



POLICY REPORT OCTOBER 2017

The changing consumer world

Introduction

At Which?, we question the way things are, as it is only through questions that we help to make consumers more powerful. We question how consumers' lives are being, and will be, shaped by the markets, regulations, technology and environment around them. We seek to understand these forces and focus our future work on them so that Which? continues to achieve its mission to make individuals as powerful as the organisations they deal with in their daily lives.

Over the past few months, Which? has undertaken a strategy review to identify the most significant themes that will shape consumers' lives over the next 15 years, and that should therefore be the focus of the policy agenda. As part of that review we worked with Forum for the Future to explore and analyse the likely changes that are coming. To inform our analysis we also studied a wide range of data on the current and past consumer environment.

This report showcases our findings from the analysis. A full set of the materials that were developed for this project are available online at changingconsumers.atavist.com, and our analysis of current and past trends affecting consumers can be found at consumerinsight.which.co.uk.

Our review identified the following six strategic themes that we will analyse and examine through our policy work over the next few years. This policy work will help Which? as an organisation make consumers more powerful through both commercial and charitable activity.

1. Digital revolution

The digitisation of the world around us is driving innovation across all sectors of the economy and radically reshaping consumer markets. We are now in a world where most people have a super-computer in their pockets, connected to an ever-faster network. This has changed consumer habits and behaviours, and the proliferation and leveraging of data is transforming the way goods and services are designed, marketed and sold. These trends will continue and deepen as new technologies such as artificial intelligence (AI), machine learning, and virtual and augmented reality reach maturity. Internet everywhere will require high-quality connectivity.

However, there are significant risks to consumers as the digital revolution deepens. For example, online fraud is the most common crime in England and Wales, with 3.6m reported incidents, and as the appliances and devices in homes become more 'connected' they are becoming susceptible to hacks.



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2. Lifetime savings

While older generations have built up significant housing and pension wealth, younger people are struggling to follow suit, due to significant falls in home ownership, stagnant working age incomes and worsening pensions provision. Less than half of 16-24 year olds are confident that they will have satisfactory retirement incomes, and according to the latest data on wealth, 30% of households had next to nothing in savings accounts or Isas. This picture has serious implications for everyone, from the difficulty of funding old-age care, to the increasing importance of encouraging long-term savings for younger people.

3. Greater individual responsibility (for bigger decisions)

Individuals are facing more responsibility for more significant decisions than ever before in arenas such as elderly care and retirement income. However, the professional services that people need can either be too expensive (eg people not getting financial advice when they should), low quality or simply not transparent. New innovations, such as robo-advice, could help people tackle these issues, but the regulatory framework will need to balance encouraging innovation with consumer protection.

The digital revolution also offers a host of innovative options to drive improvements in public services, but these depend on availability of data and access to the data for third parties. This includes how complaints data is collected, analysed and used.

4. Housing

Continued growth in the UK population, combined with historically low rates of house building, is placing significant pressure on the housing market. There has been a sudden and seismic change for younger people – the proportion of those aged 25-34 owning a property fell from 59% in 2001 to just 36% by 2014¹, and this trend is beginning to move into older age groups.

This raises issues in both the rental and home-purchase markets. Is the UK rental sector fit for purpose if the majority of younger people are now renting rather than owning? Why are home-purchase arrangements based on archaic systems that take many months, and often fall through? There are early signs of consumer-driven innovation in the housing market, but is the environment right for companies trying to improve the process?

5. Travel and transport

Pressure on the transport system continues to mount. Population growth, demographic shifts and changing habits have driven significant increases in rail travel, and traffic on the roads is forecast to grow, leading to rises in associated congestion. At the same time travel by car is undergoing a technological revolution, with the decarbonisation of road transport combining with potential advances in assisted, and potentially autonomous, vehicles.

However, the regulatory models and compensation arrangements in transport do not serve consumer needs. There is little link between major transport decisions and the people who pay for them; also a low proportion of those who are eligible for travel compensation (such as after train delays) are actually claiming for it.

6. Consumer landscape and Brexit

Consumer confidence depends on an effective system of enforcement to guarantee rights and protections and provide redress when things go wrong. The current system is in need of urgent reform. Local Trading Standards services are under a great deal of strain, but are responsible for handling a breadth of enforcement issues that have nationwide implications. Recent government reviews have highlighted that a number of issues are falling through gaps in the system.

As the UK leaves the EU, people will want confidence that there is a robust system in place to ensure that consumer product and food safety and standards are effectively enforced, as well as for cross-border purchases that originate from within the EU. This includes making sure that effective intelligence-sharing and cooperation arrangements are in place.

Key findings from the futures analysis

It's 2030, and UK consumers are affected by several issues that have their roots in the world of 2017. Trends in demographics, technology, healthcare, transport and retail have combined to produce new – and sometimes startling – choices and challenges.

How can organisations in 2017 prepare to help consumers navigate the issues of the future? What are the key strategic areas to consider now, to achieve the largest positive change?

Project background

The Which? policy team and Forum for the Future worked together between December 2016 and February 2017 to design and facilitate a 'consumer futures analysis'. The primary purpose of this analysis was to provide the Which? policy team with insight about possible and probable futures, so they could decide the areas they should focus on over the next few years and continue to address areas of consumer detriment effectively. The analysis will also be used by other areas of the organisation to ensure the whole of Which? can work together to tackle the most significant issues for consumers.

The resources in this report were developed as part of this project, and are now being made available for other organisations to use. We think they will be of particular value for policymakers, regulatory bodies, businesses and consumer advocacy groups. They are designed to assist in the development and testing of strategy by enabling creative thinking about the future that is grounded in research today. They should stimulate constructive discussion and generate empathic insight.

The resources consist of:

- Eight 'future scenarios' for 2030
- Two 'future families' cards, depicting two imagined households in 2030
- A template for a structured workshop discussion process

The future scenarios

- 1. Transport stress:** Under-investment in roads and railways make commuting an ordeal for many in 2030. While new driverless vehicle technology and flexible working could help, there's still a long way to go.
- 2. Seamless consumerism:** Total retail is now a reality. Connected devices, seamless payments and ubiquitous marketing make it effortless to purchase, saving time but fuelling consumer spending and rising levels of debt.
- 3. Health in our hands:** In 2030 we know much more about the factors that affect our health and make us more likely to become ill. People must take responsibility for their health, as strained public health services focus on the essentials.
- 4. Affording old age:** Being an older person in the UK is getting harder in 2030 as personal wealth decreases. Much-needed innovation in how we care for adults later in life is starting to come through.
- 5. Centralised digital power:** Data is currency in 2030, and most people's lives are mediated through a handful of digital 'mega platforms'. People enjoy convenience and personalised services, but worry about how their lives are being shaped through opaque algorithms.
- 6. Citizen innovation:** As traditional institutions struggle to act, individuals in society increasingly have the motivation and means to tackle the challenges they experience in their lives. The 'consumer' label no longer captures this new attitude, scope and sense of agency.
- 7. A divided nation:** Two major faultlines run through Britain in 2030, determining how well off you are likely to be: how old you are, and where you live. This is causing hardship and resentment among many people.
- 8. Connected home:** Individuals, households and communities have a widening range of options for turning underused assets into income earners and for sharing, swapping and subscribing to gain access to others. With it, we feel both liberated and more vulnerable.

