



7 Secrets to a Future-Forward Omni-Channel Fulfillment Strategy

Why Micro-Fulfillment Is the Retailer Answer to Modern Consumer Demand

[Dematic.com/microfulfillment](https://dematic.com/microfulfillment)

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Introduction

E-commerce and gig economy disruption has infiltrated just about every shopping decision consumers make today, introducing countless delivery apps, the explosion of “click and collect,” as well as increasingly faster delivery options to consumers’ doorsteps or nearby lockers.



You name it, consumers have access to whatever they want, nearly whenever they want it. And with ever-expanding online ordering options, today’s consumers have high expectations for their shopping experiences. In fact, according to a recent BRP study, “digital consumers” are driven by rapid order fulfillment and delivery, with **77% of consumers more likely to shop at a store if it offers same-day delivery.**

So, what does this mean for retailers? For starters, “we don’t have this in-stock” isn’t an option. Consumers expect retailers to have an infinite shelf of inventory in real-time. Whether shoppers are placing orders through third-party services, online or researching online to shop in-store, they expect online inventory to match what’s on the shelf.

This playbook is written for retail supply chain, e-commerce and digital decision makers across verticals and at businesses of all sizes who are struggling to sustainably and profitably address order fulfillment and rapid delivery. At the conclusion of this paper, you will have a strong understanding of:

1. How urbanization is impacting industry and challenging how retailers use space and house inventory
2. Why traditional distribution strategies are no longer working, and why interim fulfillment solutions are not sustainable or profitable for retailers
3. How retailers can maximize space of existing store fronts, urban fulfillment centers and dark stores with integrated fulfillment, distribution and delivery strategies
4. Why micro-fulfillment may be the answer retailers are seeking to address order fulfillment needs and modern consumer demand

The Impact of Urbanization

Across the globe, people are moving to cities at rising rates. In the U.S. alone, **65% of the population live in cities** and generate 75% of the nation's gross domestic product. Worldwide urbanization trends are projected to continue, with the urban share of the global population expected to surpass 66% by 2050 (up 30% from 1950).



Rapid urbanization not only presents challenges to the general population, such as increased costs of living and transit congestion, but also impacts industry with rising costs of doing business and increased tensions on supply and demand.

For retailers, this means higher real estate costs for less space to house inventory.

Urbanization is also pressuring the status quo of inventory and distribution strategies, traditionally anchored via remote warehouse locations. While it may be more cost-effective to house large volumes of inventory in remote locations, how can a distribution center in the Arizona desert effectively support same-day fulfillment to retail stores or consumer homes located in Atlanta? It's fundamentally impossible.

And while some retailers have started leveraging urban fulfillment centers and dark stores to better address rapid delivery demand, they are still **challenged with steep real estate costs, unused space at the back of the store, and lost revenue** at underperforming retail locations.

Rapid Delivery: What's Not Working

Retailers now must navigate both how to maximize space in high-cost urban locations, as well as the challenge of solving inventory and fulfillment for rapid delivery of online orders.

For some, this means partnering with third-party services to outsource order-picking and delivery. While these services get consumers what they want, when they want it, retailers are quickly realizing that outsourcing picking and delivery to third-party companies is not the best answer for their businesses or their bottom lines.

Here's why:

1. Shopping Experience

Retailers lose control over the consumer shopping experience when they outsource to third-party apps. If an order is delayed, if the shopper has to replace desired items that were listed as in-stock, or if the order shows up damaged or incomplete, who will the consumer hold accountable? More than likely, the retail brand will take some of the blame for an experience that leaves consumers wanting.

2. Consumer Data

Retailers also relinquish ownership of coveted consumer data when using third-party services. Buying patterns and brand preferences become insights owned by the third-party, which is problematic for retailers in an age where modern consumers expect a personalized shopping experience.

3. Order Fulfillment

Online order fulfillment through in-store inventory is not sustainable, reducing in-store supply and making real-time inventory management even more challenging for retailers while also hurting profitability – further exacerbating operations especially for grocery retailers already fighting tight margins. Fulfilling online orders by taking from in-store stock also risks negative experiences for consumers who are choosing to shop at store locations instead of online.

69%

of consumers say they're more likely to shop at a competitor after even just one bad experience: [Total Retail report](#)

65%

of consumers say they want personalized recommendations from retailers: [BRP study](#)

85%

of grocery shoppers still shop in-store or mostly in-store, with their loyalty at risk with 97% of grocers experiencing in-store stock-outs throughout the year: [Grocery Insights report](#)

Introducing Micro-Fulfillment:

A New Approach to Order Fulfillment That Meets Modern Consumer Demand



So, what does this look like in real life? The system is essentially a backroom of its own, leveraging physical height, narrow aisles and shelves. First, orders are inputted and processed by the solution's software management system, ideally integrated on a broader software network. Goods are then loaded into totes using automation technology such as a system of shuttle cars, and orders are inputted and processed through the solution's software management system. The totes are then delivered to store fulfillment specialists who pack orders for pick-up or delivery.

