



News Service

Pioneering spirit for the mobility and logistics of tomorrow

For some 7.5 million people in Germany, Deutsche Bahn is not just a train company but increasingly also a digital travel companion. DB is bringing new services to the rail network, to smartphones and to completely new forms of mobility.

(Berlin, January 2018) The autonomous electric bus per app order and go to the train station. On the way the shuttle collects other passengers with similar routes. Still that is future music. But Deutsche Bahn is working to bring this future within reach: In Bad Birnbach, DB operates the first autonomous bus route in Germany and thus bringing autonomous driving into public transport. More: The new business "ioki" realizes individual mobility on demand. With on-demand services, which make public transport more attractive overall. 2018 about in Hamburg, when "ioki" is part of the DB Smart City partnership with Hamburg a driver-based on-demand service with Public transport and a test field for an autonomous shuttle.

With its self-driving road vehicles, DB is demonstrating the same visionary spirit that drove the construction of the first railroads more than 180 years ago. The much-vaunted electric mobility has long been a reality on the rail network – for over 120 years in fact. The first big step toward digitalization came in 2002. With its Surf-and-Rail fares, DB was a pioneer in online ticketing. Suddenly, buying a ticket no longer meant leaving the house. In 2006, the first smartphone app was already setting new benchmarks, long before Apple brought the first iPhone onto the market. Today, DB Navigator offers almost every conceivable service for rail passengers. Voted Germany's second most popular travel app (after Google Maps) in a recent survey, DB Navigator is also the fastest-growing booking channel and is being constantly enhanced.

A recent example is the "Comfort Check-in" feature that DB is testing on several ICE trains. Travelers use the DB Navigator app to check themselves in. This means they no longer need to have their ticket inspected by the train crew and can enjoy the journey in peace, immerse themselves in a book, finish some work or take a nap.

In the logistics world, too, the aim is to make transport as easy and customizable as possible. That is why DB has invested some USD 25 million in uShip, an online platform for forwarding and transport services. This collaboration enables DB Schenker to get goods to customers faster and more efficiently. The Drive4Schenker land transport service developed by uShip makes it possible to manage a transport order in real time entirely via the internet.

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DB seizing the opportunities of digitalization in all their dimensions

Deutsche Bahn wants to play a major role in shaping the mobility and logistics of tomorrow. Innovative digital technologies will play a key part in this. Internet of Things (IoT) applications, drones, 3D printing and virtual reality are helping to achieve the aims of the “Zukunft Bahn” program, which sets out to provide better quality, punctuality and customer focus. Digitalized processes, sensors and algorithms already enable predictive maintenance of trains, tracks, elevators and escalators, along with more flexible and efficient solutions for transporting, storing and distributing goods.

One example of this in the area of track infrastructure is the diagnostics and analytics platform DIANA, a permanently connected ECG machine for DB's switches. Sensors on more than 10,000 switches send a report whenever they notice irregularities in the movement of the switch. Use of 3D printing is also gathering pace. By the end of 2018, the plan is to print as many as 15,000 spare parts for trains, from air grilles to headrests. In freight transport, more than 600 "intelligent locomotives" are in service on the German rail network, autonomously collecting data on their condition in a form of automated health check. Drones, too, are in frequent use at DB. Images and data are gathered from a bird's-eye perspective, enabling accurate forecasts - whether on the state of trees adjoining rail lines or the condition of bridges. This means that potential disruption to trains can be averted before it happens.

Incubator for innovation and new business models

New technologies are not only enabling further digitalization of the core business of rail transport, but also opening paths to new business models. This is apparent in the mobility market like almost no other. In Silicon Valley (USA) alone, more than 60% of start-ups have a focus on mobility. To create a digital ecosystem that offers fertile ground for innovation and for the inventors and entrepreneurs behind it, DB is working with start-ups and industry partners and embracing the entrepreneurial spirit within its own business.

Since 2015, DB's support for start-ups has centered on the DB StartupXpress program. Young entrepreneurs with an idea for a specific improvement for rail passengers are supported over a 100-day period with mentoring, coaching, work spaces and EUR 25,000 of start-up funding. DB mindbox in Berlin is Deutsche Bahn's main start-up location. Here, entrepreneurs and developers find the freedom they need - as well as access to data, markets, customers and global networks: in short, the ideal conditions to realize their idea. With around 30 start-ups, the DB mindbox is already seeing new products developed or made market ready. These are designed to make rail travel more attractive.

Together with the American start-up investor Plug and Play, DB has also initiated the innovation platform BEYOND1435 in order to promote mobility innovation in other areas too.

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Working with industry and technology partners such as Alba Group, Siemens AG, SBB, TUI Group and Bombardier Transportation, BEYOND1435 aims to scale up disruptive start-ups with the potential to kick-start far-reaching, cross-industry change. In 2018, DB is launching its Group-wide intrapreneurship program, also under the umbrella of BEYOND1435. Employees receive the tools they need to develop their digital business model, initially without any entrepreneurial risk, and then to make it fly by spinning it off as a start-up. The staff receives support from professional coaches and start-up experts.

EUR 100 million of venture capital

Deutsche Bahn Digital Ventures GmbH systematically supports new data-based business models with minority holdings in both external and internal start-ups. Some EUR 100 million of venture capital has been made available until 2019. Alongside the technological focus on big data, artificial intelligence and the IoT, the main emphasis is on the transformative energy that entrepreneurs bring to the market and their ability to establish forward-looking customer solutions on a broad front in three key fields: mobility, logistics and smart cities.

The DB Digital Ventures portfolio includes the green ride-sharing service "CleverShuttle" and the multimodal journey comparison platform "Qixxit." So far in 2017, it has invested in three further start-ups: what3words, Connected Signals and Talixo.

"What3words" from London divides the world into 3 x 3 meter squares and assigns random three-word addresses to each square. The result is a simple and highly accurate address system covering every part of the globe, even places without house numbers or zip codes. "Connected Signals" from Oregon (USA) monitors and analyzes the red and green phases of traffic lights. Intelligent processing of this information enables it to optimally manage transport - from individual cars to autonomous vehicle fleets and entire cities. The Berlin-based startup "Talixo" brings passengers and vehicles together on a booking platform, pooling taxi and vehicle providers for customers in 91 countries and 560 cities. The benefit: common standards of quality and safety all around the world and standardized booking and billing processes.

Finding new answers and shaping mobility in the digital world

Digitalization is changing everything in the mobility market - customer needs, modes of transportation, energy sources and platforms. A fundamental question will remain, however: how should people and goods get safely and reliably from A to B while protecting the environment? Finding new answers to this question is the key to entrepreneurial success in the age of digital mobility, and one of the main missions for DB. Deutsche Bahn's young digital ecosystem shows once again that the pioneering spirit is alive and well.

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