

# Beyond smartphone shopping — the rise of smart assistants



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## Methodology

This report presents insights based on an online survey carried out in January 2018, of 5,048 (500 per city) advanced internet users in Johannesburg, London, Mexico City, Moscow, New York, San Francisco, São Paulo, Shanghai, Sydney and Tokyo.

Respondents were aged 15 to 69 and fit the profile of urban early adopters. They represent 50 million of the 180 million living in these cities, which is not only a small slice of the consumers in those places, but also makes up a fraction of shoppers globally.

However, we believe the way respondents employ digital technology in their shopping activity puts them at the cutting edge of the paradigmatic changes we now see sweeping retail around the world. More specifically, of the sample studied, 43 percent are online smartphone shoppers, meaning that they shop using their smartphones directly at least weekly. A further 45 percent of the sample use digital voice assistants on a weekly basis, with as many as 35 percent using augmented reality (AR) or virtual reality (VR) at least once a week.

## About Consumer & IndustryLab

Ericsson Consumer & IndustryLab delivers world-class research, strategic design concepts and insights for innovation and sustainable business development. We explore the future of consumers, industries and a sustainable society in regards to connectivity by using scientific methods to provide unique insights on markets, industries and consumer trends. Our knowledge is gained in global consumer and industry research programs, including collaborations with renowned industry organizations and world-leading universities. Our research programs cover interviews with over 100,000 individuals each year, in more than 40 countries – statistically representing the views of 1.1 billion people.

# Key findings

Smartphone shopping will continue to peak on a global scale over the next few years, as the store moves into every user's hand. However, we are already seeing the next wave of disruption coming – the rise of AI-based assisted shopping.

## Two waves of disruptive change in shopping behaviors

When Chinese retailer Alibaba's Singles' Day on November 11, 2017 reported USD 25 billion record sales – of which an astounding 90 percent of transactions were mobile<sup>1</sup> – it was clear that direct smartphone shopping had officially reached the mainstream.

This new wave of mobile shopping is not only sweeping China. When the smartphone offers consumers all of the world's shopping literally at their fingertips, the explosion of choice itself drives a new wave of change beyond the smartphone.

Getting help to choose from digital shopping assistants is an emerging need among consumers. This report shows that assistant shopping needs cover both routine household purchases and more aspirational personal shopping.

We see smartphone users relying increasingly on the digital assistants in their phones for aspirational shopping support, while simultaneously driving interest in smart speakers that handle automation of routine household purchases.

Given that shopping through digital voice assistants is expected to top USD 40 billion by 2022,<sup>2</sup> selecting your type of assistant might soon be more important than making the actual purchasing choice.

## Key insights

### 1. Direct smartphone shopping peaking

- Already, 43 percent are smartphone shoppers and make purchases directly using their phone every week
- Sixty-seven percent of them also regularly pay with their phone in stores

### 2. Digital shopping assistants – the next shopping disruptor

- Selecting the chooser for home and personal shopping is more important than making choices
- Forty-seven percent of smartphone shoppers would like a service that automatically restocks everyday items
- Sixty-three percent of them think most people will have a personal shopping advisor in 3 years

### 3. Top jobs for digital assistants

- Sixty-three percent of smartphone shoppers want help with price comparisons – a likely role for a home restocking assistant
- And 48 percent want help making shopping decisions easy – a likely role for a personal shopping advisor

### 4. Stores – transform or disappear

- Sixty-nine percent of AR and VR users think the technology will give smartphones all the benefits of stores in just three years' time

### 5. Bargain prices go offline

- Thirty-six percent of smartphone shoppers already believe they should pay lower prices in stores than online if they take the trouble to go there

### 6. Materialism at a crossroads

- Only 15 percent prefer renting cars to owning them – but 70 percent think mostly everyone will rent cars in 3 years

<sup>1</sup> [www.bloomberg.com/news/articles/2017-11-12/alibaba-singles-day-goes-global-with-record-25-billion-in-sales](http://www.bloomberg.com/news/articles/2017-11-12/alibaba-singles-day-goes-global-with-record-25-billion-in-sales)

<sup>2</sup> <https://techcrunch.com/2018/03/02/voice-shopping-estimated-to-hit-40-billion-across-u-s-and-u-k-by-2022/>

# Smartphone shoppers change the face of purchases

Have you bought anything today? Unless it was a cup of coffee on your way to work or last-minute dinner ingredients on your way back home, chances are that you didn't visit a shop.

