DIGITAL OUTLOOK
RETAIL INDUSTRY

Infosys®

INTRODUCTION

2017 was an eventful year for the retail industry, which benefited from digital technologies such as artificial intelligence (AI), predictive analytics, and the Internet of Things (IoT). At a recent conference, one of the participants unveiled their futuristic insights into the global retail market of 2030. Predictions included the use of data and technology to predict buying behavior with "unprecedented accuracy", in-(physical) store shopping that was all about leisure and pleasure, mobile commerce enabling consumers to research and buy a product simply by taking its picture, and robots taking charge of mundane and repetitive tasks in brick and mortar stores.

Will retail organizations take their first steps towards such a future in 2018? Or do they have a different game plan? To understand what was top of mind in the retail sector, we surveyed 1,000 senior decision makers from business and IT, from large organizations (with 1,000 employees or more and annual revenue of at least US$500 million) in nine industries, including 115 respondents from the retail industry.

While identifying the key trends was the most important objective of the study, it was not the only one. The survey also sought to understand which digital technologies were in use within retail organizations and the broad purpose for which they had been deployed – improve existing operations, solve new problems, or create new opportunities.

It then reviewed these findings against current and immediate investments in digital technologies to understand where the money was actually going.

The research findings were supplemented with our own perspective on the retail sector and anecdotes about the happenings in the industry to produce this short but incisive report.

EXECUTIVE SUMMARY

- According to the retailers surveyed, aligning marketing, promotion and offer spends using data analytics (52 percent), using technology to increase customer convenience (50 percent), and investing in retail workforce management technology and platforms (47 percent) are the most commonly reported trends for the next three years which will make a positive impact on their organization.

- Cyber security (74 percent), big data analytics (66 percent), and enterprise cloud (62 percent) are the three digital technologies being utilized the most by retailers today.

- Retail organizations plan to invest in digital technologies in the coming 12 months. Augmented reality, point of sale/in-store experience, and analytics for aligning marketing spends currently receive investments from most enterprises who consider them a trend for the coming three years.

- Retail respondents said that their organization could improve both existing skills and technologies in preparation for implementing the top trends within the next three years.

TOP RETAIL TRENDS FOR THE NEXT THREE YEARS

1 CUSTOMER CONVENIENCE

2 WORKFORCE MANAGEMENT

3 CUSTOMER EXPERIENCE

Given that digital is a universal theme in business today, the trends that entered the conversation with the 115 retail respondents in the survey come as no surprise. Digital technologies, singly or in combination, underlie each of these trends. At least one third of the respondents expected the following trends to make a significant positive impact on the retail organization in the next three years:

a. Retailers will invest in data and insights to improve both channel efficiencies and sales.

b. The industry will invest in technology to personalize (online) customer experience in particular. For instance, stores will adopt new technologies enabling sales associates to make personalized suggestions to online shoppers while chatting live or with the help of highly targeted email marketing.

c. Investments in strengthening omnichannel capabilities will continue to enable shoppers to research a product online, order it using an aggregation mobile app, and if they don't like the item, return it to the nearest store.

d. Technologies pertaining to point of sale and in-store experiences will receive investments.

e. Retail enterprises will build their organizations on the cloud and leverage cloud computing with the latest advancements in analytics and AI.

f. There will be investments in augmented reality to support virtual selling.

On average, each retailer named four items in their list of trends that will make a significant positive impact on their organization in the next three years. But the three trends receiving most mentions – cited by 52, 50, and 47 percent of the respondents, respectively, as making a positive impact on the business – show that retail organizations believe that the next three years will not only be about creating a big splash with disruptive technologies, but also about using proven applications to do more, or differently, than before.

Aligning spends on marketing, promotion campaigns and offers using data analytics insights took first place by garnering a mention from 52 percent of the respondents. This was followed by the use of technology to increase customer convenience (50 percent) and investments in retail workforce management technology and platforms to enable shop employees to interact with customers from even outside the store (47 percent).

Which of the following trends will have the most positive impact on your organization within the next three years?

