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

2020 Edition

A report by Hatch
for BT Group plc

Contents

Hatch Urban solutions provides robust analysis of economic and social impact for corporates, trade bodies, major investment, policies and economic shocks. We work across the UK and globally. See: Hatch.com/urbansolutions for further information. Note: The Hatch Urban Solutions team in the UK merged with Regeneris Consulting in 2018.

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Introduction

1 Introduction

BT plays a critical role in supporting both the economy and society across the Midlands and East of England. We are here to connect for the good of our customers, colleagues and country, and our people and networks underpin nearly every part of our lives across the region. We have a profound sense of purpose that we are here to deliver not connectivity per se, but the benefit it brings to people.

The coronavirus crisis has brought our national leadership role in telecommunications into the sharpest focus in our company's history. The multiple challenges posed by Covid-19 have highlighted the vital role BT plays in supporting families, businesses and communities across the region. Throughout the pandemic we have seen how technology can be harnessed to help save lives and deliver even better services for the public. We were proud to get the new NHS field hospitals around the country connected, and support the Life lines project so that families could stay in touch with loved ones whilst isolated in intensive care.

More than 95% of the UK now has access to superfast speeds. We are committed to delivering full fibre across the UK and, with the right fiscal, regulatory and legislative enablers in place are ready to make the biggest communications infrastructure investment in a generation. When combined with our extensive 5G mobile network from EE, this will provide a digital infrastructure that will connect millions and help drive future economic growth. In addition to our mobile and broadband networks, we have the UK's most extensive public wi-fi network and are bringing these three networks into one converged, digital platform.

We have seen the power of innovative technology and the best converged network in trials in health care and education. Following the launch of BT's 5G network in Birmingham, University Hospitals Birmingham NHS Foundation Trust and BT are demonstrating scenarios where technology could provide solutions for the healthcare sector, with the potential to transform services and deliver significant cost savings by reducing patient trips to hospitals. A strategic alliance between BT and the University of Warwick will accelerate the co-creation of 5G led capabilities within the campus and for industries across the UK.

BT is a member of a broad consortium considering 5G transport innovation in the West Midlands. We are the lead technology partner for Worcestershire 5G Testbed, helping accelerate its vision of smart manufacturing delivered through the UK's first live 5G factory installation. We are also a partner in Robot Highways – a Lincolnshire Agritech project investigating the use of the Internet of Things and robotics in smart agriculture to drive automation, increase efficiency and reduce carbon footprint.

Jane Thomas
BT Group
East of England

Wendy Sycamore
BT Group Midlands

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BT is one of the partners for Hertfordshire County Council's Living Lab project. The project will transform Hatfield Business Park into a model 'smart place' with the introduction of an open and experimental digital ecosystem. BT is providing the 5G network for the Lab which will power the next generation of connectivity needed to support the sustainable, smart services at the heart of the project, where 5G-led technologies can bring benefits to their business and to the wider region. This project has the potential to change the way towns and cities are shaped across the UK and beyond.

We are one of the largest investors in innovation in the UK, investing £662m in 2019/20. Since its launch in 1975, BT Labs at Adastral Park has been responsible for many of the pioneering innovations which have transformed our digital world. Adastral Park is an important national asset – a globally-recognised centre for telecoms research and a key source of UK Intellectual Property. It's where scientists, IT experts, engineers and collaboration partners are pushing the boundaries of innovation, coming up with new ideas and developing technologies that continue to change how we live and work.

We are a key part of communities across the Midlands and East of England and want to help people harness the power of technology to meet their needs or fulfil their potential. In 2019/20 we launched our Skills for Tomorrow programme, designed to empower 10 million people by providing help to improve their digital skills, by 2025. This programme offers free resources for school children, parents and jobseekers. Recognising the importance of small business to the economy we are supporting 1 million businesses with free digital skills support, and we have already supported 1,000 vulnerable people connect with family and friends through the donation of devices.

We are the founding partner of the UK Modern Slavery Helpline and Tech Against Trafficking. In terms of the climate change challenge, our technology and communications networks have a huge role to play in enabling the innovative solutions and exponential change needed to achieve a net zero carbon economy. We are working with others to drive innovation in electric vehicles to transform our fleet. Smart bike light trials, including in Ipswich, could help improve our carbon footprint, whilst in Birmingham we have been working with scientists to measure air pollution. In the UK 100% of our directly purchased electricity comes from renewable energy suppliers.