If you made an online purchase, you probably did it directly in an app on your smartphone instead of using a computer. And let's think about the cup of coffee you picked up this morning – most likely, you didn't pay for it with cash, even though it was only a small purchase. Maybe you even paid for it with your smartphone.

In our survey, we found that 43 percent were already smartphone shoppers in the sense that they make purchases directly using their phone every week.

This is the way our smartphones are changing the way we shop – and in fact, smartphones have even changed the way consumers think about shopping.

Given that the smartphone shoppers in our study have become used to paying via their phones, they also expect to use smartphones for purchases when visiting stores; and 67 percent of them already pay with their phone in stores on a weekly basis.

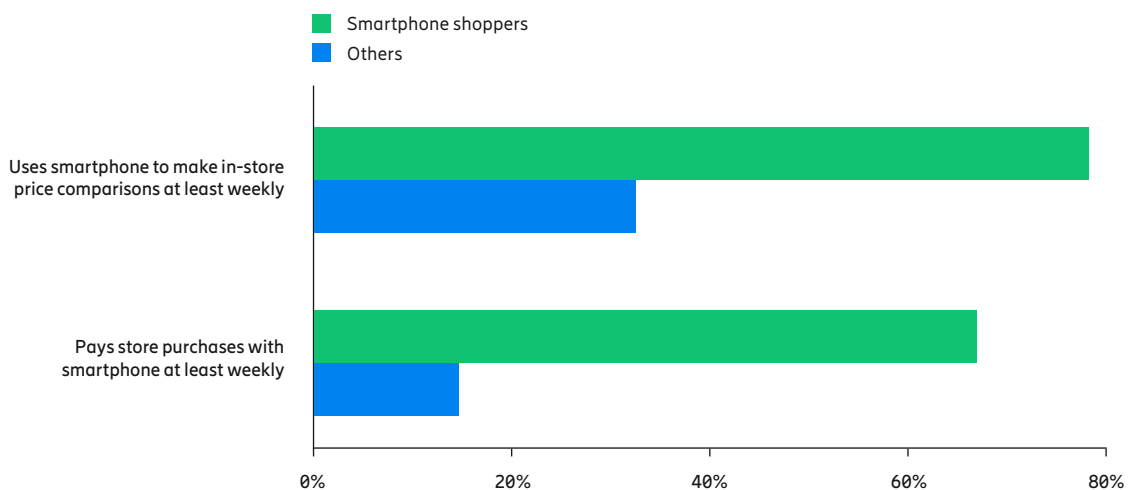
Still, the smartphone is not seen as the ultimate shopping experience. Even though smartphone screens have been growing over recent years, the main gripe remains the size limitations of the screen. This is probably the reason why the most active smartphone shoppers are

also the most interested in using AR and VR to bypass the screen's limitations.

Again, China is leading the way here. Fifty-nine percent of those surveyed in Shanghai prefer buying things with their smartphone, compared to only 12 percent in Tokyo. More than half in Shanghai also think AR and VR will be used for clothes shopping, compared to only one-fifth of respondents in Tokyo and San Francisco.

The second highest concern among smartphone shoppers is losing connection in the middle of making a purchase. As we move towards the implementation of 5G networks across our cities, being able to place trust in a fail-safe network connection will remain a top requirement.

Figure 1: How smartphone shoppers use their phones



Source: Ericsson Consumer & IndustryLab, Beyond Smartphone Shopping, 2018  
 Base: 5,048 advanced internet users aged 15–69 in Johannesburg, London, Mexico City, Moscow, New York, San Francisco, São Paulo, Shanghai, Sydney and Tokyo

# The chooser, not the choice

Choice is at the very heart of our economy, as variety and competition drive companies to create value differentiation in their offerings.

In brick-and-mortar stores, choice is all about moving the hand of the consumer between differently branded products. However, we now live in a world where supply increasingly outstrips demand,<sup>3</sup> to the extent that this is causing a retail crisis in its own right.

Although consumers have a world of choice at their fingertips, they seem to spend more time choosing the product than actually using it.

