

THE INTELLIGENT ENTERPRISE FOR THE RETAIL INDUSTRY

Delivering experiences
consumers can trust

THE BEST RUN







“The imperative for a single, intelligent, and digital core is essential to future growth. From crafting a personalized customer experience on the fly to helping business users make informed, real-time decisions, retailers need to instantly connect historical and transactional data across the enterprise.”

Achim Schneider
Global Vice President
Retail
SAP SE

WELCOME

Dear Customers:

The past 15 years have been marked by an unrelenting and disruptive consumer revolution – a search for convenience, price, and customer experience that has moved consumers online.

The next five years will require retailers to unify the online and offline worlds, a challenge dependent on both technology and that most human of elements: trust.

Looking ahead to 2025, consumers will expect retailers to be deeply enmeshed in their lives as trusted partners. The consumer and the retailer will have a shared set of values. Retailing will shift from a product-centric approach to customer-centric, experiential retail. Experiential retail will blend products, services (both physical and digital), personalization, and unprecedented levels of convenience. Experiences will be measured and improved. Stores will become brand experience and innovation centers.

Robotics and artificial intelligence will be central to all aspects of the business – from automated warehouses to robotic store associates and driverless car delivery. Automated and real-time models for service and fulfillment will become the standard consumer expectation.

Physical stores will remain an integral part of the retail shopping experience, but they will be dramatically transformed to offer an array of experiences, from highly personalized services to show rooms, fitting rooms, and even brand extensions that could include classes and entertainment.

The transition is already well under way, but it will not get far without building consumer trust. Trust will be the ultimate currency – trust in treating data safely, trust in delivering the right quality of product at exactly the right time and the right experiences from shopping to consumption and returns. Building that trust will require an unprecedented level of transparency and delicacy as retailers collect more and more consumer information to help create personalized experiences.

The winners will be retailers who are truly open to new ways of thinking and radical innovation. They will be those who best adapt in this fast-changing environment by developing new skills and acquiring the right tools to be even more agile and responsive.

The path forward is clear. It requires a single-minded focus on understanding the needs of consumers and creating distinctive and delightful experiences that exceed customer expectations.

We have identified five strategic priorities that will keep retailers on the path forward:

- Be customer centric across the value chain
- Serve the segment of one
- Implement digital supply chains
- Run smart stores
- Develop new business models

By 2025, we expect the majority of retail revenues will be based on insight derived from customer data, predictive analytics, and the ability to monitor customer use with sensors.

Subscriptions, pay-per-use, and outcome-based models will move from being “add-ons” to becoming offerings in their own right, with separate revenue streams. They will evolve into multibrand services beyond current product categories.

This paper takes a deep dive into the trends shaping our industry over the next five years and the path to innovation. In it we propose a set of priorities that will drive transformation and the tools that will make it possible.

Consumers are not looking for a digital experience or a real-world experience. They are looking for a seamless shopping experience, one that bridges the online and offline worlds. To provide it, retailers must embrace emerging technology, think creatively about the services they can uniquely provide, and, most important, earn their consumers’ trust to become a part of their lives.

Welcome to the experience economy.

Sincerely yours,

Achim Schneider
Global Vice President
Retail
SAP SE

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OUR PLACE IN THE NEW WORLD

THE NEED FOR CHANGE

The world is undergoing a profound transformation – one that has upended how people, companies, and governments interact.

The Internet has reversed the information gap, and the consumer is now in charge. The shift has put retailers under intense pressure, yet it is also providing opportunity for those who can reimagine their place in their customers' lives.

For retailers, demographic changes, the rise of the smartphone, the ubiquity of the Internet, the changing role of stores, and competition from unexpected rivals are forcing a strategic reevaluation of the fundamentals of their business. Forward-looking retailers are already building new capabilities that will enable a new relationship with their customers rather than cause them to be left behind.

The need for change is underscored by macro forces in play, including the transition from a linear economy to a circular economy, the globalization of supply chains, and the explosion of cities as the dense center of populations. These, coupled with the need for sustainable energy and the increased strain on global health systems, are testing consumers' trust in institutions.

Mini Cases: Data, Artificial Intelligence, and Experience Action

StitchFix makes 100% of sales using recommendation. Rather than up-selling based on past purchases, it makes unique and personal selections by combining data and machine learning with expert human judgment.¹

Warby Parker has discovered how recommendations and options powered by AI can be geared toward specific locations and can even connect the customer's online and in-store experiences. The result is an extraordinary customer experience that makes each customer a raving fan of the brand.²

Nike and **Levi's** have opened "concept" stores, which are flagships for their brands and an attempt to dissolve the boundaries between online and offline shopping. They represent a shift happening in the way both companies sell their products, putting a heavy emphasis on one-to-one connections with customers and customized products. Being physical spaces that surround you, these stores can be immersive in a way that an online experience can't.³

CONSUMER TRUST IS THE KEY TO PERSONALIZATION

We believe that successful retailers in 2025 will be those that understand every aspect of the customer experience and can leverage emerging technologies to transform their customer engagement.

Data, analytics, and predictive intelligence will become retail assets like no other, providing the fuel to power every aspect of the business. Converting Big Data into predictive insights that drive automated promotion, replenishment, and marketing activities will be a competitive differentiator required to exceed customer expectations.

The experience will be at the heart of customer engagement. In 2025, retailers will be immersed with their consumers' lives. Consumer retail interactions will be transformed – with browsing and buying opportunities delivered exactly where the customer is – physically, digitally, and socially. Consumers will expect retailers to “know me” and “meet me where I am,” transforming traditional marketing approaches into more personalized, experience-driven offerings

To be successful, however, retailers will have to build unprecedented levels of trust with their customers. This trust will start with keeping customer data private and secure. Without that, customers will not share the data needed to create personalized shopping experiences.

