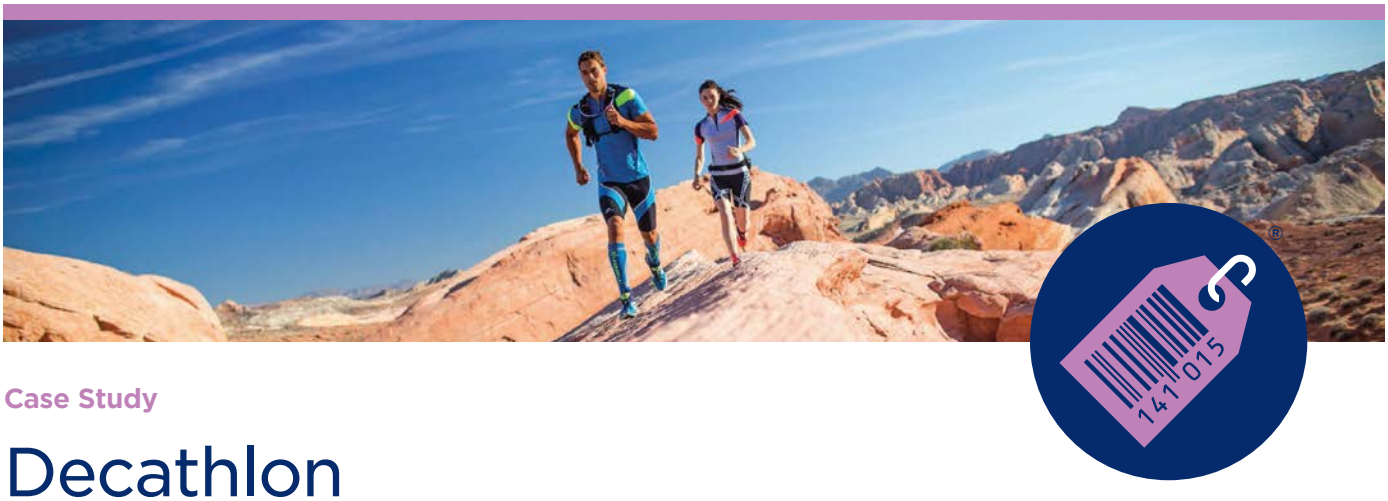
The Global Language of Business



Case Study

Decathlon

Global Retail Sporting Goods Leader Finishes First with RFID

Challenge

Decathlon made the decision to grow into a sporting goods behemoth by researching, designing, manufacturing, marketing and retailing its own branded apparel, equipment and related sports merchandise. Having to manage logistics, inventory, labeling and tracking of the thousands of products it produced, Decathlon looked for a game changer to overcome these challenges and streamline the complexities efficiently.

Solution

Decathlon decided to use technology-agnostic GS1 Standards and adopt Electronic Product Code (EPC®)-enabled Radio Frequency Identification (RFID) to uniquely identify every product in its portfolio worldwide. Today, 100 percent of Decathlon products carry an EPC/RFID-enabled tag that powers operations extending from its production lines to its checkout lines.

Benefits

- **Increased revenue and customer satisfaction.** Product tracking and availability enables Decathlon to sell at the right price and ensure on-shelf availability, while precluding overstocks.
- **End-to end operational efficiencies.** With a unique EPC/RFID code on every item, each warehouse, distribution center and store can benefit from highly accurate inventory and improved replenishment while manufacturing processes are optimized. Automation delivers advantages from pinpointing shelf location to sales checkout to post-sales interactions with consumers.
- **Business agility and market expansion.** GS1's technology-agnostic way of identifying products readily enables Decathlon to locate products anywhere and help meet regulatory requirements for different countries.
- **Brand "trustability."** Although the efficiency of Decathlon's processes using RFID makes its products difficult to match in quality and price, if counterfeit goods emerge, they can be addressed. Regulatory agencies can be assured of ethical sourcing thanks to the transparency of Decathlon's processes.

Tag, You're It

Accurately tracking the availability of products was the original impetus behind Decathlon's investments in radio frequency identification (RFID). Missed sales were having an impact on both revenue and customer satisfaction, but with RFID, Decathlon was able to better track their inventory.

"When you want to buy a bike that might cost $2000, you want to make sure you can get the one that meets your needs. RFID helps satisfy customers by allowing them to see if the bike they want is available, including where it is available, in order to buy it. Of course, Decathlon is very happy because we can sell more, but because we also don't have to overstock products" says Herve D'Halluin, leader of RFID & Referent Interactive Sport Products at Decathlon.

