

Agenda – Pwyllgor yr Economi, Seilwaith a Sgiliau

Lleoliad:	I gael rhagor o wybodaeth cysylltwch a:
Ystafell Bwyllgora 1 – Y Senedd	Gareth Price
Dyddiad: Dydd Mercher, 11 Ionawr 2017	Clerc y Pwyllgor 0300 200 6565
Amser: 09.00	SeneddESS@cynulliad.cymru

Rhag-gyfarfod preifat (09:00–09:10)

1 Cyflwyniad, ymddiheuriadau, dirprwyon a datgan buddiannau

2 Rheoleiddiwr diwydiant / Pwyllgor Ymgynghorol Ofcom dros Gymru – Seilwaith digidol Cymru

(09:10–09:45)

(Tudalennau 1 – 22)

John Davies, Cadeirydd, Pwyllgor Ymgynghorol Ofcom dros Gymru

Dogfennau atodol:

Y Briff Ymchwil

EIS(5)–01–17 (p1) Pwyllgor Ymgynghorol Ofcom dros Gymru (Saesneg yn unig)

3 Rheoleiddiwr diwydiant / Ofcom Cymru – Seilwaith digidol Cymru

(09:45 – 10:20)

(Tudalennau 23 – 26)

Rhodri Williams, Cyfarwyddwr Cymru, Ofcom

Huw Saunders, Cyfarwyddwr Telathrebu a Rhwydweithiau Ofcom, Ofcom

Dogfennau atodol:

EIS(5)–01–17 (p2) Ofcom Cymru



Egwyl (10:20 – 10:30)

4 Cynrychiolwyr busnesau bach – Seilwaith digidol Cymru

(10:30 – 11:15)

(Tudalennau 27 – 34)

Charles de Winton, Syrffëwr Gwledig, Cymdeithas Tir a Busnes Cefn Gwlad

Joshua Miles, Pennaeth Materion Allanol, Ffederasiwn Busnesau Bach

Dogfennau atodol:

EIS(5)-01-17 (p3) Cymdeithas Tir a Busnes Cefn Gwlad (Saesneg yn unig)

EIS(5)-01-17 (p4) Ffederasiwn Busnesau Bach (Saesneg yn unig)

5 Arbenigwyr TG – Seilwaith digidol Cymru

(11:15 – 12:00)

(Tudalennau 35 – 42)

Andrew Ferguson, thinkbroadband

Mark Donovan, Swyddog Gweithredol – Cleientiaid, Atos Wales

Dogfennau atodol:

EIS(5)-01-17 (p5) thinkbroadband (Saesneg yn unig)

EIS(5)-01-17 (p6) Atos Wales (Saesneg yn unig)

6 Papurau i'w nodi

Dogfennau atodol:

6.1 Llythyr gan Gadeirydd y Pwyllgor at Gyllid Cymru ynghylch adroddiad blynyddol Cyllid Cymru

(Tudalennau 43 – 46)

Dogfennau atodol:

EIS(5)-01-17 (p7) Llythyr gan Gadeirydd y Pwyllgor at Gyllid Cymru ynghylch
adroddiad blynyddol Cyllid Cymru

**6.2 Llythyr gan Gyllid Cymru at Gadeirydd y Pwyllgor ynghylch adroddiad
blynyddol Cyllid Cymru**

(Tudalennau 47 – 51)

Dogfennau atodol:

EIS(5)-01-17 (p8) Llythyr gan Gyllid Cymru at Gadeirydd y Pwyllgor ynghylch
adroddiad blynyddol Cyllid Cymru (Saesneg yn unig)

**6.3 Gwybodaeth ychwanegol gan Ysgrifennydd y Cabinet dros yr Economi a'r
Seilwaith ynghylch gwahanol fodelau'r Comisiwn Seilwaith Cenedlaethol**

(Tudalennau 52 – 59)

Dogfennau atodol:

EIS(5)-01-17 (p9) Gwybodaeth ychwanegol gan Ysgrifennydd y Cabinet dros yr
Economi a'r Seilwaith ynghylch gwahanol fodelau'r Comisiwn Seilwaith
Cenedlaethol

**7 Cynnig o dan Reol Sefydlog 17.42 i benderfynu gwahardd y
cyhoedd o weddill y cyfarfod**

8 Adroddiad drafft ar y Comisiwn Seilwaith Cenedlaethol i Gymru

(12:00-12:15)

(Tudalennau 60 – 99)

Dogfennau atodol:

EIS(5)-01-17 (p10) Adroddiad drafft (Saesneg yn unig)

Ôl-drafodaeth breifat (12:15-12:30)

Eitem 2

Mae cyfyngiadau ar y ddogfen hon

Digital Infrastructure in Wales

This paper reflects views from the Ofcom Wales Advisory Committee and are not necessarily those of Ofcom.

Digital infrastructure is a means to an end and not an end in itself. The infrastructure is installed to enable citizens and organisations to achieve benefits in their lives and operations. Take up is a necessary measure but an insufficient measure because it does not capture the valued benefits derived from using the infrastructure.

Superfast Cymru is a premises landline digital infrastructure. Mobile is part landline and part wireless digital infrastructure. Mobile is the digital infrastructure for people 'on the move', as well as a premises infrastructure.

Superfast Cymru is a work in progress to achieve completion, take-up and benefit realisation. It started with substantial supply side commitment but without matching benefit marketing to citizens and organisations in intervention areas.

The Welsh Government then started a project to focus on benefit realisation to businesses from exploitation of the infrastructure. The Ofcom Advisory Committee Wales had raised concerns publicly on the need to focus on stimulation to realise the benefits, as a return on the £406 million investment.

The fruits of this work are seen in the government's figures, but it remains work in progress. The realisation of the benefits from stimulation was hampered by BT changing its deployments of infrastructure.

The project seeks to mobilise Welsh Government resources including local authorities. Some authorities were more energetic in helping mobilisation than others.

The project is evolving and there is scope for all businesses paying rates in intervention areas to be contacted. There is scope for publicly funded bodies to consider whether they would benefit from citizens and organisations in intervention areas taking up superfast links and consequently promoting their beneficial use.

Mobile coverage in Wales is worse than all the other nations both to premises and particularly 'on the move'. The topography of Wales and its population density across 80% of its land mass hampers private sector commercial coverage. The economics could be changed by permitting companies to have masts of 100m+ and not charging rates and making available sites and wayleaves for the backhaul free on public land. Such changes would not provide universal coverage but would help. A subsidy is probably necessary for coverage in areas which are still uncommercial. A planning policy which makes consent a Wales decision might also help.

The other schemes for broadband are helpful because they fund services which the commercial market would not support. The schemes are also beneficial because applicants are individuals and likely to consider the individual benefits to themselves of the service.

The objective of coverage and speed from digital infrastructure, which creates the opportunity for benefits across the whole of Wales, needs a tight definition. The Wales Advisory Committee submitted a paper to Ofcom and possible solution to complete universal coverage. The paper is attached as an annex.

In essence it proposes use of multi-technology 10mbs solutions for coverage (particularly in use of wireless/landline combinations) with asset sharing and marginal cost open interconnect funded by a 2% tithe for five years on all network providers fixed, mobile or wireless. The new networks to be owned by the infill company with shareholding in proportion to tithes and the infill company not retailing its assets. It is very likely that many of the solutions would involve wireless connections.

This paper has focussed on the supply side reflecting the Committee questions. The realisation of benefits and how that will be achieved from past, present and future investment is important, if public spend is to be productive. Therefore, there should be a comprehensive well-funded mobilisation plan sustained over several years. It should involve public bodies, particularly with targeted links to the remote business and citizen communities. Experience suggests that a coherent funded cooperative mobilisation produces beneficial results.

John Davies – Chair, Advisory Committee for Wales

8.12.16

Advisory Committee for Wales – Input

Universal Service Obligation for Broadband (USOB)

Introduction

The USOB proposition is worded derivatively, as a supply side duty, derived from the monopoly position of the Royal Mail and British Telecom. This paper approaches the issue from a customer perspective (not supplier perspective) and the reality of several suppliers (actual or potential) and multiple technologies. This paper proposes a UK wide solution but with a default to a Wales only solution.

Universal Customer Service Broadband definition (UCSB)

Universal means all customers (individuals, groups, organisations) in the United Kingdom can buy a link to all others. The link can carry voice, data or images enabling viable live two way communication between the customers.

The customers may be at a fixed location or on the move and hence their communication needs are met and their lives benefit.

Link definition

The link can be provided by landline, radio, satellite or mixtures of these links (includes technological solutions which are inhibited by current regulatory policy).

The link will be able to carry live two-way quality two-person video conferencing and simultaneous information transfer at reading speed (400 words/minute). The link (L) will always be at 10Mbit/s on a two-way basis (contention and capacity management restrictions are excluded to ensure no speed loss at any time).

This paper will adopt 10Mbit/s two way as satisfactory customer need (L). The equalisation of upload/download speeds reflects non-domestic use and more demanding domestic user use. A move away from the equality definition should be validated by consumer/business user research. Equality favours future proofing.

Premise USOB or mobile USOB

Customer benefit will be maximised if the USOB meets the needs of customers at premises or on the move. The use of mobile communications has demonstrated clearly the benefits to customers' lives of communicating whilst on the move. Therefore this paper advocates delivery of USOB should be for both premise communication, on the move communication either with another customer on the move or at a premise and vice versa. A move away from complete 'on the move' coverage, again should be user tested and any diminution expressed in user terms.

The customer benefits flow directly to the customer who can now have a (L). The benefits also flow to customers who already have a link because they can now communicate effectively with the newly linked person. Universality means maximising benefits to all customers because it is a two-way network benefit expansion.

Economies of USOB

Competitive market entrants in the communications market will not give a (L) service to all customers in the UK either at premises or on the move because the economic return on capital is uneconomic.

Therefore to provide the benefits to customers' lives of a quality (L) a method of funding is needed. Funding should not result in patch pricing, nor should it be used to bar social tariffs which the state or Ofcom favour.

A reversion to creating a monopoly across the whole market and forcing the monopolist to use the monopolistic profits to pay for uneconomic infrastructure with standard UK prices is infeasible. BT's fixed line USO is also tempered at the extremes by cost and does not provide universality in a fixed line market.

The three routes to funding are the customer or customer groups pay the actual infrastructure cost, the government pays from general tax or suppliers pay through a tithe on their revenue. A mix of these options is also feasible.

Universality will not flow from the consumer paying for the infrastructure, as they do not have the funds. General taxation would mask the rewards from the bigger market to the suppliers and would be a subsidy from non-users. Therefore the preferred option is for the industry to pay. The communications market is far from being highly competitive and in both the subsidiary markets of fixed line and mobile the suppliers earn monopolistic/oligopolistic profits (the profits are reinforced by barriers to new entrants). The funding should be on UK revenue as a percentage and therefore being both proportionate to market share and adding a constant percentage to cost across all suppliers. All suppliers are permitted to raise their prices by the same amount. The funding to be completed over five years. Logically the benefits will flow back to all the consumers of the USOB and the increased revenue from new USOB consumers to the suppliers. A 2% tithe could produce £3650 funding /line for all 822,000 without service, after 5 years. (Current Wales superfast subsidy is about £520 /line).

Achieving delivery

There are various options for achieving USOB links and the most economic provision will depend on local circumstances e.g. an isolated Welsh cottage up a mountain may be most economically suited to a mobile link but the same cottage in a valley floor may be most economically suited to a landline or landline and Wi-Fi. The critical factor for USOB is the existing suppliers declaring all the areas where they will not provide service after 2017 with USOB quality links. Analysis can then map all premises and road networks without USOB (some of these areas may be urban).

