

# Smart retail

How to maximize retail success  
and rise to new possibilities.

It's not just digital,  
it's embracing a  
brighter future



# Contents

<u>Technology</u>	3
<u>Customer expectations</u>	5
<u>E-commerce</u>	8
<u>Mobility</u>	10
<u>Automation</u>	13
<u>Innovation</u>	16
<u>How can VMware and Intel help you?</u>	19



# Technology

As retailers look to the future, they're increasingly recognizing technology as more than just a vehicle for innovation, leveraging it strategically to build rewarding experiences that position the business as a trusted brand.

In a sector that had generally been reactive about adopting new technology, in the last few years there has been a rapid escalation in their digital transformation efforts and retail has gone all-in on innovation.

Seemingly overnight, the industry created powerful ecommerce platforms and rolled out new services such as buy-online-pickup-in-store or curbside. The retailers that were most ready to meet the near-instant shift in customer expectations acted as a beacon for others.

In some ways, the bricks and mortar retailers were playing catch up with the disruptive online-only retailers – who had capitalized on the consumerization of digital

technologies and the rise in online shopping when it had happened. Yet, traditional retailers are able to bring their physical stores into play, providing their customers with omnichannel experiences that online-only retailers can only dream of.





## Creating great places to work that are as efficient as possible

The so-called ‘great resignation’ – a mass exodus of disillusioned employees from the workforce – has been felt most acutely in the retail sector. Retailers have been forced to think about how they can create effective incentives for their workforces, or come up with alternative solutions to employing people.

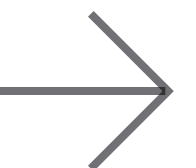
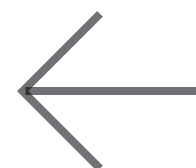
Meanwhile, digital transformation and innovation have led to major opportunities for new efficiency across operations. Whether it’s reconfiguring supply chains to place a much greater emphasis on home delivery, reaching out to new locations, or just adopting smart technologies in warehouses, there are significant gains to be made.

## Creating opportunities for traditional retailers

The retail sector is currently going from strength to strength, as businesses transform their operations to address the new market realities.

The huge opportunity – and challenge – right now is to maximize profitability. On the one hand, that means making your retail operations more efficient. On the other, it means creating omnichannel customer experiences that maximize your revenues, both in-store and online.

Traditional bricks and mortar retailers have a great strategic advantage in being able to combine in-store experiences with today’s must-have tech. As you move forwards, you can blend the past with the future, buoyed along by five key areas for retail transformation.



# Customer expectations



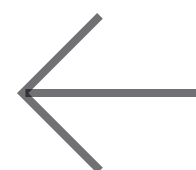
The retail customer has ascended from being just King or Queen, and is now a demi-God. They're what's driving your retail business.

The fast-paced adoption of digital technologies in retail and the corresponding escalation in customer expectations have led to a true innovation arms race. Consumers demand to be able to buy what they want, when they want, online or instore – and, if instore, at any of your stores – however they want, and have it delivered to wherever they want.

They're returning to the shop floor across all sectors – grocery, fast food and especially fashion – giving traditional retailers a huge opportunity that their online-only competitors can only dream of. So, it's now up to you to create the shopping experiences that will win consumers' attention and – above all – maximize their spend with your business.

