

Digital Connectivity; Progress and Opportunities

Digital connectivity remains a high priority for the Scottish Government and Highlands and Islands Enterprise. The Digital Scotland Superfast Broadband Programme will provide 84% of premises with access to fibre by the end of 2016 but there are plans to increase coverage with additional investment. At a national level, the Scottish Government intends to go further still and has committed to making superfast broadband available to 100% of premises by the end of 2021.

Rollout of 4G continues across Scotland. By the end of 2017, all four operators will provide 95% of premises with indoor 4G coverage. Both the Scottish Government and HIE collaborating with all four operators through the Mobile Action Plan to maximise commercial coverage. We will announce our proposals for a Mobile Infill Programme by Spring 2017.

Regulation plays an important role in improving coverage. HIE and SG are working closely with Ofcom to address concerns relating to broadband speeds and quality of service. Ofcom are attending the meeting and will participate in the discussion.

Update from HIE and Scottish Government

1. Digital Scotland Superfast Broadband (DSSB) Programme:

By the end of 2016, the DSSB project for the Highlands and Islands will deliver fibre-based broadband to 156,000 premises. With commercial coverage, this will connect 84% of the region's premises and at least 70% (of all premises) at speeds greater than 24Mbps. At the end of September, 144,611 premises were connected from 624 structures. Although clearly just a step towards our ultimate goal of universal high-speed coverage, it is important to recognise how much has been achieved in the last few years.

Already there are plans to go further:

Extended Reach - BT has confirmed they are able to go beyond the committed contractual targets within the original budget. This additional build is estimated to provide fibre coverage during 2017 to a further 4,345 premises, primarily in towns and villages where delivery is already taking place.

Gainshare – In addition, strong early take-up on the new infrastructure has triggered a Gainshare (clawback). BT is currently modelling the final funding that can be allocated for reinvestment.

BT is also modelling the remaining budget (Innovation Fund and interest) of £2.15m. **HIE has stipulated that this modelling focuses on solutions for the areas currently receiving the lowest speeds** such as Exchange Active exchanges, Connected Communities exchanges (with no ADSL) and postcodes where all premises are receiving less than 2Mbps. The benefits of these funds will be known shortly.

Broadband speeds & Coverage Data – SG is clear that BT need to do more in Scotland regarding commercial investment, innovating solutions to address speed issues and improving the availability information for the public on rollout plans. Ministers have requested that BT supplies details of how they will meet and resolve these challenges.

Speed issues stem from the use of Fibre to the Cabinet (FTTC) technology in the DSSB programme. In FTTC, street cabinets are connected to main exchanges by fibre. Existing copper cabling links individual homes and businesses to the cabinet. This 'local loop' of copper is where speed drop-off occurs.

Innovation may resolve this issue. BT is trialing 'Long Reach VDSL' at North Tolsta on the Isle of Lewis, which essentially increases the power of the broadband signal down the copper cable from the cabinet. Although trials are at an early stage, indications are promising, suggesting it could make superfast broadband available to more premises.

2. **Achieving 100% Superfast coverage**

Presently the Scottish Government is working with partners, progressing a range of actions with a view to launching new procurement activity in 2017 that will help realise our 100% coverage commitment. This work includes:

- **finalising the DSSB coverage footprint;**
- **undertaking an Open Market Review**, to determine future commercial investment plans and help define a new intervention area for the new investment programme.

As a first step, SG published a Prior Information Notice on 9 September **launching a formal supplier engagement exercise**, to gauge market interest, further improve our understanding of the broadband market and help shape our procurement strategy. This will inform an overall delivery plan.

In terms of finance, so far £42 million has been secured for further investment in broadband – £21 million from UK Government, matched by SG. However, further funding will be required if our 100% target is to be reached. We are currently assessing delivery options and cost implications of the 100% commitment. We should be in a position to more accurately estimate costs to coincide with emerging Spending Review timescales.

The Scottish Government is currently preparing an application to secure up €25 million ERDF funding from the 2014-2020 programme to help extend world class digital connectivity to those parts of the Highlands and Islands that will not be served commercially or by existing public sector investment programmes. This intervention would have a particular focus on remote island communities, potentially providing both fibre backhaul and mobile infill.

3. Improving Mobile Coverage

Both SG and HIE fully recognize that mobile connectivity is essential socially, economically and in terms of civil resilience. Improving mobile coverage is a top priority.

Commercial rollout is on-going. By the end of 2017, all four of the UK's main network operators aim to provide indoor coverage to 95% of Scotland's premises. This equates to around 97% outdoor coverage. O2's 4G license requires them to meet this coverage level. Other MNOs have committed to matching it. SG lobbied Ofcom to create a 4G coverage obligation for Scotland. Nationwide, Ofcom's Communications Market Report (published August 2016), states 92% of premises in Scotland had access to 4G from at least one provider.

