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About this research
The research featured in this report is based on several consumer surveys carried out by independent market research agencies on behalf of Deloitte.

Please visit http://www.deloitte.com/view/consumerreview for additional content related to the Consumer Business industry.
UK consumers are aware of the potential benefits of the Internet of Things (IoT) but perceived high prices and scepticism about the technology are putting them off buying more connected devices. Increasing the installed base of connected devices will be key to the development of the next generation of consumer products and services designed to serve the connected consumer in their connected home.

Currently more than half (52%) of consumers own some form of connected device for their home. However, the majority of these are connected entertainment devices such as smart TVs. Penetration of connected appliances and other devices such as smart lighting systems are much lower. Moreover, two-thirds (70%) of consumers do not intend to buy an IoT product in the next 12 months, highlighting the challenge that brands and retailers have ahead of them.

Consumers appear to intuitively understand that connected devices could make their lives easier, however, there are still a number of barriers preventing them from purchasing more connected products. Consumers are more aware of the IoT’s potential than many in the industry might expect, but scepticism remains around the functionality and price of the technology. This is the big challenge for retailers and brands – how to communicate the value of connected products to consumers?

Our research suggests that we will see a gradual uptake in IoT devices for the home – not overnight adoption. One of the biggest drivers for adoption will be the replacement cycle. The majority of new TV models are now ‘smart-ready’ and we will continue to see other home devices offer connected features as standard. As consumers replace their old kettles, ovens, fridges and lighting in the coming years, we will see a gradual escalation of IoT adoption. Through targeted promotions and marketing and in-store demonstrations, retailers may be able to speed up the replacement cycle.

The challenge for retailers will be in balancing supply of IoT products with the apparent lack of demand. Given the hype around IoT devices, there is a risk of over estimating consumer’s desire for connected devices in the short term and underestimating it in the longer term when the connected home may introduce more opportunities to engage with and sell to the consumer direct, within their own home.

We hope this report gives you the insight and data to enhance your understanding of the opportunities and challenges in your sector, and welcome your feedback.

Nick Turner
Partner, Consumer and Industrial Products, Deloitte LLP
At a glance

Consumers are more positive about the Internet of Things than expected

52% of people own some form of connected device

30% of people plan to buy a connected device in the coming 12 months

66% of people agree that connected devices have the potential to make their lives easier rising to...

...91% for 18 to 24 year olds

Smart security, lighting and energy devices are likely areas of growth for the connected home

Percentage of consumers considering purchasing...

Smart lighting 5%
Security devices 6%
Thermostats 7%

...in the next 12 months.
There are still barriers to the purchase of connected products

<table>
<thead>
<tr>
<th>Price</th>
<th>Perception</th>
<th>Replacement cycles</th>
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<tbody>
<tr>
<td>48% of people agree connected products are too expensive</td>
<td>26% of people think the technology still needs to evolve</td>
<td>21% will consider replacing current devices with connected products once they are worn out</td>
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Do barriers to purchase vary across age groups?

<table>
<thead>
<tr>
<th>Price</th>
<th>Perception</th>
<th>Replacement cycles</th>
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<tbody>
<tr>
<td>53% of 18-34 year olds agree price is a barrier</td>
<td>30% of 35-44 year olds think the technology is still developing</td>
<td>55-64 year olds are most likely to buy connected appliances once current devices need replacing</td>
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Consumer awareness of the Internet of Things

Consumers are aware of the potential benefits of the Internet of Things, but price and their perceptions regarding its utility still put them off buying.

The next stage of growth is likely to be in the area of home monitoring and security, while a connected kitchen will come further down the line.

Retailers and device manufacturers have been interested in the Internet of Things (IoT) for some time, but if sales figures are the best measure of consumer interest, then connected devices have so far failed to catch the consumer’s imagination. Smart TVs and wearable fitness devices are two of a small number of categories that have performed relatively well.

However, Deloitte’s research suggests that consumers are aware of some of the potential benefits of the IoT and connected devices, and are interested in how they could make their day-to-day lives easier. Despite an apparently slow uptake of connected devices, two-thirds of consumers (66 per cent) agree that connected devices have the potential to make their lives easier, rising to 91 per cent for 18-to-24-year olds. The data also suggests that, contrary to many businesses’ experiences, interest in an automated home is growing.

Ownership of these devices, however, is still low, and that is unlikely to change dramatically in the next 12 months. Growth in the IoT market won’t follow a smooth trajectory over the next few years, but will probably come in stages as different categories take off.

