DIGITAL TRANSFORMATION IN RETAIL

Improving Customer and Associate Experiences by Modernizing and Mobilizing Retail IT
REIMAGINING RETAIL

The retail industry has always been fast paced. Yet as on-demand technologies rapidly reshape consumer lifestyles, retailers are experiencing even more significant changes—at an unprecedented rate. They must know who buys, and how, where, and when they buy, as well as what motivates every consumer decision. Customer experience has become everything, requiring retailers to increase their digital proficiency.

Great consumer experiences will hinge on frictionless, connected business processes that ensure simple, intuitive, and highly productive interactions,¹ says IDC. With customers demanding personalized services everywhere, retail IT is forced to adapt to the consumerization of IT, including rationalizing existing technology investments and prioritizing new approaches. Debuting new store environments featuring Internet of Things (IoT) technologies, augmented reality, virtual reality, robotics, and advanced security are becoming as critical to success as addressing increasingly dynamic cyber attacks that threaten customer loyalty and brand reputations.

“…the physical/digital divide isn’t binary, it’s a continuum. In this new world, retailers can’t separate physical and digital experience strategies. Gone are the days when a bolt-on digital strategy was enough. The answer lies in customer obsession.”²

MARTIN GILL
VP, RESEARCH DIRECTOR, FORRESTER

This paper explains how retailers can securely modernize and mobilize retail IT to improve customer experiences and drive growth. It also illustrates how retailers are using VMware solutions to seamlessly transition from legacy IT to modern infrastructure and clouds, merge traditional interactions and digital engagement, and adopt transformative security.

Accelerate Digital Transformation in Retail

- Grow Revenue, Drive Operational Efficiencies, and Reduce Costs
- Improve Customer Service, Increase Brand Loyalty, and Boost Workforce Productivity
- Ensure Business Continuity, Reduce Compliance Costs, and Protect Customer Data
TRANSFORMATION DRIVERS

The retail industry is under siege with news of store closures and bankruptcies dominating headlines every day. Simultaneously, a shift is underway. Now technology is driving almost every step of the retail experience. Thanks to digital transformation, retail models are being constantly reshaped as people change their shopping behaviors.

In the face of significant change, retailers are looking to transform every customer interaction and they are already making new business model, process, and people investments that move them closer to adopting a mobile-first approach to customer engagement. In the next three years, digital transformation investment by retailers will triple. The priority for most will be to converge their physical and digital customer experiences. But according to recent IDC research, optimizing the productivity of all assets will become the primary future driver for retail initiatives.

Analysts also report that retailers will triple mobile investments this year and double spending on wireless infrastructure over the next few years. A top priority will be improving associate-enabled experiences in physical locations, which requires giving store employees instant access to accurate product information, customer purchase history, and other key sales-related data.

In an interconnected, competitive environment, retailers expect innovation investments to help maximize profits and market share. Retailers are moving to embrace IoT initiatives to access customer, product, and device information that will enable them to strategically meet changing customer demands, maneuver through a consolidated market, and identify growth opportunities.

Recognizing that no retailer wants to start over, VMware accelerates digital transformation by enabling unprecedented freedom and flexibility in how brands build and evolve their IT environments. The VMware Cross-Cloud Architecture enables IT to run, manage, connect, and secure any app on any cloud. VMware’s secure digital workspace solutions provide anytime, anywhere, any device access to data and information, improving customer engagement and associate productivity.

"I can’t wait to get better tools into the hands of our store personnel, so that they can engage with the customer better. What I love about the new role of IT is that we’re an enabler for the way we choose to do business going forward."

CHAD EHMKE
VP AND CIO, SALLY BEAUTY HOLDINGS
In the dynamic world of retail, IT is becoming a primary differentiator. VMware solutions are helping retailers drive innovation and agility by building a modern data center and best-in-class private cloud. With VMware’s Software-Defined Data Center (SDDC) approach and solutions, retailers can speed everything from checkout to supply chain management creating a flexible, secure, and scalable infrastructure to support a modern retail experience.

**Adopt Digital Retail Infrastructure**
Retailers dealing with legacy, disconnected, and siloed systems have latencies and speeds that cannot support modern commerce. By updating core infrastructure—including point-of-sale (POS) systems—retailers can quickly launch the types of services today’s customers expect. The deployment of a VMware SDDC, including virtualized compute with VMware vSphere®, storage with VMware vSAN™, and networking and security with VMware NSX®, together with a consistent operational model across public and private clouds enables retail IT to be more agile. It also helps ensure retail infrastructure can scale in support of modern apps, workflows, and PCI compliance requirements.

