DC SMARTER

Minor disruption, expensive production downtime

How global manufacturers protect their production networks

CASE STUDY

PROJECT OVERVIEW

- CUSTOMERS: Manufacturing companies operating worldwide
- INDUSTRY: Food and Automotive
- DIGITALIZATION LEVEL: High, strong dependence on IT systems

A globally operating company runs production sites worldwide. In all production halls, network devices are installed in dedicated racks. Due to on-site modifications, components were replaced without documentation—an expensive oversight in the event of failure! Identifying the affected component takes time, and if production halts during this process, it incurs significant costs.

Two manufacturing companies from different industries—automotive and food—have opted for an AI-based software solution to maintain a reliable overview of their decentralized IT systems at all times: DC Vision, the IT infrastructure management software from DC Smarter, enables even untrained users to fully capture the components of a rack in less than ten minutes. The collected information is seamlessly mapped into a digital twin and stored in the IT asset management system. In case of failures or attacks, the affected components can be immediately located, preventing costly downtimes.

THE CHALLENGE

ACHILLES' HEEL: NETWORK TECHNOLOGY

Operational technologies (OT) are used across industries to control production facilities. In the context of Industry 4.0, these facilities are typically network-connected to enterprise IT to process and store valuable data in real time. However, this information gain comes with high risks concerning the operational reliability of the entire production facility.

A Siemens study (2022, Senseye study "The True Cost of Downtime 2022") estimates hourly downtime costs ranging from $39,000 in fast-moving consumer goods manufacturing to $2 million in the automotive industry. Against this backdrop, it is essential to regularly maintain and document the network components and storage systems distributed throughout factory halls. For manufacturing companies, this requirement often presents a significant challenge.

For example, an automotive manufacturer operates more than a dozen server cabinets across its extensive factory halls. Control units must be installed close to robots to minimize latency. When facilities are modified or maintained, changes are frequently made to the distributed server cabinets without documentation. Cable routing is altered, or different ports are connected, leading to recurring error messages that require time-consuming troubleshooting.

For the food manufacturer, the challenge lies in decentralized production structures. The company produces food products at numerous global locations, yet these sites typically lack dedicated IT teams. Local teams sometimes modify the production facilities themselves or rely on external service providers, often without documenting changes to the IT infrastructure. As a result, when a disruption occurs, it took two hours just to locate the affected network component!

THE SOLUTION

CLEAR DOCUMENTATION

Both companies share a common problem: they lack reliable and complete information about the components operating in the server cabinets within production or other locations connected to the corporate network. While a logical network infrastructure map may exist, the physical location of components and their connections are either not clearly assigned or recorded in outdated spreadsheets. Independently, both companies found a suitable solution in DC Vision.

The software from DC Smarter offers maximum ease of use thanks to its augmented reality (AR) integration. Hardware in racks is easily scanned using a tablet, and the integrated AI-based image recognition accesses an extensive database to establish the necessary connections.

Ismar Efendic, co-founder and CTO of DC Smarter, recalls with a smile:

> **"** We offer potential customers the opportunity to start with a pilot project. An IT employee at the food manufacturing company took this opportunity and timed the process. He was visibly impressed that all components of the rack were documented in just ten minutes. **"**

DC VISION

DC Vision integrates Data Center Infrastructure Management (DCIM), IT Service Management (ITSM), and AI-driven tools through API-based interfaces into a single platform. By integrating IT Asset Management systems, DC Vision provides real-time insights into infrastructure, enabling proactive monitoring and optimization. The integration of ITSM tools ensures an automated and synchronized service management process.

Using mobile devices such as tablets or augmented reality glasses, hardware components are visually captured within seconds. The integrated AI compares data with existing information and creates a digital twin of the infrastructure. In case of a failure, the IT team can respond immediately and better defend against cyberattacks. Additional AI-driven capabilities within the platform help facilitate decision-making by predicting potential problems and offering intelligent suggestions to prevent them.
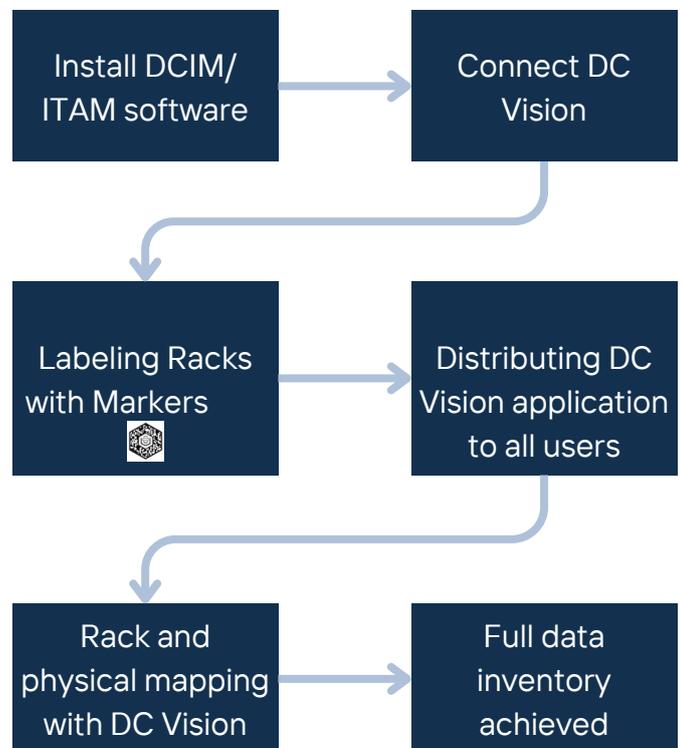
A UNIFIED VIEW

The food manufacturer was convinced not only by the short documentation time but also by the seamless and efficient integration of the software into higher-level DCIM (Data Center Infrastructure Management) solutions. The data captured with DC Vision can be directly integrated into standard solutions, and any changes recorded in DC Vision are automatically updated in the DCIM system.

To ensure the software's usability across multiple global locations, a responsible person is assigned at each site to manage the software. Regular audits ensure the long-term reliability of the data.
The automotive manufacturer directly equipped its on-site technicians with DC Vision. With every rack intervention, changes are immediately recorded, ensuring that connection documentation remains up to date at all times.

Install DCIM/ITAM software → Connect DC Vision → Labeling Racks with Markers → Distributing DC Vision application to all users → Rack and physical mapping with DC Vision → Full data inventory achieved

THE RESULTS

QUICK RESPONSE IN CRITICAL SITUATIONS

Although both companies faced different initial challenges, they had a common objective: to minimize the risk of business-critical failures and improve rapid response capabilities to ensure business continuity. Both companies successfully achieved this goal with DC Vision. Ismar Efendic explains:

> " The automotive manufacturer gained an overview of all connections and cabling across different production sites. The food manufacturer achieved transparency over its IT infrastructure at all global locations. We supported both companies during the implementation phase with training and consultation. Regardless of the industry, manufacturing companies of all sizes benefit from the speed and flexibility of our AI-based software, which reduces data capture time per rack by more than 80%. "

80%

This ensures the software's scalability. The software licenses are rented on a yearly basis and can be adjusted flexibly. This licensing model offers large enterprises the opportunity to start at select locations and gradually scale the solution.

For medium-sized companies, it provides an economical entry into a modern and efficient AI- and AR-based solution that significantly contributes to securing production and overall business operations.

INSPIRED BY THE DC SMARTER CASE STUDY?

Avoid costly production downtimes and secure your IT infrastructure – with DC Vision!
We offer free and non-binding consultations.

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