What do consumers want from their connected future?
Introduction

Connected objects and smartphones have become the most important consumer devices in our lives. And behind this is a vast world of connected objects that mesh together to improve our lives. From controlling our homes, to unlocking and controlling our cars and to monitoring our health, advances in connectivity over the past decade have radically reshaped society. Thinking about where this will take us is exciting.

However, technology currently offered to users works in silos, in specific use cases and often does not play well with others. For example, smart home devices do not easily pair with hubs or apps; IoT features in cars are locked to certain providers. The good news is that key players such as Samsung, Apple, Google, Microsoft, Alibaba, and Amazon are committed to advancing interoperability to deliver a unified consumer experience.

With the pace of technological innovation accelerating so rapidly, we sought to understand more about how consumers visualize their ideal experience in this connected world. Over the past 18 months we’ve spoken to 5,000 people from nine countries¹ about what they want from their future mobile and IoT experience. The findings are fascinating and complex, containing valuable insights that we are pleased to share with everyone involved in the mobile and connected object ecosystem; the OEMs, the retailers, the OTT service providers

Three core areas vital to consumers surfaced:
- Trust in connected objects
- The need for a seamless consumer experience
- Personalization of services

We will explore consumer journey expectations through the prism of these three themes, from the activation of mobile devices, through to how they are configured and used. Trust is increasingly important in a world of evolving cyber-threats, while the user journey is constantly evolving as new technologies and connected objects come online. Finally, we will consider personalization and how services must now adapt to individual preferences.

– Rémi de Fouchier
Vice President, Marketing Communications, Gemalto

Let’s meet Paul and Emma, personas of those we have spoken to. Each has their finger on the pulse of technology and have high-hopes for the future.

¹ Gemalto conducted four separate surveys on the mobile experience over the past 18 months. These are:
- December 2015 – 1,200 consumers aged 18-35 in Brazil, China, Germany, France, the UK and the US
- 2015 – 600 adult smartphone consumers in Singapore
- July 2016 - 1,300 adult smartphone users in Brazil, the Netherlands, South Africa, Singapore, the UK and the US
- December 2016 - 1,969 adult smartphone users in Brazil, China, Germany, France, the UK and the US
Trust in connected objects

There are many players vying for attention in the mobile ecosystem. Handset OEMs, MNOs, retailers and OTT providers all compete to be top-of-mind when it comes to customers. When we asked which would be most responsible for the mobile experience in 2025, almost half (46%) selected handset manufacturers. The balance of power has shifted from the pre-smartphone days of mobile, and MNOs must work hard to remain relevant in the eyes of consumers.

As mobile becomes a secure option for identity verification, it is striking that nearly three quarters (74%) believe they will come to manage their own ID details from their handset. A sense of autonomy is important for consumers, and governments and businesses should bear this in mind when constructing mobile portals and services. Reinforcing this point, 38% indicated they would not want a company to hold their personal data.

It is possible that consumers are influenced by the regular security breaches they see in the news, as well as having concerns about their privacy. But it is interesting to note that if effective security mechanisms were in place, 70% suggested they would be keen to use their mobile as a digital identity document. Guarantee security, and you open up a world of innovation.

“I don’t want to have to carry bits of plastic and paper to prove who I am – I want my smartphone to become my main form of ID.” - Paul

“I want to control my health, home and transport from the palm of my hand.” - Emma
Trust in connected objects

Mobile devices are also being treated as IoT remote controls by some consumers:

- 42% want to gain access to their homes via mobile*
- 32% want their mobile to control their driverless car*
- 48% want mobile to become the main form of ID*
- 16% would welcome a neural implant to control their mobile*
- 70% would use their mobile as a passport or national ID if security was guaranteed**
- 60% want to control their homes autonomously via mobile*
- 74% want to manage their own digital identities*
- 43% will use their mobile to manage all their health issues*

*Survey of 1,949 smartphone users in Brazil, China, Germany, France, the UK and the US, December 2016
**Survey of 1,300 adult smartphone users in Brazil, the Netherlands, South Africa, Singapore, the UK and the US
It is noble to strive for frictionless experiences, but as many have noted, making something simple is no easy task. Consumers nonetheless demand the best, especially for security critical operations. For instance, over four in ten (42%) anticipate that all their banking needs will be catered for on mobile with no restrictions. This could have a profound effect on the sector, and institutions would be wise to invest in comprehensive and secure digital services now to get ahead of this disruptive curve. As a sign of things to come, nearly a third (29%) indicated they do not expect to visit a bank branch at all in ten years’ time.

Consumer appetite for innovation knows few limits, as evidenced by the fact that 34% are open to emerging technologies like Virtual Reality becoming a feature of the bank branch experience. And 45% expect to be able to pay for anything with their mobile from wherever they are, demonstrating how central mobile has become to consumers’ everyday lives.