Where did the future scenarios come from?

A 'formal futures' process was deliberately used for this project as a way to stretch current thinking and challenge tacit assumptions about the future. Organisations often have an implicit, singular vision of the future that is narrowly based on an extension of the present-day mainstream trajectory. The potential effects of technological disruption and social and environmental change are rarely considered in a structured way – leading to strategic blind spots and poor resilience in the face of uncertainty or rapid change.

Techniques such as ‘horizon scanning’² are particularly useful to broaden perspectives and highlight the wide range of possibilities for the future; when combined with research on existing trends, engaging scenarios of possible and plausible futures can be built up, grounded in evidence from the present day.

We undertook a thorough research and analysis process to arrive at the eight future scenarios.

The scenarios are based on the future trends that were judged to both be more likely to be prevalent in 2030 and have a significant impact on UK consumers.

Key inputs

The key inputs in the research and analysis were:

i) horizon scanning and desk-based research into trends, drawing on Forum’s horizon-scanning platform **thefuturescentre.org**

ii) an evidence base compiled by Which?, based on past data looking at:

- Economic context and outlook
- Household income, wealth and debt
- Household spending and prices
- Population and demographics
- Market trends
- Consumer sentiment
- Consumer detriment

iii) 22 in-depth structured interviews conducted with a spectrum of experts and stakeholders, including senior Which? staff and Council members, academics, policy experts from regulators, and Which? supporters.

We asked questions such as:

- What are the trends that you think will be most important in shaping the lives of consumers in 2030?
- In your view, what new issues might these trends bring about for consumers?
- Are there any surprises you suspect could be lurking in the future that UK consumers are not prepared for?
- In your opinion, how might the role of Which? need to change in the future, in light of some of the trends we have discussed?

From the research and interviews, a list of trends was identified that could be future sources of detriment for consumers.

² Horizon scanning is a process that involves looking for ‘signals’ – events, activities or new products and processes that indicate a potential change in a trend, or a possible disruptive systemic change. Signals can be thought of as seeds of possible futures that are visible today. As a simple example, Tesla cars are a signal pointing to a possible disruptive shift to driverless, electric vehicles.



Figure 1: Research & analysis process



| TREND | SUMMARY EXPLANATION | INTERVIEW QUOTATION |
|--|---|---|
| Access over ownership | People are becoming accustomed to 'access over ownership' and paying subscriptions over one-off fees, such as subscribing to a car club rather than owning a car. Reducing waste is no longer just about reusing and recycling objects, but also about getting the maximum utility and value out of assets. | "Young people in particular are moving away from asset ownership and tying themselves into long contracts, as well as lots of subscriptions for media content. It's becoming easier for companies to upsell and for costs to spiral." <i>Interviewee</i> |
| Impacts of climate change | Flooding already causes £1bn of damage every year on average but the risks will rise yet further as climate change brings floods to new places, according to the Committee on Climate Change. ³ The number of households at significant risk of flooding will more than double to 1.9m by 2050, if the global temperature rises by 4°C. Extreme heat, drought or flooding may cause failure of services such as utilities. | "More extreme and unpredictable weather could happen in places we don't currently expect. What services will we need to cope with these new risks? What impact will this have on global supply chains?" <i>Interviewee</i> |
| Need for consumer behaviour change around water & energy | Water and energy systems are stressed. A growing population, as well as increased water use per person, will put pressure on water infrastructure. The energy grid is not currently configured for renewables – ie able to match up supply and demand for energy sources that are inherently variable. If not enough is done to build infrastructure that's designed for a water-efficient and renewables-based economy, the onus may fall more heavily on individuals to conserve resources. | "Environmental issues will grow to be more concerning by 2030, so I'd imagine consumers will be more energy and resource conscious." <i>Which? supporter</i> |
| Caring for older people | The number of people over 65 already outnumbers those under the age of 16 in the UK. There will be a 61% increase in over-65s in the UK by 2031. Middle and low-income people are likely to be stretched between their jobs and finding sufficient care for their families. | "Unmet demands for elderly and social care. There is potential for very poor outcomes for younger people as they grow older. If they realised this now they wouldn't be making the same decisions." <i>Interviewee</i> |
| Living alone | UK government figures predict that the number of people living alone will rise by 25% in the next 25 years. ⁴ People living alone can experience loneliness and depression as well as lack a financial safety net. Living alone also has negative impacts on the environment as per capita consumption goes up. | "Older people may become more isolated due to the fragmentation of society and digitisation. They will need more help to prevent them from being exploited." <i>Interviewee</i> |
| Augmented humans | Bionics, wearable technologies, augmented reality applications, and performance and memory enhancements could allow people to move, think, see, feel and hear with incredible speed and precision. The barriers that separate the physical world from the digital one will increasingly melt away. | "What impact will artificial intelligence have on the home? Will home functions become independent of us? Or will the idea simply not work, or be hacked, leading to rejection by consumers?" <i>Interviewee</i> |
| Automated transport | Automated vehicles are already on the roads in some cities. Consuming mobility services may become more common than owning a car, changing spending patterns and potentially freeing up income – but also putting more data and potentially control in the hands of a few companies. Who is responsible when accidents happen and how will the industry be regulated? | "Robotics and AI will probably shape consumer concerns and rights. Legal frameworks will struggle to catch up. Driverless cars could result in accidents and blame will be hard to establish." <i>Which? supporter</i> |
| Data security and control over decision-making | More and more functions (banking, shopping, government forms) are moving online and are integrated on a limited number of platforms. Mega-platforms offer more services and hold a great deal of personal data. People may become 'locked-in' to a company's ecosystem. Powerful algorithms make it possible to anticipate future consumer demands; will decisions start to be made for you, or about you? | "Will there be a public reaction to the continuing increases in the collection of personal information data, and in personal surveillance?" <i>Which? supporter</i> |
| Inter-generational equity | Millennials may be the first generation in modern times to be worse off than their parents. ⁵ There are vast differences between the government benefits, property and pension wealth, and job opportunities available to younger generations. Many of them have to delay families and home ownership until late in life. When these people grow older, there will be significant constraints on their disposable income. | "Less disposable income, and less regular incomes will lead to a change in how consumers spend. It is also likely to lead to new debt propositions that build on payday loan type solutions – with the attendant problems." <i>Interviewee</i> |

