

# THE FUTURE SUPERMARKET

HOW DIGITAL OPERATIONS WILL ENABLE  
A WINNING CUSTOMER EXPERIENCE,  
AT MUCH LOWER COST



The move to online shopping has dominated retail trends for many years. Lately, successful e-commerce merchants – from Amazon in the United States to JD.com in China – are increasingly opening or buying physical supermarkets. However, online retailers want to transfer some of their digital efficiency to their new brick-and-mortar stores, so they are experimenting with new forms of automation. That raises an important question for supermarkets: How many people will be needed to operate the stores of the future? At the Amazon Go concept store, shoppers first register and can then remove items from shelves and leave without going through a checkout process; the payment is automatically deducted via smartphone. Checkout is not the only store operation that can be automated though. Overall, a high degree of digitization could reduce the labor hours needed to run a future supermarket by around 40 percent.

## THE ROLE OF STORES IN AN OMNI-CHANNEL WORLD

As shopping migrates online, brick-and-mortar stores will need to respond, in particular by turning shopping from a transaction into a pleasurable lifestyle activity. Our publication “Retail’s Revolution” shows how physical stores will play an important role even in a world of rapidly growing online sales. However, given the convenience of online shopping, if physical stores are to survive – let alone thrive – they will need to give customers new reasons to visit them. We think that people are likely to remain an essential feature of stores because of their role in creating social engagement and an enjoyable experience. Well-trained, knowledgeable service staff are the best way for grocers to connect with their customers and give them a memorable and differentiated experience.

## FOOTFALL FROM EXPERIENCE AND SOCIAL ENGAGEMENT

The supermarket of the future will need to inspire customers and improve their overall experience. Upgrades could include superior fresh-food offerings, food courts, gastronomic areas, and cookery classes. Each of these features will need to be combined with expert advice; this will be labor-intensive and, therefore, expensive. To fund this investment, stores will need to deploy modern automation technologies that free up staff from routine operations. These freed up hours can then be invested in activities that add greater value for the customer.

While the most visible changes to supermarkets will be these new customer-facing features, digital tools will transform operations in less obvious ways. Before customers arrive in a store, they will have assembled their shopping lists using online apps informed by artificial intelligence, which could recognize their consumption patterns. As they sample products in-store, they will flip through recipes on a tablet or smartphone and make online orders for home delivery or for picking up as they leave the store.

“Amazon’s acquisition of Whole Foods should have signaled to the market that brick-and-mortar is necessary”

**Grocery executive**

## MANUAL TASKS NEED TO BE AUTOMATED

Some stores have already introduced automatically updated electronic price tags for display shelves, saving the bother of swapping paper tags. The electronic tags can also facilitate dynamic pricing, to discount overstocked products or those about to reach expiry date, for example. In future, customers' smartphones may display

personalized prices. This would allow supermarkets to make tailor-made offers that take into account a customer's profile, shopping history and current location in the store. Interaction with customers will become highly individual, both in stores and online.

## THE CENTER STORE GOES VIRTUAL

Floor space for the new features can be freed up by shrinking the space currently allocated to canned and packaged products. Detergent, washing-up liquid, and paper towels form part of "chore" shopping and provide little to attract consumers to a store. Supermarkets could create a virtual version

of the center store, where customers scan items on a wall of barcodes to add to their virtual baskets. They would then pick up the items later or have them delivered. The products themselves will mostly remain in the backroom storage areas, simplifying the picking process.

