BCW Bosch Connected World 2024: Digital Twins 4 Dataspaces

By Chris Schlueter Langdon, 2024-03-02

Bosch Connected World

Bosch Connected World (BCW) is an annual conference for showcasing cutting-edge innovations and advancements in the realm of the Internet of Things (IoT) and connected technologies. It is hosted by Bosch, which was was ranked as the world's No. 1 automotive supplier in 2022 with related revenue of around 52.6 billion euros in its 2022 fiscal year (Statista 2023, link). At Bosch Connected World, industry leaders, experts, and innovators converge to explore the latest trends and discuss how connected solutions can address real-world challenges (see Figure 1 for 2024 exhibitors). The event is hosted in a special location: Station-Berlin (info, link; video, link), with parts build in 1875 as a key element of the larger, old Anhalter Bahnhof at Gleisdreieck complex, one of the world's largest railway junctions in the ealy 20th century (photo, link), just south of the famous Potsdam Plaza in central Berlin.
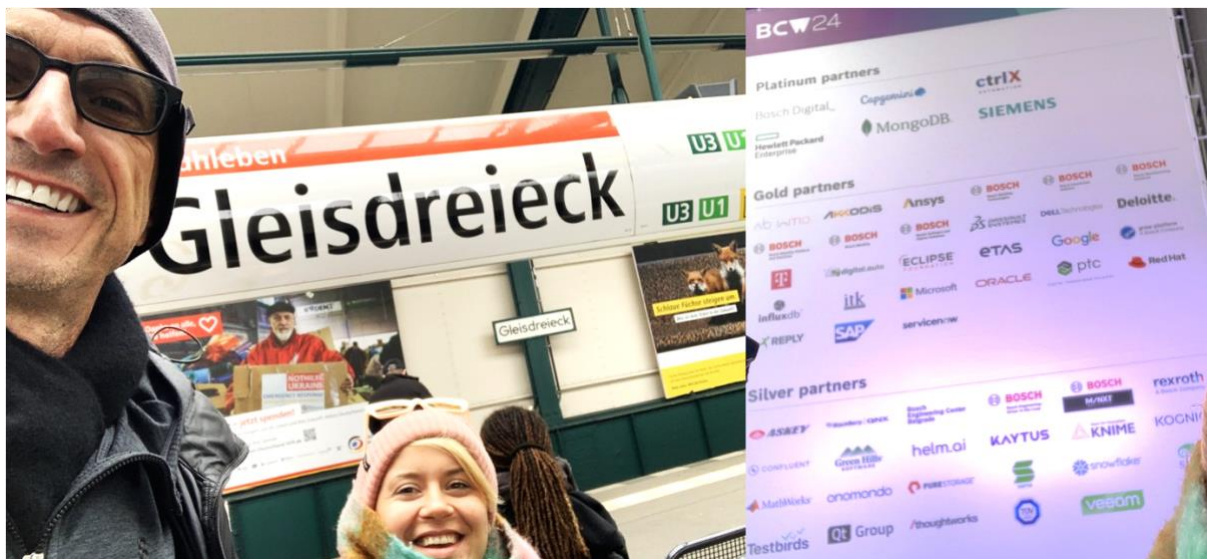

Figure 1: Venue at Berlin's Gleisdreieck and 2024 exhibitors (Chris Langdon and Nina Popanton, Biz Dev at Deutsche Telekom's T-Systems)

Bosch – T-Systems Partnership: Digital twins for dataspaces

Bosch executive board member Dr. Tanja Rueckert announced a new partnership between Bosch Connected Industry and Deutsche Telekom's T-Systems subsidiary on BCW's center stage (see Figure 2, upper left). It is focused on integrating digital twin capabilities from Bosch with dataspace connectivity products from T-Systems for the manufacturing industry. T-Systems provides the infrastructure and 'data phone with SIM card' for connecting to

decentralized data ecosystems to exchange data with built-in data sovereignty protection (see Dataspaces 101). Bosch Connected Industry contributes the technology to manage digital twins. The Digital Twin Registry from the Bosch Semantic Stack can best be described in simple terms as a 'telephone book' for digital twins (see Data products: Digital twins).

Figure 2: Partnership announcement, the deal, and product launch on stage

Super-economics: 2 value levers – vertical and horizontal

This 'data phone' with digital twin 'phone book' allows a user to participate in a data ecosystem like Catena-X. Instead of making calls like in a voice dialtone network a user can engage in data exchange in order to participate in use cases. One prominent use case is CO_2 emission or product carbon footprint (PCF) tracking along a product's entire supply chain from one part supplier to the next one upstream. A Catena-X based data ecosystem provides the standards to facilitate such product-level data sharing across all companies. A first such data chain has been launched at the CES 2024 in Las Vegas starting with a component from Ford Motor Company (see video by IBM, research note). Companies stand to gain two significant advantages:

- First, a "vertical" advantage, as users can leverage the same digital twin template along a product's entire supply chain, encompassing the entire process from raw materials upstream at the start of a supply chain to the end product or service downstream
- Second, a "horizontal" advantage of "reuse" of a product's digital twin for multiple use cases. For instance, a company can initiate a digital twin for PCF tracking, and later augment it for quality management functionalities. The latter allows for the efficient tracing of quality issues from their source downstream into the final

product. The strategic utilization of a digital twin in this manner can lead to cost savings on recalls by precisely identifying and selecting only the affected products.

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Impressions from our BCW presentations and showfloor

- Announcement by T-Systems: [Link](#)
- LinkedIn post by Bosch: https://bit.ly/BoschConnectedWorld2024_T-Systems
- LinkedIn post by Chris Langdon: https://bit.ly/BoschCW2024_Dataspace-DigitalTwins