

5 Amazon Inventory Management Secrets

And What They Mean for Your Digital Supply Chain Strategy



The Amazon Effect

To say that Amazon has a dominant share of the e-commerce market would be an understatement. Industry analyst Ben Schachter told Supply Management that Amazon claimed approximately 26 cents for every dollar spent online in 2015.

This incredible market share is the result of Amazon investing so heavily in the supply chain that it outpaced competition and redefined the industry. Supply Chain Digest explained that Amazon has not only had an incredibly aggressive approach to investing in the warehouse, but also in disrupting every layer of the supply chain.

These big-picture developments sound nice, but what do they amount to in terms of everyday operations? Strategic supply chain tactics are underneath these macro-level plans. Here are five secrets that have helped Amazon dominate the world.

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Emphasizing the Customer Experience for Both Consumers and Retailers



Redefining Customer Expectations

Customer experience has become a catchphrase to define digital business, but Amazon was among the pioneers in building its core operations around customer-facing processes.

At a time when most businesses were identifying what they could realistically do to improve service, Amazon was starting with the customer and building its processes backwards.

When shipping times emerged as a barrier to purchases, Amazon made two-day delivery the de facto expectation.

When return processes left consumers unwilling to purchase goods such as clothing online, Amazon ramped up its order processing and RMA operations to allow for quick, free, and easy returns.

All this innovation gave Amazon a start in getting ahead, but it has since taken customer-focused solutions to another level, making e-commerce more accessible than ever.

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Amazon Locker and Hub

Thinking end-to-end and removing inconveniences at the delivery point of the supply chain, Amazon has introduced its Locker and Hub processes. Now customers wary of ordering online because packages would be left exposed on a porch or locked up in a building manager's office can use an Amazon Locker or Amazon Hub for secure and convenient package delivery.

Amazon Locker: The Amazon Locker is a mini-warehouse where customers can pick up goods from locked storage units.

Amazon Hub: Brings the Locker concept to multi-household dwellings for greater convenience and security. Amazon isn't just making it easier for consumers to pick up items, the e-commerce giant is also simplifying the ordering process.

Amazon Dash: Dash buttons let users press a switch at home and automatically order new products. The buttons work from any spot with a wireless connection so customers can place an order when they're using a product that is close to running out.

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Amazon's Shipping and Fulfillment Services

For many retailers, keeping up with Amazon's shipping capabilities has proven impossible. Amazon has responded by turning those e-commerce companies into B2B customers.

Amazon has established shipping and fulfillment partnerships that allow it to process orders for e-commerce retailers and directly ship those products for clients. In some instances, this will happen through a drop shipping process in which retailers list items as needed and Amazon's systems identify the update and take action, but Amazon will also handle end-to-end fulfillment.

The e-commerce leader is changing service expectations across both consumer and retail customer bases, and it's doing it through better visibility into every facet of the supply chain.

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Warehouse Optimization



Improving the Warehouse Floor

Setting and meeting new customer expectations depends heavily on improving backend processes in order to keep up with emerging requirements. Amazon accomplished this by taking a fresh look at its warehouse operations and being willing to disrupt the status quo in order to drive efficiency.

Innovation Enterprise reported that Amazon clearly divides its warehouses into distinct storage areas so products can be picked with greater ease. Furthermore, barcodes are attached to orders, not just assets, to allow rapid processing and preparation for shipment.

In essence, Amazon reorganized its warehouse to streamline processes around the customer expectations it had already created, redefining internal best practices to drive efficiency and value creation.

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Robotics



Breaking Down Barriers in Robotics

A vision for a fully-automated warehouse may feel like a pipe dream, especially as robots face one major barrier – picking items up.

Robots aren't good at varying their strength relative to the item they are handling. They also present serious safety risks when working side-by-side with humans. Plenty of autonomous control innovation is happening around safety, but actually grabbing items is still a problem.

Of course, Amazon is already progressing here. Each year it tests projects in a Robotics Challenge. In 2017, MIT Technology Review reported that a team from the Australian Centre for Robotic Vision won with a robotic arm that could reliably identify and grab items after seeing just seven images of it.