But trust is also earned and lost through consistent and on-time delivery, a seamless shopping experience, the right quality products, and ethical and sustainable sourcing.

We expect that robotics and artificial intelligence will transform all aspects of the business. Automated warehouses, robotic store associates, and driverless car delivery will introduce new levels of efficiency into the last mile. Machine learning algorithms will help uncover unspoken needs and create more-relevant, personalized offers.

While physical stores will remain an integral part of the retail shopping experience, their function will be dramatically different. New technologies will be integrated into physical stores to provide unparalleled levels of engagement and service. Augmented and virtual reality will provide the ability to try on any color, style, or size. Beacons, RFID, and mobile devices will deliver real-time product information, availability, and other digital services that enhance the overall experience.

This, of course, requires reimagining the role of the store and the ability to seamlessly unify the offline and online worlds, perhaps the biggest challenge facing retailers over the next five years.

59%

Of shoppers now expect personalized offers delivered in real time⁴

73%

Of shoppers say they agree or agree completely that it's important for a retailer to give them the flexibility to control how their personal information is used to tailor their experience⁵

60%

Potential increase in net margin for retail companies that are using Big Data analytics⁶

FIVE PRIORITIES FOR SUCCESS

We have identified five strategic priorities necessary for retail companies to transform their business.



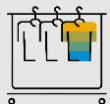
BE CUSTOMER CENTRIC ACROSS THE VALUE CHAIN



SERVE THE SEGMENT OF ONE



IMPLEMENT DIGITAL SUPPLY CHAINS



RUN SMART STORES



DEVELOP NEW BUSINESS MODELS



BE CUSTOMER CENTRIC ACROSS THE VALUE CHAIN

In 2025, retailers will be able to create deep data and predictive insights from data generated at every customer touch point – physical, digital, and social.

These insights will drive a forward-looking understanding of consumer trends and allow retailers to preempt changes in taste and style, as well as design the right experience and service offerings to create hyperloyal customers. (See Figure 1.)

It starts with optimizing existing processes by creating and using a deep understanding of customer needs to offer targeted assortments and campaigns. These processes will be extended by responding to real-world data input (search data and consumption data from sensors and home devices) and changes in usage and consumption to make relevant offers for products and services when consumers need them.

The result will be tailored, immersive experiences that anticipate customer needs, supported by seamless omnichannel interactions.

To get there, retailers must develop a new culture, one that is relentlessly focused on the customer. Successful retail cultures already put a premium on providing convenience, whether online or offline, based on insights garnered from customer and supply chain data. They obsessively protect customer privacy. The next generation of retail culture must start at the very top, modeled by the leadership of the company, and must empower every employee to act on behalf of the customer.

Figure 1: The Vision of Customer Centricity

Focus all elements of the end-to-end experiences designed around the customer



79% of retailers consider it important to quickly and efficiently change assortments and adapt pricing across channels based on current trends and customer insights, but **only 27% are able to do so.**⁷

[Carrefour Group](#) is the first mass-merchandising player to open up its Web site to local producers interested in reaching a new public: people who shop using their computers or the Carrefour app and who are on the lookout for authentic products – thus responding to changing preferences in the company's customer base.⁸

FROM BACKWARD FOCUS TO BEING FIRST TO SERVE TOMORROW'S DEMAND

What do my consumers really want? With this end-to-end integrated scenario, leverage the power of social insights, sentiment analysis, and search data to improve your assortment planning and have in store today what your shoppers demand tomorrow.

TRADITIONAL SCENARIO



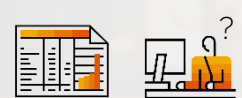
- Central assortment planning based on historic data
- Manual, home-grown spreadsheets with siloed data
- Little to no use of predictive science or external or forward-looking data



- No integration to execution, requiring manual, error-prone work
- Assortments not localized
- Items purchased and listed in regions with no insight into regional demand added to ERP



- Demand review after the fact
- Manual stock adjustments
- Slow-moving inventory leading to a high level of clearance markdowns
- Out-of-stocks resulting in missed revenue and dissatisfied customers



- Delayed visibility to sales, profitability, and inventory leads to late and costly decisions
- Limited ability to preempt customer needs and preferences
- Risk of markdowns and reduced profitability

NEW-WORLD SCENARIO

Market demand understood



- Demand signals, consumer sentiment, product search, and social media data enabling real-time understanding of market demand
- Customer segment and social media sentiment analysis
- Combination of search rankings and marketplace view with internal assortment data to intelligently identify possible additions to the current assortment mix
- True omnichannel planning for retail and digital channels as well as the wholesale channel on a single planning solution

Smart store clustering



- Analysis of performance and trends of categories, products, attributes, locations, and customer segments to inform planning decisions
- Intelligent store clustering based on customer demographics and category insights to drive localized assortments
- Advanced analytics for decision support around products to keep or drop
- Assortment optimization to maximize revenue and margins using predictive analytics

Plan launch



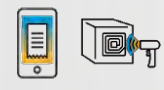
- Ability to predict demand and optimize how much to buy both preseason and in season

Profitability monitoring



- Integrated, end-to-end planning process from merchandise and assortment planning to execution with allocation and purchase order creation
- Real-time monitoring in season of plan and forecast to actuals and the ability to quickly respond
- Visibility into real-time item-level profitability
- Retailer ability to trigger customer feedback to understand the emotions and sentiments related to product offerings

Rapid response



- RFID-enabled store processes, helping store associates control inventory
- Automated stock transfer to rebalance supply across stores and eliminate markdowns
- Product experience feedback combined with operational data sets to help merchandise planners understand what drives product uptake for the target customer segments and help create more targeted assortments

TOP VALUE DRIVERS*

30%

Increase in revenues

60%

Reduction of markdowns

30%

Reduction of inventory write-offs

Source: SAP Performance Benchmarking

SERVE THE SEGMENT OF ONE

While customer centricity is meant to serve all customers, the next generation of personalization will serve the segment of one.

