Methodology
This report presents insights based on Ericsson’s long-standing consumer trends program, now in its eighth year. The insights in the report are mainly based on an online survey carried out in October 2018, of 5,097 advanced internet users in Johannesburg, London, Mexico City, Moscow, New York, San Francisco, São Paulo, Shanghai, Sydney and Tokyo. Respondents are advanced internet users aged 15−69, who have an urban early adopter profile with high average use of new digital technologies. Within the sample, 47 percent use virtual assistants (Apple’s Siri, Google Assistant, Amazon’s Alexa, etc.) at least weekly, and 31 percent use augmented or virtual reality (AR/VR) every week.

Correspondingly, they represent only 34 million citizens out of around 183 million living in the metropolitan areas surveyed, and a small fraction of consumers globally. However, we believe their early adopter profile makes them important to consider when exploring future trends.

Trend 10 also relies on 2017/2018 survey data from Ericsson ConsumerLab’s analytical platform, consisting of 72,067 smartphone users aged 15−69 in 50 countries. With the much greater reach of this survey, the trend report ends by pointing toward the mass market.

About Consumer & IndustryLab
Ericsson Consumer & IndustryLab delivers world-class research, design concepts and insights for innovation and sustainable business development. We explore the future of consumers, industries and a sustainable society in regard 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.

All reports can be found at: www.ericsson.com/consumerlab
Welcome to an automated society

Technology is promising more advantages than ever before. People want things to be cheaper, faster, more convenient and delivered to their doors at no extra cost. Supermarkets without checkouts; clothes shops that take your measurements in seconds and carry out custom tailoring in minutes; schools with increasing robotization of teachers and hospitals with non-human doctors; autonomous cars; restaurants with mechanized menus; galleries showing art made by artificial intelligence (AI); and live music performances by algorithmic composers are just a few examples of future possibilities. Many of these examples may seem like science fiction — but they are nevertheless already being realized in society.

Automation refers to processes that are performed without human intervention or assistance. With digital technology, the speed and reach of automation is now increasing rapidly. It may already be common in workplaces, but what will happen when all of society is automated? Will a life made up of more automated processes still feel human? And what will our place as individuals be when everything is smarter, more exact and logical?

Automation lends itself to creating an orderly society, but when conflicting yet autonomous processes happen simultaneously, could it also become more chaotic?

The Ericsson 10 Hot Consumer Trends 2019 reveal that people are experiencing mixed emotions. Almost half of the respondents in the survey think that, for better or worse, the internet has replaced many of the simple pleasures of daily life.
10 Hot Consumer Trends 2019

01. Awareables
Six in ten virtual assistant users think devices that understand our moods will be mainstream in three years.

02. Smart quarrels
Thirty-one percent of virtual assistant users believe different smart speakers in their homes will argue like families do.

03. Spying apps
Forty-seven percent of consumers think apps collect data about them even when the apps are not being used.

04. Enforced agreement
Always having to accept data collection cookies annoys 51 percent of consumers.

05. Internet of skills
More than 50 percent of AR or VR users want apps, glasses and gloves that give virtual guidance for practical, everyday tasks.
06. Zero-touch consumption
Around half of virtual assistant users want automated bills and subscriptions, as well as self-restocking household supplies.

07. Mental obesity
One in three consumers soon expect to go to “mind gyms” to practice thinking, as everyday decision-making gets increasingly automated.

08. Eco me
Thirty-nine percent of consumers want an eco-smartwatch that measures their carbon footprint.

09. My digital twin
Forty-eight percent of AR or VR users want online avatars that mimic them exactly, so they can be in two places at once.

10. 5G automates society
One in five smartphone users believe 5G will better connect IoT devices, such as household appliances and utility meters.
Your smartphone is likely to contain more sensors than anything else in your home. Yet advanced technology such as face recognition is only used for seemingly simple things, such as unlocking your phone.

But what about when your smartphone becomes fully aware of you; not only of what you do, but of who you are? Today, AI can already understand your personality just by looking into your eyes,\(^1\) or by hearing your voice.

