

Avery Dennison  
Printer Solutions

Freshmarx  
Intelligent Food Industry Solutions

# Building Resilience in Grocery:

Looking Beyond COVID-19

RFID bridges the physical and the  
digital, enabling retailers to have  
a more connected, agile supply chain



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# Introduction

The COVID-19 pandemic has been a major disrupter across the food industry.

In some cases, such as restaurants, the disruption has had a negative impact on their bricks-and-mortar locations as well as their supply chain partners. But the grocery segment is a different story. Both online and in-store sales have seen a significant increase. This rapid surge has shone a spotlight on major challenges as consumers shift their grocery shopping to online platforms. Some of the challenges that the pandemic has exacerbated are:

- Inventory management
- Expiration management
- Traceability
- Consumer experience

In this white paper, we'll discuss the state of the grocery industry and explore how RFID addresses these challenges, including:

- Ways in which grocers are using RFID to reimagine their supply chain operations, to offer better — and more socially distanced — consumer experiences while gaining unprecedented inventory visibility to bolster their e-commerce platforms.
- How RFID bridges the physical and the digital world, enabling retailers to have a more connected and agile supply chain, improving traceability and transparency.
- Explore insights into the latest innovations making RFID a compelling next-gen technology for a post-COVID-19 landscape.

# State of the Industry:

## Online Grocery Grows Faster Than Expected

The effects on online grocery orders from an almost worldwide lockdown cannot be overstated. According to a study by consulting firm Bain & Company, only about 3% to 4% of grocery spending in the U.S. was online before the pandemic, but that's surged to 10% to 15%.

Experts say this number will likely remain at the higher level because many customers have downloaded apps, tried new services, and discovered their conveniences. A telling historical example of this effect can be found in the 2015 MERS outbreak in South Korea. During this outbreak, out of all product categories, food and drink recorded the highest rate of e-commerce sales growth at 30%, more than double the rate of growth of the previous year. Today, the country has one of the highest rates of online grocery penetration in the world.<sup>1</sup>

Source:

1. PASSPORT - THE GLOBAL STATE OF ONLINE GROCERY IN 2020, JUNE 2020

A survey by strategic advisory firm Brick Meets Clicks shows online grocery purchases continued to grow in May, with demand spurred by the COVID-19 crisis lifting sales 24% month-over-month to \$6.6 billion. These gains further reflected increases in both online grocery order and household penetration.<sup>2</sup>

Source:

2. SUPERMARKET NEWS

The numbers are expected to stay at this level or increase, suggesting there is even more opportunity for retail growth. According to the same Brick Meets Clicks survey, 26% of the households that had not bought groceries online in the last 30 days said that they were extremely or very likely to try online shopping in the next three months. When asked how likely they were to continue using a specific online grocery service after COVID-19, 43% of the survey respondents indicated that they're either extremely or very likely to do so.<sup>3</sup>

Source:

3. PROGRESSIVE GROCER

To stay relevant, grocers need a new strategy and better processes to tighten up their supply chain, track their in-store inventory, and delight their customers to ensure continued loyalty.



## Bringing RFID to the forefront

By adding a unique identifier and online connectivity to every item in any inventory, Avery Dennison RFID-enabled intelligent labels let grocers dramatically improve inventory management, efficiency, traceability, sustainability, and customer satisfaction.

Our food solutions enable inventory optimized for customer demand, greater product transparency, faster and more precise traceability during recalls, and the recapture of profits currently lost to waste.



## Reimagining the Supply Chain Using RFID in the Store

- RFID tagging delivers huge, easily demonstrable benefits for grocers. It can enable frictionless experiences like cashierless or frictionless checkout for shoppers. It also provides atomic levels of visibility into your inventory and supply chain, so you know exactly what you have, what's coming, and where it all is — no more gaps, dark spots, or question marks.
- RFID tagging also supplies the who, what and when of a product's provenance with certainty, so that every product can be digitally documented by blockchain or other means, enabling you and your customers to see the product's whole, true-life story with a click.
- RFID tagging also enables you to waste less, sell more, and helps ensure freshness and shelf life. It conjures new possibilities for frictionless customer encounters while letting you allocate labor more wisely. In all, RFID tagging sits beautifully at the intersection of what customers want and what grocers need at this pivotal moment in the industry.