The next issue is, given the identity of localities without USOB links, how is the capability provided. The choice of technologies is varied but more important will be the ability to mix technologies and interconnect new or other suppliers to existing supplier assets at marginal cost prices (subject to regulatory control) and the marginal cost pricing to apply to traffic carriage both ways across the link. The pricing is vital to open entry of the most economic link construction and must be done first.

Achieving delivery from the most economical solution and least burden on the suppliers and customers could be achieved by inviting existing suppliers to bid for delivering links patch by patch or by offering the patches at auction and inviting any supplier/supplier consortium/new supplier (free of policy barriers to entry) new supplier consortium, community consortia or by all the existing suppliers forming a UK company funded by their tithe and given five years to deliver USOB links to all premises and on the move locations by the most economic mix of technologies. The incentive to do it economically rewards them with a lower tithe and shared rewards to the company for subsequent carriage revenue from asset ownership. If the USB company fails to deliver universality in 5 years the 2% tithe continues until completion. Analysis of the actual deployment costs is necessary. A threshold of £3650 /line might be an attractive way of diminishing user universality at the margins. Current experience suggests that the total cost of provision to all excluded customers could probably be absorbed within the total tithe income over 5 years, as it is a small number of customers. A USB company is the optimum solution.

Universality means that areas may not be excluded

The USOB company would be a de facto monopoly for the USOB links and hence would need to be regulated. The company would not own the end customer relationship which would be open to competition but just be a network link provider to retail suppliers.

The profits being reaped by suppliers are above the level that a perfectly competitive market would generate. This paper proposes a solution which transfers some excess profit to provide the offer of service to customers who are uneconomic for private enterprise provision. It will be a judgement call as to whether the service definition should be diminished to allow suppliers to keep more excess profit and exclude some localities (premises or roads) or individual premises. This paper advocates a way forward where there is a clear incentive to provide UCSB in the cheapest way without conflict and with the uneconomic costs being borne by all those who will benefit. Fundamentally the balance of economic surplus should be given to customers, not retained by the imperfectly competitive suppliers. The regulator, as stand in for customer competitive power, should ensure USOB is available to all customers to fulfil its raison d'être.

Wales has the worst mobile coverage in the UK on all dimensions and consequently large areas where customers on the move have no coverage. The rural areas of Wales also have material gaps in broadband fixed coverage. Wales has a low GDP/head compared with the rest of the UK and a disproportionate number of small businesses in its rural heartland. Therefore from a purely Welsh perspective a Wales only company on this model is as desirable as a UK model. The diminishing of the Universal Customer Service Broadband would reinforce the existing economic disadvantages of Wales and its citizens.

Wales has three people per square kilometre compared to 15 people per square kilometre in England.

Conclusions for true universality

- 1) Define USOB in customer terms not supplier terms and call it Universal Customer Service Broadband (UCSB)
- 2) Include 'on the move' as well as to premises (because on the move is normal user life!)

- 3) Describe UCSB link in terms of beneficial use constant two way live image with voice and information
- 4) Set minimum standard as 10Mbit/s constantly
- 5) Supply industry to declare areas not covered by UCSB in 12/17 by 12/16
- 6) Map areas without UCSB
- 7) Fund by 2% tithe on revenue of all market suppliers with completion in five years and stop tithe for early completion or continue until universality.
- 8) Determine marginal cost pricing regime for interconnect to all existing assets which could serve areas without UCSB and similar regime for traffic carriage
- 9) Set up a not for profit company from all suppliers to deliver UCSB to all customer premises and road by 2022 as network provider (not retail)
- 10) Remove any policy barriers to new entrants being part of company hence generating lowest cost single or multi technology solutions
- 11) Regulate company provision, maintenance and economic performance on UCSB annually.
- 12) 1-11 above will provide UCSB to all customers but the economics may mean policy makers will exclude customers on the move from their UCSB definition and exclude premises (even if grouped) where the marginal cost price of provision is above a threshold. Both exclusions mean that it is 'almost Universal Customer Service Broadband' and is discriminatory!
- 13) Wales has a great need for the benefits of UCSB as it has the worst mobile coverage in the UK and material fixed network gaps, particularly in its low population density areas.

Gwybodaeth gan Ofcom Cymru - Pwyllgor yr Economi, Seilwaith a Sgiliau, 11 Ionawr 2017

Gweler lincs isod i ddau adroddiad gan Ofcom, sef 'Cysylltu'r Gwledydd 2016: Adroddiad Cymru' a 'Cysylltu'r Gwledydd 2016: Adroddiad y DU'; a'r datganiad perthnasol i'r wasg

[Adroddiad Cysylltu'r Gwledydd 2016: Cymru](#)
[Connected Nations 2016 \(UK\)](#)

Band eang cyflym iawn nawr yn cyrraedd 8 o bob 10 eiddo yng Nghymru

16 December 2016

- **Mae band eang cyflym iawn nawr yn cyrraedd 85%, neu 1.23 miliwn, eiddo yng Nghymru**
- **Ap Cymraeg newydd ar gael i wirio signalau symudol a Wi-Fi**
- **Darpariaeth ddaearyddol y pedwar cwmni yn ddim ond hanner cyfartaledd y DU**

Mae argaeledd band eang cyflym iawn wedi neidio yng Nghymru, gydag wyth adeilad o bob deg (85%) yn gallu cael cysylltiad.

Mae'r canfyddiadau yn rhan o adroddiad [Cysylltu'r Gwledydd 2016 Ofcom](#) - yr olwg fanylaf a mwyaf awdurdodol ar gyflwr rhwydweithiau diwifr a thelegyfathrebiadau'r DU.

Yn yr adroddiad eleni, gwelir cynnydd da o ran darpariaeth gwasanaethau cyfathrebu sefydlog a symudol a'r defnydd ohonynt, sy'n rhan mor allweddol o fywydau gwaith a phersonol pobl.

Gwta ddwy flynedd yn ôl yr oedd band eang cyflym iawn ond ar gael i ychydig dros hanner (55% neu 780,000) o adeiladau Cymru, yr isaf o holl wledydd y DU, ac 20 pwynt canran yn is na chyfartaledd y DU ar yr adeg honno. Mae hyn nawr wedi neidio 73,200 mewn blwyddyn, i 1.23 miliwn adeilad, o 1.14 miliwn, ac mae hyn wedi cael ei sbarduno gan fwyaf gan raglen Cyflymu Cymru Llywodraeth Cymru.

Dros y flwyddyn ddiwethaf mae'r rheini sydd wedi gallu cael cysylltiad cyflym iawn o ganlyniad i raglen Cyflymu Cymru wedi codi 6% i 620,611 adeilad a'i nod yw cyrraedd 690,000 adeilad erbyn diwedd 2017. Fodd bynnag, mae'r adroddiad wedi canfod bod rhagor o waith i'w wneud – yn enwedig o ran rhoi hwb i ddarpariaeth symudol a band eang, a gwella ansawdd y gwasanaeth sy'n cael ei ddarparu gan gwmnïau telegyfathrebiadau. Mae ardaloedd gwledig yn dal ar ei hôl hi o ran band eang, a Chymru sydd â'r ail gyfran uchaf o adeiladau gwledig yng ngwledydd y DU. Mae hyn yn creu sialensiau anoddach i gwmnïau wrth gyflwyno 4G symudol a chysylltiadau band eang cyflym iawn.

Mae tua thri adeilad o bob deg – dros 94,000 – mewn ardaloedd gwledig yn methu â chael cysylltiad dros 10Mbit yr eiliad, sef y trothwy ac ar ôl hwnnw mae'r rhan fwyaf o bobl yn dweud bod eu profiad o fand eang yn un 'da'. Mae hyn yn aml oherwydd eu bod yn bell i ffwrdd oddi wrth y cabinet stryd lleol neu'r gyfnewidfa ffôn.

Er mwyn helpu i gau'r bwloch cyflymder hwn, mae Ofcom heddiw wedi rhoi [cyngor technegol](#) i Lywodraeth y DU ar weithredu ei gynlluniau, a [gyhoeddwyd yn 2015](#), am wasanaeth band eang cyffredinol.

Mae adroddiad Cysylltu'r Gwledydd hefyd yn cyflwyno'r lefelau cyfredol o ddarpariaeth symudol ar draws y wlad. Tra bod pethau'n gwella, gyda 4G ar gael mewn mwy o eiddo, mae'r ddarpariaeth yn brin ac mae Ofcom am weld gwell argaeledd ar draws tîrfas y DU. Felly, rydym wedi cychwyn trafodaethau gyda'r darparwyr symudol er mwyn ystyried ffyrdd radical ac uchelgeisiol o sicrhau bod darpariaeth symudol yn cyd-fynd ag anghenion defnyddwyr.

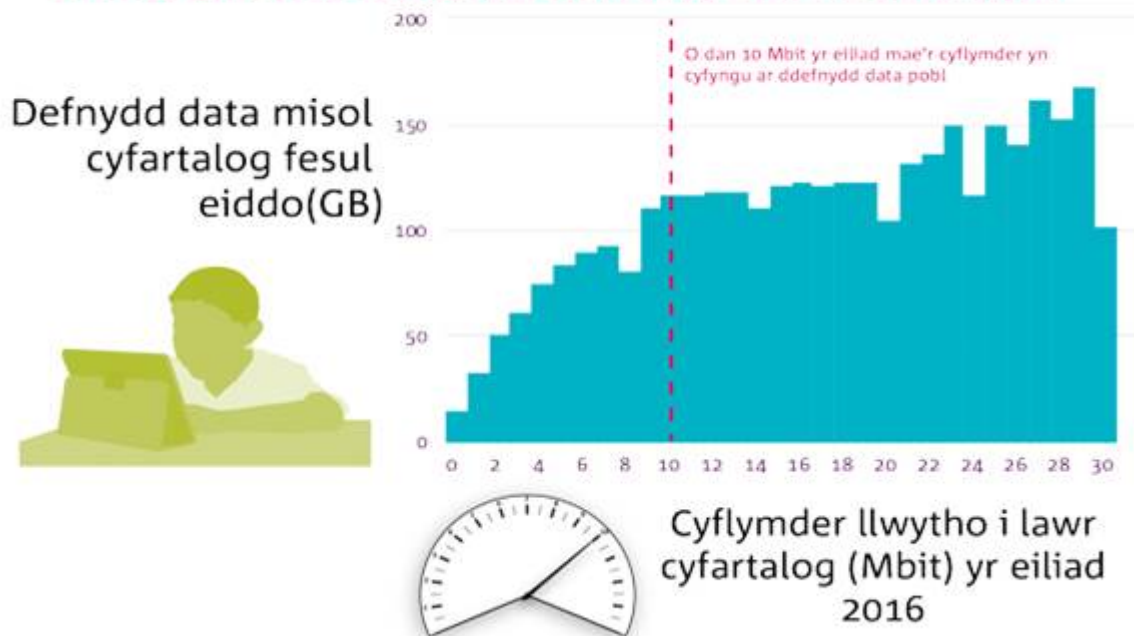
Sicrhau band eang teilwng

Mae nifer yr adeiladau sydd heb fynediad i fand eang teilwng wedi disgyn yn sylweddol dros y blynnyddoedd diwethaf, ac mae'n debyg o ddisgyn ymhellach, wrth ystyried buddsoddiadau parhaus gan y diwydiant a gan Lywodraeth.

Ond byddai'r gwasanaeth cyffredinol yn sicrhau bod gan bob cartref a busnes bach yn y wlad yr hawl i ofyn am gysylltiad band eang teilwng a fforddiadwy o 10Mbit yr eiliad neu fwy erbyn diwedd y senedd bresennol.

