Carmarthenshire County Council

Digital Connectivity Report & Action Plan
November 2019

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Introduction

Digital connectivity and efficient access to the internet is commonly considered the 4th utility in modern life. It is essential for delivering economic growth, wealth creation, increased productivity and GVA for the county and the country.

Unfortunately, delivering high speed broadband and mobile connectivity in rural locations has challenges, especially in a commercially driven market, even with Government subsidies and supporting policies. This is Widley acknowledged by all significant stakeholders including Welsh and UK Government. This problem clearly effects Carmarthenshire.

Over the past 12 months there has been a significant amount of work undertaken, building relationships, carrying out data collection, mapping data, engaging stakeholders, engaging telecoms providers and most importantly, identifying traditional and alternative solutions to the problem. We have made significant progress in identifying coverage problems across Carmarthenshire, evaluating and understanding the current situation, understanding the telecommunications market and assessing the potential interventions which we as a local Authority should pursue to improve digital connectivity across our County both now and for the future.

This paper has been produced with the intention of achieving 2 things:

- Summarising the current situation across Carmarthenshire in terms of Digital Connectivity.
- To seek approval for the proposed future projects within the action Plan. These projects have the potential to improve digital connectivity and facilitate further digital infrastructure deployment across the County.

The Authority is in an excellent position to demonstrate effective leadership on this complex issue and to have a significant influence on the problem by adopting a strategic approach and policy position which encourages investment in the county's Digital Infrastructure.

Strategic Alignment

The recommendations within the proposed action plan in the second half of this document have a clear and consistent fit with the authority's existing strategic priorities as evidenced below.

Rural Affairs Report June 2019

Our recently published Rural Affairs report and recommendations makes clear the need to improve broadband provision across all parts of rural Carmarthenshire so that digital connectivity doesn't become a barrier to rural development. Improving the infrastructure around connecting communities with services and digital platforms is at the core of the strategy. The Task Group have identified several key areas that influence the issues facing rural communities in Carmarthenshire, one of which is Broadband and Digital Skills.

Recommendations within that report specifically relating to Broadband state:

- That the Council urgently works with agencies and through the Swansea Bay City Deal Digital Infrastructure Project to improve broadband infrastructure and connectivity focusing on areas of poor or no connectivity, especially through the 10 Rural Towns programme. Where possible the Council should also develop and implement its own innovative solutions to addressing local need.
- That the Council improves promotion of grants and support services currently available to businesses and private properties to support their digital connectivity.

Digital Transformation Strategy 2017 - 2020

Our current Digital Transformation Strategy makes a clear commitment to putting our County and our Region at the forefront of the digital age, focusing on developing Next Generation digital infrastructure including improvements to expand the provision of fixed ultra-fast broadband, 4G and WIFI capabilities to benefit both rural and urban areas of the region.

Corporate Strategy 2018 - 2023

Our overarching Corporate Strategy highlights a number of challenges that we face as a County, one of which is the Increasing need to strengthen the digital infrastructure of our County and support digital inclusion for individual residents as well as public, private and third sector organisations looking to develop economic prosperity and agile working. We would also strongly suggest that effective and inclusive digital connectivity underpins much if not all of our clearly defined Well-being objectives.

Current Situation

Usage & Need

Data on Internet use and digital skills identified as part of the national survey for Wales and published in September demonstrates the following important points:

- 94% of people who use the internet accessed it at least daily with 74% accessing it several times a day.
- Younger people and those with higher level qualifications were most likely to carry out the widest range of online activities.
- In 2018-19 87% of households had access to the internet. This has increased from 73% in the 2012-13 National Survey and from 43% in the 2004 Living in Wales Survey
- 95% of internet users had used a search engine (e.g. Google) in the last three months,
 72% used online banking and 43% some form of video chat.

Fixed Broadband Coverage & Access

As of September 2019, the percentage of premises (residential & Business) across Wales who have access to Superfast Broadband connectivity is 94.8%. Superfast Broadband is defined by both the European Union and Welsh Government as connectivity with an expected download speed of at least 30 megabytes per second.

- England 96.5%
- Wales 94.8%
- Scotland 93.8%
- Northern Ireland 88.8%

Whilst the above figures demonstrate clear progress from the 44% coverage across Wales in January 2014, it does not effectively illustrate the entire picture, particularly across many rural parts of Wales and indeed Carmarthenshire.

