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China's Smart Retailing Pays Off

China's retail industry is transforming rapidly. Digitalization, new technologies, and business model innovation are reshaping the industry, creating a new era of "smart retail."

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The Chinese retail industry is in a crucial period of transformation. Online traffic is peaking, major web sellers are opening physical stores, and traditional brick-and-mortar retailers are facing unprecedented change. The retail industry is rapidly reshaping and rearranging itself. Like other sectors that have boomed with the rise of the digital economy, today's retail revolution has been driven not just by digitalization and access to new technologies, but also by demand for technological innovation and changing business models. This transformation is reflected in evolving operating models, data handling, scenario reconstruction, marketing approaches, and supply chain integration. Profound changes in every segment of the retail industry are converging to shape an entirely new landscape of "smart retail." These changes will create great opportunities for China's consumer industries as retailers and brand marketers find their places in this new environment and unlock commercial success while navigating drastic change.

Trends in the Retail Industry

Retail is the oldest form of business, evolving with the rise of human civilization. From the earliest bartering systems, to peddlers carrying their merchandise between villages, to the emergence of an established model with storefronts and factories, small retailers have been on the rise. The Industrial Revolution gave birth to the era of department stores, as small stores swiftly upsized. Then came the chain store model—with its corporate headquarters and multiple branches—and the successive rise of supermarkets and shopping malls. Traditional retailers embraced the operating philosophy of location-based advantage and quick expansion, giving rise to dramatic growth in the number of stores over the course of a golden decade.

The traditional retail industry has been under unprecedented pressure since the dawn of the 21st century. Value growth has been declining for years, and waves of shutdowns come and go. The rise of e-commerce and surging operating costs—especially for labor and rent—are among the factors pressing on traditional retailers. But the more significant underlying causes are the industry's inherent growth model and shortfalls in catering to new consumer demands. For instance, in the product development stage, brands tend to overgeneralize consumer segmentation based on demographic structure or income level. This approach fails to offer nuanced insights into consumer needs and behaviors, so the resulting products are less differentiated and targeted. While in the production and distribution stages, traditional retailers are often blind to the real needs of the market, instead clinging to the unrealistically optimistic view that anything they produce will sell. The result is excess inventory and mounting operating pressures.

Traditional retailers must have the courage to change their inherent way of thinking and adjust their business models if they are to steer themselves out of this predicament and regain momentum toward growth. We've summed up the four key trends in the Chinese retail market to help enterprises gain a more accurate perspective on what their future should look like.

From consumer segmentation to personalization

People born in the 1980s, 1990s, and 2000s are forming the core consumer group in the Chinese market. According to a survey of future consumers conducted by A.T. Kearney in 2017, the new generation of Chinese consumers has greater self-awareness and more individualized attitudes and behaviors. Compared to their Western counterparts, these consumers are more willing to provide their personal data in exchange for value-added services, allowing product and service providers to meet their individual needs.

Young Chinese consumers are also more tuned to public welfare, prioritizing eco-friendly products and other unique brand value propositions. They are also more likely to accept major Chinese brands than past generations. The result is a large upswing in support for local, rather than international, brands. Young consumers are more concerned about the shopping experience and expect to build trust and intimacy with brands and retailers, going beyond a pure transactional relationship. They are also more open to and accepting of social network marketing, giving product and service providers more space to increase their influence and personalize their offerings to customer needs.

The digitalized shopping journey

New technologies such as artificial intelligence (AI), augmented reality (AR), virtual reality (VR), the Internet of Things (IoT), and big data are becoming more sophisticated and more accessible. Some leading retail businesses have begun using these new tools to improve the shopping experience, while boosting their operational efficiency and cutting costs. For example, some brick-and-mortar stores are combining AI, surveillance cameras, "smart shelves," mobile payment, and other technologies to collect data on consumers, including their physical appearance, preferences, mood changes, and purchase history. They then compile and analyze this data, using the resulting insights to improve their products and the consumer experience.

Integration of online and offline

The wider use of mobile Internet and smart devices means consumers can easily switch between brick-and-mortar stores and digital channels, accessing more product information, comparing products and prices, making purchasing decisions, and sharing their experience. Online and offline retailing, once competing sectors, are steadily merging. The results of this consolidation have led to a number of experience models:

- **Online to offline**: purchase online and pick up offline or drive traffic online and generate purchase offline.
- **Offline to online**: scan QR code in a brick-and-mortar store and complete transaction online.
- **Offline to online to offline**: capitalize on offline marketing to drive online transaction and pick up offline.

For retailers and brands, the key to success is not in mastering online or offline sales, but in increasing the value of each contact point with consumers. Brick-and-mortar stores and online retailers are no longer two parallel and conflicting worlds; they are on a merging path toward collaboration.