In this report we look at the economic contribution of BT Group across the Midlands and East of England, and show we make a very significant impact on the local 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 in the local economy. For the period 2019/20 the total Gross Value Added (GVA) to the Midlands and East of England economy, combining the direct, indirect and induced impacts of our activities and spending, is estimated to be £5,450 million.

Jane Thomas   W Sycamore

Jane Thomas   **Wendy Sycamore**
December 2020

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Our report

2 Our report

The Economic Impact Report 2020 has been prepared independently by Hatch Urban Solutions, drawing upon data for BT Group.

Estimates in this report relate to BT Group plc activities in the UK during the financial year 2019/20. BT Group plc includes all wholly owned subsidiaries, including Openreach Limited and EE (now part of BT Consumer)

We are proud to be a major contributor of taxes in the UK. The One Hundred Group 2019 Total Tax Contribution Survey ranked us as the sixth highest contributor in the UK. 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 BT Group plc Annual Report 2020 and Digital Impact and Sustainability Report 2019/20.

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 5.

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 2020
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

3 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	**24,300**	**23,100**	**992**	**5,620**	**3,220**
London	14,500	12,200	634	3,140	2,050
South East	9,780	10,900	359	2,480	1,160
Midlands & East of England	**19,500**	**20,500**	**751**	**2,270**	**2,440**
East of England	8,950	9,580	377	1,510	1,220
East Midlands	4,490	4,990	151	130	489
West Midlands	6,070	5,940	224	636	725
North of England	**25,700**	**25,500**	**813**	**876**	**2,630**
North East	9,290	9,280	262	41	849
North West	9,720	9,690	322	410	1,040
Yorkshire and The Humber	6,660	6,550	229	424	741
South West	**8,560**	**8,350**	**321**	**634**	**1,040**
Scotland	**7,440**	**7,480**	**254**	**167**	**825**
Wales	**4,600**	**5,060**	**146**	**340**	**472**
Northern Ireland	**3,340**	**3,350**	**115**	**155**	**373**

Source: Hatch

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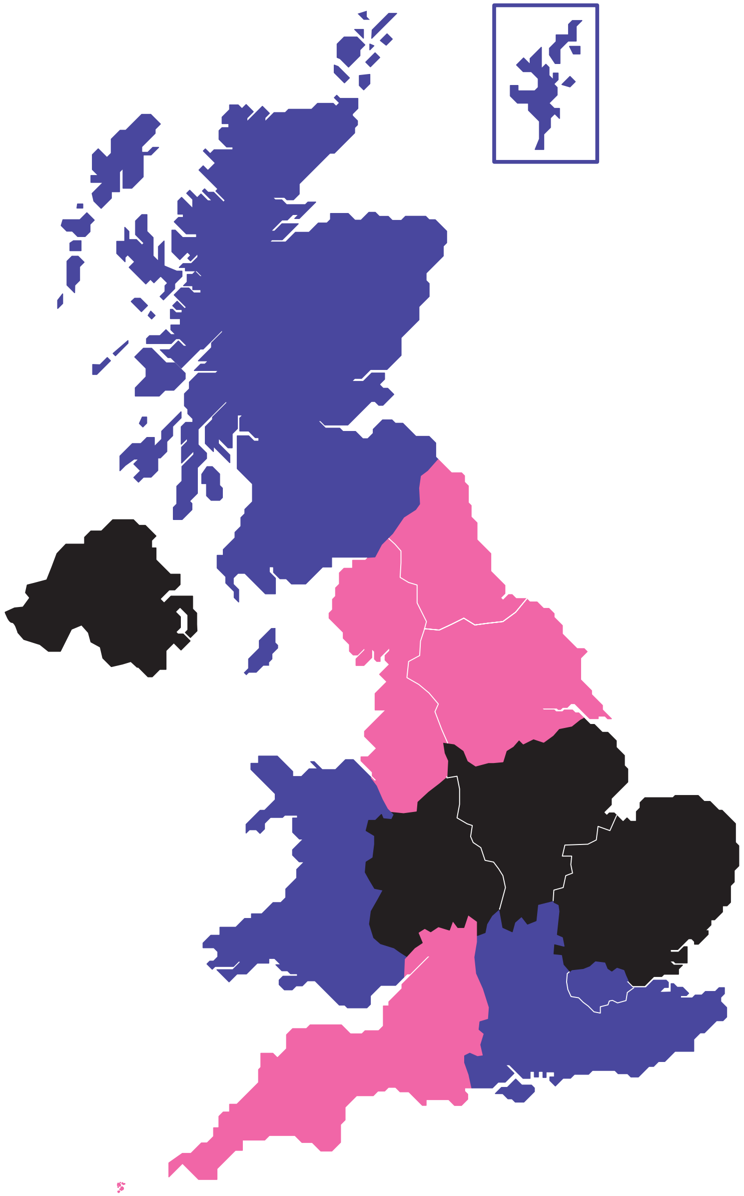
3 Key points