Mae dadansoddiad Ofcom yn dangos bod y cyflymder hwn yn ddigon i ddiwallu anghenion aelwyd nodweddiadol ar hyn o bryd. Mae gweithgaredd arlein defnyddwyr sydd a mynediad i'r cyflymderau yma yn llai cyfyngedig na'r rheiny sydd heb fynediad.

Pam y gallai fod angen 10 Mbit yr eiliad ar aelwyd



Fodd bynnag, gall hynny newid wrth i raglenni newydd sy'n defnyddio llawer o ddata ddod i'r fei. Felly byddwn yn monitro'r gwasanaeth cyffredinol ac yn argymhell codi ei gyflymder sylfaenol pan fydd angen.

Y Llywodraeth fydd yn penderfynu ar y dyluniad terfynol ac wedyn Ofcom fydd yn ei roi ar waith. Yr ydym heddiw wedi cyflwyno cyngor technegol i gyfrannu at benderfyniadau'r Llywodraeth ar ffactorau fel cyflymder, cymhwysedd, fforddiadwyedd a chyllid.

Fel rhan o hyn, rydym wedi ystyried tri senario posibl – band eang safonol yn cynnig cyflymder lawrlwytho o 10Mbit yr eiliad; fersiwn helaethach o'r gwasanaeth hwn, sy'n cynnwys cyflymder lanlwytho o 1Mbit yr eiliad; a gwasanaeth band eang cyflym iawn.



	Senario 1	Senario 2	Senario 3
2016			
Nifer yr adeiladau heb	1.4m	2.6m	3.5m
Amcan gost ⁽³⁾	~£1.1bn	~£1.6bn	~£2.0bn

(Os oes yna do o ran cost, gallai eiddo sy'n anodd-eu-cyrraedd ddewis amodau is, neu dalu'r gwahaniaeth)

Mae'r Llywodraeth wedi mynegi y byddai'n [ffafrio PDF, 156.4 KB](#) cyllido drwy'r diwydiant. O dan fodel cyllido drwy'r diwydiant, byddai'r cwmnïau sy'n darparu'r gwasanaeth cyffredinol yn adennill unrhyw faich cost annheg o gronfa y byddai amrywiaeth o gwmnïau telegyfathrebiadau yn talu i mewn iddi.

Mae Ofcom hefyd wedi ystyried yr angen i fand eang cyffredinol gyrraedd y cwsmeriaid mwyaf agored i niwed, gan gynnwys y rheini ar incwm isel Gallai fod angen cael tariff cymdeithasol er mwyn darparu band eang fforddiadwy i'r cwsmeriaid hyn, fel sydd ar gael ar gyfer ffonau llinell dir.

Nid da lle gellir gwell gyda darpariaeth symudol

Mae darpariaeth symudol wedi gwella yng Nghymru dros y flwyddyn ddiwethaf, ond rhaid gwneud rhagor o waith cyn i wasanaethau llais a data gyfateb i ddisgwyliadau uwch defnyddwyr.

Mae tua saith adeilad o bob deg (73%) yng Nghymru nawr yn gallu derbyn gwasanaeth llais dan do gan bob rhwydwaith, sydd wedi codi o 65% y llynedd ac mae gwasanaethau data dan do ar gael mewn dros hanner (57%) yr adeiladau, i fyny o 47% y llynedd.

O safbwynt daearyddol, mae gan Gymru fwy o fannau digyswllt llais (12%) na'r DU (10%). Ond ar gyfer data, mae Cymru yr un fath â'r DU drwyddi draw, gyda thua 16% o'r arwynebedd tir ddim yn cael darpariaeth gan unrhyw gwmni.

Mae darpariaeth llais ddaearyddol gan bob cwmni yng Nghymru yn 52% (66% yn y DU) ond mae darpariaeth data ddaearyddol gan bob cwmni yn ddim ond 27% - tua hanner cyfartaledd y DU.

Mae angen mwy a mwy o ddarpariaeth ar ddefnyddwyr ffonau symudol ym mhob man, felly mae Ofcom yn edrych ar sut gall helpu i wireddu hynny. Yr ydym hefyd [yn galw ar bob cwmni PDF, 41.9 KB](#) i fynd y tu hwnt i'r targedau presennol drwy edrych ar y dewisiadau i gyrraedd ardaloedd heb adeiladau – fel llinellau trafniadaeth a lleoliadau anghysbell.

Dywedodd Rhodri Williams, Cyfarwyddwr Ofcom yng Nghymru: "Yr ydym wedi gweld cynnydd dramatig yn argaeledd band eang cyflym iawn dros y blynyddoedd diwethaf ac mae gan lywodraethau Cymru a'r DU gynlluniau mewn lle i sicrhau rhagor o welliannau.

"Fodd bynnag, mae hi'n glir bod angen gwneud rhagor o waith, yn enwedig gyda darpariaeth symudol. Dyma pam yr ydym yn herio cwmnïau symudol i feddwl y tu hwnt i'w targedau presennol er mwyn ymestyn darpariaeth i bawb. Yr ydym hefyd yn gweithio'n agos gyda'r llywodraeth i ddarparu cyngor manwl ar gynlluniau ar gyfer band eang cyflym cyffredinol."

Cymariaethau rhyngwladol

Mae Ofcom hefyd wedi cyhoeddi ei [Adroddiad ar y Farchnad Gyfathrebu Ryngwladol 2016](#) sy'n cymharu gwasanaethau cyfathrebu mewn 19 gwlad fawr.

Ymysg y gwledydd hyn, y DU sydd â'r pumed argaeledd gorau o ran gwasanaethau band eang sy'n cynnig 10Mbit yr eiliad neu fwy – ar y blaen i bob gwlad yn Ewrop bron, ond y tu ôl i Singapore, Japan, De Corea a'r Iseldiroedd.

Mae'r DU hefyd yn gwneud yn dda o ran argaeledd cysylltiadau band eang sy'n defnyddio ceblau ffibr optig – fel ffibr yn rhedeg i gabinet y stryd – ac mae yn y pumed safle'r tu ôl i'r Iseldiroedd, De Corea, Japan a Singapore.

Fodd bynnag, mae Ofcom yn dal i bryderu bod gan y DU ddarpariaeth isel o fand eang 'ffibr llawn', lle mae llinellau cebl a ffibr yn cysylltu'n uniongyrchol i gartrefi a swyddfeydd. Yma mae'r DU yn yr ail safle ar bymtheg allan o 19 gwlad. Er mwyn datrys hyn, mae Ofcom yn [mynnu bod BT](#) yn caniatáu i ddarparwyr eraill ddefnyddio ei seilwaith i adeiladu eu rhwydweithiau ffibr eu hunain, yn uniongyrchol i'r eiddo.

Mae'r DU yn perfformio'n dda o ran prisiau, mae'r DU yn yr ail safle – allan o bum gwlad Ewropeaidd fawr, ac UDA – o ran y gwasanaethau cyfathrebu rhataf. Cafodd prisiau isel yn y DU eu gyrru i raddau helaeth gan wasanaethau ffonau symudol rhatach, yn enwedig ar gyfer tariffau sy'n cynnwys lwfans data uchel.

Gwirio eich cysylltiad band eang a symudol heddiw



Ochr yn ochr â'r adroddiad hwn, yr ydym yn lansio ap newydd, sy'n galluogi defnyddwyr i ganfod pa ddarpariaeth symudol a band eang sydd ar gael yn eu cyfeiriad nhw.

Mae'r gwiriwr hefyd yn gallu profi cysylltiadau band eang a Wi-Fi ac mae'n rhoi awgrymiadau i wella cyflymder. Mae'r gwiriwr yn rhedeg cyfres o brofion a mesuriadau'n gyflym o ffôn clyfar neu dabled i roi gwybod sut mae'r cysylltiad symudol neu fand eang yn perfformio mewn cyfeiriad penodol.

Mae'r ap hefyd yn dangos argaeledd gwasanaeth llais, 3G neu 4G gan bob un o'r darparwyr, y tu mewn a'r tu allan, mewn unrhyw leoliad yn y DU – gan ganiatau i bobol gymharu pa rhwydwaith sy'n cynnig y gwasanaeth gorau mewn llefydd fel y cartref neu'r swyddfya. Mae gwybodaeth am argaeledd band eang a'i gyflymdra ar gael drwy ddefnyddio data ar lefel cyfeiriad am y tro cyntaf.

Mae modd llwytho'r ap i lawr am ddim ac mae ar gael ar gyfer dyfeisiau Apple ac Android o'r [Apple App Store](#) neu [Google Play](#). Mae hefyd ar gael fel [fersiwn ar y we](#) ar gyfer cyfrifiaduron bwrdd gwaith a glieniaduron.

Mae'r ap ar gael i'w lwytho i lawr yn Gymraeg. Dyma'r tro cyntaf i Ofcom gyhoeddi ap Cymraeg ac mae'n gwneud hynny cyn ei

bod yn rhaid iddo o dan y Safonau Iaith Newydd a ddaw i rym o ddiwedd Ionawr 2017 ymlaen.



National Assembly for Wales

Economy, Infrastructure and Skills Committee

Inquiry: Digital Infrastructure in Wales

Response from CLA Cymru

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1. One third of the Welsh population lives in rural areas^[1]. Our rural economy supports some 459,000 people. In Wales, rural business totals nearly 105,000^[2] enterprises. While land-based businesses form the backbone of these, a broad range of other businesses and sectors support the farmers and landowners and are essential for maintaining thriving rural communities. The CLA represents around 32,000 members in England and Wales.
2. Digital connectivity has transformed the opportunities available to rural business in recent years. It is now possible to locate a business that trades goods and services across the globe from the heart of the countryside. However, this potential is only partially fulfilled. Despite a major programme of public investment across England and Wales, one in five rural business owners cite having to make their own investments in order to get connected. A digital divide remains, and while the political will to end it is clear, a continued focus is required.
3. The CLA is not in a position to respond to all the questions outlined, however, we believe that the evidence that we have gathered through the dedicated advisory service we offer our members will offer a realistic business-focused view from the rural economy about their experience of achieving superfast broadband.

Communication and information about the roll-out

4. Over recent years many members have contacted us in frustration with the process of getting broadband connection. The high profile campaign communicating the prospect of 'superfast broadband' has in many instances created expectation, which the delivery and roll-out have failed to match.
5. Many of the cases we hear of involve members looking for information as to if and when a superfast connection is in the pipeline for their location. Our members recognise the business benefits of superfast broadband, are eager for connection and have been willing to make private investment or get connected via community fibre network schemes if they are outside the reach of the current roll-out programme. However, this investment will only be made where it is clear that fibre connection through the current programme is not possible. This information is not openly available and not always forthcoming from BT.
6. As we near the end of this roll-out programme, businesses need accurate information about the scope and limitations of the roll-out up to July 2017. Detailed roll-out plans and information on the areas that will not be covered need to be made available now. The CLA does not want to advise members on alternative technologies, to then find that a superfast connection is to be made in the near future. Unfortunately, this has happened on a number of occasions to date.

A Superfast Cymru successor scheme?

7. CLA Cymru welcomes the recent announcement by Welsh Government to roll out broadband to 100% of Wales. However, we have a number of practical questions that we would welcome more information on so that we can continue offering up-to-date advice to our members. For example:
 - a. What does 100% coverage mean?
 - b. Does this relate to the geographic spread in Wales, to all business premises or to every property in Wales?
 - c. What is the timescale for achieving this?
 - d. What does this mean for those who have started down the road of community fibre networks projects?
8. On a UK level, the Digital Economy Bill currently before Parliament contains a legal right to superfast broadband (of at least 10 Megabits per second). This is a major breakthrough, long campaigned for by the CLA, but it is important to understand how the commitments made

^[1] In England the same statistic is 20%.