The living room was the first part of the home to become connected, and sales of smart TVs and wireless speakers continue to increase. The next stage of growth is likely to be in the area of home monitoring and security, while a connected kitchen will come further down the line.

Businesses may also need to provide consumers with the push they need to convert their interest in connected devices into actual purchases. This could involve demonstrations and education, or promotions.
In this section we review our consumer research findings, which are summarised under the following themes:

• An increasingly connected world

• Awareness of the Internet of Things and intent to purchase

• Consumer appreciation of the IoT’s benefits

• The factors stopping consumers from purchasing, and the need for more communication and education

• Preferred purchase channels

An increasingly connected world

The world is becoming increasingly connected – four billion consumer-facing ‘things’ are predicted to be connected to the internet worldwide in 2016, up from three billion in 2015.1

This increase in connectivity is not just related to the continued growth in smartphone use, it is also the result of manufacturers building more household appliances with some form of internet connectivity embedded in them. By 2020, 13.5 billion consumer items are expected to be connected to the web.2

For this report, the phrase ‘connected device’ is used to mean any electrical device or household appliance, such as a games console, a TV or a thermostat, which is also connected to the internet or to other devices via Wi-Fi. These devices can generally be controlled by an app on a consumer’s smartphone. However, in the longer term ‘connected device’ is a potentially limitless term, as it becomes possible to attach internet-connected sensors to almost anything.

Retailers continue to report sluggish sales of connected devices, but Deloitte’s research suggests consumers are interested in the IoT’s potential. Over half (56 per cent) already own some form of connected device (see Figure 1).
Consumer awareness of the Internet of Things, and intent to purchase

In some categories – such as entertainment – consumers are already accepting of and appear to understand the benefits of connected devices. Around 30 per cent of those polled already own a smart TV and 26 per cent a games console. Video streaming devices which connect to a TV and wireless speakers are both owned by around 10 per cent of the consumers surveyed.

Fewer people own devices in other areas of the home, with smart security systems, thermostats and lighting systems all owned by only two or three per cent of consumers. However, this is an area where many expect the next consumer IoT growth phase to come from, and Deloitte’s data suggests a slight uplift in interest in these devices. Seven per cent expect to buy smart thermostats in the coming 12 months, followed by six per cent for security devices and five per cent for smart lighting systems.

However the majority of consumers – 70 per cent – do not plan to buy any connected devices in the coming 12 months, highlighting the challenge that brands and retailers have ahead of them. It is clear from our data that a significant number of consumers are yet to be convinced of the benefits of connected devices.
Replacement cycles of household products will play a significant role in IoT growth, and most of the demand for connected devices will be released slowly as consumers replace old and worn out appliances.

Two fifths of people plan to replace lighting and thermostats with connected devices once they need to. Security devices and fridges are also likely to become more popular as today’s current crop of appliances reach the end of their life.

In addition, UK retailers and brands need to show consumers how connected devices work. People are more likely to understand the appeal and comprehend how they work once they see these devices in action.

Two fifths of people will replace lighting and thermostats with connected devices once they need to.

**Figure 2. Intent to purchase within 12 months**
Two-thirds of consumers agree that connected devices have the potential to make their lives easier – this rises to 91 per cent for 18 to 24-year-olds (see Figure 3).

For those over 65, an age group that might be expected to be unengaged with the idea of a connected home, 37 per cent agree that the IoT could make their lives easier. There is clearly an opportunity to increase this number, however, and brands will need to make a particular effort to communicate the potential benefits of the consumer IoT with this important group.

Consumer appreciation of the IoT’s benefits
While demand does exist among a relatively small proportion of the population, many consumers have yet to start buying and using connected devices, and many brands and retailers have attributed this to people’s lack of understanding of what the Internet of Things could do for them.

However, our data shows that consumers are more aware of the IoT’s potential than many retailers and brands might expect.

While some customers will benefit from a better understanding of what the Internet of Things is, and why it is worth purchasing connected devices, the majority do have at least some understanding of its appeal. This suggests that retailers need to do more than explain the IoT to consumers – they need to demonstrate how it works, and what it could do for them. John Lewis, for instance, has dedicated space to the smart home in its Oxford Street store in London, and is actively demonstrating what it is and how it can make shoppers’ lives easier.
Awareness of the IoT’s benefits is stronger in areas where the potential is easily identified by consumers. For example, being able to view security footage of your house on your phone while on holiday will obviously appeal to many consumers.