The below figures illustrate Superfast Broadband connectivity across our County and how that coverage compares with our regional partner authorities across the Swansea Bay City Deal area.

- Carmarthenshire 87.1%
- Pembrokeshire 88.3%
- Swansea 98.5%
- Neath Port Talbot 98%

Clearly there is a stark difference in the digital deprivation of Carmarthenshire and Pembrokeshire compared to Neath Port Talbot and Swansea. This is almost entirely down to the challenges associated to rural digital infrastructure deployment and the economics surrounding that. According to Ofcom 13% of rural premises in Wales cannot access superfast connectivity, compared to 1% of urban premises.

The Welsh Government has recently launched a Public Consultation regarding Superfast Broadband Next Generation Access (30mbps +) and Gigabit connectivity. This follows a recent 2019 Open Market Review (OMR) which requested information on NGA and Gigabit coverage and plans from telecommunications providers.

The purpose of this consultation is to confirm the premises in Wales which do not have Next Generation Access (NGA) broadband infrastructure capable of delivering at least 30Mbps, or where there are no plans to provide such infrastructure over the next three years. This also involves gathering information on Gigabit connectivity. The primary reason for carrying out this consultation is to enable the Welsh Government and Local Authorities to fully understand connectivity in Wales, and thereby to inform potential future interventions.

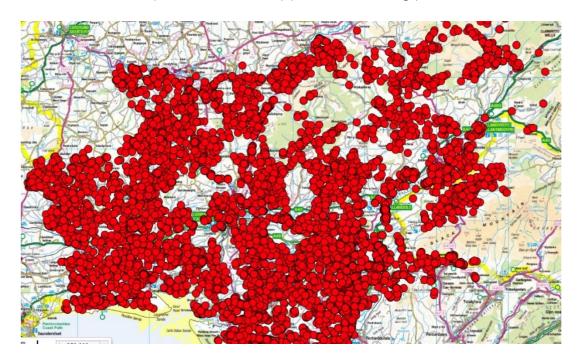
The Welsh Government is inviting three types of stakeholder to respond to the consultation:

- Residents and businesses
- Local Authorities, public bodies and industry organisations
- Telecommunications providers.

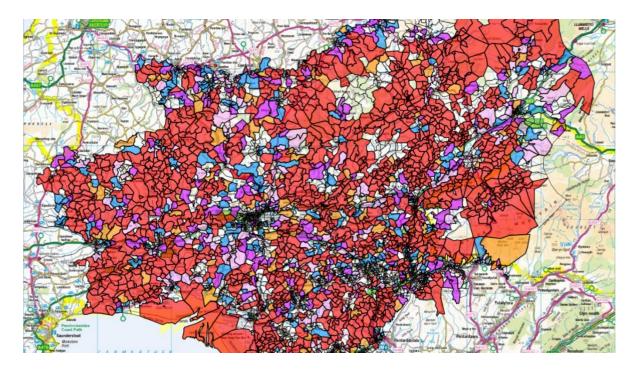
Data on the initial findings from the Open Market Review, an interactive map, and instructions on how each type of stakeholder should respond can be found at the Welsh Government's website:

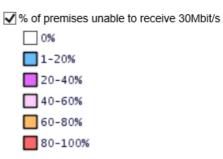
Our own data demonstrates there are currently 95,720 premises in total across Carmarthenshire (7,572 business & 88,148 residential). The initial results from the Welsh Governments Open Market Review reveal a significant gap in broadband service provision of 12,838 premises across Carmarthenshire who are unable to receive Superfast Broadband. That's almost half of all non-superfast premises within the Swansea Bay City Region.

The below image shows every premises (Business & Residential) across Carmarthenshire which does not have access to Superfast Broadband. We have obtained this data, including the address and UPRN of each premises, and mapped it accordingly.



This next image shows the percentage of underserved premises per postcode area across Carmarthenshire. The key below the image will help interpret the colours for each postcode area.





We also have lists and maps of every premises unable to receive 2mps, unable to receive 5mbps, and unable to receive 10mbps. This allows us and others to potentially target the worst served premises and communities first.

Ofcom data also shows those unable to receive minimal internet connectivity.

