



Social Study 2015

The Economic Impact of BT
in the United Kingdom
and Wales



A report prepared by
Regeneris for BT Group



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Regeneris Consulting is an independent economics consultancy that provides research-based advice to major corporates, developers, national government bodies and local government. Regeneris specialises in preparing robust assessments of economic impact, focusing on the impact of new technology, physical developments, policy changes, investment programmes and corporate economic footprint. Regeneris work across the UK from their offices in London and Manchester. See: www.regeneris.co.uk for further information.

2 Introduction



BT is the major provider of telecommunications networks and services in Wales, and the work we do is key to the country's continued economic and social prosperity. Across the country we are making connections, creating new possibilities and helping businesses to grow, communities to flourish, and people to get more out of life.

As the key communications services provider, we use the power of communications to make a better world. We bring together the expertise of our people and the best networks and technologies. We support employment in every part of Wales through our direct workforce and, indirectly, through our extensive supply chain. We seek to centre our procurement and expenditure within the local economies.

This report concentrates on and highlights the direct economic contribution BT makes, in numbers and through case studies. It estimates BT's total Gross Value Add (GVA)

to the economy, combining the direct, indirect and induced impacts of our activities and spending. In Wales BT's GVA for 2014/15 is estimated to be £575 million.

BT continues to make significant investments for the long term benefit of both the company and the UK. Our most significant investment has been in superfast broadband, and today our network covers more than three-quarters of the UK. This includes premises in rural and hard-to-reach areas that we have been able to reach following competitive tendering for public funds from the Welsh and UK Governments.

Our fibre investment has delivered one of the fastest rollouts in the world, and we are on budget and ahead of schedule. The number of premises connected has risen by more than 50 per cent during 2014/2015. We will continue to work with the Welsh and UK Governments to increase fibre coverage to Welsh homes and businesses.

We are not stopping there, we have also announced our plans to move from superfast to ultrafast (G.fast technology) with speeds of 300-500Mbps. This will be

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another significant investment for BT, again helping to ensure that the UK remains at the forefront of digital communications with a vibrant internet economy. Swansea has been chosen as a trial site for the new G.fast technology.

BT people live, play, work and do business in their local communities the length and breadth of the country. As a result, BT is often best placed and most able to support local technology-neutral programmes and projects, wherever they are. We are proud to work in partnership with, devolved governments, community and business organisations to develop next generation solutions for areas where a commercial investment is not immediately justifiable.

We have also brought affordable internet access to residents of more than 9,000 social housing properties across the UK to help people make the most of the benefits the internet can bring. We also support a number of other initiatives to ensure as many people as possible are digitally connected, and not missing out on opportunities at work, home and in the community.

This year we announced the proposed acquisition of EE, the UK's leading mobile operator. We plan to combine the UK's most advanced 4G network with the UK's most extensive superfast broadband network to provide a full range of innovative communications services.

Through our BT Sport investment, we are transforming the face of televised sport. BT Sport channels are now seen in more than 5.2 million homes, offering customers more choice and further demonstrating the benefits of fibre broadband. BT is also a major supporter of Welsh rugby, through the sponsorship of the four regions - Scarlets, Ospreys, Blues and Dragons.

We understand the importance of connectivity to social wellbeing and economic growth, and we seek to add value wherever we operate. This report highlights our economic and social activities, and shows that BT is a key player across the whole of the nation.

Alwen Williams
Director, BT Wales
September 2015

3 Our Report

The Economic Impact Report 2015 has been prepared independently by Regeneris Consulting, working closely with BT Regions to draw upon their data and information.

Impact calculations are in accordance with Government guidelines and the HM Treasury's Green Book Guidance for appraisal and evaluation, and are consistent with the Office for National Statistics' national accounts. Details of our approach are shown in Appendix A.

Estimates in this report relate to BT's activities in the UK during the financial year 2014/15. Note that the economic impact figures presented throughout this report are expressed to three significant figures. This means they have been rounded up or down as appropriate and, as a result, may not sum exactly to the totals presented.

The narrative includes announcements up to and including end of September 2015.

Economic Impact Report 2015

This study shows BT's economic contribution to the UK national economy and to regional economies in terms of jobs, output and Gross Value Added (GVA) supported. The report covers several effects of BT's activities:

Direct impact: people employed directly by BT (including contractor employees) who receive wages and salaries.

Indirect impact: income and employment created with suppliers as a result of BT's spending on goods and services.

Induced impact: further income and employment generated as wages created directly and indirectly are spent within the economy.

BT's wider social and community contributions are covered in summary in this report. Further details can be found in the Delivering our purpose report 2015, available online at: www.bt.com/deliveringourpurpose

4 An Overview of BT

BT's stated purpose is to use the power of communications to make a better world.



