



Microsoft Dynamics AX

7 emerging trends that are changing retail

Empowering retail

In the last decade, few industries have been impacted by rapid advancements in technology quite like the retail industry has. Retailers have been faced with an “evolve-or-die” ultimatum as emerging platforms have created new channels to reach customers, introduced a seemingly endless flow of new competitors, and given shoppers unprecedented access to product information, including ratings and reviews. The proliferation of personal devices - such as smartphones and tablets - is changing the shopping experience, both in-store and online, and retailers now have access to massive amounts of customer and market data, which presents both a great risk and a great opportunity.

As retailers look to manage the opportunities and challenges that technology has delivered, many are looking back to the source to help them thrive in this new environment. With the tools available in Microsoft Dynamics AX, retailers are able to help better manage global expansion with flexible deployments, create seamless commerce and omni-channel experiences for customers, and improve merchandise management. In an era of the empowered consumer, Microsoft is empowering retailers to create amazing customer experiences through intelligent operations, driving business success today and into the future.



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Creating amazing customer experiences

Global expansion with flexible deployments
Seamless commerce & omni-channel excellence
Effective merchandise management
Intelligent operations

Microsoft Dynamics AX

Increase the speed of doing business
What's new?
Why Microsoft?



Emerging trends

Create amazing customer experiences

Emerging trends

The world is changing. Fifteen years ago, businesses had much more power in the purchase process. When someone wanted to buy a product, they only had a handful of options across a few different local stores.

Today, consumers are inundated with options, and once they've narrowed down what they want to buy, they're just at the beginning, because they now have endless options on how and where to buy.

With an abundance of information available at their fingertips, and dozens of options on what and where to buy, consumers are empowered like never before. The demands and expectations are high, and the tolerance for failure is low. Retailers that want to thrive in this Age of the Consumer need to deliver experiences like never before.

The following will explore the seven biggest emerging trends in retail that are empowering retailers to deliver amazing experiences for their customers.



Digital in-store experiences

Executive summary

Digital technology has had a major impact for retailers online, but it is now reshaping the modern in-store retail experience as well. New innovations in retail technology are helping customers get the information they need to make smarter, faster purchase decisions, as well as empowering retail employees to provide better customer support.

Highlights

- *Self-service kiosks improve customer experience and increase sales for retailers by 20%.*
- *Beacon-triggered offers increase the likelihood of a purchase by 73%.*
- *85% of customers have used self-checkout kiosks, often citing convenience and simplicity.*

Digital is reshaping in-store experiences

Over the past 15 years, digital technology has transformed the way people buy. New e-commerce platforms have opened up a whole new channel for buyers and online reviews have reshaped the purchase process. Yet despite this massive transformation, these disruptive retail technologies have largely lived online, until now.

For the first time, we're seeing the promise of digital media impacting the in-store retail experience. There are several variables driving this transformation. The decreasing cost of technology paired with near ubiquitous Internet now provides seamless access to increasingly powerful clouds. This allows retailers to centralize and access data that connects customers, vendors, and employees like never before. Additionally, the proliferation of mobile devices, along with smarter sensors, is enabling new experiences that are bridging the gap between the digital and physical worlds. As a result, digital technology is finally making its way in-store, and it's reshaping the customer experience.

Technology becomes the new sales assistant

One of the last major differentiators that brick and mortar retailers can tout is the ability to speak face-to-face with an expert who can help assist customers in their buying journey; however, this asset can quickly turn into a liability when it results in long wait times or sales assistants who can't keep up with an ever expanding portfolio of products. Furthermore, today's sales assistants are facing highly informed customers who are frequently armed with very specific questions. In response to these demands, digital technology is becoming the new in-store sales assistant, both speeding up service by helping customers help themselves and by empowering sales associates with the information they need to provide better support and service to customers.

Many retailers are embracing technologies that allows customers to control their own in-store shopping experience

without needing to wait for a store employee. Banks and airlines have been quick to adopt this technology — ATMs and self check-in kiosks have become commonplace — but now we're seeing an increasing number of retailers in other industries leveraging digital kiosks to improve customer experiences.

While this technology is still relatively new, we're already seeing it change shopping behaviors. For starters, researchers have found that customers are more at ease when using digital assistants. A study conducted by researchers at Rotman School of Management, Duke's Fuqua School of Business, and the National University of Singapore found that the market share of difficult-to-pronounce items increased 8.4% when a liquor store moved from face-to-face to self-service; the shift to self-service removed the social anxiety of mispronouncing a product name. Similarly, they analyzed data from a pizza chain that had introduced online ordering and found that customers who ordered online requested food with 3% more calories and were 14% more likely to give special instructions, compared with purchases made over the phone. The researchers concluded that this lift was largely a result of customers feeling less judgment of their eating habits when ordering online.¹

Beyond a shift in buying habits, retailers have reported increased sales from self-service kiosks as well, largely driven by the ease of use, as well as the ability for digital kiosks to use data to strategically up-sell. Taco Bell recently announced that orders made via their new digital app are 20% higher than those taken by human cashiers, largely because people select additional ingredients.² Similarly, Chili's has reported a 20% increase in dessert sales since installing tablet ordering³ and Cinemark theater's new self-service kiosks have "had concession spending per person climb for 32 straight quarters."⁴ In fact, a 2011 study by researchers Northwestern University, Columbia University, and Harvard University showed that a seven second reduction in service time at

quick service restaurants could lead to a 1-3% increase in the company's market share.⁵

But the digital assistant is not limited to ordering. New retail technology is assisting customers in other ways, changing the way they collect information and compare options. Augmented reality is showing huge potential in retail, allowing customers to try on different clothes, see different paint colors on their house, and can even be used to help customers navigate through a store. China's largest online grocer, Yihaodian, has used augmented reality to create 1,000 "virtual" stores. The stores, which exist in parking lots, parks, and near famous landmarks, are completely invisible to passerby's, but via the Yihaodian smartphone app, customers can see an entire grocery store and walk down virtual aisles through their devices. Shoppers selecting items by tapping on their screens and arrange to have them delivered to their home when they're done.

Some retailers are leveraging technology as the new sales assistants in the most literal sense. Lowes has recently been testing out robots to help customers locate products in their stores. Not only can these robots — called OSHbots — scan, identify, and locate merchandise in the store, they can also speak to customers in their own languages, an amazing personal touch to an otherwise seemingly impersonal piece of technology.

And for those retailers who aren't ready





to ditch their staff for robots, technology is also playing major assisting role by providing employees with the information and tools needed to better serve their customers. Retailers are increasingly equipping their staff with tablets and smartphones, which can provide sales assistants everything from detailed product information, alternative products to consider, up-sell opportunities, and even customer profiles and past-purchases.

[Beacons are finally here](#)

Beacons are poised to be one of the most significant pieces of technology that retail has ever seen.

A beacon is a small, powered transmitter that broadcasts a message that can be read by an app on a smartphone. They use Bluetooth 4.0, called Bluetooth Smart, so that the phone can automatically detect the Bluetooth with no pairing required for users who have the respective app installed. It's strictly a one-way conversation; a beacon can push a message to the app, but it cannot read data from the phone.

Beacons can be set to interact at different distances, from as far away as 50 meters to as immediate as a few centimeters. This ability to control proximity opens up a ton of amazing opportunities for retailers. At a long range, retailers can attract nearby customers with marketing promotions and offers, even customizing those offers based

How beacon marketing campaigns influence shopper behavior⁶



on that users specific profile. Additionally, at a longer range, beacons can be used to help understand customer shopping patterns, such as user flow throughout a store, shopping frequency, and whether they visit multiple retail locations.

All of this data, combined with proximity and ability to provide targeted messaging, can have a powerful impact on sales. In a late 2014 study by Swirl Networks, Inc., researchers found that beacon marketing campaigns increased the likelihood of a purchase by 73%, with 60% of shoppers spending more money and 30% redeeming a beacon-triggered offer.⁶ A recent report by BI Intelligence Estimates — the research arm of Business Insider — projected that beacon-triggered offers will directly influence over \$4.1 billion worth of retail sales this year at top retailers, a number that will balloon to \$44.4 billion in 2016.⁷

At the narrower end of their range, beacons can deliver an entirely different range of opportunities. Museums have been quick to adopt this technology, delivering dynamic content to customer's smartphones based on the specific display they're standing in front of. Retailers create a similar experience for product information; however, the opportunities are incredibly expansive. For example, when a customer lifts a shoe off of a display, a screen could illuminate showing information about the shoe, as well as outfits that would complement them. If the individual carried

the shoes into another part of the store, lights and other displays may illuminate guiding them to recommended items based on the shoes they're carrying.

