Better Connected?

The Connected Consumer

What are consumers’ hopes and fears for the Internet of Things revolution?
In the summer of 2017, Worldpay commissioned in-depth research among more than 20,000 people across ten countries to find out how they feel about the advancements in connected devices and, specifically, how comfortable they are with its implications for security, privacy, & payments.

Overall, consumers welcome the convenience that connected devices are bringing to their lives, but the research uncovered some serious concerns over trust – particularly in the way data is harvested.

The findings have important implications for all manner of industries, from retail to travel, publishers to manufacturers. The benefits of the connected future will only be secured if industry can allay consumers’ legitimate concerns, and assure them that smart technology will add value to their lives – without having to sacrifice their security or autonomy.

Are we prepared for a connected future?

In the last few years technology has undergone a transformation as subtle as it has been revolutionary.

Until recently, technology was a tool: something that people consciously picked up or switched on to achieve a particular purpose. Today technology is increasingly embedded in every aspect of our lives. From wearable devices to chatbots, connected appliances to autonomous vehicles, we live in a world where technology is becoming less a tool, and more an integral, underlying network powering everything we do.

This revolution has been called many things, from ambient technology to the Internet of Things (IoT), but its unifying characteristic is the gradual encroachment of technology into traditional areas of human action and autonomy.

These technologies promise a huge range of transformational benefits for businesses and consumers alike, but it’s still important to understand how people feel about the rise of the machines and the impact it will have on their daily lives, our privacy and autonomy.

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Are consumers ready for the connected future?

It often takes years for new technology to gain widespread familiarity, but the concept of connected devices has swiftly permeated the public’s consciousness. Worldpay’s research shows that more than a third (34%) of people are very familiar with the term ‘IoT’ and its implications for everyday life. In fact, every one of the more than 20,000 people polled had some understanding of the concept.

Globally, around two in five consumers have used connected home devices or services such as Amazon Dot or Nest thermostats (44%), or virtual assistants like Alexa or Google Now (41%). Whether they have fully embraced connected technologies is, however, another matter.

One of the defining characteristics of connected devices is their ability to perform actions without direct input from their human owners – such as making purchases. Overall, almost half of consumers (46%) say they are comfortable with a home device ordering things on their behalf without asking permission; however, over a third (35%) said that this makes them feel uncomfortable.

But why are these people – a minority, but a significant one – fearful of the impact of smart devices? One of the main reasons appears to be the level of autonomy afforded to technology – especially when it comes to purchasing. When given the hypothetical situation of a ‘smart’ fridge that automatically orders items, three in five (59%) said they would prefer to approve every purchase before it is made. Only 11% said that the device should be able make unlimited purchases.

In the rush to implement new connected devices and smart services, it’s easy to forget that their continued acceptance depends on allaying consumers’ concerns. Organisations seeking to bring new connected products to market must therefore understand and address these concerns.
The widespread adoption of connected devices shows that consumers are certainly comfortable with the benefits they bring. Half of consumers (49%) say that the convenience brought by smart devices add to their quality of life, compared to less than a quarter who disagree (24%).

On the other hand, Worldpay’s research demonstrates that people demand a high level of control over these devices and services.

For example, half of respondents (50%) would prefer fixed limits for how much a connected device can spend on their behalf, rather than the machine making decisions based on their lifestyle and previous behaviour.

There are significant implications here for manufacturers and service providers. In the event that a device ‘over orders’ items, leading to waste, consumers are equally split on who is ultimately responsible for the decision. Around a third (37%) would blame the owner of the device, while 34% say that that the manufacturer is responsible.

These findings illustrate the potential reputational risk to manufacturers and service providers if they cannot achieve the right balance between convenience and user control - especially when it comes to purchasing decisions.
A question of privacy

As we have seen, the umbrella term “connected devices” covers a huge range of products, services, and applications, but if one thing unites them all it is that they rely on harvesting and processing large amounts of consumer data in order to deliver smarter, more effective services.

Although attitudes to privacy can be fluid and differ widely between generations, data security is an abiding concern for the vast majority of consumers. When asked whether they had concerns that smart device manufacturers might share their personal data, almost three quarters (72%) of our respondents agreed, while over half (55%) said that they would not want a connected device to collect data about them in their own home.

Such worries should give pause to manufacturers and service providers. Technologies such as machine learning, artificial intelligence, customer service chatbots and connected devices are completely dependent on gathering information about users to inform their decisions and tailor their services. Clearly, a balance needs to be struck between privacy and the convenience that these technologies provide.

When it comes to data, the foremost concern is over financial information such as payment card information. For example, over half (51%) of those polled said that they were uncomfortable sharing this information with a chatbot or personal assistant in order to get a better service.

Meanwhile, three quarters (75%) are worried about a connected device being hacked, with only 7% saying they are unconcerned about this risk.

These figures only give one side of the story, however. Connected technologies affect us differently according to how they are applied and how we engage with them. That is why we need to consider consumers’ perceptions to particular applications in different industries.

75% of users are worried about a connected device being hacked.

51% of those polled said that they were uncomfortable sharing this information with a chatbot.
The connected retailer

The future of retail might well be in the home. Connected home technologies and personal assistants such as Alexa and automated chatbots are making shopping experiences more convenient than ever before. Technology in the home provides a new path to purchase, but can also automate the shopping process, for example your washing machine can order more detergent before you run out. These automations provide benefits to shoppers allowing them to have access to sales assistant support in the home and smart recommendations based on their prior buying habits, ensuring they find what they are looking for first time round to reduce returns over time.

