

Agenda – Economy, Infrastructure and Skills Committee

Meeting Venue:

Committee Room 4 – Tŷ Hywel

Meeting date: 21 November 2018

Meeting time: 09.15

For further information contact:

Gareth Price

Committee Clerk

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Private pre-meeting (9.15–9.30)

1 Introductions, apologies, substitutions and declarations of interest

2 Paper(s) to note

(Pages 1 – 4)

Attached Documents:

EIS(5)–27–18(P1) Letter from Chair to Gareth Elliott, Mobile UK

EIS(5)–27–18(P2) Response from Gareth Elliot, Mobile UK, to Chair

3 Outreach film: evidence from Small Businesses about Research and Innovation in Wales

(9.30–9.40)



Cynulliad
Cenedlaethol
Cymru

National
Assembly for
Wales

4 Motion under Standing Order 17.42 to resolve to exclude the public from item 5

(ix) any matter of the internal business of the committee, or of the Assembly, is to be discussed.

5 Scoping paper: Barriers facing Small Home Building Firms

(9.40–9.45)

(Pages 5 – 8)

Attached Documents:

EIS(5)–27–18(P3) Scoping paper

6 National Museum Wales: Research and Innovation evidence session

(9.45–10.25)

(Pages 9 – 23)

David Anderson, Director of National Museum Wales

Attached Documents:

EIS(5)–27–18(P4) Research brief

Break (10.25–10.30)

7 Budget Scrutiny with the Cabinet Secretary for Economy and Transport

(10.30–11.30)

(Pages 24 – 84)

Ken Skates AM, Cabinet Secretary for Economy and Transport

Simon Jones, Director – Economic Infrastructure

Marcella Maxwell, Head of Economic Action Plan Implementation

Dean Medcraft, Director– Finance & Operations

Attached Documents:

EIS(5)–27–18(P5) Research brief

EIS(5)–27–18(P6) Draft Budget Evidence Paper from the Cabinet Secretary for Economy and Transport

8 Business panel: Research and Innovation evidence session

(11.30–12.30)

(Pages 85 – 98)

David Notley, Innovation Advisory Council for Wales

Ben Cottam, FSB

Ian Courtney, Wesley Clover Corporation

Simon Gibson, Wesley Clover Corporation

For the research brief, please refer to EIS(5)–27–18(P4), item 6.

Attached Documents:

EIS(5)–27–18(P7) Evidence from Innovation Advisory Council for Wales

EIS(5)–27–18(P8) Evidence from FSB

EIS(5)–27–18(P9) Evidence from Wesley Clover Corporation

Gareth Elliott
Head of Policy and Communications
Mobile UK

6 November 2018

Dear Gareth,

Thank you for attending the Economy, Infrastructure and Skills Committee meeting on 11 October 2018. Following your session, the Committee took evidence from the Leader of the House, Julie James.

The Committee questioned the Leader of the House on the anticipated effects of the planned reforms to the Permitted Development regime. The Leader made it clear that she was unconvinced a change to the regime would have any impact on mobile coverage in areas of Wales that currently experience poor or no coverage. In explaining her position, she cited the low number of planning applications for masts and a lack of clarity on where masts would be installed if changes to the Permitted Development regime were made.

During your evidence session, you suggested that the Permitted Development regime should be changed to allow 30 ft masts. It would be useful to the Committee if you could set out the impact that such a change would enable, in terms of increasing coverage for those areas of Wales that still have poor or no coverage.



The Committee would also welcome your views on any other aspect of the evidence session with the Leader of the House, held on 17 October 2018. The session can be viewed on Senedd TV here:

<http://www.senedd.tv/Meeting/Archive/e4b0a016-2c81-4101-b1f6-4390e353d66a?autostart=True> or you can access a transcript of the session here <http://record.assembly.wales/>.

I look forward to hearing from you.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Russell George', with a stylized flourish at the end.

Russell George
Chair



Russell George AM
Chair of the Economy, Infrastructure and Skills Committee
National Assembly for Wales
Cardiff Bay
Cardiff
CF99 1NA

1 Carnegie Road
Newbury
Berkshire
RG14 5DJ

14 November 2018

Dear Mr George,

Mast Heights

I would like to thank you for writing to me following evidence that was given to your Committee by the Leader of the House, Julie James AM, and your request for additional information regarding the height of masts and any potential impact on an increase within permitted development rights on coverage in Wales.

We are disappointed with the response provided by the Leader of the House who stated that she is unconvinced a change in the permitted development rights regime could have any impact on coverage in areas of Wales that currently experience poor or no coverage. It is important to point out that the vast majority of mast applications are made through permitted development, and as such, it is wrong to suggest that a lack of planning applications is evidence to limit reform. Under permitted development a planning application is not necessary. Also, the point was made during the Committee hearing by the industry that it is important to build in reforms that not only enable network rollout today but ready Wales for the roll-out of 5G.

I would also like to reiterate that the current position in Wales is at stark odds with other areas of the UK where changes to the permitted development rights regime have already been made, and further attempts are being considered to reform it further. As the industry looks forward to the implementation of 5G, there is a real possibility that Wales could find itself even further behind and with a planning and regulatory regime not fit for the future.

Mast Heights

When considering the effect of mast height, I can only provide a theoretical response as actual real-world application relies on several site-specific variables which ultimately determine coverage. However, in a typical representative example (in a semi-rural area, in this case on the M4) the coverage delivered by masts of varying heights was:

- 15m delivers 57.76 sq. km
- 20m delivers 63.77 sq. km
- 25m delivers: 76 sq. km
- 50m delivers 116 sq. km

Additionally, in evidence Mobile UK provided to the Department for Communities and Local Government in 2015 we explained that in an open 'green field' area with antennas at 25 - 30 metres

in height, the area covered could be as much as 5 – 10 km; whereas in contrast, in an urban area, with antennas at 12 metres above ground, the coverage might be only 300 – 500 metres. Again, we are only able to give ranges, because each site is unique, and the coverage depends on a variety of local factors.

However, and perhaps of more interest to the Committee, height is often required for link provision rather than simply to extend coverage. In rural areas, particularly in hilly terrain as found in Wales, it is important that masts are tall enough to have a direct line of sight to the next mast in the chain in order to deliver backhaul via a microwave link where no fibre cable backhaul is available.

I and my industry representatives very much welcome the opportunity you have provided us to provide this additional evidence. As an industry we continue to invest £2bn per annum in our networks to enhance and improve coverage. It is important that going forward positive partnerships are built and that the Mobile Acton Plan is delivered in a timely manner to ensure Wales can play its part in the next generation of mobile telephony.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Gareth Elliott', with a long horizontal flourish extending to the right.

Gareth Elliott
Mobile UK

Agenda Item 5

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Agenda Item 6

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Agenda Item 7

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Memorandum on the Economy and Transport Draft Budget Proposals for 2019-20

Economy, Infrastructure and Skills Committee – 7 November 2018

1.0 Introduction

This paper provides information on the Economy & Transport (E&T) budget proposals as outlined in the 2019-20 Draft Budget which was published in two stages: an outline budget (stage 1) on 2 October 2018 followed by a detailed budget (stage 2) on 23 October 2018. It also provides an update on specific areas of interest to the Committee.

It does not address the budget detail relating to Culture or Sport which the Minister for Culture, Tourism and Sport will address at the Culture, Welsh Language and Communications Committee on 8 November 2018 and the Health, Social Care & Sport Committee on 15 November. It also excludes the areas of Chwarae Teg, ICT Infrastructure, Public Sector Broadband Aggregation (PSBA) and Digital Inclusion which, although included within the E&T MEG, are the remit of the Leader of the House and Chief Whip who will be submitting separate written evidence to the Economy, Infrastructure and Skills Committee.

The 2019-20 draft budget preparations are the first to take place since the publication of the Economic Action Plan (EAP). It provides us with an opportunity to begin realigning budgets to support delivery of the EAP agenda and its blueprint to drive inclusive growth and future proof the economy in all areas of Wales.

The EAP document highlights how its policy, delivery and behavioural changes support and reflect Prosperity for All: the National Strategy and our Well-Being objectives. I am realistic in acknowledging that delivering the EAP's overarching aim of increasing wealth and well-being at the same time as reducing inequalities is a long term agenda for change and will require more than a change in budget lines in any single year.

Nevertheless, in our contribution to the 2019-20 Draft Budget, I have taken the opportunity to undertake a number of important changes. These signal a shift in focus to meet new priorities in the shape of the Calls to Action to future proof business and the new Economy Futures Fund that provides businesses with a clearer line of sight to funding which support the Calls to Action. Whilst recognising the need for change, it is important that our stakeholders see a seamless transition and part of this is ensuring legacy commitments that precede the EAP are honoured.

In this 2019-20 Draft Budget, the presentation of our budgets has been re-stated as detailed in **Annex A**. Recognising that there is a transition in delivering EAP, the principles of simplification and flexibility have been applied. I have been clear that we are taking an iterative approach to implementing EAP, working with our partners. Implementation of our new operating model has begun – the Economic Contract, Calls to Action and Economy Futures Fund. I am now working upon other important elements of EAP, including the approach to Foundation Sectors, National Thematic Sectors and Regional Economic Development. It is important that decisions are not made now that limit our scope in these areas. For that reason, at this stage, I have not established separate Budget Expenditure Lines (BELS) for these elements, instead consolidating budgets into revenue and capital Business Development

BELS, with revenue focussed on enabling initiatives to support business and capital providing direct support to business. Our approach to the 2019-20 Draft Budget and in particular, the creation of the Business Development BELS, provides us with the maximum ability to flex our approach as policy develops.

As a whole, the EAP is structured around seven of the twelve Well-being objectives, but in providing for better alignment between the budget and the priorities of the EAP, the changes set out above support delivery of the “Supporting people and business to drive prosperity” objective in particular. In terms of the cross-cutting themes, skills and employability and decarbonisation are reflected in the Calls to Action, which the new direct support to business is intended to support.

2.0 Summary of Budget Changes

The 2019-20 Draft Budget provides a one year spending plan for revenue and a two year spending plan for capital.

The tables below provide an overview of the planned revenue and capital expenditure for E&T activities in the portfolio excluding Culture, Sport and those areas that are the remit of the Leader of the House and Chief Whip.

The total revenue budget for 2019-20 is £365.89m (excluding Non Cash and Annually Managed Expenditure (AME)). In overall terms, the revenue budget has increased by £32.833m when compared to the revised baseline, as shown in Table 1:

TABLE 1: Overview of the Revenue Budget					
	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Revenue					
Economy	52,018	(4,387)	47,631	5,000	52,631
Transport	299,720	(22,294)	277,426	35,833	313,259
Prosperity for All Initiatives	-	8,000	8,000	(8,000)	0
Sub Total	351,738	(18,681)	333,057	32,833	365,890
Non Cash					
Transport	188,691	0	188,691	0	188,691
TOTAL	540,429	(18,681)	521,748	32,833	554,581
AME					
AME	23,619	128,235	151,854	(98,511)	53,343

Over the period 2019-20 to 2020-21, the total capital budget is £1.122bn. The summary budgets are shown in Table 2 below:

TABLE 2: Overview of the Capital Budget				
	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Economy	93,948	67,365	47,882	115,247
Transport	324,081	445,683	516,452	962,135

Sub Total	418,029	513,048	564,334	1,077,382
Financial Transactions (FT)				
Economy	15,720	32,150	10,900	43,050
Transport	2,200	1,200	0	1,200
Sub Total	17,920	33,350	10,900	44,250
Total Traditional Capital & FT				
Economy	109,668	99,515	58,782	158,297
Transport	326,281	446,883	516,452	963,335
TOTAL	435,949	546,398	575,234	1,121,632
2018-19 Final Budget	390,949	473,526	477,662	951,188
Change in New Plans	45,000	72,872	97,572	170,444

In addition, traditional capital funding is earmarked in central reserves for the M4 pending the outcome of the public inquiry: 2019-20 £173.41m and 2020-21 £215.319m.

2.1 Revenue

There has been a £32.833m movement in the revenue budget, as summarised in Table 3 below:

TABLE 3: Revenue Budget Movements				
Project	Prosperity for All £'000	Economy £'000	Transport £'000	Total £'000
Additional Allocations				
Traws Cymru – continuation of free travel at weekends			1,000	1,000
Transport for Wales – support for the new Wales and Borders rail franchise			32,610	32,610
Total	0	0	33,610	33,610
Reallocation				
Prosperity for All Allocations	(8,000)			(8,000)
Regional Economic Development – support for plans to be developed by the Chief Regional Officers with stakeholders to drive growth		2,500		2,500
Science – Chief Scientific Adviser activities to promote and showcase Wales for innovation, science and research		500		500
Tourism & Marketing – builds on targeted marketing to support Tourism 2020		2,000		2,000
Bus Support Review – commitment to review bus services to ensure they are sustainable and attractive to passengers			2,000	2,000
Youth Discounted Travel Scheme- in response to consultation this will enhance the offer			1,000	1,000

Total	(8,000)	5,000	3,000	0
Reprioritisation & Realignment				
Science – support new STEM EU programme		709		709
Business Development Initiatives – available from time limited small programmes now completed		(709)		(709)
Entrepreneurship – consolidate start up & youth entrepreneurship activity in one BEL		3,596		3,596
Business Wales – maintain separate expenditure line for business information & transfer entrepreneurship to a consolidated BEL		(3,596)		(3,596)
Healthy Working Programmes – additional funding for Time for Change (TFC)		31		31
Corporate Programmes – reprioritised available funding for TFC		(31)		(31)
Network Operations – to reflect delivery plan for the Cleddau Bridge tolls (allocation from Two Year Plaid Cymru Agreement in 2018-19)			2,000	2,000
National Transport Infrastructure – alignment of the delivery of the Cleddau Bridge tolls			(2,000)	(2,000)
Transport for Wales – to support the new rail franchise			14,966	14,966
Network Operations – reprioritisation of investment aligned to the Trunk Roads Maintenance Manual 2015			(14,966)	(14,966)
Total	0	0	0	0
Other Movements				
Third Menai Crossing Feasibility Study – Two Year Plaid Cymru Agreement – expenditure brought forward to 2018-19			(777)	(777)
Total		0	(777)	(777)
Total Revenue	(8,000)	5,000	35,833	32,833

2.2 Non Cash

There has been no change to the non-cash budget for roads depreciation.

2.3 Capital

Over the next two years £158.297m is allocated for Economy. Our capital budgets have started to be realigned in line with the EAP and as part of a managed transition, a number of our capital budgets that previously supported the priority sectors have been consolidated into a Business Development (Direct Support) BEL, which includes the Economy Futures Fund. Further detail on the consolidated funds is provided in section 5.3.

The Business Development (Direct Support) BEL contains forward commitments which were agreed prior to the development of our new operating model. There will be a gradual tapering in those commitments and an increase in the proportion of

support to deliver new projects agreed under the new operating model of Economic Contract, Calls to Action and Economy Futures Fund. Since the launch of the Economy Futures Fund in May 2018, as at September a commitment of just over £7.7m in financial support has been given to 34 businesses.

Access to finance for SMEs continues to be provided through the Business Development BEL which provides £61.374m over two years (including £3.95m FT funding) in addition to £28m for the Development Bank of Wales which includes £7m of FT funding for the Wales Micro Business Loan Fund; £15m for the Wales Flexible Investment Fund and £6m for the Wales Angel Co-Investment Fund over the next two years.

Transport connectivity at a national, regional and local level is vital to social cohesion and access to employment opportunities. Over the next two years £963.335m is allocated for Transport which includes the prioritisation of schemes set out in the National Transport Finance Plan 2015. In addition to traditional capital and financial transaction funding, investments are supported through maximising European funding opportunities, capital borrowing powers for the M4 and innovative financing solutions.

Innovative financing solutions help to deliver additional investment in economic infrastructure. The Mutual Investment Model was launched in February 2017 and will be utilised to deliver the final phases of the A465 dualling scheme.

In addition, £388.729m capital funding is earmarked in central reserves for the M4 pending the outcome of the public inquiry (2019-20 £173.41m; 2020-21 £215.319m). Recognising the development of integrated transport systems is also a key driver for economic growth. The Transport spending plans also include circa. £193m over two years for roads maintenance and improvement.