BT is one of the world's leading communications services companies



BT is Europe's largest telecoms services wholesaler by revenue



BT provides managed networked IT services for many of the largest global companies



BT is delivering one of the world's fastest rollouts of fibre broadband for the UK



BT is the leading provider of voice and broadband services to UK SMEs & consumers



Every day BT touches the lives of millions of people, helping them communicate, do business, be entertained & informed

BT has five customer facing lines of business - BT Global Services, BT Business, BT Consumer, BT Wholesale and Openreach - supported by an internal service unit, BT Technology, Service & Operations.

Full details available within the BT Group plc Annual report which can be found at www.bt.com/annualreport

5 The Economic Impact of BT in the UK

The figures below show the number of employees working in each English region, Scotland, Wales and Northern Ireland.
Note: Figures are rounded to 3 significant figures.

	Working	Living	Total direct GVA £m
East of England	10,400	10,700	1,240
East Midlands	4,070	4,370	381
London	13,300	12,000	1,510
North East	3,750	3,790	352
North West	9,450	9,370	869
Northern Ireland	3,110	3,120	290
Scotland	6,930	6,970	655
South East	10,300	11,000	1,110
South West	5,800	5,750	587
Wales	2,950	3,410	276
West Midlands	6,380	6,210	632
Yorkshire and The Humber	6,580	6,440	636

Source: Regeneris Consulting

UK Key Points

72,200

Employees directly working for BT and 10,900 contractors (Full Time Equivalent – FTE)

217,000

Total FTE jobs supported (including indirect and induced effects)

£2.9 billion

Total income of BT employees (including contractors)

£6.5 billion

Spend with suppliers based in the UK

£18 billion

Total GVA impact associated with BT activities (including indirect and induced effects)



Across the UK...

- BT directly employs 1 in every 230 employees in the private sector across the UK, and 1 in every 10 in the IT and Communications sector
- BT directly creates £1 in every £180 of GVA in the UK
- As a result of the full economic impact of BT, the firm supports £1 in every £80 of GVA in the UK economy and 1 in every 110 employees working in the UK economy

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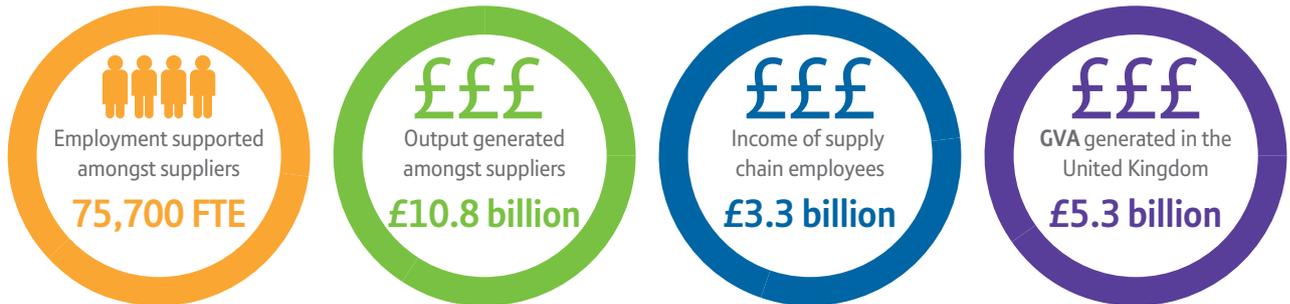
Economic Impacts

Direct Impact

BT directly employs a total of 72,200 people in the UK, with a further 10,900 employed as contractors. This results in £2.9 billion in wages and salary spend across the country. 77% of BT employees are equipped to work flexibly on any given day.

Procurement Impact (Indirect)

BT spent a total of £6.5 billion with UK based suppliers in 2014/2015. This results in significant benefits for the UK economy, including knock-on benefits further down the supply chain, which results in additional employment and output. This is summarised below.



BT Supply Chain Spend in the United Kingdom = £6.5 billion

Figure 5-1: Indirect (supply chain impacts) in the UK

Source: Regeneris Consulting

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Impact of BT and Supplier Employee Expenditure (Induced)

BT employees and contractors based in the UK earned around £2.9 billion in 2014/15 before tax. In turn, the expenditure of BT employees, contractors and the employees working for firms within BT's supply chain supports further employment and output in consumer industries. Through these knock-on effects, BT supported further jobs and turnover as shown below.



Salaries of BT Employees and Contractors in the UK = around **£2.9 billion**

Figure 5-2: Induced (wage expenditure) impacts in the UK

Source: Regeneris Consulting

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Total Impact in the UK

Combining BT's direct impact and employment with the indirect supply chain and induced wage expenditure impacts gives the total impact of BT operations in the UK. This is summarised in the table below.