**Automate Retail Operations**
Manual, error-prone processes have no business in modern retail settings. VMware vRealize® cloud management solutions enable retailers to be both proactive and reactive when it comes to infrastructure changes. By broadening IT automation centrally, IT teams can intelligently pinpoint, analyze, and prevent potential system issues in real time, before they affect customer and associate experiences, supply chains, or inventory management. With cost metrics at their fingertips, IT teams can speed decisions about where to run specific workloads for maximum efficiency. Deployment of NSX and VMware vRealize® Automation™ enable retail IT to also deliver apps and compute services with network and security services attached based on policy decisions, further reducing complexity and improving compliance.

**Run Legacy and Modern Apps**
A modern data center foundation best positions retailers to accelerate app delivery. VMware solutions support the rapid pace of retail operations. They meet IT requirements to build, test, and run modern apps through a container-optimized platform purpose-built for cloud-native apps and to deploy on production-grade OpenStack while retaining the security, control, and performance of the data center. With VMware solutions, retailers can run their POS and other critical business applications with high reliability, at lower cost.

“We have the ability to deliver building blocks to our developers, to whatever the line of business may need, delivering technology wherever they may need it.”

**TIM MELVIN**
SENIOR DIRECTOR,
GLOBAL SOLUTIONS DELIVERY,
COLUMBIA SPORTSWEAR
INTEGRATING PUBLIC CLOUD

The velocity of change in retail IT is making recognized brands rethink their IT strategies and consider cloud as the best way to improve delivery speeds. VMware supports a foundation of shared technologies to serve both the digital and in-store needs of connected retail environments—with freedom and control.

**Burst to the Cloud to Support Busy Seasons and Expansion**
During busy holiday and buying seasons, IT teams are pressured to quickly scale infrastructure to meet business demand. Retail leaders want the speed and convenience of more infrastructure, but they want it at the same or lower cost. With VMware, IT can build a best-in-class private cloud; extend easily to public clouds including IBM SoftLayer and Amazon Web Services; and ultimately run, manage, connect, and secure any app on any cloud. VMware supports hybrid cloud architectures, satisfying strict data protection regulations and providing freedom from vendor lock in.

**Enable Always-On Infrastructure**
Retailers are also looking for a connected environment to break down traditional operational silos and models because any interruption to core business infrastructure can immediately impact the bottom line. VMware ensures retailers never miss a sale with always-on infrastructure and disaster recovery automation software that integrates with underlying replication technology to provide policy-based management, non-disruptive testing, and automated orchestration of recovery plans.

“The cost difference between doing it yourself versus hosting it on VMware was really something that was attractive to us. ...we were able to replicate the full production databases out of the full production website and to do that within 6 months makes me feel very good but it also gave the executives comfort that they knew that we now had a solution which would be useful and known if we came to have a disaster.”

SCHALK VAN DER MERWE
CTO, THE HUT GROUP
EMPOWER THE DIGITAL WORKSPACE FOR RETAIL

Today’s consumers want to be able to shop anytime, everywhere. Innovative retailers are meeting these requirements by delivering modern, engaging interactions and empowering in-store workforces with digital solutions.

Secure Digital Workspace for Retail
The VMware Secure Digital Workspace for Retail—powered by VMware Workspace ONE™—is a transformative solution for modernizing IT, strengthening data security, ensuring uptime, and mobilizing workflows to grow revenue. It secures desktops, apps, and devices across the SDDC while adhering to data protection requirements. With the digital workspace, retailers can build brand loyalty by delivering unique and personalized experiences on mobile devices.

The VMware Digital Workspace enables retailers to deploy augmented reality apps, self-service kiosks, endless aisles, and tailored promotions. They can automate app and infrastructure delivery to mobile endpoints and enable bring-your-own-device (BYOD) and corporate-owned device initiatives that put information and training resources in the hands of associates and seasonal personnel. The Digital Workspace simplifies in-store IoT management, couponing, and point-of-sale apps, and eases scheduling and inventory management on all mobile devices including rugged. It also supports the delivery of digitally integrated spaces with high-performance desktops and apps to everyone—from customer service teams in call centers to store managers across regions.