The consumer desire for an omnichannel experience that blends the best of the physical and digital world is clear. From retail and banking to new areas such as health and government services, the most successful service providers of the future will embrace this change.

A surprisingly widespread belief is that accessible and affordable mobile services will be available all over the world with just a single contract. While the EU has just abolished roaming charges across member states, it might be difficult to repeat these cross-border alliances in other continents. Nevertheless, 42% think that government cooperation will consign all roaming charges to history.

As part of a seamless mobile experience, consumers also expect biometric techniques like fingerprint and facial recognition to be more prominent and want mobile security to be seamless (60%). When asked about unlocking their device in 2025, consumers believe that biometric authentication will take on new forms. Four in ten agreed voice biometrics will be available, while 43% think they will use iris scans, a feature already available on select high-end smartphones.

Consumers do not just expect biometrics to revolutionize consumer devices. A significant number also believe that the technology will change the way we engage with the workplace. Sixty-three percent think we will use our fingerprints to access the workplace, and six in ten think we will unlock our vehicles with DNA touch sensors.

“I don’t want to have separate contracts for my smartphone AND my connected devices. I would like to have a single contract for all my connectivity.” - Emma

“Connectivity is like electricity or water, it is now a basic need.” - Paul
Consumers want connectivity that is always available

87% believe access to all online content will be seamless*

61% think seamless Wi-Fi offloading will be commonplace*

69% expect to be able to make calls and use data while on underground metros*

50% think mobile data speeds will reach over 100 Gigabit/s**

22% think connectivity will be a fundamental human right, with no cost attached.**

*Survey of 1,200 consumers aged 18-35 in Brazil, China, Germany, France, the UK and the US, December 2015
**Survey of 1,969 smartphone users in Brazil, China, Germany, France, the UK and the US, December 2016
Personalization

The big drive from all service providers in today’s world is to offer a truly personalized experience. As data analytics mature, and consumers become more amenable to sharing their data for enhanced user-experiences, personalization is set to become a key battleground in terms of differentiation.

Continuity of settings and preferences is also a priority for users. They expect to listen to music in their house while getting ready to go out, pause it as they leave and lock up the house, and restart from exactly where they left off as they get into their car.

This frictionless experience extends to the world of commerce. Two fifths of users expect automated purchases to be enabled on their smartphones based on their location and/or past purchasing activity. However, this final step will require some reservations being overcome. Consumers recognize this service would require consent to mobile providers and payment companies to store and manage their data, which currently nearly four in ten (38%) oppose.

“I enter my house and the lights shine with my favorite colors and art work is displayed on wall screens according to my mood” - Paul

“I would like my settings and preferences to simply follow me wherever I go, from my office to the car, to my phone – everywhere!” - Emma
Consumers will shape their own mobile experience

53% believe screens on public transport will dynamically display personalized offers**

29% would monetize their data in return for offers**

25% hope for personalized budget analysis by 2025*

29% expect overspending warnings based on purchasing patterns*

33% want highly personalized service for customer care teams*

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*Survey of 1,969 smartphone users in Brazil, China, Germany, France, the UK and the US, December 2016

**Survey of 1,200 consumers aged 18-35 in Brazil, China, Germany, France, the UK and the US, December 2015
Some of the aspirations of the 5,000 consumers we surveyed are already available. Connected and semi-autonomous cars and smart homes are on the market, but have not broken through to the mainstream. For those of us that live and breathe technology, we often forget that the average consumer has not caught up yet. So, it’s likely that a number of consumer expectations outlined in this report will be implemented well before 2025.

To succeed, IoT products and services will have to be fully interoperable, with increasingly less reliance on silos or walled-gardens. We are starting to see some headway here especially in the iOS and Android ecosystems with their respective operating systems now deployed in smartphones, watches, cars and smart homes.”

– Emmanuel Legros
   Head of Marketing Consumer Electronics, Gemalto

Technological innovation is expected to result in a more seamless mobile experience, made possible by the development of intuitive security. Biometrics will play a significant role, but we will also see more “silent” authentication, based on users’ behavioral patterns.

This will help trust in mobile and connected objects grow exponentially. This could result in digital personal assistants making decision based on user preferences, able to anticipate our needs. This is somewhat in progress today in the automotive sector, with certain safety features, but will move through to the smart home and other areas in time.

The frustrations of today—such as the limitations of interoperability, roaming charges and so on—will fade, ushering in a new era of mobile connectivity. By 2025, connectivity will be “always on” or more precisely, always available. Within this context, consumers will expect a lot from next generation 5G networks. This step-change is far more than just faster data speeds. It is the opportunity to optimize every device, sensor and service on autonomous networks, and realize the true potential of the IoT.

As we look forward to the products and services of tomorrow, Gemalto is excited to be there with you along every step of the way, helping our key stakeholders in the mobile ecosystem secure, connect and monetize their assets.

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