



The Economic Impact of BT Group plc in the Midlands & East of England

2018 Edition



A report by Hatch Regeneris
for BT Group plc

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Hatch Regeneris creates economic and social insight to help clients make a positive impact on people, places and economies. As part of the Hatch Group, Hatch Regeneris provides clients with a full range of support and know-how from concept to completion. See: www.regeneris.co.uk for further information.

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Introduction



Across the Midlands & East of England we are helping transform lives, connecting homes, businesses, families, individuals and ideas. We're using our products and services to help even more people take advantage of an increasingly digital world. Access to the internet opens opportunities for better education, healthcare, jobs, economic growth and new ways of working. We're helping to build an inclusive digital society to make sure no one is left behind. We've a big part to play as the UK's digital champion, helping to build the infrastructure and

skills needed to develop a world-leading digital economy that works for everyone.

In this report we look at the direct economic contribution of BT Group throughout the Midlands & East of England and show that BT is a key player across the breadth of the geography, making a very significant impact on the economy. We support employment across every part of the region through our direct workforce and indirectly, through our extensive supply chain, with our procurement and expenditure within the local economies.

For the period 2017/18 the total Gross Value Added (GVA) to the Midlands & East of England economy, combining the direct, indirect and induced impacts of our activities and spending, is estimated to be £4,710 million.

The UK has the highest share of GDP generated by the digital economy of any country in the G20. It also has higher superfast availability and take-up than any major European peer. We're playing our part in this success story by building and running the largest superfast network in the country. Openreach Limited, now a distinct and legally separate company within BT Group, is connecting homes and businesses, and building a fixed fibre network that will be the backbone of the UK's digital economy for generations to come.

Openreach's Community Fibre Partnerships (CFP) programme brings fibre broadband to businesses and homes by building customised solutions. The programme enables those not included in any fibre broadband roll-out plans, to jointly fund an upgrade to fibre. 'The Impact of High-Speed Broadband for Communities' report estimates that the CFP programme will be worth £70 million to the region over the next 15 years. For businesses across the Midlands & East of England, improvements in productivity, efficiency, flexible working, innovation and finding new markets and customers are expected to be worth about £28 million, whilst households get economic and social benefits worth about £40 million.

We have the UK's biggest and fastest 4G mobile network through EE and provide 4G coverage across more than 90% of the country. EE aims to expand 4G to reach 95% of the UK's geography by the

end of 2020. The work we're doing to extend 4G coverage will support the new communications network we're helping to create for Britain's emergency services. People in remote areas will also benefit from the extended coverage. We intend to lead the market with 5G too with the UK's first live 5G trial launched in October 2018, and Birmingham, Coventry, Leicester and Nottingham announced as launch locations for 2019. We were UK pioneers with 4G, and with the UK's first live connections on 5G this marks a huge step forward for the country's digital infrastructure. Birmingham, Coventry, Leicester and Nottingham, along with Derby, Northampton and Solihull, are also amongst the first UK cities to benefit from the InLinkUK from BT service which offers the UK's fastest free public wi-fi plus a range of digital services.

The value of digital technology to society is expected to reach £222 billion in the UK by 2025. Government data shows that one in ten adults in the UK have never used the internet and risk being left behind.

We're helping more people, including the elderly, disabled and those on low incomes, get online in the UK and beyond to help them reap the benefits of internet access. We also offer specialist products and services that help people who may otherwise struggle to use technology. In our role as an advisor to the UK Government's Digital

Skills Partnership, we're helping to shape the work of the public sector, industry and NGOs to enable people to overcome barriers.

Almost three-quarters of large companies and half of the UK's smaller businesses are facing a tech skills gap. This gap is likely to grow and we're convinced that improving young people's tech literacy is the best way to fill it. Within the next 20 years, 90% of all jobs are expected to involve digital skills. We cannot solve the tech literacy challenge alone, which is why we partner with others and get stakeholders involved e.g. the Barefoot Computing Project we run with our partner BCS to support primary school teachers. We're working closely with the UK Government to support the national digital skills strategy and we are a member of the Government's Digital Skills Partnership. We know that the opportunities for individuals and the economy are enormous as technology transforms the way we live and work.

Whilst we understand the positives from today's digital world, we also recognise there are hazards. Cyber security professionals play a vital role keeping critical national infrastructure safe and we're working with the UK Government to promote careers in this field. We're one of the country's largest employers and hired more than 2,100 apprentices, supporting the UK Government's aim to fund 3 million apprentices by 2020. We're also one of the largest

investors in research and development in the UK, spending c£510 million last year. BT has eight global development centres, with our biggest being the innovation campus at Adastral Park which is shared with more than 90 other high-tech companies. BT also has extensive long-standing joint research programmes, including with Cambridge University.

Madley Communications Centre, a giant satellite earth station in the West Midlands, has played a central role in worldwide broadcasts of some of the most dramatic events of the past decades. Today it handles calls, data, internet and television links, specially tailored business services and a range of other communications to almost every country in the world. It is also the base for BT's Emergency Response Team, who can be called upon at any time to provide expert support to Aid Organisations, the Armed Forces and overseas service providers, principally to restore communications in the wake of a range of natural disasters.

Our strategy of innovation and investment will continue to help us lead and shape the digital future in the years to come.

