How Did Deutsche Bahn and RIB Get Together?

iTWO and Deutsche Bahn started the partnership in 2014. Back then DB was looking for a new enterpri-se project management solution because their old system could not fit the needs of today’s market any more. Further than that, the Group wanted to step up. Subject of the tender was brought up in order to provide a standard software for planning and controlling of infrastructure projects of the DB Group. The Group issued a European-wide tender in 2014 and launched partnership with RIB iTWO. It’s a big decision for a company like Deutsche Bahn to change a running system because they had about 50,000 projects up and running on a daily basis. The partnership was followed right away by DB’s transformation journey: the transferring of existing DB AG project data, processing an existing computer-based training and implementation and realization of training measure for employees, integrating iTWO into the IT system of Deutsche Bahn etc.

By 2016 the Group has already transferred more than 40,000 projects from the old world into the new world and “everything’s running, nothing stops and nobody heard about anything wrong. Everything works very well.” according to Mr. Mathias Pott-Stahmeyer, Program Manager of DB.

The infrastructure companies of DB work together on their goals to implement BIM as planning standard for shared goals:

- Altering planning quality
- Adherence to schedules, costs and quality
- Increase in efficiency
- Supporting public participation
- Integrated and sustainable lifecycle management

“We bank on standards software, it’s iTWO, I think it’s such a standard software, whether the design and construction phase, also the facility management.”

Niko Warbanoff
Head of International Business at Deutsche Bahn AG and CEO of DB Engineering & Consulting
Take a BIM-driven 5D Journey at DB

DB changed the old working procedure into 5D BIM with iTWO.

Pilot Project: Rastatter Tunnel

Rastatter Tunnel is a railway tunnel that lies in southern Germany. It's a 2-tube, 4.3-meter-long project with 700 million Euros of investment and is going to be done in 2022. It is the largest tunnel in terms of cross-section to be built on the high-speed line and begins east of Ötigheim and ends at Niederbühl. The distance between the track-centres of the two single-track tunnels is 26.5 metres and they are linked at 500 metre intervals by cross passages. To the north and south are trough structures with a length of 800 or 895 m connecting to the rail tracks on the surface. The tunnel is the centerpiece of a 17-kilometre-long (11 mi) section of new line, which is designed for operations at 250 km/h. The long-distance passenger services and part of the rail freight traffic passing through the corridor are expected to use it.

The project was started in May 2016 and managed in iTWO and iTWO 5D lab. iTWO carries out the simulations of the project before physical execution and enables the full management of 5D construction process. All stakeholders can visualize and evaluate all elements of the entire lifecycle of the project, ensuring maximum productivity and minimum waste.
Pilot Project: Filstalbridge
Another pilot project of BIM planning at DB is Filstalbridge. It’s a 485-meter-long bridge with an investment of 50 million Euros, and it’s also managed in iTWO.

Pilot Project: Reconstruction of Munich Central Station
Munich Central Station is one of the biggest train stations in Germany. It sees about 450,000 passengers per day, which puts it on par with other large stations in Germany. The project is planned in iTWO 5D too.

First 5D Project: Bahnhof Horrem
The very first project planned in iTWO 5D was Bahnhof Horrem. Horrem is a cabin-free “Green” station. It’s also the very first cabin-free operated station in Europe. State-of-the-art ecological standards are being implemented in this directional project. This barrier-free Green Station combines architectural transparency with ecological consistency, intermodal function and digital comfort details.
Second 5D Project: ICE Plant Köln Nippes

DB’s second iTWO 5D project was ICE plant in Köln, which is going to be the new ICE 4. ICE 4 is the very newest generation of fast train in Germany. It’s also cabin-free and will be completed in 2017.

Added Values

DB has company-wide Implementation of iTWO on more than 50,000 projects in 2015 – 2016. Through iTWO 5D, the company could achieve cost security before tender, enhance planning quality and transfer the defined data in operation and maintenance.

“In the end, what we see is all of our goals were met: we met the cost, we got the quality that we wanted and we got the support of public participation.” Stahmeyer comments, “I think 5D works, 5D works for Deutsche Bahn and we don’t want to stop at 5D.”

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Mr. Mathias Pott-Stahmeyer
Program Manager Expansion Digitization in Plant Management
Deutsche Bahn AG