NOT able to receive 2Mbs UK 0.5% - Wales 0.9%	
Authority	Percentage Premises Served
Carmarthenshire	2.2%
Neath Port Talbot	0.1%
Pembrokeshire	2.4%
Swansea	0.2%

NOT able to receive 5Mbs UK 1.3% - Wales 2.1%		
Authority	Percentage Premises Served	
Carmarthenshire	5.2%	
Neath Port Talbot	0.4%	
Pembrokeshire	4.6%	
Swansea	0.5%	

NOT able to receive 10Mbs UK 2.4% - Wales 3.4%		
Authority	Percentage Premises Served	
Carmarthenshire	7.8%	
Neath Port Talbot	0.7%	
Pembrokeshire	6.8%	
Swansea	1.0%	

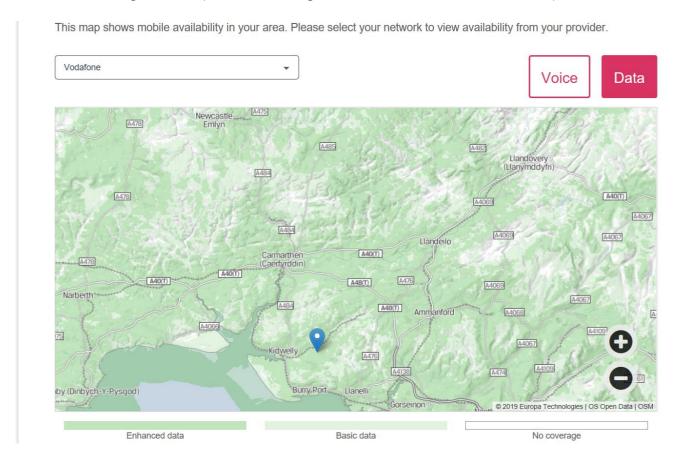
Mobile Coverage & Access (3G, 4G & 5G)

The topography and the density of its population poses challenges in improving mobile coverage in Wales. Having said that, 90% of Wales' landmass has access to good 4G mobile coverage from at least one operator, while 57% has coverage from all four mobile network operators. Within this, individual operator coverage varies, with the highest being 83% and the lowest 67%. (Ofcom)

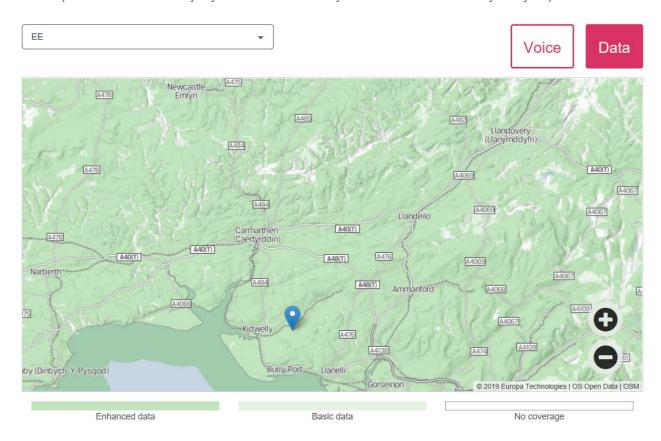
10% of Wales' landmass has no good 4G coverage from any operator. This has improved from 22% a year ago but rural areas are still badly affected. 31% of homes and businesses in Wales do not have good indoor 4G coverage from all operators. (Ofcom)

Whilst Mobile coverage in Wales is gradually improving, too many parts of the country still struggle to get a good mobile connection. Ofcom define an area as having good call coverage if nearly all voice calls complete without interruption and there is a data connection speed of at least 2Mbit/s. Good reception is easier to achieve outdoors than inside because mobile signals are reduced by obstacles such as walls and the glass used in cars and trains

The below 2 images are taken from OFCOM'S independent online coverage checker. They demonstrate 4G network coverage across Carmarthenshire firstly with Vodafone and then with EE. These are the two primary network providers across the County currently in terms of network coverage. The key for each image is located at the bottom of the pictures.



This map shows mobile availability in your area. Please select your network to view availability from your provider.