In 2025, retailers will use large data management platforms to gather big sets of sales, service, and marketing data to build a 360-degree customer profile and understand and predict individual and contextual customer needs. (See Figure 2.)

As a result, real-time interactions will create the context for marketing, assortment, pricing, and promotional offers. Algorithms will be commonplace throughout every retail business process and will power recommendations and tailored experiences for consumers. Augmented and virtual reality will offer a personalized dressing room experience, furniture display, or digital store walkthrough that will take the individual shopping experience to a new level of personalization. Sensors will monitor use, consumption, wear, and freshness, alerting consumers to replace, replenish, or repair.

Critically, retailers will need the explicit consent of their customers to gather data and put it to work, which requires a new level of transparency and a new level of collaboration between customer and retailer.

However, to meet this vision of serving the segment of one, retailers must also be able to individualize their offerings and optimize their existing processes to allow for single-item sourcing and delivery.

Retailers who offer consumers the chance to give feedback to their products, brand, and shopping experience will be able to create winning customer experiences. A new software category, which combines experience management with operational systems and review brand, as well as product and customer experience feedback, is already starting to redefine customer engagement.

Figure 2: The Vision of Serving a Segment of One



73% of retailers consider it important to deliver a fun, relevant, and personalized experience that is convenient and unique to customer sentiment, history, and preferences, but **only 10% are able to do so.**⁹

[SPAR Handels AG \(SPAR Switzerland\)](#) has created a loyalty program that gives its customers immediate benefit during checkout. Besides very attractive weekly offers, a SPAR Friend member is eligible to win the whole purchase when it is the 1,000th purchase in any of the roughly 160 outlets counts. Validating the SPAR Friends 1,000th purchase at checkout is done in real time. Having a central system to steer and control the loyalty program is key. SPAR Switzerland also wants to have the flexibility to further develop the program with new offerings and features, which can be introduced swiftly.

FROM MASS MARKETING TO PERSONALIZED, IMMERSIVE EXPERIENCES

By connecting to your customers' lifestyle, you are able to create an immersive shopping experience for your consumers – one that earns lifetime loyalty and also delivers significant efficiencies and new business opportunities to the retailer.

TRADITIONAL SCENARIO



- Consumer recognizes accelerated wear and tear in product
- No sensor data is made available
- Consumer looks up information about running shoes online
- No personalized offers are made
- Cumbersome execution happens between channels
- Consumer chooses retail store
- Associate advises unknown consumer, no connection to online offers
- Associate has no access to sales history, sizes, or functional needs
- Consumer decides and pays
- Anonymous sales data is imported to ERP system
- Opportunity to maintain consumer contact and build consumer loyalty is lost

NEW-WORLD SCENARIO

Flawless execution of service promises

New levels of customer proximity and understanding

Hyperpersonalization with Internet of Things technology



- Consumer is part of an avid community of runners
- Integrated sensors in shoes continually stream use and fitness data, augmenting both product manufacturing intelligence and consumer profile
- Based on explicit consent, consumer has valuable real-time visibility on product use, wear and tear, and insights on running patterns
- Smart automation notifies consumer when shoe is nearing end of life
- Marketing intelligence determines personalized product recommendations based on product use, customer profile, peer groups, trends, and social media inputs using machine learning
- Consumer is offered the choice of a personalized one-time replacement or continuity program for each 500 miles run
- Consumer opts for continuity program, along with a custom sole add-on and completes the purchase with Apple Pay for nearby store pickup
- Retailer fulfills order and delivers same day for store pickup from closest microfulfillment center
- Consumer is notified that order is ready for pickup and is also offered to book a same-day online foot scan for the custom sole
- Consumer checks in to store for pickup and fitting
- Associate recognizes and greets consumer in store, provides pickup order, and guides customer to foot scan
- Foot scan information is automatically added to consumer profile, thereby further enhancing relevance of future recommendations
- Foot scan data generates a custom printed sole directly from in-store 3D printer
- Foot profile helps create custom shoe recommendations for an even better fit for future shoe recommendations and potential make-to-order shoes
- Aggregate foot profiles help R&D for new product development
- Consumer keeps on running for life, feels a positive connection, and perceives real value for continued lifelong experiences with the brand

POTENTIAL BENEFITS

17%

Increase in revenue for experience leaders

40%

Increase in subscription revenues

20%

Reduction in logistics costs

Source: SAP Performance Benchmarking

Five Priorities for Success

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IMPLEMENT DIGITAL SUPPLY CHAINS

In 2025, customers won't come to the retailer, the retailer will come to them. All the factors that drive demand – promotions, seasonality, events, weather – will be dynamically taken into account to predict demand.

With drones and driverless cars, real-time product delivery at a low cost will offer a significant competitive advantage. Robotics and artificial intelligence will drive efficiency in retail warehouses. (See Figure 3.)

Consumers will expect their needs to be met automatically. Consequently, retailers will become more vertically integrated, connecting the end-to-end supply chain to automate replenishment of consumer demand. Consumers will expect transparency into the supply chain, with a focus on sustainability.