Data-driven operational upgrades

As the adoption of big data, AI, and other technologies grows, the retail industry is becoming more intelligent. From user identification to user reach and user services, all products, customers, and behaviors can be recorded as digital information. Internet-based operating philosophies even work well in traditional businesses, helping managers tap into their greater potential to create value. Data collection and analysis occurs everywhere in the retail industry value chain, from purchasing and logistics to services and consumption. The supply chains, warehouses, and data that belong to online businesses and brick-and-mortar stores will soon be pooled to build an integrated management system. Retailers will use this data to focus more on user experience, shifting from a traffic-centered model to a user-centered approach.

These changes are so overwhelming they could destroy legacy business models and reshape the competitive landscape of the traditional retail industry. To stand out in a highly competitive market, traditional retailers should try innovative tactics to cater to their consumers' needs, and embrace the digital era to upgrade and transform their businesses.

Company Transformation in the Smart Retail Era

The road to business autonomy

The core of smart retail is the emergence of an ecosystem of retailing activities that are centered on consumers. Everything that relates to retailing—including production and design, logistics and warehousing, centralized procurement, scenario marketing, services, operations and management, and cash flow—is gradually being incorporated into a digitalized and intelligent platform. The ultimate purpose is to build business autonomy based on IoT and intelligent decision-making, offering optimized benefits and a superior consumer experience.

The core of smart retail is the emergence of an ecosystem of retailing activities that are centered on consumers.

Building business autonomy requires three stages, as newer technologies and more data sources continue to cut labor costs: the prototype stage, the growth stage, and the maturity stage (see figure 1 on page 5).

In the prototype stage, a traditional enterprise seeks to digitalize its operations. Retailers use enterprise resource planning and other information systems to collect and integrate their internal data. They can then access the data by reviewing scoreboards that display the operational elements decision-makers are most concerned about: key performance indicators (KPIs) such as channel sales, user information, production costs, material procurement, and overhead charges. At this stage, the management approach is manager centric.

In the growth stage, people start working with machines and some operations become intelligent and web based. Decision-makers begin shifting their focus from "what is happening?" to "why does it happen?" With the help of various business intelligence systems and big data analysis software, businesses can pool data in each link of the value chain—including upstream and downstream supplier data, internal corporate data, and downstream distributor and retail outlet data. They can then analyze this accumulated information to determine what it implies, guide business decision-making, and improve operational efficiency. In this phase, companies begin using highly interactive or traffic-based tools—such as mobile payments, social network accounts, applets, performance-based social network advertising, gift cards, and membership cards—instead of their legacy self-built membership systems and web search.

Figure 1

Building business autonomy requires three stages

	Prototype stage	Growth stage	Maturity stage
Description	• Mainly characterized by traditional businesses seeking digitalization • Enterprise resource planning (ERP) and other information systems used to collect, integrate, and display internal corporate data	• Integrated application of big data and digital tools • Data analyzed for implications, guiding decision-making and improving operational efficiency	• Omnichannel, digitalized, and scenario-based reform; three key elements reshaped—people, products, and location • Online and offline convergence centered on consumers
Applied technologies	• Excel reports • Traditional ERP system • Office automation (OA) system	• Business intelligence (BI) system • Big data analysis software • Cloud computing platform	• AI • AR and VR • IoT
Data sources	• Internal corporate data, including channel sales, user information, procurement of materials, production costs, and overhead charges	• Integrated data on each stage of the value chain, including upstream suppliers, internal corporate operations, downstream distributors, and retail outlets	• Extensive data contacts, including multidimensional data on direct and indirect stakeholders
Interfaces	• Retailers and brands build their own membership systems	• Mobile payments, WeChat accounts, customer service accounts, applets, membership cards, and other highly interactive scenarios	• More diversified social scenarios and IoT
Feature	• Manager-centered	• People working with machines	• Automatic decisions made by data-driven algorithms
Typical examples	• Most traditional Chinese retailers	• Sam's Club and a few domestic leading retailers and consumer packaged goods companies such as HLA • Yonghui's Super Species and JD.com	

Notes: AI is artificial intelligence. AR is augmented reality. VR is virtual reality. IoT is Internet of Things.
Sources: Tencent Research Institute; A.T. Kearney analysis

In the maturity stage, the three major elements—people, products, and location—are driven by AI, big data, AR, IoT, and other new tools and models. Technologies become more sophisticated; businesses may use sensors, computer vision, and other advanced techniques to collect data from a broader range of consumers. The result is a body of multidimensional data that direct and indirect stakeholders in the business can use. This comprehensive data enables more accurate market segmentation and product or service customization. By drawing on analysis based on data and algorithms—and undertaking omnichannel, digitalized, and scenario-based organizational reform—brick-and-mortar retailers can cut costs and improve efficiency, enhancing every element from production to sales.