Across the UK in 2019/20

82,800 employees directly working for BT Group, and 10,600 contractors (Full Time Equivalent – FTE)

300,000 total FTE jobs supported (including indirect and induced effects)

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

£10.1 billion spend with suppliers based in the UK

£24 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

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Economic impacts

Direct impact
BT Group directly employs a total of 82,800 people in the UK, with a further 10,600 employed as contractors. These employees have an associated £3.4 billion in wages and salary spend.

Procurement impact (indirect)
BT Group spent a total of £10.1 billion with UK based suppliers in 2019/20. 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 = £10.1 billion

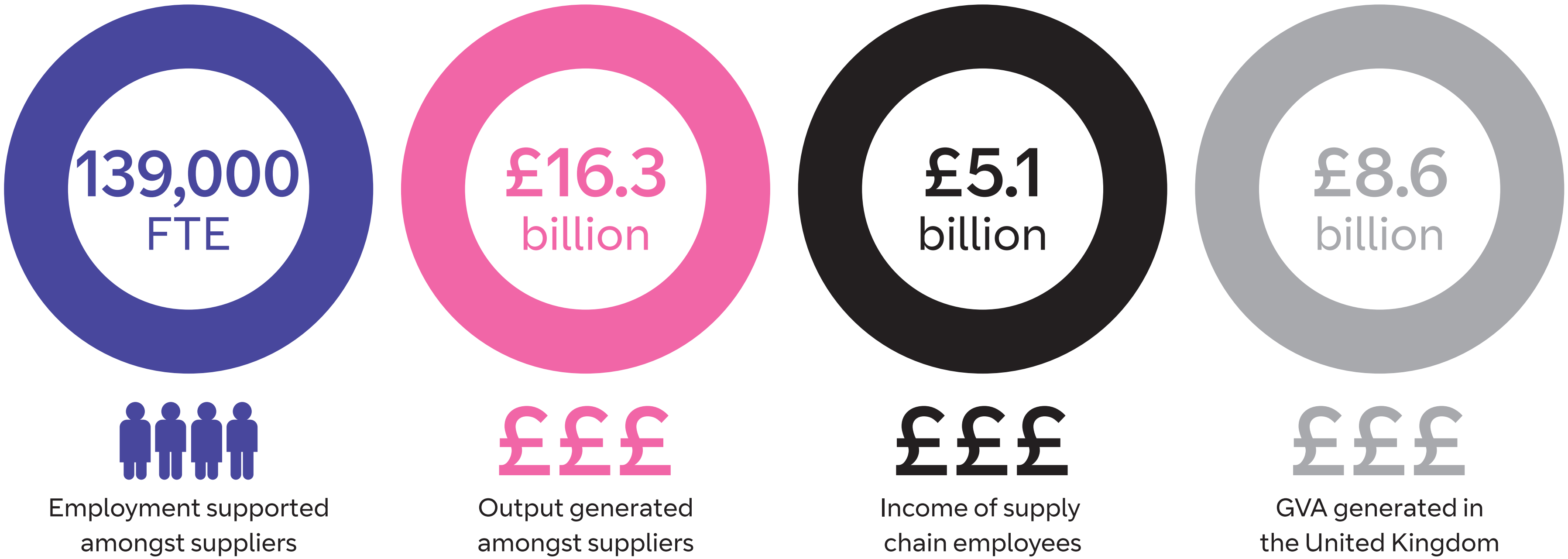

Figure 3-1: Indirect (supply chain impacts) in the UK

Source: Hatch

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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 2019/20 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.