To get there, retailers will use predictive analytics and machine learning to predict demand and supply of the individual household. Subsequently extending their business processes, retailers will connect to the point of consumption – such as the fridge – and automate replenishment. Lastly, scalable, efficient, and convenient source-to-consumer services to the place of need will build brand loyalty and allow retailers to develop brand extensions, such as food preparation services.

Ultimately, winning retailers will deploy a highly flexible and highly efficient robotics supply chain that is able to serve dynamic individual needs anywhere and anytime.

Figure 3: End-to-End Connected Digital Supply Chain



69% of retailers consider it important to have visibility into the global inventory pool and optimize it for a “source anywhere, fulfill anywhere” model, but **only 15% are able to do so.**¹⁰

[The Home Depot Inc.](#) is connecting in-store robotics with the Intelligent Enterprise approach. It is using drones and robotics to create an efficient in-store experience that delights customers and provides faster order fulfillment.

FROM MANUAL, ERROR-PRONE SUPPLY TO HANDS-FREE SUPPLY CHAINS

With this integrated, end-to-end scenario, you are able to create an automated, connected, hands-free supply chain that delivers new levels of speed and efficiency as well as superior value to your shoppers and consumers.

TRADITIONAL SCENARIO



- Manufacturer sends product to a retail distribution center
- No inventory visibility on the road is available
- No information on delivery status is available
- Delays in traffic are not accounted for
- Often manual and error-prone goods receipt occurs with paper or scanner-based lists
- Issues align the supply chain
- No visibility on status on the road is available
- There is no chance to react
- Goods can arrive too late or damaged without warning
- Customer faces empty shelves
- Store associates have no information on upcoming arrivals

NEW-WORLD SCENARIO

Real-time supplier collaboration



- Online order confirmation based on collaborative demand planning and order forecast

Real-time alerts and automated response



- Smart rerouting in case of issues along the route



- Goods receipt in distribution center with RFID



- Real-time alerts on issues such as cold chain violation, theft, and delays

Supply chain automation



- Goods receipt in store with RFID
- Secure supply chains supported by blockchain transactions

Consumer safety



- Fully stocked shelves
- Customer getting detailed information on pedigree, ingredients, cold chain compliance, and more

POTENTIAL BENEFITS

30%

Reduction in supply planning costs

40%

Reduction in damage and waste

25%

Reduction in total logistics cost

Source: SAP Performance Benchmarking

RUN SMART STORES

Consumer-centric retail stores will use experience management technology to turn their customers into advocates, their employees into ambassadors, and their brands and products into obsessions.

To stay relevant, even more flexible supply chain processes will be needed. In addition, retailers need to become increasingly self-aware and connected, providing a constant feedback loop to the consumer downstream and to the manufacturer upstream. (See Figure 4.)

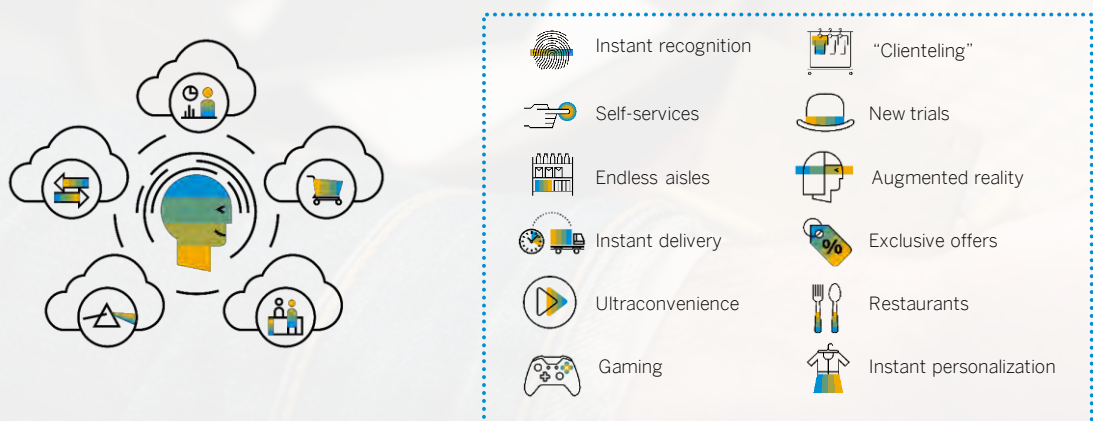
In 2025, the online and physical shopping experiences will merge by leveraging the best disruptive technologies, turning stores into “brand experiences.” Virtual reality, the use of digital technology to create immersive simulations, targeted marketing with AI, and augmented reality that lets users interact with digital content overlaid on real-world content will allow retailers to create differentiating shopping experiences. Customer interaction will be captured to optimize assortments, pricing, and promotions.

With customer identification, smart fitting, endless aisles, and gamification, the opportunities will drive loyalty as well as new revenue opportunities.

The journey will start with empowering the front-line sales staff with real-time customer, product, and inventory data to serve their customers better – regardless of channels. This will be extended through sensor-based customer identification, store interaction, and checkout as well as automated store processes. The result will be more productive, knowledgeable, and happy store employees that focus on selling versus stocking or administrative tasks.

Ultimately, stores will be transformed into experience centers with highly personalized services backed by unified digital experiences.

Figure 4: Turn Stores into Brand Experience Centers



74% of retailers consider it important to equip store associates with real-time product and inventory information to help them serve shoppers better, but **only 30% are able to do so.**¹¹

[Tommy Bahama](#) is a brand that is constantly innovating – expanding from apparel to furniture to restaurants. However, the company is committed to letting consumers interact with the brand any way they want to, in whatever channel they desire. A commerce solution is what enables the company to deliver a personalized experience to each of its consumers.