Smart retail in its infancy: transformation of traditional enterprises

Most traditional enterprises focus on including ERP and OA systems in their digitalization campaigns, to integrate traditional printed information or disparate digital data into complete and traceable corporate data flow. With the help of systematic computing capacity, this can help them perform tasks that were once impossible to achieve manually. For example, retailers can check on their sales, sales per square foot, average price per customer, and other KPIs. They can then use this information to guide business decisions, based on the system's scoreboards, or perform complicated tasks, including material demand planning, production planning, and cost management.

At this stage, enterprises have already increased their operating efficiency, but they are still in the preliminary phase of smart retail. Companies operating at this level are using only a few technologies and their data sources are mainly internal.

Smart retail in its adolescence: big data, digitalization, and omnichannel

At the growth stage of smart retail, retailers tend to think beyond increasing profits and sales. Instead, they begin to focus on upgrading and improving customer-centered elements of their business and on addressing consumers' essential demands (see figure 2 on page 7). From consumer acquisition to satisfying consumer demands, these businesses improve the consumer experience and use upgraded consumer management strategies to increase consumer stickiness and loyalty. In the meantime, brands focus on end-to-end reforms to boost their entire value chains, from R&D, production, and supply, to channels, marketing, and point of sales (see figure 3 on page 9).

Figure 2
Retailers' smart retail applications

	Consumer acquisition	Consumer needs and improved experience	Multichannel consumer management or membership system	Consumers' purchasing behaviors, improved loyalty	Others
Retailer examples	Sam's Club expands its customer base with JD.com's help	Scan QR codes to place orders at Walmart	Meiyijia's member coupons	Sam's Club improved customer stickiness by expanding its online business	

Sources: Tencent Research Institute; A.T. Kearney analysis

Sam's Club Launches a Multichannel Strategy to Achieve Online and Offline Success

Sam's Club has a global network of more than 800 stores. Due to its brief presence in the market and its positioning to appeal to the middle class, it has only 19 stores in China, although that number is expected to rise to 40 by 2020. The Sam's Club store in Futian, Shenzhen, has achieved the highest sales among all Walmart stores around the globe for 10 consecutive years.

The core value proposition of Sam's Club is membership service and development. Membership implies a commitment to providing a superior member experience, rather than depending on investing heavily in advertising and "image" building. Product quality, differentiation, and food safety are the main reasons members choose the retailer.

In response to the growing threat from online retailing, Sam's Club launched a top-down "omnichannel retailing strategy" that begins with business philosophies and ends with operating models.

As a result, it increased member retention and the proportion of repeat customers through its online platform and those of its partners, achieving sound growth.

Expanding the customer base through new channels

In addition to its online platform, Sam's Club has been collaborating with JD.com since 2016 to further expand its online business and extend its reach in locations where it has not yet established a brick-and-mortar presence. It has achieved this by capitalizing on the superior supply chain and logistics capability of JD.com.

Developing a new business model that uses quality and efficiency to increase customer stickiness

In regions where Sam's Club has physical stores, the company has experimented with offering a one-hour delivery service on its online platform.

Always taking quality as its top priority, Sam's Club never pursues quick delivery at the cost of quality. To offer its members fast delivery of high-quality products, Sam's Club invests considerable effort and resources in quality control, packaging, and delivery quality.

These factors have helped Sam's Club build and retain a strong customer base. It launched a pilot for its instant delivery service in Shenzhen. Since the launch, more than 50 percent of its customers are repeat business.

Sam's Club recently launched its JD Home Delivery service, its first premium member service on its online platform. The service offers one-hour delivery for premium products, especially fresh food. The partnership will later expand to service many other major Chinese cities (see figure).

Figure

Method / Effect	Traffic	Connection	Data
Improved sales performance	✓	✓	
Improved customer experience		✓	
Improved operational efficiency	✓	✓	
Improved brand influence		✓	

Sources: Tencent Research Institute; A.T. Kearney analysis

Meiyijia Convenience Stores Rebuild Membership System with Applets, WeChat Pay, and Public Account

The Meiyijia convenience chain has 11,000 stores, most of which are franchised. These stores receive more than 3.5 million customers every day, and the company's official WeChat account has more than 14 million followers. Meiyijia's membership system is integrated via WeChat, so customers can receive a membership card after using WeChat Pay at a physical store. After authorizing an OpenID, they can access member services with any payment voucher or WeChat post. The WeChat-based membership system integrates Meiyijia's official WeChat public account, payment service, WeChat posts, Key Opinion Leaders (KOL), online portals for its partners, and access to its brick-and-mortar stores. Within just 15 days of integrating with WeChat, membership grew from zero to 200,000. That number has now exceeded 500,000.