^[2] pp 4 - 5, CLA: 'Standing Up for Rural Business'.

by Welsh Government for 100% coverage will dovetail with the provisions of the Digital Economy Bill.

9. These changes demonstrate the political will to deliver the infrastructure needed to deliver the minimum service standards and recognition of the understanding that this is as important to economic growth in the twenty-first century as the universal postal service was in the eighteenth.
10. It is, however, vital that the roll-out now matches this aspiration, and that once established, it is regularly reviewed to ensure minimum speeds keep pace with business needs.

Use of alternative technologies

11. Realistically, about 1% of properties in rural Wales will be too remote or uneconomic to connect. For these properties, alternative technologies need to be looked at. As an organisation, we have investigated a number of different technologies and have members who can deliver a range of technological solutions and where appropriate, will work with deliverers of these technologies to try and encourage take up.
12. However, until we have clarity about the scope and timescale of this government-funded project, we are unable to advise our members about the business benefits of considering such technologies.
13. Satellite broadband has been a lifeline technology for many rural businesses. Innovation in the technology is ironing out the reliability and operational limitations and it will remain the best option for many of the most remote homes and businesses.
14. The use of wireless microwave relay signals between premises has seen significant organic growth among rural business-owners and estates. It is significantly more affordable than wire-based technologies and can continue to be a way for rural businesses to become internet suppliers.
15. While satellite and wireless technology are now established alternatives, we are also aware that technological development is moving at a pace now and innovative solutions are emerging that offer viable and cost-effective alternatives to a fibre based network.
16. We would urge Welsh Government to ensure that any contract to deliver for the final few percent of businesses and communities is flexible enough to incorporate and take advantage of these emerging technologies. Furthermore, clarity is required as to whether grant aid or other support will remain available to support those businesses and communities wishing to take forward more innovative solutions to connectivity.

Mobile coverage

17. Mobile coverage in rural areas suffers from years of under-investment. The last 18 months has seen a renewed political and industry focus to resolve this. For example EE has committed to 95% (4G) coverage by the end of 2020 and a legal target is in place to secure 90% (minimum 2G) coverage of the geographic landmass of the UK by 2017. However, stringent consequences must be in place if this legal target is not met.
18. Coverage is patchy in much of Wales, but is particularly so in rural mid-Wales, where 4G is currently a distant hope. Feedback from members has also suggested that the coverage may even be decreasing on some networks as opposed to increasing.
19. Innovation is the key to tackling the problem. In 2018 the UK Government will be auctioning off the 700MHz spectrum and it will be used from 2020. This has major potential for increasing the reach of voice and data coverage, but conditions in the licence agreements will be key to ensuring it delivers. This is a precursor to the advent of 5G where the infrastructure needs in terms of new masts and signal relay points will be significant. By 2030 mobile data connections could end the digital divide, but this would require a complete rethink of the

current urban-first roll-out strategy pursued by the major providers and endorsed by Government.

20. CLA Cymru calls on Welsh Government to ensure that properties in the remotest areas of rural Wales are not left behind in the future roll-out of the new technology.

Conclusion

21. At the CLA's recent Rural Business Conference, connectivity was identified as a key theme. The universal service obligation, once achieved, will be a significant advantage to rural businesses and the productivity opportunities in rural Wales. The technological solutions for better infrastructure and faster connections are growing all the time. They present the opportunity to provide facilities that are not catching up, but surging ahead of other areas. Securing the investment required for the next wave of connections is the challenge and CLA Cymru puts forward the following ideas:

- Universal mobile coverage – place stringent conditions on mobile operators as part of tenders for the 700MHz spectrum auction taking place in 2018 to ensure maximum mobile data coverage in rural areas.
- Promote new approaches to funding connections for the most remote communities – build on existing best practice in encouraging home and business owners in a location outside of the reach of broadband roll-out schemes to pool vouchers in a way that will fund a better, more robust solution for the whole community. In order to help businesses decide whether to consider co-financing projects. Openreach and other providers must be more transparent and long term in setting out their roll-out plans.
- Ensure local businesses can become internet suppliers – encourage rural business-owners, who invest in putting in place their own broadband connection such as fibre-to-property, to become local suppliers using technologies such as local wi-fi networks and ensure their position in the market is secure.
- Establish new investment models for better connections – explore new models for rural businesses to invest in fibre connections for their own premises. The mobile network providers should be encouraged to rent these connections to help them build their data networks (especially under 5G).

Real life example from a member in Powys of the challenges in achieving digital connectivity

Mobile connectivity at home: in 2006 = 3-5 bars with Orange/EE; gradually reduced to 0-1 bars, until, in 2014, it ceased to be viable. User switched to O2. Currently 5 bars of signal.

Mobile connectivity at user's nearby office: 2014 with O2 = 5 bars. 20/10/16 mast decommissioned without warning so no service at all. Weeks 1 to 5 thereafter user wrongly informed that it was a 'temporary outage'. After numerous contacts (phone, emails), in week 6 correct information given and user compensated.

Broadband: rural property 3 miles from roadside cabinet. 2006 download speed = 1mbps, upload = 0.3 mbps. Frequent outages, sometimes of several weeks' duration. User repeatedly complained to ISP (subsidiary of BT Group plc) with little effect. In 2013 some remedial works carried out with promise of undergrounding for new 200M length of copper cable. Undergrounding not carried out. Speeds improved to 2mbps and 0.8 mbps. Mixed messages on Superfast Cymru website from mid-2014 to mid-2016, depending on whether telephone number or postcode input to search box re. fibre availability. Early spring 2016, a nearby pole-mounted fibre splitter was installed. In late summer 2016, the website displays message saying user can 'place an order', however, ISP at first responds that it is not possible to place order, then quotes exorbitant figure for FTTP - £7,000 per 10 metres. User contacts BT. Mid-September, order placed. Hub received within 1 week. Survey carried out within 2 weeks. Major works – including obtaining easement from neighbour, digging 360 metres of trench, laying conduit, installing two man-holes etc carried out second half November 2016. 7/12/16: installation of in-house equipment. All works estimated to be minimum of 14 man-days. 7/12/16: after commissioning, speeds = 51 mbps download, 10 mbps upload.



Arbenigwyr mewn Busnes
Experts in Business

9 January 2016

Russell George AM
Economy, Infrastructure and Skills Committee
National Assembly for Wales
Cardiff Bay
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Dear Russell

RE: Digital Infrastructure in Wales

FSB Wales welcomes the opportunity to present its views to the Economy, Infrastructure and Skills Committee on its inquiry into Wales' digital infrastructure. FSB Wales is the authoritative voice of businesses in Wales. With 10,000 members, a Welsh Policy Unit, two regional committees and twelve branch committees; FSB Wales is in constant contact with business at a grassroots level and undertakes regular online surveys of its members.

A recent FSB survey showed that 99 per cent of small businesses owners view the internet as highly important to their business. It is therefore clear that Wales' digital infrastructure is of vital importance to small businesses and the Welsh economy.

FSB Wales is working with Cardiff University to examine superfast broadband in Wales. The findings of the work are yet to be published however the Committee may want to consider including Cardiff University academics Dr Dylan Henderson, Professor Max Munday and Professor Calvin Jones in their inquiry.

FSB has published a number of reports in this area that will be of interest to the Committee's inquiry. Most recently, we published *Reassured, Optimised, Transformed: Driving Digital Demand Among Small Businesses* a copy of which is attached to this correspondence. The report explored a number of themes around how businesses use digital infrastructure and the barriers to greater uptake.

How firms use digital infrastructure

Our UK-wide research suggests that small businesses fall into three categories in relation to their use of digital infrastructure:

- **Business Reassured** – Firms that tend to have less data heavy but frequent basic tasks. Issues around reliability of service rather than speeds are seen as important.
- **Business Optimised** – Firms that rely on broadband to carry out frequent, relatively data heavy tasks such as online sales. Download speeds are important here in securing productivity gains.
- **Business Transformation** – Firms that are the most digitally advanced. Being online provides a springboard for new and different products that helps the business expand.

Under this broad categorisation, the incentive to adopt and make best use of digital infrastructure will vary. This distinction also recognises the different needs and expectations firms have in relation to broadband and digital

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Experts in Business

infrastructure. The Committee may want to consider how each of these categories relate to the support currently provided by Welsh Government.

More generally, our research found that:

- Almost all business owners (99 per cent) rate the internet as highly important to their business.
- Half of small businesses (51 per cent) offer goods and services online, with an additional 15 per cent planning to do so in the near future.
- The take up of fibre products among small businesses closely tracks the residential market at 27 per cent.
- 46 per cent of all small businesses said they would like to upgrade to these services in future.
- Mobile phones are increasingly becoming a key element of connectivity for small business owners and further work needs to take place in integrating mobile technology into their existing business models.

Barriers

Our report identifies a number of barriers for small businesses in making the most of digital infrastructure. Firstly, many businesses feel that their current speeds are sufficient for their business needs now and in the foreseeable future. These businesses are satisfied with the status quo and may require further information and challenge to make the most of digital opportunities.

The rollout of infrastructure is still a concern. Ofcom's latest figures for 2016 suggest 85 per cent of premises in Wales can access superfast or higher speed broadband. While this is an improvement on previous years, it masks significant geographical variations with many rural areas still being unable to benefit. In relation to mobile coverage, Wales currently has the lowest proportion of outdoor 2G coverage, with many areas only able to access one or two network providers, limiting competition. Wales also had the lowest proportion of premises with outdoor 4G coverage from one or more mobile networks in May 2016 at 90.1%.

Quality of service issues are also affecting small business as consumers. Many small businesses do not have dedicated IT or telecoms experts. This frequently results in a lack of confidence in dealing with the market. Quality of service issues can also lead to some small businesses disengaging from the digital agenda.

Recommendations

To increase the use of digital infrastructure among small businesses in Wales, the following recommendations should be considered:

- Encourage the wider business community through organisations such as Business Wales to support moving beyond the status quo in terms of digital usage. This should include the integration of mobile services.
- Improve access to broadband and mobile infrastructure in Wales.
- Consider introducing a broadband code of practice for small businesses. This would recognise broadband providers that produce clear information and transparent download speeds. This should link to work currently being undertaken by Ofcom around a more general Broadband Code of Practice.
- Ensure Business Wales has sufficient support around improving the knowledge and skills to boost confidence when dealing with the broadband market.

Please do not hesitate to get in touch should you require any further information.



Arbenigwyr mewn Busnes
Experts in Business

Yours sincerely

Janet Jones
Wales Policy Chair
Federation of Small Businesses Wales

Attached: FSB - *Reassured, Optimised, Transformed: Driving Digital Demand Among Small Businesses*

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Federation of Small Businesses report – Reassured, Optimised, Transformed:
Driving digital demand among small businesses

[http://www.fsb.org.uk/docs/default-source/Publications/reports/fsb-telecoms-report---september-2015\(2\).pdf?sfvrsn=0](http://www.fsb.org.uk/docs/default-source/Publications/reports/fsb-telecoms-report---september-2015(2).pdf?sfvrsn=0)

Submission from thinkbroadband.com relating to roll-out and take-up of superfast broadband in Wales

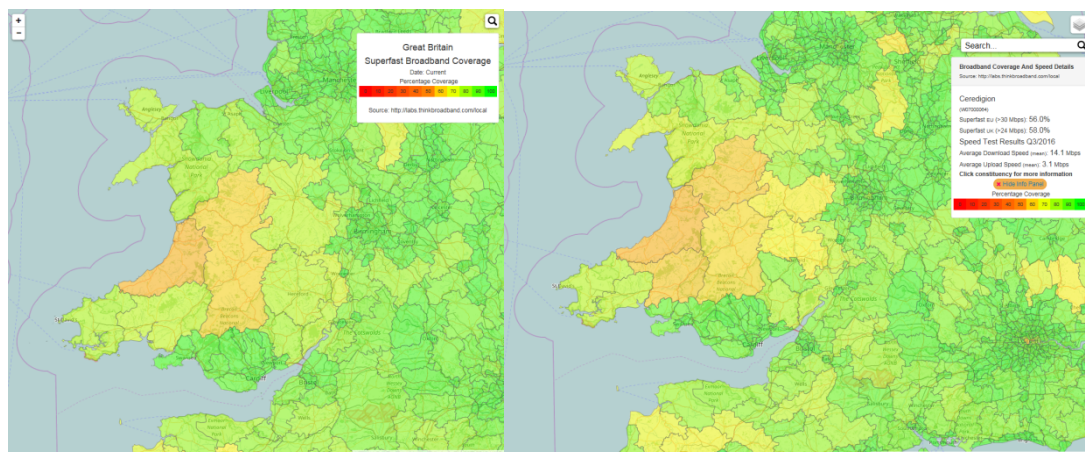
Submitted as evidence to the National Assembly's Economy, Infrastructure and Skills Committee.