Embracing IoT
Increasingly, IoT solutions are being used across retail to deliver on-demand services and create convenient shopping experiences everywhere. VMware IoT solutions simplify data monitoring and collection, including transaction details, so retailers can offer solutions that encourage customers to make smarter buying decisions. From the edge to the cloud, VMware IoT solutions work in real time to help uncover new opportunities and improve retail business, inventory, and sales processes, enabling retailers to better

• Know: Understand shopper behavior in-store and online to create a 360-degree view
• Engage: Offer real-time personalized communication with the shopper
• Sell: Send personalized mobile coupons specific to the product in the aisle
• Service: Track in-store shopper movement to enhance customer service

Empowering Associates
Employees that use VMware solutions can spend more time gaining product knowledge and engaging with customers, increasing productivity and customer satisfaction. They can view training videos, visual merchandising diagrams, text, and upcoming promotional campaigns on their devices—BYO or store-owned—keeping personal information private and corporate information in the data center.

“The biggest thing we wanted to look at is taking our mobile devices and putting those into the hands of our reps so they can be out from behind the counter, shoulder-to-shoulder selling in our 1,000 stores.”

JOE HAMBLIN
DIRECTOR EMERGING PLATFORMS, SPRINT
The retail industry is one of the largest targets for cyber criminals, making it imperative that personally identifiable information (PII) and transactions are secure to reduce the cost and reputational damages of data breaches. VMware enables retailers to secure interactions between customers, apps, and data, in an environment that is changing and increasingly under attack.

**Ubiquitous Software Layer to Combat Dynamic Threats**
VMware provides a transformative security platform that enables retail IT teams to address today’s dynamic threat landscape through a ubiquitous software layer across infrastructure and endpoints, independent of the underlying physical infrastructure or location. The platform provides visibility and context into interactions between users and apps, and the context to understand them. It also supports the insertion of additional third-party security services for intelligent protection.

**Granular Protection with Micro-Segmentation**
Legacy models of only securing the network perimeter are inadequate methods of protecting customer and credit card information. Once malware has managed to make it inside a data center, it can move laterally from workload to workload. VMware NSX features micro-segmentation that introduces stricter, micro-granular security—isolating networks from one another and automatically applying appropriate security policies down to the app level.

**End-to-End Security**
VMware AirWatch unified endpoint management (UEM) solutions integrate identity, application, and enterprise mobility management to safeguard data across any device or application—including native, web, remote, virtual, and Windows. Identity-based conditional access and role-based policies allow for control of entry points and interactions across apps, devices, and locations, which is especially important for retailers engaging with seasonal employees.

“The platform we are leveraging from VMware is providing the ability to deliver services seamlessly to our customers, to our users, to our partners, without worrying about their data integrity and data privacy, which is really the key to success for Shutterfly.”

**ARSLAN MUNIR**
DIRECTOR OF ENGINEERING AND ARCHITECTURE, SHUTTERFLY
RETAIL SOLUTIONS FROM A TRUSTED INDUSTRY LEADER

Ever-increasing consumer demands for faster, personalized services coupled with declining in-store foot traffic are challenging retailers to speed the transformation of their operations. VMware is a proven partner in digital innovation for the retail industry. For nearly 20 years, the company has helped retail organizations achieve growth and profitability by fundamentally changing service delivery. Today, VMware delivers cloud infrastructure and digital workspace solutions that empower retail IT organizations to drive further business transformation.

Capital and Operational Savings
VMware virtualization technologies have already saved retail organizations millions of dollars in capital expenses. VMware is now reimagining retail data centers by extending the paradigm of resource abstraction to all infrastructure domains, across on-premises and public cloud environments—and at the same time delivering new digital workspace solutions that improve user and customer experiences.

Digital Transformation Acceleration
VMware solutions accelerate digital transformation for lines-of-business teams seeking agility, for operations teams managing existing environments, and for engineering teams building retailing operations of the future. As evidenced by successful partnerships with retail customers across the world, VMware solutions are uniquely ready to solve infrastructure, cloud, customer engagement, digital, security, and compliance challenges—reducing IT complexity and driving sales.

Learn more
www.vmware.com/solutions/industry/retail

5. Vend. “12 forecasts for the retail industry in 2017.”