The total additional traditional capital and financial transactions allocations of £170.444m for the E&T MEG are summarised in Table 4 below:

TABLE 4: Capital Budget – Additional Allocations			
Project	2019-20 £'000	2020-21 £'000	Total £'000
<i>Traditional Capital</i>			
Tech Valleys	10,000	10,000	20,000
Integrated active travel	20,000	30,000	50,000
Taffs Well Depot	16,222	28,672	44,894
Local Transport Fund	26,000	26,000	52,000
Total Traditional Capital	72,222	94,672	166,894
<i>FT</i>			
Wales Micro Business Loan Fund	3,000	4,000	7,000
FTR Repayments	(2,350)	(1,100)	(3,450)
Total FT	650	2,900	3,550
Total	72,872	97,572	170,444

In addition there are a number of changes to expenditure lines to reprioritise and align the EAP and delivery which are summarised in Table 5 below:

TABLE 5: Capital Budgets Reprioritisation & Realignment
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BEL	2019-20 £'000	2020-21 £'000
Business Development – Direct Support – realign infrastructure activity in line with the EAP	(10,000)	(6,200)
Strategic Infrastructure Development – infrastructure activity realigned with the EAP	10,000	4,200
Aviation – reprioritised to support pan Wales developments	-	2,000
Network Operations <ul style="list-style-type: none"> - £15m north / south overtaking improvements A487 & A470 - £14.966m funding required to comply with the Trunk Roads Maintenance Manual 2015 	29,966	-
National Transport Infrastructure <ul style="list-style-type: none"> - realign delivery of £15m overtaking improvements & reallocation of £14.966m to deliver network management priorities. 	(29,966)	-
Total	-	-

The BELS that provide a full breakdown of the portfolio's revenue and capital budgets are detailed by Action in sections 4 and 6.

The E&T MEG also includes a budget allocation for AME, which provides cover for charges that are outside the control of the portfolio, such as impairments on the property portfolio, joint ventures, investments and the roads network. The budget movement reflects the changes in the provision required for the roads network and property impairments.

3.0 Equality, Sustainability, Welsh Language and Demographic Considerations

In formulating our plans, the following key demographics trends from the recent report, produced by the Office for National Statistics (ONS), on [trend-based population projections by age and sex](#) have been considered which suggest that:

- The population of Wales is projected to increase by 3.1 per cent to 3.21 million by 2026 and by 4.6 per cent to 3.26 million by 2041.
- The number of children aged under 16 is projected to increase to 568,000 by 2026 before decreasing between 2026 and 2041, with a population of 549,000 in 2041. Overall, the number of children is projected to decrease by 1.5 per cent between 2016 and 2041.
- The number of people aged 16-64 is projected to decrease by 81,000 (4.2 per cent) between 2016 and 2041.
- The number of people aged 65 and over is projected to increase by 232,000 (36.6 per cent) between 2016 and 2041.

The 2019-20 Draft Budget has been prepared with a long term perspective and an integrated approach to the decisions taken in line with Prosperity for All: the National Strategy. As part of the budget setting process, our key budget decisions have been considered to better understand the overall impact on different groups of people. Socio-economic disadvantage is an underpinning consideration when assessing the impact of decisions.

Our budgets have started to be realigned to the EAP which sets out policy, delivery, and behavioural changes to support and reflect our Well-Being objectives. EAP aims to support improved levels of wealth and well being in the aggregate, whilst reducing inequalities experienced by individuals and communities across Wales. It also sets out a vision for inclusive growth, built on strong foundations, supercharged industries of the future and productive regions. The EAP drives the twin goals of growing the economy and reducing inequality.

The Economic Contract will drive change in areas like fair work and the promotion of health, skills and learning in the workplace. Doing these things makes good business sense and also directly supports our people and improves the experience of workers in the workplace.

The regional model for economic development will help drive opportunities in every part of Wales, so that location is no longer a barrier that prevents people and communities from improving their well-being.

The EAP recognises that the economy is integral to creating the social conditions where Welsh speakers can stay in Welsh-speaking communities, or return to those communities. The regional approach will empower thriving local economies to support our target of one million Welsh speakers by 2050.

The focus on Foundation Sectors (tourism, food, retail and care) targets those services that people produce, consume and depend on locally, including care for the old and young. The Foundation Sectors represent often small and micro sized businesses that are 'grounded' in local communities. Supporting their development and sustainability will have an indirect impact on people and communities.

Infrastructure investment is essential to supporting people to access places, services and employment opportunities. For the low paid and young adults in particular, the lack of access to reliable and affordable public transport connections can be a barrier to employment or study. Transport for Wales will work with our new regional teams, the emerging regional transport authorities and partners to create an integrated public transport network, covering the rail and bus networks. The Transport budgets, property related and strategic infrastructure developments and digital connectivity are supporting our aims to support employment opportunities.

4.0 ECONOMY – FUNDING OF ACTIONS

Compared to the 2019-20 indicative budget, there is a net increase in the revenue allocation of £5m. The total capital allocation for 2019-20 to 2020-21 is £158.297m, which is an increase of £21.55m compared with the 2018-19 final budget.

Economy	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Revenue	52,018	(4,387)	47,631	5,000	52,631
Total Resource	52,018	(4,387)	47,631	5,000	52,631

Economy	2018-19 First Supp	2019-20 Draft Budget Allocations		
		2019-20	2020-21	Total

	Budget £'000	£'000	£'000	£'000
Traditional Capital	93,948	67,365	47,882	115,247
FT Funding	15,720	32,150	10,900	43,050
TOTAL	109,668	99,515	58,782	158,297
2018-19 Final Budget	74,668	88,865	47,882	136,747
Change in New Plans	35,000	10,650	10,900	21,550

The detailed breakdown of Actions by BEL activity is explained in the following sections.

4.1 Inclusive Growth and Future Proofing the Welsh Economy Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Business Development (Enabling Initiatives)	13,242	(1,500)	11,742	(709)	11,033
Export, Trade and Inward Investment	1,892	0	1,892	0	1,892
Regional Economic Development	263	0	263	2,500	2,763
Entrepreneurship	1,768	0	1,768	3,596	5,364
Social Enterprise & Economy	730	0	730	0	730
Business Wales ⁽¹⁾	8,443	0	8,443	(3,596)	4,847
Business Innovation	859	(255)	604	0	604
Total Revenue	27,197	(1,755)	25,442	1,791	27,233

(1) Excludes Chwarae Teg funding of £360k in the Leader of the House and Chief Whip's portfolio

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Business Development (Direct Support)	82,171	36,068	21,356	57,424
Tech Valleys	0	10,000	10,000	20,000
Business Innovation	3,811	4,066	4,066	8,132
FT				
Business Development (Direct Support)	1,500	5,050	(1,100)	3,950
TOTAL	87,482	55,184	34,322	89,506
2018-19 Final Budget	52,482	57,534	31,622	89,156
Change in New Plans	35,000	(2,350)	2,700	350

As part of realigning our budgets to support the EAP, the previous Sectors, Entrepreneurship and Innovation activities have been brought together under the new action of Inclusive Growth and Future Proofing the Welsh Economy.

For revenue, an additional £2.5m has been reprioritised from the Prosperity for All Initiatives to support the development of Regional Economic Development plans by the Chief Regional Officers, which is a priority in the EAP (as outlined in more detail at section 5.2). This is off set by the transfer of £0.709m to Science to support match funding for a new EU project for the National Science Academy, which will promote STEM activity.

The non recurrent change of £1.755m (when compared to the 2018-19 First Supplementary Budget) is in relation to the foundational economy allocation of £1.5m from the Two Year Plaid Cymru Agreement, which is focussed on the care sector and public procurement and £0.255m for Innovation in relation to the reclassification of R&D expenditure as Capital.

The overall Entrepreneurship revenue budget in 2019-20 is £10.941m which includes Business Wales, Entrepreneurship and Social Enterprise and Economy BELS. £3.596m has been transferred from Business Wales to consolidate the start up and youth entrepreneurship programmes under Entrepreneurship and separate the Business Wales activities, which is supported with a budget of £4.847m. The Entrepreneurship budget also levers in a total of £51m of EU funding 2014-2020 programme.

The three SMART programmes (SMART Innovation, SMART Cymru and SMART Expertise) have been consolidated into a single BEL with a total capital budget over two years of £8.132m. The investment, together with investment in these projects in prior years leverages in £74.33m of EU funding and £55.8m of Private Sector Investment, amounting to a total of £130.13m over the respective project periods in the European Funding Programme round 2014-20. Match funding of £4.2m from Innovate UK (2018-19 to 2020-21) will support the delivery of the Knowledge Transfer Partnership programme in Wales.

For capital, the budget of £89.506m over the period 2019-20 to 2020-21 will help support businesses to start, grow and succeed providing people with secure employment. The Economy Futures Fund is available to help the businesses of today adapt and drive the industries of the future with further detail provided at section 5.3.

The total capital budget includes new FT capital of £3.95m - this is a net figure which consists of £7.4m for economic infrastructure development in 2019-20, offset by a £3.45m repayment over two years for strategic projects (£2.35m in 2019-20 and £1.1m 2020-21).

In the 2018-19 First Supplementary budget, E&T received an additional capital allocation of £5m for the Tech Valleys Programme. A further £20m over two years in this Draft Budget will support Tech Valleys by capitalising on the opportunities arising from the fourth industrial revolution, encouraging the adoption of emerging digital technologies that support cutting edge industries, including the automotive sector. This forms part of a £100m commitment over 10 years, to create at least 1,500 sustainable jobs across Tech Valleys, with the primary focus being Ebbw Vale and the wider Blaenau Gwent area.

4.2 Science Action

BEL	2018-19 First Supp budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019- 20New Plans Draft Budget £'000
Science	773	(632)	141	1,209	1,350
Total Revenue	773	(632)	141	1,209	1,350

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Science	4,561	4,654	4,874	9,528
TOTAL	4,561	4,654	4,874	9,528
2018-19 Final Budget				
	4,561	4,654	4,874	9,528
Change in New Plans				
	0	0	0	0

The revenue budget of £1.35m includes additional £0.709m released from the completion of sundry time limited initiatives to support business development. This will reinstate the budget at 2018-19 levels for the National Science Academy and provide match funding to lever in a further £5.7m across the next four years from the European Structural Funds for a STEM programme.

The engine of economic growth and social progress is research, innovation and the development of the right skills for a changing world. To promote and encourage these activities we need to invest in research and development and improve the links between our universities, companies, public services and community organisations. Reprioritising £0.5m from the Prosperity for All initiative will support the Chief Scientific Adviser for Wales to establish a Welsh research and innovation promotional and engagement presence in London.

Further information is available in sections 5.14 and 5.15.

4.3 Development Bank of Wales Action

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
FT				
Business Finance Funds	7,000	21,000	7,000	28,000
TOTAL	7,000	21,000	7,000	28,000
2018-19 Final Budget				
	7,000	18,000	3,000	21,000
Change in New Plans				
	0	3,000	4,000	7,000

The total allocation of £28m supports the Development Bank of Wales in improving SMEs ability to access finance and support the creation and safeguarding of jobs. It will, at the same time, improve the integration of the provision of investment related advice and support to businesses by working more closely with Business Wales. The total funding in 2019-20 and 2020-21 supports the Wales Flexible Investment Fund (£15m) and the Wales Angel Co-investment Fund (£6m). The additional financial transactions funding of £3m in 2019-20 and £4m in 2020-21 is for the delivery of the Wales Micro Business Loan Fund. This is a priority for investment as the latest business population estimates indicate that there are approximately 209,000 SMEs in Wales, of which around 199,000 (95 per cent) are microbusinesses. This indicates a growth of 8 per cent since 2012, which suggests a continued and growing demand for smaller amounts of finance and early stage finance.

4.4 Promote and Protect Wales Place in the World Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Tourism & Marketing	13,762	(2,000)	11,762	2,000	13,762
Major Events	3,918	0	3,918	0	3,918
Total Revenue	17,680	(2,000)	15,680	2,000	17,680

This new action reflects the direction set out in the EAP and supports the objectives of enhancing the profile, reputation and influence of Wales in developing and maintaining relationships around the world to help promote Wales, support business growth and attract visitors.

The Major Events budget of £3.918m has been protected recognising the significant economic impact of key events. In 2017-18, the Major Events Unit supported 22 sporting and cultural events which delivered 282,000 additional visitors to Wales, supporting over 1600 jobs and generating a direct economic impact of £72.5m. Highlights included major international sporting events such as the Volvo Ocean Race and home grown cultural events such as Machynlleth Comedy Festival and Steelhouse Festival.

An additional £2m from the £8m Prosperity for All initiative in 2019-20 will maintain the Tourism & Marketing budget at the 2018-19 level of funding to support Visit Wales activities. Additional information on the Tourism Partnership for Growth Strategy is included in section 5.11 below.

4.5 Economic Infrastructure Development Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Property Infrastructure	4,026	0	4,026	0	4,026
Total Revenue	4,026	0	4,026	0	4,026

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Strategic Infrastructure Development	0	10,000	4,200	14,200
Property Infrastructure	3,405	2,577	3,386	5,963
FT				
Property Infrastructure	7,220	6,100	5,000	11,100
TOTAL	10,625	18,677	12,586	31,263
2018-19 Final Budget	10,625	8,677	8,386	17,063
Change in New Plans	0	10,000	4,200	14,200

¹ Excludes ICT Infrastructure, PSBA and Digital Inclusion which is part of the Leader of the House and Chief Whip's remit.

The revenue budget of £4.026m for 2019-20 is intended to meet the costs and commitments of maintaining a commercial property portfolio that supports property offers to business and the unitary payments under the Lloyd George Avenue PFI scheme. The budget is supplemented by other income collected by the Property Infrastructure division, which are primarily rental receipts and profits from disposing of land and buildings.

The capital budget over the next two years is £17.063m. This will be supported by an anticipated £25.5m that will be generated from land and property sales and circa £6m EU funding. The totality of this funding will be used to support delivery of the EAP, with the aim of providing a balanced portfolio of modern sites and buildings that meet sustainability requirements for our future generations that are capable of meeting companies' timescales for occupation to provide Wales with a real competitive advantage over other locations.

4.6 Corporate Programmes Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Strategic Policy Development	450	0	450	0	450
Healthy Working Wales	800	0	800	31	831
Corporate Programmes & Services	992	0	992	(31)	961
Strategic Business Events and Communications	100	0	100	0	100
Total Revenue	2,342	0	2,342	0	2,342

The revenue budget of £2.342m includes an allocation for Healthy Working Wales which delivers workplace initiatives supporting the healthy and active ambitions set out in Prosperity for All: the National Strategy. A transfer of £0.031m has been made to the Healthy Working Wales budget from Corporate Programmes and

Services to support the Time for Change Programme. The funding will support Phase Three of the Programme, which aims to raise awareness and reduce the stigma and discrimination faced by people with experience of mental health problems in Wales, including in the workplace. The remaining revenue budget supports economic analysis, reviews and strategic engagement.

5.0 ECONOMY – KEY POLICIES

Additional information has been provided in response to the specific areas highlighted by the Committee as follows:

5.1 Economic Action Plan

Following publication of the EAP in December 2017, we have made considerable progress in implementing and embedding key elements of the Plan. At the front and centre of this work has been the development and introduction of the new operating model (Economic Contract, the Calls to Action and the Economy Futures Fund). This is the centrepiece of the Plan and now frames our relationship with business.

Alongside the new operating model, we have also taken steps to streamline and strengthen the way in which we receive advice so that it is strategic, joined-up, and effective. We have achieved this through the establishment of a new Ministerial Advisory Board (external advice) and a Cross Government Delivery Board (internal advice).

Our focus now is on implementing other key aspects of the Plan. These include regional economic development and foundation sectors.

5.2 Regional Approach

The EAP introduces Chief Regional Officers (CROs) and Regional Business Plans as two new elements in a broader regional economic development toolkit. Their purpose is to bring strategic clarity, leadership and a unity of purpose around regional priorities, challenges, and opportunities. This is particularly important given the wider City and Growth deal context and uncertainty around regional investment in a post-Brexit landscape.

Because regional economic development has to be a shared endeavour across Government, we have also made this agenda the key focus of the Cross Government Delivery Board. This work is leading to a Cabinet paper on the way forward scheduled for discussion in November. I intend to provide further detail following that Cabinet discussion.

Budget Allocations for Regional Approach to Economic Development

Whilst our budgets as a whole support activities, programmes and interventions across all of Wales, I am keen to look at ways in which we can introduce greater transparency in the context of a regional approach to economic development. Officials are exploring options in that regard and I will update Committee as that work develops.

I have prioritised revenue funding of £2.5m in 2019-20 to support the development of the regionally focussed model for economic development.

5.3 Economy Futures Fund

We have consolidated six funds into the Economy Futures Fund. They are:

- Capital Investment and aid for job creation
- Research, Development and Innovation (including SMART Cymru)
- Environmental Protection Scheme (EPS)
- Tourism Investment Support Scheme (TISS)
- Creative Production Funding
- Repayable Fund for SMEs.

Incremental consolidation

We are mindful about ensuring a managed transition – which is why we have initially consolidated a limited number of schemes (six).

It is important that we assess how the Economy Futures Fund operates first, with a smaller number of schemes, incorporate learning, and see what businesses are telling us before we take further steps. The EAP is a partnership between Welsh Government and Welsh business and it is right that we test this new approach and more dynamic relationship with them.

Starting with a handful of funds has provided us with the opportunity to test our new approach so that we can use that learning to expand over time. My officials are exploring opportunities to expand the reach of the Fund, and I have asked my Ministerial Advisory Board for their thoughts on how we might expand the new operating model not just through other business finance schemes but wider mechanisms of government support.