Micro-Fulfillment solution software, specifically, should enable retailers to reclaim ownership of consumer shopping data, which can be leveraged to create personalized shopping experiences for consumers. Ultimately, consumer data is the key to unlocking and maintaining consumer loyalty in today's shopping landscape where 70% of emotionally-engaged consumers expect brands to know their individual preferences, [according to a recent Capgemini study](#).

To empower and enable retailers to take advantage of the benefits of micro-fulfillment, the ideal solution must:

1. Be compact and high-density
2. Balance proven, intelligent technology with human expertise
3. Power operation with integrated software
4. Provide always-on, anywhere customer service at scale
5. Enable multi-temperature environment capabilities
6. Offer human access to aisles and shelves
7. Empower integrated fulfillment, distribution and delivery

By using micro-fulfillment solutions that capture these essential elements, retailers can shift to a future-forward omni-channel distribution and fulfillment strategy in order to compete with leading retailers that are continuing to double down on e-commerce strategies.

Micro-fulfillment not only addresses ever evolving and increasing consumer demand, but it can also help retailers mitigate the rising costs of operating near consumers and achieve a healthy e-commerce operating margin.

An illustration on the left side of the page shows a hand pointing at a tablet. The tablet screen displays a shopping cart icon with an arrow pointing right, and the text "Order Received!" below it. The background is dark blue with white line art of a shopping cart and a clock face.

A Compact, High-Density Solution

First things first, micro-fulfillment solutions must be compact and high-density. Why? Micro-fulfillment is designed to be implemented close to the end consumer, so an effective solution should be configured to fit into smaller footprints while maintaining the density of its aisles and shelves to still house large volumes of inventory.

By fitting into spaces as small as 10,000 sq. ft., micro-fulfillment solutions are able to fit into the backroom of an actual retail store, or nearby urban fulfillment centers and dark stores that have significantly less square footage than large, remote distribution centers. This effectively creates a “real backroom” and enables retailers to maximize existing space; space they have not historically leveraged to its fullest potential.

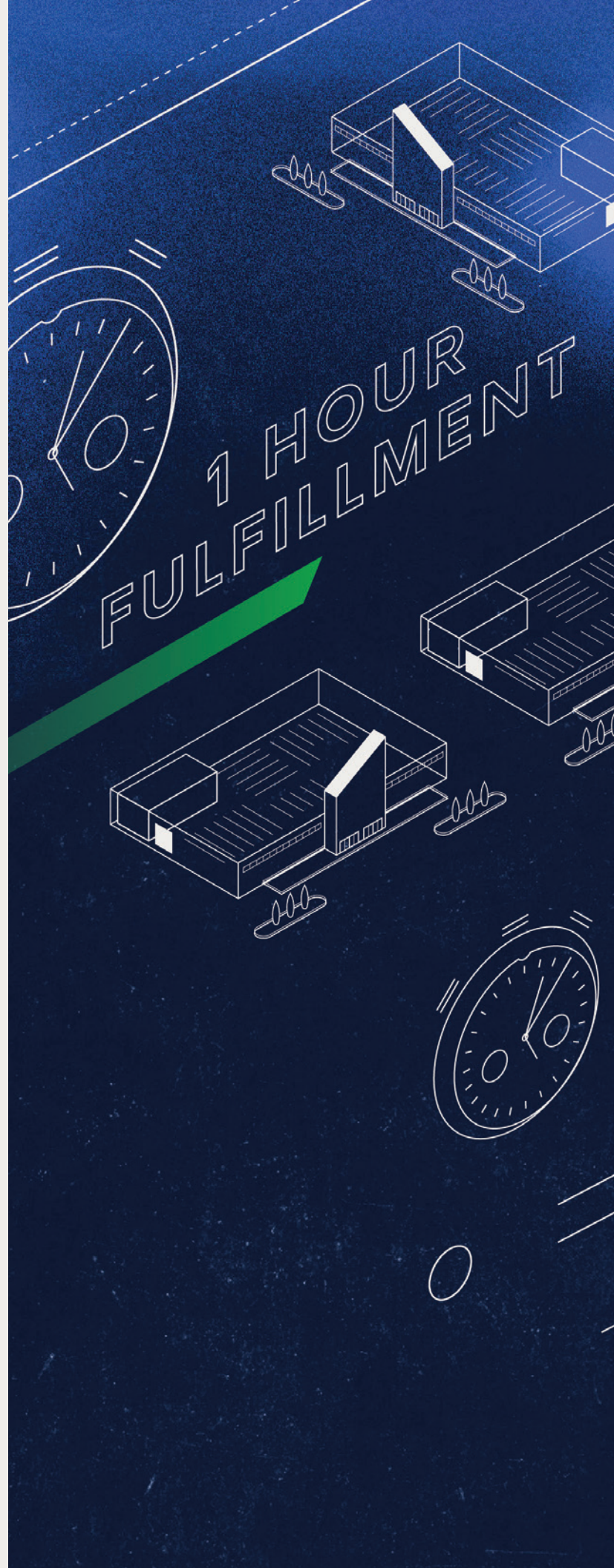
Balancing Proven Technology and Human Expertise

While the hardware of micro-fulfillment can be made up of varied automation technology, an ideal solution will include proven technology that is already helping power intralogistics and supply chain systems around the world, such as automated shuttle car technology and goods-to-picking systems.