### Exhibit 1: Stores have a clear role to play in retail's future...

...but successful stores will need to play more specialized roles than they do today

KEY SUCCESS FACTORS IN THE FUTURE		
 <b>VALUE</b>	<b>DISCOUNTS MODELS</b> "I want to pay as little as I can"	<ul style="list-style-type: none"> <li>Ruthlessly efficient operating model</li> <li>Own-label sourcing and development</li> </ul>
 <b>CONVENIENCE</b>	<b>CONVENIENCE STORE</b> "I need it now"  <b>CLICK-AND-COLLECT PICK-UP POINT</b> "I need it today, on my schedule"	<ul style="list-style-type: none"> <li>A well-curated assortment that serves the most common customer needs out of limited shelf space</li> <li>Time efficient shopping for customers in good locations</li> <li>A strong online assortment covering most additional customer needs – that can be rapidly delivered to store</li> <li>Broad store network and pick-up points</li> </ul>
 <b>EXPERIENCE</b>	<b>EXPERIENCE</b> "I want to enjoy shopping"  <b>MANUFACTURER BOUTIQUE</b> "I want access to the newest and best products from the brands I trust"  <b>OMNICHANNEL SHOWROOM</b> "I want to experience the products for myself and get advice if I need it"	<ul style="list-style-type: none"> <li>Well-trained, highly-engaged workforce</li> <li>Innovative and exciting store designs</li> <li>Strong general brand recognition plus the right features and options</li> <li>Unique product offering</li> <li>Dynamic environment to support in-store consumer trials</li> <li>Commercial terms with manufacturers that can support showroom economics</li> </ul>
 <b>SOCIAL ENGAGEMENT</b>	<b>SOCIAL INTERACTION</b> "To me, shopping also means meeting people"	<ul style="list-style-type: none"> <li>Well-trained, highly engaged workforce</li> <li>Well-located stores that support social shopping occasions with communal spaces or events</li> </ul>
 <b>AFTERCARE AND TRUST</b>	<b>SERVICE CENTER</b> "I want support if the product breaks"	<ul style="list-style-type: none"> <li>Expert employees with access to spare parts and replacement products</li> </ul>

## WAREHOUSE AND BACKROOM

The backroom will house the center store assortment and serve as a picking area. Some online orders will be picked here for home delivery or in-store pickup. Shop-floor replenishment teams can be relocated here.

Potential increase of labor hours: 100+%

## FRESH COUNTERS AND IN-STORE SERVICES

An addition to today's meat counter and fresh bakery, this area will be very important. A food court will offer expert advice, a place to socialize with barista-served coffee, and tastings of meals for home delivery or pickup.

Potential increase of labor hours: 40+%



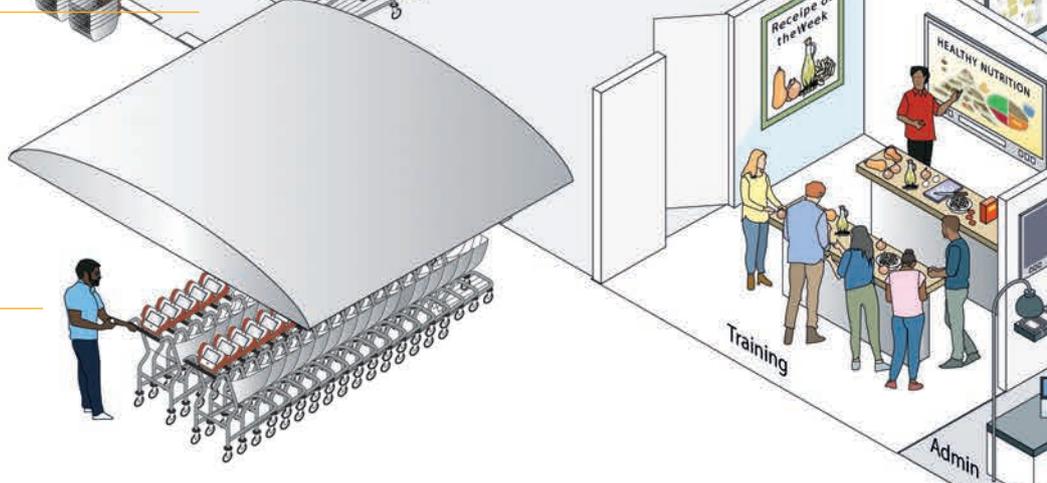
## CHECKOUT

No lines, one-click payment: The future store will offer a much better checkout experience than today. Most customers will use scan-and-go systems, others self-checkout terminals.