Budget allocation – Economy Futures Fund

Over the next two years my capital plans provide £89.5m for inclusive growth and future proofing the Welsh economy, including £61.374m direct support for business development, £8.132m Business Innovation and £20m for Tech Valleys.

This Draft Budget inevitably includes legacy projects and financial commitments prior to the establishment of the Economy Futures Fund. The majority of these projects have been supported under the schemes now consolidated in the Economy Futures Fund. Historically, there is a lead time in delivering capital projects of 2 to 3 years. Consequently, new offers made from the Economy Futures Fund are primarily planned from late 2019-20 onwards, depending on the scale and nature of the application for support. For example, investment in a new tourism destination project is likely to have a longer timescale compared to the completion of a Creative TV production.

5.4 Enabling Plans

A single enabling plan / Timeline for Production

My initial intention was to publish four separate enabling plans. However, we will now publish a single, integrated, and strategic enabling plan in which each Foundation Sector will be an important component, essentially four chapters of the same book.

I believe this approach will be more effective in promoting join-up across the foundation sectors - this has become apparent in our conversations across Government and with partners.

A key purpose of the enabling plan is to create a unity of purpose on the common opportunities and challenges across the foundation sectors. There was a risk that four separate plans would serve to highlight differences, rather than the many issues the foundation sectors share in common.

A single Plan also better reflects the cross-government spirit of EAP. It balances the need for strategic coherence across the sectors, whilst also leaving the flexibility for bespoke activity within each sector and for differences to be highlighted and addressed.

Earlier this year, I said we would publish the enabling plans in the second half of the year. I am still keen that we follow through on producing a draft before the year is out, but I do not want to impose this on the foundation sectors.

I have been really encouraged by the level of interest that is out there and the willingness to work with us in quite an agile way to produce the plan. I want to tap into that goodwill and intelligence.

That is why I want to produce a Plan in draft and refine this with partners. Whilst we could produce a final Plan before the end of the year, I think it important for everyone to have a chance to contribute.

This will help create a greater sense of shared ownership in the Plan and improve its effectiveness.

Funding to support enabling plan delivery

This issue strikes at the very purpose of the enabling plan and our approach to Foundation Sectors. This is not a narrow, portfolio driven approach – it is about how we work more effectively across Government and with the sectors.

Within this Draft Budget the revenue Business Development BEL of £11m in 2019-20 is available to support enabling initiatives. This does not mean additional resources from my budget. What it does mean is using the significant resources we have engaged across Government in those foundation sectors to much better effect.

The enabling plan will provide clarity on the strategic opportunities and challenges, on where we can make a difference, and what we should expect from partners. We can then channel our existing resources appropriately and facilitate collaboration, disseminate best practice and create a sense of common endeavour around shared priorities.

5.5 The Development Bank of Wales

Launched in October 2017, DBW is a core component of the Welsh Government's economic policy and delivery in support of businesses. This Draft Budget includes

£28m FT funding over the two years. The DBW's remit is to improve SMEs' ability to access finance, in order to start-up, to strengthen and grow, thereby supporting job creation and safeguarding. The DBW is committed to the long-term, integrated and collaborative approach to investment, involving people of all demographics for sustainable growth in Wales. Within each new fund or initiative proposed, the seven integrated well-being goals in the Well Being and Future Generations Act are aligned to outputs and outcomes. DBW also aims to improve the integration of the provision of investment related advice and support to businesses by working more closely with Business Wales.

Some of the key impacts and outputs will be to:-

- Drive up investment levels to £80m per annum within five years. The DBW invested £67m in 2017-18.
- Achieve a minimum target of 1:1.15 Private Sector Leverage (PSL). The DBW secured an additional £70m of investment from the private sector in 2017-18.
- Support 1,400 businesses over 5 years to increase jobs created and safeguarded to over 5,500 per annum by 2021-22. The DBW supported 285 enterprises, thereby creating or safeguarding over 3,900 jobs in 2017-18.

In its first year of operation, the DBW has successfully implemented a number of key initiatives including the:

- launch of Angels Invest Wales (new Welsh business angel network).
- launch of the new £8m Wales Angel Co-investment Fund.
- creation of Economic Intelligence Wales (new research unit in collaboration with the Office of National Statistics and Cardiff University).
- opening new headquarters in Wrexham.

Therefore, the DBW has established firm foundations to enable it to achieve its objectives going forward. During the next two years, it will continue to expand its pan-Wales presence and headcount, thereby demonstrating that it is an institution that serves the whole of Wales by driving economic development across the regions. In conclusion, the DBW now has around £0.5 billion under management to support Welsh enterprises, and is well placed to support both threats and opportunities arising from Brexit.

More information is available at the DBW website:

[Performance and impact | Development Bank of Wales](#)

5.6 City Regions and Growth Deal

Deals provide a framework allowing regions to drive collaborative working, set priorities which support local economic ambitions and objectives as a single voice and deliver key functions at a strategic level.

Cardiff Capital Region City Deal

Over its 20 year lifetime, the £1.2bn Cardiff Capital Region City Deal aims to deliver up to 25,000 new jobs and lever an additional £4bn of private sector investment.

Led by the Welsh Government, the Deal places the South Wales Metro at the centre of a significant infrastructure programme with circa £738m of planned investment made up of funding from the Welsh Government, the UK Government and ERDF.

The Deal also sees a further £495m wider investment fund, comprised of £375m from the UK Government and £120m from local authorities, available to prioritise in line with the objectives of the Deal. With governance arrangements agreed, the Cardiff Capital Region City Deal is in the process of prioritising projects and interventions.

In February 2018, the Cardiff Capital Region City Deal Cabinet approved the strategic business plan, which outlines what is needed to achieve the long-term objectives of this Deal and how the £495m wider investment fund will be used over the next five years to drive the Deal forwards.

The Cardiff Capital Region is already investing £38m, backed by £12m of Welsh Government funding provided from the Innovation budget, to create a world-leading technology cluster in Newport, the first project supported by the City Deal, which is expected to create more than 2,000 jobs.

The investment fund is managed in the Local Government and Public Services MEG over the 20 year period of the Deal. The full allocation of funding is subject to the City Deal's successful completion of Five Year Gateway Reviews, which will evaluate the impact of the Deal's investment of the funding in the five year period up to the Review. Payment of funding for the investment fund in 2018-19 has been agreed at £10m from the City Deal provision, with the first gateway assessment due in 2020-21. Funding for 2019-20 will be agreed in due course.

Swansea Bay City Region City Deal

Over the next 15 years the £1.3bn Swansea Bay Region City Deal aims to boost the local economy by £1.8bn and generate almost 10,000 new jobs, attracting £637m from the private sector.

Eleven major project proposals underpin this deal to deliver world-class facilities in the fields of energy, smart manufacturing, innovation and life science, with major investment in the region's digital infrastructure and workforce skills and talent underpinning each.

This £1.3bn Deal will be underpinned by £125.4m Welsh Government funding, £115.6m of UK Government funding, £396m of other public sector money and £637m from the private sector.

In July 2018, all four local authorities approved their 15 year Joint Committee Agreement. Funding in 2019-20 will be contingent on the assessment of the eleven major project proposals and discussions are also ongoing between the Swansea Bay City Region and the Welsh and UK Governments on the implementation, monitoring and evaluation plan.

North Wales Growth Deal

The six local authorities have established a joint committee structure utilising their existing North Wales Economic Ambition Board (EAB) identity, which also involves partners from higher and further education and the private sector. We continue to

work closely with the EAB and other regional stakeholders to consider how a North Wales Growth Deal can best support their ambitions to bring transformational economic growth. Currently regional proposals are under consideration which will be assessed against the objectives of the EAP, coupled with the aims set out within the Wellbeing of Future Generations Act. Specifically, we are looking for interventions that underpin and sustain growth and target key sectoral strengths including energy, advanced manufacturing and the quality of the natural environment which underpins the rural and tourism economies. The growth bid will be reflected within the Welsh Government's regional economic plan for North Wales.

Mid Wales Growth Deal

The UK Government committed to exploring a growth deal for mid Wales in the Autumn 2017 budget. The Growing Mid Wales Partnership, which comprises a broad cross section of regional stakeholders from the public, private and voluntary sectors in mid Wales, are currently defining a regional economic plan to support the work and help inform the Growth Bid proposals.

5.7 Enterprise Zones

There are currently eight Enterprise Zones across Wales with the objective to:

- Grow the local economy and provision of new jobs.
- Act as a catalyst for growth elsewhere in Wales.
- Improve the attractiveness of the Enterprise Zone for investors.
- Strengthen the competitiveness of the Welsh economy.

Revenue funding of £1.03m has been provided in 2019-20 for the Enterprise Zones in the Business Development (Enabling Initiatives) Action. The programme includes feasibility studies and business case development. There is no designated capital allocation to the programme itself, as any initiatives are embedded in delivery and funded within the Business Development (Direct Support) and the Strategic Infrastructure Development BELS.

An update of progress against key projects across the Enterprise Zones is published annually. The latest report for 2017-18 is published at:

<http://gov.wales/topics/businessandconomy/growing-the-economy/enterprisezones/?lang=en>

Following consideration by the Economy, Infrastructure and Skills Committee earlier in the year, a review of the Enterprise Zone programme is currently underway which will help inform future delivery of the programme beyond the current financial year. New governance arrangements for the Enterprise Zone Advisory Boards have also been determined.

5.8 Regional Development and Delivery (including Local Growth Zones)

The Regional Economic Development BEL of £2.763m in 2019-20 includes £0.263m for continued support regional priorities including the local growth zone strategy in Powys and the Teifi Valley. The Local Growth Zones model has been trialled in the Teifi Valley and in Powys as a rural alternative to Enterprise Zones, and has been informed and directed by Task and Finish Groups drawn from local stakeholders, including the private sector. Development of regional business plans is a key

component of the EAP moving forward and I will be asking the region to consider the Local Growth Zone model in the context of this work.

In addition, the budget supports other regional and cross border initiatives including the Mersey Dee Alliance, sponsorship of regional events and activities for regional economic partnerships. The Local Government and Public Services portfolio manage the Business Improvement Districts (BIDs) and we continue to work closely to consider both traditional town centre based BIDs and two additional innovative proposals, which will trial the concept in a sector based/ industrial setting.

5.9 Export, Trade & Inward Investment Support

As outlined in the EAP, promoting Wales as a destination for inward investment remains a driver of economic development in Wales. We continue to work with overseas companies and those based in the UK to bring further investment and jobs into Wales. EAP outlines the need to support businesses in their investment decisions and ensure that our proposition really sells Wales as a place to do business.

Budget of £1.892m has been provided in the Export, Trade and Inward Investment BEL. Inward investment activity is delivered through events, sponsorships, seminars and research subscriptions. The budget also includes support for trade missions. The outcomes are monitored closely in terms of delivering value for money, and spend is justified against a detailed business case.

The Department for International Trade's annual report for 2017-18 reported that 57 inward investment projects were secured in Wales, with the potential to create or safeguard over 4,600 jobs (just over 5 per cent of the UK total number of jobs); the number of new jobs created in Wales as a result of investment from companies headquartered overseas rose by over 20 per cent in comparison with the previous year.

Our performance regarding securing investment from companies headquartered elsewhere in the UK has improved in recent years. Last year saw 80 investments by companies headquartered in other UK regions, creating and safeguarding almost 4,800 jobs.

Through our Export Support programmes we assist companies to grow their business with a comprehensive range of services to support them to achieve that ambition. We can help companies to become export and market ready and connect them with opportunities and customers in their chosen markets by supporting companies to travel to overseas markets, exhibit at trade fairs, or meet with potential customers. Over the last year, we have also held a number of in-Wales events for companies to advise them on exporting in a post-Brexit environment.

In order to measure trade performance, value for money is measured by the value of new export business secured by the companies supported. In 2017-18, new orders worth £60m in new business were reported. This was a return on investment of over 35:1 on net programme expenditure.

Our export support programmes comply with the Welsh Government's standards for equality, sustainability and Welsh Language. Trade and Inward investment activity that is taking place outside of Wales has been granted an exemption under the

Welsh Language Standards. Therefore, the Standards do not apply when producing literature/hosting events in overseas markets.

5.10 Support for the steel industry

The Welsh Government remains committed to supporting steel making in Wales to help safeguard a sustainable future for the sector.

The Two Year Plaid Cymru Budget Agreement included a financial commitment of £30m of funding for improvements to the power plant at Port Talbot.

The Steel Procurement Group worked with the steel sector and relevant stakeholders to produce a Steel Procurement Advice Note (PAN) which was published by the Cabinet Secretary for Finance in January 2018.

The PAN supports the sourcing and procurement of sustainable steel in construction and infrastructure projects in Wales.

5.11 Partnership for Growth 2013-2020 – Tourism Strategy

The Tourism Strategy Partnership for Growth 2013-2020 is on track to deliver the growth in spending anticipated in Partnership for Growth. It is clear that continued growth cannot be taken for granted so resources have to be maintained to deliver on key priorities.

In terms of key priorities for Partnership for Growth - we have delivered on the brand and themed years and invested in new products and events. The approach delivered an additional £356m in spend in 2017 alone.

For the last three years of the strategy, we are driving forward the digital gateway; doing more to promote local areas through the 'Wales Way'; putting more resource into Business Events which tie tourism and business growth together and focussing our investment on the areas where we can make a difference, in particular world class product development and major events.

A '[mid-term review of the strategy](#)' was published in November 2016 which includes a series of revised priorities and actions which follow on from the earlier action plans. As the First Minister made clear at a First Minister's Scrutiny Committee meeting in July this year, our priority is to focus on the delivery of the existing strategy. However, as we approach 2020 we will work closely with the industry, in particular through our four regional forums, to shape our next strategy.

5.12 Business Support/Finance

The Wales Audit Office are currently finalising the study on the Welsh Government's provision of business finance. The study will review how the Welsh Government has managed its business activity. It will look at the landscape of business finance and review the Welsh Government's strategic approach, including the analysis of both expenditure and outcomes/output data.

5.13 Support for Automation and Artificial Intelligence (AI)

Automation and digitalisation is one of the Calls to Action The Business Innovation budget can support the development of new technologies in automation and AI with interventions such as SMART Cymru for business R&D and SMART Expertise for academic and business collaboration and support for third party advice.

RD&I support is also provided to larger and Anchor companies likely to be the earliest to be impacted by automation and AI. Our strengths include compound semi – conductors and advanced manufacturing and we aim to leverage funding from the UK Industrial Challenge Fund and EU funding to support these priorities. Our relationships and collaborations with business and academia are also vital in preparing our economy for the future.

Professor Phil Brown has been commissioned to undertake a broad assessment of the technological advancements developing in automation, robotics, artificial intelligence, internet of things and large scale data. The findings will inform the opportunities and challenges for exploiting these technologies in the context of the Welsh economy and the future of work in Wales. The review will investigate what actions will shape the direction of digital innovation in Wales to optimise the benefits. The review will be completed by March 2019.

5.14 Science Programmes

Promoting science and communications form a key part of the Chief Scientific Adviser for Wales' work, as well as pursuing funding opportunities that intend to draw in talent and future investment into Wales. This aligns with the recommendation in Graeme Reid's 'Review of Government Funded Research and Innovation in Wales' – to set up a Welsh Research and Innovation London Office. Revenue funding of £0.5m has been prioritised in the Science BEL to support his work.

To date, Sêr Cymru I and II programme elements have successfully supported three National Research Networks, 12 Research Chairs, 9 Rising stars (future research team leaders), 115 research fellowships (including those supporting researchers returning to academia following a career break) and more than 340 PhD students and postdoctoral researchers. The total investment to date is approximately £100m, with more than £30m from EU funding sources including Horizon 2020 and Structural Funds. Wales is the only country to have used both these funding sources in a synergistic manner to support research.

The first phase, Sêr Cymru I, is near its planned end date of March 2019 and Sêr Cymru II is currently fully committed. We are working with the appointed Chairs and Fellows in the implementation of their respective projects in Wales. We are anticipating an increase in EU match funding from the scope of the project to increase the £5.4m (including EU funding) COFUND grant commitment component of Sêr Cymru to £8.5m. The additional £0.5m allocation as part of this budget plan will help to lever a further EU contribution of £2.6m.

We have provisionally allocated £2m in 2019-20 to build on the success of the Sêr Cymru brand, and progress a new phase - Sêr Cymru III, working in partnership with WEFO, UKRI, industry and health.

The Boiling Water Reactor (BWR) Research Hub

As an example of cross collaborative research, we have recently approved the extension of funding to March 2020 for the BWR research hub and network. The development is supported by a capital allocation of £16m profiled in future years. BWR is led by Bangor University, in partnership with the Imperial College and co-funded by Hitachi GE Nuclear. BWR is designed to stimulate the research community to engage in nuclear Boiling Water Reactor technology research which has not been deployed in the UK previously. This supports the economy of Wales through industrial research and collaboration which will underpin a potential low carbon future energy source. Funding the nuclear research sector helps provide a wide range of employment opportunities in the Anglesey Bangor area and will support the Wylfa Newydd project which will generate employment from apprenticeships, technicians, researchers and engineers to senior academics and industrialists, administration and other roles over a long period of time in the region.

