



9 MARCH 2020

CARDIFF CAPITAL REGION DIGITAL INFRASTRUCTURE FRAMEWORK AND STRATEGIC OUTLINE CASES FOR FIBRE PROVISION PROGRAMME & WALES 5G PROGRAMME

REPORT OF CLLR HUW DAVID & CCR DIRECTOR

AGENDA ITEM 6c

Appendices 2 (Strategic Outline Case – Full Fibre), 3 (Full Fibre Plan) 4 (Investment Panel Log) & 5 (Strategic Outline Case – Wales 5G) to this report are exempt from publication because they contain information of the kind described in paragraphs 14 (information relating to the financial or business affairs of any particular person) and 21 (public interest test) of parts 4 and 5 of Schedule 12A to the Local Government Act 1972 and in all the circumstances of the case the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

Reason for this Report

1. To seek approval of the proposed CCR Digital Infrastructure Framework which overarches activities and interventions in the digital infrastructure space, showing their fit and contribution to the region-wide digital connectivity needed to optimise economic growth.
2. To seek approval, on recommendation of Investment Panel, of the Strategic Outline Case for the Full Fibre Programme to 330,000 premises in core CCR towns and settlements. To make the case for the release of £35k to begin the process of early business case development and the first phase of due diligence.
3. To seek approval, on recommendation of Investment Panel, of the Strategic Outline Case for the consortium-wide Wales 5G Programme proposal which is backed by an approved £5m grant from DCMS, matched by £5m private sector contributions for the Rural Connected Communities (RCC) project component. To work with WG, other public, private and HE partners to build upon the RCC project and scale into 5G Wales – a wider programme which has the potential to impact the whole of the Cardiff Capital Region. In order to progress this, an up-front funding contribution of up to £150k is required of CCR to shape the delivery and legal structures and mobilise the resources and expertise to give the wider programme the best chance of success.

4. To note and support the ongoing discussions with Welsh Government regarding co-investment in innovative digital infrastructure provision.
5. To note the other digital infrastructure proposals which have entered the Investment Framework, which are fully integrated into the Digital Infrastructure Framework and will be brought forward as part of this plan in due course. Included in which is the DCMS Local Full Fibre Network (LFFN) project which was reported to Regional cabinet in July 2019.

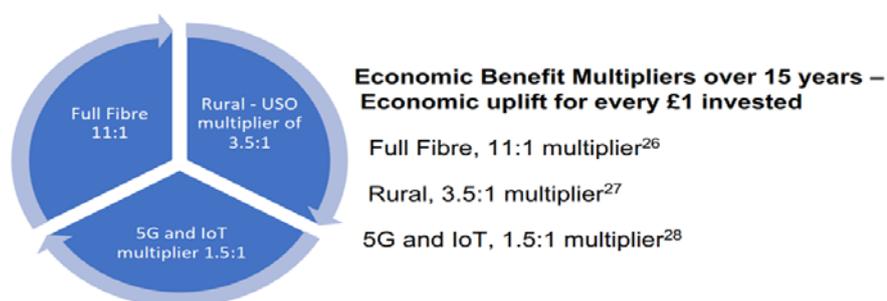
Background

6. Regional Cabinet agreed a report on Digital Interventions in CCR in July 2019 which noted the change in direction of the Digital programme strand in order to ensure compatibility with the Investment and Intervention Framework. It further addressed the need for re-positioning of the LFFN project and more a more integrated approach to digital infrastructure across CCR and Welsh Government to provide a solid base from which to leverage full fibre provision, wireless technologies and 5G deployment.
7. The report set out that CCR would take on the role of enabling full fibre provision – but would not be expected to grant fund it, instead directing the market, seeking co-funding proposals and leveraging existing voucher schemes and government funds. The focus is on the role of CCR in creating the conditions for digital infrastructure provision recognising the Investment Framework and its innovation and challenge funds play a role in attracting broader digital innovation, skills and business-led proposals.

Unlocking potential

8. Delivery of a capable and resilient core digital infrastructure in CCR is a foundational requirement. Digital connectivity underpins almost every aspect of modern life across work, travel, leisure and health. High speed reliable internet to the home or business is now widely viewed as the 4th utility. By 2020, the volume of global internet traffic is expected to be 95 times that of 2005, and connected devices will out-number the global population by nearly seven to one. In the UK, fixed internet traffic is set to double every two years, while mobile data traffic is set to increase further at a rate of 25% to 42% per year.
9. Improving fibre connectivity in CCR is critical with evidence demonstrating the dearth of commercial investment which has resulted in an underlying gap in delivery capability compared with other UK regions. Having an informed picture of optimum connectivity and how to best mobilise the levers, investment packages and incentives to attract the market and ensure every area is positively impacted – not just those the market deems as most commercially attractive – is crucial. The adoption of a CCR Digital Infrastructure Framework, will set this out clearly along with what is needed, where and by when and focusing in the tools and levers that can be applied to make it happen.