Who can feel anything but fatigue when standing in front of a rack with more than 100 types of toothpaste? Or when scrolling through endless versions of the same product? For reasons like these, 48 percent of smartphone shoppers want to only see relevant items when making choices. Almost as many think that trusted brands should help them with making purchasing choices. This rejection of choice and demand for the opposite – the reduction of choice – is a major shift that will fundamentally change shopping behaviors.

With 43 percent of smartphone shoppers wanting a shopping assistant that helps them narrow down purchasing choices, we are moving towards an era where the most important thing is the chooser we select, rather than making decisions ourselves.

Having a personal shopping assistant will empower smartphone shoppers further, as they increasingly use Artificial Intelligence (AI) to develop their individual tastes while engaging in shopping experiences that are most suited to them.

## **Shopping or purchasing – it is all about why we buy**

Of course, technology may be used in different ways, and to support different buying processes. Emerging technology has the potential to fully automate everyday buying decisions, freeing up consumers' time to do other, more exciting things. This shift seems to be driven by smartphone shoppers – 47 percent of them say they would like a service that automatically restocks everyday items, compared to only 27 percent of those who are not yet smartphone shoppers.

Automated buying could be thought of as routine purchasing rather than shopping, where consumers are mainly interested in a process that runs smoothly, and requires their attention as little as possible.

But routine purchasing is far from the only way that consumers want to shop. Sixty percent of our smartphone shoppers agree that shopping makes them happy, and furthermore, 53 percent say they can

# 43%

43 percent of smartphone shoppers want a shopping assistant that helps them narrow down purchasing choices.

spend hours online browsing for products if it is something that truly interests them. This means that for aspirational shopping, we need to think a little differently.

When shopping for enjoyment, consumers could use a savvy personal advisor that puts the thrill and excitement to the fore. In fact, as many as 63 percent of smartphone shoppers believe everyone will have their own personal digital assistant to advise them on their own shopping needs within 3 years.

For example, if you never went on that adventurous mountain climbing trip, your personal shopping advisor could be telling you that now is the moment for you to challenge your status quo and buy the flights, boots and kit.

<sup>3</sup> Dart, Michael and Lewis, Robin (2017), Retail's Seismic Shift, St. Martin's Press, New York

# Top jobs for digital assistants

There is strong interest in automated home purchasing that enables the restock of everyday household items, such as toothpaste, milk and pasta.

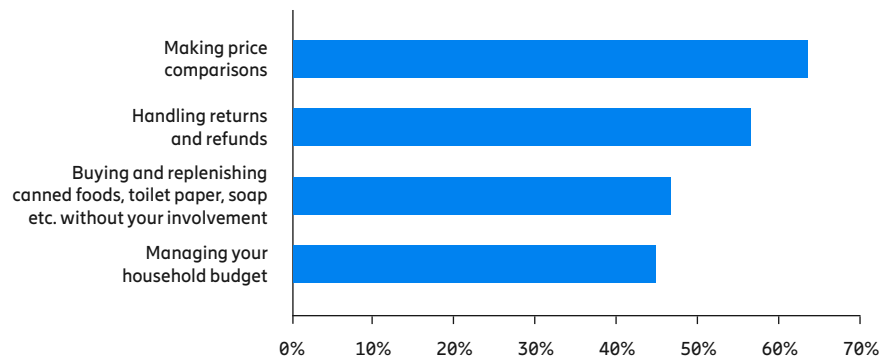
Although Amazon's share of the global smart speaker market has dropped from over 93 percent in 2016 to around 52 percent at the end of 2017,<sup>4</sup> Alexa is still very much the market leader. But what is the consumer perspective on home purchase automation?

Although the items may not cost much individually, they all add up. For example, in the UK, around 10 percent of total household income is spent on food and non-alcoholic beverages alone.<sup>5</sup> In this light, it is interesting to note that the digital assistant functionality that's most requested by smartphone shoppers is the ability to handle price comparisons, with as many as 63 percent reporting this as a likely role for a smart speaker in their home. Given that Amazon is also developing automated grocery stores, the low-involvement purchasing loop could potentially be closed without any human participation at all.