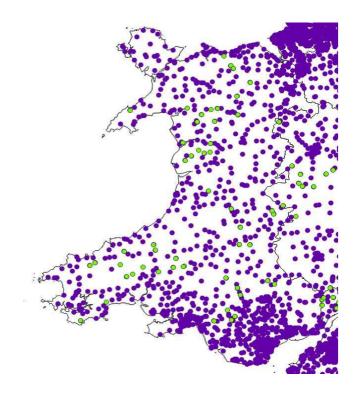
In July 2019 following a thorough tender exercise, ICT Services awarded a new Mobile contract to the Communications company EE on behalf of Carmarthenshire County Council. This new contract is for the provision of all Mobile phones, Smart phones and SIM card contracts across the authority. Our previous contract for the provision of these services was with Vodafone. As a result of this new EE contract and our previous contract with Vodafone we have a strong relationship with both operators.

EE was recently chosen by the UK Government to support the Emergency Services Network ('ESN') across the UK, to replace the previous radio system giving 300,000 critical emergency workers access to 4G voice and data for the first time. To deliver the critical ESN, EE have committed to:

- Building a new, highly resilient dedicated core network for the Emergency Services
- Building new sites, expanding coverage in rural areas
- Use the 800MHz spectrum on more than 3,800 sites to enhance coverage
- Implement satellite backhaul for Britain's most hard-to-reach areas

EE has spent significant time and investment over the last twelve months to improve coverage and capacity in Wales. As a result of this improvement and future roadmap, a number of significant customers have moved very large mobile accounts to EE from other providers.

In Carmarthenshire, EE has 95 masts 2G enabled, 74 masts 3G enabled and 82 masts 4G enabled, and is continually adding sites or upgrading existing sites to ensure full coverage to meet ESN Home Office requirements. In the map below, the purple indicates sites already in existence and green dots show new sites added in the last twelve months



There are currently 4 live planning applications from EE for new masts in quite rural parts of the County. These applications are being dealt with by our planning department via the appropriate process. Proposed locations are:

Land North of, Tirpant, Cwmdu, Llandeilo SA19 7EP Land at Cilwaunydd Fawr, Newcastle Emlyn, SA38 9LY Land at Clynmawr, Rhandirmwyn, Llandovery, SA20 0NG Agricultrual Land South Westh of Bancyffordd, Llandysul, SA44 5AB

A "Fibre first" policy approach to Digital Infrastructure.

In July 2018 the UK Government published the Futures Telecoms Review which identified that the UK was lagging far behind its international competitors in deploying full-fibre gigabit capable networks. The Review promotes a full-fibre and 5G future for the UK and recognises the need for both public sector and commercial investment to deliver the new full-fibre networks that the UK requires to grow and compete in the global digital economy. The Review also cites the July 2018 National Infrastructure report which has a key chapter on Digital Society. The image that follows, extracted from this chapter, reveals the significant difference in upload and download speeds that are achievable from full-fibre connections as opposed to copper-based connectivity.

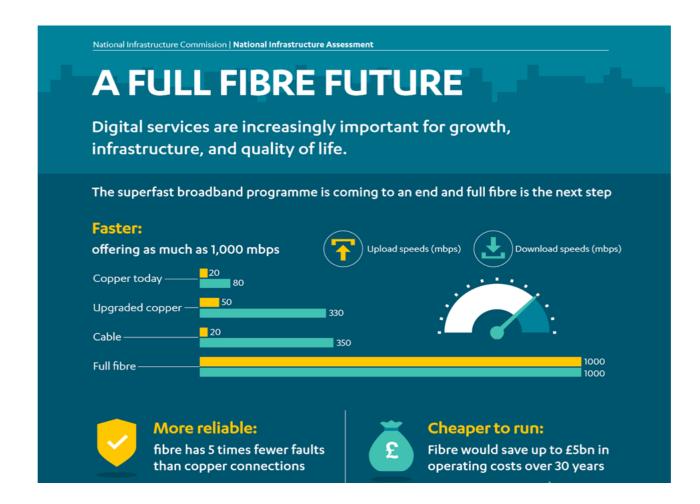
The vast majority of Carmarthenshire's Superfast connected premises are currently predominately copper-based solutions as utilised by BT and Openreach. The cities and development zones in our region have a very low penetration of full fibre to the premise as illustrated in the 2018 Ofcom data below.

Authority Percentage Premises Served with full fibre broadband:

Carmarthenshire 5.1% Neath Port Talbot 2.0% Pembrokeshire 3.9% Swansea 2.7%

The Futures Telecoms Review proposes a switch off date for the existing copper networks of 2025 making the existing Superfast Broadband Services potentially redundant within 6 years, however, a more likely switch off date is 2033. The switch off date clearly has significant implications for rural communities like Carmarthenshire and it would be prudent to take as much action as possible to facilitate the rollout of full fibre networks and migration over from copper based broadband solutions.