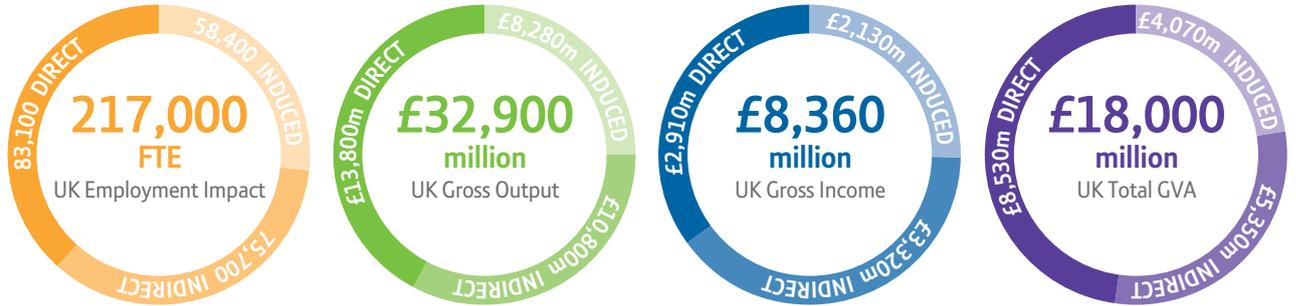


Figure 5-3: Total Impact of BT in the UK

Source: Regeneris Consulting

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Wales

Wales Key Points

3,410

BT employees live in the nation (FTE)

2,950

BT employees work in the nation (FTE)

£94 million

Total income of BT employees working in the nation

£213 million

Spend with suppliers based in the nation

£575 million

Total GVA impact (including indirect and induced effects)

Across Wales...

- BT employs 1 in every 240 employees working in the private sector, and 1 in every 6 employees working in the IT and communications sectors
- £1 in every £190 of GVA is generated directly by BT
- BT supports 1 in every 90 employees working in the private sector and £1 in every £90 of GVA as a result of the firm's full economic impact
- BT's full employment footprint is larger than the nation's creative and media sector

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National Impact

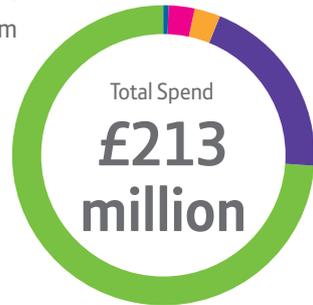
Direct Impact

BT directly employs a total of 2,790 people in Wales, with a further 164 employed as contractors. This results in £94 million in wages and salary spend across the nation.

77% of BT employees are equipped to work flexibly on any given day.

Procurement Impact

BT spent around £213 million with suppliers based in Wales in 2014/15. The largest item was telecommunications services, as illustrated in this chart.



- **£157m** telecommunications services
- **£42m** computer programming & consultancy
- **£6m** other professional, scientific & technical services
- **£6m** public administration
- **£1m** computer, electronic & optical products
- **£1m** supplier spend with other sectors

Figure 6-55: Top Five Supplier Sectors in Wales by Value of Expenditure

Source: BT Procurement data

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BT's spend with suppliers results in significant benefits for the Welsh economy (including knock-on or multiplier benefits as a result of supplier spend). This is summarised below.



BT Supply Chain Spend in Wales = £213 million

Figure 6-56: Indirect Supply chain impact in Wales

Source: Regeneris Consulting

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Impact of Employee Expenditure

BT employees and contractors living in Wales earned £109 million in 2014/15. In turn, their expenditure supports further employment and output in consumer industries in the nation. **Figure 6-57** below illustrates the wider induced employment and output supported through this employee expenditure.



Salaries of BT Employees and Contractors = **£109 million**

Figure 6-57: Induced (wage expenditure) impacts in Wales

Source: Regeneris Consulting

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Total Impact in Wales

Combining BT's direct impact and employment with the indirect supply chain and induced wage expenditure impacts gives the total impact of BT operations in Wales. This is summarised in **Figure 6-58** below.

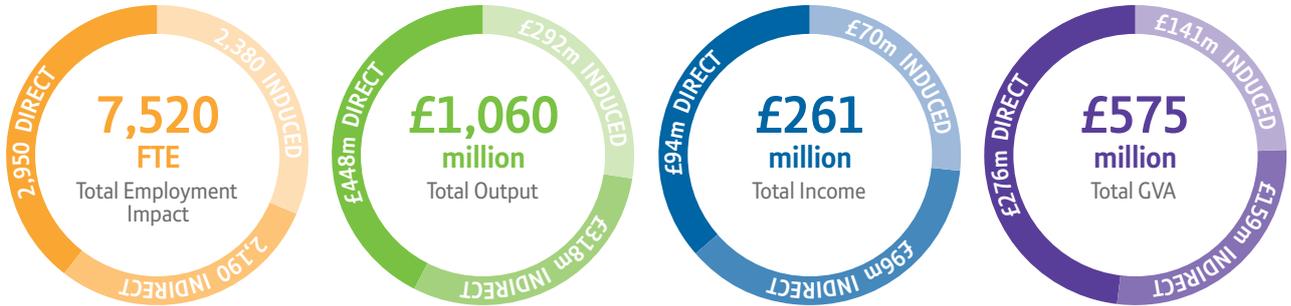


Figure 6-58: Total Impact of BT in Wales

Source: Regeneris Consulting

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Sub-national Impact

The table below shows the economic impact of BT for four key regions within Wales.