The opportunities for beacons and similar sensor technologies are expansive and will likely stretch far beyond our imaginations, but one thing is certain: beacons are going to change the in-store shopping experience in a major way.

POS technology is empowering employees

New POS technology is empowering employees, improving customer experiences by cutting wait times, and helping businesses cut costs. Because of this, many major retailers are jumping behind this evolving trend. To date, advancements in POS technology have largely come in the form of self-checkout kiosks. In fact, according to a 2015 survey by Ratale, 85% of consumers have used self-service checkout kiosks⁸, and according to London-based RBR, the number of self-checkout units worldwide will rise from 210,000 in 2014 to 335,000 by 2020.⁹

There are many obvious benefits to self-checkout. A 2014 study by NCR¹⁰ reported that 42% of self-checkout users liked the convenience, 40% liked the simplicity, and 39% felt it was faster than the cashier assisted line. Perhaps more telling of this growing trend, 20% of Millennials actually said that they don't like interacting with cashiers during checkout⁸. But for as widely ad-

opted as they've become, self-checkout does have its challenges, with 41% of customers said that self-checkout kiosks could be better.

These challenges with self-checkout kiosks have led to new solutions. Recently, mobile card scanners have been making their way into an increasing number of retailers. By leveraging mobile card scanners, any sales rep can help a customer checkout from anywhere in the store; customers no longer have to wait in line after collecting their items. Beyond improving customer experience, this has the added benefit of freeing up valuable floor space and headcount, as it reduces the demand for checkout counters and cashiers.

Beyond the POS devices themselves, new technology is emerging to help improve the POS experience. New microscopic barcodes from companies like Digimarc Corp. allow for barcodes to be placed all over a product, meaning that a product can be scanned anywhere. According to Digimarc, these new barcodes can cut scanning time in half. Another technology, referred to as trolley "GPS," is trying to solve POS challenges by providing retailers with a live view of retail traffic via a transmitter installed on shopping carts. The technology uses this data to help anticipate and optimize POS staff demand, helping retailers cut costs and provide better customer service.



Big data becomes more accessible

Executive summary

With new tools, like machine learning and prescriptive analytics, big data finally becomes more actionable.

Highlights

- *U.S. marketers will spend \$11.5 billion on data in 2015.*
- *Retailers see merchandising, store operations, and supply chain as the top opportunities for big data.*
- *Over 1 million people are victims of cybercrime every day.*
- *81% of customers don't trust retailers to keep their data private or secure.*

Big data moves beyond e-commerce and marketing

Big data is already having a major impact on retail. According to research by the Winterberry Group, U.S. marketers will spend an estimated \$11.5 billion on data in 2015, an increase of half a billion dollars from 2014.¹¹ But despite this growth, to date, applications for big data have previously been limited to online marketing and e-commerce activities, such as better ads to customers or recommending similar products.

We are finally reaching a stage where our ability to track, aggregate, and process data have advanced enough that retailers are able to take advantage of data in ways that haven't been possible before. In a 2014 survey by 1010data, retailers saw merchandising (53%), store operations (42%), supply chain (27%), and loss prevention (21%) as areas in which big data could best be leveraged.¹² Nearly half felt that big data would have the greatest impact on demand forecasting and supply chain modeling.

Faster, more reliable data

One of the most major challenges for big data has been managing the volume and speed. A 2015 study by IBM reported that 2.5 quintillion bytes of data are created every day, so much that 90% of all data in the world has been created in the last 2 years.¹³ Without the tools to better leverage their data, its uses have remained relatively niche, but with more intelligent and powerful cloud computing, big data is finally moving into new areas, helping retailers deliver a smarter shopping experience and build more intelligent merchandising and supply networks.

New technology, from smaller sensors to more ubiquitous Internet access, now

provides retailers access to faster, more reliable data. Remote data sensors are becoming increasingly common, and they're just getting started. This trend is fueled by four factors: 1) the ability to produce smaller microchips, 2) the development of low-power sensing technologies, 3) the ubiquity of Internet connectivity, and 4) improved computer processors that are able to manage a growing number of concurrent data streams. Perhaps the fifth variable would be the increasing comfort level consumers have with data collection.

These advancements allow retail businesses to collect data from a much wider range of sources than was previously possible, including data from POS systems, online transactions, social media, loyalty programs, call center records, and in-store user flows. With better, more holistic data, retailers can gain a more comprehensive understanding of who their customers are and how they shop.

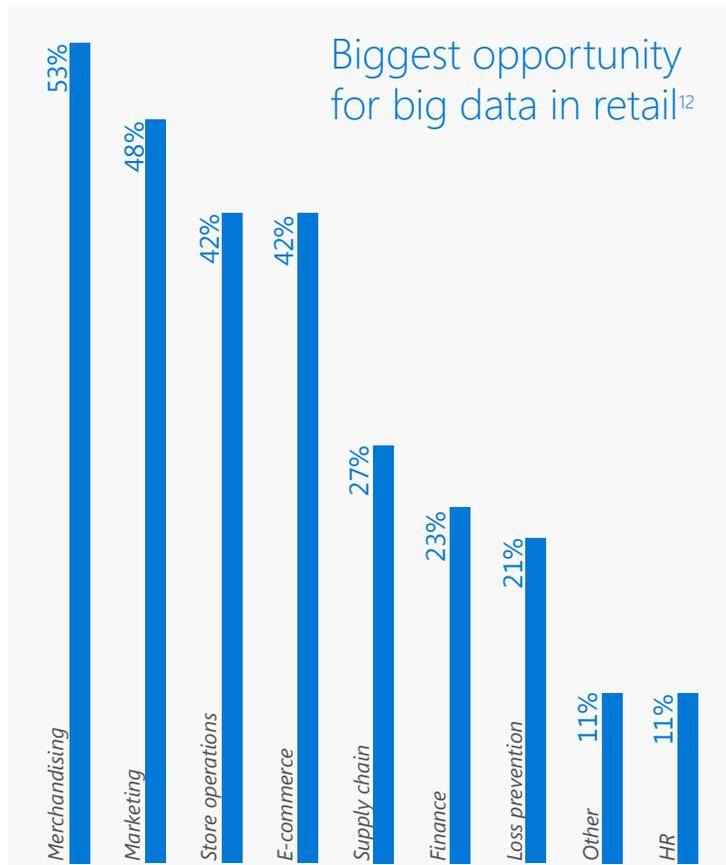
Better analytics tools make big data useful

While faster, more reliable data is a stride in the right direction for big data, it also creates new challenges, what IBM has coined, "The Four V's of Big Data."¹⁴ The four V's include volume (scale of data), velocity (analysis of streaming data), variety (different forms of data), and veracity (uncertainty of data).

With the growth in big data, retailers are definitely feeling these challenges. In 1010data's 2014 Big Data in Retail study, 41% of retailers cited inconsistency in measurement methodology as their biggest obstacle to analytics success, while 38% cited a lack of granularity, and 34% saying that they had insufficient access to the data they needed. In short, big data is too big. To date, companies' ability to leverage their data has been limited due to a lack of internal knowledge, limited tools, and prohibitive costs, but corporate capabilities are finally catching up.

Retailers are now relying on a new breed of analytics tools that make big data more easily accessible, including machine learning, predictive analytics, and automation tools. Big data, in and of itself, is not useful; it becomes useful when it can provide knowledge, make processes more efficient, and allow retailers to deliver better experiences. These tools help retailers with detection, classification, probability, and optimization.

Detection involves identifying patterns (trends), targets, and outliers. Data visualization tools that convert large sets of numbers into charts and graphics makes trends much easier to identify, and allow for simple, visual comparisons that can make outliers jump out. The addition of real-time data





adds speed to the simplicity that data visualization provides. Retailers may use these tools to track competitive changes, news, campaigns, or promotions; detect emerging market trends; or to identify potential supply chain issues before they materialize.