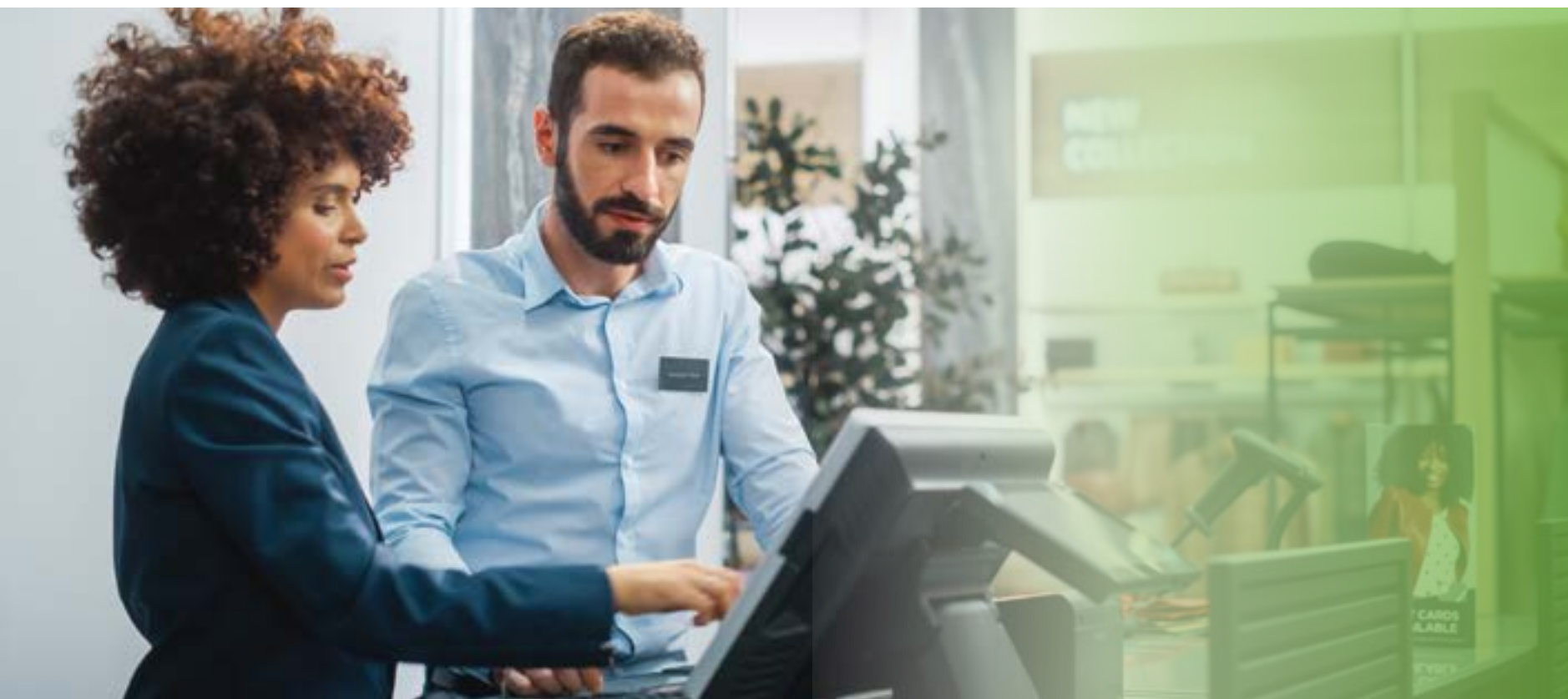
US retailers opened up 4,200 stores midway through 2022 – far outpacing the 1,766 closures announced.

**It's not just  
delivering packages  
– it's delivering  
the full package**



## Omnichannel experiences are your road to greater revenue

That means joining up your online and in-store experiences. In fact, it might mean thinking bigger about the very role of your physical store premises and how that integrates with your other services. The types of technologies that you can now offer in-store are creating entirely new ways of doing things. So, how can you deploy these different capabilities as packages of differentiated services that your customers will love?

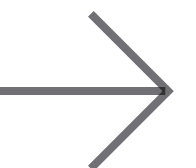
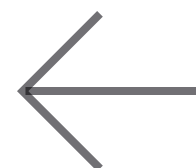


“

We see our stores as the hub of our omnichannel experience. People still want to come in. They want to feel, they want to see, and they want to try on. And we want to give them that ability, then enable them to either order online, or order in the store and combine that experience.

This is also why we are re-imagining the customer experience through new store concepts like House of Sport, which takes experiential retail to another level by exploring the future of retail through multi-sport experiences inside and outside the store, community involvement, elevated customer service and enhanced technology.”

– Jason Williams, Vice President of Athlete Technology  
DICK'S Sporting Goods





## Technological efficiency is your path to profitability

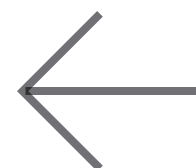
It also means thinking about how you deploy human resources. More than half of retail activities can now be automated. Time-consuming tasks – such as surveillance, stock management and some customer service activities – can be taken over and done better with the help of the latest retail technologies.

Indeed, technology can provide easy ways for your customers to get immediate and accurate answers to their questions about your products and services. You might be able to re-deploy your shop-floor workers – perhaps with the help of mobile devices – to be more effective at selling or productive in other ways.



## Creating magic moments with in-store technology

But you need to implement decentralized intelligent technology – at the store level – that can interact with customers in real time, giving them satisfying and lifelike experiences.



# E-commerce



Online shopping had already become the norm in most places, even before retail stores were shuttered in the pandemic. In Europe, for example, almost a third of people bought something online every week, and over two thirds did so each month.

Yet, COVID-19 is thought to have accelerated e-commerce by five years in just two months, **with grocery deliveries going up by 57% in Europe, year on year.**

But this was supported by a simultaneous flood of investment by retailers into their online commerce systems. Even the most advanced systems had to be transformed to support essential new operating models – such as buy-online-pickup-in-store or buy-online-pickup-on-curb.