5.15 National Science Academy (NSA)

Working in collaboration with several delivery partners, the NSA will be leading on the £8.2m Trio Sci Cymru (TSC) STEM enrichment project. The annual budget of £0.85m will lever £5.7m of EU funding and aims to increase the take up of and attainment levels in STEM Subjects Amongst 11-19 year olds.

The TSC will strategically target cohorts of Participants (pupils) aged 11-14 sourced from up to 30 schools within the West Wales and Valleys area, with the aim of engaging over 5,500 Participants (pupils) , delivering over 140,000 hours of STEM enrichment activities.

TSC will feature specific programmes to encourage girls, before choosing their GCSE options, to focus on STEM subjects, with the aim of reducing the gender pay gap and bringing more women into STEM careers. TSC is aligned to both the Welsh Government's Prosperity for All: the National Strategy and the objectives of the Well-being of Future Generations Act.

5.16 Preventative Spending

The Well Being of Future Generations Act requires public bodies to consider how deploying resources to prevent problems occurring or getting worse may contribute to meeting their well-being objectives, or another body's objectives. This Draft Budget aims to strengthen the conditions that will enable business to create jobs and sustainable economic growth. The Act is integral to our approach in ensuring Wales becomes more prosperous, resilient, healthier, fairer and more equal society.

Welsh Government has worked with the Future Generations Commissioner and a range of experts to agree a definition which will enable an assessment of whether the spirit of this requirement is really being met. The definition of prevention is: working in partnership to co-produce the best outcomes possible, utilising the strengths and assets people and places have to contribute - a more detailed definition is outlined in Annex A of the Welsh Government's Draft Budget 2019-20 Detailed proposals: A Budget to build a better Wales published on 23 October 2018.

Our interventions across the E&T portfolio action primary intervention, building resilience and creating the conditions to prevent future problems. There is evidence that well paid work is the best route out of poverty and the greatest protection against poverty for those at risk. We continue to create opportunities for individuals and families with initiatives and targeted investment across Wales.

6.0 TRANSPORT FUNDING OF ACTIONS

Transport supports the ambitions in the EAP for a modern and connected infrastructure. There is an increase of £35.833m to the revenue budget from the 2019-20 indicative plans primarily to support the new rail franchise and bus services.

The capital allocation for the period 2019-20 to 2020-21 is £963.335m which supports the National Transport Finance Plan. When this figure is considered alongside funding identified for the M4 held in central reserves, this reflects a significant level of capital funding for Transport Infrastructure over the coming capital budget period. It is still necessary however to prioritise activity and manage budgets, to ensure that the delivery of schemes within the National Transport Finance Plan are both affordable and deliverable.

The detailed breakdown of Actions by BEL activity explained in the following tables:

Transport	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Revenue	299,720	(22,294)	277,426	35,833	313,259
Non Cash	188,691	0	188,691	0	188,691
Total	488,411	(22,294)	466,117	35,833	501,950

Transport	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital	324,081	445,683	516,452	962,135
FT Funding	2,200	1,200	0	1,200
TOTAL	326,281	446,883	516,452	963,335
2018-19 Final Budget	316,281	384,661	429,780	814,441
Change in New Plans	10,000	62,222	86,672	148,894

6.1 Motorway & Trunk Road Network Operations & Domestic Routes Actions

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Revenue					
Network Asset Management	5,836	0	5,836	0	5,836
Network Operations	77,264	0	77,264	(12,966)	64,298
TOTAL	83,100	0	83,100	(12,966)	70,134

Non Cash					
Non Cash	188,691	0	188,691	0	188,691
Total	271,791	0	271,791	(12,966)	258,825

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Network Asset Management	950	850	0	850
Network Operations	40,663	70,963	51,613	122,576
TOTAL	41,613	71,813	51,613	123,426
2018-19 Final Budget				
	41,613	41,847	51,613	93,460
Change in New Plans				
	0	29,966	0	29,966

Welsh Ministers have a statutory duty to provide a safe and reliable Motorway and Trunk Road Network. It is therefore important to ensure that appropriate funding is available to fulfil this objective in respect of both ongoing management and maintenance and improvement.

Motorway and Trunk Road Standards are governed by the Trunk Road & Maintenance Manual (TRMM). The Network Operations budget has been adjusted between capital and revenue funding to reflect the nature of work anticipated during 2019-20 and beyond. However, the overall budget envelope for Network Operations has been maintained.

The revenue adjustment reflects a reduction of £14.966m offset by £2m transferring into this Action from the Road, Rail, Air and Sea Services Action for taking forward the proposed removal of tolls on the Cleddau Bridge (part of the Two Year Plaid Cymru budget agreement). The revenue funding released has been reallocated to support the running costs of the new rail services contract.

The capital budget of £123.426m over two years includes a transfer of £29.966m in 2019-20 from the Road, Rail, Air and Sea Services and Investment Action. This reflects the compensating transfer to maintain the total Motorway and Trunk Road Operations budget capital adjustment which reduces the Roads Infrastructure budget by the same amount. In addition the £15m for north to south improvements for the A487 and the A470 is transferred from National Transport Infrastructure BEL to align to the delivery of the pinch point programme managed within network management.

In addition to the capital funding provided under this action, funding for significant improvements on the existing network and major road schemes, adding to the network, are provided for in the capital funding under the Road, Rail, Air and Sea Services Investment Action which relate to road infrastructure development and delivery.

Over the budget period, maintenance budgets will be continually monitored to ensure that we are responsive to reactive works and prioritise capital investment where it is most needed.

6.2 Road, Rail, Air and Sea Services & Investment Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Aviation	5,605	0	5,605	0	5,605
National Transport Infrastructure	1,000	4,000	5,000	(2,777)	2,223
Transport for Wales	151,281	(27,607)	123,674	47,576	171,250
Total Revenue	157,886	(23,607)	134,279	44,799	179,078

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Aviation	4,577	4,873	2,000	6,873
National Transport Infrastructure	78,254	76,428	173,840	250,268
Transport for Wales	125,973	185,218	186,299	371,517
FT				
Aviation	2,200	1,200	0	1,200
TOTAL	211,004	267,719	362,139	629,858
2018-19 Final Budget	211,004	281,463	331,467	612,930
Change in New Plans	0	(13,744)	30,672	16,928

Transport for Wales will deliver the new rail franchise which is supported by £171.250m budget in 2019-20. This includes an additional allocation of £32.6m from Central Reserves and £14.966m reprioritisation from the Motorway and Trunk Road Network Operations Action. This additional investment will accelerate the improvement and frequency of services at the beginning of the contract. The revenue budget also includes provision of £5.6m for Aviation activities such as the Intra Wales Air Service, consideration of other potential PSO routes and for managing and maintaining St Athan and its airfield.

The National Transport Infrastructure BEL supports planning and feasibility activities. In 2019-20, £2m is transferred to the Motorway and Trunk Road Network Operation for Cleddau Bridge. There is also a reduction of £0.777m in relation to the Third Menai Crossing Feasibility Study which was accelerated to 2018-19 (this was an element of the Two Year Plaid Cymru budget agreement).

There has been a net movement to the capital budget over two years of £16.928m which includes: a transfer of £29.966m in 2019-20 to the Motorway and Trunk Road Action (£15m for the North/South Improvements; and £14.966m for network management/roads infrastructure projects to comply with the TRMM 2016); an additional allocation of £44.894m from central reserves in relation to the Taffs Well

Depot (£16.222m in 2019-20 and £28.672m in 2020-21); a transfer of £2m in 2020-21 from the previous business solutions budget line for Aviation.

The draft budget also continues to include Financial Transaction funding made available to support investment within the aviation industry. Other opportunities to utilise Financial Transactions funding will continue to be explored along with other innovative financing solutions.

6.3 Sustainable Travel Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Bus Support	30,205	(1,000)	29,205	3,000	32,205
Smartcards	966	0	966	0	966
Concessionary Fares	21,169	2,313	23,482	0	23,482
Youth Discounted Travel Scheme	1,000	0	1,000	1,000	2,000
Sustainable and Active Travel	630	0	630	0	630
Total Revenue	53,970	1,313	55,283	4,000	59,283

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Smartcards	1,000	1,000	1,000	2,000
Local Transport Priorities	10,150	36,150	31,150	67,300
Concessionary Fares	38,964	36,651	27,000	63,651
Sustainable and Active Travel	16,650	26,650	36,650	63,300
TOTAL	66,764	100,451	95,800	196,251
2018-19 Final Budget	56,764	54,451	39,800	94,251
Change in New Plans	10,000	46,000	56,000	102,000

This budget supports investment in integrated transport, active travel, Concessionary Bus Travel, smartcards and local transport schemes proposed by local authorities. The Youth Discounted Travel Scheme which was previously a separate action has now been included in the Sustainable Travel Action.

The total revenue budget of £59.283m includes a movement of £4m which is made up of an additional allocation from central reserves of £1m to continue the Traws Cymru free weekend travel; an additional £3m out of the £8m Prosperity for All allocation (£2m to support the Bus Review and £1m to support the youth discounted travel scheme).

The additional capital investment recognises the priorities in delivering active and sustainable travel infrastructure and local transport priorities. The Local Transport

Fund has an additional allocation of £52m (£26m in each financial year; an additional £26m has also been provided in 2018-19) from central reserves for the Local Transport Fund and £50m allocation from Central Reserves in relation to Active Travel (£20m in 2019-20 and £30m in 2020-21).

When taken with the Local Authorities' own contributions to the concessionary fares scheme, the overall funding envelope provided (across both revenue and capital) is considered sufficient to meet Local Authorities' obligations based on the 'no better, no worse' principle and anticipated demand.

6.4 Improve Road Safety Action

BEL	2018-19 First Supp Budget £'000	Change £'000	2019-20 Indicative Final Budget 2018-19 £'000	Change £'000	2019-20 New Plans Draft Budget £'000
Road Safety	4,764	0	4,764	0	4,764
Total Revenue	4,764	0	4,764	0	4,764

BEL	2018-19 First Supp Budget £'000	2019-20 Draft Budget Allocations		
		2019-20 £'000	2020-21 £'000	Total £'000
Traditional Capital				
Road Safety	6,900	6,900	6,900	13,800
TOTAL	6,900	6,900	6,900	13,800
2018-19 Final Budget				
	6,900	6,900	6,900	13,800
Change in New Plans				
	0	0	0	0

The road safety budgets have been maintained at planned levels. The [Road Safety Framework for Wales](#) sets out our safety targets.

Revenue funding supports the engagement and funding of external partners in the public, private and third sectors achieve casualty reduction, using the road safety governance structures. The capital budget supports road safety engineering improvements on the trunk and local road networks.

7.0 TRANSPORT - KEY POLICIES

Additional information is provided in response to the specific requests made by the Committee as follows:

7.1 Brexit

We have been working and will continue to work in a joined up way with the UK Government and key stakeholders on operational preparedness for EU exit, including planning for the potential effects on the transport network resulting from new and or additional customs checks at our sea ports and airport. Stakeholders include Wales' major ports, Cardiff International Airport, the Welsh Local Government Association, key local authorities, the Freight Transport and Road

Haulage Associations. Much of the detail of this work remains confidential at this stage reflecting its sensitive, commercial nature.

However, clarity is needed urgently on decisions before government and business can be expected to start investing in significant mitigation measures, otherwise there is the significant risk of investing both public and private resource in solutions which are not needed. The Technical Notices published by the UK Government to date do not help in mitigating that risk.

If significant change is required, I have made it clear that the UK Government must take responsibility for the pressures being put on Welsh businesses and the infrastructure which supports them, and make funding available to assist in the transition to a post-EU Exit environment.

7.2 Rail Franchise and South Wales Metro

In June 2018, Transport for Wales (TfW) appointed their Rail Services Delivery Partner, Keolis Amey to operate the next Wales and Borders Rail Services Contract which commenced from 14 October 2018.

The appointment brings significant benefits and opportunities, including a £1.9bn investment programme by the operator that supports our objectives to bring transformation to communities and people the length and breadth of Wales and its borders, by:

- Creating a network at the heart of communities, accessible to all, and 7 days a week.
- Increasing social mobility and widen access, connecting people with jobs, education, health and leisure.
- Making Wales even more attractive to business and tourists.
- Making travelling by rail enjoyable, enabling people to work and play as they travel on greener, state of the art trains which utilise next generation digital connectivity.

The budget plans for 2018-19 and 2019-20 were based on an assumed profile for the cost of the Rail Services Contract of £150m (2016-17 prices) in 2018-19 (based on six months of the current contract and six months of the new contract) and £120m (2016-17 prices) in 2019-20 (the first full year of the new contract). The expectation, which was set as the original funding envelope, was that the costs would rise in future years to reach £150m (2016-17 prices) when the full South Wales Metro services become operational from 2023-24.

The original funding envelope for the Rail Services Contract was based on a number of assumptions. During the procurement exercise some of these assumptions were adjusted to meet compliance requirements and others to enable accelerated achievement of benefits to passengers, including:

- Early investment in new and refurbished trains.
- Early investment in stations, car parks and interchange facilities.
- Early investment in additional services.
- Modernisation of maintenance and other infrastructure supporting improvement to performance and reliability.
- New ticketing and fares proposals, including contactless ticketing infrastructure.

- Economic development through employment.
- Maintaining a second safety-critical person on all heavy rail services.

The above opportunities and requirements front load some costs and consequently will require additional resource in the short term. In 2019-20, the cost of the new contract is £170.403m, for which there is provision of £122.830m in the 2019-20 Indicative Final Budget 2018-19. An allocation of £32.610m from central revenue reserves has been made and a re-profiling of £14.966m within the E&T MEG support the full cost. £0.844m is for non-franchise rail related activity such as the British Transport Police funding.

The end of the annual access charge rebate from 2020-21 is covered in more detail the Access Charge Adjustment section below.

The overall cost of the Rail Services Contract over the 15 year term is within the original cost envelope defined at the outset of the procurement. It will achieve a 16% saving when compared against continuing with the existing franchise and access charge adjustment arrangements. Furthermore the revenue cost of the Rail Services Contract is two per cent (net present cost) lower than the revenue cost envelope provided at the start of the procurement exercise.

Access Charge Adjustment

The financial implications of the agreement between Welsh Ministers and the Secretary of State for Transport regarding the existing access charge adjustment mechanism is captured within the Funding and Outputs agreement. Importantly, the Secretary of State retains the regulatory risk and opportunity for future changes to access charge payments to Network Rail resulting from regulatory reviews, which means that the Wales and Borders rail services contract will be treated in the same way as any other franchise and there will be no negative impact on fares or services levels. The Funding and Outputs Agreement has been published on the Welsh Government's website.

The Committee will recall that it was previously reported that the Welsh Government had been required to pay the UK Government in excess of £1bn over the course of the next 15 years of the Wales and Borders Rail Services contract. This has now been successfully re-negotiated, and the Funding and Outputs Agreement sets out how the new mechanism will work.

During a transitional period, which is designed to account for the way the Welsh Government is funded and HM Treasury's Spending Review assumptions (2017 – 2020), the Welsh Government will make two payments to the Department of Transport of £24.89m in 2018-19 and £71.8m in 2019-20. These costs will be accommodated within existing Welsh Government budgets. From 2020-21 the current Access Charge Adjustment mechanism will end.

Investigations into the South Wales network are ongoing as part of the discussion with UK Government to transfer the asset. Any adjustments relating to the ownership of the asset will be completed in subsequent supplementary budgets once the outcome of the investigation is known.

A new arrangement, base lined to the forecast access charges in our new Wales and Borders Rail Services contract (and therefore included in the overall cost base for the contract), will be in place. This means that future adjustment payments

resulting from regulatory reviews, between the Welsh Government and the Department for Transport or between the Department for Transport and the Welsh Government, will be determined by comparing actual access charges paid to Network Rail to the payments in our rail services contract. If the actual access charges match the level in our contract there will be no requirement for an adjustment either way.

Concurrently the UK Government will pay the Welsh Government a sum of £2m in 2018-19 and £4.4m for 2019-20 to operate the England only services part of the contract. For subsequent years, the England only services funding will be indexed using the same methodology that applies to equivalent franchise payments.

Within the Funding and Outputs agreement the Secretary of State has reconfirmed his commitment to provide £125m (2014 prices) towards the cost of the South Wales Metro, which will be drawn down in line with expenditure.

7.3 Integrated Public Transport Network

Integrated Transport connectivity at a national, regional and local level is vital to social cohesion and access to employment opportunities. The additional capital investment of £30m in 2018-19 in the Cardiff Region will support the development of integrated transport systems which is a key driver for economic growth. Public transport improvements support our aspirations to reduce emissions by reducing car use and provide cleaner and more efficient vehicles with good outcomes for our health and our environment.

The continuation of revenue funding of £1m for free bus travel on Traws Cymru routes is also important in generating sustained passenger growth and modal shift from car to public transport on key corridors in rural areas.