FROM DISCONNECTED STORES TO BRAND-BUILDING EXPERIENCES

Create a smart store to deliver brand-building store experiences. With this integrated, end-to-end scenario, you can manifest your brand, create new store experiences, and capture changing needs by running your stores like an online business.

TRADITIONAL SCENARIO



- Shopper enters store anonymously
- No history is available
- No insight into the shopper's needs, preferences, or buying behavior is available
- The interaction is captured only upon checkout
- No interaction is sensed
- Store is run by point-of-sale transactions
- Customer sees only what is sold
- Valuable interaction data is lost
- Customer preferences are not discovered
- Decisions are made after the fact
- Staff has no access to real-time inventory information or incoming deliveries
- Staff can't guide customers
- No personalized offers
- No convenience options
- No help when items are not available
- No ability to provide feedback
- No ability to differentiate the customer experience or offer service that drives loyalty
- Stores exposed to price competition from online pure plays

NEW-WORLD SCENARIO

Relevant offers and promotions **Empowered staff** **Product and experience feedback** **Compelling shopping experience** **New customer loyalty**



- Shopper is recognized and approached according to their privacy settings
- Smart "clienteling" is enabled based on history and known and predicted preferences
- Interaction is from smart shelf heat maps
- Sensor technology helps optimize store layouts, assortments, and price points and enables better understanding and predicting shopper preferences
- Real-time response to relevant customer demand signals
- Accelerated replenishment
- Triggered product transfer with RFID enablement to balance stock between stores flexibly
- Real-time inventory and product information
- Ability to use geospatial data to identify nearby stock locations
- Price differences eliminated and shelf stock controlled with advanced scanner technology
- Real-time inventory information and endless aisles
- Frictionless checkout
- Convenient service options
- Instant shopper feedback to optimize the experience and drive new revenue opportunities
- Combined insights from both experience and operational data sets, enabling understanding of the key drivers of customer loyalty
- Ability to drive shopper and consumer loyalty and increase shopper share of wallet

POTENTIAL BENEFITS

25%

Increase in revenue

50%

Reduction in markdowns

30%

Increase in inventory turnover

Source: SAP Performance Benchmarking

Five Priorities for Success

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DEVELOP NEW BUSINESS MODELS

In 2025, the majority of retail companies' revenue will come from services developed from the insight from consumer data. New business models will include subscription, pay-per-use, or outcome-based models.

These services will move from being product add-ons to offerings in their own right, with separate revenue streams, and they will not be restricted to the companies' own products but will rather evolve into multibrand services beyond current product categories. The intelligent retailers are the ones willing to chart new territories that are adjacent to their business. (See Figure 5.)

The next wave of retailers will think of their brand as a scalable platform, allowing for brand extensions and creative partnerships into telecommunications, travel and entertainment, and financial services.

To make it work, retailers will need a deep understanding of their customers' consumption habits and must occupy a trusted position in their lives.

With this in place, they can use experience and operational data to create new offers and services. By extending current business processes to connecting with consumers, retailers can offer use-based services enabled by sensors. The ultimate transformation will be moving from selling products to selling outcomes, facilitated by "no ownership" and subscription services.

Figure 5: Extending Existing Business Models and Innovative Customer Engagement



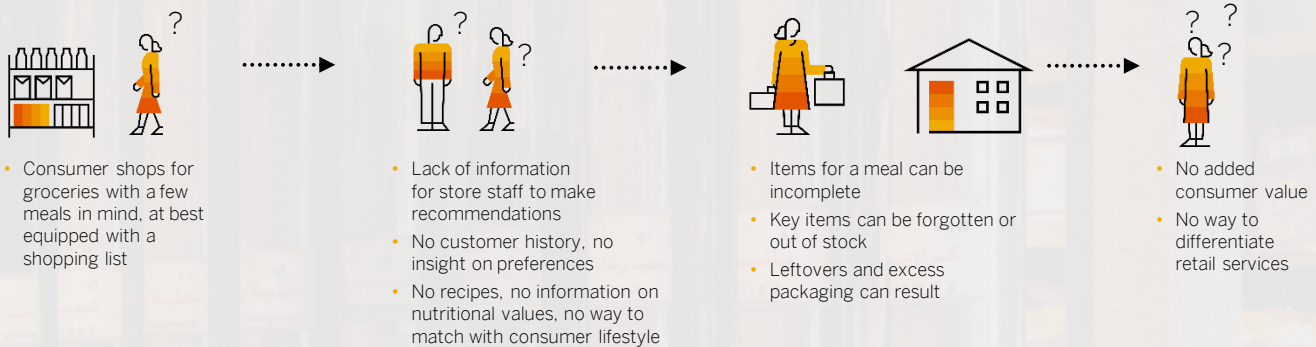
61% of organizations consider it important to leverage strengths (customers, assets, core competencies) and work with partners to drive successful business models, but **only 25% are able to do so**.¹²

[Tata CLiQ](#) helps connect Indian consumers in 900 cities and 10,000 villages to modern retail. SAP® Customer Experience solutions help offer hundreds of brands and thousands of items – all on one platform. Now people everywhere – from large cities to small villages – can get deliveries to their doorsteps or local stores.

FROM TRADITIONAL RETAIL TO SELLING OUTCOMES AND LIFESTYLES

With this integrated, end-to-end scenario, gain a superior understanding of your customers' needs and use it to create new revenue-generating offers and services, such as personalized meals with ingredient and recipe meal-kit service. Reimagine customer engagement to deliver better health outcomes.