Classification is used quite often in retail, although we may not consciously define it as such. Classification allows us to isolate, sort, filter, sequence, and compare data. Classification helps retailers become more agile by enabling them to isolate and/or rank audience segments, campaigns, or products. Tools that provide the ability to automate these processes can streamline personalization and allow retailers to be more targeted with their outreach. This also empowers retailers to create personalized experiences and conduct more intelligent cross-selling. In Q1 of 2015, Microsoft Australia dropped bounce rate on their website by 35% and increased add-to-cart rate by 10% by creating fully personalized product recommendations into a fully personalized web experience for customers.¹⁵

Understanding the probability of future events is critical to making strategic decisions. Probabilities can be used to demonstrate the likelihood of an occurrence, to compare multiple events, or to show distributions of potential outcomes. Predictive analytics tools help retailers master inventory management, determine optimal pricing

The average cost of a data breach in 2015 was \$3.8 million.¹⁷

for new products, offer more targeted product recommendations, predict sales and support needs, and better manage cash flow.

As agility is becoming increasingly important for retailers, optimization is an important use of analytics that helps retailers become more nimble. This can be done by optimizing the three pillars above: better and faster detection, categorization, and probability. As more real data becomes available, new machine learning tools help retailers improve performance by comparing the expected results against their actual results and optimizing their algorithms accordingly.

While many of these methods are not new, new tools, like more powerful processors paired with cloud computing, are now enabling retailers to take full advantage of their data.

How retailers are managing data risks

While big data has empowered retailers, with great power comes great responsibility. With more data coming and going from more entry points, the risk of a data breach grows. According to David Finn, Associate General Counsel for Microsoft's Digital Crime Unit¹⁶, "There are nearly 400 million victims of cybercrime each year. And cybercrime costs consumers \$113 billion per year." Half of online adults were victims of cybercrime in the past year, over 1 million people every day, costing the global economy \$500 billion annually.

Protecting sensitive customer information is critical for all retailers; one-

in-five small and medium businesses have been the target of cyberattacks. Not only can a data breach be costly, an estimated \$3.8 million in 2015¹⁷, it can also damage valuable relationships with loyal customers, a trust that may take years to rebuild.

With increased concerns following several high-profile credit card breaches, security experts have been working to develop safer ways of conducting transactions. EMV - standing for Europay, MasterCard, and Visa, the companies that developed the standard - is a new technology that hopes to make

Over 1 million people
are victims of cybercrime
every day.¹⁶

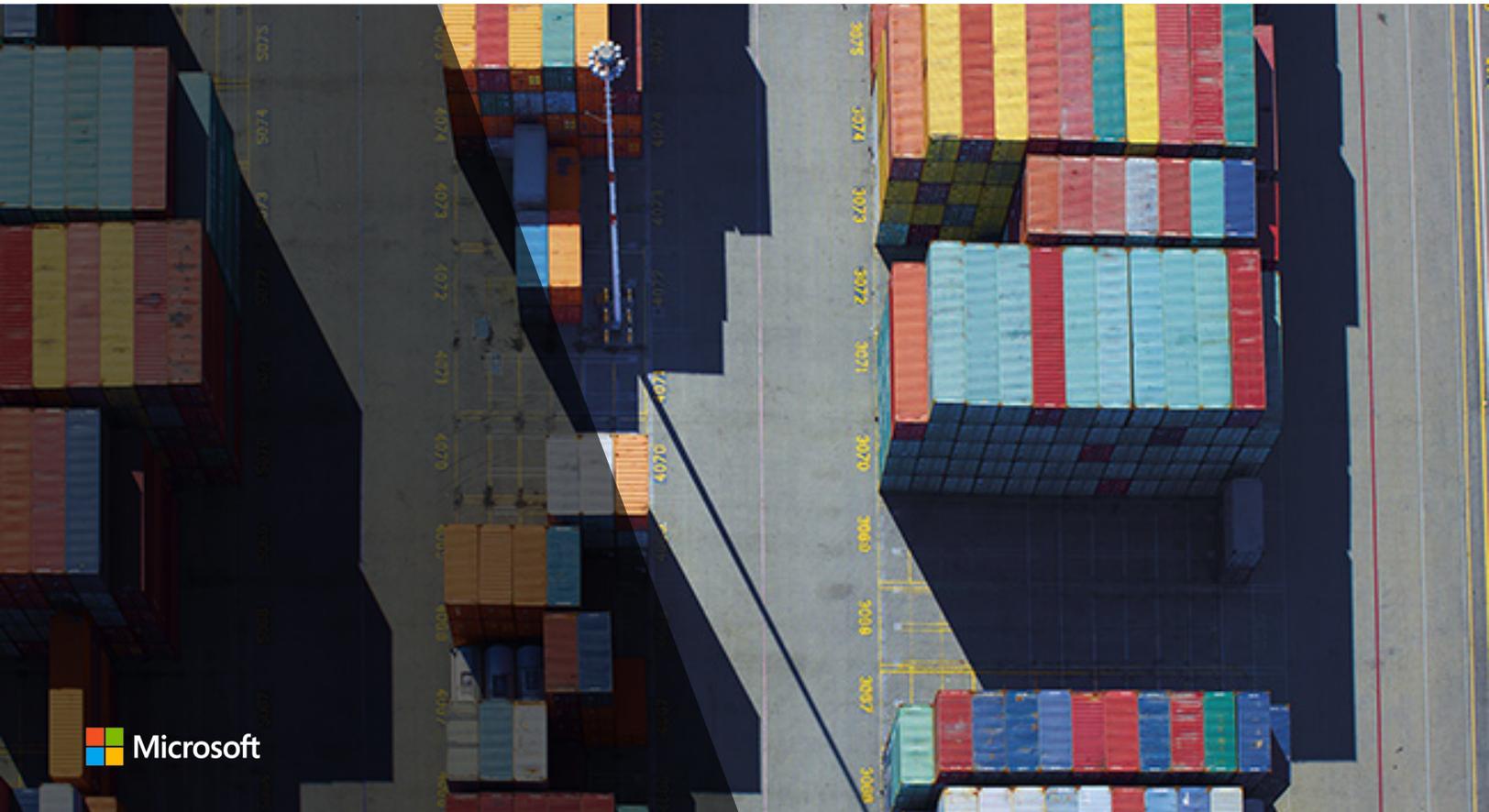
payments more secure. EMV technology is available as a microchip on many new credit cards, and it is also being used as the standard in many new mobile payment systems.

When customers make a transaction with an EMV card or mobile device, the EMV chip and the point-of-sale terminal dynamically generate an encrypted transaction security key. This key is at-

tached to the user's personal account and sent back to the issuing bank, who confirms the transaction. If the data from the transaction is compromised, a counterfeit card would be unusable without the card's unique chip. Furthermore, the data would be unusable because each transaction requires a new and unique security key for authentication.

Businesses must become "EMV-compliant" (a.k.a., accept EMV credit cards) by October 1, 2015. After this deadline, the liability for card-present fraud will fall on the party (either the retailer or bank) that is the least EMV-compliant in the transaction, which will undoubtedly be the retailer if they don't accept EMV payments. This is a major shift in liability, from banks — who have historically held much of the burden — to retailers.

Beyond the risk of a data breach, many customers are becoming more attuned to the new reality that they are being tracked. Tracking technologies, like in-store tracking, have raised some red flags from both consumers and regulators. In a 2014 Opinion Lab survey, 77% of customers felt that tracking them in-store was unacceptable, with 81% of them citing concerns that they didn't trust retailers to keep their data private or secure.¹⁸ This creates a unique challenge for businesses who are using data to make customers happy, yet they are upsetting customers by collecting this data. Mainstream attitudes around data collection will continue to change as time passes, but businesses need to remain cognizant of how their customers feel about being tracked.



Retailers take control of the value chain

Executive summary

When customers make a purchase, they're buying an experience, and as customer expectations have increased, retailers are taking greater control over the value chain to help ensure they're delivering the best experience possible.

Highlights

- *Half of customers expect to have options to buy online and pick up in store.*
- *87% of global consumers consider CSR when making a purchase decision.*
- *The sharing economy market will grow to \$335 billion in revenues by 2025.*



Percent of retailers who consider in-store pickup very valuable.²⁰

Retailers take control of the value chain

There are benefits and risks — financial, social, security, emotional — involved in every purchase decision. When customers make a purchase, they're not just buying a product, they are buying an experience. This experience includes their experience with a product, but it also extends to the complexity of purchasing, how they feel in-store, the packaging, the ease of setup, and their confidence in getting the support they need should an issue arise. "How much stress is this going to cause me?" "What will my friends think?" "What are the chances this will break?"