HIE has provided each Local Authority with a detailed update report showing progress since the last COHI in March.

Overall there are **684 existing sites** being upgraded to 4G with **94 already** in service. MNOs are progressing a further 221 sites which is a combination of new build sites and site share on an existing structure. Additionally, **the Home Office plan a further 52 sites in the most hard to reach locations**. Again they will be a combination of new build and some site shares on existing Airwaves mast sites.

Mobile Action Plan – both HIE and SG are clear that mobile operators need to do more to expand 4G coverage in Scotland. To do so, we are working closely with the industry through a **Mobile Action Plan**, published this summer. The Plan aims to improve and increase coverage across Scotland and includes an infill programme to extend coverage into rural areas not served by commercial rollout. We intend to announce proposals for a Mobile Infill Programme by Spring 2017.

In addition, the Action Plan states we will work with UKG to ensure their new 4G-based emergency services communications network provides maximum benefit for Scotland's rural communities. UKG announced EE as their network provider and where EE has no masts or plans to extend their network, UKG will build new infrastructure by 2017. It is expected that other operators will be able to use these UKG-built masts to offering improved coverage in rural areas. However it is important to recognise that the programme targets A & B roads: although it will improve coverage, gaps will remain.

4. Community Broadband Scotland

Established in 2012, Community Broadband Scotland (CBS) continues to support community-led projects in parallel with DSSB deployment. Currently CBS is assisting projects from initial scoping to procurement and final rollout across the Highlands and Islands. Current work is summarised below.

The largest and most complex schemes CBS handles are the aggregated procurements. These are exemplified by the Gigaplus Argyll project (1,439 premises). This pioneering approach aggregated several communities into a single

project to attract interest from larger providers and leverage economies of scale. Supported by a £9m fund within the Scottish Rural Development Programme (SRDP), Gigaplus Argyll is expected to provide wireless broadband to subscribers during early 2017.

Across the region, CBS is working with 45 community groups currently undertaking early project scoping/planning work. This includes exploring coverage via the current DSSB programme and options for increased coverage. A further 39 projects are benefitting from scoping/planning grant awards, totalling £244,806, providing support to the communities moving to the next stage of their projects.

West Highland Access Network (WHAN)

Led by University of Edinburgh, this research and development project is creating a network capable of delivering superfast connectivity to existing and planned community broadband projects (WHAN member groups) in an area stretching from the Small Isles & Moidart to Applecross. The project has now secured a 1Gbps connection at Mallaig and work is underway developing and testing service links for backhaul delivery to each member community project.

5. Digital Engagement

HIE, and Business Gateway have been delivering an IT digital engagement project since 2012/13. Over 3,000 businesses have been supported through the IT engagement/DigitalBoost activity. This is made up of both workshop attendees and 1-1- support – 387 workshops (with an average of 8-12 attendees) and over 328 digital reviews.

HIE and Digital Scotland's first digital demonstration and showcase facility - #hellodigital at An Lòchran - is proving popular. Over 678 people have attended #hellodigital events and 267 businesses have received advice. Events have brought businesses, social enterprises and community groups together with a wide range of experts including Google, IBM and Microsoft. Topics covered include cyber security, digital design and making, digital marketing, latest 3D technology, movie making, augmented reality and drones. See latest events at <http://hellodigital.scot>

Cyber Security - HIE is working with national partners to roll out a Cyber Resilience Programme – a Cyber Resilience Voucher (a number of local businesses already successful in securing a voucher), an online toolkit and workshop series. There will be four workshops in the H&I for business facing staff (HIE, BG, FSB, Tourism DMO colleagues) in Moray, Inverness, Argyll and the Western Isles. We are working with both the Small Business Resilience Centre (SBRC) and Police Scotland to deliver an outreach programme of Cyber Security workshops across the region from October – March 2017.

HIE is a partner in the Scotland-wide **Digital Tourism Scotland** project. There will be a series of workshops and activities in our region during 2016. HIE is consulting with local tourism organisations in each local authority area to ensure the sector maximises the support available.

Partner support to co-promote events is welcome. See what's happening at:
www.hie.co.uk/digitalandme
www.bgateway.com/digitalboost

Ofcom

In March 2015, Ofcom announced it would undertake an overarching review of the UK's digital communications with the specific aim of ensuring digital communications markets continue to work for consumers and businesses.

SG and HIE assert that telecoms regulation is key to delivering improved connectivity in Scotland, having a key role in creating an environment that encourages commercial investment and helps address inequalities in coverage. The outcomes of the Strategic Review are therefore vitally important to Scotland.

Initial findings of the Strategic Review were published in February, with a report on BT Openreach in July. The Digital Communications Review is a series of detailed proposals that set out Ofcom's plans to improve telecoms across the UK.

With Ofcom attending this meeting, this is an opportunity for CoHI to learn more about the Strategic Review and their approach to regulation.