Giles Ellerton

BT Group Regional Director, Midlands & East Anglia
December 2018

Our Report

The Economic Impact Report 2018 has been prepared independently by Hatch Regeneris, drawing upon data for BT Group.

Estimates in this report relate to BT Group plc activities in the UK during the financial year 2017/18. BT Group plc includes all wholly owned subsidiaries, including Openreach Limited and EE (now part of BT Consumer)

In the last financial year BT Group also paid £1.1bn in taxes and were the 5th highest tax contributor in the UK, thereby making an even greater impact on the UK economy. The impact of this tax contribution has not been assessed in this report.

Further information about BT Group's activities can be found in the 2018 BT Group plc Annual Report and Delivering our Purpose Report.

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.

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.

Economic Impact Report 2018

This study shows BT Group'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 Group's activities:

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

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

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

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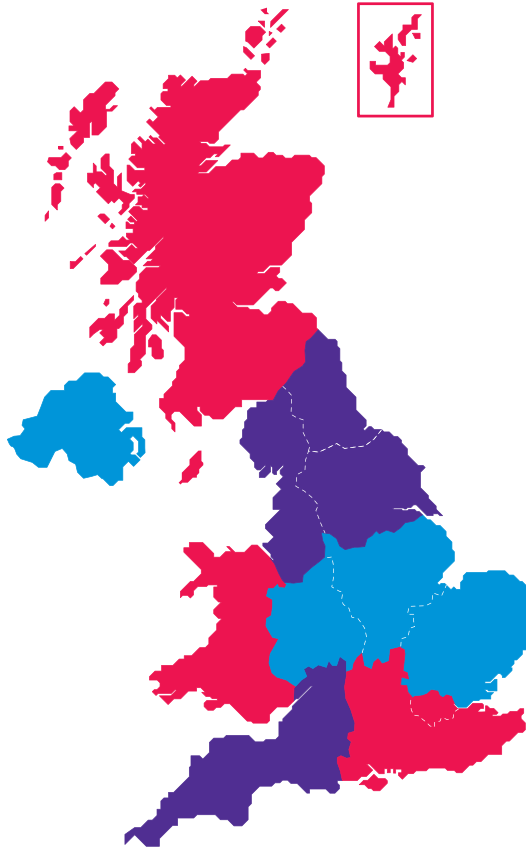
The Economic Impact of BT Group plc in the UK

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 Income £m	Spend with Suppliers £m	Total direct GVA £m
London & the South East	23,400	23,300	1,020	5,940	3,170
London	12,700	11,500	592	3,360	1,850
South East	10,600	11,800	424	2,580	1,320
Midlands & East of England	23,500	22,000	856	1,420	2,670
East of England	12,400	10,100	477	993	1,490
East Midlands	5,310	5,950	171	135	534
West Midlands	5,780	5,960	208	296	650
North of England	24,800	25,300	726	1,010	2,270
North East	9,250	9,320	238	39	743
North West	9,130	9,420	294	416	919
Yorkshire & The Humber	6,410	6,580	194	554	604
South West	7,880	7,990	278	211	867
Scotland	7,700	7,990	253	178	790
Wales	4,400	4,980	142	302	444
Northern Ireland	3,230	3,300	103	154	323

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Key points



Across the UK in 2017/18

82,500 employees directly working for BT Group, and **12,300 contractors** (Full Time Equivalent – FTE)

290,000 total FTE jobs supported (including indirect and induced effects)

£3.4 billion total income of BT Group employees (including contractors)

£9.2 billion spend with suppliers based in the UK

£22.8 billion total GVA impact associated with BT Group activities (including indirect and induced effects)

BT Group directly employed **1 in every 230 employees** in the private sector across the UK, and **1 in every 12 in the IT and Communications** sector

BT Group directly created **£1 in every £165 of GVA** in the UK

As a result of the full economic impact of BT Group, the firm supported **£1 in every £75 of GVA** in the UK economy and **1 in every 90 employees** working in the UK economy

Economic Impacts

Direct Impact

BT Group plc directly employs a total of 82,500 people in the UK, with a further 12,300 employed as contractors. These employees have an associated £3.4 billion in wages and salary spend.

Procurement Impact (Indirect)

BT Group plc spent a total of £9.2 billion with UK based suppliers in 2017/18. 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 Group supply chain spend in the United Kingdom = **£9.2 billion**

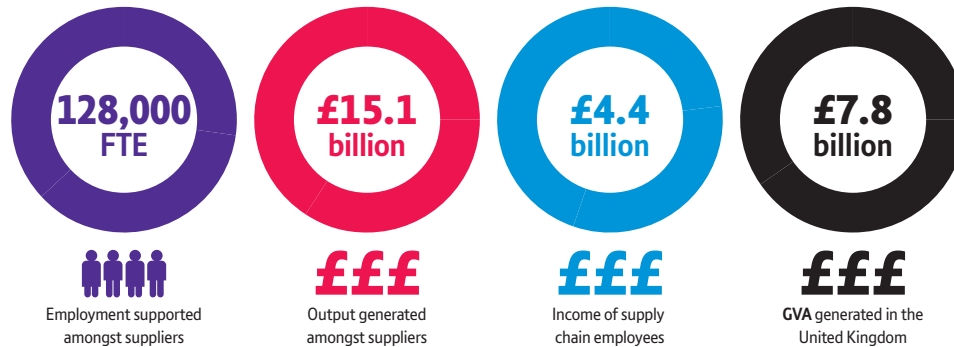


Figure 4-1: Indirect (supply chain impacts) in the UK

Source: Hatch Regeneris

Impact of BT Group and Supplier Employee Expenditure (Induced)

BT Group employees and their contractors based in the UK earned around £3.4 billion in 2017/18 before tax. In turn, the expenditure of these employees, contractors and the employees working for firms within BT Group's supply chain supported further employment and output in consumer industries. Through these knock-on effects, BT Group supported further jobs and turnover as shown below.

