

Transition from Analogue to Digital for Telecare Services in Scotland

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Purpose of document	Event Summary
Event detail (delete row if appropriate)	The event was held on 16/12/16 in Glasgow with the purpose of exploring the implications of switching telecare services from analogue to digital. Several organisations participated including DHI; Local Government Digital Office; Scottish Centre for Telehealth and Telecare; Technology Enabled Care Programme; Ofcom; FARRPOINT

Related projects	Names and doc reference numbers
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Last week, the DHI, the local government digital office, the Scottish Centre for Telehealth and Telecare and the Technology Enabled Care Programme organised an event to explore the implications of switching telecare services from analogue to digital. This was a knowledge sharing event as well as an opportunity to discuss the future landscape of telecare in Scotland. The event, held on the 16th of December in Glasgow involved four talks followed by a question and answer session where participants could quiz the panel on matters important to them. There are an estimated 170,000 users of telecare services in Scotland, demonstrating the importance of these services and why they must be enhanced to provide even better care. In 2025, British Telecoms (BT) will switch off all analogue telecare services and so the public switch telephone network (PSTN) will be replaced by digital means between now and 2025. The government expect to have a more solid idea of the work that will take place in that time early next year.

The first talk was from Martyn Wallace, CEO of Local Government Digital Office who introduced the importance of telehealth services and highlighted the areas which need improvements. For example, he spoke about the idea that many telehealth services in Scotland are Internet of Things (IoT) products with large data stores at the back of them, so how can we exploit the IoT data to make our services more efficient? The ideal scenario would be to re-design our telecare services from the bottom-up to ensure that the sector is ready for digitization. SME's are driving innovation in digitization but are hitting a wall so to speak because the industry isn't ready for them yet. This is a challenge hit by a lot of SME's in our country and this must be addressed through the switch-off. However, Wallace mentioned the Civtech 2 where there will be a call for action for innovative SME's to keep adding value and building the digital infrastructure over time.

Alasdair Hodgson, policy lead for telehealth and telecare within the Scottish Government gave a presentation about the importance of the telecare services. There are approximately 170,000 users of telecare services, which represents a large proportion of people that are already comfortable using some form of technology at home. Also, it is postulated that more people receive social care via telecare means than those that don't. Therefore, there is scope to digitize these services which would make the care provision through telecare even better and people are already accustomed to using it. Mr Hodgson also discussed the aspect of the procurement model within telecare, saying that the traditional model needs to be modernised to enhance the service rather than replacing the alarms with like-for-like digital alarms.

Therefore, there is a real need to shift away from hardware provision and focus more on software development to ensure that citizens are not bombarded with technology products every few years.

Hugh Saunders, from Ofcom, gave a talk about how the switch from digital to analogue will affect the network infrastructure and what changes the industry should expect as the switch progresses. Telephone services in general are under change in our country and in the future, all phone and internet lines will run through broadband connections. BT's System X is 30 years old and is still in service, but it cannot be sustained for much longer. In the not so distant future, BT will adopt the Voice Over Internet Protocol which is a well-standardised product and will be the dominant approach going forward. Saunders mentioned the Connected Nations 2016 publication which came out on Friday 16th of December as well. In the seventh chapter of the publication, the authors demonstrate what should be expected throughout the PSTN switch off and how industry partners will have to collaboratively engage with one another. A social broadband deal in Dumfries and Galloway has been deployed and is very efficient and innovative. One aspect which was highlighted throughout Saunderson's talk was the fact that emergency calls must be prioritized but how can this be done over a broadband connection. If everyone in a household is using the internet/on the phone, how do you make sure the 999 call goes above these calls and is put through first? He also highlighted the issue of security as IoT services are renowned for having unsophisticated barriers. He exemplified the DDoS attacks which occurred a few months ago, demonstrating what might be in store for us if security is not strengthened. On Friday, October 21, a series of Distributed Denial of Service (DDoS) attacks caused widespread disruption of legitimate internet activity in the US. Because the attacks targeted the Domain Name System (DNS) that makes sure information requests on the internet are delivered to the right address, a lot of normal activities such as online shopping, social media interaction, and listening to music, were not possible for periods of time. The length of disruptions varied, but in some cases, it was several hours. One way around using these IoT connections would be to use non-internet based connections with the smart meter programme as a major successful example of this.

Richard Parkinson, director of FARRPOINT gave the final talk of the day where he discussed telecare services in more depth and the examples of digitization of these services in other countries. Sensors and controller devices are placed in peoples' homes and at the time of an emergency the controller device is activated by the person. This is a call sent to the alarm-receiving centre where the staff support the person until more help arrives if required. There are 26 alarm-receiving centres in Scotland with some 240 staff in total. However, 30% of the staff's time is spent on administrative tasks which could be freed up using automated services. It is expected that the switch from analogue to digital will take 5 years but

early adopters in the digitization area will start to work before the 5 years is up. Parkinson eluded to the idea of clustered digital a couple of times which means increased sharing between providers. This clustered digital approach will mean that the switch to digital will be less fragmented. However, mobile connectivity costs about £4/month which is quite a high cost after you multiply it by the 170,000 users and so doesn't encourage sharing. There are also no international digital telecare standards for Scotland to follow but several organisations within Scotland are working on this. Of course, outside of the central belt, connectivity is a major issue but the government cannot 'reinvent the wheel' for every local authority or housing association and so standardisation needs to be ubiquitous. However, several new base stations are being built in rural areas of Scotland to increase the mobile footprint in these areas. According to the united nations 2016 publication by Ofcom, "the availability of superfast broadband has improved, but a significant number of homes and businesses are still at risk of digital exclusion. In 2015 around 8% of UK premises (2.4 million) were unable to receive broadband speeds faster than 10Mbit/s. Although this figure has since fallen to 5% of UK premises, this still means 1.4 million premises are being poorly served and may fall within a broadband universal service obligation". Some sources state that 4G coverage will serve all areas of Scotland within two years' time but some say this isn't acceptable and needs to be quickened. Parkinson's example of where telecare digitization has been successful was in Sweden who are replacing outdated care alarm technology with a digital platform that enables more efficient care planning and assessment for 100,000 digital users.

Overall, the day was very insightful as it gave a very brief overview of what can be expected as the PSTN switch off progresses in terms of network infrastructure and policy surrounding it. Although there are still various questions surrounding timing and funding that need to be addressed, these should be explained in the Quality of Service Report early next year.