While we may like to think that customers make rational decisions, purchasing the best product available at a given price point — a strategy called maximizing — most customers actually employ a decision making technique referred to as satisficing. Said another way, satisficers ask "What has the least chance of being bad?" These individuals settle for the "good enough" option; "Does this meet my needs?" To appeal to these satisficers — which make up most shoppers in any given category — businesses must reduce the transactional cost of a purchase. This does not just mean lower the price; retailers must reduce barriers to purchasing, including social risks and fear of the unknown.

As retailers strive to meet the evolving demands of today's consumers, many are doing so by taking control of their value chain, from creation to consumption. This level of ownership over all

touch points helps retailers better control many of these transactional costs and enables retailers to ensure greater continuity across the customer journey.

More control over supply chain

E-commerce has forced retailers to rethink their supply chains. Many retailers are now selling goods online that they don't even stock in stores, or at all, leveraging third-party logistics providers and fulfillment houses to pack and ship items on their behalf. Retailers must not only track inventory from manufacturing facilities to warehouses to stores, but they must also monitor all of the individual shipments to customers. And customers now expect to have access to more information and services, such as in-store inventory information and new fulfillment options, like in-store pick-up.

While the complexity of supply chains increases, customers have become less tolerant of failure, creating a growing demand for retailers. Furthermore, customers don't differentiate between a brand and its supply chain vendors. If a supply chain vendor makes an error, the liability, from a customer experience point-of-view, still rests on the brand itself. If a customer orders 2 day shipping and doesn't receive the product for 5 days, it reflects poorly on the retailer. Businesses need to find a way to address these increasing expectations while remaining profitable. To help gain more control of the end-to-end customer experience, many retailers are taking greater control over their supply chain, from manufacturing to delivery.

Need for speed has changed fulfillment

Evolving customer expectations are changing the way retailers address fulfillment. According to a 2014 study by Accenture, half of customer expect retailers to have options to buy online and pick up in store¹⁹, and 77% of retailers considered in-store pickup very valuable.²⁰ Of the customers who said that they use in-store pickup, 25% cited speed as the main reason for doing so.¹⁹ Yet despite the demand, and perceived value, only a third of retailers have operationalized even the most basic services, such as in-store pickup, cross-channel inventory visibility, and store-based fulfillment, such as ship-to-store.

To improve delivery times, many retailers are moving to a "one supply chain" model, unifying their distribution assets from their online stores and brick and mortar locations. For retailers that already have a large footprint, converting their retail stores into a network of mini-distribution centers helps them cut down on fulfillment time without incurring the expense of building and managing new distribution facilities. Unifying their assets also enables customers to see inventory availability, as well as the easiest and fastest options for acquiring a product.

Retailers are doubling-down on corporate social responsibility

Over the last few years, there has been much debate over the growth in consumer demand for environmentally and socially friendly products. While many



people say they want responsible products, purchase behaviors haven't always supported that. That trend is starting to shift.

While there has been a decline in individuals saying they'd pay more for responsible products, there has been an increase in the percent of individuals stating that a businesses social and environmental record is important to them.²¹ A 2013 study by Cone Communications and Echo Research reported that 87% of global consumers consider CSR when making a purchase decision.²² Interpreted another way, good CSR is the new baseline, and while consumers may not reward those for doing extra, they will certainly turn on those who fail. Businesses need to consider CSR both as a defensive strategy and an offensive strategy.

Today, information is easy to obtain and spreads quickly. Exposed unethical business practices have resulted in swift backlash from consumers. This has forced many businesses to revisit their own practices, as well as the practices of vendors in their supply chain, to become more socially responsible organizations. It has also pushed many organizations to improve transparency. In 2015, CorporateRegister.com has aggregated CSR reports from over 12,000 companies, up from a mere 20 in 1994.²³

The sharing economy market will grow to \$335 billion in revenues by 2025.²⁸

Additionally, an increasing number of businesses are using CSR to grow their businesses, from American Eagle, who recently reported a 10% increase in sales of their lingerie, Aerie, after a pledge to stop Photoshopping models in their ads²⁴, to Goldman Sachs, who is investing in training and education for 10,000 female entrepreneurs.²⁵ Research by the World Green Business Council has shown productivity gains of 8-11% in businesses that have taken initiatives to improve air quality in their offices.²⁶ The research also suggests that companies with a strong CSR record have an easier time recruiting and retaining workers, and a 2011 study between Harvard Business School and the London Business School showed that businesses with strong CSR performance had easier access to financing.²⁷ While CSR initiatives have gotten a mixed bag of reviews in the past, the waters are shifting and the importance — both ethically and financially — of investing in CSR is becoming clear.

The impact of the sharing economy

With current revenues around \$15 billion globally, a recent report by PwC predicts the sharing economy market will grow to \$335 billion in revenues by 2025.²⁸ Companies like AirBnB and Lyft have changed the rental and transportation markets, but already, this sharing economy model has spread to include boats, storage, pets, workspaces, and even energy.

With such growth, the sharing economies impact on retail is inevitable and signs are already starting to emerge. The true risk for retailers remains to be seen, but it does not seem like a stretch to conclude that if individuals are able to “share” products that they might otherwise need to buy, it could have a negative impact on sales. But the sharing economy creates some interesting opportunities for retailers as well. Several companies are already exploring the prospect of having community members pick up products in store and deliver them to customers, reducing shipping time and costs. And between

businesses, the sharing economy opens up some unique propositions, from shared overhead to resizing shared store space with companies who have alternating seasonal demands. While this trend is still new, it is destined to have an impact on many aspects of retail businesses.



Percent of customers who consider CSR when making a purchase decision.²²



Redefining the retail experience

Executive summary

The rise of e-commerce brought the rise of showrooming, a trend that many thought would destroy brick and mortar retail businesses; however, retailers are finally adapting to this modern consumer trend.

Highlights

- *46% of American's admitted to showrooming.*
- *Retailers are offering new in store perks, like food, coffee, alcohol, exclusive products, and expert advice, to get customers to come into their stores.*
- *Many major retailers are decreasing their footprint in lieu of smaller local stores.*

Retailers embrace showrooming

With the rise of e-commerce came the rise of showrooming. In a late 2013 Harris Interactive holiday shopping poll, 46% of American's admitted to showrooming, a 7% increase over the same period in 2012.²⁹ When reports of retailers charging customers for showrooming started to emerge³⁰, it briefly appeared that this trend could be the end for retailers, but many retail businesses are finally adapting to the trend and embracing showrooming.

Stores like Target³¹ and Best Buy, have already started implementing strategies designed to attract customers who are committed to showrooming, including free Wi-Fi, shopping companion apps, and digital interfaces that connect in-store customers with the tools they like to use online — such as reviews and price comparisons. This approach helps retailers better understand store performance holistically, not just based on what revenue the brick and mortar entity collects. As Casey Carl, Chief Strategy & Innovation Officer at Target puts it, "We love showrooming — when Target gets to book the sale."

Showrooming has become so popular that some non-retail businesses are creating retail spaces solely to support the showrooming experience. For example, Greek yogurt company Chobani recently launched Chobani SoHo cafe in New York to allow customers to experience new products and recipes. Online tailor Indochino has created pop-up stores, called "traveling tailor" pop-ups, to help customers experience the product in person and offer services, like taking measurements and fittings.³² The success and proliferation of these types of showrooming stores illustrates that retailers can succeed by embracing this trend.

Seller as a service

With the customer purchase decision journey evolving, many retailers are trying to attract customers in-store by offering new experiences and services. "People want more than a store.