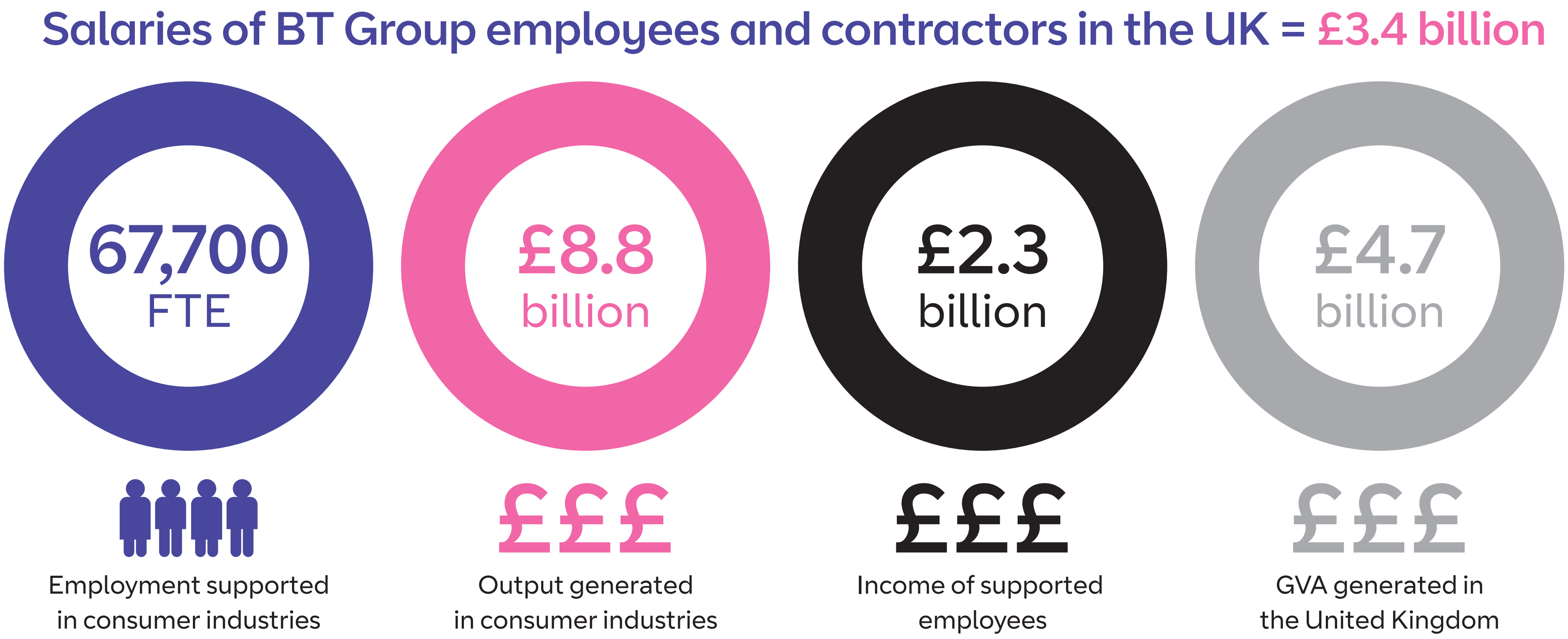

Figure 3-2: Induced (wage expenditure) impacts in the UK

Source: Hatch

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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 2019/20. This is summarised in the table below.