	BT Employees & Contractors		Total Impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
South East Wales	1,710	1,800	5,450	770	412
South West Wales	597	653	833	117	68
North Wales	482	722	1,010	139	77
Mid Wales	162	240	225	32	19

Table 6-18: Key regional Impact – Wales

Source: Regeneris Consulting

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Local Impacts

The map below illustrates the locations of key BT sites in Wales.

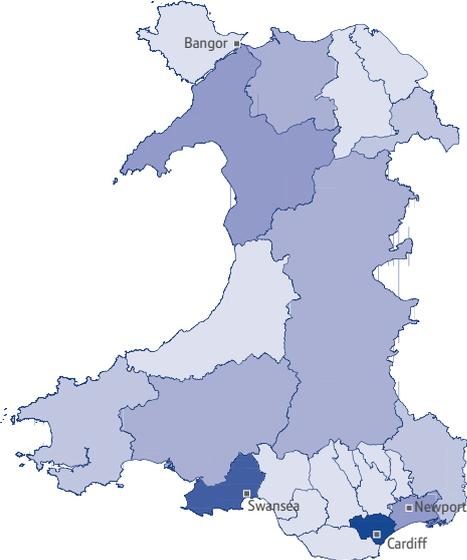
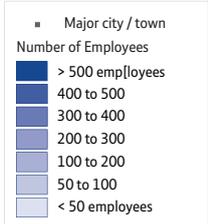


Figure 6-59: BT Employees Place of Work – Wales

Source: Regeneris Consulting

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Figure 6-60 also demonstrates the broad geographical spread of the workforce, which lives throughout Wales.

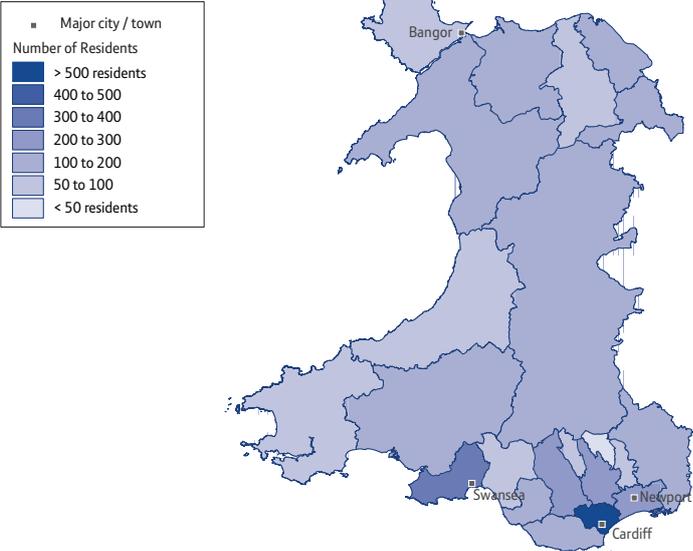


Figure 6-60: BT Employees Place of Residence – Wales

Source: Regeneris Consulting

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Keeping Wales Connected

BT has extensive networks in the UK. BT's fixed-line network is one of its most valuable assets and its investment in fibre broadband is key to delivering modern, superfast services to customers. To meet the demand from businesses, BT is continuing to expand the availability of Ethernet. And when customers are away from their home or office, they can use one of BT's Wi-fi hotspots.

A range of high speed technologies provides broadband services in Wales:

Next Generation Broadband

BT's commercial rollout alone is bringing fibre-based broadband to 59 exchanges in Wales, serving more than 638,000 homes and businesses.

- Fibre to the Cabinet (FTTC) will be the main technology deployed. FTTC can currently deliver wholesale downstream speeds of up to 80Mbps, and upstream speeds of up to 20Mbps.
- Fibre to the Premises (FTTP) technology can currently deliver faster wholesale speeds of up to 330Mbps, and upstream speeds of up to 30Mbps.

ADSL2+ offers up to 20Mbps next generation copper-based broadband services and is available from 160 exchanges, and more than 1million homes and businesses in Wales can benefit.

ADSL offers up to 8Mbps broadband services and is available from 100% of the exchanges in Wales.

Ethernet services offer higher bandwidth for businesses and organisations. Wales has 58 live nodes.

Wi-fi – BT has the UK's largest Wi-fi network with over 5 million hotspots. The company has already introduced Wi-fi into a number of UK city centres including Cardiff, as well as Brighton, Carlisle, Glasgow, Gloucester, Newcastle and Gateshead, Nottingham and Plymouth with more in the pipeline.

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Investing in Next Generation Broadband

More than 99 per cent of UK homes and businesses already have access to ‘first generation’ broadband. BT’s investment of around £3 billion in fibre means more than 23 million homes and businesses now have access to high speed broadband services. BT’s commercial network upgrade programme is widely recognised as one of the biggest and fastest in the world.