In recognition of the far reaching benefits associated with greater levels of active travel and connectivity, an additional investment over the next three years of £60m (commencing in 2018-19) will support our dedicated Active Travel Fund to boost delivery of active travel schemes across Wales. Further information on the allocations to local authorities is detailed in the Written Statement on 10 August and is available at:

<https://gov.wales/about/cabinet/cabinetstatements/2018/activetravelallocations/?lang=en>

7.4 Transport for Wales

TfW was established in 2015 under the Companies Act 2006 and is fully accountable to the Welsh Ministers, as a wholly owned subsidiary company limited by guarantee.

TfW has a clear, legal identity within a robust and well-established framework. There is a distinct separation between the Welsh Government and TfW, allowing TfW to make independent operational decisions.

Accountability to the Welsh Government will be secured by a series of strategic levers. Some elements, such as the Articles of Association, are required by law; others help to guide the interaction between TfW and the Welsh Government. The Remit Letter sets out the operational remit and the cumulative funding available from

the Welsh Government to support the delivery of the remit. Funding is paid to TfW as a grant quarterly in advance.

The Company is remitted to manage the Wales and Border rail service and the delivery of the South Wales and the North Wales Metros.

The Welsh Ministers aspiration for TfW is to enable the Company to take on a much wider range of transport functions. The EAP commits that TfW will work with the Welsh Government's new regional teams, the emerging regional transport authorities, and partners, to create an integrated public transport network, covering the rail and bus networks.

7.5 Delivery of the M4 Relief Road

Funds are held in capital reserves for the M4 Project pending statutory decision making. No allocations will be made until the outcome of that process.

The year-long Public Inquiry has concluded and officials are carrying out due diligence on the Inspectors' report. Public Inquiry has allowed all to have their say and subject the project to open and robust scrutiny, by independent inspectors, as to whether, in collaboration with the South Wales Metro, it is the long term, sustainable solution to the problems associated with the M4 around Newport.

The next step is a decision whether to 'make the Orders', effectively planning permission, which would be followed by the committed Senedd debate and vote before construction contracts are potentially awarded.

7.6 Trunk Road and Motorway Network

Infrastructure Delivery Division:

Delivery continues on a number of other strategically important schemes including:

- A465 Heads of the Valleys road between Gilwern and Brynmawr: Whilst complementing other schemes along the Heads of the Valleys route this scheme will improve accessibility to and from an area recognised as one of the most economically deprived in Wales.
- Newtown bypass: Will provide improved North / South journey times which will remove congestion from the town centre. This scheme is currently planned to be open to traffic later this year / early next year.
- Developing / progressing work on numerous other routes around Wales including A55 Corridor across North Wales, and A40 West Wales. Most recently announcing the following project updates:
 - Preferred route for the 3rd Menai crossing.
 - Commencement of the construction of the Caernarfon Bypass and the A55 Aber to Tai'r Meibion scheme (subject to Ministerial approval).
 - The imminent announcement of a preferred route for the A55 junctions 15 and 15 scheme improvement works.
 - The delivery of the A494 / A55 / A548 Flintshire Corridor through an ECI form of project delivery.

- Scheme development of the New Dyfi Bridge project in Machynlleth.

All of these activities are programmed in the context of available and anticipated budgets. However, it must be recognised that all expenditure is subject to inflationary pressures and risk. We aim to manage this by including risk and optimism bias in our projects as well as having clear points at which assumptions and estimates are reviewed and updated which includes forecasts of inflation. In the case of construction projects this is often at key stages of development and delivery. The contracts also include construction inflation indices (includes the cost of materials and labour). We also try to manage the impact of inflation within budget baselines, usually through finding efficiencies and managing delivery requirements across the portfolio.

Network Management Division:

Trunk road highway and motorway assets are components of the largest single asset on the Welsh Government balance sheet, and are continuously inspected, maintained and improved. The effects of the extreme weather events experienced from last winter are still being felt and there has been an increase in expenditure to maintain the network. 2019-20 expenditure will depend on the severity of the forthcoming autumn/winter periods.

Trials of new road surfacing methods and materials are ongoing which should reduce long term whole life costs and provide significant savings due to increased durability and also provide benefits in safety and low noise levels. Innovation in methods of construction and use of new materials and components is encouraged on all trunk road and motorway asset programmes.

The Pinch Point Programme continues in the feasibility and planning stages, considering multiple improvement schemes which will deliver the benefits of journey time reliability, easing congestion and increased safety throughout Wales. In 2019-20 there will be £15m of local improvements on the A470 and A487, mainly in the mid-Wales areas, from the Two Year Plaid Cymru budget agreement.

The A55 resilience project has already provided much needed quick wins in terms of safety schemes including the average speed cameras installed at Rhualt Hill. Further short, medium and long term measures are currently being developed and will be implemented late 2018-19 and into 2019-20.

Work is progressing on the feasibility of improvements to ease congestion on the A483 Wrexham area, M4 west of Junction 32 and A470 dualled section from Heads of the Valleys to Coryton.

7.7 Delivery of Active Travel Policy

With the approval of the Integrated Network Maps of nearly all local authorities earlier this year, we reached a major milestone in the implementation of the Active Travel Act. For the first time we have a comprehensive set of coherent plans for walking and cycling routes for all the larger towns in Wales, which have been developed in consultation with local communities.

This helped make the case for the in-year establishment of the £60m three year Active Travel Fund, which is kick starting the creation of these new and improved routes. The first £10m funding was allocated in the summer, within 6 weeks of the

fund being established. 11 strategic schemes and 13 packages of local schemes are receiving funding in the first round.

There has been a noticeable change in the desire for ambitious active travel schemes among communities and community leaders, as evidenced by the scale and number of projects put forward for funding or which are currently at feasibility stage.

Bids for schemes starting in the next financial year will be invited later this year. These will build on the £5m feasibility and pre-work for scheme development we are funding in 2018-19.

Complementing the Active Travel Fund, we are maintaining our £5m Safe Routes in Communities programme, which specifically focuses on improvements to walking and cycling routes to schools and related facilities such as shelters. Two further grant programmes support the active travel agenda. The £4m Road Safety Capital Grant helps local authorities improve locations and routes with a history of personal injury collisions, including those involving pedestrians and cyclists, and the Local Transport Fund, which has been boosted to £78m over this and the following two years can help fund active travel improvements as part of integrated transport schemes, as well as other schemes such as public bike share.

The main activities aimed at active travel promotion, training and awareness raising which are funded through transport budgets are the Active Journeys programme, delivered by Sustrans and working in schools across Wales, and the funding of National Standard Cycle Training and Child pedestrian training.

7.8 Investment in Rail Infrastructure

Rail Infrastructure remains to be non-devolved and the Welsh Government does not receive funding to undertake such changes. However, when the case is made and an opportunity arises to invest the Welsh Government will do so.

The new Rail Services Contract includes almost £5bn of investment over the next 15 years. A proportion of this will be on investing in improved Rail Infrastructure:

- £793m will be invested to implement the South Wales Metro (£738m) and Taff's Well depot (£55m over the period 2019-20 to 2021-22). This investment includes significant infrastructure changes along with electrifying 172km of track.
- Around £900m for South Wales Metro infrastructure operation, maintenance and renewal and Valley Lines asset transfer expenditure.
- £3 billion rail services revenue expenditure.

Other examples of where the Welsh Government is developing a new transport interchange at Bow Street which will open in 2020. The Welsh Government is considering the case for investing in a new station at Llanwern (South Wales). An additional £10m has been committed to undertake infrastructure improvements at Wrexham. As part of the North Wales Metro the case for a new station at Deeside and enhanced interchange facilities at Shotton are being reviewed.

We will continue to work with the industry to identify opportunities for investment in the future.

7.9 Support for Bus and Community Transport Services, Concessionary Fares and Youth Discounted Travel Scheme

Bus and community transport continues to be an important consideration for the budget as these sectors provide connectivity for the public, who greatly rely on public transport. The number of passenger journeys on buses, for example, remains between three and four times that undertaken on trains.

A consultation on bus services in Wales was launched on 8 March 2017 following the successful Bus Summit on 23 January 2017. The summary of responses was published in August 2017. Transport for Wales and Welsh Government officials are working together to undertake the Bus Strategy Review to deliver a cohesive passenger focused public bus network. It is intended that the review will be completed in early 2019 and thereafter be used to target public funding.

Three business cases are being developed by Transport for Wales to:

- Develop an integrated responsive transport.
- Identify a national network that is well planned, integrated including with rail services, with better infrastructure and more reliable services.
- Establish better ticketing arrangements and back office support.

Annual bus revenue support funding of c£90m supports service delivery and includes maintaining the Bus Services Support Grant (BSSG) at £25m. This level of BSSG has remained the same since 2013-14. Whilst services are considered affordable for the current year it is clear that with inflationary pressures and an ageing population the Welsh Government's ability to continue to fully support all initiatives will become unsustainable unless current baseline funding significantly increases or there is a fundamental change to the way in which services are supported. This is something that the review will be looking to identify and propose ways of addressing.

We continue to support the work of Bus Users Cymru and the Community Transport Association in Wales to ensure that bus passengers' views are represented effectively in developing our policies for the bus network. Community transport makes an important contribution to an integrated public transport network and social cohesion, particularly in remote and rural communities, and during times of limited funding.

The Welsh Government continues to fund the TrawsCymru long distance bus network and we have made substantial improvements to the network of services over the last five years. Improvements include new routes such as the T6 linking Brecon to Swansea. In July 2017, we introduced a major 'ground breaking' weekend free travel initiative. As a result of this investment, the TrawsCymru bus network carried a record 1.74 million passengers in 2017-18. This continues to grow as more requests are received for additional TrawsCymru services providing high-quality, limited stop services. As part of the Two Year Budget Agreement with Plaid Cymru, additional funding of £0.2m in 2018-19 and 2019-20 has also been made available to introduce a new TrawsCymru coach service linking Aberystwyth to Carmarthen, Port Talbot and Cardiff.

The Welsh Government is funding two full-time posts within the METRO local authorities in north and south Wales to lead, co-ordinate and deliver the bus elements over five years, within the envelope of a statutory bus Quality Partnership Scheme (QPS). A QPS would be valuable in helping to shape future investment in the bus network outside the METRO areas.

Local authorities are responsible in law for reimbursing bus operators for carrying older or disabled passholders under the free concessionary bus travel scheme. Authorities are also obliged to ensure that those bus operators are “no better and no worse off” as a result. The Welsh Government’s budget of £60m in support of the local authorities’ expenditure on reimbursement will continue to meet their responsibilities, supplementing the contributions that local authorities continue to make from their own budgets, reflecting the funding that they provided for discretionary schemes before the mandatory scheme was introduced in 2002. Collectively, these local authority contributions amount to some £10.3m annually. In addition, we meet the cost of local authorities’ administration via a £3 per live pass in circulation, each year. Currently, there are some 730,000 concessionary bus passes in circulation throughout Wales.

In terms of discounted travel for young people, £1m has been re-prioritised in the Youth Discounted Travel Scheme BEL to continue the Young Persons Discounted Bus Travel scheme which was introduced as an 18-month pilot in September 2015. A consultation on potential enhancement of the scheme has concluded and the summary of responses was published in June 2018. In 2019-20, additional funding has been earmarked for enhancing the scheme and an announcement will be made in due course. The Welsh Government will also work with the bus industry to determine the potential to continue this initiative on a commercial basis.

Consideration of the options for enhancing arrangements for bus services in Wales are ongoing and proposals for reform will be announced as soon as possible.

7.10 Support for Local Transport Priorities

The local transport priorities budget line (Sustainable Travel Action) makes available funding to local authorities for local transport schemes that support the economy, improve road safety and enable active travel. We continue to work in partnership with local authorities and other key organisations to ensure the key priorities are met and to identify other suitable sources of finance that will aid in delivery.

This Draft Budget includes an additional £52m (£26m additional budget also provided in 2018-19) to the Local Transport Fund. This fund will allow Local Authorities to bid for funding for schemes that encourage sustainable transport and easing congestion, particularly on public transport routes.

7.11 Decarbonisation

We will be establishing an advisory, non-statutory National Infrastructure Commission for Wales which will take account of our duties under the Environment (Wales) Act, including the sustainable management of natural resources and Biodiversity and Resilience of Ecosystems Duty.

Our updated Transport Strategy – due to be published in May 2020 – will include a key focus on moving to lower carbon modes of transport to meet both our

decarbonisation targets and reduce the growing number of Air Quality Management Areas which have a strong link to transport related emissions.

The new rail contract reflects our commitment to carbon reduction. Treherbert, Aberdare, Methyr Tydfil, Coryton and Rhymney lines running north out of Cardiff Queen Street will be 100 per cent electric traction, with the electricity sourced from 100 per cent renewable sources (50 per cent from within Wales). There will be a reduction in carbon emissions of 25 per cent across the whole service by the fifth year, as a result of introducing the latest generation of low emission Diesel Multiple Units (DMU).

As set out in my Written Statement of 11 October, the £2m funding for electric charging points which was agreed in the Two Year Budget agreement with Plaid Cymru, will be used to help create a publicly accessible national network of rapid charging points. The focus will be on locations on/near our strategic road network, with a particular emphasis on North-South and East-West journeys.

Following detailed information and advice that I have received and considered, particularly on my aim to lever in as much sustainable private investment as possible to support the creation of a national network, I am looking at a national concession delivery model. The framework and specifications will be as innovative and inclusive as possible in terms of adding value to local communities and businesses.

I have also tasked officials to explore the feasibility of extending the deployment of the funding to charging points at park and ride facilities and taxi ranks to encourage and benefit public transport use in the wider sense.

Additional scoping, analysis and testing with key stakeholders, including local authorities, will now take place to set the strategic framework and specifications. I see the value in placing a national network within a statutory strategic and spatial planning context and will look to have this reflected within the National Development Framework. My aim is to go out to procurement in Spring 2019.

7.12 Preventative Spending

The majority of Transport expenditure for programmes and policies may be attributed to preventative spend such as: active travel in terms of promoting sustainable modes of transport and thus reducing environmental impacts and increasing activity levels which support health outcomes. Concessionary bus travel is particularly important in rural areas and vital for social cohesion and well being. Our investment in road safety, road maintenance and improvements in network management helps to prevent more significant issues and accidents over the longer term. An important example of how our transport services will be transformed is the South Wales Metro, with potential opportunities to deliver much more for regions than an improved public transport network. As an integral part of the Cardiff Capital Region City Deal this will be the catalyst for the broader regeneration, helping to shape the regional economic and social infrastructure, social mobility and equality of opportunity for some of our most deprived areas. In delivering better outcomes preventative spending measures are therefore important for the long-term.

8.0 EVIDENCE BASE FOR BUDGET DECISIONS

Evidence from a wide range of sources underpins our financial decisions such as published research, engagement with stakeholders, previous policy evaluations and statistics.

As a Government, we have helped established organisations to help develop the evidence we use to inform our activities. For example, funded by the Economic and Social Research Council and Welsh Government, the Wales Centre for Public Policy is based at Cardiff University and is a member of the UK's What Works Network. The Centre collaborates with leading policy experts to provide Welsh Ministers and officials with high-quality evidence and independent advice that helps them to improve policy decisions and outcomes. The Centre and its predecessor, the Public Policy Institute for Wales (PPIW) have published several reports relating to the E&T portfolio.

In the last year, we established Economic Intelligence Wales (EIW). This is a collaboration between the Development Bank of Wales, Cardiff Business School and the Office for National Statistics which will provide a unique resource for Wales. EIW will provide the evidence base for policy decisions, enabling the Welsh Government, Business Wales and DBW to challenge and adapt the support offered to Welsh SMEs.

The evidence and scope of the appraisal undertaken during policy and programme development are assessed on the basis of risk, size and scale, existing evidence base and other factors. Feasibility studies are undertaken prior to the commencement of key projects to assess suitability in delivering against our goals, whilst gateway reviews for large projects are completed to challenge all aspects of a business case including the essential value for money assessment. Whilst the reviews are project specific, they help to build up a useful source of information for considering other projects. Internal and external audit reports can be helpful in a similar way.

We fund the Wales Social Partners Unit, through a competitive tender process, to deliver engagement services between Social Partners and the Welsh Government in Wales. This helps ensure that the views of some of our key stakeholders are embedded into policy development and delivery.

We have simplified and streamlined the advisory architecture, replacing a range of advisory bodies with a single E & T Ministerial Advisory Board that provides regular, creative and high-quality advice to me to help improve economic development in Wales in line with the priorities and vision set out in the EAP.

From a transport perspective, we fund Bus Users Cymru to represent passengers' interests and to input to policy development. This includes contributions to policy consultations, monitoring of bus services, dealing with complaints and holding bus surgeries throughout Wales.

9.0 MONITORING BUDGETS

In developing the plans in this Draft Budget, detailed in-depth reviews have been undertaken across the portfolio and aligned to Prosperity for All: the National Strategy. During in-year delivery of programmes, all business areas are robustly challenged on a monthly basis and quarterly in-depth reviews are undertaken by officials to ensure that we continue to deliver against our outputs and outcomes.