Aligning marketing campaigns and offers program spending with data analytics	**52%**	**Investment in technologies for point of sale or in-store experiences**	**37%**
Increase consumer convenience	**50%**	**Investment in augmented reality for virtual selling**	**34%**
Investment in retail workforce management technology/platforms	**47%**	**Having smaller stores (with no or fewer inventory) to create a bigger experience for the customer using technology**	**26%**
Investment in data and insights for both efficiency of channel and to sell more	**43%**		
Investment in technology to personalize customer experiences	**43%**	**None of the above will have a positive impact**	**1%**
Investment in strengthening omnichannel capabilities	**38%**	**Average number of trends that will have a positive impact on respondents' organizations within the next three years**	**4**
Building the organization on the cloud combined with the latest advancements in analytics and AI	**37%**		

Let us examine each of these one by one. The retail industry has always been a leader in using analytics to improve customer understanding and create value in other ways. So the finding that analytics will drive a trend that will make the maximum impact on retail organizations is somewhat of an anticlimax. But a little bit of inquiry reveals that retailers plan to take the use of data a notch higher in the coming years by aligning various marketing related spends. Here it is best to explain with an example: A store selling food products offers customers loyalty points on purchases, which they can redeem at a chain of restaurants. The store then takes data about what customers ordered at the restaurant to stock up on those ingredients.

The trend at second spot, namely, using technology to improve customer convenience seems even less remarkable at first glance. But while retailers will seek to improve access, cut down wait times, or reduce friction in the buying experience within the next three years, some would be looking at really innovative and unconventional approaches to offer a highly convenient shopping experience. Again, an example is necessary. Brandless is a digital grocery store where everything sells at US$3, and nothing is branded. The store believes that by eliminating

brands while standardizing the quality and value of its product range, it makes shopping simpler and more convenient. The survey respondents could have kept such approaches in mind while voting for this trend.

Investing in retail workforce management technology and platforms came in third. Here, the intention is possibly to acquire a technology that enables shop staff to connect with customers even outside the store. This is because in the retailing business, sales assistants have a huge role to play in personalizing the shopping experience and driving loyalty towards the store. Online shopping, while it has many other advantages, lacks this important personal element. But with a workforce management platform, stores can give customers the best of both worlds by integrating their sales force into the online shopping process so that they can offer informed suggestions to customers (both known and unknown) based on purchase history and other variables.

DIGITAL TECHNOLOGIES THAT RETAILERS USE – CYBER SECURITY, ANALYTICS, AND CLOUD

Retail organizations utilize six digital technologies on average. The most popular technologies are cyber security, big data analytics, and enterprise cloud, in use at 74, 66, and 62 percent of the enterprises, respectively. Following at some distance are AI (52 percent), business process management (BPM) solutions (51 percent), and enterprise resource planning (ERP) and enterprise application implementation/modernization (49 percent).

Which of the following digital technologies does your organization currently utilize?

Cyber security	74%		Internet of Things	43%
Big data analytics	66%		3D printing	37%
Enterprise cloud	62%		Dev-Ops and agile	36%
Artificial intelligence (AI) (machine learning, deep learning, natural language processing, natural language generation and visual recognition)	52%		Blockchain	28%
Business process management solutions	51%		APIs	27%
ERP and enterprise application implementation/modernization	49%		Mainframe modernization	23%
Enterprise service management solutions	46%			

The purpose of implementing these technologies varied with the technology. In the case of cyber security, big data analytics, BPM, and ERP, it was to improve existing business operations. In the case of cloud and AI, there were around an equal number of responses in favor of improving existing operations and solving new business problems.

When the following areas of digital technologies and solutions were implemented within your organization, was it to improve existing business operations, solve new kinds of business problems, or create new opportunities?

	Improve existing business operations	Solve new business problems	Create new opportunities	Don't know	None of these
3D printing	76%	48%	33%	-	-
AI (machine learning, deep learning, natural language processing, natural language generation, and visual recognition)	63%	62%	40%	-	-
APIs	74%	61%	29%	-	-
Big data analytics	63%	46%	46%	-	1%
Blockchain	63%	69%	34%	-	-
Business process management solutions	75%	39%	36%	2%	-
Cyber security	71%	51%	29%	-	-
Dev-ops and agile	68%	59%	41%	2%	-
Enterprise cloud	58%	58%	42%	-	1%
Enterprise service management solutions	60%	60%	45%	-	-
ERP and enterprise application implementation/modernization	79%	48%	32%	-	-
Internet of Things	80%	45%	47%	-	-
Mainframe modernization	81%	73%	38%	-	-

WHERE RETAILERS ARE INVESTING – AUGMENTED REALITY

Retail organizations plan to invest in digital technologies in the coming 12 months. Where are they putting this money? Are they investing in disruptive technologies to bring totally new possibilities to life or only in tried and tested solutions that keep the business running?

