



IOT AND OMNI-CHANNEL RETAILING WILL SAVE BILLIONS FOR RETAILERS



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OMNI-CHANNEL RETAILING

What is Omni-Channel Retailing?

Omni-Channel retailing is defined as the use of a variety of channels and decision points in a customer's shopping experience, including research prior to making a purchase and post-purchase returns. These channels can include: Brick & mortar stores, online stores, mobile stores, mobile app stores, telephone sales, and any other way of transacting with a customer.



Omni-Channel Retailing Today

Most major retailers today offer multiple channels for customers to make their purchases. However, because those channels are segregated, retailers are unable to capitalize on the data collected through existing and potential channels, resulting in significant lost revenue opportunities.

Every major study has shown that improving the customer experience at each point of the purchase cycle increases purchase size, profit per customer, and customer loyalty. For example, a recent study by our partner AT Kearney¹ found that “...multi-channel consumers are 15 percent more likely than single-channel consumers to recommend a retailer and that the average spend of three-channel consumers is more than twice that of single-channel shoppers...”

MULTI-CHANNEL CONSUMER BEHAVIOR



MORE LIKELY TO
RECOMMEND
A RETAILER



AVERAGE SPEND
PER CUSTOMER

Missing the Target

While it is generally accepted that omni-channel retailing has the potential for incredible gains, optimizing individual channels without first optimizing the underlying supply chain or being able to react to real time stock levels can be costly and challenging, as has been demonstrated by mega retailer Target.²

Since 2014, Target has made significant investments in their online and mobile ordering platforms. According to Target's CFO, John Mulligan,³ shoppers who utilize both the digital platform and retail locations shop three times as much.

To remain competitive with other retailers like Amazon and Walmart, and offer attractive shipping options to their customers, 350 of Target's brick & mortar stores now act as online fulfillment centers for many of those orders. This is expected to increase to 450 stores, a full 25% of Target's retail locations, by the end of 2015.

THE TARGET RETAILER CASE STUDY



As a result of using their retail locations to fulfill online orders, while also serving their in-person customers, Target is reporting ongoing and significant difficulties in keeping their shelves stocked. This is a drastic change from just two years prior when consumers were flocking to Target's retail locations, as they abandoned other retailers like Walmart due to the same empty shelf challenges.

Why would retailers knowingly place this much strain on their supply chain and brick & mortar locations? It is widely known that Walmart has been struggling with this challenge for years. Walmart has tried to balance this problem by keeping more products stocked in their distribution centers as online ordering has increased. This has resulted in even less stock at their stores, intensifying the ongoing customer dissatisfaction with chronically insufficient stock levels, even though Walmart executives acknowledge⁴ that resolving their under-stocking problems could mean a \$3 Billion opportunity.

RESOLVING
UNDER-STOCKING
PROBLEMS:
\$3B
OPPORTUNITY



The only way to fully address the challenges these retailers are facing is through IoT Innovation: By integrating all of the channels and systems with one platform to communicate with one another, from front end shelves to stock rooms to distribution centers and transportation vehicles to the suppliers; by ensuring that the data being reported is accessible by all the necessary staff members; and by using the data collected to proactively identify and address opportunities and problems as they arise.

Big Data's Role In Omni-Channel Retailing

Retailers are already heavily reliant on the wealth of data being collected through each channel. The challenge is that all of this data is in silos and significantly less effective when viewed individually. In order for this data to truly be valuable, all of the channels must be integrated on a singular, channel-agnostic platform that collects and disseminates data from every point in the retailer's information chain...

**IOT
DATA
COLLECTING
PLATFORM**



By establishing a supporting infrastructure to collect, consolidate, and analyze data from every interaction point, retailers can gain valuable insights to the full customer purchasing cycle. In order to use the resulting information effectively, it's necessary to develop a "Data Culture" where relevant information collected is accessible and usable by every department within the organization.

Start with Smart Shelves

Because 93% of all purchases in the US⁵ are still made in brick & mortar stores, this channel is where the greatest digital transformation opportunities exist. By beginning with smart shelf technology, retailers can make huge strides in optimizing the brick & mortar channel – which, connected with the other channels on one shared platform, can improve the experience through every channel.



Imagine the ideal physical shopping experience: You enter a store and find it perfectly lit, temperature controlled, and welcoming. The floor plan is laid out in an intuitive and easy to navigate manner. Every item is appropriately stocked on the shelves and racks, in every size and every color the retailer carries. Staffing levels are appropriate for volume and the associates are empowered to address any issues or questions you might have.

Now imagine that the technology exists for you to deliver this shopping experience to your customers today. Further imagine that the technology also exists to continually adjust this experience based on evolving customer needs and trends. It does exist; and customers are expecting you to deliver exactly that. Relayr believes that the first step toward the fully optimized retail environment is digitally transforming standard shelves into smart shelves, enabling real time data collection and analysis.



Real Time ERP Updates

With smart shelf technology, the time it takes to get Shelf Data into your company's Enterprise Resource Planning (ERP) system would be reduced from 30 days or longer to mere seconds. For the first time, the technology exists for businesses to easily and inexpensively capture and analyze, in real time, every facet of the environment, individually and in any combination of: temperature, noise, humidity, movement, color, geography, size, weight, and utilization of any item. This is especially exciting for retail environments, which are constantly changing.