Decathlon believes innovation begins with the simplest of objects: in this case, a "revolutionary" RFID tag – small and rectangular with an integrated electronic chip. The principle behind this chip is straightforward: it can communicate and provide each product's unique identifier from up to several meters away, in hundredths of a second, and even through boxes.

GS1 is the One

Even though a vertical enterprise with a "closed" supply chain, Decathlon chose to utilize GS1 Standards in order to be able to uniquely identify Decathlon's products anywhere and in any kind of supply chain. "GS1 is key to the successful implementation of RFID," D'Halluin says.

Another reason Decathlon decided to make use of GS1 Standards was due to the ease of choosing hardware and labels – barcode or RFID readers and RFID tags.

"We just need to ensure that the devices are GS1-compliant," D'Halluin says. "This saves us from having to test equipment and helps reduce our costs."

> "Decathlon is very happy because we can sell more ... we also don't have to overstock products."

Herve D'Halluin
RFID & Referent Interactive Sport Products Leader, Decathlon

Game Changer

By uniquely identifying every one of its products with RFID, Decathlon became one of the forerunners in the apparel and general merchandise (AGM) industry. Following a successful pilot in 2008, company-wide deployment began, and in 2013 Decathlon became the first company to manufacture products that include RFID tags to track merchandise throughout its ecosystem.

By the following year, RFID was rolled out in all Decathlon processes, including warehouse and retail store inventory, earning recognition for the most extensive use of the technology in retail. By 2019, Decathlon had tagged 100 percent of its products, and between its factories, warehouses and stores uses over 50,000 RFID readers worldwide.

Reading Material

Before RFID, staff members would confirm whether a product was labeled correctly by scanning the barcode and then entering the data into a database. The whole process took about 12 seconds per item. RFID simplified this procedure and shortened the entire process to less than three seconds. Using a handheld reader or racquet, the accuracy of sorting was also greatly improved. Although the difference between the two operations at first glance is less than 10 seconds, when you calculate the thousands of times this activity occurs worldwide, the time savings are huge.

Going Global with RFID

Emerging regulations within the European Union (EU) regarding material sourcing make RFID functionality even more relevant. Not only will it aid in proving ethical sourcing, but it will also capture item-to-country relationships for regulatory compliance and tariff management. If two different countries are the source of a given product's materials, for example, RFID can help in tracing those relationships in accordance with trade requirements.

"If you are in a given warehouse and you have the same product coming from different places, you are able to select the product coming from the country where you are going to pay less import or export taxes," D'Halluin says. "You can improve your tax situation through transparency linked to that single GS1 code. Thanks to GS1 Standards, we are able to optimize these kinds of things."

Beyond new regulations in Europe, Decathlon's new initiative for 'trustability' is important for many reasons.

Minimizing Risks with RFID

Despite confidence in their products and the inability to not only match their quality and safety – the company is cognizant of the risk of counterfeiting to its enviable reputation.

"We are not a luxury goods company, but we are facing more and more these kinds of issues," says D'Halluin. "We evaluate which product could be subject to counterfeiting and put the right tag on the right products, depending on the risk."

RFID Enables Efficiency

Leveraging its extensive and innovative use of technology, Decathlon collaborates with its approximately 800 manufacturing partners to:

Improve Production Monitoring

Enable Traceability

Manage Production Time, Shipping & Waste

Simplify Inspections & Checks

Avoid Distribution Center Inaccuracies

Diminish Excess Product Waste

Trends On and Off the Field

Leveraging its extensive and innovative use of technology, Decathlon can readily partner with other retailers as needed, as well as with its global suppliers, marketing its own brands directly to consumers in Decathlon-branded big-box stores. RFID is used not only in labeling its vast array of products, but also in its end-to-end operations, including automated checkout.

Decathlon has introduced an RFID cash collection system as the final shopping link, so visitors can experience streamlined checkout. Consumers need only put goods into the basket of the self-service cash register; the reader can automatically identify and complete payment. Different from other self-service unattended cashiers, customers don't need to scan items one by one in Decathlon's self-service cash register; an RFID reading box completes the calculation and pricing at one time. The system improves the efficiency of cash collection by 20 percent.

"Today, RFID allows customers to spend less than a minute paying for merchandise."