Budget movements are made as necessary to ensure that we deliver optimum impact.

10.0 EVALUATIONS/REVIEWS

Outcomes are monitored for each of the projects and contracts that are managed within the portfolio. Feasibility studies are undertaken prior to the commencement of key projects to assess suitability for going forward in delivering against our wellbeing goals. Evaluation of projects and programmes are undertaken during and at the end of projects and can be undertaken internally or by external contractors.

The need for and scope of evaluation can be taken on a case by case basis during policy and programme development having regard to the risk, size and scale, existing evidence base and other factors.

Commissioning evaluations and research is one way of gathering evidence on policies and programmes, but is not the only way and is not always the most appropriate.

Gateway reviews for large projects are undertaken to assess value for money and both internal and external audits have and will be undertaken, which provide further evidence to support policy outcomes.

Sometimes the existing evidence base is used to shape programmes and policy and there is not always a need, or a good value for money argument to produce new evidence. Organisations such as the Institute for Public Policy Research, What Works Centre for Local Growth have produced reports analysing which policies are most effective in supporting and increasing local economic growth. Similarly, the OECD has conducted a review of local economic and employment development policy approaches in OECD Countries and considered how these might be applied in Wales.

As we have developed and implemented the EAP, we have engaged widely with stakeholders. In the first phase of delivery, stakeholders have been helping us shape the implementation of the Economic Contract.

To remain responsive to the needs of the business community we undertake staged evaluations of the services within Business Wales, from inception through to final evaluation. The findings are used to refine delivery and help inform future policy decisions.

From a transport perspective, we provide funding for Bus Users Cymru with Transport Focus to undertake annual surveys of bus passengers, and non-bus users, to identify what things the network has got right and where it needs to improve. The latter work is intended to confirm investments which are needed to attract more car drivers and passengers onto buses, especially fare-paying passengers and especially at peak commuting hours.

We closely monitor accident data and work with partners to improve the use of data and analysis to target interventions most effectively. We recently commissioned reviews of key funded interventions and tightened rules regarding which schemes are eligible for funding.

11.0 Brexit

In terms of financial implications for the portfolio of the UK leaving the European Union, extensive work is underway across the Welsh Government to ensure we maximise our influence in discussions within the UK and in turn in formal EU negotiations and thereby secure the best possible outcome for Wales. A UK Treasury guarantee on funding for current European Structural and Investment (ESI) Funds and other EU programmes provides some degree of certainty for investments made before our exit from the EU. Beyond the date of exit, however, there remains uncertainty about how that guarantee will work in practice, including the implications of any transition deal, exit agreement, or “no deal”.

We are also pressing the UK Government to confirm successor funding to replace our ESI funds. We have been clear since the referendum that Wales should not lose a penny of current EU funding, honouring promises made during the campaign. We are committed to working with UK Government to secure appropriate funding for Wales.

We also expect the UK Government to honour its commitments to the transfer of powers and responsibilities from the EU to Wales. For this to be meaningful it must be accompanied by an appropriate level of funding to enable us to deliver those new responsibilities.

Since the referendum we have been engaging widely with businesses right across Wales to understand the risks and opportunities of Brexit. We recognise of course that businesses have concerns around the uncertainty ahead and about specific issues around access to the Single Market and tariff and non-tariff barriers.

We are hearing evidence that some firms are delaying investment decisions, or that they are planning based on a worst case scenario. This is why it is so important that we are clear that Wales remains open for business and that we stand ready to continue to support business in making the case for future investment in Wales.

One of our biggest efforts to the potential negative impact of Brexit is making our businesses ready and able to export and trade and we are increasing our efforts to grow the number and scale of Welsh based businesses that are exporting through bringing forward a pro-active plan for export support.

We need to focus on supporting businesses to prepare for the regulatory changes caused by Brexit. Beyond that we will also want to focus on supporting businesses looking to maximise the opportunity of any new and expanding markets around the world, in line with whatever trading arrangements are in place. In September we launched the new Business Wales Brexit Portal that not only provides relevant information and advice to businesses but also contains a diagnostic tool designed to help businesses better assess their level of preparedness and what actions they need to take to prepare.

We are focussing our efforts on protecting jobs and the economy for the longer term, through the allocation of funding to specific activities such as the Development Bank of Wales, communicating our pro-business message and by engaging directly with business on their priorities.

Proactive campaigns are also supporting businesses and tourism. The Two Year Budget Agreement with Plaid Cymru provides recurrent funding of £3m in 2018-19

and £1m in 2019-20 for the Tourism & Marketing BEL which has enabled us to build on the successful Wales brand.

This year, we commissioned a research report on the impact of Brexit in Wales. A report "[EU Transition and Economic Prospects for Large and Medium Sized Firms in Wales](#)" commissioned by the Welsh Government and prepared by Cardiff Business School.

We are aware of the need to strengthen our intelligence on trade between Wales, the UK and the world. There is currently no data on Wales' exports to, and imports from, the other nations of the UK. As a first step in responding to this demand, consideration is now being given to funding pilot work, utilising the EU Transition Fund, to develop trade data for Wales.

We are continuing to build on the evidence base in relation to Brexit through our regular discussions with businesses in Wales. A subgroup of the Council for Economic Development, the EU Exit Working Group, has met several times over the course of the last year, bringing together key partners and organisations to develop our collective understanding of the challenges and opportunities presented by the exit from the EU.

The timescales and scope of UK Government legislation in relation to Customs and Trade is unclear at this stage, however, amending these systems will have an economic impact and will particularly impact on the ports and harbours of Wales. We are working with counterparts in the UK Government to understand what is proposed in this legislation, in order that we can mitigate the risks for Wales and maximise the benefits.

12.0 LEGISLATION

12.1 The Wales Act 2017

The Wales Act expands the National Assembly's legislative competence in several transport areas. It also expands the executive functions of the Welsh Ministers in transport, particularly in the areas of ports and road traffic; these provisions came into force April 2018.

The Wales Act places new regulatory duties on the Welsh Ministers in regards to ports and harbours, mainly with regard to Harbour Orders; applications for which are subject to a fee. Staff resourcing and deployment has also been reviewed to ensure that the new duties can be undertaken effectively.

The other new powers granted by the Act are discretionary functions, and the financial implications of policy development will be factored into the policy development. Consultations have been published on potential changes to the taxi and private hire vehicle licensing regime, and the organisation of bus services in anticipation of the expanded powers coming into force. Both consultations note that these potential changes could be cost neutral, making better use of the existing resources spent in this area.

From the 1st of October 2018, the Welsh Ministers have assumed responsibility for the licensing of onshore petroleum extraction from the UK Oil & Gas Authority.

The necessary administrative arrangements for the licensing functions to operate effectively have been put in place. A new statutory instrument is in place which enables us to charge license holders for licensing functions. The financial and resource implications of the new responsibilities have been assessed and mechanisms are being developed to ensure Welsh Government is able to discharge its duties.

In preparation for this new area of responsibility, a consultation has been held on our preferred policy towards future petroleum extraction in Wales.

12.2 Bus Services Act 2017

The Bus Services Act 2017 mainly applies to England only and legislation currently in force in relation to bus services in Wales will remain in place. The Act amends the Equality Act 2010, introducing a requirement on bus operators to provide accessible information to disabled passenger during the journey, including next stop audio visual announcement systems. The provision amends the Equality Act 2010, and provides that the Regulations and supporting guidance shall be made by the Secretary of State for Transport in consultation with the devolved governments in Wales and Scotland. The relevant provisions in the Bus Services Act that apply in Wales will be cost neutral to the public sector in Wales, although the Regulations that follow may add about 0.4% to the cost of operating bus services in Wales (if audio visual next stop announcements are included in the Regulations).

Bus services across Wales provide a vital link between our communities and an important supporting tool in ensuring a vibrant economy. The Welsh Government has been clear that we can do more with the money we use to support buses in Wales and I have been clear that, over the next few years, using the tools that we have gained in the Wales Act 2017, we can reshape the industry in a way that supports that ambition. This will require primary legislation and later this year, a White Paper will be published that contains proposals for a range of options to empower, through legislation, local authorities to determine the most appropriate model for providing bus services in their area.

13.0 WELL BEING OF FUTURE GENERATIONS (WALES) ACT 2015

The 2019-20 Draft Budget is the third published budget since the Well Being of Future Generations (Wales) Act came into force. As in the previous two years, the Act has provided the framework for developing our plans, but we have taken this a step further in developing the EAP. The EAP is an example of how our decisions connect more clearly to the well-being objectives, and explains how we contribute to achieving the objectives of the Act.

The EAP pays close attention to our obligations under the Act, embedding the principles within our strategic thinking and policy development. We have taken the Act's overarching intention to create a Wales that we all want to live in now and in the future and used this to inform the EAP's focus on interventions to equip people, businesses and places with the tools they need to shape their own futures.

The EAP directly supports delivery of seven of the twelve well-being objectives (in addition to indirectly contributing to the other five) and these objectives are used as the framework around which the EAP and its actions are structured.

The prominence of these well-being objectives serve to ensure common purpose between the objectives of the EAP and the Act and provides internal and external stakeholders with assurance that we are all working toward the same objectives.

In addition, consideration of the objectives has helped to join up the interventions set out in the EAP and helped us to better recognise the relationships and inter-dependencies between the objectives and the individual actions that flow from them.

This has influenced the development of key policy changes, such as the Economic Contract and its associated Calls to Action. These new interventions are not simply about a narrow approach to business support, but are about ensuring we secure wider impacts across a number of the objectives. The adoption of this broader, more joined up view is directly attributable to applying the principles in the Act.

We have demonstrated each of the Act's five ways of working in the development of the EAP. For example, in seeking to address entrenched, long-term and structural challenges like productivity and spatial variations, the EAP is long-term in its approach, recognising these are generational issues and the need to take action now, to prevent these challenges continuing to shape economic outcomes in the future. This includes focus on ensuring businesses are preparing themselves for the future and the focus on skills in supporting individuals to reach their potential.

14.0 REDUCING THE IMPACT OF DEPRIVATION AND POVERTY

Prosperity for All: the National Strategy provides a framework for our whole-government approach to prosperity for all and addressing the root causes of poverty in a more effective, joined-up way. The strategy will be driven by a focus on raising skills levels, ensuring sustainable employment and spreading the benefits of economic growth as widely as possible.

Transport plays a vital role in driving Wales' economic competitiveness, connecting people, communities and business to jobs, facilities and markets. Our focus is to provide a sustainable, multimodal and integrated transport system which enables our communities to be united and to prosper, providing access for all our people to the opportunities and services they need to live healthy, sustainable and fulfilling lives.

We continue to provide substantial funding in support of Wales's bus network. Our Bus Services Support Grant will help local authorities subsidise a range of bus and community transport services throughout Wales that would otherwise not run without public funding.

We have provided an additional £2m to support the Youth Discounted Travel Scheme. We have included provision of £60m to continue our Concessionary Bus Travel Scheme, with more than 750,000 pass holders resident in Wales. This makes bus travel more affordable for younger people and provides free travel for older people to access employment, education, social events, training, medical appointments and any other journey purposes.

Our City Regions recognise not only that cities must be drivers of growth, but that prosperity must be shared across the wider regions. They are emphasising connectivity and skills as core priorities. These priorities are an enabler of growth and are fundamental in facilitating inclusive access to jobs and opportunities.

Participation in the labour market is recognised as a key driver of movement in and out of poverty. Over half of entries into poverty are associated with a fall in earnings, primarily due to job loss. We know that workless households are more at risk of being in poverty and are especially at risk of living in persistent poverty. Being unemployed adversely affects both mental and physical wellbeing.

The people of Wales are a central focus of the interventions throughout the EAP. The EAP sets out a number of key changes to our approach to economic development, all of which have the potential to support prosperity for all and inclusive growth.

The Economic Contract is the centrepiece of our new approach, and frames the reciprocal relationship between Government and business to drive public investment with a social purpose. We are applying the Economic Contract to our direct financial support to business, and exploring extending the contract to include our wider offer to business and the adoption of these principles by the rest of the public sector in Wales. The Economic Contract requires businesses seeking investment to demonstrate that, amongst other things, they are promoting fair work and health, skills and learning in the workplace.

ECONOMY & TRANSPORT MEG

Draft Budget Allocations 2019-20 – Re-stated presentation

ECONOMY AND TRANSPORT - NEW STRUCTURE			ECONOMY AND TRANSPORT - OLD STRUCTURE			
RESOURCE			RESOURCE			
Budget Expenditure Line	2018-19 Supp Budget New Plans June 2018	2019-20 Plans as per 2018-19 Final Budget	Budget Expenditure Line	2018-19 Supp Budget New Plans June 2018	2019-20 Plans as per 2018-19 Final Budget	Former Action Description
	£000s	£000s		£000s	£000s	
Business Development (Enabling Initiatives)	13,242	11,742	Business Development	2,500	1,000	Sectors
			Construction	264	449	
			Business Solutions	434	434	
			Enterprise Zones	831	1,030	
			Energy & Environment	1,458	1,753	
			Advanced Materials & Manufacture	526	1,150	
			Creative Industries	1,636	1,708	
			Financial & Professional Services	150	150	
			Life Sciences	2,200	2,200	
			ICT	2,552	1,828	
Export Trade and Inward Investment	1,892	1,892	Single Investment Fund	691	40	
Regional Economic Development	263	263	Trade and Inward Investment	1,892	1,892	
Entrepreneurship	1,768	1,768	Regional Development and Delivery	263	263	
Social Enterprise and Economy	730	730	Youth Entrepreneurship	1,768	1,768	
Business Wales	8,443	8,443	Social Enterprise and Economy	730	730	Entrepreneurship & Business Information
			Entrepreneurship Delivery Start Up & Business Wales	8,443	8,443	

Business Innovation	859	604	Academia & Business Collaboration	859	604	Innovation
Action: Inclusive Growth and Future Proofing the Welsh Economy	27,197	25,442		27,197	25,442	
Tourism & Marketing	13,762	11,762	Tourism	13,762	11,762	Sectors
Major Events	3,918	3,918	Major Events Unit	3,918	3,918	Major Events
Action: Promote and Protect Wales' Place in the World	17,680	15,680		17,680	15,680	
Science	773	141	Science	773	141	Science
Action: Science	773	141		773	141	
Property Infrastructure	4,026	4,026	Property Infrastructure	4,026	4,026	Deliver Property Related Infrastructure
Action: Economic Infrastructure Development	4,026	4,026		4,026	4,026	
Strategic Policy Development	450	450	Economic Analysis	157	157	Corporate Programmes
Healthy Working Wales	800	800	Strategic Engagement	293	293	
Corporate Programmes & Services	992	992	Healthy Working Wales	800	800	
Strategic Business Events and Communications	100	100	Corporate Programmes & Services	992	992	
Action: Corporate Programmes	2,342	2,342	Strategic Business Events and Communications	100	100	
Network Asset Management	5,836	5,836	Network Asset Management & Support	5,836	5,836	Motorway & Trunk Road Operations
Network Operations	77,264	77,264	Network Operations	77,264	77,264	
Action: Motorway & Trunk Road Operations	83,100	83,100		83,100	83,100	
Network Operations Non Cash	188,691	188,691	Network Operations Non Cash	188,691	188,691	Improve and Maintain Trunk Road Network (Domestic Routes) - Non Cash
Action: Improve and Maintain Trunk Road Network (Domestic Routes) - Non Cash	188,691	188,691		188,691	188,691	
Aviation	5,605	5,605	Aviation	5,605	5,605	Road, Rail, Air and Sea Services and Investment
National Transport Infrastructure	1,000	5,000	New Road Construction and Improvement	1,000	5,000	
Transport for Wales	151,281	123,674	Rail Franchise & Service Improvements	151,281	123,674	

Action: Road, Rail, Air and Sea Services and Investment	157,886	134,279
Bus Support	30,205	29,205
Smartcards	966	966
Concessionary Fares	21,169	23,482
Youth Discounted Travel Scheme	1,000	1,000
Sustainable & Active Travel	630	630
Action: Sustainable Travel	53,970	55,283
Road Safety	4,764	4,764
Action: Improve Road Safety	4,764	4,764
Prosperity for All (E&T Additional Allocation)	0	8,000
	0	8,000
TOTAL	540,429	521,748

	157,886	134,279	
Bus Support	30,205	29,205	Sustainable Travel
Smartcards	966	966	
Concessionary Fares	21,169	23,482	
Youth Concessionary Fares	1,000	1,000	Youth Concessionary Fares
Sustainable Travel & Walking & Cycling	630	630	Sustainable Travel
	53,970	55,283	
Road Safety	4,764	4,764	Improve Road Safety
	4,764	4,764	
Prosperity for All (E&T Additional Allocation)	0	8,000	
	0	8,000	
TOTAL	540,429	521,748	