BT is also working with the Department of Culture, Media and Sport (DCMS), Broadband Delivery UK (BDUK) and Devolved Governments and is on track to meet the target of 90 per cent of UK premises by the end of 2016.

BT announced that it will be making £129 million available to extend the roll-out to more BDUK homes and businesses, earlier than planned and at no extra cost to the taxpayer (this is due to take up exceeding 20%).

BT is also in the planning phase for the BDUK phase 2 contracts that they have won across the UK. These contracts are part of the Government’s Superfast Extension Programme, designed to ensure 95 per cent of Britain has access to superfast fibre broadband by the end of 2017. In Wales, BT has worked with the Welsh Government to extend the Superfast Cymru programme so that it will run until June 2017 in order to cover additional premises which have been identified since the project began.

Fast, reliable broadband connectivity can provide a major economic boost to local communities. Many reports highlight the range of benefits businesses can gain by using superfast broadband, and case studies from across the UK stand testimony to how companies large and small are now building their success on fibre.

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Case study – Homestyle Furnishings

Homestyle Furnishings is a family-run business which has operated for over 20 years. Access to superfast broadband has allowed them to use the internet effectively for the first time. The website now supports the shop and the shop supports the website with customers getting a more complete service, resulting in increased sales. Suppliers share their latest products online as well as plans for future products.

BT retains its longstanding concerns about exclusion. Some of the groups that could benefit most from the internet, both economically and socially, have never been online. Many of the UK's digitally excluded people are elderly or on low incomes, and it is estimated that the socio-economic value to a new user of being online is some £1,064 each year*. Helping people to use the internet for the first time can transform their lives and help to generate around £6.8 billion within UK society and the economy.

* 'Digital Inclusion: the social return on investment, Just Economics for BT, June 2014'

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Fibre Partnerships

BT has unrivalled experience in overcoming the challenges of geography, topography and distance and has been working with local communities through the Superfast Cymru fibre partnership in Wales:

Superfast Cymru

Superfast Cymru is an ambitious partnership between BT Wales and the Welsh Government to roll-out superfast fibre broadband across Wales. Funded by BT, Welsh Government, UK Government, and the European Regional Development Fund, the project will take the total investment in fibre broadband in Wales to £425 million, helping the Welsh Government to achieve its aim of 96 per cent of Wales - 1.3 million premises - having access to fibre broadband. The project has already passed 482,000 premises. One business reaping the benefits of fibre is SonicPrint. Before superfast broadband was installed, the team found it increasingly difficult to compete at a national level. Since the company upgraded to fibre in September 2014, they now achieve an impressive 80mbps download and 20mbps upload speed, vital for running their own servers. Being able to host their business in Tredegar will save thousands of pounds in hosting and development costs. Fibre broadband has also brought new opportunities for their business including remote working, cloud backup databases and the possibility of VOIP for their phone system. Ultimately, it has brought improved job security and freed-up cash to potentially invest in further growth and expansion. Peter Topping from SonicPrint said, *“The speeds achieved by fibre are a game changer. Why have a customer base of 85,000 in Blaenau Gwent, where it could be potentially 6 billion!”*

NB: Figures quoted correct as of 12 August 2015

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Innovation, Research and Development

Innovation, supported by research and development (R&D), is at the heart of BT's business. BT is one of the UK's largest investors in R&D, investing £502 million in 2014/15.

BT uses its world-class expertise to lead and encourage innovation, generate new ideas and help keep the UK a step ahead. BT combines its expertise and resources at its main UK research facility at Adastral Park, near Ipswich. From pioneering work in optical technologies and digital switching, through to work in advanced software techniques and protocols, Adastral Park is recognised as one of the leading centres of technical innovation in the world of communications technologies.

BT has set out its ultrafast broadband vision for the UK. G.fast is an innovative technology that uses higher frequencies than FTTC to provide faster broadband speeds over copper lines. It will help BT realise its ambition to transform the UK broadband landscape from superfast to ultrafast, via a widespread deployment of G.fast. Trials in the East of England, North East and South Wales will build on tests at Adastral Park – Swansea has been chosen as a trial site for the new G.fast technology. G.fast is designed to help BT deliver ultrafast speeds of up to 500Mbps. Deployment could start in 2016/17, reaching 10 million homes and smaller businesses by the end of 2020 and the majority of premises within a decade. A 1Gbps service will be provided for those that want even faster speeds. The connections on offer would be a combination of FTTP technology as well as new G.fast technology, which uses existing FTTC technology.

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Swansea has been chosen as a trial area and will be amongst the first to benefit from the new technology in specific types of deployment. The technical trial will focus on how G.fast can be used to serve Multiple Dwelling Units (blocks of flats) and business premises, both of which present unique challenges that differ from ordinary residential deployments. Around 100 premises will take part, based on technical criteria. The trial will also look at the economic impact on small and medium sized businesses of deploying higher speed wireline services.