Potential reduction of labor hours: 60+%

## THE CUSTOMER OF THE FUTURE

The future customer will want to shop anywhere, anytime. A trip to a store will need good reasons. These could include services such as recipe tastings and lunch in the store, or a highly personalized offer and price. Shopping will need to be fun, hassle-free, and experienced through multiple channels.





### ORDERING AND REPLENISHMENT

Forecasting errors will be reduced by machine learning algorithms, making stock management much easier. Center store products will be bought online or from virtual shelves. The stocking of perishables will be a higher priority.

Potential reduction of labor hours: 50+%

### SHELF MAINTENANCE

Electronic shelf labels will enable automatic price updates and reduce effort – especially for discounted products. Personalized prices seen on a smartphone may even replace unified shelf prices. But tasks such as fresh and quality controls will stay relevant.

Potential reduction of labor hours: 50+%

### THE WORKFORCE OF THE FUTURE

Taking advantage of new tools and technology requires staff to develop a new skill set. Managers need to leave their offices and engage with customers, as good restaurant owners do. Staff at new areas like the food court will require a customer-centric mind-set and a new training approach.

### ADMINISTRATION

Smarter tools and automation will massively reduce back-office work. Streamlining and digitization will mean managers won't have to work through long paper lists and daily reports. The new checkout experience will also minimize hassles such as cash management.

Potential reduction of labor hours: 60+%

“People are social and for some reason shopping is one way they express their social nature”

## Mass retail executive

To smooth the flow of goods through their stock rooms, stores will need more-effective picking systems. Depending on lead times and customers' use of digital shopping lists, some orders will be picked in centralized warehouses in different locations. These items will then be combined with products that shoppers add in the supermarket, providing a seamless experience across every shopping channel.

Stores' forecasting and ordering decisions will be fully automated using machine-learning algorithms and real-time out-of-stock alerts. Smart tools and algorithms will help to plan just the right level of convenience food production. At the food court, employees will use standardized meal kits to maintain high levels of product consistency and operational efficiency.

## CHECKOUT WILL BE CUSTOMER-LED AND SUPPORTED BY TECH

Automation is already changing the supermarket checkout process. In the future, customers will expect no lines, no transaction time, and one-click cashless payments. Amazon Go uses a combination of digital technologies to check which items each customer has taken from the store's shelves. This kind of system will be too

expensive for most supermarkets, at least for now. However, scan-and-go systems that greatly simplify the checkout process are gaining popularity among shoppers. Many retailers offer self-checkout terminals, a number of which can be overseen by a single member of staff.

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**JD.com** aims to launch one million stores across China over the next five years