| TREND | SUMMARY EXPLANATION | INTERVIEW QUOTATION |
|---|---|---|
| Income inequality | Falling real wages among low-income households due to long-term unemployment, low-quality jobs, and greater job insecurity could serve to widen inequality. At the same time the 'millionaire segment' is one of the fastest growing in the UK. Regional differences – eg the north-south divide may become more pronounced. High levels of income inequality are linked to economic instability, financial crisis, debt and inflation. | "Will everybody who wants a job have one, and will they learn enough for a comfortable lifestyle?" <i>Which? supporter</i> |
| Changes in the role of civil society | Around the UK there are signs of a resurgence of localism, characterised by community ownership, cooperatives, alternative currencies and credit, repairing, sharing and making use of waste. More power is being devolved to local governments. People are taking action at a local level as public services are cut back and trust in large institutions falters. In 2030 the state model may not be able to provide services we currently take for granted, or be able to act quickly enough. Might we see local communities pooling intangible assets, such as online reputation, to put pressure on companies? | "Consumers might use a more collaborative community approach to solve issues, and to put pressure on companies." <i>Interviewee</i> |
| Greater understanding of the determinants of health | We are gaining a much greater understanding of what makes someone healthy. Developments in research on the microbiome (the collection of microbes that live in and on the human body), DNA profiling, and greater understanding on mental health provide opportunities to improve overall public health and prevent problems from arising. Studies show that environmental factors such as air pollution, noise pollution, and lack of access to green space can negatively impact mental and physical health – even influence gene expression. | "Obesity rates have continued to increase in the UK and around the world, leading to issues such as diabetes. It's not just a public health issue but also has immediate effects on quality of life." <i>Interviewee</i> |
| Individual responsibility for health | As pressure on public health service grows, there is likely to be an even greater focus on individuals to take accountability for their own health outcomes such as obesity, cigarette addiction, lack of exercise, etc. Technological advances ranging from remote diagnosis to the 'quantified self' (the use of personal data to improve one's health and well-being) are allowing individuals to take on more responsibility for their health. As people continue to seek alternate health services, quality control and equity will remain important. | "There will be a difficult debate needed about what the state pays for versus what individuals pay for – particularly for health and social care. We have got used to the state paying for things, which might be unsustainable." <i>Interviewee</i> |
| Growing mental health burden | There is a lack of resources for a growing mental health problem; by 2030 there will be approximately 2 million more adults in the UK with a mental health problem. In the next decade, the NHS could experience a funding gap of between £44 and £54 billion. ⁶ However, attitudes towards mental health are improving; the view that it is an illness like any other are becoming mainstream and the stigma is starting to decrease. | "A significant share of the population may be more vulnerable with a condition like dementia, where they struggle to make choices for themselves, but are still decision-makers." <i>Interviewee</i> |
| Retail everywhere | New 'frictionless' payment systems, digital currencies, the growth of the internet of things, and total online access will make it possible to buy goods and services instantly. Traditional barriers will disappear from the process of buying, selling and trading – at least until things go wrong. The flurry of investment in emerging technologies like wearables, voice activation, home automation and facial recognition are a good indication of the direction of travel. | "Personalisation is positive when it leads to better products and services, but brings new risks for consumers. What do you do about the people that competition and digital engagement are not helping?" <i>Interviewee</i> |

3 Climate Change Risk Assessment 2017', Committee on Climate Change. <https://www.theccc.org.uk/publication/uk-climate-change-risk-assessment-2017>

4 '2014-based Household Projections: England, 2014-2039', Department for Communities and Local Government, July 2016. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536702/Household_Projections_-_2014_-_2039.pdf

5 'Stagnation generation? The case for renewing the intergenerational contract', Intergenerational Commission, July 2016. <http://www.intergencommission.org/publications/stagnation-generation-the-case-for-renewing-the-intergenerational-contract>

6 '#MHN2014: The future of mental health', Mental Health Network-NHS Confederation, March 2014, http://www.nhsconfed.org/-/media/Confederation/Files/Publications/Documents/The_future_of_mental_health.pdf

Themes from the research analysis

These trends were discussed, nuanced and added to in a working session between Which? and Forum for the Future. The trends and related issues were assessed using a matrix, based on the level of certainty that they would be important in 2030 and their potential to cause detriment in future.

Forum for the Future then further refined the trends on the matrix by clustering related trends. These were further prioritised with Which? to decide on the eight scenarios. The scenarios are summarised below; the detailed versions are given in the next section of this report.

1. Transport stress
2. Seamless consumerism
3. Health in our hands
4. Affording old age
5. Centralised digital power
6. Citizen innovation
7. A divided nation
8. Connected home

The future scenarios were then used as the core stimulus in a set of three workshops with Which? staff and external stakeholders. A secondary resource depicting two future families from 2030 was also used to deepen engagement with the issues raised by the scenarios. Participants explored the possible 2030 context for consumers in structured discussions, identifying areas of possible consumer detriment and potential strategic responses by Which?.

The insights and suggestions from these workshops were then collated and analysed to produce a detailed set of strategic choices, recommendations and questions to inform medium and long-term strategy development by the policy team at Which?.

The future scenarios

In this project, a set of future scenarios for 2030 was created as the main tool. The scenarios are not predictions of the future, but are useful in helping to uncover possibilities. They focus on particular themes and may contradict each other in places, which is useful in stimulating different conversations about the future and generating systemic insight into the way that different trends may reinforce or counter each other.

1. Transport stress
2. Seamless consumerism
3. Health in our hands
4. Affording old age
5. Centralised Digital power
6. Citizen innovation
7. A divided nation
8. Connected home

Possible future 1 Transport stress

Under-investment in roads and railways makes commuting an ordeal for many in 2030. While new driverless vehicle technology and flexible working could help, there's still a long way to go.