BT works with universities through UK Research Councils, collaborative programmes and directly funded research. At any one time, BT is typically involved in between eight and 12 collaborative projects. BT works with its academic partners to help create industry-relevant proposals to Research Councils that offer real impact, and also demonstrate the significance of academic research for the UK's ICT sector. BT plays a full part in Research Council-funded projects, providing expert steering and advice, academic placements, access to real problems and unique data sets, and the opportunity to test networks.

BT funds a range of university research in the UK and beyond. The company supports some 30 UK-based PhDs with a mix of collaborative awards and direct funding. BT is funding a post-graduate studentship at Bangor University to look at how to achieve technology that can deliver faster data speeds over fibre access networks. The head of BT's fibre access research team has received an honorary professorship from Bangor University for his outstanding contribution to research into optical fibre access. Derek Nasset, is one of BT's industry-leaders, defining the technologies that will be used in fibre broadband products of the future.

BT has links with around 30 UK university partners, working with them on projects of immediate relevance to BT's operations, as well as on speculative developments that may take as long as 20 to 30 years to come to fruition.

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Developing Talent and Championing Skills

BT invests in its own future success by continually developing the skills and knowledge of its people. To keep pace with the speed of innovation, BT selects talented people and provides them with opportunities to develop and improve their skills.

More than 500 apprentices and 229 graduates joined BT in 2014/15, and BT plans to recruit a further 1000 graduates and apprentices in 2015/16. BT has an excellent track record of employing ex-armed forces personnel, particularly within Openreach where more than 200 roles have been filled. Working with Transition Force, BT provides ex-military people with training and support in writing CVs, presentation skills, and attending job interviews.

In 2014/15, BT recruited 45 apprentices, and had 46 traineeships ongoing in Wales.

BT recognises that for the UK economy to grow it is essential for everyone to develop the skills for success at work. BT supports a range of programmes including providing more than 500 traineeships in 2014/15. BT also offers work placements and work experience opportunities, and supports the development of technology skills in schools. In 2015/16 BT will be offering up to 1,000 vocational and work experience placements to 18-24 year olds as part of the UK employer-led initiative 'Movement to Work'.

In March 2015 BT announced the launch of a new, ambitious programme to build a culture of tech literacy for the UK. This is a long-term commitment for BT with an ambition to inspire 5 million young people to connect with tech concepts by 2020 to benefit young people and the UK economy. Through the Barefoot Computing Project's initial phases (May 2014-July 2015) BT has already supported 850 workshops, 2,400 schools, 12,500 teachers and reached 340,000 pupils across the UK.

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BT has also teamed up with educational charity 'Techniquest' to help deliver Bytesize Science, a programme of interactive, hands-on stage shows to bring computing to life. In the long-term BT is confident that Bytesize Science will help to inspire a new generation of computer developers and programmers who can meet the increasing demand for IT specialists and engineers in Wales, and encourage more women to enter the fields of science, engineering and computing. Getting more children interested in computing and science is essential for the future prosperity of the economy in Wales and inspiring children, in particular girls, at a very young age is a key way to achieve this.

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A Purposeful Business

BT recognises the importance of connectivity to social wellbeing and to economic growth. Wherever BT operates, it works to extend the value it can add to communities and to society at large, by finding new ways for its products and services to bring social and economic benefits.

In 2014/15, BT invested £32.5 million in sustainable and responsible business activities, a full 1.15 per cent of its adjusted profit before tax.

In 2014/15 BT invested more than £700,000 in sustainable and responsible business activities in Wales, which also benefited from UK-wide activities funded at over £13 million. As part of a four year national partnership with The Lord's Taverners, BT has provided funding and in-kind support to Ysgol Pen-Y-Bryn and Ysgol Crug Glas in Swansea. BT has also provided support and funding for two projects through The Supporters Club.

Creating a Connected Society

BT helps people across the UK to develop the skills, knowledge and confidence they need to use the internet safely and securely. BT has shared with all its customers the 'parental controls' internet safety feature that comes free with BT Broadband. This helps families limit access to undesirable content and remain secure while still using BT's products and services and internet capability to the full. In partnership with UNICEF, through 'The Right Click: Internet Safety Matters' programme, BT has delivered a series of workshops across the UK on how to keep children safe online.

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By the end of April BT had delivered 100 workshops. BT volunteers are supporting the programme by delivering “Train the Teacher” sessions followed by an interactive workshop delivered for parents and children. Five workshops have already been completed in Wales.

BT has also been making the internet affordable to people with lower incomes, people with disabilities, and the elderly. The company has also inspired small businesses to tackle digital exclusion locally.

Delivering Environmental Benefits

BT uses its technologies to respond to the global climate change challenge. For the sixth successive year, BT has reduced its UK net carbon emissions (CO²e) by sourcing more renewable electricity, using more efficient vehicles and reducing its energy consumption.