ECONOMY AND TRANSPORT - NEW STRUCTURE			
CAPITAL			
Budget Expenditure Line	2018-19 supp Budget New Plans June 2018	2019-20 Plans as per 2018-19 Final Budget	2020-21 Plans as per 2018-19 Final Budget
	£000s	£000s	£000s
Business Development (Direct Support)	83,671	53,468	27,556
Tech Valleys	0	0	0
Business Innovation	3,811	4,066	4,066
Action: Inclusive Growth and Future Proofing the Welsh Economy (Support for the Calls to Action)	87,482	57,534	31,622
Business Finance Funds	7,000	18,000	3,000
Action: Development Bank of Wales	7,000	18,000	3,000
Science	4,561	4,654	4,874

ECONOMY AND TRANSPORT - OLD STRUCTURE				
CAPITAL				
Budget Expenditure Line	2018-19 supp Budget New Plans June 2018	2019-20 Plans as per 2018-19 Final Budget	2020-21 Plans as per 2018-19 Final Budget	Former Action Description
	£000s	£000s	£000s	
Construction	-49	-22	-22	Sectors
Business Solutions	49,634	21,993	14,911	
Enterprise Zones	2,500	0	0	
Energy & Environment	5,975	13,647	5,427	
Advanced Materials & Manufacture	8,884	11,420	2,465	
Creative Industries	7,662	515	989	
Financial & Professional Services	2,791	2,710	1,870	
Life Sciences	2,090	798	801	
ICT	2,184	407	115	
Tourism	2,000	2,000	1,000	
	0	0	0	
Business Innovation	1,254	1,254	1,254	Innovation
Innovation Centres and R&D Facilities	945	1,200	1,200	
Academia & Business Collaboration	1,612	1,612	1,612	
	87,482	57,534	31,622	
Business Finance Funds	7,000	18,000	3,000	Sectors
	7,000	18,000	3,000	
Science	4,561	4,654	4,874	Science

Action: Science	4,561	4,654	4,874
Strategic Infrastructure Development	0	0	0
Property Infrastructure	10,625	8,677	8,386
Action: Economic Infrastructure Development	10,625	8,677	8,386
Network Asset Management	950	850	0
Network Operations	40,663	40,997	51,613
Action: Motorway & Trunk Road Operations	41,613	41,847	51,613
Aviation	6,777	6,073	0
National Transport Infrastructure	78,254	106,394	173,840
Transport for Wales	125,973	168,996	157,627
Action: Road, Rail, Air and Sea Services and Investment	211,004	281,463	331,467
Smartcards	1,000	1,000	1,000
Local Transport Priorities	10,150	10,150	5,150
Concessionary Fares	38,964	36,651	27,000
Sustainable & Active Travel	16,650	6,650	6,650
Action: Sustainable Travel	66,764	54,451	39,800
Road Safety	6,900	6,900	6,900
Action: Improve Road Safety	6,900	6,900	6,900
TOTAL	435,949	473,526	477,662

	4,561	4,654	4,874	
	0	0	0	N/A
Property Infrastructure	10,625	8,677	8,386	Deliver Property Related Infrastructure
	10,625	8,677	8,386	
Network Asset Management & Support	950	850	0	Motorway & Trunk Road Operations
Network Operations	40,663	40,997	51,613	
	41,613	41,847	51,613	
Aviation	6,777	6,073	0	Road, Rail, Air and Sea Services and Investment
New Road Construction and Improvement	78,254	106,394	173,840	
Rail Investment	125,973	168,996	157,627	
	211,004	281,463	331,467	
Smartcards	1,000	1,000	1,000	Sustainable Travel
Local Transport Priorities	10,150	10,150	5,150	
Concessionary Fares	38,964	36,651	27,000	
Sustainable Travel & Walking & Cycling	16,650	6,650	6,650	
	66,764	54,451	39,800	
Road Safety	6,900	6,900	6,900	Improve Road Safety
	6,900	6,900	6,900	
TOTAL	435,949	473,526	477,662	

Innovation Advisory Council for Wales

Response to Economy, Infrastructure and Skills Committee (“The Committee”) review into Research and Innovation in Wales.

1. Background

The Committee has called launched a consultation on research and innovation in Wales.

The Innovation Advisory Council for Wales (IACW) is a Welsh Government advisory body established to provide expert advice and guidance to Welsh Government on innovation policy and practice. Our members are drawn from across the public, private, educational and third sectors.

In this document IACW outlines its perspective on innovation and its vital role in driving the development of the Welsh economy, supporting the environment and improving the wellbeing of citizens.

The term Innovation tends to have a range of meanings to different people and stakeholder groups. In some cases, this has caused Innovation to be narrowly defined and hence, often we have seen a strong association with science, research and technology. IACW has a long standing, evidence based view that all of the components of innovation need to be developed and recognised in order to create cultures and whole systems of innovation rather than silos, compartments or pockets of innovation that can have a limited impact on the wider economy, society and the environment.

Building on the above context we would make the following general observations on research and innovation and its importance to Wales.

- 1. Innovation is not exclusively about science, research and technology.** In many cases incremental innovation and ingenuity has a much more dynamic and far reaching transformational impact on economies, the environment and society. For example, innovation amongst Welsh SMEs is evidentially low, as defined by Government statistics and proxies such as R&D tax credit claims. However, there is often a mistaken belief that innovation has to be centred on new technology and should be rich in Intellectual Property (IP). In our experience the most effective and transformative innovation can often be in business process innovation and investing in productivity transforming capital expenditure and skills development. It’s often less about the “great leap forward” technology gains and more about wide spread, incremental improvements and a constant embracing of change and new ways of doing things.
- 2. University based research has an unequivocally important role to play in innovation but its wider economic, social and environmental impact can sometimes be limited.** That innovation often does not disseminate to Welsh SMEs or the public sector in Wales and the commercial exploitation could easily take place in other countries, especially where the Intellectual Property is licensed by the University. Many Universities have very successful programmes and initiatives that engage with industry and the public sector but these are small in comparison to the research heavy science and technology innovation, which currently absorbs much public sector funding.

3. **Wales has the potential to turn its comparatively large public sector into a competitive economic advantage by opening up its Public sectors, in a risk managed way, as innovation test beds.** There are examples of good practice here with SBRI and KTP but it's not at a sufficient scale at present. SMEs and public sector innovators should be empowered and encouraged to undertake proof of concept innovations in trial environments that have the potential to make significant impacts on productivity, safety, wellbeing, environmental and consumer experience gains.
4. **Much innovation funding has historically been focussed on IP rich, research and science based innovation, especially in Universities.** It should be more focussed on productivity, wellbeing and the environment across SMEs, the public and third sectors.
5. **Wales is currently measuring the wrong things in assessing innovation impact.** Instead of focussing on research, IP and job creation, metrics need to be focussed on productivity, wellbeing and the environment.
6. **Welsh SMEs are undercapitalised.** This means their ability to invest in productivity boosting innovation, transformation, capital expenditure and skills is restricted. Funding for broad spectrum innovation and transformation is vital. That can be grant based or commercial. SMART Cymru is a positive initiative and Innovate UK have good examples of more commercial financial instruments through their grants and Innovation Loans.
7. **Wales can become a landing pad for global innovators and a launch pad for home grown innovators.** If the environment is right with attractive funding, public sector test beds and proactive business support, there is no reason why Wales cannot attract innovators from all over the World and a coordinated strategy to do so should be deployed. Other cities and regions do this very successfully including Singapore, California, The Netherlands and London.
8. **Innovation is a loaded word.** It is the right word but it has become synonymous with science, research and technology. Impactful innovation is far more about embracing change and transformation, challenging the status quo, ingenuity, being empowered to be inquisitive and engaged in experimentation. Innovation therefore cannot just be seen as "belonging to Science, Research and Technology."

2. Detailed Responses

Below we have set out responses to some specific issues that the Committee has raised:

- Welsh Government says that there needs to be a "major increase" in research intended to help solve specific challenges facing Wales (challenge-led research). It also says this type of research needs to be balanced with the more traditional type of long-term research undertaken by universities which pushes the boundaries of knowledge
 - To what extent do you agree with this view and how can Welsh Government ensure that an increase in one type of research activity doesn't mean the other type loses out?
 - Policy and practice must take account of UK wide and European initiatives in this space. Particularly those of Innovate UK and Horizon 2020. Wales cannot develop policy in this area in isolation. We should note the extensive research

conducted to shape the priorities of the funding from Innovate UK – The Grand Challenges –

<https://www.gov.uk/government/publications/industrial-strategy-the-grand-challenges/industrial-strategy-the-grand-challenges#artificial-intelligence-and-data>

- Welsh Government has said it wants to bring all research funding together and that this funding should then be available to small and medium-sized enterprises (SMEs), large private businesses, and other organisations as well as universities and colleges.
 - To what extent should businesses and other organisations be able to receive Government research funding that might have otherwise gone to universities and colleges? How could this be done without under-funding some organisations – might there be unintended consequences?
 - A central repository for all research funding is a good idea.
- In a recent review into research funding, it was argued that there was a strong risk of university research and innovation interests overshadowing the research and innovation interests of private businesses. But it didn't then go on to suggest a way of stopping this happening.
 - What needs to be done to ensure businesses and their interests are not overshadowed by universities when it comes to research and innovation funding and activity?
- It is important to understand that innovation has many forms and that it is not exclusively about science, research and technology. The ability of businesses to access funding for investment in leading edge business process development, innovative capital expenditure and leadership and skills development can drive important productivity gains. Funding for such activities is harder to find from commercial sources because all of the above often involves risk, disruption and uncertainty. In addition, SMEs in particular need access to funding to commercialise technology. Historically funding has been focussed on Technology Readiness Levels (TRLs) 1-4. It needs to be more focussed on TRL levels 5-9. Therefore patient capital is required that is not traditionally available from mainstream funding sources. Funding could be ring fenced for such purposes.
- In the academic year 2016/17 there were 241 graduate start-ups reported by Welsh universities with an estimated turnover of £56 million, this was almost double the turnover of university staff start-ups in the same year.
 - What is currently in place from Universities and Welsh Government to help and support student and graduate entrepreneurs turn their ideas into successful ventures?

Agor IP Swansea.

Business Wales including Big Ideas Wales and the Accelerated Growth Programme.

Development Bank especially the Technology Seed Fund.

Various co-working and incubator spaces.

University Industrial Liaison Officers.

KTP.

Smart Cymru

KES

- Is this support systematic and consistent across Wales and is there more Welsh Government and others could do?

The support needs to be better linked to the funding to create a genuinely cohesive ecosystem built around funding but with pre and post investment support built in.

- The recent review of research made recommendations to help incentivise businesses and universities to work closely together on research and innovation to take their collaborations to “greater heights”.
 - What are businesses and universities able to offer each other when they work in collaboration on research and innovation projects?

Should Welsh Government and others be doing anything differently to bring smaller businesses together with universities to collaborate on research and innovation projects? What is working well and what isn't?

Better link Universities, SME and Welsh Government Business support in a more dynamic and integrated offer. Consider helping to create commercial innovation and business hubs within universities, focused on emerging technology sectors.

However, do not assume that the best means for supporting innovation in SMEs is to encourage them to work more closely with Universities. That's important but it's a relatively small part of the answer. There are other far more impactful mechanisms.



Arbenigwyr mewn Busnes
Experts in Business

1st October 2018

Russell George AM
Chair, Economy, Infrastructure and Skills Committee
National Assembly for Wales
Cardiff Bay
CF99 1NA

Dear Russell

RE: Research and Innovation in Wales Inquiry

FSB Wales is the authoritative voice of businesses in Wales, with around 10,000 members. It campaigns for a better social, political and economic environment in which to work and do business. With a strong grassroots structure, a Wales Policy Unit and dedicated Welsh staff to deal with Welsh institutions, media and politicians, FSB Wales makes its members' voices heard at the heart of the decision-making process.

Introduction

FSB Wales welcomes the opportunity to comment on the Economy, Infrastructure and Skills Committee's inquiry into research and innovation in Wales. We have carried out several pieces of research of relevant to this inquiry both in Wales and across our wider UK organisation.

In our recent report *The Missing Middle* FSB Wales suggested there needed to be significant change in terms of the governance and funding of research and innovation policy in Wales, aimed at bringing closer alignment between PCET institutions and companies who could commercialise IP.¹ In particular, our recommendations reflected recent evidence gathered by the Innovation Advisory Council for Wales on a potential innovation body for Wales, and the UK Government's industrial strategy that committed a 20 per cent increase in funding for research and innovation.

We are pleased to see that this is being developed through the creation of Research and Innovation Wales (RIW) within the PCET proposals. However, it is vital that Welsh Government focuses funding on this area, particularly in relation to knowledge transfer and exchange between higher education and businesses of all sizes.

On the whole, this area of policy has been poorly coordinated in the past and as a result the links between universities and businesses have not been properly funded, developed and promoted to ensure maximum economic value for Wales. This is clear from the recommendations of the Reid review, which we would encourage Welsh Government to adopt and implement within its proposals for RIW. Furthermore, both the Diamond and Reid reviews have provided significant evidence upon which to base decisions around the funding of QR and innovation related activities.

In particular, we feel that further funding should be targeted at the point where businesses and universities interact, through funds similar to Higher Education Innovation Funding (HEIF). The Reid review identifies this

¹ FSB Wales. 2017. *The Missing Middle* [Online]. Available at: http://www.fsb.org.uk/docs/default-source/fsb-org-uk/fsb_missing_middle_eng.pdf?sfvrsn=0

funding as ceasing to exist in Wales from around 2014 onwards with European funding largely filling the gaps.² Given the uncertainty around European funding going forward, Welsh Government should act in this area as a priority and seek to develop the St David's Investment Fund as per the Reid recommendations.

SMEs and Innovation

Recent research undertaken by our Westminster office highlights the relationship between SMEs and innovation related activities³. In summary, the following key themes emerge:

- 76 per cent of smaller businesses have introduced a new innovation in the past three years.
- Of those who have innovated, 25 per cent have introduced a **new to market product** and 95 per cent a **new to firm** innovation.
- 40 per cent of those bringing new products to market are not aware of any R & D tax relief relevant to their business.
- Just 10 per cent of innovating smaller firms have accessed financial support from government.
- 43 per cent see lack of time as a barrier to innovation.
- 37 per cent see lack of staff or skilled employees as a barrier to innovation.

In the first instance, it is important to recognise that innovation is a far broader term than simply university led research activity. We found that firms fall in to two camps with those innovating by introducing new innovations to their business on the one side and those bringing new product innovations to market on the other. In the context of links between research funding and innovation, it is the latter group that will be most relevant.

SMART Cymru

SMART Cymru is Welsh Government's support programme for innovation activity in businesses.

Anecdotally, we have heard accounts of barriers being created preventing businesses from access funding relating to innovation in Wales. For instance, a member recently approached us about Welsh Government's SMART Cymru funding for innovation saying they were unable to access it as they employed fewer than 10 people and did not anticipate growth that would lead to employment of 50 people or more. This suggests that some innovation support is being withheld for those who are on the Accelerated Growth Programme and not for the broader SME community.

This appears to run contrary to the Welsh Government's own advice on the issue with its SMART Cymru guidance suggesting *"Our support is aimed at small and medium-sized enterprises (SMEs), as well as start-up businesses. We provide financial support and innovation advice. We direct you to specialists and help you create connections. In short, we support you by sharing the risk."*⁴ We are concerned by this and would urge the committee to investigate this further with a view to ensuring innovation funding is genuinely available to all small businesses.

² Reid Review. 2018. <https://gov.wales/docs/det/publications/reid-review-en.pdf> P.43

³ <https://www.fsb.org.uk/docs/default-source/fsb-org-uk/innovation-report-final.pdf?sfvrsn=0>

⁴ https://businesswales.gov.wales/sites/business-wales/files/documents/Growing%20a%20business/SMARTCymru%20Brochure%20Eng_growing.pdf



Arbenigwyr mewn Busnes
Experts in Business

Challenge-led research

FSB Wales broadly welcomes the notion of challenge-led research. However, this can only succeed in an environment where there is sufficient funding through traditional QR funding to create the capacity needed within universities to be able to bid for any challenge funding. Fundamentally, QR funding provides institutions with the base level of investment to allow them to attract more challenge-based funding through UKRI, the research councils or a proposed Future of Wales Fund highlighted in the Reid Review.⁵ We agree with the assessment in the Reid Review that challenge funding should not detract from QR but should seek to promote more competitive institutions.

If this succeeds, one would expect more quality research in Wales that would deliver opportunities for commercialisation through SMEs and economic development.

Business links with universities

FSB Wales welcomes Welsh Government's intention to broaden out funding so that SMEs are able to access it. However, it is likely that the capacity to do so in the short term will be limited given the nature of QR and the proposed challenge funding. At present, universities are likely to be the only organisations with the research quality to succeed in this regard.

That said, FSB Wales believes more needs to be done to increase the links between universities and businesses, particularly around the innovation agenda. Building links in this regard will be mutually beneficial, particularly where SMEs are involved, and will allow the Welsh economy to better capitalise on the opportunities created by knowledge generation.