It is also easy to understand the benefits of being able to control heating and lighting remotely – especially when smart devices are able to learn someone’s habits and heat the house more efficiently in order to save money.

This is borne out by the data. A majority of consumers (57 per cent) would like their heating to turn off automatically when they leave the house, and a similar number would also like to be able to control their heating remotely.

Other popular ideas include being able to control several home appliances from one smartphone app (38 per cent agree they would like to be able to do this), and technology companies including Google and Amazon are racing to provide a platform that will enable people to do this.
Some parts of the IoT are less appealing to consumers, however. Having a washing machine automatically order more detergent from the supermarket when it is running low was one of the less popular ideas, for instance, and it may also be a while before people can see the appeal of connected fridges. Some parts of the Internet of Things will take longer for consumers to accept, perhaps because they have not yet experienced these technologies, and conversion to a fully connected home is likely to take several years. However, attitudes towards automated ordering could change quickly – Amazon, for instance, is rolling out more of its Dash buttons, allowing more products to be ordered at the touch of the button. Automated ordering is the next natural step on from Dash, and consumers who have experienced the convenience of buttons will be more likely to see the benefits of automation.

**The factors stopping consumers from purchasing**

Price is a concern for many consumers, with almost half (48 per cent) agreeing that it is a barrier preventing them from buying more connected devices. Clearly price perceptions will differ from category to category, for example many of the first generation of smart home appliances such as smart fridges command a significant premium to standard products. However, brands could tackle price perceptions by using marketing messages that focus on the utility of a particular line or product category.

A significant number of people agree that the technology behind connected devices is still developing. This is another misperception that retailers and brands could take steps to correct. While much of the technology used in connected devices has been around for decades, the consumer proposition is relatively new, and many think later iterations of the devices will offer better value by working more effectively.

Another area of misunderstanding is how well the technology actually works. Consumers may be more easily convinced by stores that allow them to try out the technology, and where advice from store assistants is readily available. Product displays should make it clear that consumers can try out the technology. There should be material available that explains how to use it and how it could improve their lives. Retailers should also include advice on how to connect devices to each other.

Finally, Deloitte’s research shows that replacement cycles will play a role in how quickly demand rises for the IoT. Consumers will often consider connected devices once their current appliance needs replacing – a trend that is visible in both the smartphone and smart TV markets. For some appliances with long life spans, such as fridges and ovens, demand may be slower to develop.

Price is a concern for many consumers, almost half agreeing that it is a barrier preventing them from buying more connected devices.
Preferred purchase channels
The top three channels for purchases of connected home products are online retailers, electricals retailers and department stores. The data shows younger consumers are more likely to enjoy the convenience of buying online while older consumers prefer having access to advice and the face-to-face contact they get at specialist stores. These trends reflect the typical shopping patterns for these demographics, suggesting there is no clear IoT destination for shoppers. They are sticking to their usual patterns in the absence of any incentive to do otherwise.

Connected cars
The connected car market has pulled ahead of some other parts of the IoT market, partly because car manufacturers have prioritised placing connectivity in cars. The industry spent the past decade or so adding technology to cars to make them safer and more responsive. However, in the last few years attention has turned towards enhancing a car’s ability to connect with the outside world and improve the in-car experience.

Consumers are particularly keen on using connected cars to avoid traffic – 40 per cent say it would be of greatest value if their cars could connect to the internet to allow them to use maps showing how to avoid traffic. Another popular feature is the possibility of automated maintenance, including automated diagnosis and tracking of the vehicle’s engine systems, and fuel efficiency tracking.\(^3\)
Deciding when to invest in the Internet of Things

It is a question of ‘when’ not ‘if’ the Internet of Things becomes mainstream, but the speed of development will vary for each product category.

The concept of the Internet of Things has excited both consumers and technology industries for some time, but introducing the technologies into consumers’ homes is proving to be a slow process.

In some areas, development has already been relatively rapid and in others it will soon speed up. Brands need to kick-start demand for certain categories, and the challenge for many businesses is understanding the point at which they should increase resources and launch a formal connected home offer.

In this section we look at the development of the Internet of Things industry, areas where it has been successful, and why progress in other areas has been slow.

Digital disruption
In the same way that the web created opportunities for new business models and new ideas, the Internet of Things represents another step change in the way consumers and businesses use technology.

However, as is the case with many potentially game-changing new technologies, the hyperbole surrounding it often exceeds its short-term impact. The Internet of Things is currently at a pivotal point in its development, and there are several barriers stopping IoT devices being used more widely.

