



5G impacts in retail

How will 5G help deliver new opportunities in the retail industry?

5G will be the catalyst for the transformation of the economy and the connected society, covering the network needs and contribute to the digitalization of vertical markets like Retail.

Drivers and key figures of 5G in Retail

- The retail industry is undergoing digital transformation**

By 2025 the **Smart Retail Market size is expected to be worth up to USD 58.23 billion**
- Growing consumer desire for an enhanced digital shopping experience**

~90% of consumers looking for a digitally enhanced shopping journey, whether engaging at home, via mobile, or inside a physical location
- 5G combined with other emerging technologies [e.g. Augment Reality (AR)/ Virtual Reality(VR)] will transform the customer shopping experience and store operation**

By 2035, the sales enabled by 5G are expected to add **up to USD 1198 billion**
- AR/VR technologies are expected to have a major role in changing the in-store experience**

The market for **AR/VR technologies in retail alone is expected to reach USD 1.6 billion by 2025**

5G role in Retail

Key use cases categories where 5G's advanced features will deliver further value to the end solutions

Key use case category	Illustrative use case	5G added value
In-store customer care & experience	Immersive virtual support Assist customers while shopping without the need to interact with a store assistant (e.g. virtual dressing rooms)	AR/VR use cases usually demand stringent network requirements such as low latency, high reliability, and high bandwidth, which are 5G's intrinsic features
Pricing & promotion personalization	Customized pricing & promotion Share personalized notifications with customers when they are in-store or in the neighborhood by identifying their purchasing patterns	The usage of Artificial Intelligence (AI) /Machine Learning (ML) and Edge computing powered by 5G's high bandwidth and low latency connections will allow to deliver fast customized promotions to customers
Inventory management	Out of stock shelf replenishment Scan shelves for out of stock or low inventory positions to send automatic replenishment notifications to in-store associates or distribution centers to allocate additional inventory	Near real-time identification of misplaced, mislabeled, and mispriced products through MEC video analytics Multistore analysis using 5G network to cross-correlate reliable current inventory levels
Distribution centre & asset efficiency	Warehouse asset and equipment monitoring Monitor and transmit in real-time the location and the condition (e.g. temperature) of the goods in the warehouse	5G high capacity and reliability is required to support the deployment of multiple sensors and transmit high volumes of data
Workforce & store efficiency	Cashier-less checkout Provide a Grab & GO in-store shopping experience by enabling customers to collect the products they need and be automatically charged for them, eliminating the need of going through queues for checkouts	5G provides the high bandwidth, high capacity and low latency required to track both customers and items as they are picked up and moved around the store

Expected improvements¹

↑ 3-5% Revenue

Main Drivers:
Enabled associates, improved pricing/promotions strategy, reduced stockouts, stronger demand planning

↓ 4-6% Operating Margin

Main Drivers:
Reduction in store operation, supply chain, omnichannel operations, and merchandising costs

¹Potential improvements were calculated based on benchmarks from a cost-reduction project at a large retailer; ranges for each improvement are based on low and high assumptions on the impact of 5G

Source: Deloitte

How can Deloitte help?

We translate business and industry needs into technical requirements delivering value added E2E 5G solutions that lead to **meaningful business outcomes**.

- IDEATE AND PRIORITIZE**

Select the areas to be improved with 5G use cases, ideating, identifying and prioritizing the top 5G use case opportunities
- DEVELOP THE BUSINESS CASE**

Formulate the operational benefits of the 5G use case(s) defined and associated business case value proposition
- DESIGN TECH REQUIREMENTS**

Define and design use case technical solution architecture and requirements, considering deployment strategies and application requirements
- BUILD AND EVALUATE**

Start with a PoC first to monitor and evaluate the 5G use case(s) performance and then proceed with global rollout
- OPERATE AND MAINTAIN**

Define overall governance, operating model and procedures to ensure the sustainability in BAU

Sources: Deloitte TMT Predictions 2021, Huawei, IDC, Gartner, The business research Company

Contacts

Experts



Elizabete Moreira
Tech Senior
emoreira@deloitte.pt



Nuno Oliveira
Manager
nunooliveira@deloitte.pt

Sponsor



Pedro Tavares
Partner
petavares@deloitte.pt

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