



2018

Trends to Watch: Consumer Technology

Contextual AI, mobile AR, and the Olympics



Summary

Catalyst

Consumer technology is entering a phase where science fiction becomes reality and unthinkable scenarios such as machines outsmarting humans are seriously considered by technology leaders and politicians. Artificial intelligence (AI) will grow to become a core differentiating feature and purchase driver for devices. This report looks at how consumers will react to these developments and what that will mean for service providers and vendors in 2018.

Ovum view

Object smartification drives the growth of the consumer Internet of Things (IoT) and forms the basis on which consumer-facing AI services work, from the data they gather to the use cases they create. What will be the extent to which those services will reach consumers, and where and when? And how will they be perceived? Those are key questions that are yet to be answered, but 2018 will provide a view of what the true implications of AI-capable devices will be. Ovum forecasts that 2.47 billion voice-AI capable devices will be sold globally in 2018.

The next step will be vision AI – the ability for devices to recognize and

analyze the images they capture. Samsung Bixby Vision and Google Lens are examples of this – unveiled mid-2017, they will effectively impact consumers in 2018. One of the main use cases for vision AI is augmented reality (AR). Mobile AR (i.e. AR via a smartphone) will be a dominant theme in 2018, kick-started with the launch of iPhone 8 and ARKit-based applications in September 2017. This will help Apple strengthen its premium smartphone market lead in 2018.

A final trend to watch for 2018 will be 5G. The winter Olympics, which will take place in South Korea in February 2018, will see the first 5G smartphones in action. Despite using a pre-standardized version of the technology, and unlikely to ever be commercially deployed, the devices will offer a glimpse of what's to come for the 2 billion-plus audience.

Key messages

- Contextual AI will be everywhere.
- 2018 won't be the year of AR or VR yet.
- Apple will dominate more than ever.
- The 2018 Olympics will see the first 5G devices.



Recommendations

Recommendations for service/content providers

Consumer-facing AI services will only be as strong as the local market knowledge and data they possess. Service and content providers who hold such information stand to benefit from the growth of digital assistants and should look to partner with the companies that power them.

Digital assistants are a new user interface for consumers to interact with content and services. Service providers must make sure that their services and content are discoverable and accessible through this new interface.

Similarly to the early beginnings of mobile apps a decade ago, the novelty aspect that mobile AR apps will convey should be used by major brands for marketing purposes. AR will not shift consumer app spend, which will remain limited.

Recommendations for vendors

Device makers must find a way to bring AI capabilities to their devices for fear of missing relevance among consumers and losing to the competition. However, the benefits of AI capability will vary by device type, and this needs to be understood clearly by development and marketing teams to ensure that they do not overestimate the impact it will have on sales.

AR has the toughest on-board processing power and camera hardware requirements but is also a major battery drain. Delivering devices that offer a superior AR experience without compromising on design and battery life will not be easy. Device makers need to find the right balance while keeping prices at a competitive level – very few will spend nearly \$1,000 on a smartphone that isn't from Apple or Samsung.

Unless you are Samsung, Huawei, or ZTE and have a vested interest in both 5G networks and devices, just wait and watch 5G developments unfold throughout 2018. There is no need to make any investment in 5G until it is at least fully standardized and the first networks are commercially deployed in 2020.