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Amazon Air

Drone delivery has long been envisioned as a part of the future, and Amazon has one of the most mature pilot projects in place. The Amazon Air pilot initiative features 30-minute delivery. In this process:

- A customer orders using Prime Air.
- Items are automatically identified as eligible for Prime Air based on their weight, dimensions and availability in the pilot project's warehouse.
- Backend systems deliver notifications to warehouse employees when an order has been made.
- The item is picked and packed quickly by a human and loaded into a drone.
- The autonomous vehicle takes off and lands on a designated pad in the customer's yard.

This is just a pilot project, but it shows the potential that drone delivery offers within a fulfillment process that is streamlined through robust data integration.



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Robotics-based Warehouse

In Miami-Dade, Florida, Amazon is on the brink of opening a new mega-warehouse, an 850,000 square-foot facility. The Miami Herald reported that the location will feature 1,000 human workers, but otherwise be heavily focused on robotics.

The new warehouse, set to open in 2018, will increase the variety of goods available for same-day delivery in the region. This service expansion can be attributed, to a great extent, on a robust fleet of robots that will be used to sort and transport packages within the facility, allowing for rapid order processing and delivery.



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Redefining Traditional Retail



Bridging the Gaps Between Physical and Digital

E-commerce brands have been working tirelessly to blend physical and digital channels to better meet customer demands, and Amazon is already pushing boundaries in omnichannel experiences.

By optimizing its warehouse operations, the retailer is able to adjust customer experiences to provide a greater degree of flexibility. This makes it much easier to bridge gaps between sales channels because data is integrated across all channels.

For example, if a customer purchases something in a store, the user's account is updated. Furthermore, warehouse systems are notified of the supply change, allowing for backend updates and notifications that enable timely restocking and procurement.

These processes are coming together in a few key projects.

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Data-Driven Operations



Data is Beneath Amazon's Revolution

It is safe to say that Amazon has revolutionized the e-commerce industry. To accomplish this, the company has become incredibly reliant on data.

Big Data Zone reported that Amazon manages approximately 200 million accounts with 1,000,000,000 GB of data. All this information is pulled into predictive analytics systems, letting the company anticipate consumer demands and stay ahead of competitors. EKN Research found that 80 percent of major retailers believe they are behind Amazon.

Amazon uses its data to constantly track what customers purchase and view, letting it change how its web and mobile experiences present themselves to users. Data analytics are changing how brands interact with customers, and Amazon has set the baseline expectations.

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Laying the Foundation for Predictive Analytics

Of course, robust big data systems that incorporate machine learning and predictive analytics may seem out of reach for some companies.

Cloud computing is making these technologies more accessible all the time – part of Amazon’s advantage is its cloud platforms that let the company optimize its backend IT setup.

However, Amazon’s ability to take these steps into the future has only been possible because it can gather and integrate data from diverse locations and synchronize it across the enterprise. Mobile data collection, barcode scanners, data integration and similar processes – all accessible to warehouses today – are the foundation that Amazon’s innovation is built on.

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Using Data Visibility to Expand Business Possibilities

By investing heavily in its ability to gather, integrate and manage data across the supply chain, Amazon has found ways to introduce new products or operational models into the e-commerce sectors. A few examples include:

- Establishing shipping and return practices that made ordering clothes online more palatable for those worried about sizing issues.
- Creating a high enough degree of agility in the supply chain to ship food and other perishable goods.
- Building out shipping partnerships that make it cost efficient to move large or unusually shaped objects.
- Creating new paradigms for ordering so users can shop in the most convenient ways for their needs.

Over time, Amazon has used digital capabilities to align its people, processes, buildings, and software so it can constantly innovate and stay ahead of market demands. Improving supply chain visibility doesn't just improve efficiency, it creates new business opportunities.



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Conclusion

Two common threads are clear across all of Amazon's supply chain secrets:

1. The retailer always builds its processes around the customer instead of having their operations dictate the experience.
2. Amazon uses data to understand its customers and its own processes so it can constantly refine operations in the most efficient way possible.

Not many businesses can keep up with Amazon, but that doesn't mean they can't make strides by learning from the e-commerce giant. Updating mobile data collection and integration is the first step. Businesses that know how they operate in the supply chain can equip themselves for change. Those that don't have the data they need are guessing.

At RFgen Software, we are leading the charge in reliable, warehouse-optimized mobile data collection and ERP integration solutions. Our technologies are built to drive efficiency and intelligence across every phase of the digital supply chain, eliminating process and knowledge gaps that can hold back innovation.

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