Salaries of BT Group employees and contractors in the UK = **£3.4 billion**

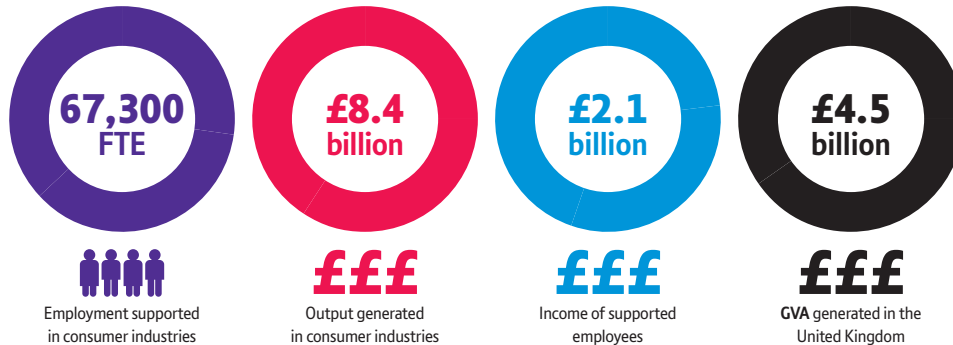


Figure 4-2: Induced (wage expenditure) impacts in the UK

Source: Hatch Regeneris

Total Impact in the UK

Combining BT Group's direct impact and employment with the indirect supply chain impact and induced wage expenditure impact gives the total impact of BT Group's operations in the UK in 2017/18. This is summarised in Figure 4-3 below.

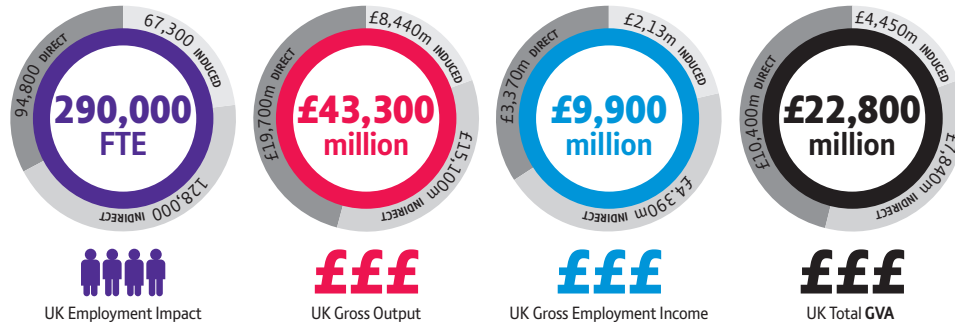


Figure 4-3: Total Impact of BT Group in the UK

Source: Hatch Regeneris

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Midlands & East of England



Across the Midlands & East of England in 2017/18

22,000 BT Group employees live in the region (FTE)

23,500 BT Group employees work in the region (FTE)

£856 million total income of BT Group employees working in the region

£1,420 million spend with suppliers based in the region

£4,710 million total GVA impact associated with BT Group activities (including indirect and induced effects)

BT Group directly employed **1 in every 200 employees** working in the private sector across the region, and **1 in every 8 employees working in the IT and Communications** sectors

BT Group directly created **£1 in every £6** of GVA in the region's IT and Communications sector

As a result of the full economic impact of BT Group, the firm supported **£1 in every £80** of GVA in the region's economy and **1 in every 70 employees** working in the region's private sector

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East of England



Across the East of England in 2017/18

10,100 BT Group employees live in the region (FTE)

12,400 BT Group employees work in the region (FTE)

£477 million total income of BT Group employees working in the region

£993 million spend with suppliers based in the region

£2,750 million total GVA impact associated with BT Group activities (including indirect and induced effects)

BT Group directly employed **1 in every 160 employees** working in the private sector across the region, and **1 in every 8 employees working in the IT and Communications** sectors

BT Group directly created **£1 in every £100** of GVA in the region

As a result of the full economic impact of BT Group, the firm supported **£1 in every £55** of GVA in the region's economy and **1 in every 40 employees** working in the region's private sector

Regional Impact

Direct Impact

BT Group directly employs a total of 11,700 people in the East of England region, with a further 678 employed as contractors. These employees earned £477 million in wages and salaries.

Procurement Impact

BT Group spent £993 million with suppliers based in the East of England in 2017/18. The largest item of spend was in construction, as illustrated in the chart below.