They want a location where they can feel good about themselves and learn something new," said author and retail expert Carmine Gallo. Retailers — from Urban Outfitters to Nordstrom — are now serving food, coffee, and wine to customers in their stores. Whole Foods has even started launching breweries and serving beer inside their stores.³³

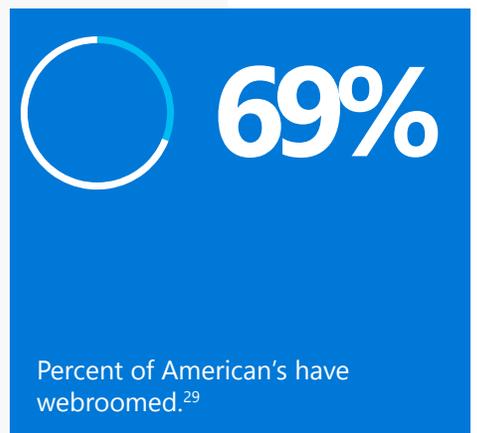
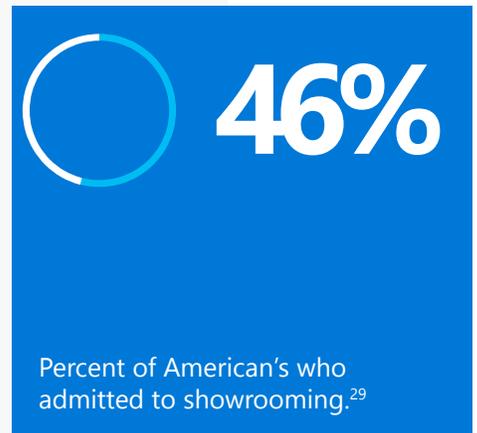
Many other retailers are bringing experts in-store to serve as consultants to customers. Target recently partnered with pregnancy and parenting website BabyCenter on a new initiative called Baby 360. Through this program, Target is offering quality content, product reviews, and recommendations for new moms through their website; however, they've taken their investment to the next level by offering in-store service desks with "Baby Advisors."³⁴ These types of programs, which offer customers an experience and a service beyond acquiring a product, are emerging at more and more stores, giving customers a whole new reason to visit.

Small is the new big

For much of our history, shopping was a local experience: small local stores with local owners and staff. The growth of malls in the mid-1900s standardized larger store formats. Department stores grew in size and scale, which paved the way for big box stores, but now the largest store of them all — the Internet — has challenged these ever growing brick and mortar destinations. According to Green Street Advisors' 2015 U.S. Mall Outlook report, roughly 15% of the 1,500 malls in the U.S. will close in the next 10 years, far surpassing the number of new malls that will open.³⁵

Retailers are starting to put large, expensive stores in the past, making room for smaller, more targeted and more nimble stores. Retailers including Target, Walmart, and Whole Foods are all creating smaller format stores that allow them to be in more local markets while reducing costs.

This downsizing trend is also led — in part — by the showrooming trend. Retailers no longer need to stock every product on its shelves. Retail stores become a local hub for services like in-store pickup, while new technology — like mobile checkout — allows retailers to remove checkout counters, maximizing space for customers to browse.





Omni-channel is here

Executive summary

As the line between the digital and physical world becomes increasingly blurred, retailers need to create an experience that delivers greater continuity across all customer touch points.

Highlights

- *71% of customers felt the ability to view inventory information for in-store products was important or very important.*
- *Mobile accounts for 54% of retailer web traffic and 30% of online revenue.*

WWW now means “what, when, and where I want it”

As the line between the digital and physical world becomes increasingly blurred, customer expectations of the retail experience are shifting to reflect these changes. Customers now want a seamless experience between devices, and they expect the choice and flexibility that online shopping provides with the timeliness and service of an in-store purchase. For shoppers, WWW now means that a customer can buy “what, when, and where I want it,” and retailers need to deliver.

Better cross-platform experiences

Customers increasingly expect greater continuity across their shopping experience. Capabilities, like the ability to view store inventory information online, create a more connected experience between what shoppers are doing online and what is happening in store. It also eases the stress of shopping by reducing the chance of visiting a store only to find out that they do not have a product in stock. According to a 2014 Accenture study, 71% of customers felt the ability to view inventory information for in-store products was important or very important, with 39% claiming they'd be unlikely or very unlikely to visit a retailer's store if the online store does not provide physical store inventory information.¹⁹

Improved inventory management solutions not only enable retailers to provide customers with real-time access to in-store and online inventory information, they also give customers access to more fulfillment options — such as pick-up in store, ship to store, and faster delivery — all of which empowers the customer to buy what they want, when they want it, and where they want it.

Beyond in-store inventory views, new technology is helping retailers create more integrated cross-platform experiences for their customers across the purchase journey. Productivity and collaboration tools, including digital asset management software, help retailers deliver a more consistent brand experience

as customers move across multiple touch points. While this may seem like a minor detail, consistent branding and navigation, both online and offline, can make purchasing much easier and more comfortable for customers. When a customer researches a product online and proceeds to a retail location to purchase that product, they should know that they are in the right store as soon as they've arrived and finding the product should be easy based on their online experience.

And to further connect the dots from online to in-store, retail employees can get easier access to customer information, including past-purchases, wish list items, and support tickets, which allows them more strategically sell and deliver superior service to their customers. Ultimately, this better integration means greater continuity and a more personalized experience for customers.

Mobile broadens its reach

Smartphones, equipped with new capabilities and faster data connections, are having an undeniable impact on retail, and with the ability to bring web browsing in-store, mobile plays a unique role in the omni-channel retail experience. A 2014 Accenture study looked at where customers were researching products on their mobile devices. Fifty-six percent did so at home, 38% checked product inventory on the way to the store, and 34% researched products in-store.³⁶ In October 2015, smartphones account for 42% of retailer traffic and 16% of online revenue, a staggering volume when compared to laptops (45%/70%) and tablets (12%/14%).³⁷

Retailers are now building experiences that are mobile optimized and deliver greater continuity across devices. Responsive websites have become popular for retailers that need to engage with customers on any device. A responsive website will render differently, in size and scale, depending on whether it is being viewed on a laptop, tablet, or mobile device. With non-responsive websites, viewing content on

mobile devices can be difficult due to the device's smaller screen size, and prior to the development of responsive websites, many brands chose to build a completely separate website for mobile browsing, but today, responsive websites help resolve these challenges with an efficient solution to building a single website that dynamically renders to different browser sizes

Retailers are also employing new web standards, like HTML5 and CSS3, that are optimized for mobile and have cross-devices compatibility. Additionally, new cross-platform development tools now make it easier for app developers to code the same app for multiple mobile operating systems. Microsoft has even launched a universal app platform that will allow Windows 10 phones, tablets, and PC computers to run iOS and Android apps, a major step that will help retailers deliver the best experience for customers without having to incur the cost of developing for multiple devices.³⁸

Online moving offline

With all the talk about how e-commerce is destroying brick and mortar retail, it would be easy to believe that e-commerce sales towered over in-store retail sales, but in fact, they only make up a small percentage, about 5.9% according to eMarketer.³⁹ Despite the growth of online retail, more than \$14 out of every \$15 are still spent in stores.

As a result, many e-commerce sites are looking to grow by opening offline stores. Online retailer Birchbox opened their first physical retail store in New York last July. Online eye care company Warby Parker is doubling down on its brick and mortar efforts, while Bonobos raised \$55 million last year for “guideshops” where customers can try on their brand's clothing.⁴⁰ Even e-commerce giant Amazon is open retail stores in locations like New York and San Francisco.⁴¹ Ironically, the online retailers that appeared to be the end of brick and mortar retailers are now refueling the brick and mortar market.



Social is the new e-commerce

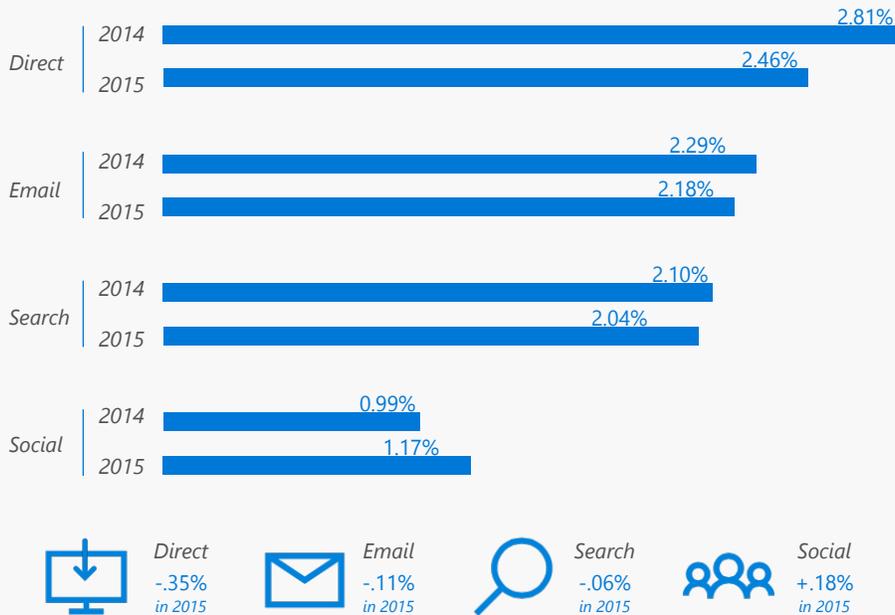
Executive summary

Brands have embraced sites like Facebook, Twitter, Pinterest, and Instagram to market their products, connect with customers, and even as a research tool to inform merchandising decisions, but recently, social media platforms are becoming a whole lot more shop-able, streamlining the process from discovery to purchase.