TRADITIONAL SCENARIO



NEW-WORLD SCENARIO

New levels of customer proximity and understanding

Consumer subscribes to meal-kit service, which provides cooking and taste preferences and physical and exercise information per their individual preferences and goals

Feedback and machine learning can be used to improve recipes, recommendations, and the overall offering, and the next delivery cycle is kicked off

Consumer profile and preferences are enhanced based on structured and unstructured feedback



Selling balanced and healthy nutrition

Nutrition expert

Food and nutrition experts help consumers discover matching items based on their personal preferences and buying history

Through machine learning, the back-end system determines recipe recommendations based on consumer data, preferences, and history, including data from social media

Trend analysis from Web searches helps make recommendations that drive demand

Meal kits are assembled and shipped directly to consumers based on shipping preferences



Home delivery or pickup of selected meal kits are according to specs, with the right size, amount, and nutritional values, and with reduced, sustainable packaging

Consumer prepares meals and provides feedback

POTENTIAL BENEFITS

3x
Increase in shopping basket value

40%
Reduction in logistics cost per item

30%
Increase in repeat purchase rate

Source: SAP Performance Benchmarking



KEY TECHNOLOGIES

The current pace of technological advancements has the most profound impact on enabling how retailers transform themselves to respond to their customer needs and to the market trends.

Intelligent technologies promise to bring great benefits such as productivity and efficiency gains, enabling innovative new business models and new revenue streams. The following intelligent technologies are instrumental in helping retailers respond to the market trends. Each of these priorities will be enabled by emerging intelligent technologies.

Artificial Intelligence and Machine Learning

Businesses can leverage these capabilities to eliminate repetitive manual tasks and drive the next level of intelligent business process automation. Today, advances in speech and visual recognition are dramatically changing how consumers interact with retailers – for example, shopping by voice with a personal home assistant or using visual search to find a product. Robotic process automation streamlines repetitive, rule-based processes and tasks in an enterprise and reduces cost through the use of software robots by replicating specific tasks or keystrokes.

Data As a Strategic Asset and Advanced Analytics

The recognition that data is a strategic asset is a fundamental shift for most businesses. Retailers that curate their data and aggressively acquire data from external sources will have significant advantage over their more traditional competitors. Empowered users can get real-time visibility into their changing environment, simulate the impact of business decisions, mitigate risk, and achieve better customer outcomes.

Conversational AI

Voice interfaces will be the go-to technology for the next generation of applications, allowing for greater simplicity, mobility, and efficiency while increasing worker productivity and reducing the need for training. In customer interactions, they will transform customer engagement and allow targeted and fully informed exchanges anytime, anywhere.

Blockchain

A relatively recent breakthrough technology, blockchain is revolutionizing the movement and storage of value by creating a chain of unaltered transactional data. The blockchain model of trust, through massively distributed digital consensus, has the possibility reshape supply chains and commerce across the entire digital economy. In the near term, blockchain based solutions are satisfying consumer's demand for solutions to support global traceability and sustainability in food and agricultural products. Solutions to validate authenticity and to fight counterfeiting are also perfect use cases for blockchain technology.

The Internet of Things (IoT) and In-Store Technologies

Retailers are using IoT capabilities to bring digital capabilities to the physical world. The IoT through product-level RFID is being used to transform the store, from basics, such as inventory management with the IoT, to more advanced experiences such as smart mirrors.

The checkout process continues to evolve to meet customer demands with technologies such as self-checkout, self-scanning and smart checkout. Fully automated stores are already established in parts of Asia and are being introduced in other markets.

Virtual and Augmented Reality

Virtual reality (VR), the use of digital technology to create immersive simulations, was once the stuff of science fiction. So was augmented reality (AR), which lets users interact with digital content that's overlaid on the real world. They will become the standard way to demonstrate a product, whether that is furniture or paint in the consumer's home, beauty products applied to the consumer's face, or fashion worn virtually by the consumer.

Data Platform to Manage Experience

Leaders are interlocking the operational performance data from companies' business systems (what is happening) with the experience data coming from customers and employees (why it is happening).

~50%

Of new mobile apps use voice as a primary interface, and 50% of the consumer-facing G2000 use biometric sensors to personalize experiences by 2020¹³

40%

Of retailers will have developed a customer experience (CX) architecture supported by an AI layer by 2019¹⁴

30%

Increased conversion rate and up to 25% higher revenues from a CX architecture supported by an AI layer¹⁵

Up to 25%

increased inventory turns through 2021 for retailers that leverage AI, AR, and the IoT for employee and customer engagement to respond to stakeholders' experience expectations¹⁶

20%

Improved customer satisfaction for retailers that leverage AI, AR, and the IoT for employee and customer engagement to respond to stakeholders' experience expectations¹⁷

Up to 15%

employee productivity for retailers that leverage AI, AR, and the IoT for employee and customer engagement to respond to stakeholders' experience expectations¹⁸

58%

Of human task hours will be automated by 2025¹⁹

99%

Accuracy in voice and video recognition by 2020²⁰

20.4 billion

Connected devices will be in use by 2020²¹

GETTING THERE: A PHASED APPROACH

Companies will become intelligent enterprises on three distinct tracks as they evolve their strategic priorities to match their company's vision. They will:




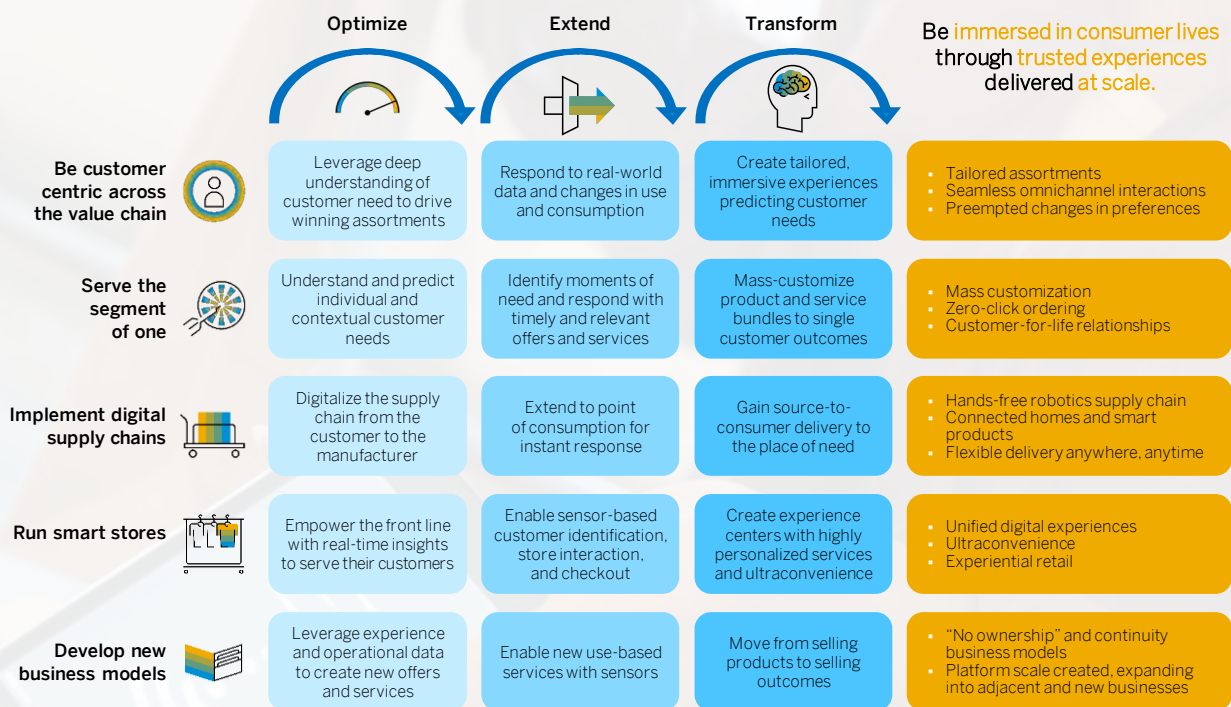
-  **1. Optimize** what they already do by implementing a stable and scalable digital core to make processes more transparent and integrated
-  **2. Extend** their current processes by connecting them to the real world using IoT technologies
-  **3. Transform** their business using a constant stream of data enabling new service-driven business models. (See Figure 6.)

Figure 6: Strategic Priorities Across the Maturity Framework



EARLY DIGITAL ADOPTERS LEAD THE WAY

How do you achieve these strategic priorities?

Start with reimagining your business together with your customers. Then build a path for even more optimization and intelligent automation to simplify your business and free up resources to invest in even more digital transformation programs and find new business models and revenue streams.

According to a July 2018 study by Forrester Consulting that was commissioned by SAP, innovative retailers focus on digital priorities to help them achieve digital transformation more than other retail companies. (See Figure 7.)