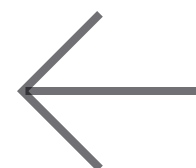
Those applications exist outside of commerce platforms yet were critical to their success. In the US, during the lockdowns, each different State had slightly different rules and regulations over what was permitted. Being able to adapt online commerce systems quickly and flexibly to enable different delivery models in different places was an essential business enabler.



“

“An example of how we were able to scale super-quickly was when we stood up buy-online-pick-up-curbside in just a matter of weeks, back in April 2020... customers have begun to expect this kind of seamless experience from us and one of our top priorities is to ensure they experience this across the entire shopping journey, whether that means shopping online, on our app or in the store.”

– Heather Mickman, CIO, Gap Inc.





## Preparing for the retail evolution

There are almost no limits to the different kinds of services you can provide. Some examples:

- **Fashion brand** integrating with TikTok to win sales from consumers in the moment.
- **Grocery retailer** enabling consumers to augment online orders in-store for home delivery.
- **Fast-food outlets** enabling touchscreen ordering to reduce waiting times.
- **Petrol stations** enabling forecourt workers to take store orders via mobile devices.

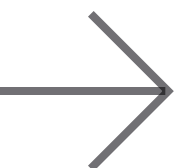
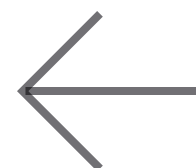
## Reach out for tomorrow's opportunities today

So, what will you do the next time the world turns on its head, and you need to react fast? And what other services can you wrap around your online commerce platform today that will enable new and compelling customer experiences?

It isn't just about today's greatest feature. You need to think about whether your applications development platform and approach gives your commerce platform the flexibility to use – and to enable – any external technology.

The trend towards online commerce is set to continue, but there is also a desire among consumers to return to the physical store. That gives you amazing opportunities to use technology in new ways to create compelling customer experiences.

So in a world that's rich with possibilities, where will your digital dreams take your business?



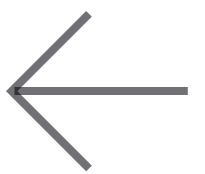
# Mobility



*It's not just  
your fleet,  
it's your  
workforce*

Mobile device usage is now endemic in our modern culture. According to Statista, **there are now 6.567 billion smartphone subscriptions in the world**, putting astonishing power and possibility into people's hands.

The vast majority of people are constantly influenced by their mobile devices, browsing everywhere – at home and work, on vacation, during their commute, and so on. That means retailers have endless opportunities to engage the workforce and influence their target customers – yet it also creates pressure for you to find meaningful ways of doing that.



## Welcome to your sixth sense on your customers' desires

On the retail sales floor, mobile devices can give your associates the information they need to deliver great service. They are more than hardware – they create new perspectives on efficiency and customer and employee experiences.

That might be as simple as stock- or price-checks, done there and then, without having to 'go and look'. It could also be providing good, accurate and detailed product advice from a reliable source. Mobile devices can also enable existing customer orders to be searched for and amended, and for stock to be ordered in from other stores.

Additionally, your associates can potentially bring up customers' online activity, see where they are in their buying journey, what they care about, and give them the exact help they need to finalize their purchases. Indeed, it's even possible to enable in-store mobile devices to take card payments, so your associates can also conclude sales more naturally.

## Create the best offers to make every moment magic

Crucially, with the right technology in place, mobile devices on the shop floor can be used to come up with special, personalized offers based on context. So, for example, a sales-floor associate might be able to offer known, loyal customers bigger-than-usual discounts.



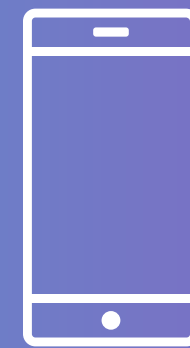
Home



Content



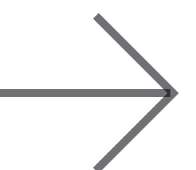
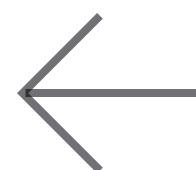
Contact



## Intel and VMware technologies

You can manage fleets of mobile devices to better secure, manage and support devices in any location:

- **Easy mobile device management** with updates applied anywhere, anytime without disrupting users.
- **End-to-end security** with out-of-band and in-band device support, patching and updates.
- **Insights on employee experiences** and faster resolution of support tickets.



Turkish retailing giant, Migros, uses VMware technology to maintain its fleet of over **3,000** handheld devices...