As a practical step in this direction, we believe the Reid Review recommendation to create a St David's Investment Fund to increase the scale of collaboration between businesses and universities is necessary. This would help generate further revenues for research by increasing the amount of external investment received by universities. It would also ensure our conversation is one of collaborating to maximise impact rather than competing for limited funding.

In relation to the creation of a Tertiary Education Commission for Wales (TERCW), it is vital that this organisation is tasked with delivering the post-compulsory education system that the Welsh economy needs, and this should include priorities around research and innovation funding. It cannot simply be the aggregation of disparate education sector voices under one banner.

Graduate Entrepreneurs

Like anyone wanting to start a business, graduates in Wales will have access to support from Business Wales and the Development Bank of Wales. As we set out in our report *Supporting Success* it is crucial that both services are continued and strengthened when European funding comes to an end in 2020. Both services provide good value for money in terms of job creation, particularly when compared to grant funding given to large businesses in Wales.⁶

Small Business Charter

⁵ <https://gov.wales/docs/det/publications/reid-review-en.pdf> P.24

⁶ [https://www.fsb.org.uk/docs/default-source/fsb-org-uk/final-business-support-beyond-2020-\(english\).pdf?sfvrsn=0](https://www.fsb.org.uk/docs/default-source/fsb-org-uk/final-business-support-beyond-2020-(english).pdf?sfvrsn=0)



Arbenigwyr mewn Busnes
Experts in Business

As a matter of course, we would like to see all institutions in Wales look at attaining the Small Business Charter.⁷ This charter sets out the need for universities to help small firms grow, engage with others in the area on the economic agenda and provide students with start-up support. At present, only Cardiff Metropolitan University and Cardiff University have attained the charter, both of which we have worked with in the process.

Yours sincerely

Ben Francis
Wales Policy Chair
Federation of Small Businesses Wales

⁷ Further details about the criteria involved in the charter can be found here: <https://smallbusinesscharter.org/wp-content/uploads/2018/08/List-of-SBC-Dimensions-August-2018.pdf>

Evidence from Wesley Clover

1. INTRODUCTION.

1.1 Wesley Clover is delighted to have the opportunity to contribute to the Committee's consultation on Research and Innovation in Wales. Wesley Clover is an Anglo-Canadian investment management and holding company chaired by Sir Terry Matthews. Wesley Clover's United Kingdom headquarters are located in Newport. The headquarters of its Canadian operation are based in Ottawa.

1.2 Wesley Clover believes it is suitably qualified to contribute to this important exercise because of its intimate understanding of the process involved in the commercialisation of intellectual property. This intellectual property can be the output of research conducted at Higher Education Institutions. Wesley Clover combines experience in the development of rapidly scalable, market leading enterprises, sometimes labelled "frontier firms", with international business interests in the technology sector. In the four decades since its formation Wesley Clover has been responsible either singly or in partnership with other institutions and individuals for the foundation, funding and development of 126 technology ventures. Some of these companies have remained in private ownership, a number have listed on public markets, others have been subject to trade sales and in a minority of instances some have failed. The companies are positioned across sectors including; software, semi-conductors, 'cloud' technology, computer/ telephony integration, cyber security, media and mobile communications.

1.3 Furthermore Simon Gibson and Ian Courtney, respectively the Chief Executive of Wesley Clover and its Director of External Affairs, were the Chair and author of the report of the Commercialisation Review, a Task and Finish Group commissioned in 2006 by the then Welsh Government Economy Minister Andrew Davies. The purpose of the Review was to assess the economic impact of Welsh publicly funded commercialisation activities. It concluded there was substantial room for progress. This was largely the result of a misunderstanding of how good ideas are developed into economic value. In essence the Review found that Higher Education Institutions were generally not structurally equipped nor possessed the experience and skills to undertake commercialisation activity to enable the smooth transfer of research into applied innovations. Later these views were largely endorsed by the Reid Review.

1.4 Partially in response Wesley Clover pioneered, with its partners the Welsh Government and the Waterloo Foundation, the establishment and funding of the Newport based education charity the Alacrity Foundation. The Foundation's mission is "to mentor and train the brightest and best graduates and create a new generation of British hi-tech companies in Wales." The Foundation delivers this via its twelve month Graduate Entrepreneurship Programme. A singular feature of the Programme is that it challenges teams of graduates to solve a real life business problem by the development of a software application. Upon completion of the Programme teams are expected to have incorporated as a company, created a working product and secured their first commercial sale. Having achieved these three conditions teams are regarded as an investible proposition and qualify for venture funding to a ceiling of £250,000, on condition they headquarter their companies in Wales. The Programme has been designed to allow teams to benefit from the skills and experience of the partners in building commercially successful start-ups.

2. THE VALUE AND IMPORTANCE OF INNOVATION.

2.1 The Organisation for Economic Co-operation and Development (OECD), one of the world's foremost economic research institutes, defines four sources of innovation; "an innovation is the implementation of a new or significantly improved **product** (good or service), or **process**, a new **marketing** method, or a new **organisational** method in business practices, workplace organisation or external relation" (OECD, 2005, "The Measurement of Scientific and Technological Activities: Guidelines for Collecting and Interpreting Innovation Data: Oslo Manual, Third Edition" prepared by the Working Party of National Experts on Scientific and Technology Indicators, Paris).

2.2 It follows that the value of innovation activity to the Welsh economy cannot be overestimated. Wesley Clover concurs with the conclusions of the OECD and others that innovation performance is a crucial determinant of productivity, competitiveness and national progress and wealth. Moreover, innovation is important to help address global challenges, such as climate change and sustainable development. The application of advances in technology, in combination with entrepreneurship converts scientific and technological advances into a more productive economy.

2.3 The role of university based research activity and critically the ability to harness it is critical to the Nation's welfare. As was reported in the Commercialisation Review "the relationship between the Welsh economy and its higher education institutions will be enduring and grow in importance." To help us better understand the contribution of higher education Wesley Clover has analysed HE-Business and Community Interaction returns for years 2014/15 and 2015/16. The results of this analysis are shown below;

Institution	No of Active Graduate Start Ups		Value of External Investment for Graduate Start-Ups (£000s)		Average Turnover Per Graduate Start-Up (£s)		HEI IP Revenue (£000s)
	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16
Aberystwyth	56	56	1,120	1,120	22,500	22,500	156
Bangor	57	53	0	0	140,800	94,750	38
Cardiff	190	204	0	0	52,600	46,000	13,445
Cardiff Met	293	205	0	0	15,000	15,365	0
Glyndwr	0	0	0	0	0	0	0
Swansea	70	88	122	130	95,600	81,150	44
Trinity/St Davids	567	420	350	300	15,000	15,000	10
USW	354	348	0	0	11,370	10,370	43

2.4 The data contained in the table suggests on all measures the performance of Welsh universities varies. In most instances the headline data indicates a strong performance amongst institutions in their ability to aid the foundation of graduate start-ups. On closer inspection data for average start-up company turnover and their ability to attract external investment suggests much of the potential has yet to be realised. Start-ups associated with Bangor, Cardiff and Swansea all demonstrate exceptionally healthy levels of average annual turnover. From a commercial perspective the remainder appear to be trading at sub-optimal levels. This raises issues about their ability to develop over the long term. An

indicator of the capacity of companies to maintain a sustainable pattern of growth is their ability to secure investment from external sources. According to the data the only institution in Wales to have spawned graduate founded start-ups that have attracted external funds at scale is Aberystwyth University. What makes the performance of start-ups associated with Bangor, Cardiff and Swansea so significant is their ability to achieve the reported levels of growth in the absence of external funding.

2.5 The table also reveals data for individual institution's income derived from the commercialisation of intellectual property. This is an important figure since it provides a guide to the institution's ability to exploit publicly funded research activity. A public policy issue that rests at the centre of the Committee's enquiry. In this respect Cardiff University stands out from the remainder. This might be expected for a number of reasons. Cardiff University is a member of the Russell Group of universities. Cardiff has also pursued a policy of collaboration with the commercial entity IP Group, a company established to develop commercial income from publicly funded research activities. Whilst this approach may not be suitable for every Welsh higher education institution the benefits of engaging with commercialisation specialists for university finances and the wider economy is potentially large.

2.6 In the next and last section of its evidence Wesley Clover applies its experience and knowledge to respond directly to the issues highlighted by the Committee. Wesley Clover acknowledges these responses should be seen in the context of wider issues affecting collaboration between business and universities. Of specific relevance to this enquiry is the consistent identification of the low level of demand from business for access to knowledge and intellectual property created within universities (Lambert Review of Business-University Collaboration, 2003; 'The Gibson Review' – Commercialisation in Wales; Report of the Independent Task and Finish Group, 2007).

2.7 According to Dr Drew Nelson, a co-founder of Cardiff headquartered semi-conductor materials specialist IQE and a member of the team responsible for the establishment of the Compound Semi-Conductor Applications Catapult in South Wales, typically universities account for 3% of company sources of innovation. The majority is sourced from within the company or from a member of that company's supply chain. Whilst there is seen to be considerable virtue in encouraging university/ business relationships to promote innovation the reality is the level of demand for them does not match the level of activity that goes into encouraging them.

3. RESPONSES TO COMMITTEE QUESTIONS.

3.1 Welsh Government says that there needs to be a "major increase" in research intended to help solve specific challenges facing Wales (challenge-led research). It also says this type of research needs to be balanced with the more traditional type of long-term research undertaken by universities which pushes the boundaries of knowledge; **(1.) To what extent do you agree with this view and how can Welsh Government ensure that an increase in one type of research activity doesn't mean the other type loses out?**

1. Wesley Clover believes a misalignment exists between different types of publicly funded research in the United Kingdom and by implication Wales. Analysis conducted by Wesley Clover indicates that government funding for traditional types of HE centred long-term research was £4.5 billion annually, the vast majority being distributed until April 2018 via Research Councils UK. This contrasts with an annual figure of £450 million of public funds for commercialisation research activities, administered at the

time by Innovate UK, for Catapult activities. By definition these are closer to market and therefore act as a suitable proxy for 'challenge-led research'. The practical consequences of the difference in magnitude in these two numbers is profound. The costs and time involved in commercialisation, taking an idea from initial research through to international reach, are back-end loaded. In Wesley Clover's experience the cost of refining a piece of pure research into a product or service that has commercial appeal is one and a half to two times the cost of the initial research. From a time perspective the process can take between five and ten times longer than the initial research. These requirements of finance and time stand in contrast to the allocation of public funds which are front end loaded. As a consequence there is a distortion between the level of public research funding and the resources needed to fund successful innovation. This is not to imply there is a binary choice between the two categories of funding. Just like pure research commercialisation is not a linear process. Successful economies require funding for pure research and commercialisation, the challenge is to establish a better balance between them.

3.2 Welsh Government has said it wants to bring all research funding together and that this funding should then be available to small and medium-sized enterprises (SMEs), large private businesses, and other organisations as well as universities and colleges; **(1.) To what extent should businesses and other organisations be able to receive Government research funding that might have otherwise gone to universities and colleges? (2.) How could this be done without under-funding some organisations – might there be unintended consequences?**

1. & 2. For the reasons highlighted in paragraph 3.1 Wesley Clover believes it is appropriate for businesses to qualify for Government research funding. In an era of spending restraint it seems inevitable that if businesses are to benefit some organisations that are currently in receipt of funding will suffer. One way of mitigating the impact of this and accelerating the rate of innovation activity is to establish conditions in the award of funding that encourage genuine collaboration between higher education and businesses. Too often barriers to collaboration exist because universities and businesses have widely divergent objectives. Wesley Clover believes Welsh Government should undertake a rapid but nonetheless comprehensive consultation exercise involving higher education, HEFCW and research intensive businesses of all sizes (and not confine it to the representative bodies) to help shape a set of criteria governing the research funding award process.

3.3 In a recent review into research funding, it was argued that there was a strong risk of university research and innovation interests overshadowing the research and innovation interests of private businesses. But it didn't then go on to suggest a way of stopping this happening; **(1.) What needs to be done to ensure businesses and their interests are not over-shadowed by universities when it comes to research and innovation funding and activity?**

1. Wesley Clover's response contained in paragraph 3.2 provides an outline of a principle that could be applied to ensure the interests of business are not overshadowed by those of universities. Genuine collaboration is established as a minimum condition for receipt of funding. Without prejudicing the outcome of the proposals for a consultation exercise contained in paragraph 3.2 universities have a number of existing research relationships with business. What is not clear is the extent to which the benefits of these relationships actually percolate into the Welsh economy. Welsh Universities that work with multi-nationals frequently neither have an objective to insist nor have the negotiating power to insist that any commercial exploitation of

research is conducted in Wales. Whilst Wesley Clover is an advocate of an open approach to trade and business there appear to be no measures in place that encourage the benefits of research and intellectual property creation to remain within the local economy. This might be addressed by the design of funding award criteria that incorporate a presumption in favour of proposals that demonstrate an intention to maximise the benefits of research and innovation in Wales.

3.4 In the academic year 2016/17 there were 241 graduate start-ups reported by Welsh universities with an estimated turnover of £56 million, this was almost double the turnover of university staff start-ups in the same year; **(1.) What is currently in place from universities and Welsh Government to help and support student and graduate entrepreneurs turn their ideas into successful ventures? (2.) Is this support systematic and consistent across Wales and is there more Welsh Government and others could do?**

1. Wesley Clover is aware that Higher Education Institutions across Wales have adopted a variety of measures to promote graduate entrepreneurship. Directly or indirectly, via its involvement in the Alacrity Foundation, close relationships exist with Cardiff and Swansea Universities. Approximately a half of the graduates entering the Foundation's Programme formerly studied at these two institutions. Additionally staff of Wesley Clover and Alacrity provide guest lectures and mentorship to graduates at both Institutions. Many universities have applied capital funds for the construction of premises intended to provide accommodation for student founded companies to incubate and grow. Whilst this can be welcomed the provision of accommodation alone is not sufficient to create the conditions for success. Of greater value is the ability to surround a good idea with people with appropriate skills and experience and appropriate forms of finance. Sadly there are too many examples of property driven innovation policies that have failed to achieve appropriate outputs. Successful commercialisation and innovation is not about property it concerns intellectual property.

2. Notwithstanding its partial knowledge of individual institution's approach to the provision of support for graduate entrepreneurship it is not apparent support is systematic. Whilst it is legitimate to allow for differences between institutions it would be reasonable to expect approaches were guided by similar principles. There appear to be no expectations, articulated into clear guidelines accompanied by measurable objectives in place by which to measure success. The contribution of graduate support activities has been promoted by the institutions themselves and government. Whilst there should be no doubting the importance of graduate entrepreneurship it remains unclear whether in practice it occupies the primacy it deserves and whether it is adequately resourced and most importantly whether it is successful.

3.5 The recent review of research made recommendations to help incentivise businesses and universities to work closely together on research and innovation to take their collaborations to "greater heights"; **(1.) What are businesses and universities able to offer each other when they work in collaboration on research and innovation projects? (2.) Should Welsh Government and others be doing anything differently to bring smaller businesses together with universities to collaborate on research and innovation projects? What is working well and what isn't? (3.) What should Welsh Government and others be doing to help businesses use the knowledge gained from research activity and turn it into marketable products or improved services?**

1. Businesses and universities are able to offer each other complementary skills and experience that neither of the other parties possess. Research and business skills are

both essential for successful commercialisation. Good academics rarely make good businessmen and woman. Equally business men and women rarely make good academics. Welsh Government might wish to reflect on the possibility that one of its objectives for the revised approach to funding is the creation of conditions that rewards collaboration between business and universities.

2. Since 2015 Wales has participated with Asian, South American and other European regions in the Massachusetts Institute of Technology managed Regional Entrepreneurship Acceleration Programme (REAP). Welsh representation was led by Simon Gibson of Wesley Clover. REAP's primary purpose is to stimulate "innovation driven entrepreneurial" activity. As a consequence the Welsh team developed a 'Five Stakeholder Model of Innovation' (5SModel). The 5SModel is based on an analysis of the institutional components of the most successful regional economies. In particular whilst it acknowledges an essential role for government a distinctive feature of the 5SModel is the clear contribution to be expected of each component institution and the parity of responsibility. In the 5SModel government sits alongside academia, corporate representatives, entrepreneurs and risk capitalists in a partnership of equals. At the core of this approach is an implicit acceptance of the limits of the policy levers at the disposal of government to influence outcomes. The point of the 5SModel is to emphasise the ability of each component institution to leverage their individual contributions to create the optimal conditions for innovation. Wesley Clover believes Welsh Government should encourage the adoption of the 5SModel as a condition of applications for research funding.

3. Notwithstanding the important and supportive role of the Development Bank of Wales and especially its seed fund activity, Wales, similarly to the United Kingdom generally, has failed to create the conditions where there exists an intense relationship between researchers, innovators and venture capitalists. One explanation for successful regional economies is the existence of empathetic risk financiers. The most successful of these are actively involved in the development of their client businesses.