## Inventory management

Inventory management at center store or fresh continues to be a high touchpoint area and a significant source of labor spend for food retailers. By using RFID at item level, grocers stand to gain increased inventory accuracy while eliminating or reallocating valuable labor away from inventory tasks. For online ordering, RFID can assure the right product is in the right place at the right time.

### Grocer benefits & ROI drivers



99%

99% inventory accuracy



Improved online ordering experience



Reduction in out of stocks/substitutions = sales lift



Increased customer confidence in order accuracy, increasing customer loyalty



Store associates/pickers spending less time looking for items that aren't really there



Up to 50% reduction; additional savings when paired with RFID-enabled shelf scanning robots

## Expiration management

By encoding the expiration date directly in the RFID label, retailers can quickly scan hundreds of items in a matter of seconds and know the number of products on the floor and remaining shelf life for each individual item allowing for improved expiration management, production planning, and predictive analytics.

### Grocer benefits & ROI drivers



More effective markdowns



Labor savings: eliminates the need for an associate to handle every item



Up to 20% food waste and shrink reduction = less margin erosion and more sales



Optimize production planning and replenishment



Up to 50% labor reduction

## Traceability

### Supply chain

By adding RFID via in-line high-speed production processes at manufacturing, food retailers can leverage unique digital identities, including lot information, to better track and trace products throughout the supply chain.

This can be done at the item, case, or pallet level. RFID can also be used to automate information into blockchain systems.

### Grocer benefits & ROI drivers



Unique digital IDs on every product, i.e. serialized GTIN + Lot information



Agility and speed in the event of a recall for product identification



Enabling technology to a more digitized supply chain



Enhanced vendor management and forecasting



Bolstered supply chain = consumer protection



Can be easily paired with blockchain





## Traceability

### Food safety

Every day customers put their confidence in retailers and brands that they know and trust. They expect that the products on store shelves are fresh and safe to eat. When a recall happens, it sends shockwaves through the entire supply chain from source to consumer. Not only is it a safety concern, but it's a costly logistical nightmare that shakes the confidence that a retailer has built.

As soon as a recall is issued, "the clock starts ticking" and all focus turns to how quickly a retailer can respond. All companies have a recall response plan, but identifying, isolating, and disposing of affected products can be a manual, labor-intensive, complex process. Studies have shown that locating affected products can take days, weeks, and even months. With every second that goes by the risk increases that a consumer may be impacted by a recalled product.

By enabling item-level traceability with RFID and blockchain, the timeframe to respond to recall can be significantly shortened from days and weeks to a matter of seconds.

## Food safety key facts

337

recalls in the  
USA in 2019

1 in 6

Americans fall ill every year  
due to food contamination  
(that's 48 million people)

125k

children die every year from  
foodborne illness

\$55.8B

a year wasted on  
food recalls

## Grocer benefits & ROI drivers



Targeted recall  
approach = reduction  
in food waste



Order of magnitudes  
faster recall  
responses =  
protection of public  
health



Labor savings:  
eliminates the need  
for an associate to  
handle every item,  
every time



Improved visibility  
throughout the entire  
supply chain



Supply chain  
agility



Enabling technology  
for a more digitized  
supply chain

## Consumer experience

Consumers want total transparency in their food supply. They want to know who made it, how it was processed, and where it comes from, all the way back to the source. Food Safety Magazine offered some insight into the importance to consumers of traceability throughout the supply chain:

- “A recent study by Deloitte found that over the last two years, more than 60% of consumers increased spending on the fresh food category. Other research from the Center for Food Integrity found that 65% of consumers want to know more about where their food comes from.
- As consumers continue to diversify their diets, it will be increasingly important for food brands and retailers to provide trustworthy information, which leads to peace of mind. By prioritizing food traceability, the industry can work together to close the gap between consumer demand for fresh, healthy food and the industry’s ability to meet that demand with assurance of safety.”<sup>4</sup>

Source:  
4. FOOD SAFETY MAGAZINE

Avery Dennison Intelligent Label solutions enable companies to verify a food item’s journey across the entire supply chain, from its source to its final destination, and pinpoint any troublespots along the way, minimizing risk and cost.