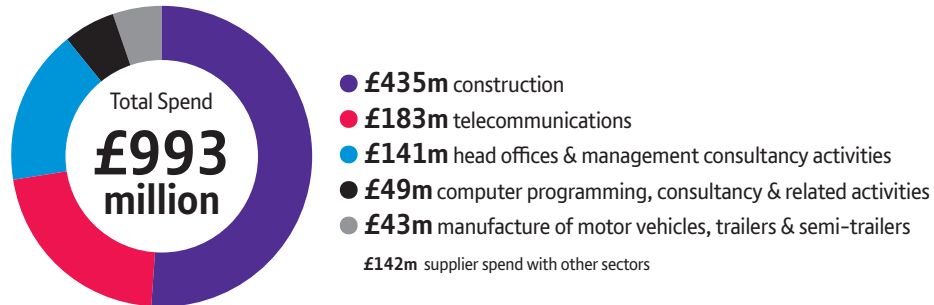


Figure 5-9: Top Five Supplier Sectors in the East of England by Value of Expenditure Source: BT Group Procurement data

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

BT Group supply chain spend in the East of England = **£992 million**

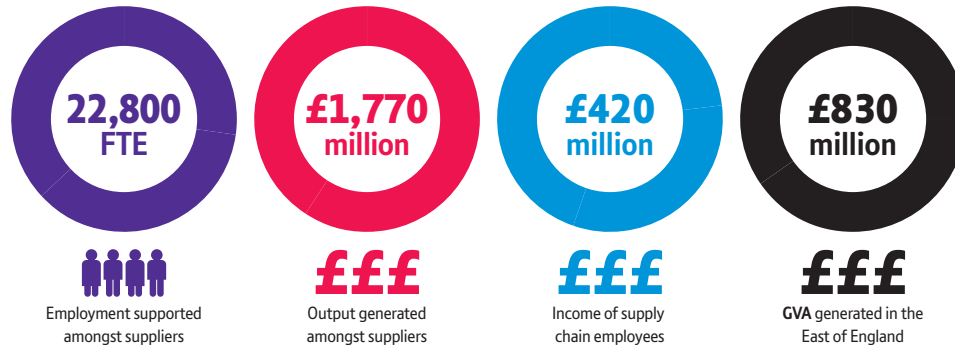


Figure 5-10: Indirect (supply chain impacts) in the East of England

Source: Hatch Regeneris

Impact of Employee Expenditure

BT Group employees and contractors living in the East of England earned £422 million in 2017/18. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 5-11** below illustrates the wider induced employment and output supported through this employee expenditure.

Salaries of BT Group employees and contractors in the East of England = **£422 million**

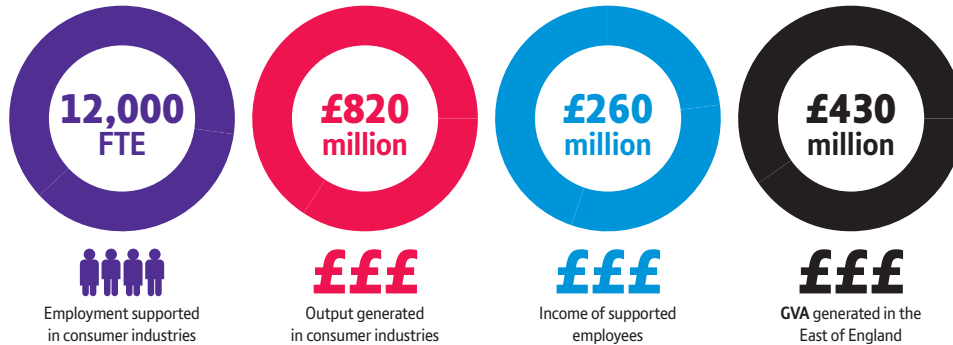


Figure 5-11: Induced (wage expenditure) impacts in the East of England

Source: Hatch Regeneris

Total Impact in the East of England

Combining BT Group's direct impact and employment with the indirect supply chain impact and induced wage expenditure impact gives the total impact of the firm's operations in the East of England. This is summarised in **Figure 5-12** below.

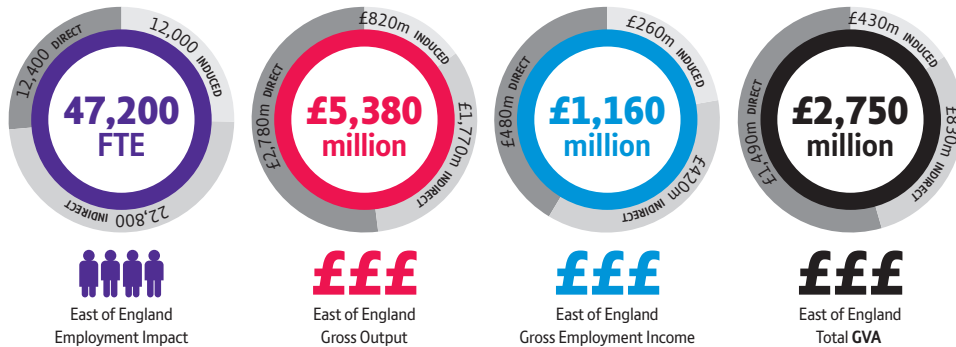


Figure 5-12: Total Impact of BT Group in the East of England

Source: Hatch Regeneris

Sub-regional Impact

Table 5-5 below illustrates the economic impact of BT at a County level in the East of England.