In addition, the full potential of 5G connectivity is fully reliant on connecting to full-fibre backbone networks. The connectivity technology and the current lack of full fibre backbone infrastructure for it to connect into will therefore need to be a consideration for Carmarthenshire County Council when assessing opportunities moving forward.



Super-Fast Cymru 2

Welsh Government's Superfast Cymru Phase 2 scheme has now been announced and contracts awarded. The scheme started out with a funding pot of around £80m. Unfortunately, only £22.5m of that was bid for by the private telecoms sector, and Openreach (BT) where the only bidder. The scheme will cover 26,000 additional premises across Wales with full fibre broadband by March 2021.

Our interpretation of the data provided by Welsh Government regarding the impact of Superfast Cymru 2 on Carmarthenshire is disappointing. It appears to be targeting approximately 960 easy to each premises which already have copper based Superfast connectivity and giving them ultra-fast full fibre connectivity. What is very useful about the data is that it provides a list of every single premises (including address) across Carmarthenshire that has less than 30mbps broadband connectivity and no future plans to upgrade. This is useful because clearly these are the premises to target across Carmarthenshire for alternative connectivity.

Whilst this news is clearly disappointing for our County it is important to ensure we facilitate the upgrading of those Super-fast Cymru 2 premises in any way possible and remain engaged with the Superfast Cymru 2 scheme as closely as possible.

Trunk Road Concession Contract

We understand that Welsh Government will soon announce a long-term project to deliver a new high-quality full fibre backhaul network across South and West Wales's trunk road network. The network is to be used by Transport for Wales to upgrade core road networks to Smart Roads & Intelligent Motorways whilst also creating an open access full fibre network to be used by internet service providers for 5G backhaul and Digital Innovation programmes.

Our interpretation of this development and the discussions we've had is that this is very good news for Carmarthenshire and the region in terms of Digital Connectivity. This concession introduces the potential to drive and encourage real competition for Digital Infrastructure and network services across South and West Wales. It creates a backbone fibre network that could be used to deliver full fibre ultrafast broadband to hundreds of thousands of premises (business & residential).

For Carmarthenshire, you will see from the image below that the fibre network is quite substantial across our County. We are told that any residential or business premises within 1km either side of this network will be able to order ultrafast full fibre connectivity via this back bone on day one. Our own mapping work indicates that this would be in the region of 27,000 premises across Carmarthenshire. There is of course the potential to build much further out in to communities should the demand and commercial appetite be there thereafter. It also runs straight past Cross Hands Business Park, which is of significant strategic importance to Carmarthenshire.

We await the announcement and awarding of the contract and the detail regarding timescales and where the network would be deployed first. Initial conversations indicate that the rollout would be "demand lead" i.e. the winning telecoms provider would potentially seek to work with Local Authorities to identify potential commercial opportunities and will then prioritise those areas based on demand".



Awareness & Adoption.

The issue of effective Digital Connectivity and adoption of digital services isn't just a lack of infrastructure and access to effective connectivity, it's also an issue of knowledge, understanding and ultimately product uptake and exploitation. According to the Welsh Government 93% of homes and businesses in Wales are in areas where superfast, or better broadband is available, but only 38% of homes are using these services. This is the lowest take-up in any of the UK nations - Northern Ireland 45%, England 44%, and Scotland 40% (Ofcom Connected Nations December 2018). A greater proportion of urban premises across Wales have also adopted superfast broadband than rural (41% versus 26%).

This problem appears to be a deeper issue than simply a lack of Digital Infrastructure and access to services. The evidence clearly demonstrates that across Wales, and indeed Carmarthenshire, people who do have access to Superfast connectivity aren't procuring the services in many cases. The problem appears to be related to digital awareness, a lack of understanding of the use cases for Digital Connectivity, affordability and the resulting lack of commercial appetite for investment by the communications service providers. As an authority we are in a strong position to lead on highlighting the benefits to businesses, communities and individual citizens of digital connectivity and online access and the social and economic benefits of doing so. This in turn will increase the commercial viability of deploying Digital Infrastructure across our County by demonstrating to operators that the appetite for uptake and adoption of services is increasing.