# Frictionless shopping

Frictionless grocery shopping isn't "the future" anymore. It's happening right now, as grocers, convenience stores, and upstart brands deploy it in the fight for stomach share, in a world where COVID-19 has suddenly made digitally-enabled shopping not just a convenience, but a life-saver. Of all frictionless solutions, RFID provides a less time-consuming, more socially distanced experience for shoppers while also transforming the back end of your business, in a way that's easier and more cost-effective to deploy.

Because, more than ever, consumers are demanding grocery shopping that is fast, painless, and light on unnecessary interaction. By adding RFID at the item-level, grocery retailers can enable new seamless consumer experiences and even extend their reach beyond the store as in the case of intelligent vending machines.

Learn more in: [The Future of Frictionless Food - Deep Dive](#)

## Grocer benefits & ROI drivers



Save time and hassle for shoppers = customer loyalty and potential for increased sales



Enable new channels for fresh food sales, i.e. smart vending at airports, college campuses, corporate centers, etc.



Labor reduction due to cashierless models



When compared to vision and scan & go models, RFID provides friction-free experience, from start to finish while also being easier to deploy and more cost-effective



## RFID - Latest innovations

Early versions of RFID were limited by cost, incompatible packaging materials, and the computing technology of the time. Today, the cost of RFID tags has decreased dramatically. And packaging limitations have been overcome.

It's now possible to tag every item in a store — including metals, liquids and microwavables — due in part to Avery Dennison's innovations in RFID tags. Also, improved tags and readers have dramatically enhanced accuracy and read rates. And mobile devices have put the power of Intelligent Labels into the hands of any employee and any consumer.

### On-metal inlays

Finally, it's possible to add RFID tags to items containing metals and liquids. Our on-metal inlays make it possible to extend the benefits of RFID to cosmetics, fragrances, lotions, housewares and items in metal foil packaging. Get unprecedented inventory visibility down to the last item, in stores and across your supply chain.



### WaveSafe™

Add the awesome advantages of RFID to microwavable packages. Our breakthrough WaveSafe™ tags eliminate the fire risk from microwaving frozen or chilled RFID-labeled foods, while still providing highly accurate read rates and item tracking. WaveSafe™ tags deliver all the benefits of RFID, including improved inventory management, lower labor costs, and reduced waste.





# Conclusion

New market challenges are driving groceries to find better, more productive ways to:

