



Quality Assurance with Industrial IoT

Realizing Kellogg's Smart Factory Vision with SAP Digital Manufacturing

Client Success Story



Michael Dean, Director Global Power,
Control & Information Systems, Kellogg



Camelot helped us to digitize our quality control process by creating an easy-to-use, transparent and real-time application.



The Challenge

Improving Production Processes at Large Scale

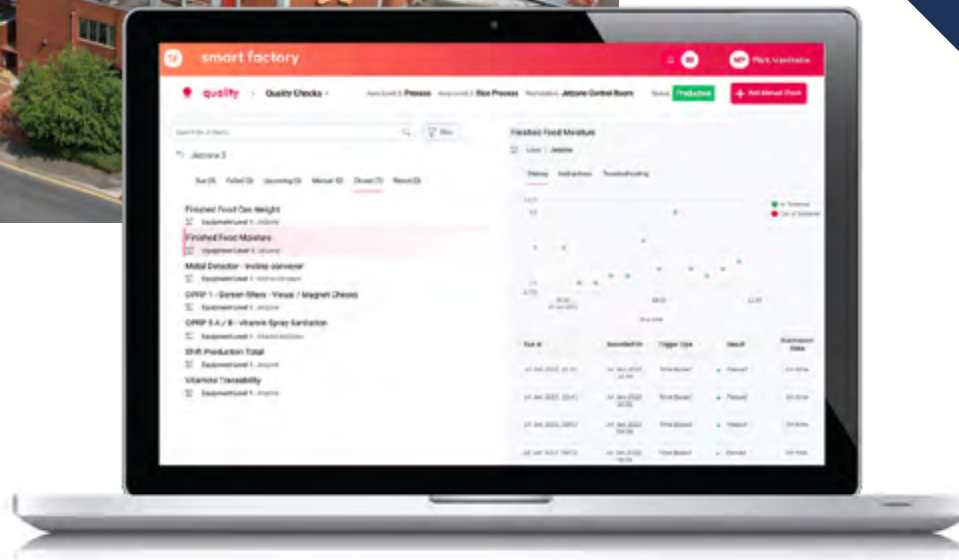
The **Kellogg Company** is one of the world's largest cereal producers, with net sales of approximately \$14.2 billion in 2021 and well-known brands such as *Pringles*®, *Special K*®, *Kellogg's Frosted Flakes*®, and *Kellogg's Corn Flakes*®. The quality of the foods is of utmost importance to Kellogg, placing high requirements on quality control. In all of its facilities, Kellogg has prioritized improving production processes and modifying equipment to reduce food waste.

At Kellogg Europe, the paper-based recording of the current quality indicators and the control and evaluation of the documented values required considerable effort. Analysis and reporting of the recorded values could only be done with a time delay.



THE CONSEQUENCE:

- No real-time insight in quality data
- Late detection of quality issues
- Increase of waste in the event of missing quality standards



The Project

Preparing for Future Business Requirements

The main objective of the project was to ensure high product quality, avoid manual work, reduce waste and increase productivity by implementing automated quality assurance processes on the existing SAP Manufacturing Integration & Intelligence (SAP MII) system in the form of a Quality Assurance application based on SAP Digital Manufacturing.

With the help of DigitalExperience², an innovative, agile Camelot approach for an accelerated digital transformation, solutions were ideated and validated jointly with the client.

The results were then transformed into a testable prototype. Subsequently, the prototype was validated and implemented with the Industrial IoT solution SAP MII including integration of PI System, production data base, shop floor and mobile devices as well as simplification of the user interface.

The project and the resulting quality assurance solutions are part of Kellogg's Smart Factory program. Kellogg runs several manufacturing sites across Europe. The related home-grown IT system was not able to support Kellogg's future growth and success. Smart Factory is a Manufacturing Execution System (MES) solution aiming to significantly increase visibility and transparency, drive operational excellence and business agility while at the same time prepare for future business requirements.



Mike Conduit, Project Manager, Kellogg

With the expertise of the Camelot team and the SAP MII platform, we were able to provide an application which enables us to easily control, document and improve the quality in our production processes worldwide.

The Results

Kellogg now has a quality assurance solution that helps the company to keep up the high product quality in the future, increase productivity, and reduce waste. The new solution provides real-time insights into the quality data of each shift as well as comprehensive reporting for quality managers at just one click. And: it is intuitive to use for operators.



HIGH PRODUCT QUALITY

- ▶ Real-time insights into quality data
- ▶ Early detection of quality issues
- ▶ Compliance with requirements



INCREASED PRODUCTIVITY

- ▶ Automated processes
- ▶ Less paperwork
- ▶ Direct integration with machine data



LESS WASTE

- ▶ By automated rescheduling of failed checks
- ▶ More effective use of available resources
- ▶ And maintaining and improving the production process



HIGHER TRANSPARENCY

- ▶ Real-time reporting for quality managers
- ▶ Faster reaction to unusual events and obstacles
- ▶ Easy-to-use application with high user acceptance

“ Operators are enthusiastic about using the software and removing the paper records. ”

Gareth Judd, Quality & Food Safety Manager, Kellogg

The Companies

Kellogg Company

At Kellogg Company (NYSE: K), our vision is a good and just world where people are not just fed but fulfilled. We are creating better days and a place at the table for everyone through our trusted food brands. Our beloved brands include Pringles®, Cheez-It®, Special K®, Kellogg's Frosted Flakes®, Pop-Tarts®, Kellogg's Corn Flakes®, Rice Krispies®, Eggo®, Mini-Wheats®, Kashi®, RXBAR®, MorningStar Farms® and more. Net sales in 2021 were nearly \$14.2 billion, comprised principally of snacks as well as convenience foods like cereal, frozen foods, and noodles. As part of our Kellogg's® Better Days ESG strategy, we're addressing the interconnected issues of wellbeing, climate and food security, creating Better Days for 3 billion people by the end of 2030.

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Camelot Management Consultants

We are a global management and technology consulting firm focusing on value chain management. Our mission: turning our clients' value chains into a competitive advantage and creating lasting impact where our clients need it most. By combining our industry focus, value chain process expertise, and technology know-how, we guide our clients from strategy to sustainable technology adoption.

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