What if the new brand of cereal that your home restocking assistant chose is not to the liking of your children? It will need to be returned. The second most wanted functionality for digital assistants is the handling of returns and refunds, which makes sense in an automated home restocking setup.

Forty-four percent of smartphone shoppers also say they want a digital assistant that receives deliveries when they are not home, and a massive 68 percent think that this will be mainstream in only 3 years.

**Figure 2: Tasks for a home shopping assistant**



Source: Ericsson Consumer & IndustryLab, Beyond Smartphone Shopping, 2018

Base: Smartphone shoppers, constituting 43% of 5,048 advanced internet users aged 15–69 in Johannesburg, London, Mexico City, Moscow, New York, San Francisco, São Paulo, Shanghai, Sydney and Tokyo

Once household purchasing chores are handled with minimal human involvement, chances are that consumers will have more energy to spend on aspirational shopping. This would require a shopping advisor that knows all about their habits and personality – more like the current smartphone assistants, and less similar to what a shared smart speaker does.

Price will still be an important aspect in this context, and 53 percent of smartphone shoppers say they would like their personal assistant to negotiate prices with salespeople. However, when shopping for items that express them as an individual, making the right choices becomes much more important – as many as 48 percent want the personal assistant

to help make shopping decisions easy. Moreover, consumers do not express their personality just by shopping for themselves, which may be why equally as many also want their assistant's advice on gifts for family and friends.

It is easy to see how consumers could use a personal shopping advisor to gain new insights and experiences in high-involvement shopping situations. Although a quite different role, it is equally easy to understand the consumer benefits of a smart home restocking assistant that takes over almost completely in low-involvement purchasing of everyday household supplies. And the implications for the retail industry – in both scenarios – could be massive.

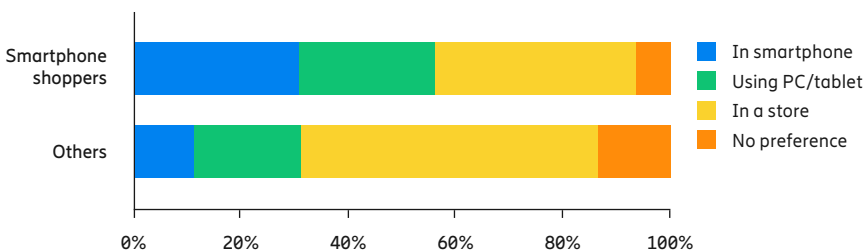
<sup>4</sup> [www.statista.com/statistics/792604/worldwide-smart-speaker-market-share/](http://www.statista.com/statistics/792604/worldwide-smart-speaker-market-share/)

<sup>5</sup> [www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/bulletins/familyspendingintheuk/financiaylereadingmarch2016#total-spending-remained-unchanged-when-compared-with-a-year-ago](http://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/bulletins/familyspendingintheuk/financiaylereadingmarch2016#total-spending-remained-unchanged-when-compared-with-a-year-ago)

# Stores – transform or disappear

The fact that it may soon be possible to automate much of our everyday purchasing raises a lot of questions about the future of the physical store.

Figure 3: Preferred way to shop across 11 categories



## 64%

64% of AR and VR users think that, in 3 years' time, almost all shopping will take place through the smartphone, and physical stores will disappear.

Source: Ericsson Consumer & IndustryLab, Beyond Smartphone Shopping, 2018  
Base: 5,048 advanced internet users aged 15–69 in Johannesburg, London, Mexico City, Moscow, New York, San Francisco, São Paulo, Shanghai, Sydney and Tokyo

As many as 69 percent of current AR and VR users think the technology will give smartphones all the benefits of stores in just 3 years' time, and as many as 64 percent even think that in that same time frame, almost all shopping will commonly take place through the smartphone, and physical stores will disappear.

But is that realistic? The short answer is: most likely not. Shopping is not about merely buying things. Instead, there are many other values and drivers at play. As mentioned, on average more than half of those surveyed say that buying things makes them happy, and as many as 60 percent of smartphone shoppers agree with this statement. It's the 'thrill of the chase' which enthralls consumers, and this applies to both the digital and the physical shopping experience.