“Thanks to Workspace ONE, the software updates that used to take weeks, are now completed in one hour smoothly. This led to a substantial decrease in the number of calls and a substantial increase in internal customer satisfaction.”

– Murat Zobu IT Infrastructure and Operational System Director, Migros

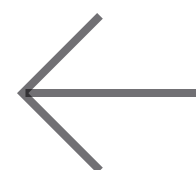
## Support your business and your people

There are many other ways you can use mobile devices in retail operations. They can be used throughout your supply chains for fast and accurate recording of stock movements. Workflow tasks can be assigned through them, helping you maximize employee productivity. And you can use them to guide employees through specific tasks, with snippets of the right information provided at just the right moment, helping support learning and improve the quality of work.

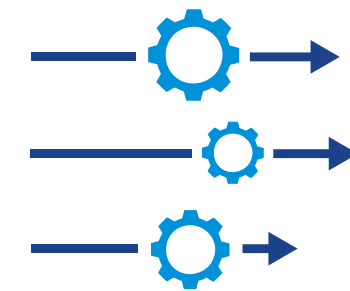
## Create great employee experiences to build loyalty

Finally, a key role of mobile devices today is in improving the employee experience. They can make work much easier – and far more rewarding – for in-store employees by speeding up many tasks and eliminating boring manual work.

This can be a key differentiator in the struggle to attract and retain good employees. In fact, one of the largest retailers in the world has actually chosen to give each and every one of its 700,000 in-store employees their very own mobile device as a perk. The employees are free to take the devices home and use them as they wish, but they also include all the applications that are necessary in store.



# Automation



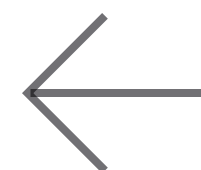
You can now enable intelligent tools to run in-store that would previously have required a costly on-site data center.

## Immediate decisions to set off fireworks

That means you can enhance your employees' and customers' abilities with new feats of in-store, automated decision-making capabilities. The applications of this are many and varied, and light the way to unprecedented customer-centricity and operating efficiency.

As the previous section mentioned, personalized offers can now be automatically created for customers based on their individual buying context. But the technology has implications that are far more wide-reaching than what you can do on mobile devices.

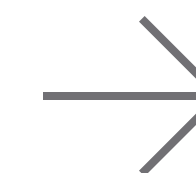
**It's not just  
picking up pace,  
it's intelligent  
decision making**



## Connect with almost anything

You can run advanced algorithms anywhere – using edge technology – and orchestrate everything to work together on any device, application, or cloud. Here are just a few of the many use cases:

- Customers can scan a **QR code** with the store's app – when they enter and as they browse – to receive personalized offers and information.
- Restaurant **smart menu screens** can engage intelligently with customers, asking questions and even taking payments by facial recognition.
- **Surveillance cameras** can raise alerts when shoppers fail to scan items at self-service checkouts, or when there's spillages, and so on.
- **Self-checkouts** (SCOs) can enable customers to scan barcodes on items, and cameras can even automatically identify and register items as they're put in bags.
- **Payments by facial recognition** enables known customers to have a completely frictionless in-store retail experience.
- **Mobile apps** can determine the most efficient way to pick and pack warehouse orders to speed up fulfillment and reduce costs.
- **Robots** can automatically navigate road hazards and street environments to make deliveries, or move autonomously around the warehouse, communicating with other digital systems as they go.



These all use the latest in artificial intelligence (AI), machine learning (ML) and Internet-of-Things (IoT) technologies. Their underlying platform must ideally be as flexible as possible so that it will work with your existing technology investments.

There's an additional challenge in that many retail stores may need physical reconfiguration to be able to support some of these technologies. Especially for applications like video-scanning self-checkouts, the cameras obviously need to be able to see every corner of your store.

Moreover, all these interactions can capture huge volumes of customer data which – as well as enabling the functionality itself – can then also be fed back into your centralized IT analytics systems. You can gain valuable new insights on your customers' behavior and shopping trends, and also tweak, test and optimize your in-store algorithms over time.



“

It's more about creating a platform where solutions could be deployed, providing the productivity and convenience for the development teams to deploy things... to an edge location. Being fast in the market, reacting to changes in the market. Being closer to the customer and reacting on the customer.”

– Heiko Onnebrink, Principal Architect,  
Wipro Business Solutions

# Innovation



As you will already know well, cloud offers retailers a whole universe of advanced – and advancing – new capabilities while also enabling you to enjoy a diverse range of cost economies.

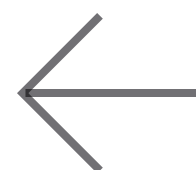
But what kind of cloud – public, private or hybrid? And, if public is part of it, which public cloud? Because retailers want to be free to choose the best ecosystem for their customers' needs. You want the flexibility to advance at the speed of retail – to pursue the very best approach – and to make the most of all your investments.