Contextual AI will be everywhere

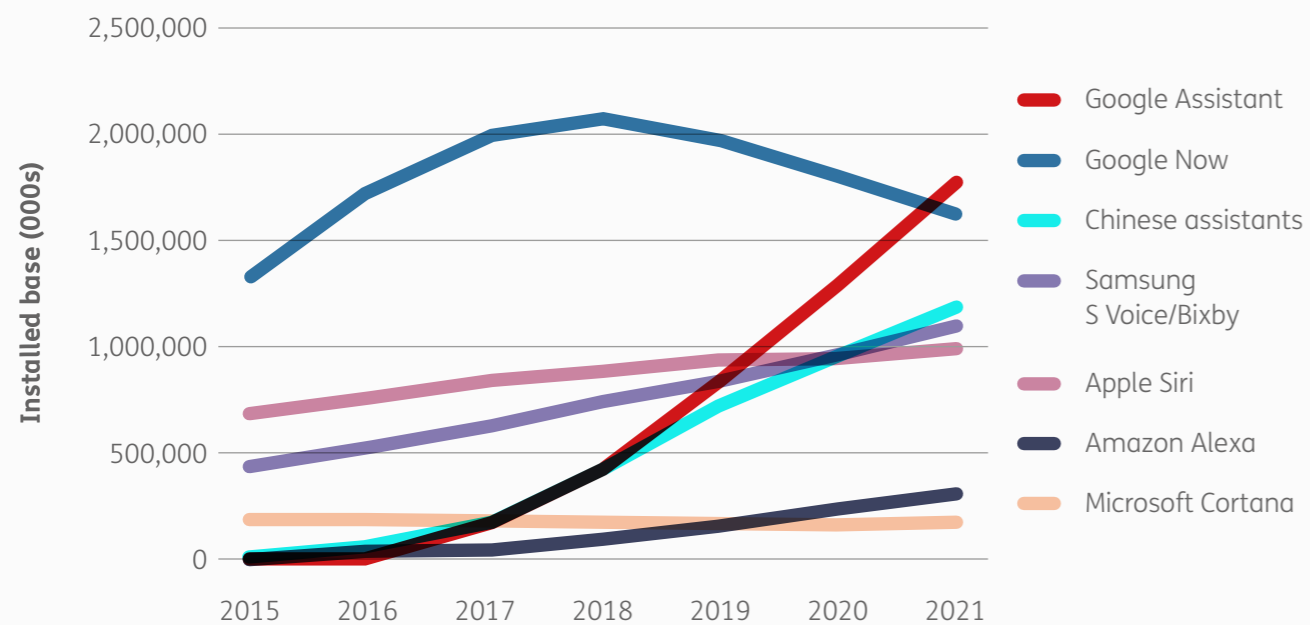
Digital assistants will be embedded in major apps

Already Google, Microsoft, and Facebook have been silently rolling out AI features within their core communications apps. For example, Facebook M and Siri are making suggestions based on your conversations, such as suggesting relevant emojis or creating an event when a meeting is discussed. This is very important for two reasons: firstly, it shows that AI platforms have reached a new level of maturity whereby assistants can understand a lot more about context; secondly, the impact is huge, as the corresponding installed base for those popular apps is in the hundreds of millions, if not billions.

Expect consumer backlash on contextual AI

This will certainly impress consumers but not always in a good way. Many will see this as a very intrusive feature and realize that the companies behind it know a lot more about them than they initially thought. This could potentially slow down the development of contextual AI, despite the capabilities of the underlying deep learning algorithms.

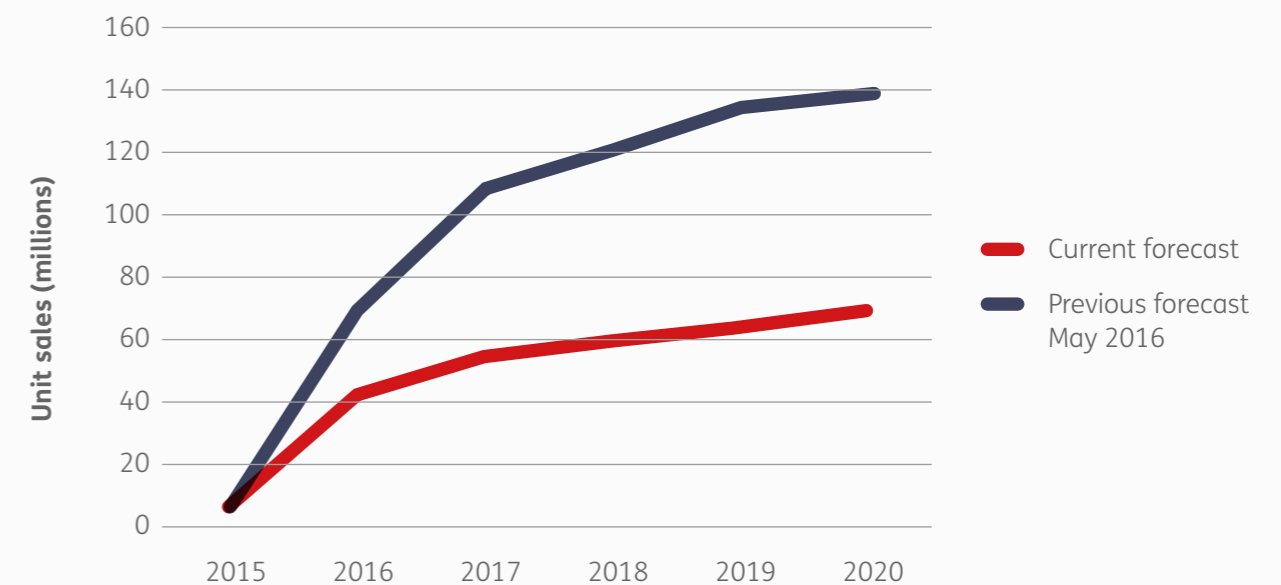
Figure 1: Global digital assistant installed base by vendor, 2015-21



