

How 5G will benefit payments and mobile commerce

Article

Though still in the early stages of rollout, 5G technology could bring about positive changes to the retail industry, as retailers seek to maintain their digital transformation efforts and bring consumers safely back into stores in 2021. Retailers will use their IT investments in 5G to enhance the customer experience, both in-store and online.

As noted in our December 2020 report “Future of Retail 2021,” digital-first retail experiences with zero-touch checkout will become more commonplace this year. There’s already significantly higher consumer interest in mobile payments and mobile app orders: 30% and 28% of US consumers expressed interest in those respective technologies in a June 2020 survey from Periscope By McKinsey, both up more than 10 percentage points from similar polling in March 2020. The industry can also expect frictionless stores of the future to proliferate, as digital-first retail experiences such as Amazon Go continue to expand.

Coronavirus Impact: Interest in Select Digital Retail Technologies Among US Consumers, March 2020 & June 2020

% of respondents

	March 2020	June 2020
Mobile payments	17%	30%
Mobile app orders	16%	28%
Apps to scan barcodes	-	25%
Self-identifications at terminal	26%	25%
Digital screens to navigate	-	22%
Digital screens for browsing	23%	20%
Digital shelf labels for info	21%	20%
AR to try on product	15%	16%
AR for product info	15%	16%
Location recognition	13%	16%

Source: Periscope By McKinsey, “Retail Reimagined: The New Era for Customer Experience,” Aug 6, 2020

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Amazon Go, a cashierless convenience store concept featuring its patented Just Walk Out technology, is continuing to expand its footprint. Amazon also has expansion plans for Amazon Fresh grocery stores, which feature “Dash Carts,” shopping carts that automatically scan and charge the items placed in them. The stores have been popping up near big cities including Los Angeles and Chicago.

In September, Amazon also unveiled the Amazon One handprint scan technology that can identify customers upon store entry. The company will look to license these technologies to other physical retailers, which could dramatically scale its footprint and hasten consumer adoption.

Integration of Amazon’s accounts and payment systems with in-store tech, such as computer vision systems and smart shelves, is part of the magic of its contactless stores—but not all cashierless stores will rely on computer vision technology. Shekel Brainweigh has developed an autonomous retail store format with AI-enabled smart shelf systems that count inventory by weighing items on shelves.

The technology operates in tandem with a Light Detection and Ranging (Lidar) system from Hitachi that uses light to measure object distance for shopper tracking instead of facial recognition, according to Guy Moshe, co-founder and CTO of the retail innovation division at Shekel Brainweigh. Groupe Casino is currently testing the store format in France. The stores can be placed wherever there is a cellular network, including 5G, but Moshe expects they will cost less and require less compute power than computer vision-enabled stores do.

Mobile payments

Shop-and-go experiences that leverage computer vision, Lidar, and other technologies for inventory management and customer identification should become more commonplace. We forecast that US mobile payment volume will rise from \$705.28 billion in 2019 to \$2.541 trillion in 2025 across mcommerce, proximity mobile payments, and mobile peer-to-peer (P2P) payments. In short, mobile devices are becoming central to enabling payments to retailers.

With mobile wallet use on the rise, the bandwidth and latency advantages of 5G networks can help speed up the payment process, whether it's via a contactless or proximity payment method. Additionally, the use of SIM authentication via the cell service provider (meaning no Wi-Fi logon), as well as fast networks for processing of biometric data for identification, also provides new opportunities to speed up the payment process while reducing the opportunity for fraud and ensuring the transaction is secure.

To learn about other key growth opportunities for 5G in retail, Insider Intelligence subscribers can read our recent report:

Report by Jim Davis Mar 18, 2021

How 5G Will Change Retail