Hardware vs software
The first challenge for the connected home is that the software powering the connected devices still needs to evolve.

Many of the connected devices themselves – such as the Amazon Echo or Google’s recently released Home device – are relatively straightforward pieces of hardware, and have evolved to the point where they work well. What will make these devices ‘must-buys’ for consumers, however, is the combination of this hardware with the software that runs them.

The concept of the Internet of Things has excited both consumers and technology industries for some time.
The Echo and Home devices are potentially interesting to consumers because of Alexa and Google Home, the respective software powering the hubs. Their voice recognition technology, artificial intelligence tools that help the machines to learn, and their ability to connect with other devices and systems, mean they can complete household tasks or speak to third party apps to order pizzas or taxis.

The software used within connected devices, or used to control them, is ultimately what will sell the idea to consumers because it will create services that may not have existed before. The hope is that the IoT will attract the creativity of developers and entrepreneurs, in the same way that the success of smartphone applications, such as Uber, have been achieved because technology created a service that improved on what was available before.

The industry will progress as more software-based services become available. Such services could take the form of an app that makes the public see the concept in a new light, for example a service that repackages the IoT in such a way that consumers immediately see the value.

**Competing eco-systems**
Another hurdle the Internet of Things must clear is the problem of several companies fighting to become dominant. Many manufacturers are racing to develop their own ecosystem, with each device being controlled by a different app. Even though users cannot connect these different apps, product manufacturers continue to develop products in silos because they are hoping to retain control of their customer data or perhaps emerge as a dominant platform. Apple and Google both have projects in place to take on this challenge [see box].

**Role for integrators**
The current lack of interconnection between devices and the resulting lack of cohesion in the consumer offer could be contributing to confusion among consumers, and their sense that the technology needs to develop further.

What is needed is a central focus point for the connected home, and devices that can automatically talk to each other. If consumers want to create a fully automated home at the moment, they need to work at it. They need to research the different platforms and which devices are compatible with each other before working to connect the devices manually once they are in the home.
Emerging integration platforms

Apple’s Homekit platform was launched in 2014, and provides iPhone users with a framework for connecting up the devices in their home. For example, users with connected lights and connected blinds can ensure the different devices can be linked to one another – so if the blinds go down when they start to detect falling daylight, the lights know to turn on. The devices can also be controlled using Siri, Apple’s voice recognition service.

In 2016 Samsung launched its SmartThings hub, a small white box which aims to connect all a consumer’s devices in the home. Not every device is compatible with the hub, but Samsung has opened up the SmartThings platform to third-party developers, and there are work-arounds for nearly every non-compatible device. This is a complicated process for anyone not used to using the technology, however.

Google may launch an Android integration platform but has not done so yet. Until recently it has focused on using its Nest thermostat device as a home hub. It runs a ‘Works with Nest’ programme which invites manufacturers to create devices that are compatible with Nest. Device manufacturers including Pebble smartwatches, LG and Whirlpool have all made devices that can be connected with the device. However Google’s focus is changing, with the recent launch of its Google Home product taking centre stage.

Several companies, notably Samsung and Google, who are helping to shape the connected home industry, have called for a set of common standards. But at the moment, the industry is characterised more by competition than collaboration.

The current lack of cohesion is problematic because without it consumers may never fully understand or have easy access to what a connected home could do. Once devices are set up, almost anything can be used as a trigger to make them do something. They can be prompted to act by other devices, by what time of day it is, the temperature or a person’s presence in a room. It is this seamlessness that could enable a consumer to hand a lot of their daily household tasks to the devices themselves.

Collaboration has already started in the business-facing world of the Internet of Things, after IBM and Cisco teamed up to combine IBM’s data analytics offer Watson with Cisco’s knowledge of devices and networks. The partnership suggests that companies are starting to become aware of the need to collaborate in an area where few, if any, can provide the entire ecosystem.
Uncertainty
The Internet of Things has attracted its fair share of cynicism, and there are some who believe consumers will never purchase connected devices on a broad scale. Discussions around privacy and security have also helped to make some consumers wary.

Connected televisions were relatively rare three years ago, but now it is difficult to find a television on the market that does not connect to the internet. This is partly because Netflix and other services have overhauled the way we consume media, another example of a software-based service causing large scale disruption to the way consumers behave.

There is also the undeniable fact that while demand has been slow to rise, supply is still increasing and the number of connected devices on the market continues to expand. The success of the IoT may eventually come down to every device on the market being connected in some way – it will simply be the way things are made.