Highlights

- *Driving 85% of orders from social media, Facebook is still the largest revenue driver of social sites.*
- *New tools, like Curalate's "Like2Buy" platform for Instagram, are creating a more seamless shopping experience on social media sites.*

Conversion rate by source¹⁵



Social is the new e-commerce

Over the past decade, social media has become a foundational element of most marketing programs, and its impact is expected to grow. A study by researchers at Duke’s Fuqua School of Business reported that social media currently made up 9.4% of a business’ marketing budget, on average, and they projected that this percent would increase by 128% by 2020, to 21.4%.⁴²

As brands have grown their communities and presence on social media, they’re increasingly looking for ways to leverage social as a selling tool, and customers seem to approve. According to a 2015 study by Monetate, conversation rates from social media were 1.17%, up from .99% in 2014. While it still felt short of direct, email, and search (2.46%, 2.18%, and 2.04%, respectively), it was the only traffic source of the four who’s conversation rate increased between 2014 and 2015. Additionally, the average order value for social was \$124.07, higher than all other traffic sources except for those who navigated directly to the site.¹⁵

Facebook is still king

Facebook continues to be the primary

source of social media traffic to commerce stores, accounting for roughly 63% of all visits to websites from social, according to a recent study by Shopify.⁴³ An average of 85% of orders driven from social media come from Facebook, with some industries — including photography, sports and recreation, pet supplies, drop shipping, and jewelry and watches — seeing over 90% coming from Facebook. Facebook also saw the highest average conversation rate, 1.85%, with video sites Vimeo and YouTube tying for second, each with a 1.16% conversion rate.

But that doesn’t mean that Facebook is the only choice for your business. The study shows that performance varies greatly by industry. For example, antiques and collectibles saw 74% of their orders from social media come from Pinterest, and 47% of orders from social came from YouTube for digital products. Furthermore, Facebook only ranked fourth for average order size, at \$55.00 per order, behind Polyvore (\$66.75), Instagram (\$65.00), and Pinterest (\$58.95) (Q3 2013).

New social tools for retailers

Much of the value that retailers receive

from social media does not come in the form of site traffic but in the form of social proof. A study by ODM Group reported that 74% of consumers rely on social networks to guide purchase decisions.⁴⁴ Brands have embraced sites like Facebook, Twitter, Pinterest, and Instagram to market their products, connect with customers, and even as a research tool to inform merchandising decisions, but recently, social media platforms are becoming a whole lot more shop-able, and retailers are taking notice.

With the launch of Facebook and Twitter’s “buy” buttons, and Curalate’s “Like-2Buy” platform for Instagram, social media is helping to bridge the gap from awareness to interest to desire to action. Retailers, including Home Depot, Nordstrom, Target, and Burberry, have already started leveraging this new e-commerce channel, which allows users who go directly from a social media site to a product page that is visually consistent with where they came from. Ultimately, this creates a more seamless shopping experience, reducing friction between channels and making it much simpler to make a purchase from social media.



Retail becomes borderless

Executive summary

While retailers have struggled to find success abroad, new technology is providing them a springboard towards global success.

Highlights

- *Retail sales reached \$22.492 trillion in 2014 are expected to grow to \$28.300 in 2018.*
- *Better productivity and collaboration technology is helping retailers abroad.*
- *E-commerce only makes up 5.9% of global retail sales, but that number is growing.*
- *E-commerce giant Alibaba is shaking up the global e-commerce landscape.*

Retail becomes borderless

Worldwide retail sales are on the rise. According to a recent study by eMarketer, retail sales—both in-store and online—reached \$22.492 trillion in 2014, and they project that retail sales will reach \$28.300 in 2018.³⁹ With growing economies abroad, the lure of global expansion seems inviting, yet to date, many retailers have struggled making the leap. In fact, a research review by the Harvard Business Review “found that, with a few exceptions, globalization’s benefits had not accrued to retailers.”⁴⁵ Virtually all of the worlds largest retailers, from Walmart to Tesco to Carrefour, have had to pull out of foreign markets after attempting to establish a local presence. Yet despite these challenges, the unrelenting pressure to grow is leading many businesses into new territories.

Smarter and faster retail

Technology is playing a major role in retailers’ ability to be successful abroad. For starters, improvements in cloud collaboration and productivity tools are helping businesses plan and adapt faster than ever before. These improvements are critical in helping business leaders do everything from better manage operations to create smarter localized marketing campaigns. Improvements in technology and transportation also mean faster delivery of goods and services. All of this adds up to more agile businesses.

E-commerce eases the burden

E-commerce is becoming a major ally to retailers looking to expand abroad. Compared to in-store sales, e-commerce is still small, accounting for 5.9% of worldwide retail sales in 2014.³⁹ This percent is expected to rise to 8.8% by 2018. Last year, the U.S. and China accounted for 55% of online sales. By 2018, China is expected to account for 40% of worldwide online sales, totaling nearly \$1 trillion. While the growth rate for online sales is the highest in China, other countries, including the U.S., UK, Japan, Germany, and others, are expected to have double digit growth in online retail sales over the next 3 years as well.

The growth in e-commerce will also be fueled by the growth of mobile devices in emerging markets. According to a 2015 study by the GSMA, there were 3.6 billion unique mobile subscribers at the end of 2014, and they project an additional 1 billion additional subscribers by 2020, which would bring the global mobile penetration rate to nearly 60%.⁴⁶ Perhaps more impactful, mobile Internet subscription penetration is expected to grow rapidly in emerging regions. For many of these areas, mobile Internet is the sole means through which to access the web. This accessibility gives people access to services — like banking and education — and other valuable hard goods that may otherwise be difficult or expensive to acquire in these regions.

Emerging technology overcoming a unique challenge

One of the under-discussed challenges that e-commerce faces in going global is delivery: moving goods from point-A to point-B. In the U.S., the conversation surrounding delivery is one of timeliness, but in order to make a timely delivery, or a delivery at all, you must first have a point-B.

Roughly 75% of the worlds population “suffers from inconsistent, complicated, poor, or no addressing systems,” according to startup what3words.⁴⁷ Four billion people in the world have no address at all, and even in developed countries, addresses can be a complicated issue. For example, in London, there are eight different Lonsdale Roads and many houses don’t have numbers.

what3words, a London-based startup, is tackling this issue by creating a global grid of 3m x 3m squares, 57 million of them, each with a unique 3 word address. In a sense, it acts as a simple geographic coordinate system. They are gaining a lot of attention from retailers and shipping companies as this targeted address system could allow customers not just to have a product shipped to their house, but to specify which door or area on their property