This integration delivered many benefits, including:

- **Streamlined processing.** Member registration takes three seconds, enhancing the chance of converting customers.
- **Wider customer reach.** Services and promotional campaigns can easily reach customers through an easy-to-use interface
- **Greater interactivity.** The system creates more interactive scenarios for customer participation.

In past customer acquisition models based on web search, the customer acquisition cost was so high that it was almost impossible for small independent platforms to grow sustainably. But traffic channels are changing dramatically. Today, by connecting a range of highly interactive scenarios, including mobile payments, social network accounts, applets, performance-based social network advertising, gift cards, member cards, and financial services, social network traffic has improved retailer performance and the customer experience (see figure A and figure B).

Figure A
WeChat's full product line is open to smart retail

Source: Tencent Research Institute

Figure B

Method / Effect	Traffic	Connection	Data
Improved sales performance	✓	✓	✓
Improved customer experience	✓	✓	✓
Improved operational efficiency	✓	✓	✓
Improved brand influence	✓		✓

Sources: Tencent Research Institute; A.T. Kearney analysis

Figure 3
Brand marketers' smart retail practices

Business types and challenges	R&D	Production and supply	Channels	Marketing	Store, others
White goods producer	Analyze consumer needs using big data gathered online and develop products accordingly				
Clothing manufacturer		Optimize end-to-end operation using big data			

Source: A.T. Kearney analysis

Midea Shortens Product Development Cycle with Online Big Data

At a time when consumers have a huge variety of products to choose from, successful and efficient new launches play an increasingly important role in enhancing a consumer business's market standing and profitability.

However, businesses often face issues such as long development cycles and a low chance of market success. Smart retail offers them an opportunity to improve in these areas. Empowered by data, brands can collect consumer data, gain insights, and analyze their demands to guide their development of new products and achieve C2B (consumer-to-business) success.

Using online consumer data, Midea gained insights that guided the development, launch, and promotion of a successful product tailored to children.

Its process included:

- **Data collection and analysis.** It researched consumers' concerns and reviews from e-commerce and online platforms (Tmall and Taobao's "Ask Everyone"), identifying demand for a noiseless air conditioner with volume control. It then researched children's physiological features when sleeping.
- **Product development.** It upgraded the silent mode on current systems and introduced a new heat sensor function that adjusts air volume and temperature based on detected changes to a child's body temperature and the ambient temperature.
- **Online and offline omnichannel marketing.** It built the model's reputation and visibility on e-commerce platforms. After reaching projected sales figures, it expanded sales to offline channels and initiated an online and offline omni-channel marketing campaign.
- **Sales performance.** More than 300,000 units of this model of air conditioner are sold annually, confirming that products that target consumers' urgent needs receive positive feedback from the market (see figure).

Figure

Method / Effect	Traffic	Connection	Data
Improved sales performance		✓	✓
Improved customer experience			✓
Improved operational efficiency			✓
Improved brand influence			✓

Sources: Tencent Research Institute; A.T. Kearney analysis

HLA Uses Big Data to Optimize Supply Chain Efficiency

In the clothing industry, new technologies are enhancing productivity, product development is increasingly complicated as customer demands become more diversified and specific, and competition is intensifying. Clothing brands face the challenges of a shorter product life cycle and reduced profitability.

Drawing on its superior business model and total control over stock, HLA improved the efficiency and flexibility of its supply chain system, laying the groundwork for its ongoing transformation in the era of smart retail.

HLA began with a basic operational framework for the era of smart retail. For its front end—its retail stores—it adopted a model that separates ownership and operation; it directly controls store management and is able to access firsthand information about offline sales and members. At the back end, HLA offers its suppliers general product design schemes and instructions so they can design fine details and produce the finished product.

As an intermediate process, HLA adopts centralized logistics management to receive and stock wares from suppliers and to sort and deliver products to its stores.

The company has built a production, supply, and sales coordination system to integrate its information, pooling the information flows, cash flows, logistics data, and work flows from all its stores, headquarters, and producers.

Since 2014, the company has also been using radio frequency identification (RFID), which enables product information to be batch scanned, uploaded instantly, compared, and classified.

Combined with accurate and fast sorting and packaging processes, this has helped slash labor costs by two-thirds and increase delivery efficiency fivefold.