- Towns and cities across the UK are mired in extreme congestion. Roads are frequently gridlocked, and trains, particularly in the South East and the major cities of the North West, are packed at peak times. The average journey time to work is now well over an hour, compared to around 50 minutes in the 2010s.
- More and more people are working from home and travelling outside peak times. Despite this, many people still choose to live in cities for better schools and jobs. Along with population growth, this means that gridlock and long journeys are a fact of life for many.
- Lack of investment means that disruption is widespread on many commuter journeys by road and rail. In many places roads and surrounding drainage have not been upgraded to cope with the increase in heavy rainfall and large variations in temperature, caused by climate change.
- Rail journeys are still the preferred option for long journeys, but with the few remaining rail-related jobs threatened by automation, strikes are frequent.
- Protests are commonplace as those on lower incomes, who don't have the luxury of working from home, are forced to live further out and travel into urban centres. The proportion of income spent on travel by some is estimated to be up to 30%.
- Any available investment goes towards improving routes to London. Operator standards are dropping and there have been rural rail services cuts, sparking campaigns from NGOs and MPs, as well as industry strikes. As an alternative, the first co-operatively owned train company has successfully launched in the North West.
- On the plus side, availability of new mobility services is starting to spread in some regions after successful trials in Yorkshire and London in 2025. You can hire an electric driverless car (or autonomous vehicle – AV) to get from A to B, a boon for young, elderly and disabled people hampered by cuts to rural bus services. New revenue models, such as subscriptions and advertising-supported services, have made these mobility services widely accessible to consumers.



Major headlines from the last decade...

2020 Communities up in arms as last rural rail service in Lincolnshire is cut

2025 Proportion of 'flexible workers' in UK now over 50%

2030 Most cities now implementing mandatory phase-out of manually driven cars

Signs of this future today

- ▶ A graduate of the Art Centre of Design, Pasadena, California, has designed a membership-based shared transit system for driverless car technology. Customers use an app to request a car to take them to a destination, much like a taxi. As many people will share similar routes, it can pick up and drop off multiple people at once.
- ▶ The UK government's Modern Transport Bill introduced a set of updated road-use policies in relation to driverless cars in 2017. It is also providing £19m to launch driverless car schemes in four UK locations.

What are the implications?

- * How might the public transport situation and advanced home-working technology shift commuting patterns?
- * How could the growth of efficient driverless vehicles both help and hinder travel?
- * Will consumers be spending more or less of their income on travel?

Possible future 2 Seamless consumerism

Total retail is now a reality. Connected devices, seamless payments and ubiquitous marketing make it effortless to purchase, saving time but fuelling consumer spending and rising levels of debt.

- Shopping is no longer a spare-time activity; it's accessible all the time and everywhere. Browsing the latest fashions during the morning commute, with same-day drone delivery to your front door is the new normal.
- Many "stores" are now showrooms for online businesses where people can enjoy branded experiences, such as gigs or food tasting, or try out products before buying online.
- Marketing has become highly sophisticated and invasive. Face and voice recognition creates highly targeted advertising based on your purchase and browsing history.
- People are incentivised to share their data for discounts and enhanced access to products and services (eg priority boarding at airports, first in line for device upgrades). Debate rages about the trade-off between privacy and retail privileges, with some citizen campaigns calling for an end to this two-tier system.
- Purchasing is effortless, and at times inadvertent. It is hard to remember what it was like before payment systems were integrated with personal identification technology. There are a host of methods to purchase, including retinal scans, fingerprint activation and geolocation.
- Concerned about spending or getting into debt, some choose to be constantly prompted to authorise payments. However, many more have forfeited control over payments for convenience, opting in to subscription and re-ordering services.
- Less prudent shoppers are highly vulnerable to overspending, sometimes unaware that they are being upgraded to more expensive subscription tiers. Many people are losing out on better deals because of the hassle to switch from their current provider.
- When things do go wrong, most reputable companies offer a fairly straightforward complaints and refund process. Sadly, it's common to hear horror stories of people stuck in labyrinthine customer service systems wholly delivered via artificial intelligence 'operators' unable to resolve their issues.



Major headlines from the last decade...

- 2020** Consumer debt at record levels – automatic payments a major factor
- 2025** First clinic opens in London for shopping addiction
- 2030** Rogue fridges: record £100m compensation paid by grocery retailer for unwanted digital orders



Signs of this future today

- ▶ Amazon has opened its first Amazon Go store. Shoppers simply scan their smartphones upon entering and 'just walk out' technology will detect when products are taken off the shelves. Customers can exit the store without queuing and their Amazon account is automatically charged.
- ▶ UK retailer Shop Direct was one of the fastest growing retailers in 2016 after moving its catalogue business entirely into digital sales. Mobile accounted for 54% of Shop Direct sales in 2015. Last year, pre-tax profit increased by 75%, driven mainly by investment in big data and personalisation.
- ▶ British tech company Smarter has unveiled a device called FridgeCam. A small camera snaps a photo of what is inside and integrates with an app that adds products to a shopping list automatically. If the camera integrates with a grocery ordering site, items can be automatically ordered and replaced.



What are the implications?

- * As retail becomes seamlessly integrated into everyday life, how will consumers keep track of their purchasing and spending habits?
- * Will allowing retailers access to personal data be a requirement of participation in the digital world?
- * How will people be able to opt out of marketing messages?



Possible future 3 Health in our hands

In 2030 we know much more about the factors that affect our health and make us more likely to become ill. People must take responsibility for their health, as strained public health services only focus on the essentials.

- In 2030 public information about health is much more sophisticated. The wisdom of mental and physical health being equally important to maintain is common practice.
- Advances in genetic profiling mean that most people now have a large amount of information about what conditions and diseases they are more prone to and how to prevent them.
- It's now common knowledge that the health of your microbiome (the billions of microbes that live on your skin and hair, in your gut and mouth) is essential. People with issues such as obesity, anxiety, eczema and IBS can now manage their condition through 'microbiotics'.
- Links between environmental factors and health – from air and noise pollution, to contact with nature and electronic devices – have been much more strongly established.
- You can buy home-testing kits for DNA sequencing and microbiome analysis over the counter. Health management services can, for a fee, take information about your DNA, microbiome, living conditions and lifestyle to produce highly personalised recommendations for your health regime.
- This new knowledge of the factors affecting people's health has led to scrutiny of particular products and services. Tech companies, for example, have to go much further to demonstrate how they are acting to reduce digitally induced stress. Major UK airports are the subject of ongoing class action for contributing to widespread air pollution-related illnesses.
- The NHS has had to introduce a credit system which limits the number of times that people without serious health issues can get quick GP access. The Department of Health incentivises 'preventative care' through tax rebates for those who actively use health-tracking devices.
- Not everyone can take advantage of this revolution in personalised health. Those in deprived areas still have far greater rates of obesity, less green space, and often don't opt into health services, despite efforts by the NHS to roll out basic diagnostic services to all citizens.



Major headlines from the last decade...

2020 UK's leading companies to provide bonuses to workers who make healthy choices

2025 NHS unveils holistic health-monitoring app that sends daily data to your GP

2030 Record payout by app distributor for causing 'acute anxiety' among teens



Signs of this future today

- ▶ The microbiome – the body's vast army of microbes – may be linked to mental health, according to a 2016 Oxford University study. Exploration of the microbiome by scientists is uncovering links between the gut and brain with specific strains of bacteria connected with anxiety and depression.
- ▶ Various apps have been developed to help people seeking mental health services. One of these in the US, Joyable, treats patients with debilitating social anxiety by using cognitive behavioural therapy (CBT). In the UK, Beating the Blues is a similar app that is only available via prescription.
- ▶ Air pollution from traffic and industry is leading to the premature deaths and poor health of millions of people annually. In London alone, more than 400 schools are located in areas that exceed limits for nitrogen dioxide pollution. Exposure to air pollution is linked to suppressed lung growth in children, asthma, heart disease, and diabetes.



What are the implications?

- * As people have more health data, will they be expected to take greater responsibility over their own health?
- * Could there be discrimination against people with poor health conditions?
- * How will new health services, potentially delivered outside the NHS, be tested and regulated to ensure quality?

Possible future 4 Affording old age

Being an older person in the UK in 2030 is getting harder as personal wealth decreases. Much-needed innovation in how we care for adults later in life is starting to come about.

- Walking down the average UK street you are much more likely to see a person over 65 than a young person.
- As pensions have become less generous, greater numbers of older people are choosing to work past the official retirement age of 72 in part time or freelance work. Organisations recognise the value of retaining older staff, and now offer flexible job-sharing and part-time working options for older people.
- For some, working into later life is a welcome choice, but for those that are less affluent or suffer from poor health, the future looks increasingly bleak.
- Food and housing costs are high and, for most people, pensions are modest. For millennials, now in their 40s, property wealth is not an option to pay for care in later life, as many rent their home.
- People have to save more and work harder to provide for retirement, while caring for elderly relatives. Many are pessimistic about the future.
- A host of new experiments and funding mechanisms have been tried out to ensure that older people are better cared for.
- As well as tax breaks for people who care for an older person, there are incentives such as lower council tax for multi-generation households. In many parts of the UK, you can build up credits through voluntary work in return for reduced cost or free care in later years. In more affluent areas, entrepreneurial older people have set up co-housing schemes that offer independent living with communal gardens and eating/social spaces, to tackle loneliness.
- Dementia is now the number one public health issue. Public places and shopping areas have had to adapt to serve an ageing population, often with mobility or dementia-related issues. 'Slow lanes' in shops are common. Age-friendly signage and a higher number of public toilets have also been installed.
- The digital divide between older and younger people persists. Many older people can't keep up with the speed of development of new technologies that underpin shopping, banking and utilities. Some are ripped off by unscrupulous services that take advantage of the most vulnerable.



Major headlines from the last decade...

2020 Experimental treatment for Alzheimer's gives hope to millions

2025 Nursing homes to offer free babysitting services for caregivers

2030 Depression and anxiety rise as retirement age pushed to 72



Signs of this future today

- ▶ By 2035 the number of dementia sufferers in the UK is expected to surpass one million. Treating those with dementia currently costs the UK economy £25 billion each year.
- ▶ The number of disabled old people receiving informal care in the UK will double over the next 20 years if supply is to meet demand. Carers UK estimates 3.5 million more carers will be needed by 2037.
- ▶ New models of care are emerging. Many cities are experimenting with nursing homes that allow college students to live rent-free. These programmes combat social isolation and loneliness among the elderly, and allow the students to save money on rent. The Humanitas House in Deventer, Netherlands, ESDS Inter-génération in Lyon, France, and Judson Manor in Cleveland, US, are among several locations to adopt such programmes.



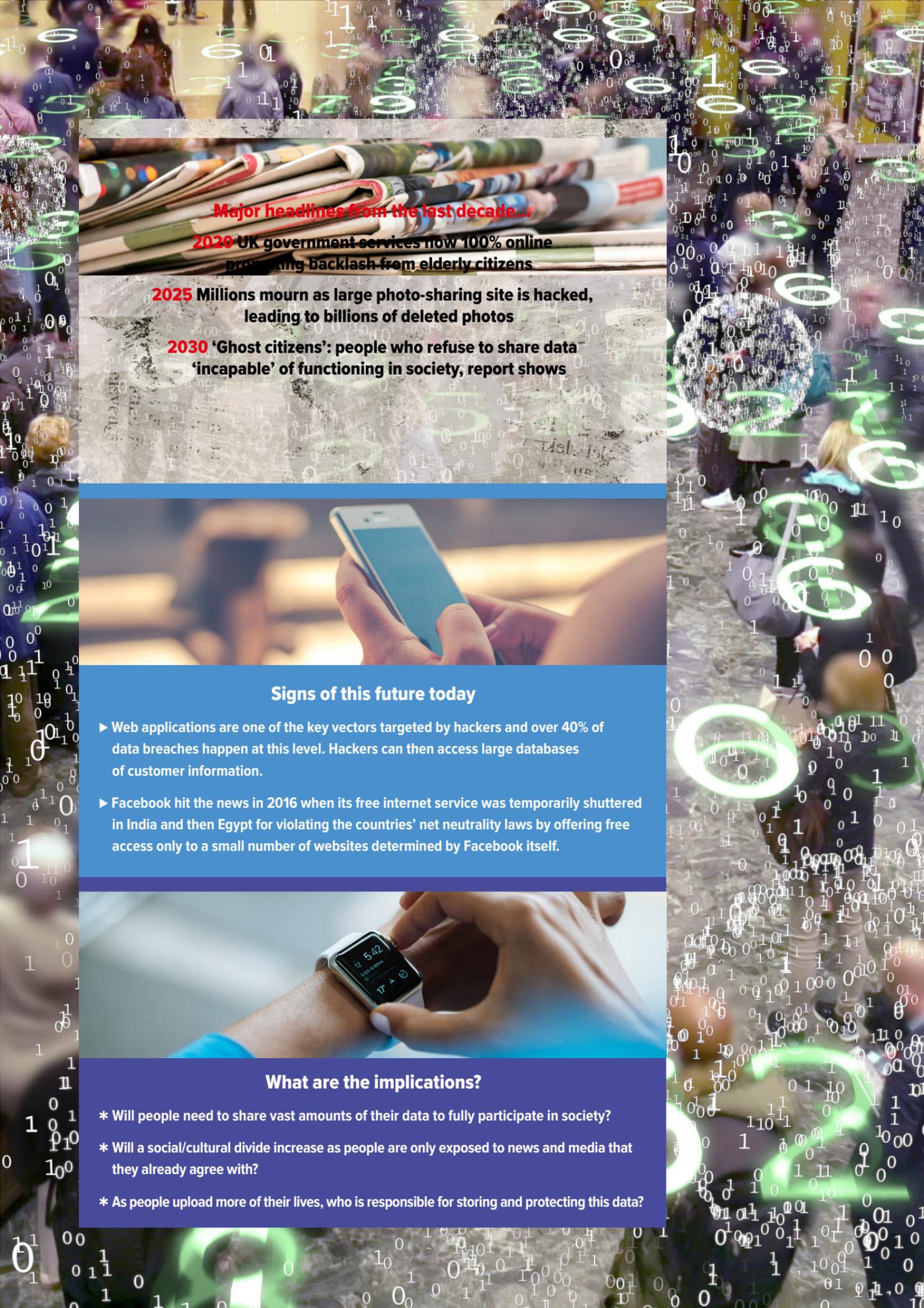
What are the implications?

- * How will low and middle income families cope with the caregiving crisis?
- * How do we ensure that the post-baby boomer generations are able to afford old age?
- * As more and more services move online, how do we ensure that older people are able to access them?

Possible future 5 Centralised digital power

Data is highly valuable in 2030. Most people's lives are mediated through a handful of digital 'mega-platforms' and they enjoy convenience and personalised services, but worry about how their lives are being shaped through algorithms.

- Just a handful of mega-platforms hold the accounts of billions people, and those in the UK are no exception. People use these platforms to access news, banking, health services, utilities: almost everything. To take advantage of privileges offered by these companies, you have to share your personal data, the scope of which is vast in 2030.
- From what you eat and where you travel, to your health data and your political views, and even the temperature of your home – data is valuable, and privacy is a luxury many people can't afford.
- Indeed, data security is now a concern of every citizen. A number of businesses have sprung up that offer encryption services, but people have to constantly keep up with the latest privacy measures to avoid being hacked. The most concerned pay to use websites that are ad-free.
- This wealth of data is mined by algorithms that anticipate your desires (often before you do) and are able to predict your behaviour. Your calendar is integrated with your smart fridge and your handheld device so that on days when the kids have after-school activities, a dinner based on your preferences is automatically ordered and sent to your door.
- While services such as these are highly convenient, many people are frustrated at the number of decisions being made automatically based on your data and past behaviour. Allocation of state benefits and the cost of insurance premiums are two particular areas where people have campaigned for transparency on the decision-making criteria underpinning what people get.
- You notice that you very rarely disagree with things you read in the news. This is because news you receive is tailored to your data profile, giving you the feeling that your beliefs are universal.
- It is difficult to make friends outside of your existing circles as so much information, including restaurant recommendations and dating profiles, are targeted to your specific demographic.



Major headlines from the last decade...

**2020 UK government services now 100% online
prompting backlash from elderly citizens**

**2025 Millions mourn as large photo-sharing site is hacked,
leading to billions of deleted photos**

**2030 'Ghost citizens': people who refuse to share data
'incapable' of functioning in society, report shows**

Signs of this future today

- ▶ Web applications are one of the key vectors targeted by hackers and over 40% of data breaches happen at this level. Hackers can then access large databases of customer information.
- ▶ Facebook hit the news in 2016 when its free internet service was temporarily shuttered in India and then Egypt for violating the countries' net neutrality laws by offering free access only to a small number of websites determined by Facebook itself.

What are the implications?

- * Will people need to share vast amounts of their data to fully participate in society?
- * Will a social/cultural divide increase as people are only exposed to news and media that they already agree with?
- * As people upload more of their lives, who is responsible for storing and protecting this data?

Possible future 6 Citizen innovation

As traditional institutions struggle to act, individuals in society increasingly have the motivation and means to tackle the challenges they experience in their lives. The 'consumer' label no longer captures this new attitude, scope and agency.

- Fingers are pointed as people everywhere get desperate for things to return to 'normal'. Apparently, we're out of the recession, but it doesn't feel like it.
- A significant minority think they are irrevocably excluded from society and from the lifestyles they aspire to, while the most entrepreneurial and well-connected relish the flexibility of being freelance and global.
- Only those in power still believe our political system has the ability to solve society's problems.
- Alternative currencies and investments proliferate.
- Disillusioned, and with wide access to open-source software and peer-to-peer networks, many people see less need for politics as an intermediary for tackling social issues.
- New ways of marshalling debate and action have stepped into the void; using digital lobbying, data collection and sharing to interject in decision-making, along with new ideologies, like the idea of a 'Post Nation-State' world.
- Shared work and maker-spaces cultivate agency and entrepreneurship among consumers who band together to force institutions to renegotiate terms and improve their offerings. There is also a readiness to team up with brands to promote products and services through their personal networks.
- Enterprising citizens are exerting their influence in the digital economy; reclaiming their personal data from the dark web and corporations, understanding it, monetising and trading it for their own purposes.
- Waves of families are choosing to opt out of state-subsidised child and social care in favour of lower taxes and cooperative models that they trust.
- Basic Income schemes have proven successful in the public sector, manufacturing, fishing and farming industries. Additional pilots are underway in law and accountancy professions hit by digital job losses, but people are concerned by the longer-term impacts on society.



Major headlines from the last decade...

- 2020** "Bail us out or lose us forever": says city council chief
- 2025** Government crowd-sources new healthcare constitution
- 2030** Business group calls for laws against 'bullying' consumer-buying groups

Signs of this future today

- ▶ In 2015, 886 Dutch citizens came together to successfully sue their government for its failure to meet climate commitments.
- ▶ For the first time, the Greater London Authority is offering match-funding for community initiatives via a dedicated crowd-funding programme that aims to create special local spaces that bring Londoners together.
- ▶ Through an intergenerational conversation on Twitter, the Birmingham Impact Hub is reimagining childcare, testing radical new services that are more affordable.

What are the implications?

- * How will individuals' needs shift as they play more diverse, proactive roles in society and internationally?
- * How can consumers be empowered and exercise their agency through emerging digital technologies?
- * What protections will be required for the groups that are set to lose out?

Possible future 7 A divided nation

Two major faultlines run through Britain in 2030, determining how well off you are likely to be: how old you are, and where you live. This is causing hardship and resentment among many people.

- Throughout the 2020s, inequality continued to widen in Britain. The lowest income households have seen their wages stagnate and living costs rise each year, while affluent households are better off. What's changed is an increasing division between those able to work systems for their own advantage – educated, enterprising and able to adapt (EEAs) – and those who rely on institutional and poor quality artificial intelligence services.
- Incomes and living standards have continued to diverge between the north and south of the country. Incomes in the North East are up to 30% lower than in the South East, and still significantly lower even after accounting for high housing costs in the south.
- When it became clear that outright or quasi-home ownership was an unattainable dream for many, some tenants started asking how else we could achieve that security and wealth appreciation.
- Acting together, in some places virtual communities have spurred waves of innovation in architecture, home-building, home-services, time, space and land sharing, and cooperative housing models.
- Regions heavily reliant on EU funding saw a second wave of hollowing out of jobs in the late 2010s – particularly in the north and east of England, Wales and some parts of Scotland.
- While some towns have managed to recover, others are much more deprived. Here people tend to experience more health problems, lower life expectancies, and greater levels of crime as multiple generations grow up with little access to meaningful work.
- Households under the age of 40, with more than two children, mostly renting, have been particularly hard hit. They face high housing, utilities and childcare costs, wage stagnation, dwindling employment opportunities in many locations, cuts to public services and spiralling higher education costs.
- The 'generational divide' is used to refer to the major split between these two age brackets. Many younger people tend to hold hostile attitudes towards older people. They blame them for reaping the benefits of the welfare state and property market of the 2000s, while sowing the seeds of a pensions crisis, and living high carbon lifestyles that have contributed to the climate change disruption (flooding, high food prices, mass migration) that no one now denies. They also find themselves competing for jobs with older people who want to carry on working part time into their retirement.



Major headlines from the last decade...

2020 Buy 10 houses in the North East for the price of one in the Home Counties

2025 Pressure mounts on older homeowners to downsize as South East housing market strains to meet demand

2030 Average household in Stoke has just £20 disposable income after bills



Signs of this future today

- ▶ By 2021 The Resolution Foundation projects that we will see the biggest rise in inequality since the late 1980s, with falling living standards for almost the entire bottom half of the working-age income distribution. Within a decade it estimates that 9 out of 10 Britons under 35 with modest incomes will be frozen out of home ownership.
- ▶ The Centre for Cities found that the gap between economies in northern and southern English cities dramatically widened in 10 years. For every 12 jobs created since 2004 in southern cities, only one was created in cities elsewhere.
- ▶ The Hunziker Project, Germany, is a building cooperative that's experimenting with how to transition to a '200 Watt Society'. It contains 13 buildings, 400 residential units and a mix of non-residential buildings. It offers new forms of living for different lifestyles and age groups eg cluster flats that share cooking and living areas, and diverse ground floor areas for private or commercial use.



What are the implications?

- * How will hard-up households be spending what little disposable income they have?
- * What new types of services might be championed for low income households?
- * What new models for housing might we see to serve 'generation rent'?

Possible future 8 Connected home

Individuals, households and communities have a widening range of options for turning under-used assets into income-earners and for sharing, swapping and subscribing to gain access to others. With it, we feel both liberated and more vulnerable.

- In today's 'subscription economy', renting has become a more attractive proposition, with longer-term agreements, enforced rent controls and quality standards – tenants are investing in their homes.
- The average home is a web of connected objects, serviced by a handful of large providers and with a patchwork of cyber controls and responsibilities.
- The home is a shifting space of work and leisure, and combined real and virtual experiences – with much of our once private lives captured, indelibly, online.
- We all have ready access to our smart meter data, which has sparked radical innovation in the energy market: time-of-use pricing, domestic load shifting (ie turning fridges and freezers on and off and timing electric vehicle charging/use of stores), and households supplying small amounts of renewable electricity to the grid as part of their tariff.
- Fear of local blackouts, flash flooding and targeting by spy drones is fuelling a surge in local resilience planning. Local micro-grids and heat networks, and sophisticated home-storage technologies, give whole streets the ability to go off-grid if they choose.
- Although utility costs are sky-rocketing for many people, households and communities with usable, individual and pooled assets are negotiating the lowest utility costs – like space for allotments and vertical farms, water harvesting, deliveries, and parking.
- People move more frequently – largely because the employment market demands it – and, with an ever-greater emphasis on lifestyle, we change our subscriptions and trade our shares flexibly.
- Home security systems are attached to the profile of individuals and families rather than to bricks and mortar: safeguarding DNA, finger and retinal prints, insuring reputation damage (credit, trust and relationship histories) and theft of digital wealth.



Major headlines from the last decade...

- 2020** Family's horror to find 200 digital agencies are using their home data
- 2025** Fake community land-share scheme dupes Cardiff family out of inheritance
- 2030** Landlords forced to sign up to long-term energy services to help fuel for the poor



Signs of this future today

- ▶ LogMeOnce is one of a series of companies that have sprung up to help people manage their passwords online for greater security – predicated around the fact that users should have a different secure password for each site they use.
- ▶ Brooklyn Microgrid is a network of energy relationships that supports locally generated renewable energy. A start-up, it's disrupting the energy market by introducing community microgrids that enable households to buy and sell renewable energy from rooftop solar installations using blockchain technology.
- ▶ In 2016, Stanford University's 'Designing your Life' course was its most popular by far.



What are the implications?

- * How could families be helped to understand and control the unintended imprint of their home life on the internet?
- * How can the rights of those producing and selling products via peer-to-peer networks be reinforced?
- * How could renting a home be a better option to an increasing number of people?
- * Better management of supply and demand of energy would make the UK electricity grid more efficient and cheaper to run. How can the uptake of demand-side technologies be accelerated so that the grid better serves its users?



Project insights

A large number of insights and ideas were generated by using the scenarios in workshop sessions. Several areas of possible future detriment for consumers were identified and discussed, and a judgement made about those that were most likely to shape the future lives of consumers. These insights were used in a refresh of the Which? policy team strategy, to identify six strategic themes that will guide the focus of their work over the next five years. The policy team plan to conduct a similar futures process every two years to ensure that their work is focused on understanding the most important issues for consumers and exploring how the future can be shaped in a better way.

Appendix 1. The future families

We have imagined two archetypal future families, living in 2030. These can be used in workshop sessions as a way of empathising more strongly with the possible future context for people living in the UK. The future families are based on research gathered for the 2013 Which? Consumers in 2030 project, led by Forum for the Future.