Figure 7: Innovators Focus More on Digital Priorities Than Others²²

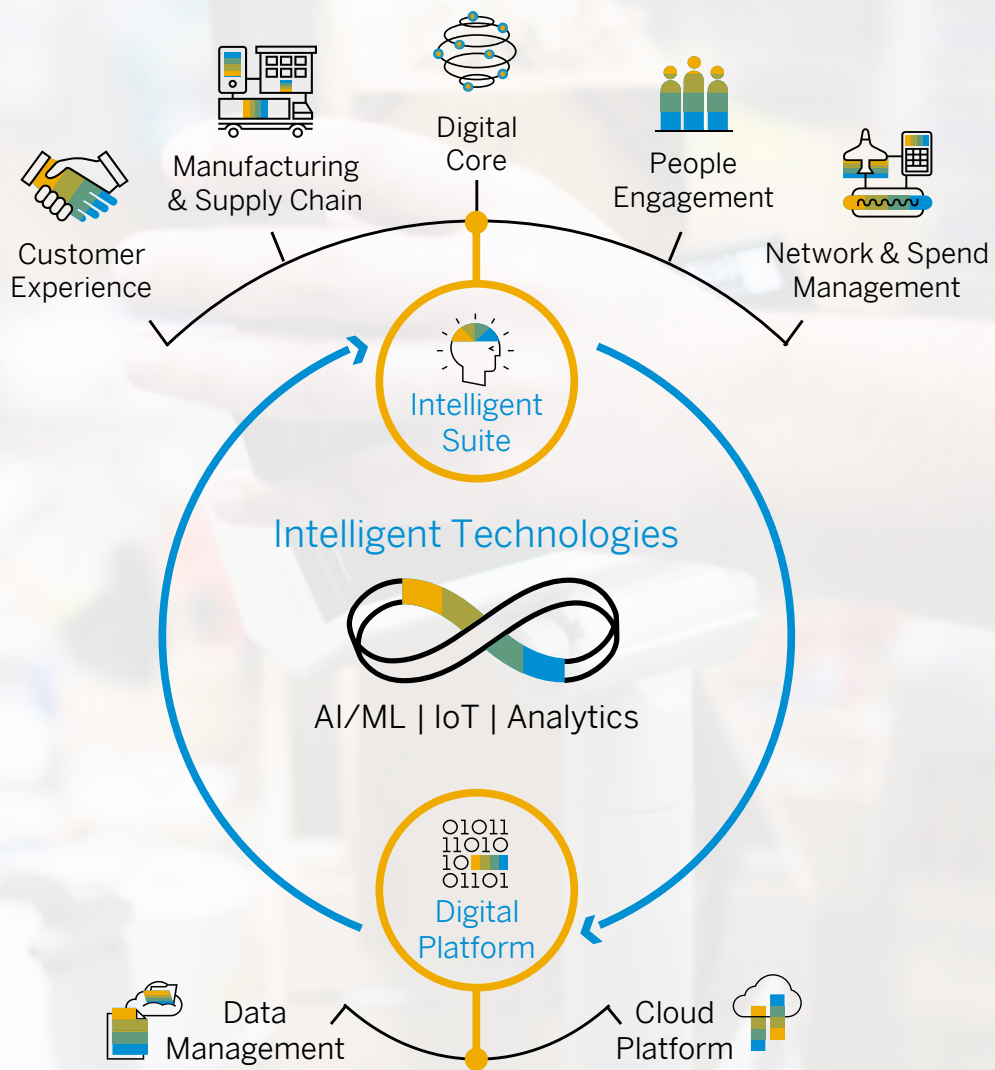


A young boy with dark, curly hair and black-rimmed glasses is looking intently at a computer monitor. He is wearing a bright yellow long-sleeved shirt. The background is a warehouse with wooden shelving units filled with boxes. The lighting is warm and focused on the boy and the screen. A white semi-transparent box is overlaid on the right side of the image, containing text.

SAP'S FRAMEWORK FOR THE INTELLIGENT ENTERPRISE

The Intelligent Enterprise framework is a suite of intelligent business applications that use intelligent technologies and can be extended on a digital platform. (See Figure 8.) This enables next-generation business processes to deliver breakthrough business value on our customers' journey to becoming intelligent enterprises.

Figure 8: The Intelligent Enterprise Framework



HOW TO PLAN YOUR PATH TO THE INTELLIGENT ENTERPRISE

In the digital economy, intelligent technologies and integrated business processes are now driving digital transformation.

To do this effectively requires an end-to-end plan for becoming an intelligent enterprise. This includes creating an intelligent enterprise road map and implementation plan with proven best practices and deployment options that optimize for continuous innovation with a focus on intelligent outcomes.

The End-to-End Journey to Becoming an Intelligent Enterprise



Plan
well to manage expectations

Simplify and innovate

- Reimagined business models, business processes, and work
- SAP Digital Transformation Framework methodology as a guide for digital transformation
- Value-based innovation road maps

To move forward with speed and agility, it helps to focus on live digital data and combine solution know-how and industry-specific process expertise with data analytics so that the right digital reference architecture is defined and delivered. In that context, a model-company approach is aimed at simplifying and increasing the speed of the digital transformation journey. Model companies represent the ideal form of standardization for a specific line of business or industry.

Build and launch
with proven best practices

Standardize and innovate

- Model-company approach to accelerate adoption with model industry solutions
- Design thinking and rapid, tangible prototypes
- Coengineered industry innovations delivered with agility

Run
all deployment models

Run with one global support

- One global, consistent experience
- End-to-end support – on premise, in the cloud, or with a hybrid approach

They are built on preconfigured SAP solutions based on best practices supported by SAP, along with the business content that encompasses our experience and expertise relevant for the industry. They provide a comprehensive baseline and come with the accelerators to jump-start digital transformation projects.

Optimize
for continuous innovation

Optimize to realize value

- Continuously captured and realized benefits of digital transformation

COMPREHENSIVE SAP ECOSYSTEM ORCHESTRATING THE WORLD TO DELIVER VALUE FASTER

SAP partners play a key role in helping organizations like yours succeed. These experts can help you identify, buy, build, implement, service, support, and run the SAP for Retail solutions that best fit your unique needs.

Our comprehensive retail ecosystem offers integration into:

- A wide range of business services (merchandising, point of sale, supply chain, analytics, omnichannel, and more)
- Open architecture with a choice of hardware and software
- Complementary and innovative third-party solutions – accessible via [SAP App Center](#)
- Broad reach through partners to serve your business of any size anywhere in the world
- Forum for influence and knowledge
- Large skill sets

Our partner ecosystem includes, among others:



SAP IS COMMITTED TO INNOVATION



10-Year Innovation Vision

SAP delivers fully intelligent business solutions and networks that span across company boundaries and promote purpose-driven businesses. These solutions will be the most empathic symbiosis between machine intelligence and human ingenuity.

- Self-running enterprise systems
- Self-organizing business ecosystems
- New markets and business models



Comprehensive Industry Coverage

SAP enables comprehensive coverage of the complete retail value chain across the enterprise. With its clear industry road map, SAP is the partner of choice for the Retail industry.

- More than 13,400 retail manufacturers in 121 countries innovating with SAP solutions
- 99% of retail companies in the Forbes Global 2000 are SAP customers
- All lines of business are supported on a single platform



Proven Services Offering

By bringing together world-class innovators, industry and emerging technology expertise, proven use cases, and design thinking methods, we help retail companies develop innovations that deliver impact at scale.

- Proven methodologies to drive innovation, from reimagining customer experiences to enhancing operations
- Innovation that is fueled through a managed innovation ecosystem from SAP
- Ability to build your own innovation capability and culture

SAP supports retail companies in becoming intelligent enterprises – providing integrated business applications that use intelligent technologies and can be extended on SAP Cloud Platform to deliver breakthrough business value.



Learn more

- [SAP.com for Retail](#)
- [SAP Leonardo](#)
- [SAP Digital Business Services](#)
- [SAP Design Thinking](#)

RESOURCES

Outlined below is external research that was used as supporting material for this paper.

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Note: All sources cited as "SAP performance benchmarking" are based on our research with customers through our benchmarking program and other direct interactions with customers.

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