At the back end, HLA built a supply chain progress tracking system with cloud computing and big data technologies. This allows it to control the progress and quality of its central plants and other elements of its business, including the operational status of its supply chain, and facilitates quick decision-making and responses.

HLA has also been optimizing and experimenting with intelligent practices, including using big data to adjust store operations and monitor market changes.

In the future, following an alliance with Tencent, HLA is expected to further digitalize its offline business and membership promotion, improving its ability to identify and manage offline consumer data. By bringing in cloud computing and the big data technologies of Tencent and JD.com, HLA can consolidate its online and offline sales figures and user profiles. By combining technology with more accurate consumer analysis and sales projections, HLA can keep enhancing its product design and the flexibility of its supply chain (see figure).

Figure

Method / Effect	Traffic	Connection	Data
Improved sales performance		✓	✓
Improved customer experience		✓	
Improved operational efficiency			✓
Improved brand influence			✓

Sources: Tencent Research Institute; A.T. Kearney analysis

Smart retail in its maturity: frontier technologies in retail

The application of frontier technologies has created an opportunity to upgrade service models for smart retail. New technologies that are ready for use are springing up and being merged with and applied to every segment of the retail industry. They are speeding up the improvement of operational efficiency and user experience in facets of the industry including procurement, production, supply chain, sales, and service.

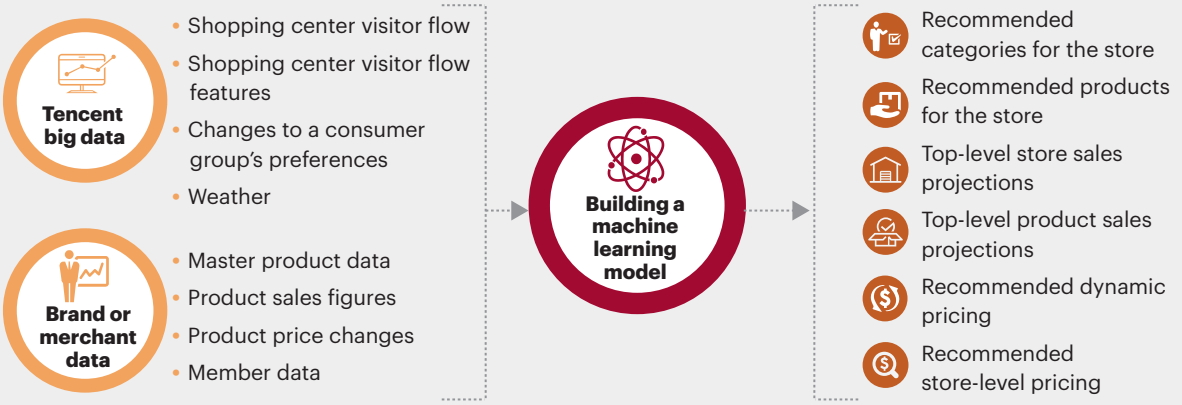
In 2017, tech giants began expanding to offline businesses. Amazon launched Amazon Go, an experimental unattended retail store, followed by a range of other unattended stores and warehouses. With the emergence of new challengers, the retail industry is going through an industrial reform driven by big data and AI and moving toward the mature stage of smart retail.

At this stage, the industry is empowered by technologies in three ways. First, computer vision and a variety of sensors are widely used to collect data from a broader range of consumers. As a result, multidimensional data is collected that direct and indirect stakeholders can use, customers are identified, and their consumer behaviors are tracked to gain more accurate insights. Second, retailers use big data and sophisticated algorithms to increase their data-handling capability. Based on retailing data, they can mine data for user profiling and use algorithms to optimize and improve factors such as location, pricing, and inventory control. Third, with the advent of automatic customer service, AR, RFID, digital price tags, facial and voice recognition, and other retailing technologies, new technologies that are ready for use are springing up and being merged with and applied in every segment of the retail industry, improving operational efficiency and user experience in retailing and service. Ultimately, intelligent information sharing, a digitalized network of suppliers, and an improved omnichannel experience will become a reality in the industry.

Smart pricing and consumer choice

Big data insights and outcomes

Figure A



Sources: Tencent Research Institute; A.T. Kearney analysis

Retailers can use Tencent's big data to build a machine learning model and reconstruct offline retailers' consumer scenarios (see figure A). This data can include shopping center visitor flow, visitor flow features, changes to consumer group preferences, and data from merchants—including in relation to products, sales, and members. Offline retailers can then get recommendations on categories and products and dynamic pricing support (see figure B).