Most importantly, are retailers putting money into the trends they deemed most significant within the next three years? To understand this, the survey asked the respondents whether they were investigating or investing in the top three trends they had named as having the most impact on their organization in the next three years. Here is what emerged.

The majority of retail enterprises, who believe a trend will have a positive impact, are already investing in the key trends. The only exception is "smaller stores (with no or less inventory) to create a bigger experience for the customer using technology", where a relatively larger number of retailers are yet to commit their money and are still investigating the trend (17 percent) or, having done that, are planning to invest in it later (35 percent). This is quite understandable, given that the inventory-less store is a radical concept. In fact, Nordstrom opened its first store of this kind only in October 2017. The 3,000 square feet "Nordstrom Local" outlet – one-fiftieth the size of a "regular" Nordstrom store – has eight dressing rooms

where customers can try out clothes, but they will eventually receive their items from the inventory in Nordstrom's shopping mall stores. Target and Sears are also among those experimenting with the small store format.

When it came to the trends that were drawing the most investments, it was augmented reality (AR) for virtual stores, which topped the charts (79 percent of the respondents, who believe it will have a positive impact within the next three years, said they were investing in it). AR will lead to the creation of virtual stores with endless aisles and choices where customers can order highly personalized products and have them shipped as they desire. For retailers, this will mean more consumer information shared from more devices that they can exploit to deliver targeted product offerings, promotions, and even virtual merchandise, in-store.

Next was point of sale or in-store experiences (73 percent). Clearly, retailers are eyeing super experiences, such as that provided by a home products retailer that gives shoppers a tablet to use in their store from which they can scan product barcodes for more information and make wish lists.

Seventy percent of the respondents, who had named "aligning marketing campaigns and offers program spending with data analytics" to have a positive

impact within the next three years – the topmost trend of all, said they were investing in it, while another 25 percent had plans to do so. The situation with the remaining two most common trends was not very different: 65 percent of those voting for "increasing consumer convenience" in their top three choices had invested in it and 68 percent of the retailers choosing "retail workforce management technology/platforms" had done likewise.

From the findings it appears that retail enterprises are already looking beyond the next three years to invest in trends that are slightly more futuristic. This is consistent with their track record of leading the adoption of digital technologies, especially analytics, social, mobility, etc.

Is your organization investing in or investigating any of the top trends?

	Investing in this trend	Planning on investing in this trend	Investigating this trend	Not investing in, planning on investing in or investigating this trend
Investment in augmented reality for virtual selling	79%	18%	4%	-
Investment in technologies for point of sale or store experiences	73%	19%	8%	-
Aligning marketing campaigns and offers program spending with data analytics	70%	25%	6%	-
Investment in retail workforce management technology/platform	68%	18%	15%	-
Investment in technology to personalize customer experiences	68%	25%	7%	-
Building the organization on the cloud combined with the latest advancements in analytics and AI	67%	22%	11%	-
Investment in data and insights for both efficiency of channel and to sell more	67%	29%	4%	-
Increase consumer convenience	65%	18%	18%	-
Investment in strengthening omnichannel capabilities	55%	28%	14%	3%
Having smaller stores (with no or fewer inventory) to create a bigger experience for the customer using technology	43%	35%	17%	4%

To the question, "Which of the following technologies or solutions will your organization use in order to realize the promise of all of these trends?" retailers, who believe at least one trend will have a positive impact, responded by more or less recounting the list of technologies that are being used by them the most, namely, big data analytics (59 percent), AI (55 percent), cyber security (54 percent), BPM (52 percent), and enterprise cloud (51 percent).

This suggests that retailers are already well provisioned technology-wise to deal with immediate trends, which is why their investments are being directed into more future-looking technologies.

But overall, how ready are retailers to implement these trends? When the survey asked the respondents if they had what it took to implement their top trend, a huge majority said they possibly needed to improve their depth in disruptive technologies (89 percent) and their skills further (87 percent).

IN CONCLUSION

For the retail sector, 2018 will be about the things that have always mattered the most in their business – engaging the customer with better understanding, service, and experience. That being said, the top trends of the next three years will offer opportunities to do these things better, or even differently, than before. It is also encouraging that the industry is already looking ahead of 2018 to invest in a technology such as AR that could disrupt some more an industry that has already been disrupted a great deal.

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