How the Internet of Things transformed entertainment consumption

Netflix started life as a DVD-mail company in 1997, and only began streaming TV shows in 2007. It grew quickly from there: in 2010 it had 20 million subscribers and in 2016 it reached 80 million.

At the same time, smart TV ownership has grown rapidly. According to Deloitte research, 28 per cent of shoppers own a smart TV.

Netflix is not the only streaming service that has grown quickly in the last few years; Amazon Prime and Sky’s Now TV have also helped to strengthen smart TV’s role in the home. These streaming services have created a role for connected TVs in peoples’ lives, and the same could soon be true for other connected appliances.

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Understanding the next steps

Key areas of focus for consumer businesses developing their IoT strategy.

Consumer business companies that want to lead the way have probably already invested in the IoT and have a clear idea of what can be achieved. However, brands that are yet to develop a plan need to understand the market and where they would like to sit within it. They also need to understand what the IoT could potentially do for them.

Brands waiting for the right moment to ramp up their IoT efforts will need to listen to customers and closely monitor early signs of increases in demand or interest. In addition, consumer brands should track developments in the wider IoT market. Technology firms are active in this area and new innovations, partnerships and strategies are announced frequently. Brands hoping to gain a share of the consumer IoT market must watch its development as the major technology companies manoeuvre themselves into place.

An iterative approach is likely to be the best one. It is important to start with small projects and investments, at the same time as developing a strong, ambitious vision for the future. This area needs to be developed and managed over time, and businesses will need to remove silos in their organisation to ensure they have the flexibility to cope with the far-reaching effects of the IoT.

Investing in some early marketing around the IoT is likely to be worthwhile. Brand recognition will play an important role in determining who does well in the IoT market, because consumers will gravitate towards the names they trust. Amazon has already taken the lead over other brand names, with 55 per cent of consumers saying they associate the online retailer with connected devices. Laying the groundwork now and reinforcing a brand’s name in consumers’ minds is likely to pay dividends when consumer demand for connected devices starts to increase.

Product brands and technology manufacturers need to think beyond product specifications and hardware efficacy, and expand into thinking about how the products and services might be used in a consumer’s day-to-day life. For some, this will require an internal culture change and may necessitate partnerships with other companies. Businesses need to change their mind-set so that they move from selling products to selling services. Consumers are unlikely to understand the potential of products until the brands selling them can communicate it.

The lack of universal standards for the manufacture of IoT devices is one of the most important hurdles to clear before the IoT can succeed. At Google’s IoT developer summit in January 2016, the search engine’s chief internet evangelist Vint Cerf warned the IoT industry that compatibility could be an obstacle to the IoT’s success. He said the IoT cannot be built effectively if it is too difficult to connect millions of incompatible sensors, and called on the industry to work towards a set of common standards.

The lack of a standardised operating system is limiting IoT development, but if brands were to put pressure on or work with technology firms, the pace of development could speed up.
Privacy and security also need to be addressed. Deloitte research shows that 13 per cent of people are holding back from buying connected devices because they are concerned about their device getting hacked, while 11 per cent do not want their usage data accessed by companies. Manufacturers and software companies need to ensure app updates and operating system updates are secure, as well as taking steps to protect data.

Communication between businesses and consumers also needs to improve to ensure consumers understand the full extent and detail of connected devices. The public may be aware that smart thermostats can save money on energy bills, but they might not understand that the £200 device would save an average of £100 a year.

The IoT is in its infancy, but consumers are more interested in creating a connected home than sluggish sales would suggest. It is important for the market to become more cohesive if significant growth is to be achieved. While no clear market leaders have yet emerged, when change does occur in this area it is likely to happen quickly. Consumer businesses need to ensure they know what they want out of it, and how to get it.