The data contained in this document was sourced in the period of 28th November to 8th December 2016 and as the roll-outs are still underway there will have been further roll-out. Generally this means a change nationally of 0.4% each month, the latest data is always available at <https://labs.thinkbroadband.com/local/wales>

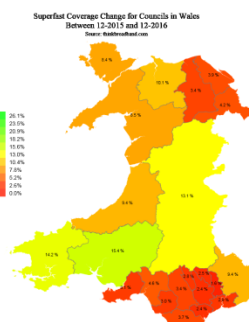
The tracking of availability is based on all the fixed line providers, which generally comprises Openreach, Virgin Media and Hyperoptic in Wales. In addition to the availability we also match a number of years of observed speed test results from the public against the various areas of Wales.

This means we can give insight into coverage, the speeds people receive from the faster services and an estimate of take-up.

The two main views of Wales are the degrees of superfast coverage by local authority and Westminster constituency. The constituency level view with relatively uniform population size also help to give some idea of the areas of high population density.

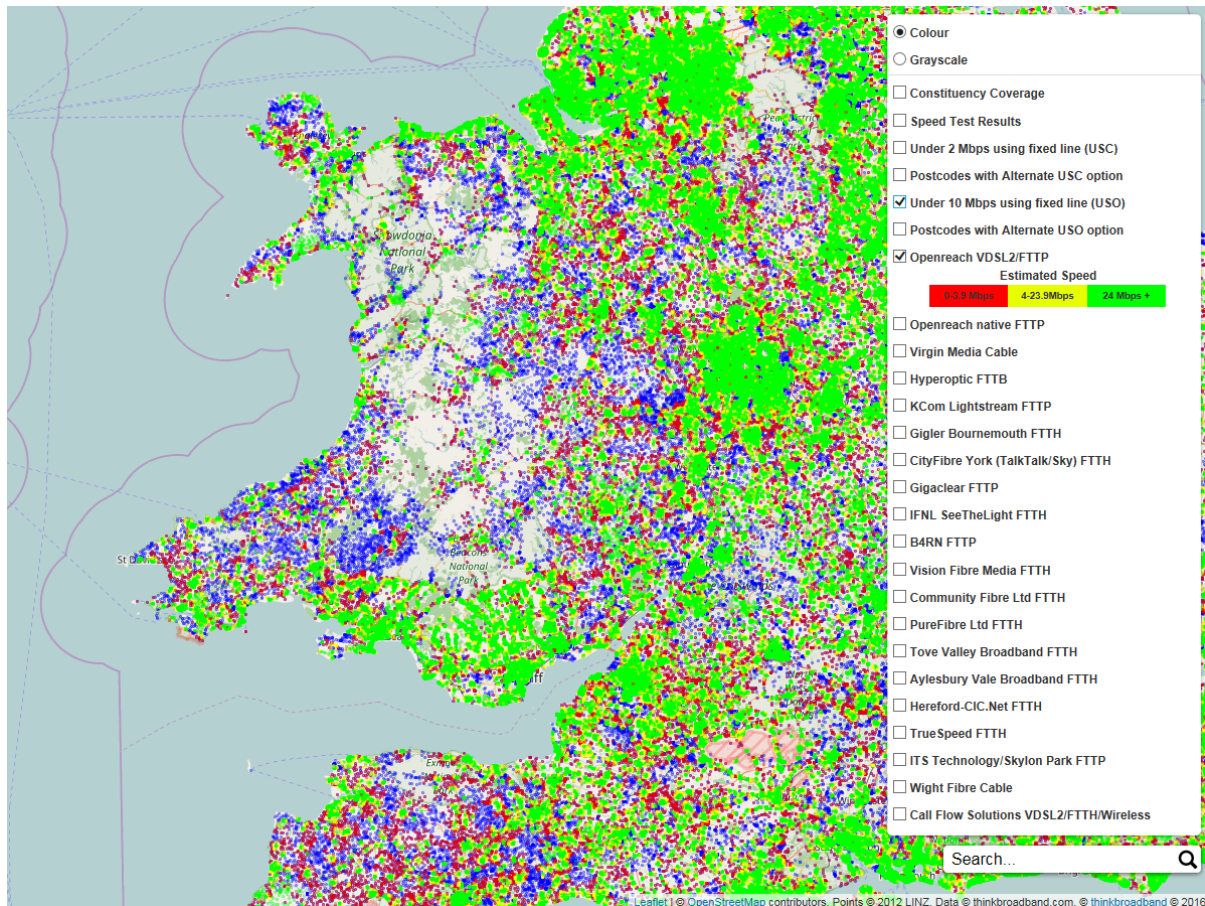


Mid and West Wales are the two areas lagging, but these are also the areas where superfast coverage was low or non-existent a few years ago.



This simpler map highlights the levels of change in the last 12 months across Wales and is useful to highlight that the roll-outs while not uniform across the areas of Wales is targeting the areas where coverage was lowest.

One issue we have learnt is that people sometimes miss construe the uniform colouring of the council and constituency areas, for example with some areas if you a service is delivered to the two major towns of an area you find people in the rural areas dispute the coverage levels. Therefore it is often proven better to show a dot per postcode format such as:



The combined analysis of where superfast broadband is available and speed tests demonstrating people have taken up the service shows an observed take-up of 32%.

In table form coverage as of 7th December for Welsh Parliamentary constituencies with speed test results from Q3/2016 and the Q4 results should be available the first week of January. The rank is based on the full 650 UK set of constituencies.

Rank (Based on)	Constituency	More Detail	Superfast (Over)	Superfast (Over 30 Mhns -)	Observed Average Download	Observed Average Upload
39	Rhondda	W07000052	99.1%	98.1%	18.6	4.2
55	Cardiff West	W07000079	98.9%	98.8%	31.3	4.7
108	Blaenau Gwent	W07000072	98.4%	97.8%	17.7	3.9

Rank (Based on	Constituency	More Detail	Superfast (Over	Superfast (Over 30 Mbps -	Observed Average Download	Observed Average Upload
116	Swansea East	W07000048	98.3%	98.2%	29.3	5.1
174	Swansea West	W07000047	97.7%	97.5%	31.0	4.7
197	Cardiff South and Penarth	W07000080	97.3%	97.2%	29.1	5.0
208	Cardiff North	W07000051	97.2%	96.4%	27.4	4.9
223	Pontypridd	W07000075	96.8%	96.0%	20.1	4.5
237	Merthyr Tydfil and Rhymney	W07000071	96.6%	95.3%	18.1	3.9
246	Cynon Valley	W07000070	96.5%	95.4%	18.0	4.1
250	Cardiff Central	W07000050	96.4%	96.1%	28.8	4.5
251	Islwyn	W07000077	96.4%	94.6%	18.7	4.2
262	Caerphilly	W07000076	96.2%	94.6%	18.8	4.1
268	Torfaen	W07000053	96.1%	94.8%	20.9	4.1
278	Newport West	W07000056	95.9%	95.5%	27.8	4.8
291	Aberavon	W07000049	95.9%	95.2%	31.2	4.9
295	Newport East	W07000055	95.8%	95.5%	24.7	4.3
317	Bridgend	W07000073	95.5%	94.6%	19.5	4.6
338	Alyn and Deeside	W07000043	95.1%	94.1%	18.5	3.9
369	Wrexham	W07000044	94.2%	93.4%	17.0	3.7
381	Ogmore	W07000074	93.9%	90.9%	16.5	3.6
405	Llanelli	W07000045	93.1%	91.7%	16.5	3.7
411	Neath	W07000069	93.1%	92.0%	23.5	3.9
439	Vale of Clwyd	W07000060	91.9%	90.9%	18.2	3.8
451	Vale of Glamorgan	W07000078	91.3%	90.6%	24.4	4.0
453	Gower	W07000046	91.1%	90.3%	22.2	4.0

Rank (Based on)	Constituency	More Detail	Superfast (Over 10Mbps)	Superfast (Over 30Mbps)	Observed Average Download	Observed Average Upload
520	Aberconwy	W07000058	86.6%	85.1%	15.9	3.5
522	Arfon	W07000057	86.5%	84.1%	16.6	3.6
545	Delyn	W07000042	84.4%	82.6%	17.7	3.6
575	Clwyd West	W07000059	81.2%	80.2%	15.1	3.3
587	Ynys Mon	W07000041	79.7%	78.0%	16.6	3.5
590	Monmouth	W07000054	79.6%	77.9%	15.8	3.5
597	Preseli Pembrokeshire	W07000065	78.6%	76.7%	16.3	3.4
598	Carmarthen West and South Pembrokeshire	W07000066	78.4%	76.9%	15.9	3.5
609	Clwyd South	W07000062	76.5%	74.3%	14.8	3.2
616	Dwyfor Meirionnydd	W07000061	74.0%	72.1%	16.8	3.6
636	Brecon and Radnorshire	W07000068	63.5%	62.1%	12.5	2.5
637	Carmarthen East and Dinefwr	W07000067	62.5%	59.8%	11.8	2.7
638	Montgomeryshire	W07000063	62.1%	60.5%	12.6	2.5
646	Ceredigion	W07000064	58.1%	56.1%	14.1	3.1

One very important aspect of the SuperfastCymru roll-out is the availability of fibre to the premises this is running at 1.4% currently and rises to 1.56% once you factor in the presence of Hyperoptic. We are aware of a large amount of Openreach FTTP that is in the build stages, and this is likely to be in the order of another 2-3% which based on our analysis would put Wales well past the 90% superfast mark, and ensure the original goal of 96% fibre based broadband availability was met.

The biggest challenge appears to be convincing people that the project is delivering, and as those who are still to benefit are becoming increasingly vocal ensuring clear communication as to when they will see an improvement is important.

Additionally there are many who may be confused e.g. the talk is all about superfast broadband, but there are plenty who would benefit from upgrading from slow ADSL services to VDSL2 even when it can only deliver 10 to 15 Mbps.

Is Wales Connected - Digital Infrastructure in Wales

Response to the Economy, Infrastructure and Skills Committee Inquiry

by Atos

1.1 Introduction

- 1.1 Improvements to digital access can create opportunities for the people of Wales to gain an advantage in the global economy and to build a more inclusive, better-connected and stronger society. Outside of London, Wales has the fastest-growing digital industry in Britain. The IT Sector in Wales employs around 24,000 people and is predicted to add £1.5 billion to the economy over the next five years. But more still needs to be done to ensure that access to world-class digital technology is available in all of our communities; to enable our citizens to develop digital skills and awareness and allow them to access the full benefits of the digital economy.
- 1.2 Atos is pleased to offer its support to this inquiry by the Economy, Infrastructure and Skills committee and would be delighted to attend a meeting of the committee to provide further details, if invited. Our contribution will firstly consider the requirements for digital access and the key opportunities it provides. We will then focus on how alternative technologies could be used to extend digital access by improving or supplementing existing broadband and mobile coverage. Finally, we will summarise other key factors that need to be considered to ensure that investments in digital infrastructure are successful.