If nothing else, the social aspect of shopping isn't likely to disappear overnight. Forty percent of smartphone shoppers still admit to frequently going to shopping malls

to hang out with friends. In Shanghai, the city that's already leaping into smartphone shopping, as many as 43 percent of respondents say they often go to a mall to just enjoy looking at everything.

However, the role of the store must change. Compared to others, those who are already smartphone shoppers have a 34 percent lower preference for shopping in stores. So, if nothing else, both size and the location of physical stores are likely to change in order to attract new interest from shoppers.

### Bringing the shopping mall into the home

Starting with size, having unused store space in premium locations is costly. Sixty-six percent of current AR and VR users think the technology will mean stores downsizing to have much less floor space within just three years. This way, brick-and-mortar stores could provide

attractive alternatives for customers to experience a large variety of products and solutions, using fewer resources.

As for location, if stores become smaller, they will also be more mobile. One perspective of this is the idea of pop-up stores with time-limited offers in prime locations. Indeed, 72 percent of AR/VR users believe that pop-up stores will be mainstream in 3 years' time, enabling stores to go where the consumers are.

Given that 52 percent of all respondents believe the effect of fewer people going to stores in the future will be an increase in home deliveries, a wider selection could be pre-emptively delivered to homes. In such a scenario, this pre-emptive delivery would likely become a sales interface tactic in its own right. So, while you are still deciding how that new carpet, lamp or chair would fit in your living room using AR, a range of optimized selections could already be arriving outside your front door.

# Bargain prices go offline

Until recently, online shopping has been driven by price competition. But more and more consumers are finding that other aspects are becoming increasingly important.



Flexibility is the top smartphone shopping benefit: 66 percent value the convenience of being able to shop anywhere and on demand in their smartphone, when the need arises.

Simultaneously, brick-and-mortar retailers are increasingly resorting to price matching, constant sales and special price reductions in order to make increasingly jaded and time-conscious consumers walk into their stores.

We may be at a crucial point where much of what we have come to associate with online shopping is turning upside-down. Thirty-six percent of smartphone shoppers already believe they should pay lower prices in stores than online if they take the trouble to go there. After all, if you get near-instant deliveries, hassle-free returns and digital help with everything from advice to finding the most unique items, why would you pay more to have to go from store to store, wait in line for busy shop attendants, and jostle with other customers?

The common understanding in the retail industry seems to be that stores need to focus on services and experiences in order to keep footfall steady. While our research confirms that consumers are indeed interested in a wide variety of in-store services – from classes and inspirational talks to shopping services – willingness to pay for such services are lower than interest levels. This could indicate some hurdles for stores to surmount in replacing revenue lost on product sales. Recent examples of fully automated convenience stores show that if the aim for the shopping experience is to be quick and smooth, the human factor may not always give a competitive edge. However, in other categories it may be the chance of meeting a human representative of the retail brand that makes the store worth visiting – although that meeting might be enhanced with digital tools.

## 43%

43 percent of smartphone shoppers believe it will be difficult for stores to charge for extra services, as many of them will be available for free on the internet anyway.

As an effect of this, consumers who enjoy the convenience of a personal shopping assistant-guided inspirational session in VR during their afternoon coffee break, as well as the luxury of getting their goods delivered whenever and wherever they want, will increasingly be willing to pay more online. The more price-conscious, on the other hand, may find themselves rummaging about in outlet bargain bins or hunting for flash sales in stores.



# Materialism at a crossroads

We live in the age of digitalization, and this relates very much to shopping. Not only are stores disappearing from the high street, but the products we shop for are also entering the realm of the digital.

Some industries have already become primarily digital, such as music, movies, books, games and ticketing. With the continued pace of digitalization, products in other industries are increasingly expected to turn into online services – for example, subscribing to a transport service instead of owning your own car.

## 34%

34 percent of respondents think owning too many things is a hassle

From some perspectives, consumers are driving these changes. For example, our study shows that 34 percent of all respondents think owning too many things is a hassle. The overwhelming majority also believes that the future of range of product categories lies in renting them for a fee.

Seventy percent believe that the mainstream way of using cars will be renting or leasing, and that consumers in general will be doing so in only three years. Significantly more than half also believe we will be renting furniture and kitchen appliances within the same time frame.

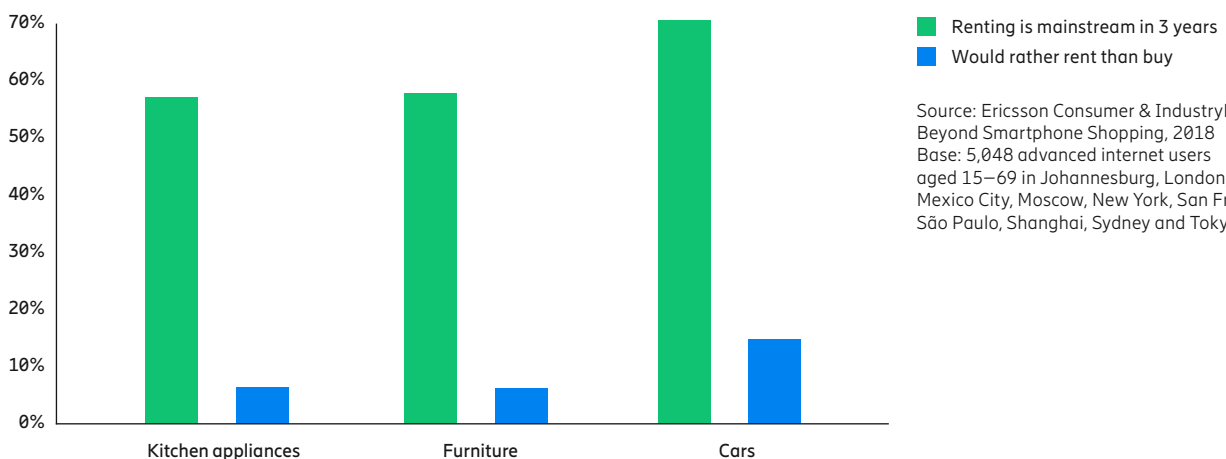
However, it may in fact be too early to announce the end of materialism as we know it. Only 10 percent or less state they would rather rent than buy things like household electronics and appliances,

kitchenware, furniture and clothes. The only product category that shows slightly higher figures here is automotive, where 15 percent say they would rather rent than buy a car.

So, what is going on here? On the one hand, it's true that consumers are rapidly digitalizing their consumption behaviors, and many products will probably be turned into services going forward. Yet on the other hand, this seems like a shift that most people still have a hard time seeing themselves making – perhaps because they have not seen rental solutions they want just yet. For now, they enjoy owning things, and also prefer buying new things rather than renting them.

Expect materialism to remain at a crossroads for some time to come.

Figure 4: Opinion on renting vs. buying



Source: Ericsson Consumer & IndustryLab, Beyond Smartphone Shopping, 2018  
Base: 5,048 advanced internet users aged 15–69 in Johannesburg, London, Mexico City, Moscow, New York, San Francisco, São Paulo, Shanghai, Sydney and Tokyo

# Peak smartphone shopping

This report describes how smartphone shopping is expected to peak around the globe in the coming few years.

In some places, like China, smartphone shopping is already a mass-market behavior, and based on the results in this study, we predict it will be in other markets very soon as well. A frantic race to adapt to changing buyer behaviors is already ongoing in both physical and digital retail. To be relevant on the smartphone screen is a necessity, and here large IT platforms are already well entrenched.

To keep up, retailers are aligning themselves with those platforms. One example is Google's newly launched Shopping Actions program, where participating retailers including Target, Walmart, Ulta Beauty, Costco, and Home Depot get to list their products across Google Search.<sup>6</sup>

The next groundswell of change we have described in this report may be of even higher importance, to both consumers and the retail industry: the rise of shopping assistants. From one perspective, personal shopping advisors will continue to strengthen the smartphone shopping trend, helping shoppers to develop their individual tastes and aspirations while making the shopping experience itself more engaging and fun. However, another type of shopping assistant will rise out of the current smart speaker boom and handle all the routine household purchases as unobtrusively as possible, while virtually taking the human element out of the equation.

Already today, there are also telecom operators like SK Telecom which are offering smart home speakers as well as mobile assistants to their customers. To what extent will telecom operators engage in the digital assistant market, going forward?

The telecommunications industry will certainly be affected, and the biggest short-term impact is likely to be higher requirements on reliable connectivity. How do you react when you lose connectivity just as you are paying for something? You become furious. But how do you react when your home restocking assistant loses connectivity and you no longer have anything to eat? You become desperate.