10. The requirement of full fibre infrastructure across the region is key to driving economic growth and inclusion. High-order digital connectivity stimulates innovation and the creation of new business sectors – key in the context of the CCR’s priority sectors. According to research, the UK’s business community, most particularly it’s SMEs which make up 96% of all Cardiff Capital Region businesses, could stand to benefit significantly. Access to full-fibre could unlock billions in business productivity, competitiveness as well as unlocking new markets; business start-ups and workplace agility. The UK Government commitment is for full fibre to benefit more than 15 million premises by 2023. Full-fibre is also an essential platform for the roll-out of 5G, unleashing an £11:1 multiplier as in Figure 1 below:



²⁶ extrapolation from Regeneris Report – The Economic Impact of Full Fibre Infrastructure in 100 Towns and Cities

²⁷ UK Govt case for USO intervention

²⁸ EC report on 5G impacts, TeliaSonera Inst, benefits of 4G Sweden & Estonia

Digital Infrastructure Framework

11. The Digital Infrastructure Framework – sets out the desired plan for fibre connectivity and 5G and wireless enhancement for CCR and is attached at Appendix 1. The Framework also maps the contribution that could be made by the proposals submitted to date, into the Investment Framework, to bring this plan to life. These will be subject to all necessary approvals, but demonstrate there is real market interest in creating a full fibre future for CCR across rural connectivity, 5G deployment, enablement of specific features such as the Core Valley Lines and full fibre provision. CCR is a diverse space. There will be no one size fits all technology solution and so the map in Appendix 1 illustrates the hybrid and blended approach needed.
12. The Digital Infrastructure Framework has been shaped by CCR team working extensively with providers to establish interest, capability and the commercial viability and deliverability of products and services. It is this soft market testing and engagement with interested organisations that has developed confidence in the approach. This is further backed up by submissions into the Investment Framework – two of which are considered further below – with more to follow.
13. The Framework must now be quickly mobilised to ensure optimisation of a deployment and capability plan (backed up by a demand analysis review that is being undertaken to inform this work). Given the sequence of the work needed

deliver proposals, more proactive work can be undertaken to promote developments as open access and capable of engaging Internet Service Providers (ISPs) that may have previously seen Wales as a closed market. The Framework also encompasses new developments in CCR, including the South Wales Metro and commercial and housing development activity, ensuring we direct the capacity for fibre grade connectivity at design stage. This sets the scene for deployment of Internet of Things solutions using both LORAWAN and 4/5G networks – key to innovation readiness. CCR has engaged closely with WG officials on this and our framework is supported by them.

Strategic Outline Case – Full Fibre Enablement for 330,000 Premises

14. As stated above, one of the submissions into the Investment Framework is from a global private sector infrastructure company, with track record and credentials in the commercial deployment of fibre connectivity – at scale. The proposal aims to deploy Ultrafast capability to the premise and is a combination of installation of new fibre and use of existing OpenReach assets. This is a whole-sale model and is open access meaning any ISP can provide the local service – maximising consumer choice and flexibility.
15. The provider is currently piloting roll-out of the scheme in another area of the UK. They have a plan for rollout that splits the UK into 12 areas, with CCR being one in which deployment would start in 2025. The incentive of the CCR Investment Fund and the priority focus afforded to digital however, has attracted them to the region, ahead of their deployment plan. The basis of the investment ask is debt finance over a medium-term financial model and sees investment focussed at c330,000 premises in towns, smaller settlements and large villages across the region. Roll-out in the CCR would take approximately four years to complete.
16. The confidential Strategic Outline Case attached at Appendix 2 (exempt from publication) highlights the target areas for intervention. The cities are not included in this proposal given their ability to attract wider market interest. Confidential Appendix 3 sets out the initial deployment plan (exempt from publication). Dialogue is progressing with WG to understand potential for co-investment. Continued discussion will enable collaboration and ensure no overlaps with Wales-wide interventions, such as the Trunk Road concession.
17. Investment Panel considered this proposal initially as a SIFT 1a on 11th November 2019 and agreed that it should progress through the Investment Framework and this early stage advice was reported to Regional Cabinet on 18th December 2019. Again, at the meeting on 21 January 2020, Investment Panel agreed that a SOC should be drafted and on 28th February the SOC was endorsed for onward presentation to Regional Cabinet. In brief, this sets out a £220m investment requirement, with up to £50m debt financing required of CCR and requiring creation of a Special Purpose Vehicle to operate the network. The loan period would likely be in the region of 7-8 years with security offered through provision of a Parent Company Guarantee. Interest rates would be in line with the market and state aid requirements. The Investment Panel Recommendation Log of 28th February is attached as confidential Appendix 4

and suggests in the first instance, £35k is released to carry out early stage due diligence in order to inform the proposal more fully. Whilst further and more comprehensive due diligence costs would be met as part of the commercial agreement, in the first instance it is proposed the initial work is met from the CCR Programme Development Budget.