2 Demanding Digital

- 2.1 The requirement for digital access is an increasingly critical factor for businesses, public sector bodies and individuals in Wales.
- For business, it offers the ability to access global as well as national and local markets; interact rapidly and efficiently with customers and suppliers; gain vital information and connect to networks of support and opportunity.
 - Public sector bodies require wide-scale digital access in order to provide progressive, high value services to the citizens they serve but also to enable them to connect and share vital information and extract greater value from the data they hold; from more effective demand management, to an increased use of data analytics to evaluate and improve services.

- Individuals stand to benefit from the services and products that business and the public sector can provide digitally. Many people no longer use traditional home phones and receive most of their services through mobile devices or have abandoned traditional media in favour of digital on-demand services. For others, the challenge is, more importantly, to achieve *digital inclusion* so that they are not deprived of the benefits of access to digital services.

In all of these cases there is a common factor, which is the need for continuous availability of internet access at a wide range of locations (or whilst mobile) with the quality and reliability to make digital services usable and acceptable.

- 2.2 For many areas in Wales, the availability of 3G & 4G mobile coverage and the delivery of superfast broadband is patchy and incomplete. Sadly, this is often the case in areas where social deprivation, remoteness or lack of transport infrastructure makes digital inclusion all the more essential. The investments in Superfast Cymru and pressures on mobile providers have established a baseline of service across Wales but have not supplied access to all the areas that need it most. To achieve full digital inclusion for all communities in Wales will require a more thoughtful and innovative approach to overcome the challenges of geography and demographics within realistic budgetary constraints.

3 Applying Innovations in Technology

- 3.1 The technology options available to support digital access offer a range of possibilities to suit different geographic, demographic and economic needs. Table 1 provides a summary of the principal options, their approximate UK coverage and a comparison of performance and cost:

Technology/ Service	Typical UK Coverage	Max Speed of Download	Cost per bit
Cellular 4G/LTE	Large areas of UK subject to carriers	100 Mbit/s	Medium
Cellular 3G	Majority of UK subject to carriers	42 Mbit/s	Medium
Satcom	Full UK	26 Mbit/s	Highest
DSL	Majority of UK subject to carriers	80 Mbps	Lowest
Fibre	Majority of UK subject to carriers	10 Gbps	Lowest
Radio	Majority of UK subject to handoff POP proximity	2Gbps	Medium

Table 1. Digital access - technology options

3.2 There is no single technology that ideally suits all scenarios. For example, achieving 100% coverage of 4G (or even 3G) would be challenged by the mountainous terrain in some regions of Wales. Similarly, the cost of delivering Satcom access versus its limited performance means that it might only be suitable for the most remote or inaccessible locations and may not suit some business uses at all. In general terms the suitability of all these options can be summarised as follows:

- Cellular 4G /LTE - Becoming more widely available and affordable but still sparse in rural areas. Dependence on a single operator in many areas has risks but technology solutions can provide mitigation.
- Cellular 3G – Low data rates, but currently acceptable for most uses. Similar risks to 4G, but extender & multi-operator remedies are available.
- Satcom – Useful in very remote regions but still the highest cost for low data rates. Support to mobile users depends on Wi-fi.
- Fibre/DSL - Availability of infrastructure restricts choice at many locations. May not be immediately available or economically feasible for remote locations. Support to mobile users depends on Wi-fi.
- Radio – Enables extension of other services from existing locations. A more flexible option for some terrain. Support to mobile users depends on Wi-fi.

3.3 With a range of options available, any of which could be most suitable in certain circumstances, the innovation challenge becomes “*How to select the right technology for each location.*” This requires a comprehensive analysis of regional cellular mobile coverage aligned to a detailed understanding of domestic and business needs, especially in hard-to-reach locations. A methodology or set of rules should be developed and applied to ensure that the best technology is selected for each set of circumstances and that a sound business case exists to support the full range of investments.

3.4 In some cases isolated or remote communities may have need of composite solutions (e.g. Fibre connections extended by Radio links). Once again, innovative thinking will be required to look at all permutations and possibilities to arrive at a solution that offers digital inclusion at an acceptable cost.

4 Optimising Investment

- 4.1 Digital access also requires the end-user – whether they are citizens, business owners, employees or volunteers – to have the skills and available devices to make use of the infrastructure. Therefore, a key component of further programmes should be an analysis of the effectiveness of initiatives to provide training and access to technology for users, and commitment to further investment in these areas where needed.
- 4.2 Finally, and critically, it is essential that plans for improvements to digital infrastructure are linked into an overarching digital strategy that clearly defines how the public sector will deliver digital service transformation and the specific economic benefits it will offer to the private sector.

5 Summary

- 5.1 In this paper we have summarised some of the key points regarding the justification for extended digital access, the main technology options and the best approach that Atos believes could be taken. The most critical point, is that to extract value from further investment for the individuals, organisations and businesses that need it most requires an innovative, holistic approach based on a clear digital strategy with a flexible view of all of the technology options available.

Mark Donovan

Client Executive, Atos Wales
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Atos is a business technology partner with firm roots and an extensive presence in Wales. We are committed to helping our partners in the Welsh Government, NHS Wales, many educational institutions and other public sector bodies, as well as the private sector, with cost effective solutions to deliver their ambitions in digital transformation, big data, cyber security, and technological innovation.

For further details of our [Digital Vision for Wales](http://uk.atos.net/en-uk/home/your-business/government/government-in-wales/digital-vision-for-wales.html), click on the link or go to:
<http://uk.atos.net/en-uk/home/your-business/government/government-in-wales/digital-vision-for-wales.html>

Cyllid Cymru

28 Tachwedd 2016

Annwyl Cyllid Cymru,

Diolch i chi am ddod i'r Pwyllgor ar 9 Tachwedd 2016 er mwyn ein galluogi i graffu ar eich adroddiad blynyddol.

Yn ystod y cyfarfod cynigiodd Mr Thorley roi nodyn i'r Pwyllgor ynghylch cyfanswm yr enillion ar y buddsoddiad o ran y pedwar buddsoddiad a wnaeth golled (yn eu cyfanrwydd).

Cododd y sesiwn nifer o gwestiynau yr hoffem gael rhagor o esboniad yn eu cylch, ac rydym hefyd wedi mynd ati i wneud rhai argymhellion i Gyllid Cymru, a byddwn hefyd yn rhannu'r rhain gydag Ysgrifennydd y Cabinet dros yr Economi a'r Seilwaith.



Cwestiynau

Cyllid cyfalaf

Disgrifiodd Mr Thorley y cyllid a gafwyd gan Lywodraeth Cymru fel "yr angor" o ran ffynonellau cyllid cyfalaf yn y dyfodol.

Hoffem gael rhagor o eglurder, maes o law, ynghylch goblygiadau hyn.

Rheoli risg

O gofio'r cynnydd yn y capasiti benthycia a ragwelir ar gyfer y Banc Datblygu, bydd hyn hefyd yn arwain at fwy o risg i Lywodraeth Cymru.

Er nad yw gofynion darbodus arferol yn gymwys i Gyllid Cymru, hoffem gael rhagor o wybodaeth ynghylch pa gamau sy'n cael eu cymryd i reoli maint y risg.

Er enghraifft, a fyddai dyledion nad ydynt wedi eu talu yn cael eu gwarantu gan Lywodraeth Cymru, neu a fyddai rhyw fath o ofyniad cyfalaf i wella'r broses o reoli risg yn cael ei roi ar waith?

Cynllun Cymorth i Brynu

Mae'r cynllun hwn wedi'i seilio ar fenthyciad a gaiff ei ad-dalu (i Drysorlys Ei Mawrhydi); tybir y bydd y benthyciad hwn yn cael ei warantu yn y pen draw gan Lywodraeth Cymru. Hoffem gael nodyn ynghylch telerau'r benthyciad hwn, yn ogystal â diweddariad blynyddol ar y camau a gymerir i'w ad-dalu.

Pensiynau

Gwnaethom nodi bod y cynnydd yn nhâl y cyfarwyddwr a enillodd y cyflog uchaf yn 2015–16 wedi'i chwyddo gan gyfraniadau pensiwn; a bod 30 y cant o staff presennol Cyllid Cymru yn yr un cynllun. A allwch ein sicrhau bod yr achos busnes ar gyfer y Banc Datblygu wedi ystyried y risg actiwaraid hwn?



Argymhellion

Proses adrodd

Mewn ymateb i'n cwestiynau ynghylch y colledion a gofnodwyd ar gyfer 2014–15, roeddech yn gallu ein sicrhau nad oedd hyn yn rhoi darlun cywir o wir sefyllfa ariannol y sefydliad.

Dywedodd Kevin O'Leary: "I don't believe the committee should be concerned by that loss... Our accounts are not a good entry in to understanding Finance Wales' performance."

O ystyried nad yw'r dull presennol o gyflwyno adroddiadau yn rhoi darlun clir, argymhellwn fod Cyllid Cymru yn ystyried – wrth gydnabod ei rwymedigaethau adrodd statudol – sut y gall gyflwyno ei gyfrifon blynyddol mewn ffordd sy'n rhoi darlun cliriach o berfformiad y sefydliad ac sy'n galluogi trethdalwyr Cymru i weld a yw eu harian wedi'i fuddsoddi mewn ffordd sy'n arwain at fanteision. Gallai hyn fod yn rhan o'r cyfrifon blynyddol, neu'n rhywbeth ychwanegol.

Hunan-ariannu

Gofynnodd y Pwyllgor gyfres o gwestiynau ynghylch gallu Cyllid Cymru i symud tuag at fodel hunangyllidol, a hynny heb dderbyn cymorth grant gan Lywodraeth Cymru. Dywedasoch wrthym fod hyn yn ddibynnol ar godi lefel y cronfeydd sy'n cael eu buddsoddi, er mwyn i'r ffioedd perthnasol fod yn ddigonol i dalu costau'r sefydliad.

Nodwn y bydd risgiau wrth symud tuag at fodel hunangyllidol a byddwn yn codi'r mater hwn gyda'r Ysgrifennydd Cabinet.

Risg adleoli

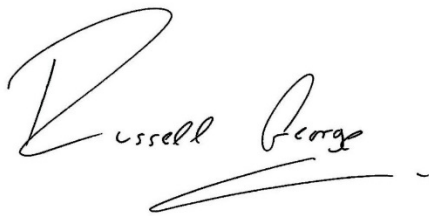
Mae'n debyg y bydd newid lleoliad Cyllid Cymru sydd â'i bencadlys yng Nghaerdydd, i Ogledd Ddwyrain Cymru lle lleolir pencadlys Banc Datblygu Cymru, yn arwain at risg – un sy'n gyffredin ym mhob menter adleoli – na fydd staff yn dymuno symud. Rydym yn sylweddoli nad yw'r achos busnes wedi cael ei



gyhoeddi eto, ond rydym yn deall bod angen ystyried y risg o golli staff, a'r costau sy'n gysylltiedig â recriwtio a / neu becynnau adleoli, yn y cynllun busnes.

Maes o law, hoffem gael rhagor o wybodaeth am sut y mae'r risg adleoli yn cael ei asesu; y costau posibl; a'r opsiynau a ddewisir i liniaru'r rhain.

Yn gywir,

A handwritten signature in black ink that reads "Russell George". The signature is written in a cursive style with a long horizontal flourish underneath.