Optimize Merchandise Stock Levels

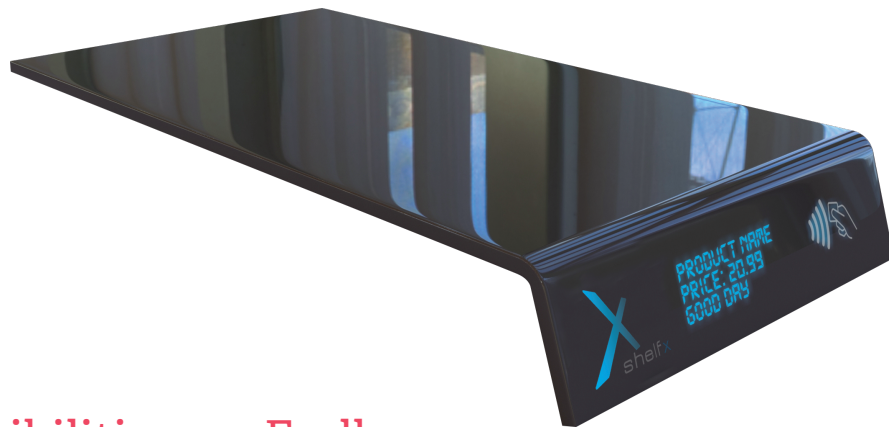
One of the biggest challenges retailers face is customer dissatisfaction due to out of stock items. Consumer surveys have found that over 50% of customers⁶ will simply go to another store if their preferred items are out of stock at their current retailer. This results in lost sales and lost customer loyalty too.



Smart shelves are the solution to this challenge. From the shoe shelf to the walk in cooler, and every area in between, smart shelves can report real time data to the ERP. This means you can see exactly how much product is in stock at any given moment, send automated alerts to in-store employees to replenish the shelves, automate reordering when levels reach certain threshold, and prevent restocking items that underperform.

Simplify Product Placement

Because product placement is such a critical and time consuming part of retail planning, this is another area that smart shelves can dramatically benefit retailers. With real time data being reported from smart shelves, product placement teams can drastically reduce the time it takes to analyze merchandise layouts, track the results of changes, make minor modifications, or plan for major reorganizations.



The Possibilities are Endless

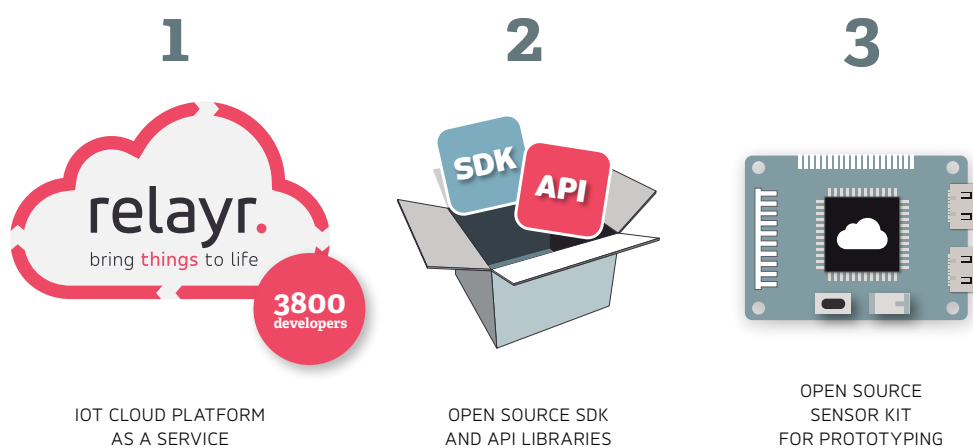
We have only discussed a few of the major ways that smart shelf technology can, and has already begun to, transform the retail industry. Smart shelves can be enabled to engage with customers, perform suggestive selling tasks, alert staff members when items have been re-shelved incorrectly, or to track and deter theft.

Smart shelves are already being used to inform and entertain customers, make employees more efficient so that they are free to quickly assist customers, and track the number of customers in the store so that an appropriate number of cash registers are open at all times. Over the next few years, smart shelf technology will be the standard in successful brick & mortar retail stores.

Let relayr Help You Get Started

As we discussed earlier, in order for retailers to integrate all of their channels, it is imperative to implement a secure supporting infrastructure at the cloud or fog layer to collect, consolidate, and analyze the wealth of data in each channel.

The relayr Innovation Acceleration approach breaks down the complexity and ambiguity of a vast IoT implementation into manageable, defined steps. At the end of each step, customers have the ability to evaluate the impact and decide if they want to move forward with the solution.



relayr provides the Enterprise Middleware for the Digital Transformation of Industries. Our cloud platform is secure, scalable, and connects Any to Any. This means that we build connectors between any service, any sensor, any software, and any hardware. With the relayr Kick Start Workshop, we help businesses rapidly identify, research, prototype, and roll out their own IoT solutions within one quarter.

Learn more about relayr Cloud at www.relayr.io or email sales@relayr.io

About relayr

relayr is a rapidly growing IoT company, providing the enterprise middleware for the digital transformation of industries. Founded in April 2013 in Berlin, relayr's cloud platform, consulting services, and award winning hardware have quickly launched this company from startup to global IoT leader in record time.

Relayr addresses the central challenge of the Internet of Things, digitizing physical objects, with an end-to-end development solution consisting of an IoT cloud platform that communicates from Any-to-Any (any service, any software, any platform, any sensor); open source software development kits; and a sensor kit for rapid prototyping.

Through their expanding Partner Program, relayr is poised to continue their unprecedented growth and solidify their position as the company that is delivering the "last mile of connectivity" for IoT devices all around the globe.

1) <https://www.atkearney.com/documents/10192/4683364/On+Solid+Ground.pdf/>

2) http://www.scdigest.com/assets/on_target/15-09-09-1.php?CID=9710

3) <http://www.fortune.com/2015/03/03/target-layoffs/>

4) <http://www.bloomberg.com/news/articles/2014-03-28/Walmart-says-refilling-empty-shelves-is-3-billion-opportunity>

5) https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf

6) <http://www.fierceretail.com/story/75-shoppers-faced-out-stock-disappointment/2015-08-10>