Strategic Outline Case – Wales 5G Programme

18. A further submission has been made to the Investment and Intervention Framework for the delivery of a Wales 5G Programme. This proposal is led by the now moth-balled Innovation Point and is currently being co-ordinated from within Welsh Government. Currently, the cornerstone project of Wales 5G Programme is the Rural Connected Communities initiative which has been allocated £5m from DCMS matched by £5m from private and academic partners. Blaenau Gwent and Monmouthshire Councils are core partners to the DCMS project which requires quick mobilisation in March 2020.
19. The wider strategic opportunity that exists is to build upon this initial win and exploit 5G potential across the region and on a Wales-wide basis. The Wales 5G programme, led by WG, is seeking £31m in total with a requirement of up to £3.65m (investment in return for equity) from CCR with the remainder being made up from other public and private partners – with WG and Tech Valleys supporting in principle c£5m.
20. Given the contributions made to date by WG and key partners of c£500,000 and an ongoing commitment to a further c£100,000 of investment in mobilisation, the SOC sets out an immediate ask of CCR of up to £150,000 to be released quickly to influence, shape and develop the wider strategy and proposition. The SOC is attached as confidential attachment at Appendix 5 (exempt from publication).
21. The £150,000 CCR + £100,000 WG/ partners contributions essentially acts as the bridge between the DCMS RCC project and the wider £31m 5G programme. The initial seed fund would enable the programme to have a fighting chance and although this would be CCR funds ‘at risk’ – the early commitment is necessary to understand and develop the potential. Without it, the prospect of the project does not exist. It is proposed that the fund would catalyse:
 - creation of a Special Purpose Vehicle with a public/ private shareholding;
 - all necessary legal and financial arrangements;
 - deal terms around equity investment and share-holding;
 - specialist technical support and advice and staffing capacity;
 - shaping and development of the full programme.
22. At this stage there are risks involved as this is speculative and subject to partnerships, commitment of match funding, securing relevant specialist expertise, capacity and high-order legal and financial support. There is also opportunity cost consideration. However without taking this first step, the bigger

risk is in not engaging at all and never understanding the potential. In essence, the up to £150,000 secures CCR's place around the table and its ability to influence, direct and shape process and outcomes.

23. The 5G Wales Programme could offer a sense of comparative advantage for inward investment and opportunities for smart infrastructure and innovation development. Alongside full fibre, 5G forms the core of a modern place-based infrastructure to drive economic and social value creation. It is a growth enabler in terms of the priority sectors and clusters identified in the Industrial and Economic Growth Plan and given CCR lags behind much of the UK in relation to fitness for purpose of digital infrastructure – could see it accelerate ahead UK deployment of next generation wireless.
24. Having previously recommended to Cabinet at SIFT 1a, that the scheme gained entry to the Investment Framework (18 December 2019), on 28 February Investment Panel provided the view that the Wales 5G programme was aligned to the Economic and Industrial Growth Plan. There is undoubtedly an opportunity to show leadership on 5G deployment as both a sector in its own right and as an enabling tool for the region's priority sectors and clusters. However the proposal does require better definition, structure and clarity around leadership and commerciality and it is accepted that the best way to achieve this is for the up to £150,000 CCR contribution to essentially guarantee a role and contribution in shaping it. Again, the Recommendation Log is attached as confidential Appendix 4 (exempt from publication).

Investment Framework – other complementary proposals

25. The above two proposals alone make a significant contribution to the Digital Infrastructure Framework. However, they do not address issues of intractable rural not-spots. This is particularly prevalent in northern areas of Bridgend, the Vale of Glamorgan and rural Newport and Monmouthshire. A proposal has recently been received into the Investment Framework which has the potential to address this based on a combined wireless and fibre approach, which allows gigabit connectivity (LIDAR) to isolated areas. This is a proven technology and is currently being considered for roll-out in Monmouthshire. This proposal appears to be fully compatible with the Fibre to the Premise project already detailed and when combining both projects it will deliver a digital solution comprehensively across the region. The proposal is based on a repayable finance over a medium-term financial model leveraging DCMS funds and commercial investment. This proposal is currently in the very early stages of being tested by Investment Panel in - as reported to Cabinet on 18 December 2019.
26. In addition to this, a proposal has been received for fibre enablement of the Core Valleys Lines. Working with Transport for Wales, Cardiff Capital Region is looking to maximise the opportunity by harnessing the digital transformation of the Core Valley Lines. As part of the existing plans fibre will be installed along the Core Valley Lines in order to run critical Command and Control systems. CCR is working with TfW and Welsh Government in order to maximise the opportunity around increasing the capacity of this fibre for commercial use.