Source: Ovum

This won't be the year of AR or VR yet

Figure 2: VR headset unit sales forecast, 2015-20



Source: Ovum

Besides games and adult content, VR use cases remain weak

2017 was a period of disillusionment for VR with sales roughly half of what was initially expected, and this is unlikely to change in 2018. The user experience for most people (i.e. mobile VR) just isn't satisfying enough to warrant buy-in versus other cool technology currently flooding the high street. Dedicated standalone VR headsets are much better but are mostly used as an extension to games consoles – as a new accessory for your PlayStation, for example. VR will be truly transformational when the virtual world into which you immerse yourself is as clear as the real world, or close enough that the human eye can't tell the difference. Graphics chipset specialist Nvidia reckons it will take 20 years to reach that level.

AR needs to be more than a gimmick

Unlike VR, AR works despite the quality of the visual experience because it works on the top of a snapshot of a real environment (e.g. Pokemon Go). Nevertheless, computer vision technology improvements due to come out late 2017 and early 2018 are set to fuel a wave of new AR-focused content and apps. Recent developments on Apple's ARKit platform provide a glimpse of what's to come. Most of it however looks to be gimmicky rather than providing a real benefit to its users, lowering its actual impact on device sales. Apple's marketing campaign for the iPhone 8 and X will feature AR content that could overturn this prediction. Facebook is also set to push AR as part of the camera within Facebook Messenger, which was first unveiled at its F8 developer conference earlier this year.

Apple will dominate more than ever

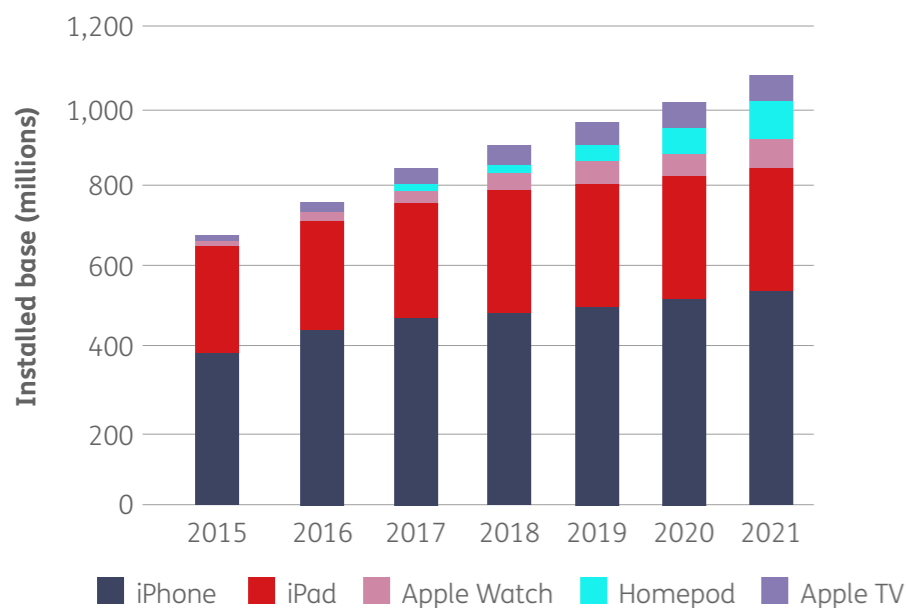
4Q17 will see the highest iPhone sales on record

The highly anticipated launch of the new iPhone in September marked a major redesign of the handset set to bring Apple back to its former industry-leading innovative status. But most importantly, the launch will hit a major replacement cycle phase across the iPhone installed base, maximizing the sales opportunity. In addition to this, Siri will be the first digital assistant to be truly omnipresent across the device, having full access to the phone's features and native apps, as well as being compatible with hundreds of thousands of third-party apps and services.