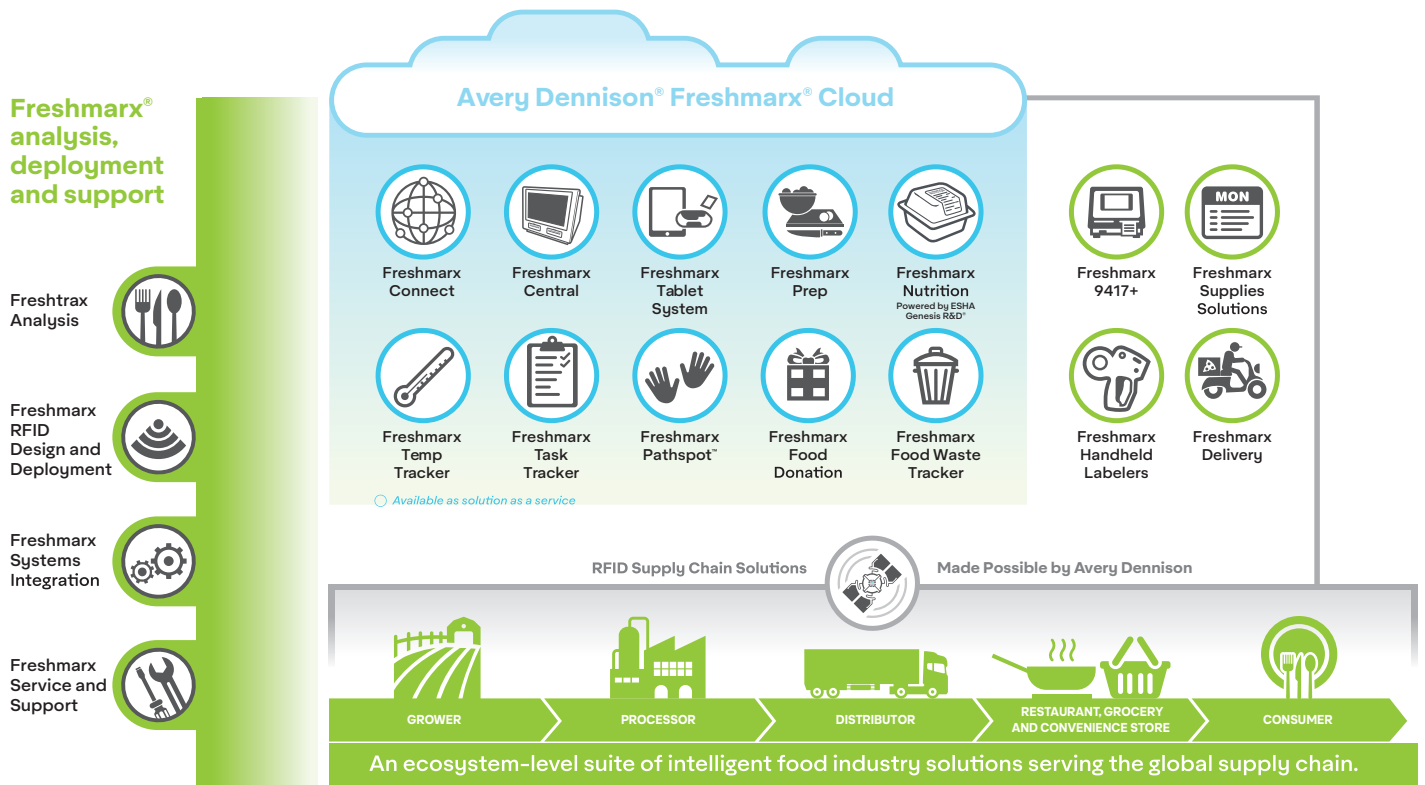
- Keep food safe throughout the supply chain
- Track and move inventory more efficiently
- Enable quicker, more accurate recalls
- Address consumer perception around food origin, delivery safety and new technologies such as frictionless checkout
- Deliver a consistent customer experience

All of this can be achieved by creating a connected supply chain leveraging RFID technology. Avery Dennison's integrated global RFID approach is proven to increase inventory accuracy, improve supply chain agility, and enhance visibility across all channels.

When you choose Avery Dennison RFID, you get field-proven inlay products, advanced research and testing capabilities, experienced engineering and technical resources, and, most importantly, a partner with a deep understanding of what it takes to make your application successful.

# About Avery Dennison® Freshmarx® Intelligent Food Industry Solutions

Avery Dennison has a full suite of solutions encompassing the food supply chain from farm to consumer.



For more information about our Freshmarx® Suite of Intelligent Food Industry Solutions, please contact us:

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**Avery Dennison**  
Printer Solutions

**Freshmarx**  
Intelligent Food Industry Solutions

Harnessing the power of accurate, shared data throughout the food industry supply chain to enable labor efficiency, food safety, sustainability and enhance the consumer experience.

**Made Possible**  
by Avery Dennison

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