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Tadashi Suzuki
Managing Corporate Officer
Yokohama Rubber



Yokohama Rubber has implemented FUJITSU Intelligent Dashboard to provide real-time, cross-sectional visibility of its Japanese and overseas factories' operations.

At a glance

Country: Japan
Industry: Manufacturing
Founded: 1917
Website: y-yokohama.com

Challenge

Yokohama Rubber relocated its production bases overseas, making global and total factory optimization difficult. It wanted to improve operational visibility, automate data retrieval, and increase efficiency.

Solution

The company implemented the FUJITSU Intelligent Dashboard and developed a system which allows users to make real-time, cross-sectional comparisons of the state of all the company's Japanese and overseas factories.

Benefit

- Intelligent Dashboard provides instant visibility of production base status
- Access to real-time information enables smarter decision making
- Automated data retrieval from multiple factory systems increases efficiency

Customer

Yokohama Rubber was founded in 1917, and over the past century it has produced high-performance tires for every vehicle category, from compact cars and sports cars to high-powered sedans and large construction equipment. It has also developed original equipment tires for many of the world's leading car makers. By participating in a wide variety of motor sports, Yokohama Rubber has accumulated know-how on tire performance in every car and racing category. The company operates in more than 120 countries and employs over 24,000 people around the globe.

Products and Services

- FUJITSU Enterprise Application
Intelligent Dashboard

Enabling process optimization

After relocating its production bases overseas, Yokohama Rubber needed to move away from optimizing each factory individually and instead work towards total factory optimization on a global scale.

"Twenty years ago we were still making our tires in factories in Japan, so we considered the tires that were being manufactured at our overseas factories as stock for inventory adjustment," explains Tadashi Suzuki, Managing Corporate Officer, Yokohama Rubber. "But now our production ratio is higher overseas, and we are beginning to see the need for global optimization to have a better grasp of our global production status."

Furthermore, tires come in a myriad of styles, with each brand boasting an endless range of sizes. Although the products are segregated from location to location, a single factory manufactures a huge variety of tires. Whilst it was possible to monitor the production status of a single factory, attempts to make cross-sectional comparisons of all the factories' production statuses were incredibly time-consuming.

Around 20 years ago, Yokohama Rubber adopted a business process re-engineering (BPR) strategy and set a number of KPIs. One of these KPIs addressed the need to monitor production statuses, however no measures had been implemented.

"There's no point in calculating a KPI if no one is going to use it," says Noboru Koyagaki, General Manager, Yokohama Rubber. "We decided that investing in this KPI would be a waste of time, so it became neglected."

Building an insightful interface

Yokohama Rubber implemented the FUJITSU Intelligent Dashboard to work on visualizing the production statuses of its 15 main factories in Japan and overseas. The company first focused on visualizing the vulcanization process: the final step in the tire manufacturing process, which involves heating the tire with steam while applying pressure.

System development began in June 2016 and was completed in January 2017, with everyone from the management team to factory employees able to compare production results, operating rates, and achievement levels between production bases in real-time.

"Up until now, the systems we have developed in-house have mainly focused on implementing functions that were required by the end-user," comments Michitomo Yamasaki, IT & System Planner, Yokohama Rubber. "So, we never gave thought to the design of the screen. But this system is of no value if people don't look at it, so we really cared about the user interface."

Yokohama Rubber proceeded with system construction from a user's perspective by adopting a UX design workflow which focuses on user-friendliness to increase the amount of value provided to users. The company created the design by holding workshops and sharing ideas through brainstorming sessions at Fujitsu's HAB-YU platform.

"It's amazing because it's like something you see in a movie," adds Suzuki. "We were surprised because we were able to think outside the box and come up with an unprecedented design. We've achieved our goal of using a stylish design to encourage visualization."

Real-time visibility improves efficiency

The FUJITSU Intelligent Dashboard provides Yokohama Rubber with a window on manufacturing optimization. Digital technology is used to view processes and address bottlenecks in real-time, while delivering improvements in efficiency, reduced inventory, and increased throughput. It provides a single, real-time view of the entire global operation, complete with management reporting and drill down to machines and processes supporting root cause analysis.

"Previously, the data was being displayed as separate pieces of information, so being able to display it chronologically and in a linear fashion is a huge step forward," remarks Koyagaki. "We want to work on cross-examination features next so that we can urge users to make new discoveries."

Suzuki adds: "The data used to be separate pieces of information, and the way we amalgamate and display this data in real-time will be a key factor. It will give us the opportunity to think about our areas of improvement and will prompt us to work on them. Continuous improvement will result from sharing the success stories, as well as from evaluating our progress in overcoming our weaknesses."

The final goal of Yokohama Rubber is the establishment of a cycle in which the factories understand problematic areas and come up with improvement plans that produce noticeable results immediately. To achieve this, it is imperative to gather data and create a structure in which the cycle can be put to use.

"We noticed that creating a tool which allows cross-sectional studies to be conducted also brought about changes in our mindsets," concludes Suzuki. "We're considering this as the first step towards a change in the standing of the IT department."

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