Relying on untested robotics technology introduces unnecessary risk into the supply chain – and with brand reputation riding on seamless customer experiences, that's a risk retailers can't afford to take.

Additionally, the hardware technology of micro-fulfillment should be adequately balanced with human expertise to ensure maximum impact from order to consumer fulfillment.

Robotics technology is still in its infancy, so retailers should not underestimate the human component of their teams, and of their supply chain and intralogistics vendors, that is essential to creating a differentiated shopping experience that today's consumers demand.



Powering Operation with Integrated Software

The software powering any micro-fulfillment solution should provide seamless integration with other inventory management, warehouse management software (WMS) and enterprise resource planning (ERP) systems to ensure that all stores, distribution centers and corporate offices are networked on the same platform.

The ideal software will also enable retailers to reclaim ownership of consumer shopping data from third-party delivery services to unlock and maintain consumer loyalty through personalized experiences based on consumer shopping habits and preferences.



Always-On, Anywhere Customer Service at Scale

Because of the high-touch nature of micro-fulfillment solutions, technology troubleshooting has to be done largely onsite. This means that retailers must have always-on access to customer service to prevent downtime, ultimately helping to maintain margins and increase profitability.

Most retailers that would be interested in implementing micro-fulfillment are more than likely looking to install not just one solution at one retail site, but at scale. So, it's essential that they have access to always-on customer service from anywhere in the world.





Multi-Temperature Environment Capabilities

Micro-fulfillment can and should be used by retailers across verticals, including grocery, apparel, consumer electronics, sporting goods, auto parts, apparel, industrial supplies and department stores that have an opportunity to re-purpose retail store space. If consumers can buy it online, micro-fulfillment should be able to handle the order fulfillment for retailers.

By nature, this means that an ideal solution should be able to house and process products that require different temperatures for preservation before delivery. This requires the capability to have multiple temperature zones, from room temperature to cold zone environments, within the same micro-fulfillment solution.



Human Access to Aisles & Shelves

A number of existing micro-fulfillment solutions are designed to be high capacity, with aisles and shelves that create a mini store for goods picking. But not all solutions allow actual human access to all of the internal workings of the hardware.

In the case of downtime, or at worst, full system shutdown, it's imperative for operators to be able to manually access the aisles and shelves to help mitigate the impact of any outage or system error.

Empowering Integrated Fulfillment, Distribution & Delivery



As retailers are exploring micro-fulfillment as a solution to e-commerce business challenges, there is also a major opportunity for micro-fulfillment to support inventory needs for other nearby retail locations, dark stores and urban fulfillment centers.

Micro-fulfillment at its best will help retailers maximize existing space to reach new levels of sustainable operations, increasing margins and profitability for the long-term.



The Dematic Micro-Fulfillment Difference

- ▶ Throughout this paper, we've shared the societal and technological dynamics at play that micro-fulfillment is positioned to help retailers address, as well as essential components of an ideal solution retailers must consider.
- ▶ As a company that has been leading intralogistics innovation and invention for 200 years, our own micro-fulfillment solution echoes Dematic's legacy, and is a demonstration of our mission to power the future of commerce and enable one-hour order fulfillment.
- ▶ The **Dematic Micro-Fulfillment solution** is fully customizable for customers and can be built and installed in as little as 12 weeks and configured to fit into footprints as small as 10,000 sq. ft, such as in the back of a retail store. Such close proximity enables retailers to better utilize and maximize space, making one-hour fulfillment possible while increasing profitability.
- ▶ Our solution is powered by proprietary Dematic iQ software and proven Dematic automation technology, including the Dematic Multishuttle and Goods-to-Person picking solutions that have set industry standards for decades.
- ▶ Additionally, Dematic's global footprint enables implementation at scale, making it possible for customers to install multiple micro-fulfillment solutions at once, at locations worldwide. This is further supported by unmatched always-on customer service with local operations in over 25 countries.



The **Dematic Micro-Fulfillment solution** is now available to customers worldwide. Follow along for Dematic Micro-Fulfillment news and developments at [Dematic.com/microfulfillment](https://www.dematic.com/microfulfillment).