	BT Group Employees & Contractors		Employment	Total Impact	
	Work in area	Resident in area		Output £ million	GVA £ million
Bedfordshire	589	878	2,350	256	130
Cambridgeshire	736	754	7,290	648	323
Essex	2,020	2,790	14,800	1,390	700
Hertfordshire	5,150	1,960	17,100	1,950	1,000
Norfolk	681	804	1,060	164	86
Suffolk	3,230	2,900	4,530	966	512

Table 5-5: County Impact – East of England

Source: Hatch Regeneris

Local Enterprise Partnerships (LEPs) are locally-owned partnerships between businesses and local authorities and play a central role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs. A total of eight Local Enterprise Partnerships† fall in full or in part within the East of England region and the economic impacts which relate to these areas are shown below.

	BT Group Employees & Contractors		Total Impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
Hertfordshire	5,150	1,960	17,100	1,950	1,000
New Anglia	3,910	3,700	5,590	1,130	598
Greater Cambridge & Greater Peterborough *	961	1,280	8,580	776	388
South East Midlands *	3,390	4,160	17,200	2,220	1,130
South East *	4,620	5,740	18,100	2,140	1,100

Table 5-6: LEP Impact – East of England

Source: Hatch Regeneris

† The information provided on LEPs and Enterprise Zones is correct at the time of publication of this report (as at December 2018). We have used information published by the Government which is available at the following location: <https://www.gov.uk/government/publications/local-enterprise-partnerships-local-authority-mapping>

Note that in some cases part of the LEP areas fall outside of the region. These are marked with an asterix (*).

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- £1 in every £30 of GVA in **Hertfordshire LEP** area is supported by BT Group's full economic impact.
- 1 in every 4 employees working in the IT and communications sector in **New Anglia LEP** is directly employed by BT Group.
- 1 in every 28 employees working in the IT and communications sector in the **Greater Cambridge and Peterborough LEP** is directly employed by BT Group.
- 1 in every 40 private sector employees working in the **South East Midlands LEP** area is supported by BT Group's full economic impact, and 1 in every 10 employees working in the IT and Communications sector is directly employed by BT Group.
- 1 in every 8 employees working in the IT and communications sector in **South East LEP** area is directly employed by BT Group.

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East Midlands



Across the East Midlands in 2017/18

5,950 BT Group employees live in the region (FTE)

5,310 BT Group employees work in the region (FTE)

£171 million total income of BT Group employees working in the region

£135 million spend with suppliers based in the region

£833 million total GVA impact associated with BT Group activities (including indirect and induced effects)

BT Group directly employed **1 in every 280 employees** working in the private sector, and **1 in every 10 employees working in the IT and Communications** sectors

BT Group directly created **£1 in every £190** of GVA in the region

As a result of the full economic impact of BT Group, the firm supported **£1 in every £120** of GVA in the region's economy and **1 in every 130 employees** working in the region's private sector

Regional Impact

Direct Impact

BT Group directly employs a total of 3,550 people in the East Midlands region, with a further 1,760 employed as contractors. This results in £171 million in wages and salary spend across the region.

Procurement Impact

BT Group spent £135 million with suppliers based in the East Midlands in 2017/18. The majority was spent on other personal service activities, as illustrated in the chart below.

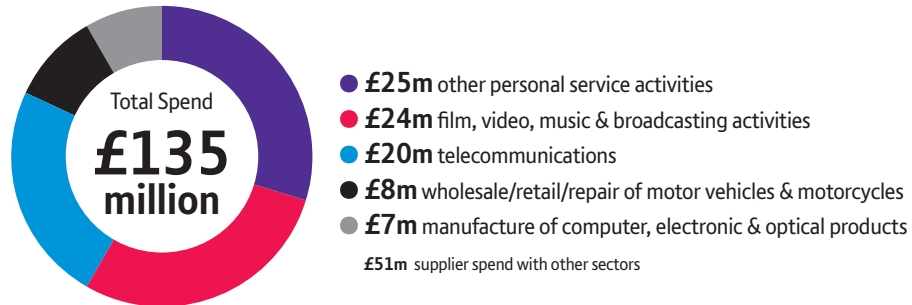


Figure 5-13: Top Five Supplier Sectors in the East Midlands by Value of Expenditure Source: BT Group Procurement data

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

BT Group supply chain spend in the East Midlands = £135 million

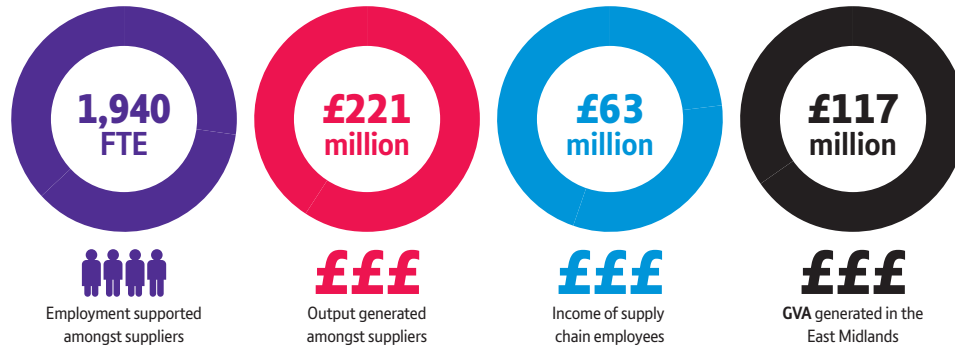


Figure 5-14: Indirect (supply chain impacts) in the East Midlands

Source: Hatch Regeneris

Impact of Employee Expenditure

BT Group employees and contractors living in the East Midlands earned £195 million in 2017/18. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 5-15** below illustrates the wider induced employment and output supported through this employee expenditure.