**Alibaba** aims to turn six million convenience stores into smart service centers

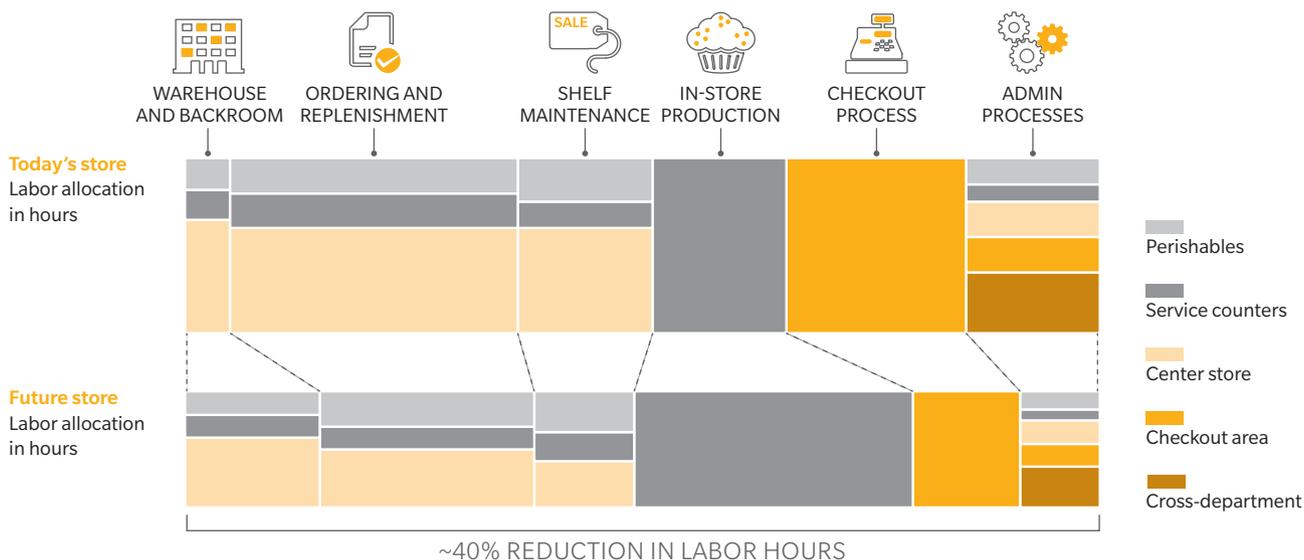
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## FUTURE STORES WILL BE ABLE TO OPERATE WITH 40-PERCENT REDUCTION IN LABOR HOURS

A number of these store upgrades will be costly, but technology presents huge opportunities to save money by simplifying basic tasks, while also providing a better customer experience. We think retailers could free up 20 percent of their labor using existing technology and by systematically optimizing and simplifying day-to-day processes. By adding the cost savings from

massive automation and the transformation of supermarket sections such as the center store, the future store will be able to operate with labor hours reduced by 40 percent from their levels today. (See Exhibit 2.) Highly-efficient digital operations will thus enable supermarkets to create a superior customer environment that will be well placed to compete against online stores.

Exhibit 2: The supermarket of the future will have different roles and fewer associates (~40% reduction in labor hours), as a result of automation and changing customer behavior



### Drivers of change for labor-hour demand

WAREHOUSE AND BACKROOM	ORDERING AND REPLENISHMENT	SHELF MAINTENANCE	IN-STORE PRODUCTION	CHECKOUT PROCESS	ADMIN PROCESSES
<p>Robots to support backroom picking for click and collect and online delivery</p> <p>Home for center store items (shop-floor shelves will be virtual)</p>	<p>Manual ordering fully replaced by automated, sales-based ordering with better forecasts</p> <p>Center store product restocking will be minimized thanks to virtual shelves</p>	<p>Electronic shelf labels will reduce labor effort</p> <p>Personalized prices seen on smartphones may replace uniform shelf prices</p>	<p>Emphasis on food court experience</p> <p>Areas for customers to socialize and be inspired by offerings such as barista-served coffee and in-store cooking classes</p>	<p>Customers to take more control of the checkout process with scan-and-go systems and self-checkout terminals</p> <p>Reduced number of cashiers needed, though still present to assist customers</p>	<p>Smarter tools and automation will massively reduce back-office work</p> <p>Store managers freed up to leave offices and engage with customers</p>

## ABOUT OLIVER WYMAN

Oliver Wyman is a global leader in management consulting that combines deep industry knowledge with specialised expertise in strategy, operations, risk management, and organisation transformation.

In the Retail & Consumer Goods Practice, we draw on unrivalled customer and strategic insight and state-of-the-art analytical techniques to deliver better results for our clients. We understand what it takes to win in retail: an obsession with serving the customer, constant dedication to better execution, and a relentless drive to improve capabilities. We believe our hands-on approach to making change happen is truly unique – and over the last 20 years, we've built our business by helping retailers build theirs.

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