Russell George

Cadeirydd Pwyllgor yr Economi, Seilwaith a Sgiliau



Russel George
National Assembly for Wales
Economy and Infrastructure Committee
Cardiff Bay
Cardiff
CF99 1NA

December 2nd 2016

Dear Mr George

Thank you for your letter dated 28th November 2016. Our responses are given below.

Capital Funding

Mr Thorley described Welsh Government funding as “the anchor” in terms of future capital funding sources.

We would welcome greater clarity, in due course, on what this will mean.

At present Finance Wales receives its fund monies from ERDF and Welsh Government. In light of Brexit, we feel that it may be necessary to investigate what other sources of funding could be available, while at the same time working closely with Welsh Government to assist in the delivery of their key economic objectives.

Risk Management

Given the greater capacity to lending envisaged for the Development Bank, there would also be a greater exposure to risk for the Welsh Government.

While normal prudential requirements do not apply to Finance Wales, we would welcome further information on what consideration is being given to managing the exposure to risk. E.g. would bad debt be underwritten by the Welsh Government, or would some form of capital requirement to foster enhanced risk management be applied?

The increased investment and lending activity envisaged by the Development Bank will be undertaken through a number of distinct funds targeted to address specific areas of market

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failure. A key consideration when developing new funds is defining their risk appetite. For example, investments in early stage, technology businesses inherently carry a higher risk than does lending to established businesses to fund their growth aspirations.

Like Finance Wales before it, the Development Bank will agree in advance individual fund parameters including risk appetite, and hence forecast losses and returns, with Welsh Government. Thereafter, individual investments will be closely monitored through robust portfolio management procedures and will be summarised in a comprehensive suite of monthly management information reported to the Development Bank Board. Inter alia, this will include comparison of actual bad debts with those originally envisaged. The performance of each fund will also be reported quarterly to Welsh Government. Proactive tracking of fund performance will, with Welsh Government agreement, enable fund parameters to be varied during the life of the fund. Such variations may be appropriate where fund performance is off plan, or in response to changing macro-economic circumstances. The business plan for the Development Bank includes provision for modest recruitment activity to ensure that portfolio management is resourced effectively.

Accordingly, whilst bad debts will impact fund performance and, therefore, returns to Welsh Government, this will be factored in to the development of new funds.

Help to Buy Scheme

This scheme is underpinned by a repayable loan (to HM Treasury). A loan, we assume, that is ultimately underwritten by the Welsh Government. We would welcome a note on the terms of this loan, and an annual update on progress to repay it.

The HTBW scheme has two financial transaction reserve loans as follows:

HTBW Fund I – total loan £174.5m (fully drawn) Investment start date Jan 2014.
Investment end date approx. Dec 2016

HTBW Fund II – total loan £290.0m (£26.3m drawn) Investment start date Oct 2016.
Investment end date approx. Dec 2021.

The HTBW shared equity loan investments made by the HTBW funds are interest free for the first 5 years. The term is up to 25 years and capital is only returned on a sale of the property or a refinance. Each loan can be up to a maximum of 20% of the purchase price (called HTBW's equity percentage), capped at £60,000. The amount of capital received back is equal to HTBW's original equity percentage times the sales price/valuation at the time of repayment. So the success of the scheme will depend on how the property market moves over the period of the scheme.

The Fund I loan is due to start being repaid from 2018/19 with the final repayment in 2040/41. The loan is interest free and only the original capital is to be repaid. The ramp up of repayment is end loaded and starts to ramp up from 2033. To date HTBW has received 51 repayments totalling some £1.5m with a net profit of £50k. The positive news is that this amount of repayments already received from borrowers nearly covers the first 3 years of repayments of FTR to 2021.

The Fund II loan is due to start being repaid from 2018/19 with the final repayment in 2043/44. The loan is interest free and only the original capital is to be repaid. The ramp up of repayment is end loaded and starts to ramp up from 2036. HTBW has just started investing this fund with c. £200k invested to date.

The FTR repayment risk is the liability of WG not HTBW.

The scheme is operating well, based on stakeholder feedback, and is tracking slightly ahead of the forecast investment run rate.

Pensions

We noted that the rise in the remuneration of the highest paid director in 2015-16 was inflated by pension contributions; and that 30% of the current Finance Wales staff are in the same scheme. Can you assure us that the business case for the Development Bank has considered this actuarial risk?

The significant cost shown in the 2015/16 accounts are reflective of a combination of several factors:

- a) Which pension scheme the individual is contributing to
- b) Length of service
- c) Age
- d) Salary
- e) Circumstance where the individual leaves the organisation as part of a restructuring.

Detailed consideration has been given to any individuals who might have more than one of these characteristics.

None would trigger any liability of anything approaching this size. The six individuals, who are of or are approaching the age where a reorganisation might trigger access to pension, do not have significant service and/or salary to create a significant cost.

In the committee hearing I promised to revert on a specific question posed by Vikki Howells AM in relation to equity investments exited by Finance Wales in the last financial year.

Of the 4 equity exits in 2105/16, 2 were loss-making which resulted in an average multiple of 0.58 or a loss of £454,850. Taken in isolation, the performance of these assets could be viewed as a cause for concern however this highlights the difficulty of viewing the performance of an equity fund in light of a single asset or as part of an annual Profit and Loss account. To understand fund performance, taking a longer term view is appropriate in order to avoid the issue of limited data misrepresenting realisations as either negative or positive.

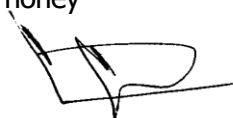
Finance Wales equity funds follow a 5 year investment period followed by a realisation period with fund performance monitored over the same timeframe. In the last 3 years Finance Wales equity investments have performed as follows:

Year	Multiple	Profit/Loss
14/15	1.58	£4,616,120
15/16	0.51	(454,850)
16/17 YTD	2.20	£3,174,956

In relation to the other comments in your letter where you wish to be updated in due course, we appreciate the interest of the Committee and will keep you informed of our progress.

With kind regards,

Giles Thorley



Chief Executive



Llywodraeth Cymru
Welsh Government

Russell George AC
Cadeirydd – Pwyllgor yr Economi, Seilwaith a Sgiliau
Cynulliad Cenedlaethol Cymru

SeneddEIS@assembly.wales

15 Rhagfyr 2016

Annwyl Russell,

Hoffwn ddiolch i'r pwyllgor am roi'r cyfle imi gynnig tystiolaeth ar gyfer eich ymholiad i Gomisiwn Seilwaith Cenedlaethol Cymru.

Yn ystod y sesiwn, dywedais y byddem yn paratoi papur i'r pwyllgor yn rhoi amlinelliad o'n modelau ar gyfer y comisiwn. Mae hwn wedi ei atodi i'r llythyr hwn.

Rwy'n gobeithio y bydd y pwyllgor yn teimlo bod y papur hwn yn ddefnyddiol ac yn edrych ymlaen at ddarllen yr adroddiad pan gaiff ei gyhoeddi.

Yn gywir,

A handwritten signature in black ink, appearing to read 'Ken', written over a horizontal line.

Ken Skates AC/AM

Ysgrifennydd y Cabinet dros yr Economi a'r Seilwaith
Cabinet Secretary for Economy and Infrastructure

**PWYLLGOR YR ECONOMI, SEILWAITH A SGILIAU
COMISIWN SEILWAITH CENEDLAETHOL CYMRU
YSTYRIED MODELAU AR GYFER COMISIWN SEILWAITH
CENEDLAETHOL CYMRU**

Cyflwyniad

- 1.1. Mae Llywodraeth Cymru wedi ymrwymo i sefydlu Comisiwn Seilwaith Cenedlaethol i Gymru i roi cyngor arbenigol, annibynnol ar faterion a blaenoriaethau sy'n gysylltiedig â seilwaith strategol.

Wrth benderfynu ar statws a chylch gwaith cychwynnol comisiwn ar gyfer Cymru, edrychwyd ar y modelau presennol ar gyfer cyrff seilwaith ym Mhrydain ac yn rhyngwladol.

Mae ein rhaglen Lywodraethu, 'Symud Cymru Ymlaen', yn pennu sut y bydd Llywodraeth Cymru yn adeiladu Cymru mwy hyderus, mwy cyfartal, sydd â gwell sgiliau ac sy'n fwy cadarn. Mae'n cynnwys cyfres uchelgeisiol o bolisïau fydd yn golygu y bydd y wlad yn fwy llewyrchus a diogel, iach ac egnïol, yn wlad uchelgeisiol sy'n dysgu, sy'n unedig ac yn gysylltiedig.

- 1.2. Rhan allweddol o gyflawni'r uchelgais hwn fydd symud ymlaen tuag at strategaeth buddsoddi mewn seilwaith sy'n fwy hirdymor sy'n cynnwys egwyddorion Deddf Llesiant Cenedlaethau'r Dyfodol. Bydd y buddsoddiad hwn yn hollbwysig i sicrhau bod y seilwaith yn cysylltu pobl a chymunedau mewn dull sy'n addas at y diben, ac sy'n edrych ymlaen at anghenion yfory yn ogystal â heddiw.
- 1.3. Mae nifer o weinyddiaethau wedi sefydlu cyrff i ddarparu cyngor arbenigol, annibynnol ar faterion seilwaith. Mae statws a'r dull o lywodraethu cyrff o'r fath yn amrywio. Fodd bynnag, eu swyddogaeth allweddol cyffredin yw ceisio buddsoddi mewn ffordd newydd, yn hytrach na'r buddsoddi tymor byr dinistriol, o ganlyniad i wleidyddiaeth tymor byr, a chael strategaeth fuddsoddi hirdymor mwy cynhyrchiol sy'n adlewyrchu consensws cryfach, mwy sefydlog sy'n cael ei alluogi gan gyngor arbenigol, annibynnol o'r fath.

Prif egwyddorion

- 2.1. Mae ein syniadau ynghylch y math o fodel a fyddai ar y cychwyn yr un mwyaf buddiol i Gymru wedi bod yn seiliedig ar ganlyniadau a nifer o elfennau allweddol:
- 2.2. :
- i. Mae angen i'r comisiwn gefnogi nodau ac egwyddorion gweithio sydd wedi'u sefydlu o dan Ddeddf Llesiant Cenedlaethau'r Dyfodol

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- ii. Mae angen uniondeb a'r gallu i roi cyngor arbenigol ac annibynnol i Weinidogion Cymru sy'n cynrychioli anghenion a safbwyntiau y gymdeithas gyfan
- iii. Dylai'r comisiwn gydnabod cyfyngiadau ar y gyllideb, yn ogystal ag ymrwymiad y llywodraeth i sicrhau cyn lleied â phosib o ddeddfwriaeth newydd,
- iv. Dylai trefniadau llywodraethu a chyllido'r llywodraeth fod yn gymesur i'r gwerth ychwanegol y gallai gynnig i sefydlu strategaeth seilwaith sefydlog, mwy hirdymor ar gyfer Cymru.
- v. Mae angen i'w gyngor ategu'r dull o ddatblygu Fframwaith Datblygu Cenedlaethol Cymru ar gyfer cynllunio strategol ar y tir, o dan y Ddeddf Gynllunio ddiwethaf.
- vi. Dylai gwaith y comisiwn, yn seiliedig ar arbenigedd ac annibynniaeth, gefnogi fframwaith benderfynu a chydsynio gyflymach, drwy adlewyrchu consensws o anghenion a safbwyntiau y gymdeithas gyfan a chyflymu twf.