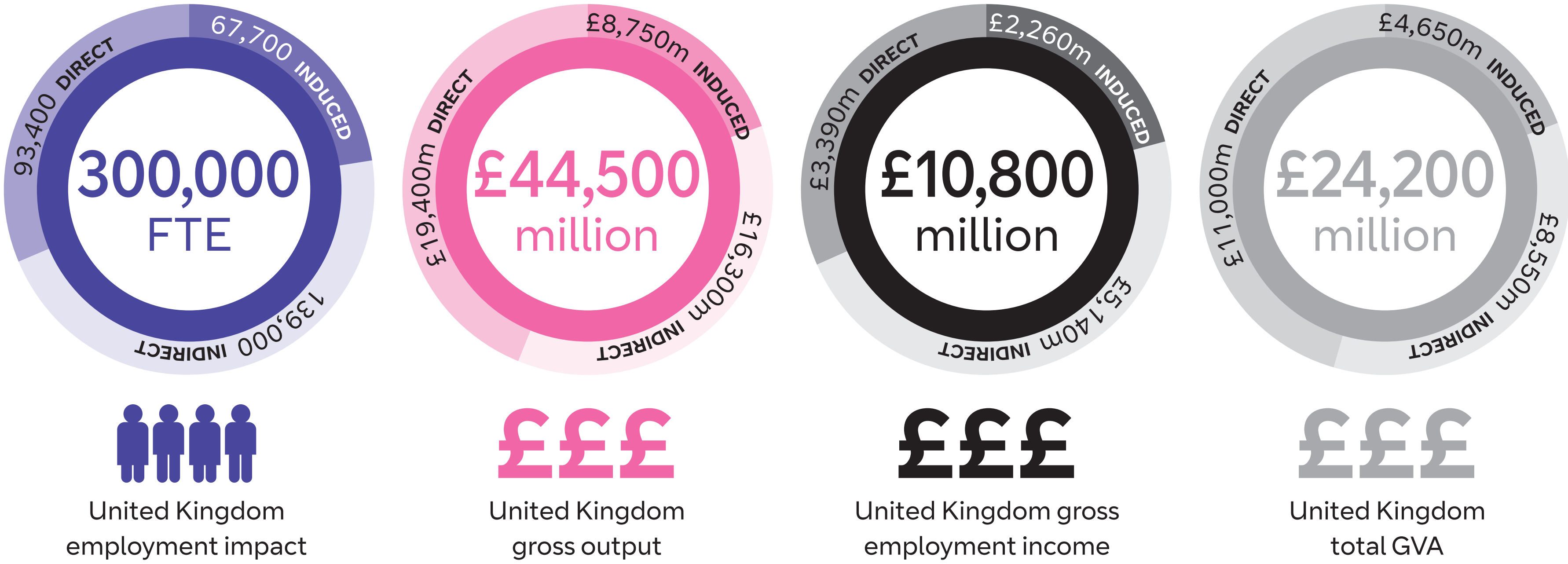

Figure 3-3: Total impact of BT Group in the UK

Source: Hatch

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BT Group plc across the Midlands & East of England

4 Midlands & East of England

Across the Midlands & East of England in 2019/20

20,500 BT Group employees live in the region (FTE)

19,500 BT Group employees work in the region (FTE)

£751 million total income of BT Group employees working in the region

£2,270 million spend with suppliers based in the region

£5,450 million total GVA impact (including indirect and induced effects)

BT Group employed **1 in every 270 employees** working in the private sector, and **1 in every 10 employees** working in the IT and communications sectors

£1 in every £160 of GVA is generated directly by BT Group

BT Group supported **1 in every 60 employees** working in the private sector and **£1 in every £70** of GVA as a result of BT Group's full economic impact

4 East of England

Across the East of England in 2019/20

9,580 BT Group employees live in the region (FTE)

8,950 BT Group employees work in the region (FTE)

£377 million total income of BT Group employees working in the region

£1,510 million spend with suppliers based in the region

£3,130 million total GVA impact (including indirect and induced effects)

BT Group employed **1 in every 220 employees** working in the private sector, and **1 in every 10 employees** working in the IT and communications sectors

£1 in every £125 of GVA is generated directly by BT Group

BT Group supported **1 in every 40 employees** working in the private sector and **£1 in every £50** of GVA as a result of BT Group's full economic impact

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Regional impacts

Direct impact

BT Group directly employs a total of 8,560 people in the East of England region, with a further 394 employed as contractors. These employees earned £377 million in wages and salaries.

Procurement impact

BT Group spent £1,510 million with suppliers based in the East of England in 2019/20. The largest item of spend was in education, as illustrated in the chart below.

- **£984m** education
- **£215m** telecommunications
- **£70m** office administrative, office support & other business support activities
- **£54m** construction
- **£47m** manufacture of motor vehicles, trailers & semi-trailers

£140m supplier spend with other sectors

Figure 4-9: Top five supplier sectors in the East of England by value of expenditure

Source: BT Group Procurement data

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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 = £1,510 million