Salaries of BT Group employees and contractors in the East Midlands = **£195 million**

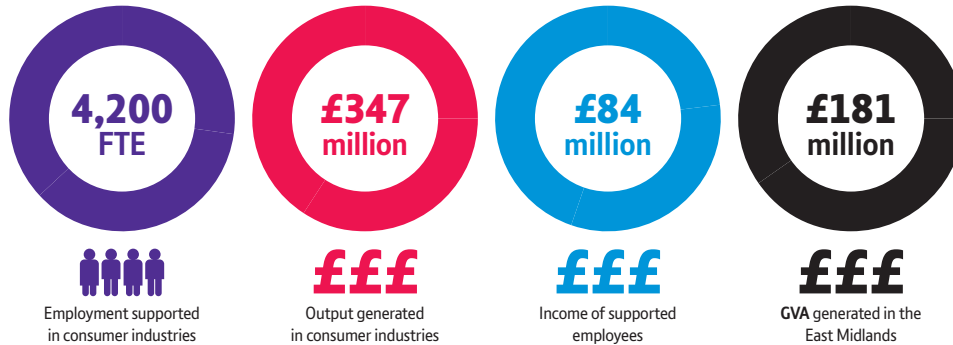


Figure 5-15: Induced (wage expenditure) impacts in the East Midlands

Source: Hatch Regeneris

Total Impact in the East Midlands

Combining BT Group's direct impact and employment with the indirect supply chain impact and induced wage expenditure impact gives the total impact of the firm's operations in the East Midlands. This is summarised in **Figure 5-16** below.

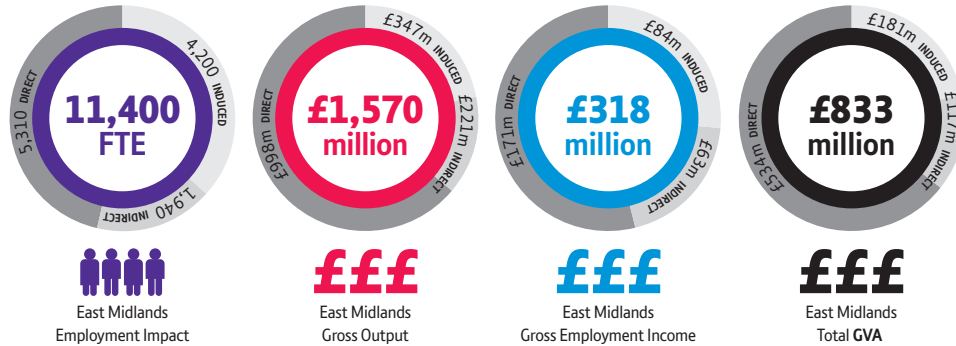


Figure 5-16: Total Impact of BT Group in the East Midlands

Source: Hatch Regeneris

Sub-regional Impact

Table 5-7 below illustrates the economic impact of BT at a County level in the East Midlands.

	BT Group Employees & Contractors		Employment	Total Impact	
	Work in area	Resident in area		Output £ million	GVA £ million
Derbyshire	924	1,070	1,400	229	122
Leicestershire	607	736	882	131	70
Lincolnshire	848	1,030	3,110	365	193
Northamptonshire	924	1,070	1,400	229	122
Nottinghamshire	1,540	1,570	2,490	374	199

Table 5-7: County Impact – East Midlands

Source: Hatch Regeneris

Local Enterprise Partnerships (LEPs) are locally-owned partnerships between businesses and local authorities and play a central role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs. A total of seven Local Enterprise Partnerships† fall in full or in part within the East Midlands region and the economic impacts which relate to these areas are shown below.

	BT Group Employees & Contractors		Total Impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
South East Midlands	3,390	4,160	17,200	2,220	1,130
Greater Cambridge & Greater Peterborough	961	1,280	8,580	776	388
Derby, Derbyshire, Nottingham & Nottinghamshire	1,770	2,110	4,510	594	315
Leicester and Leicestershire	1,535	1,568	2,494	374	199
Greater Lincolnshire	772	939	1,060	161	86
Sheffield City Region	3,560	3,450	4,070	682	360

Table 5-8: LEP Impact – East Midlands

Source: Hatch Regeneris

Note: The Sheffield City Region, Greater Cambridge and Greater Peterborough, Greater Lincolnshire and South East Midlands LEP areas are not wholly contained within the East Midlands region.

† The information provided on LEPs and Enterprise Zones is correct at the time of publication of this report (as at December 2018). We have used information published by the Government which is available at the following location: <https://www.gov.uk/government/publications/local-enterprise-partnerships-local-authority-mapping>
Note that in some cases part of the LEP areas fall outside of the region. These are marked with an asterisk (*).

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- 1 in every 50 employees working in the **South East Midlands LEP** area is supported by BT Group's full economic impact.
- 1 in every 28 employees working in the IT and communications sector in the **Greater Cambridge and Greater Peterborough LEP** is directly employed by BT Group.
- 1 in every 16 employees working in the IT and communications sector in the **Derby, Derbyshire, Nottingham and Nottinghamshire LEP** is directly employed by BT Group.
- 1 in every 8 employees working in the IT and communications sector in the **Leicester and Leicestershire LEP** is directly employed by BT Group.
- 1 in every 8 employees working in the IT and communications sector in the **Greater Lincolnshire LEP** is directly employed by BT Group.
- 1 in every 4 employees working in the IT and communications sector in the **Sheffield City Region LEP** is directly employed by BT Group.