Herve D'Halluin
RFID & Referent Interactive Sport Products Leader, Decathlon

"We have found that payment is the most important service improving customer satisfaction. Before we implemented RFID, customers could wait up to 20 minutes queuing for payment," D'Halluin says. "Today, RFID allows customers to spend less than a minute paying for merchandise. In addition, RFID automation has reduced shrinkage and allows for electronic article surveillance (EAS). Decathlon's staff can now focus on our consumers – we can better advise them."

"We were experiencing double digit growth," says D'Halluin. "It's difficult to stay efficient when you're going from 10 to 50 warehouses. It's important to invest in things where the more you invest the more efficient you become. We have mastered RFID, and we are now a leader."

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The Last Link in the Chain

Decathlon is now focusing on GS1 Digital Link to engage with customers. GS1 Digital Link helps barcodes and other data carriers become web links - connecting a product's unique identity to online sources of real-time information that brands control. This means that GS1 identifiers, such as the Global Trade Item Number® (GTIN™), become gateways to consumer information that strengthens brand loyalty, improves supply chain traceability information, fortifies business partner APIs, and more.

Two-dimensional (2D) barcodes, including QR codes, can carry all GS1 keys and attributes. Because it can be applied to hold trade item information, such as the item expiry date, serial number or batch/lot number, the 2D symbols can also be used to specify the URL in support of mobile phone scanning applications. These barcodes are especially useful with consumers because they carry a robust amount of product information and readily link to an internet repository where even greater amounts of product detail can be found.

"We also envision using RFID and GS1 Digital link for recycling products. This will simplify the sorting of products and allow more efficient recycling processes," D'Halluin says.

"In fact, with a circular economy, we foresee an eventual reduction of 20 to 30 percent in raw materials needed to manufacture our products."

Herve D'Halluin
RFID & Referent Interactive Sport Products Leader, Decathlon

Sustainability is also served by improved efficiencies brought about by RFID: diminished overstocks and a reduction in excess shipments and unsold products. Accurate analysis of merchandise allows for right-sized manufacturing, reduced waste, and unwarranted transportation.

"In fact, with a circular economy," D'Halluin says, "we foresee an eventual reduction of 20 to 30 percent in raw materials needed to manufacture our products."

Advice from the Leaders

Gain Strong Support

Garner strong executive and shareholder support because of the level of investment and the structural changes that will need to occur in the course of creating value with the technology.

Use the Right Metrics

Use the right metrics and the right key performance indicators (KPIs). Although Decathlon does not disclose the results of its own quantitative and qualitative studies, the return on investment has borne out.

Consider Ramifications

Consider the global ramifications to the enterprise and interoperability wherever business is conducted. The wrong choice of digital coding system can cost dearly if not based on recognized global standards such as GSI Standards.

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— **Herve D'Halluin,** RFID & Referent Interactive Sport Products Leader, Decathlon

About the Organizations

About Decathlon

Founded in 1976 in France, Decathlon is a manufacturer, distributor and retailer of sportswear and sports equipment with more than 90,000 employees in over 1,600 stores in 69 countries worldwide. Now the largest sporting goods retailer in the world, Decathlon manages in-house all research, design, production, logistics and distribution for its ten thousand products. www.decathlon.com

About the GS1 US Apparel and General Merchandise Initiative

The GS1 US Apparel and General Merchandise Initiative is a retail industry group that is committed to defining business challenges and opportunities and organizing members to explore solutions and create adoption plans. More than 100 suppliers, distributors, retailers, and logistics providers are participating members in Initiative activities, focused on improving inventory accuracy, exchanging standardized product data, and achieving traceability with GS1 Standards. More information about the GS1 US Apparel and General Merchandise Initiative is available at www.gs1us.org/ApparelGM.

About GS1 US

GS1 US®, a member of GS1® global, is a not-for-profit information standards organization that facilitates industry collaboration to help improve supply chain visibility and efficiency through the use of GS1 Standards, the most widely used supply chain standards system in the world. Nearly 300,000 businesses in 25 industries rely on GS1 US for trading partner collaboration that optimizes their supply chains, drives cost performance and revenue growth while also enabling regulatory compliance. They achieve these benefits through solutions based on GS1 global unique numbering and identification systems, barcodes, Electronic Product Code-based RFID, data synchronization, and electronic information exchange. GS1 US also manages the United Nations Standard Products and Services Code® (UNSPSC®). www.gs1us.org

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IAPMO

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*If applicable

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