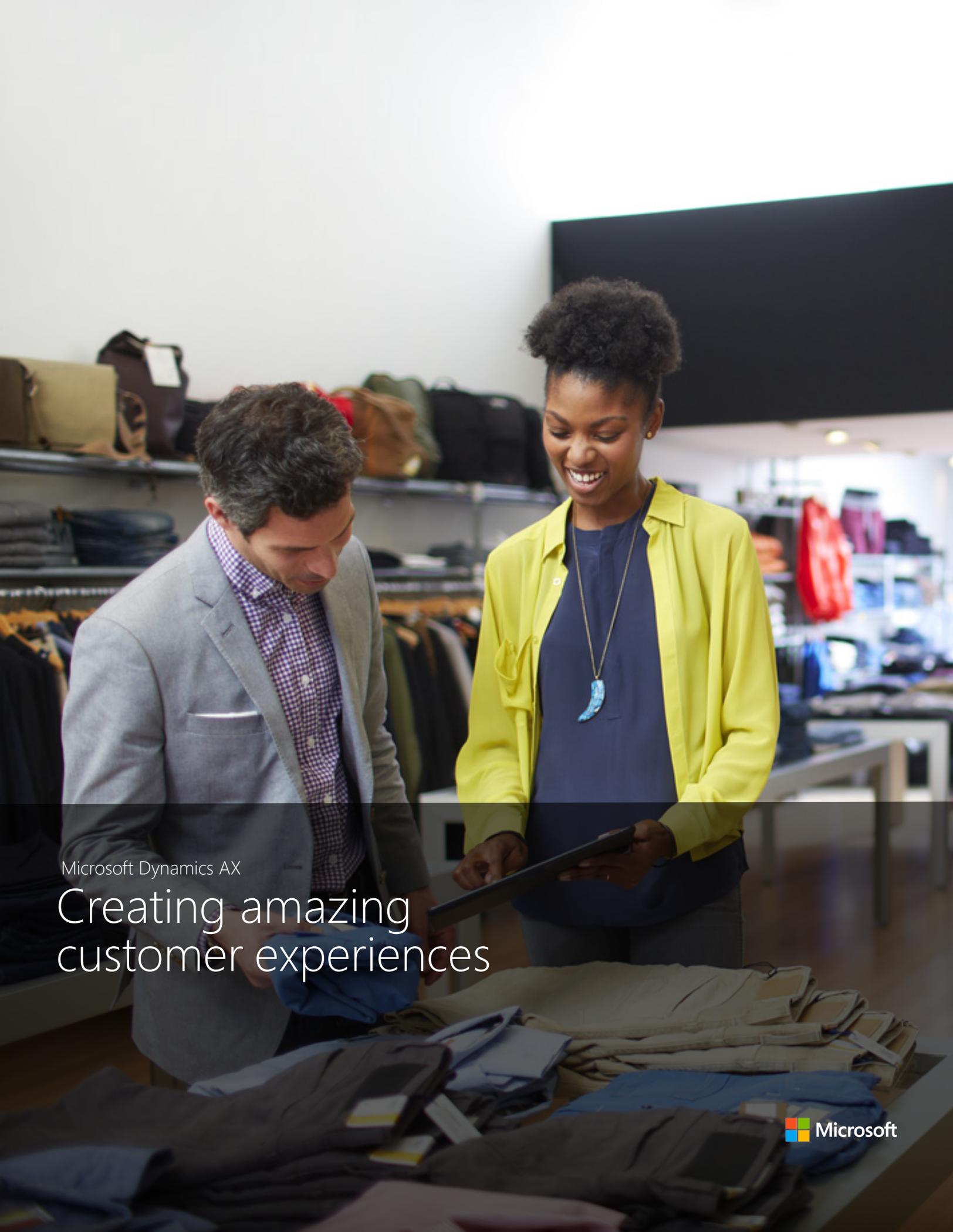
they would like a package delivered to. And paired with drone technology, this coordinate system could open the door for fast and easy delivery of food, medicine, and supplies into hard to reach places. While still on the cusp, these emerging technologies are working to make the world a smaller place.

The B2B elephant in the room

No discussion about global retail would be complete without mention of Alibaba. Founded in 1999 by eccentric leader, Jack Ma, Alibaba is the worlds largest online business-to-business trading platform, handling sales across more than 240 countries and regions. The original intent was to create a B2B portal that would allow Chinese manufacturers to connect with buyers overseas. While the company now does quite a bit more, the impact that Alibaba has had for manufacturers and retailers is undeniable. At \$25 billion, Alibaba’s US IPO was the largest in the world.

Alibaba is China’s largest e-commerce company, controlling over 80% of China’s online shopping.⁴⁸ They have 279 million annual buyers that drove \$248 billion of transactions in 2013, greater than Amazon and eBay combined. Unlike Amazon, Alibaba does not own warehouses and goods, so while their revenue is not as impressive (Alibaba earned around \$2.5b compared to Amazon’s nearly \$20b in Q2 of 2014), Alibaba’s net profit margins reach nearly 80% of their revenue (compared to Amazon who had negative net income in Q2).





Microsoft Dynamics AX

Creating amazing customer experiences

Amazing customer experiences through intelligent operations

[Global expansion with flexible deployments](#)

Accelerate innovation and future growth through a dynamic and agile solution that adapts to business needs, offer limitless cloud scalability, delivers compliance and data security at the same time as providing seamless experiences for customers and empowering your employees to be truly productive. Microsoft helps you to manage the complexities of multiple languages, multiple sites, multiple companies and complex international taxation and regulatory requirements as your business grows and you enter new markets. All of this is delivered through a single, comprehensive cloud commerce platform that offers virtually limitless cloud scale, industry-leading security, enabling real time, connected solutions across any device and any location, all with the predictability and repeatability needed to drive rapid speed-to-value.

[Seamless commerce & omni-channel excellence](#)

Modern Retail is now digital, with customers and retail employees demanding intuitive, engaging, and informative solutions that make the shopping experience fun, rewarding and ultimately lead to a sustainable competitive advantage. Customers want to shop on their terms – what they want, where, when, and on the device of their choice as they move across multiple channels during their engagement with your brand. Arm your employees with modern, connected, mobile-enabled solutions to give them the 360 degree view of the customer they need to operate at unprecedented levels of productivity and offer world-class customer service within and beyond the store. Microsoft offers role optimized productivity, collaboration, social solutions that engage and empower your people and delight your customers with just the right information at just the right time regardless of channel.

[Effective merchandise management](#)

Be ready for what's next. With new channels, new geos and new products or services appearing constantly you need to continually anticipate trends in the retail marketplace and have the ability to adapt quickly to maintain market leadership. Microsoft helps you to execute with the insight you need to provide powerful merchandising capabilities that include global and local management of products and custom attributes; unlimited categories for enhanced category and assortment management; and innovation to manage matrix and other types of inventory.

[Intelligent operations](#)

Delivering the tools and solutions for retail employees to save time, serve customers better and using a natural workflow tailored to their needs. Through front office operations, right into key operations like inventory and vendor management, engaged employees are now able to make better more informed decisions to drive growth through deep data insights, powerful analytics coupled with intuitive recommendations. Empowering your workforce with a solution that can help people save time, do more and become better at their job, ultimately driving more revenue and higher margins.



Microsoft Dynamics AX

Increase the speed of doing business

Microsoft Dynamics AX is the Microsoft's business solution for enterprises that enables people to make smarter decisions quickly with access to real-time insights and intelligence on nearly any device, anywhere. It enables business to transform by enabling them to redesign their business processes faster so they can innovate and get quick time to value to stay ahead of the competition. It also gives businesses the flexibility to grow at their pace through the choice and flexibility of the cloud, allowing them to scale their operations globally to meet business needs.

Grow at your pace

Helping businesses grow at their pace is all about giving them the choice and flexibility to modernize their business. We are giving businesses the ability to leverage the power of the cloud to scale their operations globally. A solution that easily integrates with their legacy systems and data so they can continue to benefit from their existing investments and removing any barriers to growth. It is also about giving them the peace of mind that their information will be secure and compliant in a trusted cloud from Microsoft.

Transform business faster

Transforming business by easily redesigning processes is crucial for organizations to stay competitive. It's a way for them to challenge the status quo, but they need to do it quickly in a predictive way and without business disruption. We are enabling businesses to transform by simplifying and speeding up their ability to redesign business pro-

cesses. With AX they will get faster time to value from their technology, improve business planning and execution with predictable implementations – getting them up and running faster. And when they want to customize processes, support for technologies like Visual Studio gives them a large pool of talent, resources and solutions to meet their specific business needs.

Make smarter decisions quicker

We're enabling people to make smarter decisions quicker, so they are ready for anything and make dreams a reality. We are empowering people by delivering tools built for the modern workplace - business solutions that are mobile, familiar, easy to use and foster collaboration so people can be more productive, faster. And with real-time views into business operations they can make better data-driven decisions to have a positive impact on their business.



Microsoft Dynamics AX
What's new?

Retail HQ



Azure-hosted Retail HQ offers centralized management and complete visibility of all aspects of commerce operations through a web client.

Workspaces

Workspaces could help to improve the efficiency and productivity of workers to perform merchandising operations by letting them centrally manage their tasks and actions that are related to the merchandising role. Also, the price and discount priorities feature gives customers more control over how prices and discounts are used. The feature also enables new scenarios where higher store prices win over standard prices. Last but not least, it will allow to centrally manage most of their tasks and actions that are related to channel deployment, operations and retail IT operations.