5

West Midlands



Across the West Midlands in 2017/18

5,960 BT Group employees live in the region (FTE)

5,780 BT Group employees work in the region (FTE)

£208 million total income of BT Group employees working in the region

£296 million spend with suppliers based in the region

£1,130 million total GVA impact associated with BT Group activities (including indirect and induced effects)

BT Group directly employed **1 in every 310 employees** working in the private sector across the region, and **1 in every 12 employees working in the IT and Communications** sectors

BT Group directly created **£1 in every £190** of GVA in the region

As a result of the full economic impact of BT Group, the firm supported **£1 in every £110** of GVA in the region's economy and **1 in every 130 employees** working in the region's private sector

Regional Impact

Direct Impact

BT Group directly employs a total of 5,260 people in the West Midlands region, with a further 518 employed as contractors. These employees earned £208 million in wages and salaries.

Procurement Impact

BT Group spent £296 million with suppliers based in the West Midlands in 2017/18. The largest single item was telecommunications, as illustrated in the chart below.

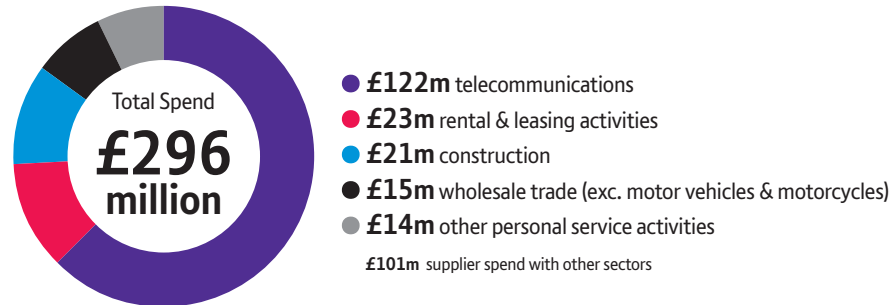


Figure 5-17: Top Five Supplier Sectors in the West Midlands by Value of Expenditure Source: BT Group Procurement data

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

BT Group supply chain spend in the West Midlands = £296 million

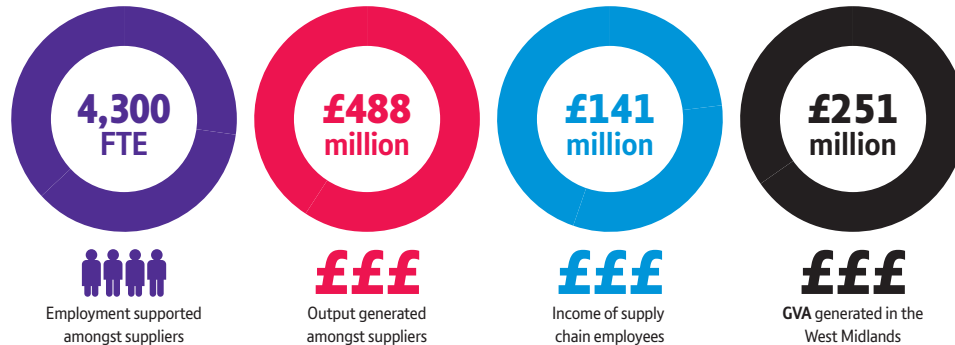


Figure 5-18: Indirect (supply chain impacts) in the West Midlands

Source: Hatch Regeneris

Impact of Employee Expenditure

BT Group employees and contractors living in the West Midlands earned £214 million in 2017/18. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 5-19** below illustrates the wider induced employment and output supported through this employee expenditure.

Salaries of BT Group employees and contractors in the West Midlands = **£214 million**

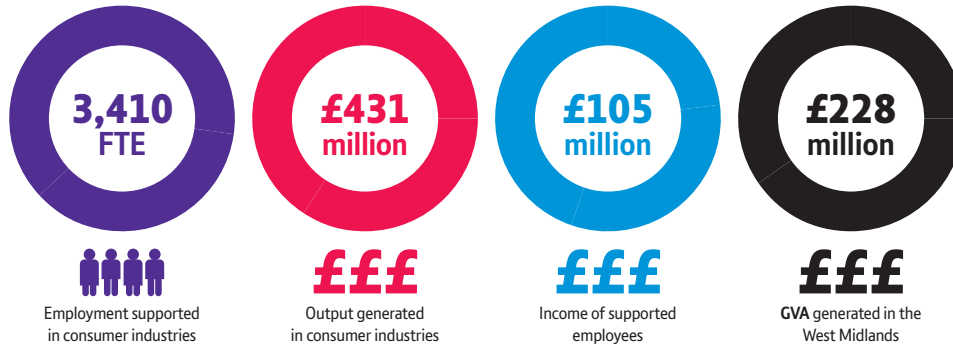


Figure 5-19: Induced (wage expenditure) impacts in the West Midlands

Source: Hatch Regeneris

Total Impact in the West Midlands

Combining BT Group's direct impact and employment with the indirect supply chain impact and induced wage expenditure impact gives the total impact of the firm's operations in the West Midlands. This is summarised in **Figure 5-20** below.