## Entering the multi-device era – when trust is king

The smart speaker is, however, perhaps only the first step into a multi-device era – where the smartphone is just one of many devices – and digital assistants play a part in enabling this change. Forty-five percent of the respondents in our study state they already use their digital assistants on a weekly basis; 40 percent use phone assistants, and 29 percent use shared devices such as Amazon Echo or Google Home.

In addition, 23 percent use VR headsets, and nearly 27 percent use AR smartphone features every week.

As we move into a new era of multiple devices, companies will have even more of an opportunity to gather consumers' digital footprints. These practices rely on consumers' willingness to share their data.

In previous Ericsson Consumer & IndustryLab studies we have seen that early adopters of VR expect AR and VR to eventually merge into a single device. Such a development would of course enable consumers even further to move beyond the smartphone as the main shopping device.

The assistant revolution is fueled by consumer data. As we move into a new era of multiple devices, companies will have even more of an opportunity to gather consumers' digital footprints. These practices rely on consumers' willingness to share their data. Smartphone shoppers are aware that the cost of personalization might be the loss of personal privacy. Still, if you trust the brand, it might be a cost that many are willing to pay. Compared to those who are not yet smartphone shoppers, twice as many smartphone shoppers are willing to share personal information with stores in order to get relevant offers. Almost one quarter even say they don't mind being tracked when shopping online.

<sup>6</sup> <https://techcrunch.com/2018/03/19/google-introduces-shopping-actions-to-help-retailers-in-their-battle-with-amazon/>

# Who are the assistants working for?

Personal information will remain a tug-of-war, as almost half of all respondents surveyed say they try to give away as little information as possible when shopping.

However, smartphone shoppers are more aware of how difficult that is, with 40 percent of them saying that stores, social networks and online ads will use facial recognition in order to know their shopping behavior.

Key question: “To what extent can digital shopping assistants be trusted, and how will they impact us?”

Digital assistants bring a totally new dimension to the use of consumer data. For consumers, choosing digital assistants both for the personalized shopping experience and for household restocking purposes will be as important as it will be difficult; and a key question will be to what extent such assistants can be trusted and how their use will impact us.

When consumers choose assistants to make choices for them, an essential part of free choice is moved into the domain of the complicated algorithms of the AI assistant. How to build responsible AI systems becomes crucial, not only for consumers but for all companies in the retail ecosystem.

Chances are that a home restocking assistant will not always make the decisions that are best for the household, but rather the decisions that are best for those who pay to influence the assistant. Already today, voice shopping on Echo smart speakers is tied to Amazon, and if you want to buy from Walmart you will have to use a device such as Google Home instead.

Once a home restocking assistant is in charge of the logistics of everyday purchases, becoming the assistant for the smart home in a wider perspective will seem like a natural extension. Such a development would mean that any company with a vested



interest in smart homes will be affected.

On a more personal level, the AI effects on consumers need to be explored. For instance, a very effective personal shopping advisor that helps consumers express their identity through consumption could ultimately influence not only shopping choices but also consumer aspirations, and perceptions of who they should be. How do we build a digital assistant that enables consumers to understand what motivations and algorithms guide them in certain directions, but not others?

## Who are the assistants working against?

For both digital assistant types – the personal shopping advisor and the home restocking assistant – the overarching challenge for the retail industry is that the real customer will become an AI rather than a human. Everything from advertising to services to after-sales support will have to be refocused accordingly.

Whereas social media has been seen as the most important frontier for retailers, digital assistants could

drastically change the situation. Although digital assistants might help consumers post status updates on social networks, social media will no longer play such an influencing role in helping an assistant make shopping recommendations.

Whereas 47 percent of smartphone shoppers currently like brands that comment on social network posts, and 38 percent say they are often inspired to buy things they see on social networks, AI-based shopping assistants will have no such needs.

Today, as many as 30 percent of smartphone shoppers say they only accept brands that reflect their own personal beliefs on social networks, but will they care once digital assistants replace social networks as intermediaries between brands and shoppers? Could it even be that the rise of digital shopping assistants spells the end of the social networking era – at least as far as shopping is concerned?

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