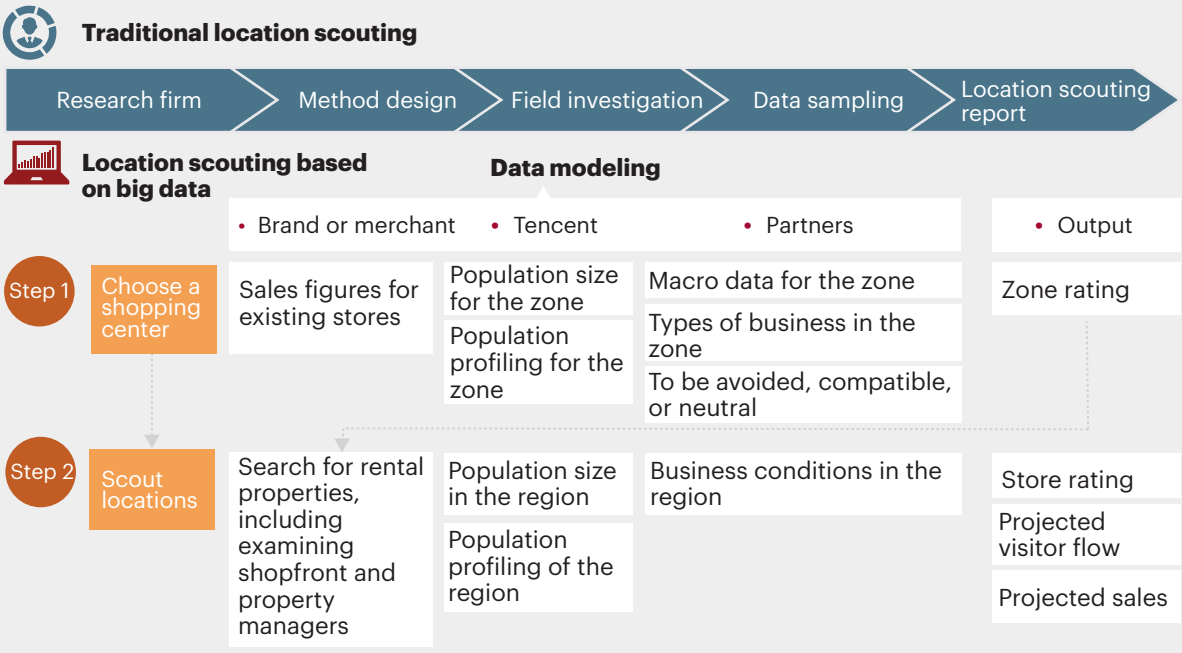
Figure B

Method / Effect	Traffic	Connection	Data
Improved sales performance		✓	✓
Improved customer experience			
Improved operational efficiency		✓	✓
Improved brand influence			✓

Sources: Tencent Research Institute; A.T. Kearney analysis

Intelligent location scouting: informed decisions based on machine learning and modeling—an ice-cream brand example

Figure A
Traditional and intelligent location scouting processes



Sources: Tencent Research Institute; A.T. Kearney analysis

The first step is to compile heat maps based on population density at different hours for a period of time (one week, two weeks, one month) to learn overall visitor flow figures (see figure A). The next phase involves rating regional visitor flow heat maps according to different consumer groups (by age, gender, income level, occupation, and payment preference) at different times in a certain period, and defining target areas. Finally, this data is compared against the number of existing stores and districts where potential customers live to identify recommended hotspots for new stores.

This method has many benefits, including:

- **Scientific location scouting, which can guide data-based decisions on location in accordance with analysis of core groups in the region, rather than relying purely on experience-based judgments**
- **Real-time solutions, as dynamically tracking demographic features and customer profiles of the region allows for real-time updates and decisions (see figure B).**

Figure B

Method / Effect	Traffic	Connection	Data
Improved sales performance	✓	✓	✓
Improved customer experience			
Improved operational efficiency		✓	✓
Improved brand influence			✓

Sources: Tencent Research Institute; A.T. Kearney analysis

UMall smart retail system: stores built with AI and big data

In December 2017, Tencent launched its UMall smart retail system, combining Tencent's Youtu AI technology and big data technology (see figure A). The system comprises a VIP arrival reminder, store compass, traffic pattern analysis, customer base management, facial recognition–based payment, visitor number alert, and unauthorized person alert, covering each segment of store management. Store personnel use Youtu's facial recognition technology to identify regular customers, adjust display shelves in each zone, provide a shopping guide, and patrol stores.

By tracking visitor flows in a shopping mall, it provides insights into product categories and relevance, allowing managers to optimize store layout and plan optimal shopping mall traffic patterns.

Based on the amount of time visitors spend in a certain area, the system can analyze consumers' brand preferences, optimize shopping mall layout, and prioritize advertising space. And using data from a single store, it can provide visual reports containing customer group profiling.