Again this proposal is investment-based and is not seeking subsidy or grant and is in the early stages of development and will be reported to Cabinet at the relevant juncture.

Progress with Local Full Fibre Network Project

27. Work is ongoing with Welsh Government to re-position the project in line with new DCMS guidance and ensure optimum impact is achieved with the c£6/7m funding available. The coverage of the project has been extended from the original four LAs to all 10 LAs in the Cardiff Capital Region and is concentrating on upgrading 316 sites with copper connections to the OpenReach FFIB product and will be carried out during 2020/21.

Financial Implications

28. This report seeks Regional Cabinet's approval to set aside £35,000 to support early stage due diligence for the Strategic Outline Case for the Fibre to the Premise proposal and £150,000 of funds to advance and shape the Strategic Outline Case for the Wales 5G Programme.
29. If approved, the City Deal financial contribution can be met from sums set aside in respect of the Wider Investment Fund 'Top-Slice' and it is anticipated that these costs will be incurred during Financial Year 2020/21.
30. Any subsequent approvals for further expenditure on these projects as a result of the Business Cases brought forward will be subject to periodic financial and performance reports throughout the year. Access to funds will need to be through agreed criteria which align to the requirements of the Investment Framework itself. This includes the requirement to produce acceptable business cases in line with the funding requirements set out by HMT and Welsh Government as well as best practice. This is key, to ensure that City Deal funding terms and conditions are observed at all times and the risk of costs proving to be abortive at a later stage are minimised.

Legal Implications

31. The report, amongst other things, seeks authority for further due diligence work to be carried out to develop proposals for the projects referred to. It is understood the Overarching Funding Agreement which sets out the investment criteria has been complied with to assess the applications at the SIFT stage.
32. When developing proposals for individual projects, the provisions of the Joint Working Agreement in relation to the delivery of the Cardiff Capital Region City Deal ('the JWA'), (in particular the provisions of the Assurance framework), and the terms attaching to the funding provided by HMT to the CCRCD must be complied with. As set out in the body of the report, to ensure compliance with the JWA, business cases will be developed for each project and the approach taken will be consistent with the HM Treasury Green Book and business case appraisal process, applied in a manner that is proportionate to the project in question.

33. It is important that the due diligence and development of the business case involve consideration of the legal issues raised by the proposals to ensure that the proposals, as developed, meet all legal requirements. It should be noted that developing the business cases is likely to require significant legal resource, which will need to be funded by the CCRCD, as part of the costs of developing the full business case. By way of example only, consideration will need to be given to;
34. a) the legal powers available to the Councils and the Regional Cabinet to provide the various forms of investment under consideration, b) the governance arrangements that should be put in place to administer the Funds (how and by whom decisions will be taken to award grants, loans, provide guarantees etc. at varying financial thresholds), c) the terms and conditions that should attach to the various proposed funding arrangements, and d) consideration of any planning law issues, state aid and procurement law implications.
35. It is noted Members are asked to approve the release of funds in the sum of i) £35,000 and ii) up to £150,000 in regards to the proposed projects and is further detailed in the financial implications. There is always a risk that expenditure on developing proposals could prove abortive if, amongst other matters, the project does not progress. That said funding could not be secured without the business cases being developed so the risk of abortive costs incurred in developing business cases is not unique to these particular projects. It is also worth highlighting, that there appears to be an 'enhanced' risk with the one particular proposal for the reasons as set out in the report and the rationale for proceeding notwithstanding the risk is further set out.

Well-being of Future Generations (Wales) Act 2015

36. The Well-Being of Future Generations (Wales) Act 2015 ('the Act') is about improving the social, economic, environmental and cultural well-being of Wales. The Act places a 'well-being duty' on public bodies aimed at achieving 7 national well-being goals for Wales - a Wales that is prosperous, resilient, healthier, more equal, has cohesive communities, a vibrant culture and thriving Welsh language, and is globally responsible. In discharging their respective duties under the Act, each public body listed in the Act (which includes the Councils comprising the CCRCD) must set and published well-being objectives. These objectives will show how each public body will work to achieve the vision for Wales set out in the national well-being goals. When exercising its functions, the Regional Cabinet should consider how the proposed decision will contribute towards meeting the 'well-being duty' and in so doing assist to achieve the national well-being goals.
37. The well-being duty also requires Councils to act in accordance with a 'sustainable development principle'. This principle requires Councils to act in a way which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs. Put simply, this means that the Regional Cabinet must take account of the impact of

their decisions on people living their lives in Wales in the future. In doing so, the Regional Cabinet must:

- look to the long term;
- focus on prevention
- deliver an integrated approach to achieving the seven national well-being goals;
- work in collaboration with others to find shared solutions;
- involve people from all sections of the community in the decisions which affect them.

