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SBB CFF FFS

**STEP-BY-STEP DIGITALIZATION
OF RAIL OPERATIONS
SUB-PROJECT "GLEISSPIEGEL"**



ADESSO SUPPORTS THE DIGITALIZATION OF SBB'S RAIL OPERATION

The operational staff of railway production use a variety of different end devices. The information doesn't come from standardised channels, and some tools are outdated and end-of-life. To overcome this fragmentation, the aim is to simplify work and speed up processes with more consistent and user-specific optimised digital assistants. The development of these assistants is divided into various epics, which are developed and put into operation in parallel.

CHALLENGE

"Gleisspiegel" (track mirror) was the first large-scale project implemented by the adesso team together with Swiss rail company SBB. The parking locations of individual wagons and multiple units were previously managed manually by SBB staff on an Excel spreadsheet and only consolidated as a complete overview when the workstation was accessed. Decisions regarding shunting movements, control and steering were made on the basis of this Excel list. The aim of this project was to replace this Excel list with a digitized "Gleisspiegel" application.

SOLUTION

The team developed a solution with two frontends. The mobile app allows shunting personnel to scan and digitally record stabling efficiently and without delay. The web application was primarily developed for the steering and control staff so that they could plan further use of parked rolling stock with the most up-to-date information at all times.

BENEFITS

This simplified, digital operation leads to more efficient shunting processes and up-to-date data at all times. Device sync across both applications ensures that steering, control and shunting have the latest information at all times, eliminating the need for subsequent corrections in planning. The additional information that can be recorded during shutdowns reduces the additional daily work involved in maintenance coordination.



More efficient
recording



Reduced subsequent
corrections



Up-to-date data
at all times

MORE ON THE SOLUTION

After commissioning this project, the team is responsible for further development and 2nd level support. The solution has two frontends as noted above: A mobile application and a web application. Both frontends access MongoDB's Device Sync Services and MongoDB's Atlas Service directly, without having to go through an additional backend. The mobile application is also offline-capable thanks to the use of Device Sync, which makes it possible for shunters to record their movements even on remote tracks without a mobile network. A Spring Boot backend is also being created for peripheral system connections within SBB and certain master data import processes.

METHODS AND APPLIED TECHNOLOGIES

The adesso employees provide support primarily through their experience in backend technologies, software architecture, business analysis and the Scrum Master role.

[Agile Projektmethodik](#) | [Scrum SAFe](#) | [MongoDB](#) | [MongoDB Device Sync](#) | [MongoDB Realm SDK](#) | [Flutter](#) | [Mobile Development](#) | [WebApplikation](#) | [Spring Boot](#) | [Java](#) | [OpenShift](#) | [Docker](#) | [Cloud](#) | [REST](#) | [Renovate](#) | [Sonar](#) | [Jenkins](#) | [GIT](#)



” *The newly-assembled team built a user-centered Minimum Loveable Product in nine months, with increases in quality and effectiveness achieved in operation. This was achieved through bringing together the required skills in a high-performance team consisting of SBB and adesso experts.*”

Marc Dettwiler, Product Owner, Team Galileo SBB



ABOUT THE CUSTOMER

SBB AG is the largest public transport company in Switzerland and one of the country's largest employers with 34,200 employees. Its public services include passenger transportation and rail infrastructure. SBB transports 1.16 million passengers and 180,000 tons of goods every day.



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