But although 46% of shoppers say they’d be comfortable with devices ordering on their behalf, half (50%) say they want fixed limits for how much these devices can spend, and three in five (59%) say they want to approve each purchase before it’s made. Whilst there is an opportunity for retailers to target shoppers in their home, they must factor in consumer concerns over the limits and liabilities of automated purchasing.

Technology can also be used to assist purchasing and make recommendations: such as chatbots that use machine learning to anticipate owners’ future needs from their past behaviour, to 3D body scanners that could potentially remove the need to physically try on clothes.

However, shoppers are still spooked by the idea of their data being collected and used without their consent. 55% of shoppers worldwide say that they wouldn’t like connected devices to gather data on them in their own home, and 53% say they don’t like the idea of a machine anticipating their needs. Clearly, retailers have some work to do to show customers the real value they could get out of automation, to convince them to share their data.

We know that consumers crave convenience and friction-free shopping but retailers must communicate the benefits that these technologies will bring to consumers, but also provide unambiguous controls over what data is collected and how payments are made to make them feel comfortable. We found that consumer concerns can be overcome by communicating clear data policies and enabling payment experiences with the simplest method of approval opposed to completely automated "invisible" payments. This will define the foreseeable future for connected retail.

The connected traveller

The advent of connected technologies promises a future where virtual assistants can manage every aspect of a traveller’s trip, from booking flights and airport transfers, to arranging car hire and accommodation, recommending restaurants or even planning sightseeing itineraries.

Aside from the greater convenience, these technologies have the ability to gather data on local conditions such as weather, traffic, and up-to-date listings, as well as from the users’ own preferences and behaviours to help plan and manage the whole trip effortlessly.

There is certainly appetite for such services, with two in five consumers (41%) seeing value in chatbots or personal assistants that can automatically book travel tickets. While these technologies are increasingly replacing humans in the travel industry, there are significant obstacles still to be overcome.

For one thing, half of consumers (50%) say that they think it’s “creepy” when automated services pretend to be human, while less than a third (29%) would be comfortable giving their payment details to a bot or personal assistant for use on their behalf. Meanwhile, 70% want to authorise any payments made via these technologies – reflecting the higher cost of travel-based transactions, and the association with fraud for purchases made abroad.

While the benefits of automating payments are clear, so is the importance of providing purchasing visibility through some form of translucent payment, and ensuring that the user retains an element of control.

Perhaps the ultimate connected device for travellers is the connected car, which can automatically pay for petrol or road tolls, purchase fast-track tickets when you’re running late for your plane, or arrange car-pooling.

6 - Recode, Jan 2015, www.recode.net/2015/1/30/10583623/googles-virtual-assistant-will-pull-in-data-from-airbnb-lyft-and
The connected user

Linear TV and "dead tree media" have given way to any-time, anywhere content, available on-demand and on any device. Our media consumption helps publishers and platforms to suggest content, while chatbots, virtual assistants and smart TVs can learn enough about us to buy films on our behalf – movie night, anyone?

Audiences understand that digital media comes at a cost, whether it is through online or in-app advertising, or through data collection. But as the utility of these devices multiply, so they and the services that they provide increasingly depend on knowing more about every aspect of our lives.

Almost three quarters of users (72%) say they are worried about device manufacturers sharing their personal data – such as location data used to tailor advertising. Meanwhile, less than half (43%) would "probably" or "definitely" consider allowing a personal assistant to download media on their behalf. However, those aged 18-34 are much more likely to consider this (52%) than those aged over 55 (just 25%).

Furthermore, less than a third of consumers say that they are comfortable with devices using their location of data to deliver personalised advertising (13%) or to verify their identity and enable faster payments (24%). Again, though, younger users are more than twice as likely to be comfortable with sharing location data (42%) than over 55s (19%).

This has important implications for publishers and media platforms that should not just be tailoring their content for different ages and demographics, but also adapting options such as automated purchasing and data collection.

Transparency over data collection and automated payments will help to put consumers’ minds at rest, while balancing the convenience and content "discoverability" that these technologies bring.
Confidence depends on connecting with consumers

Given the rapid advance of connected technologies into our homes, workplaces, vehicles and personal devices, it is unsurprising that we have not yet reached a consensus on the question of convenience versus security.

Worldpay’s research makes clear the high levels of support for a whole range of connected technologies, from drones to artificial intelligence, but highlights many factors that cause unease to consumers.

Unsurprisingly, it is issues around security and autonomy – especially when it concerns financial transactions – that pose the biggest problem. While the rapid adoption of many of these technologies is highly encouraging to manufacturers and service providers, they must not take consumer goodwill for granted, especially when it comes to concerns over privacy and security.

Various industries may be keen to automate ever-more aspects of our lives, but they must also listen to people who do not want to give up visibility or control – for example, when it comes to making purchases.

The continued adoption of connected technologies depends on service providers and manufacturers on maintaining goodwill and trust with the public, so it’s important that they remain connected to consumers and committed to understanding their concerns.

This may mean sacrificing some of the capabilities of connected devices, such as fully automated, “invisible” payments, to put consumers’ minds at rest.

Connected technologies are disrupting long-established industries, transforming others beyond recognition, and are creating a multitude of new, often experimental business models. Whether these are sustainable in the long-term depends, to a large extent, on whether they can balance consumers’ demands for both convenience and peace of mind.
The connected consumer research was conducted by Opinium and examines the viewpoints of over 20,000 consumers across 10 markets on opinions and adoption of IoT (Internet of things) technologies, as well as the barriers and benefits to adoption.

Online interviews were completed by adults located in Australia, Brazil, China, Spain, Singapore, USA, Germany, Sweden, Netherlands, and the UK.