Action Plan

Carmarthenshire County Council is in an excellent position to demonstrate effective leadership on this complex issue and to have a significant influence on the problem by adopting a strategic approach and policy position which encourages investment in the county's digital infrastructure, particularly in rural and underserved areas. In doing so, via a combination of direct and indirect interventions, there is the potential to:

- improve the quality of public service delivery by ensuring communities in remote areas have access to services.
- Facilitate social cohesion and inclusion across the region to sustain communities
- stimulate economic growth by enhancing opportunities for employment.

The below action plan is based on best practice and learning from other UK Local Authorities making progress in this area, advice and guidance from Welsh and UK Government experts, telecoms industry experts' advice and guidance, and our work alongside the Swansea Bay City Deal Digital Infrastructure Project.

The UK Governments "<u>Digital Strategy and Leadership guidance for local authorities</u>" clearly sets out how local authorities can demonstrate leadership and create a strategy to encourage investment in digital infrastructure.

Below are two lists. The first identifies activities that are currently live and ongoing within Carmarthenshire which we are pursuing in order to improve Digital Connectivity across our County. The second lists proposed projects that have been identified as distinct pieces of work which we as an organisation can pursue now, in addition to the list of current activities, to further improve Digital Connectivity across our County. We are seeking agreement to further pursue the below activities.

Current Activity

- 1. **Stakeholder Meeting** Host a stakeholder meeting and invite key potential delivery partners such as EE, Vodaphone, Openreach, Virgin and SME's to share our vision for Carmarthenshire and ascertain what and how they can work with us to improve Digital Connectivity across our County.
- 2. **Elected Members Digital Connectivity Seminar** Hold a Digital Connectivity Seminar for Elected Members to raise awareness of the current situation across Carmarthenshire, the interventions we as an authority can pursue, the alternative options that are available for businesses and communities and what elected members can do to help. Arranged for 18th December 2019.
- 3. **Department for Digital, Culture, Media and Sport** Meet with the UK Government's Department for Digital, Culture, Media and Sport to establish the potential and feasibility of Carmarthenshire pursuing its own funding applications for the installation of full fiber broadband infrastructure across rural communities. Currently this would be via the Rural Gigabit Connectivity (RGC) program. https://www.gov.uk/guidance/building-digital-uk. It would also be an opportunity to establish the potential and feasibility of Carmarthenshire pursuing its own funding applications for the deployment of 5G infrastructure. Meetings are currently ongoing.

- 4. **Internal Departments**, **Policies and Strategies** Engage with and coordinate internal departments, policies and strategies to consider what they can do to help and facilitate Digital Infrastructure deployment across Carmarthenshire, particularly in rural areas. Departments that could potentially have a significant impact would include Planning, Highways, Economic Development, Rural Development, Estates and Legal.
- 5. **Swansea Bay City Deal Digital Infrastructure Project** Continue to play a leading role in the Digital Project of the Swansea Bay City Deal, ensuring that the priorities and interests of Carmarthenshire are represented and delivered upon.
- 6. Welsh Government's Wales Rural Broadband Task Force Continue to play a leading role in Welsh Government's Wales Rural Broadband Task Force, working to identify immediate solutions to broadband coverage deficits, identifying and recommending practical actions that can be taken in the short-term to improve broadband access to the remaining underserved premises in Wales, consulting and engaging with the telecoms industry to identify and address barriers to infrastructure and service deployment, identifying solutions which can be implemented in the short, medium and long term and inform future procurement routes and interventions.
- 7. **Wales Trunk Road Concession** engage with the Welsh Government and the wining Telecoms provider in order to further understand the scheme, its potential impact on communities and business across Carmarthenshire and what we can do as an authority to facilitate it's success.
- 8. **Appoint a Digital Connectivity Officer** To maximise the potential of the digital economy in rural Carmarthenshire by understanding the county's needs in relation to digital connectivity and developing means of enhancing connectivity and stimulating digital adoption. To deliver a program of activities designed to address digital connectivity issues impacting on rural Carmarthenshire. Funding for this post has been identified under the LEADER project and recruitment is underway.

