

## Japan

# Using GS1 standards and RFID technology is a win-win for Johnson & Johnson Supply Chain

### Challenge

RFID technology is not new, having been deployed in parts of the retail sector for the past 15 - 20 years. However, its use in healthcare has been sporadic, and implementation of RFID is challenging if global standards aren't used.

### Approach

JJSC received a request from a hospital for a customer-specific RFID tag on products. The RFID team quickly launched a rapid test-and-learn cycle to prove technical and business feasibility and explored existing system connections to provide a globally accessible serialised tracking solution. JJSC also took the opportunity to implement standardisation utilising GS1 standards.

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first pass read  
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**80%**  
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**70%**  
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Gaining support  
from the Japanese  
medical device  
industry to adopt  
solution as industry  
standard

Radio-frequency identification or “RFID” is emerging as an important technology to make product identification and traceability more efficient. It transmits the identity of an object wirelessly, using radio waves, and it requires little human intervention. RFID has the ability to better connect the end-to-end supply chain. Johnson & Johnson Supply Chain (JJSC) is developing innovative ways to apply RFID technology to meet customer needs and improve processes and product visibility.

Blair Korman

## Meeting the needs of customers

RFID technology is not new, having been deployed in parts of the retail sector for the past 15-20 years. However, its use in healthcare has been sporadic, and implementation of RFID is challenging if global standards aren't used. For more than 10 years JJSC has investigated several options, worked to improve technical challenges and has implemented a few localised solutions.

JJSC received a request from a hospital for a customer-specific RFID tag on products. Our RFID team quickly launched a rapid test-and-learn cycle to prove technical and business feasibility and explored existing system connections to provide a globally accessible serialised tracking solution. We also took the opportunity to implement standardisation utilising GS1 standards. While there were challenges, the team ultimately delivered a compliant system that met the customer's need.

While the solution was not scalable, we studied what would be required for a larger-scale implementation and developed a standard to use in all future RFID projects. We learned through this first pilot that GS1's EPC Tag Data Standard (TDS) could be followed, and we created a technology framework to use with the next pilot.



Implementing RFID using GS1 standards is a win-win. We are able to respond to a customer's request to RFID tag and also improve the supply chain by taking the data that GS1 standards provide and applying it across our operations.

## RFID solution developed for Global Orthopaedics in Japan

Establishing a GS1-compatible RFID standard attracted attention from medical device manufacturers, distribution centres and hospitals across Japan. Building on our experiences, JJSC tackled a larger challenge for the orthopaedics business in Japan - to change the way medical devices are labelled and scanned, ultimately providing for a more agile customer experience. It started as a pilot to demonstrate how RFID could improve the loaner kit replenishment process in the Japan Global Orthopaedics distribution centre. Using a GS1-compliant RFID labelling process, RFID tags were placed on each sterile item in the loaner kits at the distribution centre. The tags were read and missing items were automatically identified, eliminating manual scanning and identification. The pilot leveraged the JJSC RFID standard operating procedure, which is based on GS1's "Gen2" UHF RFID standard. Since the Serialised Global Trade Item Number (SGTIN) is a main pillar within GS1's EPC Tag Data Standard (TDS), we also leveraged SAP's Advanced Track & Trace for Pharmaceuticals solution for provisioning serial numbers that had been put in place for JJSC.

### Results

We created a highly accurate, cost-effective, scalable, GS1-compliant and user-friendly RFID solution.

%

The pilot generated impressive outcomes: **99.96%** first pass read accuracy, **80%** time reduction compared to manual scanning and **70%** faster exception handling.

We are gaining support from the Japanese medical device industry to adopt our solution as the industry standard, as it leverages GS1 standards. GS1 Japan has identified this solution as setting best practice to be followed by other medical device manufacturers in Japan.

Others in the medical device industry are meeting regularly to monitor the Japan pilot, to understand the pilot results and potentially use the GS1 standards in their solutions. This is a big win for our customers who will benefit greatly from a common RFID standard.

### About the organisation



**Johnson & Johnson Supply Chain** includes three business sector supply chains—Consumer, Medical Devices and Pharmaceuticals—that cover planning, sourcing, internal and external manufacturing, as well as the Supply Chain Strategy, Innovation & Deployment organisation and the Deliver organisation, which manages distribution and customer service. Additional enterprise-wide functions that are part of the Johnson & Johnson Supply Chain include Quality & Compliance, Environmental Health, Safety & Sustainability and Engineering & Property Services. [www.jnj.com](http://www.jnj.com)

### About the author



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Blair Korman is a senior project manager for Johnson & Johnson Supply Chain leading UDI compliance efforts and driving the RFID initiative to standardise tagging operations. Blair's experience in logistics, packaging, labelling, and front-line operational supervision support her work with the UDI requirements developing globally and with U.S. Food and Drug Administration compliance. Blair continues to collaborate with RFID industry groups to encourage GS1 RFID standards and the adoption of RFID within the customer supply chain.