BT is purchasing enough renewable energy from a Welsh wind farm to match the power consumption of around 50 per cent of its operations in the nation and the deal is worth around £100 million over 15 years. BT has also been working to help its customers reduce their carbon emissions, investing in innovative products and services. The company has also been influencing policy and engaging stakeholders, which presents an opportunity for innovation and growth and helping reduce the risk of serious climate change impacts.

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Supporting Charities and Communities

BT provides its technology, time and expertise to help thousands of charities with their fundraising and to work more efficiently.

MyDonate is a commission free online fundraising service for UK charities, with no set up fee or monthly charge. The service from BT has helped raise more than £1 million for charities in Wales. The BT Community Web Kit has also helped small charities across the nation build over 590 websites.

Volunteering is a key part of BT's support for charities and the community. BT believes that volunteering is good for its people, and BT's employees can volunteer in many different ways, sharing their professional skills and helping to raise funds. As well as benefiting charities and the communities they support, this strengthens BT's business profile. BT's volunteering programme enables employees to contribute up to three days of working time each year to community or charitable work. In 2014/15, BT volunteers provided more than £15.7 million of in-kind support and assistance - some 50,500 days - with one in four employees choosing to volunteer during the year.

In Wales, BT people provided more £748,500 of in-kind support and assistance, some 2,416 days.

Welsh Rugby Regions

BT Sport has a sponsorship deal with the four Welsh Rugby Regions, which is the largest ever in their history. BT Sport has also sponsored the Cardiff Blues Women's Rugby team and, in an unprecedented agreement secured naming rights for Cardiff Blues' iconic home grounds to be known as the "BT Sport Cardiff Arms Park". In addition, a core segment of BT's sponsorship will go towards fostering greater community engagement with rugby at a local level, encouraging more people to stay fit and active by participating in the game.

More detailed information can be found at www.bt.com/deliveringourpurpose

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Other Impact in the Region

BT Global Services has been winning business with genuine partnerships based on flexible models, which deliver innovation and efficiency savings.

BT has been awarded a seven year contract to operate the Wales-wide Public Sector Broadband Aggregation (PSBA) network. This will see BT provide broadband to schools, hospitals, police forces and local government across Wales – and 80 public service organisations and 4,000 public sites will benefit. The contract will bring significant savings whilst continuing to provide people with valuable and effective services. The PSBA network will provide increasing opportunities for Welsh public services, from Further Education institutions to Natural Resources Wales, to work together to improve service delivery. The PSBA will play a key role in the Welsh Government's vision to see Wales become one of the most connected digital nations.

BT was also at the heart of the UK's biggest security conference when it deployed services for the NATO summit hosted in south Wales in the autumn of 2014. BT was the official communications partner for working sessions at the Celtic Manor in Newport and for more informal events in Cardiff. BT set up a multi-discipline, cross-line of business programme led by BT Global Services' UK chief's operating office.



Technical Appendices

Here we set out the methodology used to estimate the economic impact of BT and the data sources that have been drawn upon.

Definitions

There are three sources of economic impact that a company like BT generates.

Direct impacts

These are the impacts arising as a direct consequence of the company's activities, in the form of output and wealth creation, employment within the firm and associated employment income.

Indirect impacts

Also known as the supply chain impact, this contribution arises from BT's purchasing of goods and services from suppliers in the UK, who in turn make further purchases from their suppliers, and so on. This chain of procurement spending resulting from BT's initial expenditure injection creates further wealth, and supports jobs and income.

Induced impacts

Further economic activity and employment is created as BT employees and those whose jobs are supported through supply chain effects spend their wages and salaries on goods and services. The economic effects from this consumer spending are known as the induced effect.



Throughout the report these impacts are measured using four key indicators:

Output

This refers to the turnover/sales revenue that is generated directly within BT or within other firms in the economy through indirect and induced effects.

Gross Value Added (GVA)

This is the key measure of wealth creation within an economy and is used by the government to monitor economic performance. It refers to the residual value created by firms once non-labour costs have been paid, which is then distributed to owners/shareholders in the form of profits and to employees via wages and salaries. It is measured in two ways:

- GVA = turnover minus bought in goods and services (known as the *production* approach)
- GVA = gross operating profit + depreciation and amortisation + taxes less subsidies on production + compensation of employees (i.e. wages plus social security contributions) (known as the *income* approach)

Employment

This is the quantity of jobs supported by BT's activities. Since these jobs are a mix of full time and part time positions, throughout the report we refer to Full Time Equivalent (FTE) posts, in order to express all jobs in a common currency.

Employment Income

These are the gross wages and salaries paid to employees whose jobs are supported by BT, including NI and pension contributions, and PAYE taxes.

Note that the economic impact figures presented throughout this report are expressed to three significant figures. This means they have been rounded up or down as appropriate and, as a result, may not sum exactly to the totals presented.



Methodology and Data Sources

The methodology used to estimate BT's economic impacts for 2014/15 has been designed to be consistent with previous reports. Further information is provided below.

Direct impacts

The two data sources used to estimate this are BT's financial accounts for 2014/15 and BT's HR database.