Half of those currently using virtual assistants (Google Now, Alexa or Siri, etc.), in phones or smart speakers, think that their smartphones will soon understand their emotions. And 42 percent think smartphones will soon understand them better than their friends do. In fact, 6 in 10 think devices that sense and react to our moods will be mainstream in 3 years. When this happens, devices will act on situations rather than commands. Imagine that you told your smart speaker a secret and wanted it to be discreet. Fifty-six percent of virtual assistant users want a smart speaker that lowers its voice in such a situation.

Similarly, 52 percent want a smartwatch that blocks notifications when it understands you are busy. Forty-seven percent even want an app that fact-checks a social media post just by noticing a surprised look on your face.

When devices know us this well, they will also know our secrets. But astoundingly, twice as many trust an AI device more than a human to keep their secrets.

**Figure 1: Trust in humans and AI among virtual assistant users**

<table>
<thead>
<tr>
<th>Role</th>
<th>Trust human</th>
<th>Trust AI</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a keeper of your secrets</td>
<td></td>
<td></td>
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<tr>
<td>As your insurance consultant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As your clothes style advisor</td>
<td></td>
<td></td>
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<tr>
<td>As your lawyer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As a doctor checking your health</td>
<td></td>
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</tbody>
</table>

Base: Virtual assistant users in 10 cities globally
Source: Ericsson ConsumerLab 10 Hot Consumer Trends 2019

Smart quarrels

Virtual assistants might argue just like family members do.

What should I have for dinner?

- Pizza
- Burgers
- Fight!

Burgers have been ordered, they will be delivered to your door in 15 minutes.

Family life can often include bickering and trivial quarrels over differing opinions, and this could extend to the behavior of virtual assistants.

What will happen when we let different types of virtual assistants, such as Alexa, Google Assistant, Siri and others, into various devices in our homes?

It turns out 47 percent of virtual assistant users surveyed think different assistants will give them different answers. In fact, 41 percent think it will be important for couples to have compatible assistants.

But would disagreeing assistants really quarrel? In the same way that people tend not to talk about strained relationships when in public, people may not want to talk about the bickering that happens between their devices at home. It could even lead to tensions in the home and cause arguments between family members themselves.

Although only 31 percent think virtual assistants in their own household would start quarrelling with each other like family members — 66 percent believe such family scenarios will be common 3 years from now.

47%
47 percent of virtual assistant users think different assistants will give them different answers.

41%
41 percent think it will be important for couples to have compatible assistants.
Spying apps

Many feel that the apps they use are constantly spying on them.

It is not uncommon to hear people describe a situation where they have been talking about a certain product only to be confronted by related advertising. Although there is little concrete evidence that apps listen in to your conversations, you may have experienced something similar.

As a result, the feeling of having someone constantly looking over your shoulder is becoming almost impossible to shake off. In fact, 47 percent of respondents believe many popular apps use cameras, microphones and location information to collect data about their everyday behaviors — even when the apps are not being used.

Many people also feel that they are being taken advantage of. As many as 52 percent of consumers think popular apps collect more smartphone data than needed in order to make profits. This leads to more than half of consumers trying to avoid companies that misuse personal data when they choose services and products. But even so, more than half still worry that apps sell their data to companies without their permission.

As a result, 59 percent say we need global personal data protection principles. The question of individual integrity will continue to rise with the increasing digitalization of society.

52 percent of consumers think popular apps collect more smartphone data than needed in order to make profits.
Enforced agreement

Clicking yes to “allow cookies” has become the new enforced pastime.

With an increasing number of websites wanting to collect our information, browsing the internet has turned into a real chore. Although the EU initiative to protect user data and integrity has consumer benefit in mind, it has set off a global epidemic of companies trying to get consumers to sign away their rights to personal data.

The result of this is consumer fatigue. More than half think there should be a single standardized agreement that all companies would have to use, allowing a choice over which level of personal data use consumers accept. Only 8 percent are comfortable with always having to accept cookies and data collection, whereas 51 percent are annoyed by it.

Trying to cajole consumers into agreement might in fact be counter-productive. In our survey, 46 percent of consumers say that having to agree to so much makes agreement enforced and worthless. Instead, it only creates mistrust.

The major business model behind this is to serve up personalized adverts to the users. But that in itself becomes a problem when 49 percent say they often have to wait for an ad to load before they can view a web page. This begs the question: is the internet broken?

In fact, 47 percent think the internet needs a new business model beyond advertising. And as many as 42 percent say the internet needs to be changed fundamentally if it is going to be a force for good in society again.
Internet of skills

Using AR/VR to structure reality will let us instantly master almost anything.