“

Google Cloud VMware Engine has given Carrefour France a fast and simple route to the cloud. We were able to migrate on-premises VMware workloads to Google Cloud within minutes – it really is ‘lift and shift.’”

– Damien Cazenave, Chief Technology Officer and Chief Information Security Officer, Carrefour France



## From private cloud to public cloud... to Cloud Smart

Moreover, the smartest retailers have generally built their own private clouds – home to the core of their businesses – and then also harness public cloud services to enhance those operations. This approach gives you the greatest flexibility because the core of your business is entirely within your control. But how you manage and integrate your public cloud resources will have a direct impact on your ability to innovate quickly.

Indeed, these decisions will cut right to the heart of your business strategy. With the speed that retail moves at, flexibility and agility are critical success factors for competitiveness. You need to take an architected and planned – or Cloud Smart – approach to digital transformation.

First, it means deploying the right cloud for your application, based on data access factors, technology, governance, and so on. Second, it means having a unified developer experience to ensure your software coding team can be as productive as possible.

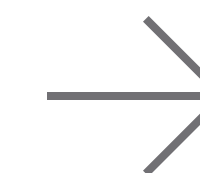
Finally, it means removing all friction from your customer experience, as they use your mosaic of different applications, whether legacy data center, SaaS or new cloud native.

Essentially, Cloud Smart means transcending the time-consuming, day-to-day practicalities of managing cloud technologies, and streamlining your developer efforts with cross-cloud services.

## Food for thought



The restaurant sector today depends heavily on cloud computing, along with artificial intelligence and machine learning. It has embraced cloud solutions that help with inventory management, secure Point of Sale (POS), data extraction and analysis, and enhancing the customer experience.



# The future of retail is now, are you ready?

- **Create** breakthrough omnichannel customer and employee experiences cross clouds?
- **Accelerate** retail cloud transformation by modernising your infrastructure, operations, and applications?
- **Empower** the hybrid workforce for retail by enabling work anywhere with secure and frictionless engagements?

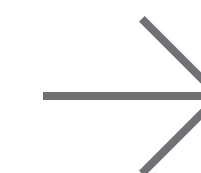
VMware and Intel help retailers effectively adopt a cloud initiative in a seamless, scalable, cost-effective manner that is both minimally disruptive to retail operations and provides a superior experience for customers and employees alike.

## Why now?

- Legacy data centers are inefficient, lacking resiliency, agility, security, and the ability to scale.
- Omnichannel customer experience has become critical and is now a necessity in an increasingly competitive market.
- Unpredictable supply chains and delivery logistics are putting increasing pressure on retail operations and remote connection points
- In delivering retail apps, visibility, security, and costs can be negatively impacted by the use of multiple, disparate teams with no consistency in managing cloud infrastructure.
- Disjointed hybrid work solutions cannot scale across retail locations, creating siloed visibility into security policies and associate experiences, which increases operational overhead.



Reach out to us to discuss!



# How can **VMware and Intel** help you?

Discover the retail technology providers that offer greatest flexibility, enable maximum speed and agility, and can ensure you're ready for anything.

Find out today how VMware and Intel can help you dream richer digital dreams in retail. **Please get in touch with:**

## Ed Durbin

Senior Director, Retail Industry Solutions,  
VMware

[edurbin@vmware.com](mailto:edurbin@vmware.com) 

## Ryan Wehner

Industry Director Retail and Consumer Goods, EMEA  
VMware

[wehnerr@vmware.com](mailto:wehnerr@vmware.com) 

## David Dobson

Industry Director Retail & Hospitality,  
Intel Corporation

[david.dobson@intel.com](mailto:david.dobson@intel.com) 

## Marta Muszynska

EMEA Vertical Sales Specialist Retail & Hospitality,  
Intel Corporation

[marta.muszynska@intel.com](mailto:marta.muszynska@intel.com) 



# Thank You

vmware®

VMware, Inc. 3401 Hillview Avenue Palo Alto CA 94304 USA Tel 877-486-9273 Fax 650-427-5001 vmware.com  
Copyright © 2022 VMware, Inc. All rights reserved. This product is protected by U.S. and international copyright and intellectual property laws. VMware products are covered by one or more patents listed at vmware.com/go/patents. VMware is a registered trademark or trademark of VMware, Inc. and its subsidiaries in the United States and other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.  
Item No: 03536-11\_VMware\_Retail\_eBook\_v3 11/22

Join us online:

