



Communications
Consumer Panel

Switchover from analogue to digital telephony: UK consumer and micro-business reactions



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Communications Consumer Panel
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Executive Summary

Background

The Communications Consumer Panel is a conduit for the voices of consumers, citizens and micro businesses, and ensures that they are heard by industry, Ofcom, government and others. As well as engaging with stakeholders who work with consumers on a daily basis, we commission independent research on topics where there is risk of detriment to consumers - and particularly to groups of people who may have vulnerabilities or additional requirements.

The issue

The current UK telephone network - the Public Switched Telephone Network (PSTN) is reaching the end of its life and needs to be upgraded. The existing network is over 35 years old and will be unable to meet the demands placed on it in the future.

Work on this upgrade has been ongoing for several years now, and by 2025 all consumers will be migrated over to using landline telephones over Voice over Internet Protocol (VoIP) technology. This means everybody currently using a standard PSTN landline, and anyone who has any technology connected to a landline, will need to switch over to the new digital network.

The Panel has identified a risk that policy-makers' and industry's preparations for migration to VoIP may not have given sufficient weight to some people's specific circumstances. Some customers (both residential and business) have additional requirements - they may still be reliant on PSTN for certain services such as care alarms or fax machines, or lack the right equipment in their home to switchover easily, or simply not understand what they need to do when the switchover happens. There is therefore a risk that they may be adversely - and in some cases seriously - impacted by the switchover.

The research comprised 46 in-depth interviews across the UK with residential and business audiences:

- The residential interviews included interviews with people we identified as potentially at a higher risk in terms of the impact migration to VOIP could have on their daily lives. Participants were recruited who were expected to be more reliant on their landline telephone services, so potentially more vulnerable to changes in the telephone system included people who were over 75, adults of any age living with physical or mental disabilities, people lacking broadband internet at home and anyone with additional PSTN services beyond a telephone such as care alarms or fax machines. We included participants who were less likely to experience detriment as a control sample, as well as family and friends of people more vulnerable to the changes.
- The business interviews included businesses reliant on PSTN technology, as well as 'expert' businesses selling/installing/buying PSTN equipment on behalf of people with additional requirements.

Objectives

Our primary objectives were to understand:

- The needs of customers that may have additional requirements and/or be at risk of detriment when the changes to landlines services occur, so that sources of potential harm can be identified and mitigated against;
- The level of knowledge and confidence of those people who may be at higher risk of detriment in their ability to carry out the switchover, and the level or type of support they may expect from communications providers (CPs) and other organisations;
- Whether third parties such as family and friends assisting those with additional requirements anticipate being able to support them through the migration;
- The extent to which organisations selling/supporting/commissioning technology that is dependent on PSTN lines are aware of, and preparing for, the upcoming changes to landline services.

Key insights

1. Awareness of the VoIP switchover was generally very low, but awareness was more varied amongst expert businesses.
2. Overall, most people accepted the concept of the VoIP switchover as technological progress - though some were upset that a trusted technology was being taken away. It was seen in similar terms to the analogue to digital TV switchover some years ago.
3. Consumers - including those most at risk of detriment and businesses reliant on PSTN - generally believed they understood what the VoIP switchover meant when it was presented to them.
4. There was considerable variability of response among expert businesses, with some seeing PSTN as more reliable, and others perceiving VoIP to have benefits in areas like telemetry and others not knowing enough to have a view.
5. There were a number of factors that could increase or decrease the likely impact that switchover could have on customers. The most important indicators of increased risk of impact were not having broadband at home or the office, but age, more severe disability, cognitive impairments, low digital literacy and limited support from friends or family were all factors leading to potentially higher impact.
6. There was a wide variety of different types of landline setup, related to the number and type of PSTN services being used and the placement of master, power and extension sockets.
7. Participants felt they could manage the switchover themselves, perhaps with support from friends and family. They were more likely to anticipate needing help from providers after the switch with potential issues around compatibility in order to avoid gaps in their landline service - though most people accepted it was their responsibility to source and pay for new handsets if required.
8. Participants considered that the onus is firmly on providers to initiate the switch and support customers to migrate, to provide the necessary routers and basic instruction and offer hands-on support if needed during the process, potentially including checking phone compatibility. This may include providing extra help to

people with additional access requirements.

9. The most frequent questions raised about the switchover related to timescale and cost, but issues of reliability and performance, the role of the CP, extension sockets, external rewiring, compatibility and the impact of power cuts on the service.

Summary of the Panel's recommendations (found in full on page 15)

The Panel has identified a number of recommendations for communications providers, UK and devolved governments and Ofcom that could run in tandem with their current plans for switchover.

Communications Providers should:

1. Get to know customers' additional requirements, and promote widely the Vulnerability Policy that they are required by Ofcom to publish, explaining the benefits of services they operate that are designed to provide additional support to customers with access requirements.
2. Take responsibility for informing customers (including those who are not online) of the switchover 12 months in advance to ensure there are no unwelcome surprises.
3. Train staff to explain to customers simply why the switchover is happening and what benefits they will receive from it, using consistent language across the sector.
4. Collect feedback from customers who have been switched to VoIP and share learnings with other CPs to lessen potential impacts on consumers, particularly those with unusual set-ups.
5. Display clear information on their website and other materials to enable current and potential customers to get in touch with queries related to the switchover.
6. Ensure that customers understand what they can expect from CPs in terms of the provision of new routers and other equipment, and what they will be required to action themselves.
7. Use relevant branding and signposting to ensure consistency and protect consumers from scams.
8. Provide a database of VoIP-compatible products online and via a helpline to allow customers to check whether their equipment is compatible before the switchover happens.
9. Provide information about requirements in relation to extension sockets, including information about options for wireless handsets and the costs and processes for re-wiring.

UK government bodies and Ofcom should:

1. Work with communications providers and consumer groups to agree consistent and consumer-friendly terminology around the switchover, learning from

examples in other countries such as Australia's 'Check-Select-Connect' campaign.

2. Develop a consistent, easy to understand communications plan to raise awareness of the switchover. This needs to consider consumers, micro-businesses, suppliers of services that use PSTN and people who do not use the internet.
3. Create an agreed and understood 'VoIP-ready' symbol or logo to help consumers make an informed choice when buying new handsets and other equipment prior to switchover.
4. Monitor and publicly report on communications providers' efforts to promote services to consumers with additional access requirements.
5. Ensure communications take place well in advance, particularly to expert businesses that may require more preparation.

For the Panel's full list of recommendations for communications providers, governments, Ofcom and other stakeholders, now, during and after switchover, please go to page 15.

Background

The Communications Consumer Panel is a conduit for the voices of consumers, citizens and micro businesses, and ensures that they are heard by industry, Ofcom, government and others. As well as engaging with stakeholders who work with consumers on a daily basis, we commission independent research on topics where there is risk of detriment to consumers - and particularly to groups who may have vulnerabilities or additional requirements.

The current UK telephone network - the Public Switched Telephone Network (PSTN) - is reaching the end of its life and needs to be upgraded. The existing network is over 35 years old, and as things stand will be unable to meet the demands placed on it in the future.

Work on this upgrade has been ongoing for several years, and by 2025 all consumers will be migrated over to using Voice over Internet Protocol (VoIP) technology. This means everybody using a standard PSTN landline, and anyone who has any technology connected to a landline, will need to switch over to the new digital network.

The Panel has identified a risk that some people may be left behind in the migration to VoIP and anxiety, stress or other harms may be caused. With some customers (both residential and business) having additional requirements - they may be still reliant on PSTN for certain services such as care alarms or fax machines, or lacking the right equipment in their home to switch easily, or simply not understand what they need to do when the switchover happens - there is a risk that they may be adversely - and in some cases seriously - impacted by the switchover.

To help understand the potential impacts of the migration process on consumers, citizens and micro-businesses across the UK, we brought together for the first time, participants from our four National Stakeholder Hubs¹ - a series of roundtable discussions across England, Northern Ireland, Scotland and Wales attended by organisations representing consumers, citizens and micro-businesses to discuss issues facing communications consumers. We considered that a UK-wide Hub would be a useful platform to share nationwide information. Openreach's ALL IP Industry Engagement Manager provided participants with an overview of the migration process and Digital Office for Scottish Local Government's Business Relationship Manager (Digital Health & Care) provided an overview of their [digital telecare programme in Scotland](#) including current progress and any challenges experienced so far. Participants had an opportunity to ask questions and discuss the potential impacts of the migration on the consumers, citizens and micro-businesses they represent and suggest any steps that industry could take to protect consumers throughout the migration process.

Outlined below are the key messages that emerged during our discussions.

1. Digital connectivity needs to be universal, reliable and resilient, particularly for people living in rural areas who currently rely on landline services to interact with others.
2. A coordinated consumer communications campaign is essential to help raise awareness of migration to voice-over IP so consumers, citizens and micro-

¹[The Panel's National Stakeholder Hubs](#)

businesses can prepare for the switchover; and planning this should begin immediately with input from consumer, citizen and micro business representatives from an early stage.

3. Communications providers need to better understand which of their customers have specific access requirements so that those people can be safeguarded throughout the migration process to mitigate potential harm to them.

What we did

We commissioned a programme of 46 qualitative in-depth interviews across the UK across six different residential and business audiences. They took place in March and April 2021.

These included:

Residential audiences

- 20 participants living with a range of factors that may make them more vulnerable to the upcoming changes to the telephone system. These included those over 75, with physical disabilities, with mental or cognitive disabilities, with no broadband internet at home or additional PSTN services beyond a telephone.
- 6 participants used as a control sample (a mix of ages from 30 upwards).
- 5 family and friends assisting a person more vulnerable to the upcoming changes in the telephone system (due to the factors listed above).

Business audiences

- 5 businesses reliant on PSTN technology
- 5 businesses selling and/or installing PSTN technology
- 5 businesses buying PSTN equipment on behalf of those with additional requirements

A range of PSTN technologies were covered in the business sample e.g. textphones, medical remote monitoring devices, care buttons, telemetry systems and fax machines.

Objectives

We had a number of primary objectives for the research. We wanted:

- The needs of customers that may have additional requirements and/or be at risk of detriment when the changes to landlines services occur, so that sources of potential harm can be identified and mitigated against;
- The level of knowledge and confidence of those people who may be at higher risk of detriment in their ability to carry out the switchover, and the level or type of support they may expect from communications providers (CPs) and other organisations;

- Whether third parties such as family and friends assisting those with additional requirements anticipate being able to support them through the migration;
- The extent to which organisations selling/supporting/commissioning technology that is dependent on PSTN lines are aware of, and preparing for, the upcoming changes to landline services.

In addition, there were more detailed secondary objectives. We wanted to explore:

- *Current landline set-ups*: What do customers and businesses have in place in their home/office and what are the implications when it comes to switching?
- *Views on how to check compatibility of current landline technology*: How would customers and businesses make sure any PSTN technologies continue to work? What were people's levels of understanding / acceptance in relation to alternatives such as moving from a wired to a wireless telephone?
- *Views of appropriate alternatives for emergency calling* during a power-cut and willingness to use battery back-ups.

What we found

1. **Awareness of the VoIP switchover was generally very low, but more varied among expert businesses.** Awareness among residential customers in particular was very low. Some expert businesses were already aware and taking steps to be ready as well as stopping the sale of PSTN equipment; others, particularly those that only used PSTN technology (for instance, alarm systems reliant on a PSTN line) were often shocked and concerned about the planned changes.
2. **Overall, most accepted the concept of the VoIP switchover as technological progress.** Many saw it as a 'logical' change given the age of the landline network, and perceived that there would be benefits to the country from the update to services as well as potentially direct benefits such as call quality. Others were upset that a technology they trusted and that worked well was being taken away, with little obvious upside for them to the switch.

“I accept change and progress - you have to. That’s keeping up with the modern world” - Female, higher risk participant, Northern Ireland

“It’s all about moving technology forward... and some people say ‘oh it’s progress’ but I say ‘well my phone has worked and I’ve had it 40 odd years, and it’s all been quite straightforward’... They’re pushing all these things but they don’t think [about whether] everyone wants it. It’s all expense, everything is working fine at the moment and I don’t need to do it” - Female, higher risk participant, Wales

3. **Consumers believed they understood what the VoIP switchover meant.** The switch from analogue to digital was generally understood, including by those more at risk of detriment and businesses reliant on PSTN. Some people had additional questions as they learnt more about the switch, but many did not - either because they knew little about technology and did not know what to ask, or who were confident with it and felt it was not worth worrying about.

“I can’t really see how I’d have any questions, no. I’d just assume that the background work would have been done and that’s that” - Male, higher risk participant, Wales

4. **There was considerable variability of response among expert businesses,** with some seeing PSTN as more reliable while others felt that VoIP would have benefits in areas such as telemetry, and others feeling they did not know enough to have a view.
5. **The research suggests that there are a number of factors that could increase or decrease the likely impact that switchover could have on customers.** Potential higher impact was typically related to:

- *Not having broadband* at home or the office. These people were the group most likely to be adversely impacted by the switchover process.
- *Age* (people over 65 most at risk due to increased landline reliance - they may not own, or be comfortable using a mobile phone - and lower confidence with technology).
- *More severe disabilities* leading to difficulty in conducting manual parts of the switchover process.
- *Cognitive impairments* such as memory loss leading to difficulty in understanding the task.
- *Low digital literacy* leading to lack of confidence or engagement with technology.
- *Level of complexity* of home/office set up.
- *Limited or no support* from friends or family.
- *Greater reliance* on the landline (practical or emotional).
- *Use of other PSTN reliant services* such as care alarms.

“If it’s going to mean that my mum has to pay for broadband, which she’s never needed and will never need for anything else, that’s going to be an additional cost for the privilege of making a phone call or a couple of phone calls a day. I can see no end of problems...”
 - Family & Friends, England

6. **There was a wide variety of different types of landline set-up.** They ranged from the very simple to the much more complex, relating to the number and type of PSTN services being used, the placement of master sockets and power sockets, and whether customers were using extension sockets. Most residential and business customers were now using cordless phones, while fax machines and text phones were becoming obsolete.
7. **Participants perceived that there were two stages to the switchover, and felt they could manage most of the process themselves with support from CPs and other providers.** On the one hand, they focused on the switchover itself, which they imagined they would be able to handle themselves, perhaps with some help from friends or family. On the other, they focused on what happens after the switch, where they foresaw issues to resolve around compatibility. They were anxious to avoid a gap in their landline service, with some intending to buy VoIP-ready products in anticipation of the switch. Consumers largely accepted it was their responsibility to source and pay for new handsets if required.

8. **Participants considered that the onus is firmly on the providers to initiate the switch and support customers to migrate.** Providers are expected to take the lead in informing customers and support them during the migration, providing necessary routers and basic instructions and offering hands-on support if needed both during and after the switchover, potentially including checking phone compatibility. This could extend to providing extra help to people with additional access requirements - though it was recognised that CPs do not always know who these customers are.
9. **There were a number of questions raised about the switchover during the research.** These related to a number of themes: most frequently they related to timescale and cost, but also to reliability and performance, the role of the communications provider, extension sockets, external rewiring, compatibility and the impact of power cuts on the service.

*“So, what happens with my extensions? They won’t work? I’ve just decorated my bedroom so wouldn’t be thinking about re-wiring!” -
Male, higher risk participant, England*



Communicating about the switchover

The flowchart below illustrates the expectations that participants in our research had in terms of communication and support at different stages of the switchover:

In time to prepare: Communications Providers (CPs) to inform customers (consumers and micro businesses) about the switchover and timelines [Note: PSTN-reliant businesses voiced their need for additional time to prepare themselves and their customers]



Before switchover: CPs to provide routers and other necessary equipment to those who need them - and clear, basic instructions - and to arrange support with set-up where needed



Upon switchover: CPs to provide support in checking phone compatibility; Service Providers to provide support in respect of other services (telecare alarms etc)



After switchover:
The following to provide support where required by customers:
CPs,
Providers of the previously PSTN-reliant services,
Third parties - trusted partners such as charities (there may also be a role for these organisations throughout this process).

Case studies

When recruiting people to take part in this research, we focused on people in a range of circumstances who would be affected by the VoIP switchover in different ways and to differing extents. The case studies below tell the story of three people that illustrate some of the issues this report highlights.

Case study 1: June

Low risk of negative impact

Older age group

Frequent landline user

Profile: Female, retired hairdresser. June is married with grown-up children. She has recently started to have falls and recognises that she will need to install a care alarm in future.

Set-up overview: June frequently uses her landline, mainly out of habit. She has a handset in her living room where the main socket is, plus a wireless handset upstairs, but she increasingly relies on her mobile phone which she uses for WhatsApp in particular. She has broadband at home and is a regular user of the internet for shopping, and doing things like sorting out her family's car insurance.

The switchover: June has no real concerns about the VoIP switchover. She recognises the need for progress and has few real issues with power cuts because she can rely on her mobile. Nevertheless, she lives on an exposed hill and the internet can be affected by weather. June is confident that she and her husband would be able to plug the phone into the router (which they originally installed themselves) or that their children could help. She would be happy to replace the landline handsets if required, and would see it as an opportunity for an upgrade.

“I do think I could do it [carry out the switch] if I had all the information laid out on a sheet in front of me”

Case study 2: Terry

Medium risk of negative impact

Middle aged group

Living alone with a health condition and uses a care alarm

Profile: Terry, in his mid-40s, is unable to work because of Type 1 diabetes. He lives in supervised accommodation, in a flat in the Scottish Borders. He has a girlfriend and parents who live nearby.

Set-up overview: Terry lives in a highly connected home. The landline master socket is in the sitting room, along with his landline phone, router and medicare alarm. He does use the landline phone, but his main phone is now the mobile.

The switchover: Terry has few challenges with the switchover process. He feels he would be able to follow instructions and has lots of support in life if help is required. He is more troubled with the issue of power cuts and the impact this would have on his medical alarm, which is essential support if he collapses because of his medical condition. He is reassured at the idea of battery back-up for routers and alarms that can use the mobile network. He has a good relationship with his local alarm provider so will contact them to discuss the switchover and the options involved.

“The landline is almost like the ‘old faithful’ in my life... Mobiles aren’t always the most reliable. It’s always been there and it connects my other systems [care alarm] so it makes a big difference to me”

Case study 3: Pat

High risk of impact
Older age group
No mobile phone or internet at home

Profile: Pat is a retired widow, living alone in North Wales. She is fairly independent but is restricted to her immediate local area because she is beginning to lose her short-term memory. She does have grown-up sons, but they live some distance away. From speaking to Pat, there is a sense that she is living a very simple, traditional life, although she did not articulate this herself.

Set-up overview: Pat is entirely reliant on a single landline phone, plugged into the master socket in the hall with an extension cable running through to her sitting room. She does not have a mobile phone, and she does not have the internet at home- although her sons did have it when they were still living at home.

The switchover: The switchover would present significant challenges for Pat, including comprehension of what’s involved because of her low familiarity with routers and the internet. Therefore, the actual switchover could be difficult as she views the world of internet/broadband as largely alien and a source of mistrust, so organising and running her single communication channel through it is a concern for her. Being without a mobile phone, she does not have a back-up available if the internet fails.

“I don’t want a charge for the internet. So where would I get a router from?” [Note: participants were advised that a router would be provided by their communications provider as part of the switchover]

Recommendations

The Panel proposes the following practical steps for communications providers (CPs), UK government bodies and other stakeholders, to ensure that consumers and businesses' experience of the switchover is positive and not detrimental.

For communications providers:

The Panel is aware that the switchover to VOIP brings different challenges to those encountered with digital TV switchover, as it will be happening in stages, over a longer period. These recommendations assume that communications providers have their own switchover plans and can combine our advice with their knowledge to support their customers.

Immediate - act now

- a. CPs should ensure they get to know their customers' additional requirements. All CPs are required by Ofcom to publish a Vulnerability Policy, and CPs should promote this widely, explaining the benefits of any services they operate that are designed to provide additional support to consumers who have additional access requirements. This may encourage consumers with additional access requirements to contact their CP, helping the CP to identify which consumers will need more support during switchover to VOIP
- b. Take responsibility for informing their customers of the switchover 12 months in advance to ensure there are no unwelcome surprises - taking into account the needs of people who do not use the internet.
- c. Train customer-facing staff to tell customers in simple terms why the switchover is happening and what benefits they (and wider society) will receive from it - use language that is consistent across the sector (see recommendations for Government, Ofcom and other stakeholders).
- d. Collect feedback from customers who they have switched over to VOIP and share learning with other CPs to lessen the impact on consumers, particularly where complex and unusual set-ups are concerned, and support is needed.
- e. Display clear information on their website to enable current customers and those looking to sign up to their services to understand how to get in touch with any queries about the switchover.

Closer to the switchover

- f. Provide a more detailed explanation of the switchover closer to the date - around three to six months in advance.
- g. Provide simple explanations and instructions to empower customers, avoiding jargon and technical language (such as PSTN and VoIP) where possible (see recommendations for Governments, Ofcom and other stakeholders) - take into account the needs of people who do not use the internet.

- h. Ensure that customers understand what they can expect from CPs in terms of the provision of new routers and other equipment, and what customers will be required to action themselves.
- i. Use relevant branding and signposting to ensure consistency and protect consumers from scams (see recommendations for Governments, Ofcom and other stakeholders)

During and after the switchover

- j. Support customers through the switchover by making answers to FAQs available both online and via telephone, and ensuring customers are aware of these support resources, taking into account the needs of people who do not use the internet.
- k. Provide a database of VoIP-compatible products online and equivalent information via a helpline so that customers can easily check whether their equipment is compatible before the switchover happens.
- l. Use relevant branding and signposting to ensure consistency and protect consumers from scams (see recommendations for Governments, Ofcom and other stakeholders).
- m. Enlist other sources of authority and support for at-risk audiences - for example, charities, local authorities and social services.
- n. Provide information about requirements in relation to extension sockets, including information about options for wireless handsets and the costs and processes for re-wiring.
- o. Inform customers about the possibility of battery and mobile network backup for devices and how to access this.
- p. Ensure that customers who have self-identified as vulnerable are communicated with directly according to their particular requirements. Consider targeted support for those less confident with technology (in this qualitative research, this was predominantly people aged over 65, people with additional services attached to their landline and people without a current broadband connection)
- q. Let relevant customers know they can inform their CP if they live with conditions that may act as a barrier to completing diagnostic checks or manual actions, such as plugging in routers - provide additional support (including free engineer services) where required.

Additionally, there are a number of priority areas for action by Government and Ofcom:

For Government bodies, Ofcom and other stakeholders

We believe lessons can be learnt from the VOIP switchover programmes run in other countries. We recommend that UK and devolved governments, and Ofcom, work with an independent organisation, charged to deliver the communications package for the switchover, which can be used by communications providers to inform their customers. To reduce unnecessary detriment, we consider that planning for this must start without delay, to ensure enough time for consumers and businesses to make informed choices as they prepare for switchover and to minimise the chance of them buying telephony equipment that may soon become obsolete.

Immediate, act now

- a. Work with communications providers and consumer groups to agree consistent and consumer-friendly terminology around the switchover, learning from examples in other countries, such as Australia's ['Check - Select - Connect' campaign \(click here to open a YouTube page showing a video of the Australian campaign\)](#).
- b. Develop a consistent, easy to understand communications plan to raise awareness of the switchover. Consider consumers, micro businesses and suppliers of services that use PSTN, taking into account the needs of people who do not use the internet.
- c. Safeguard consumers against fraudulent activity by ensuring all communications use clear language, branding and signposting to advise who they should contact with any questions.
- d. Ensure communication takes place well in advance, particularly to expert businesses that may require more preparation.
- e. Create an agreed and understood 'VoIP-ready' symbol or logo to help consumers make an informed choice when buying new handsets and other equipment prior to switchover.
- f. Involve consumer organisations and wherever practical, consumers, to inform the design of communications around VOIP.

Plan now, act later

- a. Ofcom to monitor impact and take enforcement action against any communications provider that does not support vulnerable customers through the process.
- b. Ofcom to monitor and publicly report on communications providers' efforts to promote services to consumers with additional access requirements.
- c. Stakeholders with a remit for enforcement against retail companies to take enforcement action against those selling fraudulently marked 'VoIP ready' equipment.