With increasing internet use, a gradually diminishing understanding of physical things is affecting all of us. We don’t know what to do when there is no app to start or screen to swipe. Almost half of all respondents agree that those who spend too much time on the internet seem to forget how to do even simple things in real life.

But now the internet is about to literally step into the physical world, and help us fix that broken chair, even if we have never used a hammer before. Or help us cook the best food imaginable even if we normally fail with instant noodles.

Imagine a YouTube video that interactively personalizes instructions to help you do something you have never tried before. Eighty-two percent of AR/VR users believe that this type of instruction will be mainstream in only three years.

But AR and VR offer possibilities far beyond that. Sixty percent would like glasses with on-screen instructions that help you repair almost anything, and 56 percent even want to learn how to dance using an instructive AR experience.

With instructions that adapt digitally to any task at hand soon to be available on demand, we will likely see the creation of a whole internet of skills.

Figure 2: Percentage of AR or VR users interested in services

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Interest Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>A pair of glasses that help you repair almost anything in your household by giving on-screen instructions</td>
<td>80%</td>
</tr>
<tr>
<td>An app that gives hands-on help to cook food by mapping onto your stove and kitchen utensils</td>
<td>70%</td>
</tr>
<tr>
<td>An AR experience that maps onto your own body and teaches you to dance</td>
<td>60%</td>
</tr>
<tr>
<td>A smartphone app that digitally shows everything from tying shoes to pumping air into a bike tire</td>
<td>50%</td>
</tr>
<tr>
<td>Gloves that can guide your fingers when repairing things or even when sewing on a missing shirt button</td>
<td>40%</td>
</tr>
</tbody>
</table>

Base: AR or VR users in 10 cities globally
Source: Ericsson ConsumerLab 18 Hot Consumer Trends 2019
Zero-touch consumption

Virtual assistant users would like to fully automate many boring aspects of consumption.

Shopping can be aspirational, social and fun. It can also be an everyday chore that has to be done – or there won’t be anything in the fridge to cook for dinner.

People are increasingly expecting new technology to automate the boring elements of life, and in the process, hopefully allow us to spend more time on interesting things. For example, not everyone finds going to the supermarket to buy groceries stimulating – 49 percent of virtual assistant users would like to automate household restocking of generic items.

Keeping track of bills for gas, electricity and water and paying them when they are due is another tedious task that 55 percent would like to automate. Forty-seven percent would in fact like a virtual assistant to handle all their finances, including tax declarations.

Maybe an assistant could actually be smart enough to fix itself if it breaks down? Fifty-two percent want virtual assistants to manage warranty repairs of household electronics.

Some of this household automation might seem a bit alien, as one considers that humans are of course still the ultimate beneficiaries. But zero-touch consumption without human intervention might happen sooner than we think. In fact, 7 in 10 current virtual assistant users think these types of automated consumption will be commonplace in only 3 years’ time.

47 percent would like a virtual assistant to handle all their finances, including tax declarations.
Toast or cereal? What if you couldn’t even decide what to have for breakfast without asking a digital device for advice?

This could become a reality, given that 34 percent of virtual assistant users would trust an AI as their nutritionist, but only 25 percent would trust a human.

Eating right makes you feel better, but automating such decisions might also take you down a path where you no longer know how you feel. In fact, 57 percent say they want a smartphone that knows when they are becoming ill before they notice themselves, and 54 percent would like a smartwatch that senses when they are getting stressed before noticing it themselves.

Would this lead to people attending medical appointments without knowing why? Forty-three percent would like a virtual assistant that decides when they should visit a doctor, dentist or hairdresser.

Today’s screen age has made us lazy as we aren’t required to move. Anything we want is just a click or a swipe away, and many of us exercise our bodies less than we need. But we may be on the cusp of this laziness spreading to our minds too.

With digital decision support in increasingly more areas of everyday life, one-third of consumers think virtual assistants will make people forget how to make their own decisions.

In fact, 34 percent already believe critical thinking will disappear due to the overuse of virtual assistants. And 31 percent of consumers also expect that we will have to go to “mind gyms” to practice thinking.