38. To assist the Regional Cabinet to consider the duties under the Act in respect of the decision sought an assessment has been undertaken, which is attached to this report (Well-being of future generations assessment Appendix 6) for Member's consideration.

39. In preparing reports due regard must be given to the Statutory Guidance on the Act issued by the Welsh Ministers, which is accessible using the link below: <http://gov.wales/topics/people-and-communities/people/future-generations-act/statutory-guidance/?lang=en>

Equality Act 2010

40. In considering this matter, regard should be had, amongst other matters, to the Councils' duties under the Equality Act 2010. Pursuant to these legal duties the Regional Cabinet must in making decisions have due regard to the need to (1) eliminate unlawful discrimination (2) advance equality of opportunity and (3) foster good relations on the basis of protected characteristics. Protected characteristics are:

- age;
- gender reassignment;
- sex;
- race – including ethnic or national origin, colour or nationality;
- disability;
- pregnancy and maternity;
- marriage and civil partnership;
- sexual orientation;
- religion or belief – including lack of belief

Reasons for Recommendations

41. The reasons associated with these recommendations are:

- to provide a detailed picture of the proposed Digital Infrastructure Framework for the region as a necessary backdrop to directing and channelling the proposals and projects being brought forward through the Investment Framework;
- seek approval for the Strategic Outline Cases for the Full Fibre Enablement to 330k premises project and the Wales 5G Programme

project, committing to the next stage of the business case development and release of funds for early – as endorsed by Investment Panel;

- to provide an update on other complementary projects coming through the Investment Framework;
- to provide an update on LFFN and ongoing collaboration with WG.

RECOMMENDATIONS

42. CCR Regional Cabinet is asked to:

- (1) approve the Digital Infrastructure Framework drawn up as a means of positioning and aligning priority digital interventions and activities required in the Cardiff Capital Region;
- (2) endorse the recommendation of Investment Panel that the Strategic Outline Case for the Fibre to the Premise proposal is approved and £35,000 of funds from the Programme Development Budget is released to support early stage due diligence;
- (3) endorse the recommendation of Investment Panel that the Strategic Outline Case for the Wales 5G Programme and release of up to £150k of funds from WIF Top Slice to advance and shape the proposal and fully secure and leverage the DCMS and partner investment potential of £31m;
- (4) note and support the ongoing discussions with Welsh Government regarding collaboration;
- (5) note the compatibility of other related proposals which are currently in the very early stages of the Investment Framework process;
- (6) note and support the current position of the LFFN DCMS project.

Kellie Beirne
Director, Cardiff Capital Region
9 March 2020

Appendices

Appendices 2 (Strategic Outline Case – Full Fibre), 3 (Full Fibre Plan) 4 (Investment Panel Log) & 5 (Strategic Outline Case – Wales 5G) to this report are exempt from publication because they contain information of the kind described in paragraphs 14 (information relating to the financial or business affairs of any particular person) and 21 (public interest test) of parts 4 and 5 of Schedule 12A to the Local Government Act 1972 and in all the circumstances of the case the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

Appendix 1	Strategic Framework - Digital Connectivity Plan & Map
EXEMPT Appendix 2	Confidential Strategic Outline Case – Full Fibre to 330k premises
EXEMPT Appendix 3	Confidential Full Fibre to 330k premise deployment plan

EXEMPT Appendix 4
EXEMPT Appendix 5
Appendix 6

Investment Panel Log 28 February 2020
Confidential Strategic Outline Case - Wales 5G Programme
Wellbeing of Future Generations Assessment

Strategic Framework : Digital Connectivity Plan

This strategic framework focusses on answering the following questions:

1. *What are the conditions required to make the Cardiff Capital Region one of the most digitally advanced regions in the UK?*
2. *What steps are required to initiate the activities to realise these conditions?*

Wider context and why this focus?

Digital connectivity underpins almost every aspect of modern living across work, travel leisure and health. High speed reliable internet to the home or business is now widely viewed as the 4th utility. By 2020, the volume of global internet traffic is expected to be 95 times that of 2005, and connected devices will outnumber the global population by nearly seven to one. In the UK, fixed internet traffic is set to double every two years, while mobile data traffic is set to increase further at a rate of 25% to 42% per year.

There is broad and proven recognition that the provision of digital services drives economic growth and enables social inclusion and cohesion. There is also a growing recognition that the availability of world class digital connectivity stimulates innovation and the creation of new business sectors, however less than 10% of premises in our region have access to full fibre infrastructure.