HomePod will be the first global smart home speaker

Siri speaks 20+ languages, whereas Google Assistant and Alexa speak less than a handful. This alone should help HomePod dominate at a global level. Apple's music-centric marketing strategy for the HomePod will work better than its competitors because more people buy connected speakers than buy smart speakers. The combination of HomePod and iPhone 8 will drive Apple's performance throughout 2018 and is set to increase Apple consumers' loyalty even further.

Figure 3: Siri installed base by device type, 2015-21



2018 Olympics will see the first 5G devices

South Korea tech industry on steroids

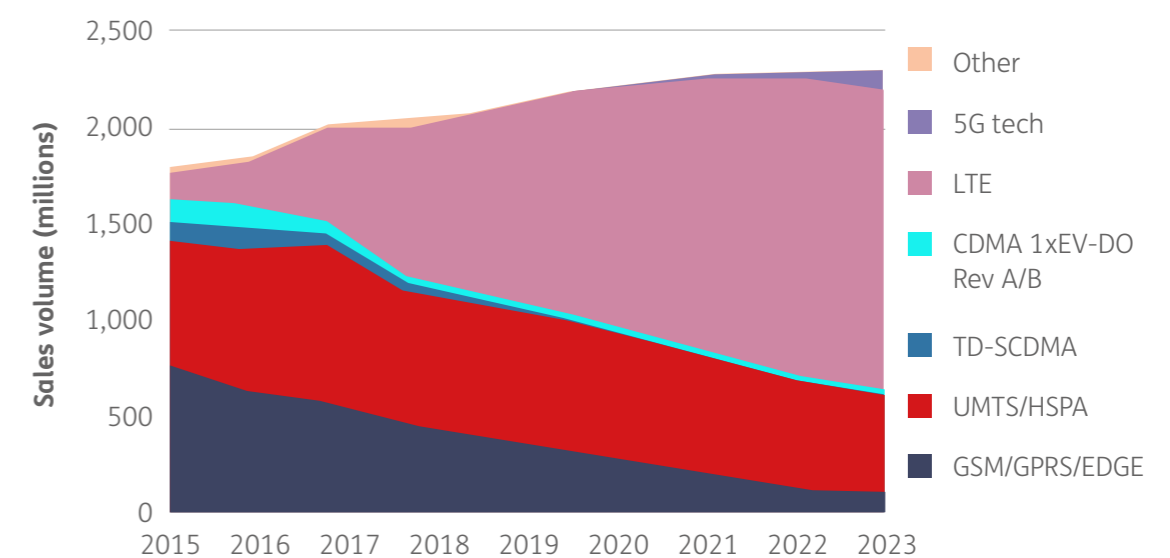
South Korea remains one of the most advanced countries in the world when it comes to consumer technology, but it has experienced some significant competition from China lately. The Olympics will be the opportunity to remind the world what South Korea's top tech firms are best at. KT and Samsung have announced that they will be piloting 5G smartphones at the event in February 2018.

From AI robots to 5G handsets and 8K television, the Olympics will give a glimpse of what's to come two or three years down the line. It will not have a direct impact on 2018 market indicators but will set the tone in terms of investment and market positioning.

Getting a clearer picture on 5G devices and use cases

A key lesson learned from previous technology rollouts is that the technology itself is not important as far as consumers are concerned. This time however, device manufacturers are pushing services that are enabled by high bandwidth and low ping connections – HD video, interactive VR, and digital assistants. This experience-driven approach is more effective in communicating to consumers why they should pay a premium for cutting-edge technology, but it can lead to consumers being disappointed in the future if the network support is not comprehensive enough for true mobility. The Olympics will help answer a few uncertainties on what 5G will look like and what can be done with it.

Figure 4: Handset unit sales forecast by access technology, 2013-2022





Appendix

Methodology

This report was prepared using Ovum experts' extensive knowledge of the market; public statements from technology vendors, device manufacturers, and operators; and private briefings with several of the key players involved.

Further reading

iPhone 8 Predictions: Design Innovation and AR, but with Compromises, TE0004-001196 (September 2017)

VR Headset Unit Sales, Installed Base, and Hardware Revenue Forecasts: 2016–21, TE0004-001172 (June 2017)

Mobile Handset Forecast: Sales, Installed Base, ASP, and Revenue, 2017–22, TE0004-001176 (June 2017)

Digital Assistant and Voice AI-Capable Device Forecast: 2016–21, TE0004-001165 (April 2017)

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