

## US

# Introducing serialisation at Johnson & Johnson Supply Chain

<p><b>Challenge</b> In the healthcare industry, supply chains have become increasingly complex and vulnerable to falsified medicines. Every step in the supply chain offers an opportunity for counterfeiters, and the impact of product counterfeiting and diversion is global.</p> <p><b>Approach</b> Through work on serialisation and traceability, JJSC is creating identifying information at all levels of production. Every pack level, pallet, case, and sellable unit will have unique identifying information of a product number and a serial number, shared using a GS1 2D DataMatrix.</p>	 <p><b>Instantly confirm the authenticity of products for customers</b></p>	<p><b>50%</b> reduction of picking time</p>
	<p><b>100%</b> inventory accuracy</p>	 <p><b>Prescription drugs can be traced back to their original source</b></p>

Imagine trying to navigate a city with no addresses. The only information you have to go on is what the building looks like, or what landmarks it's near. With identifying information it would be so much easier. Johnson & Johnson Supply Chain (JJSC) is leading the work of mapping the products from the Johnson & Johnson companies. By using a variety of tools and mediums we are working to identify, trace, and make the products that the Johnson & Johnson companies create easily locatable.

Leandro Oliveira

### Challenge

Counterfeit drugs and drug adulteration have been worldwide issues for decades. In the healthcare industry, supply chains have become increasingly complex and vulnerable to falsified medicines. Every step in the supply chain offers an opportunity for counterfeiters, and the impact of product counterfeiting and diversion is global.

**%**

Pharmaceuticals are the largest market for counterfeit goods and it's estimated to be worth **\$200 billion** a year.<sup>1</sup>

### Solution

Through our work on serialisation and traceability, JJSC is creating identifying information at all levels of production. Every pack level, pallet, case, and sellable unit will have unique identifying information of a product number and a serial number, shared using a GS1 2D DataMatrix. GS1 standards provide the foundation for this information to be used and enable automated solutions to be built.



By implementing serialisation and traceability, JJSC increases patient safety, maintains customer confidence in Johnson & Johnson company products and retains trust in supply chain processes and systems that deliver product to trade partners, hospitals, retailers and patients.

By bridging the physical with the digital, we increase our ability to communicate transparent, real-time data across the supply chain. With this information in hand, JJSC has a direct line of sight to our customers most pressing needs. Our products are reaching customers in the way that is most efficient and effective for them. As a result, we are creating a better information flow around our supply chain and a deeper understanding for the life cycle of products.

<sup>1</sup> Havocscope Global Black Market Information, 2016

## Benefits

This system is in operation around the world for J&J pharmaceutical products and it has brought many measurable short and long-term benefits to our supply chain.



Immediate advantages include increased efficiencies, reduced errors in receiving, the elimination of manual entry of lot/expiry in inventory management, and the creation of heads up display.

In the future, issues management and claims/credit management will be realised, and accuracy and efficiency of tracking, tracing, and managing product inventory could improve at all points throughout the supply chain.



Interoperability is also important as it provides crucial supply chain visibility for trading partners on both ends of the transaction. It allows real-time sharing of consistent, compatible data detailing product attributes, source, current location, and destination. All of this data means that prescription drugs can be traced back to their original source and every stop along their journey to point of sale. In terms of patient safety, this enables high-assurance validation of the drugs' authenticity and prevents acceptance of counterfeit products at the pharmacy destination. It also means that if a serious problem does occur, a recall can be efficiently executed, and the source of the problem can be quickly identified.

In the US, we're able to instantly confirm the authenticity of products for customers. In the European Economic Area we have successfully deployed all the foundational capabilities for pharmacies and hospitals to scan and verify the authenticity of the product. For a global company, being able to track and trace our products around the world is vital for understanding our reach and is part of our responsibility to keep our products safe.

In Brazil, we've been manufacturing and distributing serialised products since January 2017. Prior to that, the sites received several monthly customer complaints regarding missing products within sealed shipper cases. Since the January 2017 go-live, however, implementation of serialisation and aggregation initiated the automation of the shipper packing process and verification of the shipper prior to shipment closure. Subsequently, we have received zero customer complaints of missing packs within shipper cases.

Also in Brazil, the picking process involved manual sorting to fulfill customer orders. After a more robust packing control with supplementary automation was implemented, picking steps were simplified and processing time decreased by approximately 50%. Goods Receipt process requires accepting, verifying and registering product documentation and loading product pallets into bins. In the post-traceability environment, serialised pallet labels and scanners confirm receipt of product with minimal paper verification and manual effort. Each of the six distribution centers in Brazil enabled with traceability execute this process several times daily delivering a cost savings per year.

Inventory accuracy is beginning to indicate improvement with post-implementation cycle counts for missing products confirming consistent improvement since go-live. Better warehousing control and more automation delivered by the implementation of serialisation has resulted in significant improvement in inventory accuracy, with some warehouses cycles at 100% accuracy.

Packing Manual Checks is a process performed manually and visually by a warehouse operator to verify customer order contents to ensure the accuracy of the order. After serialisation, the business processes would be automated. In some warehouses, automation would come in the form of a packing, or checkout station, using a combination of software and hardware solutions, eliminating the need for the process to be executed manually, producing a yearly cost savings. This is a typical example of a benefit not coming directly from the serialisation, but from automation that is possible using product serialisation as an enabler to it.

## Conclusion

As we become increasingly able to build on the automation and intelligence supplied by serialisation, we'll continue to see quality, cost and efficiency benefits. We've already seen cost and efficiency savings, and these are still only in the early stages of the implementation. As the impact of this spreads further and further within our organisation, these benefits will only grow.



## About the author



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Leandro Oliveira is a senior manager for digital identification & traceability managing serialisation and traceability, unique device identification and global data synchronisation for the Asia Pacific region (APAC). For the past four years, Leandro led the serialisation program in Latin America. For Brazil he managed the first serialisation implementation and successfully led enterprise deployment for Russia, pilots in different markets, and the Advanced Track & Trace - Pharmaceutical platform upgrades. Leandro joined Johnson & Johnson Brazil in 2010 and has managed Supply Chain projects in the Make, Quality, Procurement, Planning and Deliver areas. Prior to joining Johnson & Johnson, Leandro worked in the energy, oil and gas industries as a project manager across different markets including Brazil, Europe and the Middle East.

## 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.

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