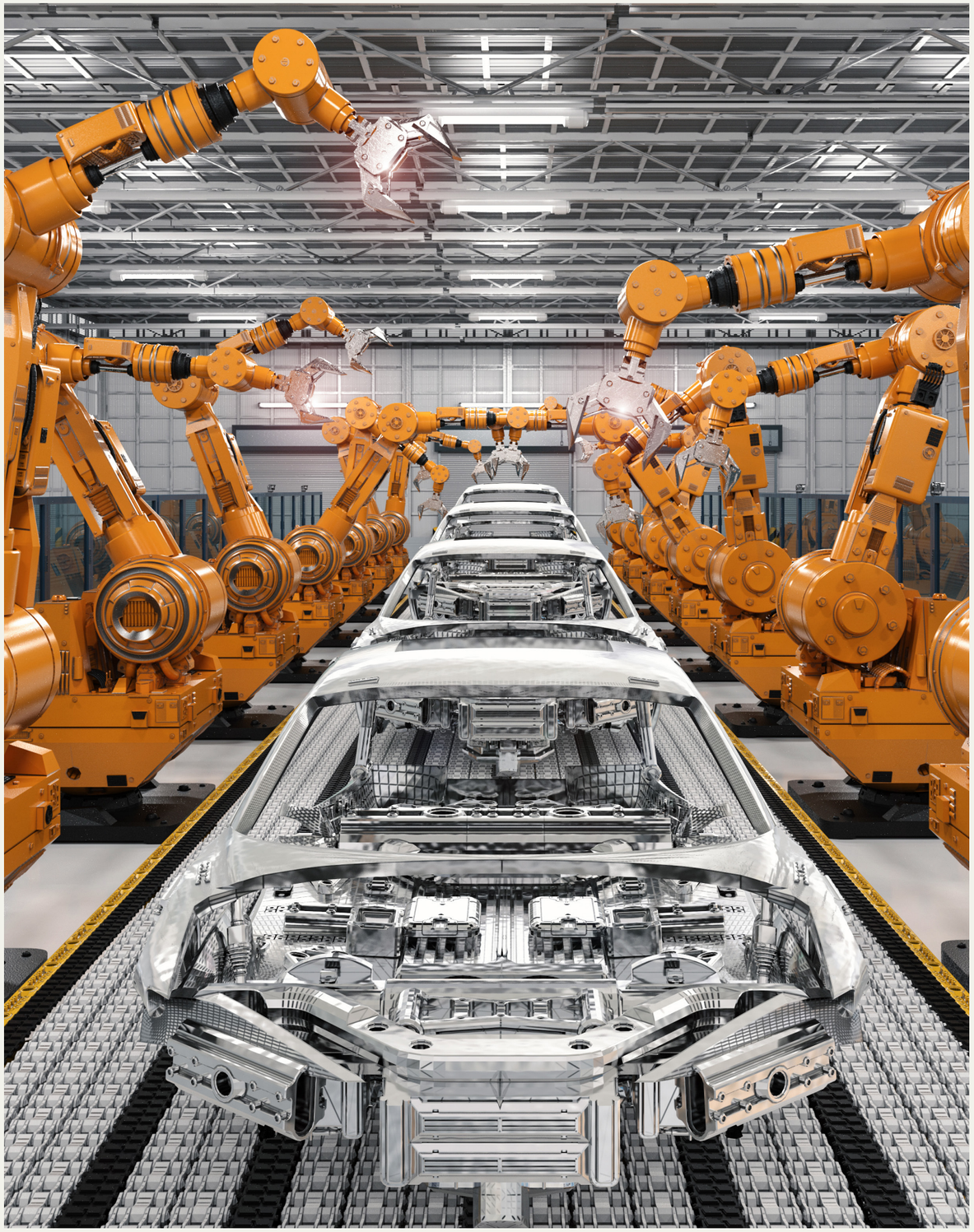
Avery Dennison Smartrac
In partnership with Turck Vilant Systems

Case study
June 2023



Advanced Manufacturing Empowered by RFID

German car brand is building a data asset on safety components using RFID.

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“Manufacturers in industries such as automotive and electronics, nearing the tipping point of digital adoption, are achieving even faster and more sustainable change.”

AD Global Supply Chain Research, 2022

A leading German brand is using RFID to improve the quality of its information to improve vehicle safety. On new models, they can access detailed information on every component relevant to safety, for example, the airbags. In the future, if a vehicle is involved in an accident, it is possible to retrieve all the relevant information on a single component, including who manufactured it, in which facility, and in which batch. If a part is considered a safety risk, it is then possible to identify all the vehicles manufactured using this specific batch of components and activate a recall.

The Challenge
Automotive production lines are challenging environments to implement new wireless technology based systems. A successful solution needs to perform in a dynamic, metal rich environment, possibly with extreme heat variations, wet and dry conditions, and space restrictions.

The Solution
Advances in RFID technology and reading systems have made it possible to successfully integrate automated RFID reading at almost every assembly stage. For this German brand, up to 50 components are tagged with RFID labels, and the RFID system must identify all of them during production. The components include safety-related parts such as seats, airbags, engine parts, and cables. RFID gates along the production line automatically register the assembled car part and log it into the database for that vehicle.

Process optimization is also improved. For example, using the automation provided by the automatic identification of RFID tags (rather than a manual barcode scan) reduces time per assembly stage — scanning each component manually in stages where every second counts would be too time-consuming.

For the car brand, the value of RFID extends right along the supply chain, and in all future Request For Quotations, suppliers will be required to deliver components equipped with RFID tags. The company plans to complete this global RFID implementation in 2023, and it will spread across eight factories in five countries. High quality data today is driving a safer future tomorrow.

The Result
- Superior data quality
- Up to 2x production throughput
- Optimized manual resources

The Benefits
- Cost savings
- Improved data quality
- Compliance

To learn more about how Avery Dennison RFID solutions can help your business, visit rfid.averydennison.com

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