Output has been taken directly from the accounts, as revenue from external customers in the UK. This removes both internal revenue resulting from internal transfers between BT group companies and sales made outside the UK.

GVA has been calculated using the income approach, as the sum of gross operating profits before tax, interest, depreciation and amortisation, and compensation of employees. We have estimated UK gross operating profit using global EBITDA* from the accounts, and estimated the UK portion by factoring down by the UK share of total revenues. Compensation of employees has been estimated using data on gross wages and salaries (sourced from BT), plus social security costs (sourced from BT).

Employment numbers have been sourced from a snapshot of information provided by BT, with data on the number of people employed directly by BT and the number of contractors employed through agencies, along with their contracted hours. These have then been converted to FTE posts based on one full time job being equivalent to a 36 hour per week contract. The data indicates both the place of residence and place of work of each employee. For direct employment we have used workplace based figures. The employment numbers are consistent with those in the 2014/15 annual accounts.

* Earnings Before Interest, Tax, Depreciation and Amortisation



The BT data provided the home and workplace postcode for each employee. These were used to allocate employees to regions and local authorities for the residence and workplace based analysis. Home postcodes were not available for agency staff and contractors. The assumption was made that these members of staff were resident in the same Local Authority and Region as their workplace.

Information on contractor staff was supplied by BT.

Employment income has been estimated using data from BT, using gross wages and salaries of employees and contractors by place of work, again adjusted to be consistent with the averages wages and salaries bill quoted in the accounts in the same way as for employment numbers.

Indirect Impacts

The data source used to estimate indirect impacts has been provided by BT by location and by sector. Each supplier was allocated to a region and local authority based on the invoicing address. Suppliers were then allocated to sectors using the following process:

- All suppliers common to both 2015 and 2013 procurement data were allocated to the same sector as they had been in the 2013 economic impact assessment. This provided a sector allocation for covering 79% of total spend.
- Suppliers not included in the 2013 procurement data were allocated to sectors based on a brief review of each supplier's business activities using information available on company websites. This manual allocation was completed to ensure that c.90% of procurement spend in each region and all suppliers where invoices totalled £10 million or more were covered.



- The remaining suppliers were assumed to be operating in the telecommunications sector.

As expenditure on contract and agency staff is encompassed by the employment element of the direct impact assessment, all identifiable procurement expenditure with employment agencies has been removed from the supplier spend analysis, in order to avoid double counting.

Impacts have been estimated using Regeneris Consulting's input-output tables for the UK and the regions.

Induced Impacts

Data on wages and salaries of BT employees and contractors by place of residence has been used to calculate induced impacts, along with the employment income of indirect employees estimated above.



The regional and local dimension

Estimating regional and local impacts

The results are presented for the former Government Office Regions as well as the recently formed Local Enterprise Partnership (LEPs). Wherever possible this has been informed by actual data for these areas, but where this data is not available, we have apportioned results to local areas using suitable apportionment factors, drawn from other BT data. This should therefore be borne in mind when interpreting results at these geographical levels.

The HQ effect

National procurement contracts are often allocated to a location according to the supplier's HQ address. However, it may be that these services are actually provided from a series of locations around the country. This process of allocating the procurement expenditure to the HQ location, rather than the location of the depot where activity is taking place, may skew impacts to the HQ region and consequently under-estimate impacts elsewhere. We have adopted this approach as in previous year's assessment. It does mean that the results pertaining to indirect impacts in particular may be subject to significant margins of error, particularly at the local level.



Benchmarking the Results

The report sets the key results in their wider socio-economic context, in order to illustrate the relative scale of BT's contribution to the local, regional and national economy. To do this we have drawn down nationally published statistics. The data sources used are as follows:

- 1. Total employees in employment:** The total number of people employed by all businesses with operations in the area. This excludes working proprietors and is presented as Full Time Equivalent employees (it excludes the self-employed). (Source: ONS, BRES, 2013).
- 2. Total IT and Communications sector employees in employment:** The total number of people employed by ICT businesses with operations in the area. This excludes working proprietors and is presented as Full Time Equivalent employees (it excludes the self-employed). (Source: ONS, BRES, 2013).
- 3. Total private sector employees in employment:** The total number of people employed by private sector businesses with operations in the area. This excludes working proprietors and is presented as Full Time Equivalent employees (it excludes the self-employed). (Source: ONS, BRES, 2013).
- 4. Total gross earnings from all residents in employment:** This has been derived using the total number of residents in employment (source: Annual Population Survey, 2014) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2014)



5. Total gross earnings from all employees in employment: This has been derived using the total number of people employed by businesses in the area (source: BRES, 2013) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2014)

6. Total GVA - Total Gross Value Added generated by businesses based in the area: GVA data has been provided for regions and selected LEP areas (Source: ONS, Headline Workplace Based GVA at Current Basic Prices, 2013 and ONS, GVA for Local Enterprise Partnerships, 1997-2013).

Offices Worldwide

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