### Challenges facing the IoT

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<th>Challenge</th>
<th>Description</th>
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<tr>
<td>Communicating the cost benefits</td>
<td>Smart devices can save home owners money, but for low earners who most need to save £100 a year on their heating, a £200 price tag for a thermostat may be prohibitive.</td>
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<tr>
<td>Drivers of behaviour</td>
<td>The IoT could help people do everything from caring for elderly parents via motion tracking, to making sure children playing nearby are safe. Rationale for buying connected devices will be broader than simply making household tasks simpler.</td>
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<tr>
<td>Devices are too logical</td>
<td>Connected devices and their associated apps are designed around rules designed by their owners, such as 'turn the lights on when it gets dark'. However, these rules then need to be over-ridden in certain situations – connected devices cannot currently cope with the level of complexity in people's lives.</td>
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<td>Portability</td>
<td>The consumer IoT doesn't yet lend itself easily to moving house, or staying in someone else's home.</td>
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<tr>
<td>Interoperability</td>
<td>At the moment, families of connected products can talk to each other, but each new product must be purchased within that family. No company has yet managed to successfully produce a unifying hub that dominates the market.</td>
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<tr>
<td>Uncertainty</td>
<td>In 2014 Google acquired a home-hub company called Revlov, but 18 months later it announced it would be switching off support for the device. IoT consumers can be left with dead devices that cost hundreds of pounds.</td>
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<tr>
<td>Data security</td>
<td>If IoT systems are implemented poorly they could leave consumers open to being hacked. There is also the issue of who owns the data generated by smart devices, and who could conceivably be given access to devices and data.</td>
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<tr>
<td>Multiple users</td>
<td>Connected devices are not designed to be easily used by households with multiple inhabitants.</td>
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<tr>
<td>Will consumers drive IoT?</td>
<td>It is likely that the IoT will develop more quickly in the workplace – including offices, heavy industry and manufacturing – than in the home.</td>
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<td>Stability</td>
<td>If a smart home’s security, including door locks, depends on internet connectivity, consumers will need a high level of reassurance on stability of the devices themselves and internet services.</td>
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Appendix:
Consumer Research Findings

Methodology
To understand consumer attitudes to the Internet of Things better, Deloitte commissioned an online consumer survey carried out by an independent market research agency. The survey was conducted with a nationally representative sample of 2,076 adults aged 16 and over in England, Scotland and Wales.

Perceptions of utility
Consumers find some parts of the IoT more attractive than others. While the benefits of some areas are clearer to consumers, they find it harder to see the benefits of some parts of the IoT. These are the areas we expect to take longer to develop.

Areas that can be expected to develop more quickly are home security, smart heating and smart lighting (see Figure 1).

Figure 1. Perceptions of utility

Base: UK consumers 18+ (n = 2076)
Source: Deloitte research, May 2016

I would like to be able to link my diary and online shopping accounts together and access via my fridge
10% 19% 26% 21% 24%

I would like to be able to view the contents of my fridge via my smartphone or tablet so that I can then make
12% 24% 23% 18% 23%

I would like to be able to use a touchscreen on the door of my fridge to make shopping lists of what I need, which
12% 23% 24% 19% 22%

I would like to be able to instruct my coffee machine to make a coffee using my phone.
11% 20% 24% 21% 24%

I would like my washing machine to order in more detergent for me when I am running low
9% 16% 23% 26% 27%

I would like to be able to place my washing in the machine and leave it, allowing the machine to scan the
16% 24% 25% 18% 17%

I would like the ability to check my home security cameras remotely and be alerted if the burglar alarm
22% 31% 24% 10% 13%

I would like to be able to control surveillance monitors at home, such as cameras or motion sensors, remotely
16% 29% 29% 12% 13%

I would like my heating system to automatically switch off or switch to the most energy efficient setting when I leave
22% 35% 22% 12% 9%

I would like to be able to control my heating remotely
19% 35% 21% 11% 13%

I would like to be able to change the level and type of light according to the time of day
12% 30% 21% 14% 15%

I would like to be able to turn lights on and off remotely via my smartphone
17% 32% 20% 14% 16%

I would like to be able to control all of my home appliances on my smartphone via a single app
12% 26% 25% 17% 20%
Barriers to purchase
Several different aspects are playing a role in stopping consumers from buying connected devices.

Price is the key considering for many, with nearly half (48 per cent) agreeing it is a barrier preventing them from purchasing more connected devices.

Other barriers include a perception that the technology is still developing, which retailers can tackle by demonstrating IoT devices in store (see Figure 2).

Connected cars
The feature that most appeals to consumers about connected cars is their ability to choose the best route with the least traffic. The cars can assess which parts of a town or city are the busiest, and suggest a route that avoids them. Forty per cent of consumers agree this is their preferred feature.

The second most popular option was automated maintenance. Connected cars can monitor their own parts and either take necessary steps to solve problems, or alert owners to what needs to be done. Eighteen per cent of consumers agreed this was appealing (see Figure 3).
Endnotes

11. http://uk.pcmag.com/consumer-electronics-reviews-ratings/81933/opinion/the-internet-of-things-is-not-for-you
15. https://ir.netflix.com/index.cfm
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