According to research, the UK's business community, most particularly it's small and medium sized companies make up 96% of the Cardiff Capital Region businesses. In 2019, 9,584 start-ups were created in the Cardiff Capital region, representing 54 per cent of all new businesses created in Wales. Many of these businesses would stand to benefit enormously as access to full-fibre/gigabit connectivity could unlock billions in business productivity, innovation and access to new markets, in addition, an increase in growth would be driven from catalysing new business start-ups, while the increased ability for companies to support flexible working could add huge benefits to both businesses, citizens and the environment.

Our Vision

To have a digital environment which is open and flexible and has the ability to anticipate future demand and adapt accordingly, by working with the telecoms market and our key business sectors to allow them to compete and lead on a UK and Global level.

Measures of Success for the Digital Connectivity Plan

- Working with the market to enable **open, flexible, gigabit capable, or full fibre connectivity** throughout the region, through a hybrid approach of different solutions which interact with each other, allowing resilient and highly capable connectivity;
- To take **digital solutions from concept level through to deployment** for radical service delivery change in public sector including IoT, MedTech and Smart Devices.
- Availability and alignment of **skills in the digital environment** from apprentice level to highly skilled digital analysts

Strategic Focus

Digital connectivity is a critical enabling infrastructure that supports economic growth and social inclusion, and four strategic elements have been identified to deliver a globally competitive digital environment where our key business sectors can harness the opportunities provided by technologies such as 5G and Gbs services.

1. Full Fibre/Gigabit Connectivity

Full fibre has the highest immediate economic and social impact and is therefore a primary concern for the region to be at the forefront, this is evidenced by the UK government statement that the UK must achieve full fibre for 15 million premises by 2033. For 5G deployments, fibre connectivity is a pre-requisite and its absence will slow 5G and even 4G coverage. Residents and businesses having access to world class fibre networks and 5G will open the door to innovation at all levels and accelerate the move towards full digital transformation across both public and private sector organisations.

Global Connectivity

The implementation of a link to Ireland and onto the USA enabling the fastest possible connection through the worldwide global digital network. This link would immediately put the region on par with Manchester in terms of digital access, opening opportunities that are currently out of reach for data centres, financial cloud services and media and creative content providers.

What we will do;

- Work with Welsh Government to recognise the demand for this level of connectivity.
- Develop relationships with the operators to ensure all opportunities are maximised by having full sight of both private and public sector opportunities within the region

Regional Connectivity

Open access fibre/gigabit connectivity deployment throughout the region is essential, and should include public sector buildings, businesses and fibre to the home to ensure benefits for our businesses and citizens. By ensuring any targeted investment into fibre is maximising the impact the connectivity has to be of Carrier-Grade which will allow mobile telecoms operators to utilise the network and improve the mobile connectivity throughout the region.

We will;

- work with the market to ensure open full fibre/gigabit coverage across the region utilising the full range of potential stakeholders in using innovative commercial models
- develop proposals offering innovative wireless solutions which deliver reliable connectivity where full fibre is not logistically or financially viable
- work with Welsh Government to adapt the future PSBA model to become a more flexible systems integrator.
- Actively promote the region to the telecommunications industry to ensure that it is at the forefront of their investment planning
- work with key business sectors such as Creative and FinTech to understand the value of their aggregated demand within the dark fibre market to stimulate market investment.
- work with the major developers across the region to ensure digital connectivity is inbuilt into their development proposals
- Work with the 10 local authorities and other public sector organisations such as Health, to adopt a single wayleave and planning policy and charging matrix
- Work with major infrastructure projects such as South Wales Metro and Metro Plus programmes to ensure digital is included as default to maximise the services and impact of the project.

2. 5G Deployment across the Region

Presently 5G has been announced for deployment in the City Centre of Cardiff by various operators, such as EE and O2, and without a targeted approach by CCR, the rest of the region will be left behind and the digital divide will be even more apparent. By creating better market conditions for operators we can bridge the gap and ensure businesses and residents across the region can benefit from the step change in digital which 5G deployment will bring.

We will;

- Create an Infraco SPV which will become the one point of contact for operators in the market, allowing them to view the region as one opportunity

- Work with the 10 local authorities to harness the power of their public sector assets such as rooftops and street furniture to have a cohesive regional approach
- Identifying new user cases for 5G across the region, ensuring emerging and already established businesses are fully aware and understand what a 5G environment could do for their business
- Identify and trial innovative solutions for delivering public services in the future

3. Open Data Environment

Maximising the opportunities around the data rich organisations located within the region, such as Transport for Wales. This would enhance the understanding of Intelligent Data for all key business sectors to allow them to make more informed decisions.

We will;

- Work with Transport for Wales and the development of the South Wales Metro to create new innovative digital solutions for mobility around the region by creating opportunities around real time data solutions for mobility, smart parking, Park & Ride, EV infrastructure

4. Digital Skills

Digital development and technology is moving at an exponential pace and new technology is not new for long before the next version is available, therefore a large number of SME businesses and public sector organisations find it difficult to adapt quickly enough to compete. There is both a gap in the basic understanding of what is available and what technology they could or should be moving to in the future.