The Amin family

Newton Heath, Manchester

These families are two archetypal future families that we have imagined what their lives in 2030 may be like. These can be used in workshop sessions as a way of empathising more strongly with the possible future context for people living in the UK

- The Amins live in a rented semi-detached house in north Manchester. They are a family of 5: parents Mo and Zahra, 47; their son Syed, 25; daughter Aisha, 17 and Mo's mother Fatima, 69.
- Rent isn't too high in Newton Heath, but the cost of energy for heating (and water) has skyrocketed for those who can't generate their own power.
- Fatima moved in after her husband, Mo's father, died a few years ago. She is happy to live with her relatives, particularly as she'll need a to save up a large sum to buy into a housing collective or partnership. She supplements her pension with community credits she earns as a volunteer social care officer, visiting elderly neighbours, and doing online translation for the many refugees moving to Manchester.
- Mo ran an online grocery wholesale business until 6 months ago, but had to liquidate the firm due to competition from massive global wholesalers and high food and import taxes. He is now working on and off on short-term contracts, while re-skilling as a supply chain resilience expert for retailers wanting to tap in to small, local suppliers.
- Zahra teaches English as a second language, half of the time at the local college and the rest of the time online on a freelance basis, often at unsociable hours of day, to students in India and Pakistan.
- Syed graduated from Leeds Metropolitan University with an online degree in advanced computing, but faces stiff competition from the many other underemployed people in his field. He earns casual money through virtual reality marketing (amidst a lot of gaming), while looking for something permanent. While he does help with household bills when he can, his main contribution is the time he invests in turning their unused assets, like their garage roof and its big freezer, into profit.
- Aisha, a science whizz, is finishing college and hopes to move to outer London to get an apprenticeship in an advanced biotech firm, so is working hard to get company sponsorship to build her network and get access to mentoring – not to mention the private healthcare!

The Dunn family

Dorking, Surrey

- Single parent Oliver, 51, and his two children Poppy and Leo aged 9 and 13 live in a large detached house. Oliver is a freelance genetics consultant, working mainly from home.
- While the mortgage repayments are high, house prices have continued to rise and Oliver is confident of passing on a healthy inheritance to his children.
- The children attend good, business-backed schools in the area that promise to develop kids with the mindset and skills to compete for work in the international market. This was one of the main reasons for moving out of Lewisham to Dorking seven years ago. The other was concern over air pollution, which was making Poppy's asthma quite debilitating. The explosion in electric vehicles in recent years has vastly improved air quality and she can now play outside any day without having to check health warnings first.
- Oliver now spends far less time with the family as he has a job with more responsibility and longer hours to cover their higher costs.
- Oliver commutes into London two or three times a week, travelling off peak to avoid standing-room-only carriages. He often has very early and very late virtual meetings with colleagues in the US and China, with free time in the middle of the day.
- The latest au pair, Sebastian, is great, but teams up with the kids in rebelling against the nutritional guidelines recommended by their insurer. He lets the kids take devices into bed with them and Oliver worries this is exacerbating Leo's anxiety levels and lack of sleep.
- Once a month Oliver has a long lunch with other single parent dads in the area – a sort of informal support group. They're all feeling the tension of lacking the time to invest in parenting and so rely on digital and educational services.
- Oliver has invested a lot of time and money into the house: state of the art gadgetry to manage their energy (generated through solar tiles and to charge their electric car), to control their heating and lighting, and to ensure the family is never out of groceries. An automated delivery comes most days to restock essentials. Dorking is frequently clogged with trucks, bikes and drones delivering products to households.

Appendix 2. Using futures analysis for long-term planning

The resources provided in this report can be used by any organisation, to stimulate creative thinking and rich discussion about future issues for consumers in the UK over the next decade to 2030.

The main resources are the future scenarios; the future families are provided as a secondary resource to deepen engagement with the scenarios. The scenarios are standalone and can be used individually or as a collective or partial set.

A sample workshop agenda is provided that outlines how to use the future scenarios and the future family resources in a structured way over the course of a half-day workshop. This would enable an organisation similar to Which? to engage with these futures and consider the implications. However, the longer process that we undertook to design the scenarios ensures they are up to date and relevant.

Sample workshop agenda

| TIME | ACTIVITY |
|---------|---|
| 10 mins | <p>Introductions and framing</p> <p>Facilitator: agree workshop objectives; run through agenda. Suggested warm-up exercise: each delegate shares a hunch they have about the future.</p> |
| 15 mins | <p>Families of the future</p> <p><i>Facilitator:</i> explain use of archetypal families as a way of thinking through the real-life implications of the future propositions.</p> <ul style="list-style-type: none"> Meet two future families – one NW family lower income, one affluent SE family. <p>Facilitator: divide people into two groups, or work together and take each family in turn (in which case, more time will be needed).</p> <p>Discuss and record on a flipchart:</p> <ul style="list-style-type: none"> What do you think this family's aspirations are? What would be some of the biggest worries for this family? What would be the main costs for this family? How might members of this family be spending their disposable income? <p>Quick feedback to share observations with the whole group.</p> |
| 60 mins | <p>Exploring the future propositions</p> <p><i>Facilitator:</i> give overview of the eight propositions. Small groups explore the future propositions using the family they have already discussed.</p> <p><i>Groups:</i> imagine your family in relation to the proposition. Discuss the following (example questions focusing on potential areas of consumer detriment. You can come up with your own questions relevant to your organisation).</p> <ul style="list-style-type: none"> What challenges could this future pose to your family that they may not be aware of? What would their biggest concerns be in this context? How might they stand to benefit in this context? <p>Given the questions above, what are the possible challenges and opportunities presented by this proposition? Groups discuss using one future proposition, and then when done, move onto the next. Ideally ensure that all future propositions have been considered.</p> |
| 30 mins | <p>Implications for your organisation</p> <p>Continue in group work, and discuss:</p> <ul style="list-style-type: none"> How might your organisation need to respond to address the potential areas of detriment or opportunity you have identified? |
| 45 mins | <p>Whole group discussion</p> <p>Each group shares their top ideas on the areas of detriment, opportunities and organisational responses.</p> <p><i>Facilitator:</i> capture and cluster the ideas – using a matrix to capture organisational responses, such as ease of implementation vs impact.</p> <p><i>Whole group discussion:</i></p> <ul style="list-style-type: none"> Are there any consistencies across different propositions? Could any responses be designed to tackle multiple issues? Capture any other insights. |
| 10 mins | <p>Summarise the key insights & recommendations</p> <p>Explain next steps.</p> |

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