2.3. Yna caiff yr egwyddorion hyn eu profi fel rhan o'r gwaith o asesu modelau eraill o weinyddiaethau amrywiol er mwyn sefydlu yr ateb gorau i Gymru. Bu pwyslais arbennig ar gylch gwaith, aelodaeth, arbenigedd, cwmpas (gan gynnwys cwmpas ariannol) a manteision comisiwn wedi ei fesur yn erbyn costau gweithredu.

Modelau y DU a Rhyngwladol

3.3. Cafodd nifer o fodelau gwahanol eu nodi i'w hystyried. Mae modelau y DU a modelau rhyngwladol yn bodoli mewn amgylcheddau sy'n wahanol iawn i Gymru, Mae nifer o elfennau gwahanol yn cynnwys cyfyngiadau daearyddol, y cyd-destun gwleidyddol, setliadau datganoledig, fframweithiau deddfwriaethol ac adnoddau ariannol a chyfrifo.

3.4. Roedd y modelau gafodd eu hystyried yn cynnwys:

Enw	Statws	Cylch Gwaith
Comisiwn Seilwaith y DU	Cynghorol Anstatudol	<ul style="list-style-type: none"> • Wedi ei sefydlu'n gyntaf ar ffurf anstatudol/cysgodol • O fis Ionawr 2017 caiff ei ail-sefydlu fel asiantaeth weithredol anstatudol sy'n atebol i'r Trysorlys • Gorfodol i ddadansoddi seilwaith 30 mlynedd y DU • Cynnwys seilwaith trawsffiniol datganoledig • Dim cylch gwaith statudol dros seilwaith

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CENEDLAETHOL CYMRU**

		<p>statudol, ond gallai edrych ar anghenion datganoledig drwy wneud cais</p> <ul style="list-style-type: none"> • Seilwaith o fewn y cwmpas yn cynnwys ynni, trafniadaeth, dŵr a charthffosiaeth, amddiffyn rhag llifogydd a chyfathrebu digidol • Ni fydd yn cynnwys seilwaith 'cymdeithasol' – ysbytai, ysgolion a charchardai ac ati • Terfyn ariannol pendant wedi ei osod gan Drysorlys EM • Cynlluniau seilwaith hirdymor i'w gosod gerbron y senedd • I gynnwys cadeirydd, comisiynwyr, Prif Swyddog Gweithredol a swyddfa â staff.
The Scottish Futures Trust	Cyflawni Cwmni Hyd Braich	<ul style="list-style-type: none"> • Cwmni annibynnol, hyd braich a sefydlwyd gan Lywodraeth yr Alban • Yn 2015/16 amcangyfrifwyd bod £146 miliwn o fanteision ac arbedion net o ganlyniad i'r SFT. • Cyllideb weithredol o £10.3m yn 2016/17. Ymddiriedolaeth yn cynnwys 70 o weithwyr proffesiynol ym maes ariannu, caffael a chyflawni seilwaith • Cwmpas yn cynnwys tai, carbon isel, addysg a digidol • Ffyrdd eraill o gyllido i gynnwys mentrau nad ydynt yn dosbarthu elw, mentrau tai ar y cyd ac ariannu treth cynyddrannol ochr yn ochr â'r awdurdodau lleol. • Rhan o'r cyfiawnhâd ar gyfer y model oedd cyllido prosiectau seilwaith penodol oddi ar lyfrau balans y llywodraeth • Newidiadau diweddar i reolau Eurostat wedi golygu bod y ddyled fenthyca hon yn dod o dan y llywodraeth
Bwrdd Buddsoddi Strategol Gogledd Iwerddon	Cynghorol Statudol	<ul style="list-style-type: none"> • Cwmni wedi ei gyfyngu gan warant • Wedi ei sefydlu drwy is-ddeddfwriaeth • O dan berchnogaeth y Prif Weinidog ac wedi'i ariannu o fewn terfynau gwariant adrannol. • Cynghori llywodraeth, awdurdodau lleol a chyrrff eraill • Ein prif gyfrifoldeb yw paratoi strategaeth fuddsoddi 10 mlynedd, cefnogi partneriaid y

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		<p>sector cyhoeddus trwy ddarparu staff arbenigol, uned rheoli eich asedau eich hunan; a diwygio hyrwyddwyr</p> <ul style="list-style-type: none"> • Gweithgareddau wedi eu harwain gan nodau polisi llywodraethol gorfdol • Yn gweithio o fewn cyfyngiadau cyllidebol buddsoddiadau.
Infrastructure Australia	Cynghorol Statudol	<ul style="list-style-type: none"> • Sefydlwyd trwy ddeddfwriaeth sylfaenol • Cynghori'r Llywodraeth ac yn archwilio seilwaith sy'n bwysig yn genedlaethol • Datblygu Cynllun Seilwaith parhaus dros 15 mlynedd • Cwmpas i gynnwys trafndiaeth, ynni, cyfathrebu a dŵr • Annibynnol ar y llywodraeth • Gweinidogion yn cyhoeddi Datganiad Disgwyliadau sy'n pennu blaenoriaethau y llywodraeth sydd i'w hystyried • Nid yw'n ariannu na chyflawni prosiectau • Y Bwrdd yn cynnwys cadeirydd a 12 o aelodau
Uned Seilwaith Cenedlaethol Seland Newydd (NZNIU)	Llywodraeth Fewnol	<ul style="list-style-type: none"> • Sefydlwyd yn 2009 • Yn seiliedig o fewn adran trysorlys y llywodraeth • Cyfrifol am ddatblygu a monitro cynllun seilwaith 20 mlynedd, gan sefydlu fframweithiau traws-lywodraethol ar gyfer arfarnu prosiectau seilwaith a rheoli asedau; a darparu cymorth i'r Bwrdd Cynghori Cenedlaethol ar Seilwaith • Roedd y Bwrdd yn cynnwys aelodau y sector preifat a thu allan i lywodraeth ganolog yn eu capasiti fel cynghorwyr. • Prif swyddogaeth y bwrdd yw i gysylltu gyda'r sector preifat, llywodraeth leol a rhanddeiliaid eraill • Prif ddull NZNIU yw i fanteisio i'r eithaf ar gyfleoedd ar gyfer Partneriaethau Cyhoeddus Preifat (PPP).

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Awdurdod Ailddatblygu Trefol Singapôr (SURA)	Mewnol, Llywodraeth	<ul style="list-style-type: none"> • Awdurdod cynllunio trefol a bwrdd statudol • Sefydlwyd yn 1974 mewn ymateb i fwy o ddwysedd trefol • Cyfrifoldebau i gynnwys cynllunio tir, cynllunio dinesig, cadwraeth adeiladau, gwerthu tir a rheoli meysydd parcio • Creu Cynllun Cysyniadau 40 mlynedd • Cynllunio hirdymor yn seiliedig ar Gynlluniau Meistr 10 mlynedd mwy manwl
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Opsiynau ar gyfer Comisiwn Cymru

4.1. Wedi cymharu manteision ac anfanteision modelau cenedlaethol a rhyngwladol eraill, cafodd yr opsiynau canlynol eu hystyried ar gyfer comisiwn cenedlaethol i Gymru.

a) Corff cyhoeddus anadrannol statudol

Byddai'n dangos yn glir swyddogaeth ddifrifol y comisiwn. Fodd bynnag, yn debygol o fod yn ddrud, yn defnyddio llawer o adnoddau i'w gyflwyno a'i sefydlu, yn debygol o gynyddu biwrocratiaeth, ac o bosibl yn anghymesur i'r anghenion presennol.

b) Model y DU, gyda Gweinidogion Cymru wedi eu rhwymo gan ei gyngor a'i argymhellion

Dull mwy cymesur, a fyddai'n elwa o ymrwymiad i ddadansoddiad annibynnol, arbenigol ond byddai perygl o ddiffyg democrataiaeth ac o fod yn atebol.

c) Cwmni cyflawni cyhoeddus annibynnol

Drud o bosibl a byddai amheuan ynghylch ei gymesuredd, mae'r model hwn yn gysylltiedig â chyflawni yn hytrach na chynghor strategol. Gellid newid y pwyslais o helpu i sefydlu strategaethau seilwaith mwy hirdymor, a allai fod yn allweddol i ryddhau fframweithiau buddsoddi a chyflawni sefydlog a fyddai o fudd i genedlaethau'r dyfodol yng Nghymru. Mae gwrthdaro posibl ac/neu ddyblygu posibl hefyd rhwng y model hwn a sefydliadau eraill, fel Trafnidiaeth Cymru.

ch) Corff cynghori statudol

Byddai'r sail statudol yn sicrhau bod y sefydliad yn fwy difrifol. Fodd bynnag, mae hyn yn debygol o fod yn anghymesur o ran cyflawni amcanion y comisiwn, ac yn ddwys o ran ei gyflawni.

d) Corff cynghori anstatudol gyda phenodeiaeth nas ariennir yn gyhoeddus

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Gellid ei ystyried yn gymesur ond mae cwestiynau o ran ei werth, ei ddifrifoldeb a'i dryloywder yn debygol o godi heb broses penodiadau cyhoeddus.

dd)Corff cynghori anstatudol gyda phenodeiaeth a ariennir yn gyhoeddus

Cymesur â'r angen presennol, er y gellid ei ystyried yn wanach na chorff statudol. Byddai'r broses penodiadau cyhoeddus yn ychwanegu hygredd i'r rhai a benodir. Byddai'r model hwn hefyd yn rhoi mwy o hyblygrwydd na modelau eraill o ran datblygu'n fwy, pe byddai tystiolaeth yn ymddangos bod angen newid.

Casgliad

- 5.1. Mae amrywiol fodelau eisoes yn bodoli a gwahanol syniadau ar gyfer statws a chylch gwaith corff seilwaith. Fodd bynnag, nid yw'n ymddangos bod un model yn cynnig ateb perffaith, a bydd angen creu rhywbeth penodol ar gyfer Cymru. Dengys y dystiolaeth mai'r ateb mwyaf ymarferol yn y cyd-destun presennol fyddai sefydlu comisiwn cynghorol, anstatudol. Byddai hyn yn gam pendant tuag at gryfhau'r broses o wneud penderfyniad ac o gyflawni ym maes seilwaith.
- 5.2. Yn ogystal â bodloni meini prawf y prif egwyddorion, gellid cryfhau'r model hwn trwy gynnal adolygiadau cyfnodol i asesu eu heffeithiolrwydd a pha mor addas ydynt at y pwrpas. Byddai hyn yn rhoi hyblygrwydd i addasu i newidiadau mawr yn yr amgylchedd wleidyddol, gyfreithiol ac ariannol allanol, a fyddai'n werthfawr iawn yn y cyd-destun presennol ble y mae llawer o ansicrwydd ynghylch y dyfodol.
- 5.3. Y ffordd orau o fynd i'r afael â hyn fyddai drwy broses agored a thryloyw, gyda phwyslais ar gydweithio tuag at greu consensws. Dylai'r cyngor gan y corff fod yn gyngor arbenigol yn seiliedig ar dystiolaeth ac yn gywir yn dechnegol, a fyddai'n galw ar aelodau i gael eu penodi yn ôl teilyngdod a phrofiad yn hytrach na'u swyddi.
- 5.4. Dylai swyddogaethau a chyfrifoldebau y sefydliad fod yn glir o'r dechrau. Dylai Llywodraeth Cymru fod yn barod i newid statws a chylch gwaith y corff os oes manteision amlwg o wneud hynny. Un ffordd y gellid gwneud hyn yw drwy adolygu statws a chylch gwaith y corff cyn etholiad nesaf y Cynulliad yn 2021.

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- 5.5. Gan ddibynnu ar yr adborth o'r ymgynghoriad cyhoeddus, gellid sefydlu comisiwn o dan y model hwn erbyn yr haf 2017.

Eitem 8

Mae cyfyngiadau ar y ddogfen hon