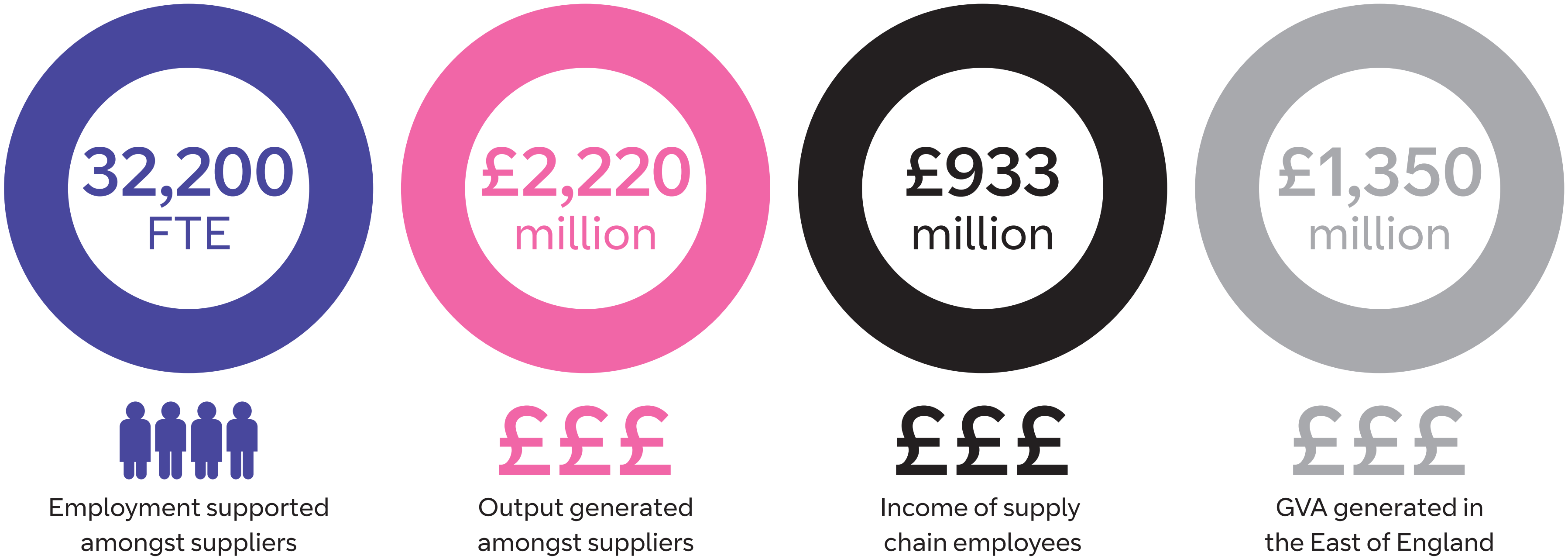

Figure 4-10: Indirect supply chain impact in the East of England

Source: Hatch

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Impact of employee expenditure

BT Group employees and contractors living in the East of England earned £415 million in 2019/20. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 4-11** 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 = £415 million

13,500 FTE

Employment supported in consumer industries

£1,060 million

Output generated in consumer industries

£346 million

Income of supported employees

£555 million

GVA generated in the East of England

Figure 4-11: Induced (wage expenditure) impacts in the East of England

Source: Hatch

4

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 4-12** below.