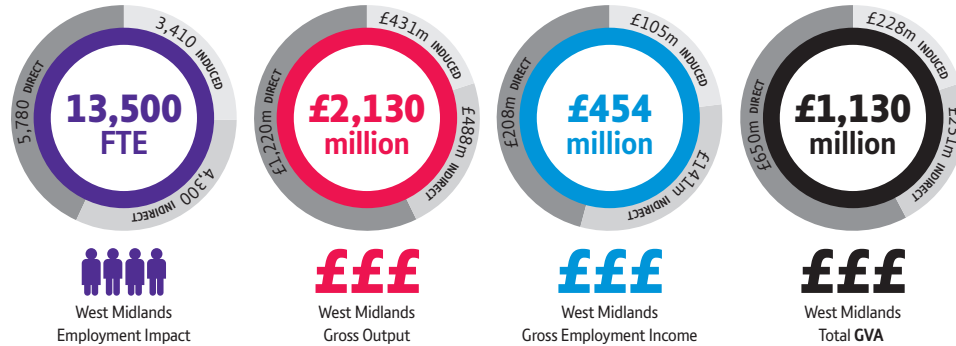


Figure 5-20: Total Impact of BT Group in the West Midlands

Source: Hatch Regeneris

Sub-regional Impact

Table 5-9 below illustrates the economic impact BT has at a sub-regional level in the West Midlands, focusing on key counties and areas across the region.

	BT Group Employees & Contractors		Employment	Total Impact	
	Work in area	Resident in area		Output £ million	GVA £ million
Birmingham	1,210	850	3,340	524	277
Coventry	552	372	1,440	221	117
Herefordshire	270	300	303	58	31
Shropshire	828	769	1,050	204	109
Solihull	472	390	737	135	72
Staffordshire	797	1,140	3,590	491	258
Warwickshire	160	489	411	66	35
Worcestershire	324	503	584	98	52

Table 5-9: Sub-regional Impact – West Midlands

Source: Hatch Regeneris

Local Enterprise Partnerships (LEPs) are locally-owned partnerships between businesses and local authorities and play a central role in determining local economic priorities and undertaking activities to drive economic growth and the creation of local jobs. A total of six Local Enterprise Partnerships† fall in full or in part within the West Midlands region and the economic impacts which relate to these areas are shown below.

	BT Group Employees & Contractors		Total Impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
Marches	1,100	1,070	1,350	262	140
Stoke & Staffordshire	797	1,140	3,590	491	258
Greater Birmingham & Solihull	1,960	1,860	6,940	1,020	539
Coventry & Warwickshire	712	862	1,860	287	152
Black Country	1,160	1,150	2,030	336	179
Worcestershire	324	503	584	98	52

Table 5-10: LEP Impact – West Midlands

Source: Hatch Regeneris

† The information provided on LEPs and Enterprise Zones is correct at the time of publication of this report (as at December 2018). We have used information published by the Government which is available at the following location: <https://www.gov.uk/government/publications/local-enterprise-partnerships-local-authority-mapping>
Note that in some cases part of the LEP areas fall outside of the region. These are marked with an asterisk (*).

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- 1 in every 6 employees working in the IT and communications sector in the **Marches LEP** area was directly employed by BT Group.
- £1 in every £80 of GVA in the **Stoke and Staffordshire LEP** area was generated directly by BT Group.
- 1 in every 12 employees working in the IT and communications sector in the **Greater Birmingham and Solihull LEP** area was directly employed by BT Group.
- 1 in every 20 employees working in the IT and communications sector in the **Coventry and Warwickshire LEP** area was directly employed by BT Group.
- 1 in every 6 employees working in the IT and communications sector in the **Black Country LEP** area was directly employed by BT Group.
- 1 in every 20 employees working in the IT and communications sector in the **Worcestershire LEP** area was directly employed by BT Group.

Technical Appendices

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

Definitions

There are three sources of economic impact that a company like BT Group 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 Group'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 Group's initial expenditure injection creates further wealth, and supports jobs and income.

Induced impacts

Further economic activity and employment is created as BT Group 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 Group 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** = 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 Group'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 Group, including NI and pension contributions, and PAYE taxes.

Methodology and Data Sources

The methodology used to estimate BT Group's economic impacts for 2017/18 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 Group's financial accounts for 2017/18 and BT Group'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 Group), plus social security costs (sourced from BT Group).

* Earnings Before Interest, Tax, Depreciation and Amortisation

Employment numbers have been sourced from a snapshot of information provided by BT Group, with data on the number of people employed directly by BT Group and the number of contractors employed through agencies, along with their contracted hours. These have then been converted to FTEs based on one full time job being equivalent to a 37.5 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 2017/18 annual accounts.

The BT Group 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 Group.

Employment income has been estimated using data from BT Group, 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 Group by location and by sector. Each supplier to BT Group 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 were matched to the Companies House Database. This provides the sector for each supplier at the 2 digit Standard Industrial Classification (SIC) code.

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 Hatch Regeneris' input-output tables for the UK and the regions.

Induced Impacts

Data on wages and salaries of BT Group 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 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 Group 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 Group'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, 2017).
- 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, 2017).
- 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, 2017).

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, 2018) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2018)

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, 2017) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2018)

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, 2017 and ONS, GVA for Local Enterprise Partnerships, 1997-2017).

Offices Worldwide

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