We will;

- harness the ability of talent the region has in the Universities in AI, Cyber and Data Analytics and ensure we are signposting both our businesses and students to the opportunity we have to develop businesses to use these skills within the region.
- Develop plans to upskill in all areas of digital, from apprentice level to highly skilled digital analysts
- Using the concept of the Public Services Test bed, to retrain current thinking within Public Sector to use innovate digital solutions

Future Generations Assessment

<p>Name of the Officer completing the evaluation:</p> <p>Kellie Beirne</p> <p>Phone no: 07826 919286 E-mail: kellie.beirne@cardiff.gov.uk</p>	<p>Please give a brief description of the aims of the proposal</p> <p>The proposal aims to seek cabinet support for the digital infrastructure framework and the SOCs for Full Fibre project and 5G</p>
<p>Proposal: Digital way forward</p>	<p>Date Future Generations Evaluation form completed: 02 March 2020</p>

1. Does your proposal deliver any of the well-being goals below? Please explain the impact (positive and negative) you expect, together with suggestions of how to mitigate negative impacts or better contribute to the goal.

Well Being Goal	Does the proposal contribute to this goal? Describe the positive and negative impacts.	What actions have been/will be taken to mitigate any negative impacts or better contribute to positive impacts?
<p>A prosperous Wales Efficient use of resources, skilled, educated people, generates wealth, provides jobs</p>	<p>Digital is an underpinning requirement for economic growth and social prosperity. Developing approaches to new technologies and ensuring they can be scaled in the region, will not only attract businesses and investment, but develop the skills needed to meet these requirements.</p>	<p>The actions taken to maximize impact are around:</p> <ul style="list-style-type: none"> •Development of shared approach with WG •Industry-led commercial infrastructure development •Links to future ready skills framework and digital skills development •The digital framework sees infrastructure needs in the round & brings together a

Well Being Goal	Does the proposal contribute to this goal? Describe the positive and negative impacts.	What actions have been/will be taken to mitigate any negative impacts or better contribute to positive impacts?
		whole set of interventions that are fit for the future
A resilient Wales Maintain and enhance biodiversity and ecosystems that support resilience and can adapt to change (e.g. climate change)	The proposal reflects a desire to move forward with the digital agenda in ways which impact social, economic and wider wellbeing goals, ensuring we are resilient in the face of future challenges. Digital will support agility and options for minimising travel, home working and embedding local resilience.	A focus on data and evidence and the underpinning nature of digital in relation to EV, LEV air quality and active travel all demonstrate the key objectives with which digital interfaces.
A healthier Wales People's physical and mental wellbeing is maximized and health impacts are understood	Digital connectivity is a 'hygiene factor' and seen today, as the fourth utility	Ensuring people in towns and smaller settlements across the region will create opportunities for people to feel better connected and to enjoy accessibility to services.
A Wales of cohesive communities Communities are attractive, viable, safe and well connected	Appropriate levels of connectivity across the region are key to enhancing coherence and connectedness of communities	5G SOC in particular is about building upon a rural focus and scaling up to benefit the wider region. Selecting and developing the right use cases is a risk area and must be done with consideration and thought.
A globally responsible Wales Taking account of impact on global well-being when considering local social, economic and environmental wellbeing	As above – digital connectivity is a core service and requirement for communities and businesses and educational establishments.	More needs to be done to work with government and industry partners to focus on global connectivity and enhancing UK internet link through international collaboration, thus inducing inward investment and FDI opportunities.
A Wales of vibrant culture and thriving Welsh language Culture, heritage and Welsh language are promoted and protected. People	Digital offers a key means of optimizing this.	

Well Being Goal	Does the proposal contribute to this goal? Describe the positive and negative impacts.	What actions have been/will be taken to mitigate any negative impacts or better contribute to positive impacts?
are encouraged to do sport, art and recreation		
A more equal Wales People can fulfil their potential no matter what their background or circumstances	This proposal goes to the heart of inclusive growth and ensuring equity of provision and equality of access.	

2. How has your proposal embedded and prioritized the sustainable governance principles in its development?

Sustainable Development Principle	Does your proposal demonstrate you have met this principle? If yes, describe how. If not explain why.	Are there any additional actions to be taken to mitigate any negative impacts or better contribute to positive impacts?
 Balancing short term need with long term and planning for the future <small>Long Term</small>	Digital is an underpinning future industry that is central to the success and sustainability of all economic sectors and plays a significant social role.	The report sets out need for a digital plan for CCR which will cover short, medium and long-term aims as well as some early potential interventions that could lead to large scale delivery
 Working together with other partners to deliver objectives <small>Collaboration</small>	The proposal is a partnership with WG, other public bodies and businesses.	
 Involving those with an interest and seeking their views <small>Involvement</small>	This approach has straddled regions, sectors, businesses, skills bodies, government groups and universities.	

