT specialists puts great emphasis on an approach that is both integrated and results-oriented. HaCon has many years of extensive project management experience for the European Commission and other project sponsors.

HaCon’s service portfolio includes the requisition and negotiation of subsidies, the completion of financial and administrative formalities and the overall coordination of all parties involved such as railway companies, shipping agents, institutions and associations.