Category and product management workspace

The **Category and product management workspace** enables the following functionality:

- *Assortment management*
- *Assortment lifecycle*
- *Tracking*

Retail HQ



Prices and discounts workspace

The **Prices and discounts workspace** enables the following functionality:

- *Price and discount management for a given channel and category*
- *Category price rule management*
- *Price and discount priorities, which let you assign priorities to price groups and discounts to control the order in which they are applied*

Catalog management workspace

The **Catalog management workspace** enables the following functionality:

- *Summary of active catalogs*
- *Catalog lifecycle tracking in a single location*

Channel deployment workspace

The **Channel deployment workspace** lets you perform the following tasks:

- *Track channel configuration progress.*
- *Take the required steps to complete a task, or provide information to complete the task.*
- *Directly download the Retail Modern POS (MPOS) program installation in stores.*
- *Access all related pages.*

Channel operations workspace

The **Channel operations workspace** lets you perform the following tasks:

- *Create post statements for a given channel.*
- *Track shift status for a given store.*
- *Manage worker point of sale (POS) permissions for a given store.*
- *Quickly access all related pages.*

EPOS client is replaced with MPOS

The EPOS client is replaced with MPOS and the eCommerce channel has also been added to Retail Essentials by default enabling greater out-of-box channel support and providing a streamlined configuration option for retail-specific implementations and allowing streamlined configurations and a streamlined UI for retail-specific implementations through Microsoft Dynamics Retail Essentials.

Enhanced support for data entities

Retail data entities have been expanded to support all master and reference data that is related to retail. There is also enhanced support for data entities across the entire Microsoft Dynamics AX solution. This enhancement will let Data entities customers have metadata-driven import and export of data and OData entities also let customers integrate Microsoft Dynamics AX with third-party programs.

Retail HQ



BI reports

More than 30 back-office reports and 10 channel-side reports are available in this new version letting customers to access to BI reports to better predict trends, uncover insights and operation at the best possible performance.

Consumer-level permission POS

Retailers can choose whether POS operations can be available to consumers for self-service scenarios. The new Dynamics AX provides the ability to configure this new scenario. Retail Server uses permissions for application programming interface (API) calls.

Configuration manager and validator

The configuration manager and validator feature provides the ability to bootstrap the configuration, validate the status and completeness of the configuration for the various configuration element, Manage and validate entity configurations. This feature enables Bulk configuration data upload and business entity validation.

Retail hardware station



New hardware profile

An added hardware profile supports more diverse hardware from one station to the next. A new hardware station profile supports a unique terminal ID for each hardware station when electronic funds transfer (EFT) transactions are processed. EFT support has been merged into hardware station to reduce the involvement of MPOS in EFT payment processing enabling POS devices to connect to peripherals such as printers, cash drawers, or payment devices. It provides greater flexibility for implementations and also provides enhanced security and reduced exposure to credit card data.

Retail server and data management



OData V4 support

Connect to a Commerce Runtime (CRT) database that stores business data for the channel by using CRT services. This new support will help the customer stay current with OData standards and also could help to create a robust omni-channel experience by integrating sales across in-store, mobile, and online channels.

E-commerce API

The E-commerce API is now available through Retail Server to support online scenarios and also provides hosted and scalable e-commerce services that can be used with third-party online stores.

Retail server and data management



Cloud re-engineered Commerce Data Exchange

Even when the functional parity is similar to Microsoft Dynamics AX 2012 CU8, Commerce Data Exchange has been re-engineered for the cloud and still responsible for managing the data transfer between Microsoft Dynamics AX and retail channels such as online stores or brick-and-mortar stores but allowing the Async service to use direct access to the channel database, enabling Commerce Data Exchange to become a real-time service that is hosted as a Microsoft Dynamics AX custom service and letting MPOS manage synchronization between offline databases and Retail Server.

Credit/debit card features enhancements

Dynamics AX supports all existing Microsoft Dynamics AX for Retail 2012 credit/debit card features plus some new enhancements letting customer process credit/debit card transactions for payments, support plug and play, and semi-integrated cross-channel payment processing by using the payment SDK.

Device activation

In this new version of Dynamics AX, the device activation can be made using Microsoft Azure Active Directory increasing security and cloud-based activation, Enhanced security for token management, Improved reliability, troubleshooting and error messaging during the activation process. It also offers a simplified process to IT administrative tasks related to the activation of the device. In terms of security, these enhancements can help to stop unauthorized remote use of mPOS and help to track mPOS devices for PCI compliance purposes, it maps physical devices with a business entity and it reports device information from headquarters.

Rich media content support

Manage rich media content for authoring and serving through Media Gallery. I help to address pain points around externally hosted images managing them from a single place. It provides powerful content management through Media Gallery for uploaded and externally hosted images, and filtering to find images; lets you easily create bulk associations between externally hosted images and entities such as products and catalogs and also supports Retail-hosted storage for images, and Excel integration for easy updates. Some detailed support can be found in the list below:

- *Image upload, view, manage, and delete from Media Gallery for both externally hosted and Retail-hosted images.*
- *Image upload and view from entity pages (Products, Catalogs, and so on) by linking an image from the gallery and uploading an image from the desktop.*
- *Optimize the images for thumbnail, custom size, and original.*
- *Bulk link entities by using a template and background jobs for bulk association.*
- *Excel integration overwrites the attribute group limitation of naming conventions and predefined paths.*
- *Supports for Offline images and secure images for personally identifiable*
- *Information (PII) content, such as Retail-hosted employee and customer images*

Rich clientele experience



Retail offers immersive mobile experiences anywhere, any time, and on any device. In this new version we are providing with a new enhanced shopping and store experiences across all channels.

Modern POS

Even when we are providing functional parity with AX 2012 MPOS, we have made some enhancement to add some new features for sales staff to process sales transactions, customer orders, and perform daily operations and inventory management, by using mobile devices anywhere in the store. With the new Dynamics AX version, we are including the following features:

- *Customer lookup across stores/channels*
 - *The ability to create customer orders without accessing Real-time Service*
 - *Improved device activation workflows, status, and error messages*
 - *Extensibility improvements, such as pre/post triggers and activity support to improve customization.*
-

Cloud POS

Thanks to the unique architecture provided in this version of Dynamics AX, we are introducing a browser based POS with functional parity similar to mPOS and device activation support using AAD. Thanks to the responsive layout design, it can be used in mobile devices and support cross-platform browsers. This new cloud-based POS could help to enable retails to easily activate remote POS stations as needed lowering and reducing deployment costs.

Flexible e-commerce platform

In this release customers now have the flexibility to use the content management system of their choice. A robust e-commerce platform is provided to support third-party storefronts letting customers integrate with content management systems to create an omni-channel E-commerce website thanks to the following features added to this e-Commerce platform:

- *A rich consumer API*
 - *Authentication integration to any third-party open ID providers*
 - *Payment integration*
-

Call Center

Even when the feature parity with the AX 2012 Call Center solution is available (with the exception of price overrides), users can deploy a call center to let workers take orders from customers directly over the phone and create orders, target customers via mail catalogs and streamline operations through fast order entry, assisted sales and fulfillment by using this call center module. All this thanks to a responsive and redesigned UI based on HTML5 that can be accessible via any browser.

Warehouse management



Warehouse Mobile Devices Portal

In this version of Dynamics AX, a stand-alone installer can be downloaded directly through a menu item in Warehouse management instead of the standard Dynamics AX setup process. It's designed for self-driven on-premises deployment and configuration. During the enabling process of the Warehouse management module to use the mobile device functionality, you need to install and configure the Warehouse Mobile Devices Portal locally and get a connection to the Microsoft Dynamics AX program in the cloud.

Sales



Delivery alternatives page

Based on the existing algorithms for delivery date calculation, the Delivery alternatives page offers a new user experience for order promising. As part of the new experience, this page consolidates relevant information from multiple forms onto one space, shows "ready-made" alternative delivery packages, such as a combination site/warehouse/variant/transport mode, based on the fastest delivery (earliest available date) criterion that the user can choose from and let the user select options from the simulation interface and transfer them to the sales order line.

This new experience can help organizations that aspire to provide high customer service while committing to an inventory optimization strategy could now promise orders reliably and competitively. After all, their customers' own business requires that products be available on time. The Delivery alternatives task page makes the order promising task quicker, easier, and more systematic by identifying and recommending the best alternative order delivery dates in one interactive place.



Why Microsoft?

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