

## AUDITING IN THE AUTOMOTIVE INDUSTRY

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**Product recalls still occur fairly often in the automotive industry, despite increasingly stringent quality assurance requirements in both vehicle and parts production. That is one of the reasons that manufacturers need a good data management system to provide end-to-end proof of adherence to quality standards.**

Harmonised quality standards and processes help maintain competitiveness in the automotive industry and gain the trust of customers. High vehicle quality translates to high reliability, and that can be a decisive criterion when deciding which vehicle to buy. People need to be able to depend on their vehicles and they have come to expect certain standards. The level of quality on offer is a significant factor when competing for customers. That is why vehicle manufacturers continually look for ways to optimise processes and improve quality throughout the entire supply chain. From parts supply, through every stage of vehicle manufacture, all the way to customer aftercare.

#### **Digitalisation throughout the value creation chain**

As the digitalisation and standardisation of Industrial IoT processes moves on apace, enormous volumes of data are being collected. "Big Data" of this kind can be used for many purposes, including statistical analysis and as proof of adherence to standards. Data is created throughout the vehicle supply chain. Automobiles are computer-designed, and digital technology is the key factor in all processes that follow. From calculating the parts and materials needed to controlling and monitoring production, distribution, sale and maintenance. The kinds of data created include graphical, CAD, commercial, operational, usage, due date, ERP and much more. The data is created and managed in numerous different databases, then collated using custom software solutions. For example, ERP systems contain commercial information, CRM systems store customer information, and knowledge bases contain and manage owner manuals, service schedules and FAQs. The latter can be made available online to specific customer groups. There are also MES systems that record production data, including condition monitoring data.

#### **Data management in the focus of auditors**

Automobile manufacture is a highly automated sector. And with the advent of the Industrial IoT, it is set to become more and more digitalised. Automation components such as PLCs, HMI terminals, robots, drives and inverters are all computer controlled. Behind everything is a multitude of computer programs, each of which is continually being changed. Whether commissioning a new production line or specifying the details of customers orders, each new software version generates data that needs to be documented and managed. Data that can be used as proof of quality, with one of the most important roles here being played by the control programs of automated equipment.

A large number of automobile manufacturers and their suppliers are using the versiondog data management system from AUVESY to manage the device data of a wide range of automation equipment manufacturers, including Siemens, KUKA, Schneider Electric, Mitsubishi Electric and Rockwell. This software solution provides advanced version control and documentation of the control program data of equipment from these and many other manufacturers. In the event of problems, it is easy to see when a change was made, who made it and why it was made. Program data is stored at change points by the data management system and cannot be subsequently changed. This is invaluable for an auditor as it adds a great deal of certainty to the audit process and significantly eases the process of providing proof of quality in production. Work currently being

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undertaken by those in charge of IIoT-related matters at the ZVEI (the German Electrical and Electronic Manufacturers' Association) show us the direction that data management could take in the future. They are busy developing a data management shell called RAMI 4.0 (the IIoT is also known as *Industrie 4.0* in Europe, hence the "4.0" in the name). A universal communication protocol makes many new connections possible. Between the customer and production control, for example. This kind of connectivity opens up completely new value-creation opportunities.

The software specialist AUVESY provides strong support for the automotive industry in these times of rapid change. Its versiondog data management system is there to ensure that quality assurance requirements for automation equipment continue to be met. Digitalisation presents us with new challenges every day. To keep up with the newest developments, AUVESY regularly invites its customers to working group meetings to ensure that its data management system remains at the forefront of quality assurance.

**[www.versiondog.com](http://www.versiondog.com)**

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