The benefits of this approach include:

- **User information digitalization:** provide access to information about user arrivals, shopping trips, chance of purchases, and other data
- **More targeted shopping guide services:** update members' consumption habits in real time, enabling better shopping guides and other customized services
- **Comprehensive user profiling:** provide information such as consumers' age groups, genders, consumption levels, and interests
- **Better advertising and operations:** enable more accurate and effective advertising and operations through data analysis
- **Reduced chance of theft and damage:** trigger timely alerts relating to suspicious actions (see figure B).

Figure A

People			Product	Location
Enter store	**In-store route or movement**	**Purchase**	**Product display**	**Area focus**
• How many arrivals are there? • Who are they? • When does the number of arrivals peak?	• How do customers move around the store? • Where does everyone tend to stop?	• Who are the repeat customers? • What is the percentage of repeat purchases?	• Which parts of the shelves receive the greatest interest? • Which products are more likely to be picked up?	• Which functional areas of a store are the most crowded? • In which areas do the visitors stay the longest?

Sources: Tencent Research Institute; A.T. Kearney analysis

Figure B

Method / Effect	Traffic	Connection	Data
Improved sales performance		✓	✓
Improved customer experience		✓	✓
Improved operational efficiency		✓	✓
Improved brand influence			✓

Sources: Tencent Research Institute; A.T. Kearney analysis

Approach to Integrating Enterprises and Smart Retail

Unlike any previous retail industry revolutions, smart retail is fully transforming the value chain from multiple angles in areas such as logistics, data, and connectivity. The first enterprises to embrace this and initiate change have achieved significant results, improving the effectiveness of their R&D and the front end of the value chain, and launching products and services that closely follow market trends and cater to consumers' preferences. They are creating highly efficient supply chains, cutting costs, and improving efficiency from end to end. They are using big data and intelligent tools to gain insights into the market, then following up with omnichannel and precision marketing campaigns, creating new business opportunities and achieving sustainable and sound development. They have adopted new smart retail technologies that integrate their products, brands, consumers, and channels into an organic system that optimizes the customer experience, planting the seeds for future sustainable growth and social and economic progress.

A rethink of retailer positioning

Digitalization

Data is the core of smart retail, and will become a powerful driver of the transformation to omnichannel retail. In embracing the data-driven retail era, the industry will need to improve its capacity for data management, specifically defining, acquiring, and maintaining data. Learning to build a data pool involves knowing how to choose from external data sources and how to select and use analytical tools.

Scenarios

Various new types of retailers—including Yonghui's Super Species, unmanned convenience stores, and Mi Home—entered the market in 2017, offering products and services based on consumer needs. In the past, consumers bought a product from a brick-and-mortar store for use in a certain scenario. Companies now need to project their products into corresponding scenarios, so consumers can find what they need wherever they are, and access it right away.

Hierarchy

A hierarchical retail industry is inevitable in today's Internet-based environment. As consumer hierarchy results in business hierarchy, the retail industry is increasingly less inclusive and more hierarchical. Guided by these hierarchies, retailers create new products, scenarios, and services for different consumer groups that have different shared interests, hobbies, values, and social classes. By putting out products and services that are more relevant to consumers' specific values, retailers can more accurately reach their target audience.

Online and offline integration

Neither online stores nor their brick-and-mortar counterparts can satisfy the needs of their customers alone. In an era of advanced consumerism where everything can be bought and there is an extreme excess of products and information, consumers prefer to save time with online shopping—even though they may prefer the shopping experience in brick-and-mortar stores. As the two models merge, consumers will no longer have to choose.

Tencent's value proposition for smart retail

Tencent proposes a "reciprocal coexistence" with retailers to help them achieve integrated management within an independent model. It positions itself as an enabler, providing complementary functions that support retailers and its own retail business. Tencent also facilitates access to a platform where retailers can build ecosystems and explore new business models using Tencent's AI, advertising, and mobile payment functions.

Tencent's own goals include decentralization and sustainability, so in backing the development of independent brands without consolidating or dominating web traffic and resources, it is committing to build a sustainable, interactive bridge between retailers and consumers.

For each part of the digitalization process, Tencent's smart retail toolkit offers a full range of digitalization support. Smart retail is connected by cloud platforms and social networks; Tencent's toolkit empowers its partners by releasing core resources and opening its cloud computing, big data, AI, location services, and other technologies to the public. The toolkit also gives users access to Tencent's experience services, including applets, mobile payment, marketing, and scenario guiding, and to the traffic resources of its various platforms. By fully connecting traffic, technologies, and experience, Tencent can offer these technologies to supermarkets, convenience stores, department stores, and other types of business in a focused, useful way. In the current stages of digitalization, changes are spreading from marketing and payment at the consumption end, to operations and management and then to other segments, including production and R&D. The end result will be an overhaul of the entire industry.