Proposed Projects

- 1. **Upgrade Public Sector Hub Sites** Work alongside the Welsh Government (PSBA) and public sector partners across the County to cost and scope the feasibility of upgrading as many public sector assets as possible, many of which are rural, from copper connectivity to full fiber connectivity. Provided we deploy the correct technology, this would enable an average of between 9 15 surrounding premises per site to obtain full fiber immediately as an "accidental benefit" of our work. It also makes future commercial rollout of full fibre build to surrounding communities and premises more commercially viable because we will have deployed the necessary backbone fibre to build out further as part of this work.
- 2. **Cross Hands Business Park** Lead on an exercise to cost and scope the feasibility of deploying a full fibre ultrafast network to every premises at the Cross Hands Business Parks, working alongside the business community on site, telecoms providers and all other relevant stakeholders and funding streams. If successful, this model could potentially be applied to other business sites and communities across the County.
- 3. **Create a Marketing brand** i.e. "Digital Carmarthenshire" or "Connected Carmarthenshire", which can in turn be used to frequently and rigorously promote all authority activity and support resources for citizens and businesses on this agenda via Social Media, Digital Marketing, PR, Promotion and all other available communications channels. This would go hand in hand with the next proposed action to develop web-based support resources for citizens and businesses.
- 4. **Develop Web based support resources** for citizens and businesses which contain how to get better connected guides, sign posting to various other online resource, sharing of key contacts, lists of alternative broadband solutions and suppliers etc. Web based online resources could also be combined with the previously mentioned marketing brand to establish, share and promote use case studies of the benefits and usage of Digital Connectivity raising awareness of why better connectivity is so important and how it can be used to help citizens and businesses across Carmarthenshire.
- 5. **Rural Community Projects** Identify 2 or 3 of our worst served rural communities who we could potentially work with to pilot rural community projects to bring full fibre connectivity to that community. This would require involvement and commitment from us the Authority, the local community and it's leaders, telecoms providers and other stakeholders. The Authority would not be in a position to actually deliver the project ourselves however we would be in a position to provide leadership, advice, guidance, provision of technical, commercial and legal support and to broker relationships between the communities, telecoms providers and other stakeholders.
- 6. **Hold 10 Towns Community Events** hold Digital Connectivity events around the County, potentially at the 10 towns identified as part of our work on rural affairs. Invite residents, business groups and community organisations. Share information and knowledge, signpost to relevant assistance and resources, hold workshops, invite discussions etc.

7. **Promote and Facilitate Voucher Scheme uptake** – UK and Welsh Government Vouchers can be used by businesses, local communities and citizens to contribute to the installation cost of a aiaabit-capable broadband connections. Businesses and residents in Wales are eligible for additional funding from the Welsh Government towards these costs. Through the scheme businesses can currently claim up to £2,500 against the cost of a gigabit capable connection either individually or as part of a group project. Residents can claim a voucher worth £500 as part of a group project with a business. For group projects, the Welsh Government will pay up to an additional £3,000 per small to medium-sized business (SME) and an additional £300 per residential property. This means that for group projects in Wales up to £5,500 is available per business and up to £800 is available per residential property. Voucher scheme applications from residents and businesses across Carmarthenshire is currently extremely low in comparison to other parts of the UK. This is ironic given the fact that we are one of the areas with the most need for such intervention. We as an Authority are in a strong position to promote these voucher schemes in everything that we do and all work associated to Digital Connectivity. They could potentially be used to fund or part fund any Community project and the Cross Hands Business Park project suggested previously.

Financial Resources.

There would be no immediate working budget required. There would however be a requirement to allocate existing resource as and when necessary. Much of the recommended actions within this document will be exploratory. The full detailed requirements of many of the opportunities will also be unknow at this point. For those reasons we would recommend no financial resource be allocated for now other than human resources and that each project be assessed on a case by case basis as and when investment is required.

Measures of Success

Potential suggested measures of the success of this activity are as follows:

% of premises (business & residential) across Carmarthenshire that have access to Superfast connectivity who are procuring the product. i.e. product uptake.

- % of premises (business & residential) across Carmarthenshire able to receive Superfast Broadband connectivity.
- £ Voucher scheme funds accessed across the County.
- £ Funding attracted for the deployment of telecommunications infrastructure and/or services.

Number of direct contacts made with individual citizens and/or community groups to promote, assist and guide them on all matters relating to digital connectivity.

Number of individual premises connected as a direct result of Carmarthenshire County Council intervention and/or assistance.

Number of communities connected as a direct result of Carmarthenshire County Council intervention.

Number of premises connected as a result of a nearby public sector premises or asset having its connectivity provision upgraded.