Sustainable Development Principle	Does your proposal demonstrate you have met this principle? If yes, describe how. If not explain why.	Are there any additional actions to be taken to mitigate any negative impacts or better contribute to positive impacts?
 <p>Prevention</p> <p>Putting resources into preventing problems occurring or getting worse</p>	<p>The project supports growth in a long-term high-productivity through a core digital connectivity offer. This will help ensure data, digital competency and bandwidth is in place to support growth and prosperity for all.</p>	<p>The FTTP SOC is aimed at levelling up digital supply and demand across the region.</p>
 <p>Integration</p> <p>Considering impact on all wellbeing goals together and on other bodies</p>	<p>The proposal is central to delivery of all wellbeing goals.</p>	

3. Are your proposals going to affect any people or groups of people with protected characteristics? Please explain the impact, the evidence you have used and any action you are taking below.

Protected Characteristics	Describe any positive impacts your proposal has on the protected characteristic	Describe any negative impacts your proposal has on the protected characteristic	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts?
Age	<p>The proposal for base connectivity should be open to all and accessible to all. This makes the case to plan digital infrastructure development to bring a whole region to life.</p>	<p>None arising – although particular attention will have to be paid to how the message and opportunities is conveyed as consistently as possible to all businesses and communities.</p>	<p>Planning through the Regional Skills Partnership</p>
Disability	<p>The proposal for base connectivity should be open to all and accessible to all</p>		

Protected Characteristics	Describe any positive impacts your proposal has on the protected characteristic	Describe any negative impacts your proposal has on the protected characteristic	What has been/will be done to mitigate any negative impacts or better contribute to positive impacts?
Gender reassignment	The proposal for base connectivity should be open to all and accessible to all	As above	
Marriage or civil partnership	As above	As above	
Pregnancy or maternity	As above.		
Race	As above.		
Religion or Belief	As above.		
Sex	Again, should the proposal be successful, proper regard will be had to working conditions and rights and ensuring equity. Efforts in this regard need to be twinned with more support for women in particular in STEM related work.	Proportion of women employed in STEM related professions is generally lower than that of male counterparts.	Data and evidence through the activities of the RSP to inform any potential need for targeted recruitment processes.
Sexual Orientation	As with all of the section above.		
Welsh Language	We will discharge all of our duties in relation to the Welsh language Act.	Not at this time but the situation will be kept under review.	

4. Safeguarding & Corporate Parenting. Are your proposals going to affect either of these responsibilities?

	Describe any positive impacts your proposal has on safeguarding and corporate parenting	Describe any negative impacts your proposal has on safeguarding and corporate parenting	What will you do/ have you done to mitigate any negative impacts or better contribute to positive impacts?
Safeguarding	Any work with young people or in the context of schools/ learning establishments, will have proper regard to Safeguarding requirements and policy compliance.	Safeguarding is about ensuring that everything is in place to promote the well-being of children and vulnerable adults, preventing them from being harmed and protecting those who are at risk of abuse and neglect.	
Corporate Parenting	Opportunity exists to advise and support our young people about the potential for careers, growth and personal development through engagement with this sector		Ensure information about the industry in which the ten LAs are investors – is conveyed to and shared with young people in the care of the LA. Consideration should be given to city deal employment opportunities being more closely referenced in Corporate Parenting Policies and Strategies.

5. What evidence and data has informed the development of your proposal?

- Data and evidence
- Academic research
- Impact assessments
- Global reports and predictions
- Future trends
- Work to date by Cube Ultra
- Demand analysis
- 5G Wales report
- Submissions into the CCR Investment Framework

6. SUMMARY: As a result of completing this form, what are the main positive and negative impacts of your proposal, how have they informed/changed the development of the proposal so far and what will you be doing in future?

The proposal is a speculative one at this stage and pre-submission of EOI.

7. ACTIONS: As a result of completing this form are there any further actions you will be undertaking? Please detail them below, if applicable.

What are you going to do	When are you going to do it?	Who is responsible	Progress
<p>Ensure the plan for digital connectivity is monitored to optimize and maximize contribution to wellbeing goals – e.g. prosperity, connected communities and opportunities through data and evidence to plan, prevent and shape behavioral change.</p>	<p>As SOCs proceed through the business case stages and via detailed due diligence</p>	<p>Proposers and City Deal office</p>	

8. MONITORING: The impacts of this proposal will need to be monitored and reviewed. Please specify the date at which you will evaluate the impact, and where you will report the results of the review.

<p>The impacts of this proposal will be evaluated on:</p>	<p>June 2020 – as per phases of agreed due diligence</p>
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