Platform traffic, experience, and data are the three ways that Tencent Smart Retail can help the retail industry evolve and improve sales performance, corporate productivity, customer experience, and brand influence.

In terms of platform traffic, Tencent can explore new customer acquisition and traffic resources for retailers. Compared with e-commerce platforms that boast an established advantage in traffic resources, social media network platforms, and content applications, Tencent offers just as many premium user resources alongside great customer acquisition potential. Tencent can also capitalize on the influence of social media network followers and word-of-mouth sharing as sources of future platform traffic.

In terms of experience, Tencent can help optimize the user experience with retail technologies such as mobile payment, smart identification, personalized recommendation, RFID, applets, and a full-service supply chain.

In terms of data, Tencent can capitalize on and integrate data based on users' cell phone numbers, member accounts, and shopping records on e-commerce to further conduct digitalized management of user profiles, stores, and visitor flows. This can help build digitalized operational capability and improve businesses' operational efficiency (see figure 4 on page 17).

Figure 4
Tencent's smart retail toolkit

	Product	Location	People
Empowerment via traffic	• Social media network gift cards • Applet coupons • Social media advertising	• Visitor flow diversion from stores	• Precise location-based services' visitor flow diversion
Empowerment via experience	• Online store applets	• QR code scanning to place orders through applets • Mobile payment codes • Smart cashiering and store patrols	• Member account system • VIP arrival reminder
Empowerment via data	• Smart product selection • Precise pricing • Product recommendation • Brand index	• Store location scouting • Shopping center analysis • Stock management	• Customer profiling • Traffic pattern analysis

Sources: Tencent Research Institute; A.T. Kearney analysis

Examine, Optimize, Adapt

In the future, smart retail will continue to fuel the restructuring of traditional value chains and the development of a new ecosystem that is more open, coordinated, and conducive to value sharing. Online retailers that succeed based on visitor flow and traffic alone will cease to exist, as business becomes more democratized. Driven by accelerated and widespread technological progress, a more inclusive and all-embracing business environment will emerge.

In the era of smart retail, retailers and brands should keep seeking to reshape the value chain within their industry. In doing so, they should examine and optimize their own systems at four key levels to achieve comprehensive reform, adapting their operations to suit the new era.

- **Level 1: Core corporate values.** Retailers should replace a single isolated corporate culture with a culture and development philosophies that are centered on collaboration. This will lay the groundwork for internal and external corporate collaboration and empowerment via external technologies.
- **Level 2: Data sharing.** Using data as the springboard for collaboration, companies should build a system of data collection, acquisition, and sharing to access real-time, standardized, and analytical data.
- **Level 3: Technology integration.** Companies can enhance their reform efforts with advanced technologies, endowing business data with new meaning. AI, blockchain, and other technologies can help retailers update their understanding and knowledge of consumers, their operations, and their supply chains. They can also optimize supply chain efficiency using RFID, collaborative robots, and other tools that connect information more efficiently and reduce total costs.

- **Level 4: Terminal operation.** Retailers will be equipped to break through traditional marketing scenarios and interaction models, replacing them with scenario-based and hierarchical terminal systems, including fully upgraded offline experiences and integrated online and offline channels. This will satisfy customers' demands for efficiency and experience, and help companies succeed in the changing consumer environment.

The future has arrived; the elements that remain unchanged will change soon enough.

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About A.T. Kearney

A.T. Kearney is a leading global management consulting firm with offices in more than 40 countries. Since 1926, we have been trusted advisors to the world's foremost organizations. A.T. Kearney is a partner-owned firm, committed to helping clients achieve immediate impact and grow their advantage in dealing with their most mission-critical issues.

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Tencent established its social studies institute, Tencent Research Institute, to pool wisdom from all sectors with Tencent's great variety of products, cases, and data. It is an open and collaborative research platform that works to address the key issues of industrial development, and enhance the sound and steady development of Internet-related industries.

The institute has a number of divisions, including the Law Research Center, Industrial and Economic Research Center, Center for Social Studies, Criminal Research Center, Security Research Center, Patent and Innovation Research Center, "Internet+" Innovation Center, and Postdoctoral Center. The institute is teaming up with Chinese and international institutions and think tanks to address topics as broad as Internet legislation, public policy, the Internet economy, big data, and other research fields. It constantly releases data and reports about Internet-related industries, offering powerful research capabilities to support academic studies, industrial development, and policy-making.

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