31%

31 percent of consumers believe that we will have to go to “mind gyms” to practice thinking.
The idea of monitoring your vitals has been in the public eye ever since smartphones went mainstream. But when the first generation of wearables did not live up to high consumer expectations, the interest in self-quantification also took a hit. Now wearable technology has matured and interest is returning, albeit with a twist. Wellbeing today is as much about CO2 as it is about calories.

People are increasingly connecting their own health to a healthy environment. As a result, 39 percent of respondents would now like an eco-smartwatch that measures their daily carbon footprint.

However, awareness is one thing and acting on it is something else. This is where automation comes in. For example, 4 in 10 would like a virtual assistant that environmentally optimizes indoor temperature and water use.

In other cases, abstaining from action is more important. Hence, 75 percent think that digital commuting, as opposed to physical commuting, will be mainstream in 5 years – to lessen its environmental impact. Changes will also apply similarly to private life; 78 percent believe that in the same 5-year time frame, VR holidays as a replacement for physical holidays will become mainstream for environmental reasons.

This might also entail digital holiday souvenirs and a rise in status of digital items compared to physical.

Our shopping habits also need to change and change fast. As many as 68 percent think virtual assistants will help almost everyone avoid products with big environmental impact within the next 3 years. And almost half would support a digital eco-currency that gives them extra money when they shop and commute in environmentally friendly ways.

Self-knowledge now means minimizing your environmental impact.

Eco me
Being in two places simultaneously might sound like magic, but in reality, we already are — often on a daily basis. Even when making a simple phone call, we are physically in one place and yet are mentally engaged in a conversation taking place somewhere in the ether. This also goes for many situations on the internet, such as in a chat or game.

But with avatars becoming increasingly realistic, it may become difficult for others to judge if we are in a certain place or not. In fact, 48 percent of AR/VR users think avatars will mimic their face so well that it will be no different to looking in a mirror. This won’t only apply to ordinary people. Thus, 47 percent predict that it will be difficult to know when politicians and celebrities are real and when a digital avatar just acts like them.

This blurring of what is real and what is digital will have some merits. Around half would like avatars that can represent them in different places at the same time, such as at work or school, as well as at social gatherings.

But 46 percent also worry that they will be held responsible if their avatar does something illegal — which could be dangerous since as many also believe fake avatars could steal their identity.

It might be a long time until avatars become our true digital twins. But it is a direction we might end up going in, as 49 percent believe customer service and support functions will eventually use only avatars instead of people — an area that today is already highly focused on automation.

And AR/VR users believe lifelike avatars are coming soon. More than half think avatars will be commonly used in online meetings in only a year, and as many already want to use avatars in this way.
Smartphone users globally expect 5G to have a big impact on societal internet infrastructures.

Smartphone users across 50 countries have high expectations of 5G to mobilize and automate many areas of everyday life. While they see communication benefiting most from upgraded mobile networks, they also believe that 5G will support automation in a variety of ways.

Not only do 37 percent predict 5G will better enable home alarms but 23 percent believe it will benefit self-driving cars too. One in five also see a long list of IoT devices made more useful by 5G including electricity, gas and water meters, as well as refrigerators, stoves and washing machines.

Smartphone users globally also think AR/VR applications will be improved. Specifically, 32 percent see VR shopping benefitting from 5G, and 21 percent also expect mobile use of AR/VR headsets in general.

Figure 3: Share of consumers who think the following services will benefit the most from 5G

Base: 72,067 smartphone users aged 15–69 in 50 countries
Source: Ericsson ConsumerLab analytical platform 2017/2018

In order for such services to reach the mass market, 5G will need an iconic device that resonates with consumers. While the iPhone defined the mobile internet, it might take an AI phone to define mass automation by becoming an intelligent hub for IoT devices. In fact, respondents in our urban early adopter study ranked the AI phone as the No. 1 tech device that people everywhere will buy, in a list of 12 future-oriented devices.

Furthermore, respondents ranked self-driving cars second, AR phones third and smart glasses fourth, all of which are devices that point toward an increasingly automated future.

Still, iconic products are typically the first of their kind, so the 5G device that actually defines the next era may yet surprise us all.
Ericsson enables communications service providers to capture the full value of connectivity. The company’s portfolio spans Networks, Digital Services, Managed Services, and Emerging Business and is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson’s investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world. The Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York.

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