DB CARGO

On Track with Advanced IoT Solutions

CLIENT BACKGROUND

The DB Cargo Business Unit manages Deutsche Bahn's Europe-wide rail freight business. Its network comprises 16 subsidiaries in various countries. With a strong network of its own subsidiaries, plus many partnerships and joint ventures with partner rail companies, DB Cargo offers almost full rail freight coverage throughout Europe. With some 70,000 freight cars and 2,000 locomotives, DB Cargo has the largest fleet on the European continent.

OPPORTUNITY

German railway company Deutsche Bahn has been at the forefront of innovative technologies for many years. Several years ago, its DB Cargo business unit began pushing at the edges of advanced Internet of Things (IoT) technologies, which offered the promise of richer information and better control over 10 GB of daily sensor data. Connecting real-time sensor data from freight cars and locomotives, DB could have more detailed, up-to-date information about its fleet and optimize internal processes. At the same time, the data-rich environment could also enable DB Cargo to offer innovative, revenue-generating services to its customers.

The company began working with Splunk, a Silicon Valley-based provider of analytics solutions, and other eco-system partners to develop new IoT-based functionalities and solutions for its fleet. Following a period of initial pilot implementations, DB Cargo was looking to scale up and industrialize across its assets. Being the biggest strategic implementation partner of Splunk and having a long track record with the company, Accenture was chosen to work with Splunk to industrialize and scale DB Cargo's IoT capabilities with agile methodology.

SOLUTION

An important factor in being able to scale IoT and analytics capabilities across DB Cargo's huge fleet at a reasonable cost was Accenture's innovative onshore/nearshore operating model — an "IoT Factory"—supplemented by Splunk Professional Services and Accenture Consulting expertise onsite. The IoT Factory approach balances the need of an onsite innovation culture with highly scalable and cost efficient agile delivery methodology.

Solutions developed in early phases of work included a Splunk dashboard to monitor data received from the telemetry devices to monitor the accuracy, uniqueness and quality of data. High data quality enables DB Cargo's customers to monitor freight cars and loaded goods more precisely.

Realized use cases include (non-exhaustive):

Device lifecycle monitoring to validate the data quality of the IoT devices and their adherence to contractually defined limits and accuracy.

Wagon shock detection to sense possible damaging shocks to a wagon/railroad car at customer sites for improved claims management.

Locomotive monitoring that enables the visualization of locomotive data so that the company can analyze sensor data prior to the arrival of the locomotive in a repair workshop and enable predictive maintenance cases.

RESULTS

Through its ongoing work with Accenture and Splunk, DB Cargo can more easily scale its solutions in a cost-effective way, overcoming the previous challenge of having multiple, high-cost resources from multiple partners. In partnering with Splunk and Accenture especially the quality of data and time to market has improved dramatically. DB Cargo can leverage new kinds of solutions across its fleet to improve planning and decision-making, and to generate new revenue streams.

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