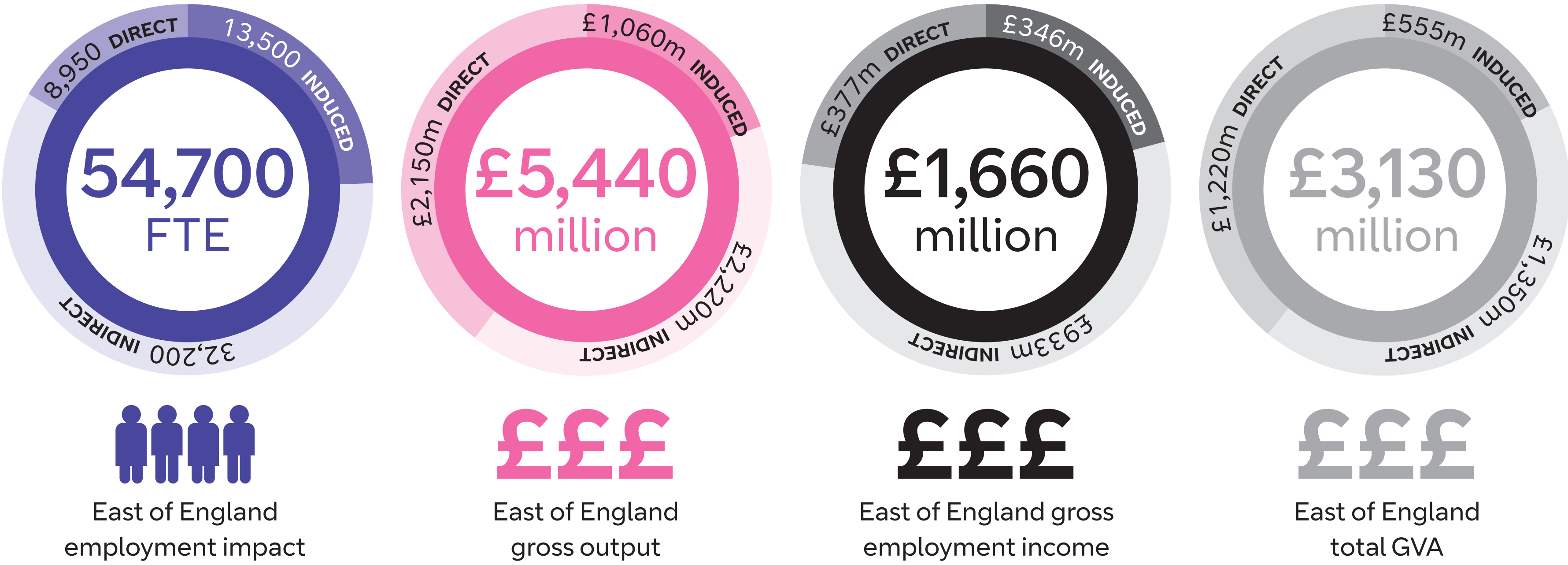

Figure 4-12: Total impact of BT Group in the East of England

Source: Hatch

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Sub-regional impact

The table below illustrates the economic impact of BT Group at a sub-regional level in the East of England.

	BT Group employees & contractors		Total impact		
	Work in area	**Resident in area**	**Employment**	**Output £ million**	**GVA £ million**
Bedfordshire	610	860	2,050	234	134
Cambridgeshire	720	722	3,260	342	196
Essex	1,780	2,520	3,480	500	285
Hertfordshire	1,960	1,920	11,200	1,170	672
Norfolk	685	803	30,800	2,300	1,340
Suffolk	3,190	2,750	3,950	889	505

Table 4-5: County impact – East of England

Source: Hatch

4

Local Enterprise Partnerships (LEPs) are locally-owned partnerships between businesses and local authorities and are intended to 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 five 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	1,960	1,920	11,200	1,170	672
New Anglia	3,880	3,560	34,800	3,190	1,840
Greater Cambridge & Greater Peterborough *	814	898	3,440	370	212
South East Midlands *	2,510	2,810	5,570	790	437
South East *	4,070	5,180	6,510	1,130	635

Table 4-6: LEP impact – East of England

Source: Hatch

† The information provided on LEPs and Enterprise Zones is correct at the time of publication of this report (as at October 2020). We have used information published by the Office of National Statistics which is available at the following location: https://opendata.arcgis.com/datasets/a46c859088a94898a7c462eeffa0f31a_0.csv
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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Hertfordshire LEP	£1 in every £60 of GVA in the area is supported by BT Group’s full economic impact
New Anglia LEP	1 in every 4 employees working in the IT and communications sector in the area are directly employed by BT Group
Greater Cambridge and Peterborough LEP	1 in every 28 employees working in the IT and communications sector in the area are directly employed by BT Group
South East Midlands LEP	1 in every 110 private sector employees working in the area is supported by BT Group’s full economic impact, and 1 in every 10 employees working in the IT and Communications sector are directly employed by BT Group
South East LEP	1 in every 10 employees working in the IT and communications sector in the area are directly employed by BT Group

4 East Midlands

Across the East Midlands in 2019/20

4,990 BT Group employees live in the region (FTE)

4,490 BT Group employees work in the region (FTE)

£151 million total income of BT Group employees working in the region

£130 million spend with suppliers based in the region

£759 million total GVA impact (including indirect and induced effects)

BT Group employed **1 in every 330 employees** working in the private sector, and **1 in every 12 employees** working in the IT and communications sectors

£1 in every £210 of GVA is generated directly by BT Group

BT Group supported **1 in every 150 employees** working in the private sector and **£1 in every £140** of GVA as a result of BT Group's full economic impact

4

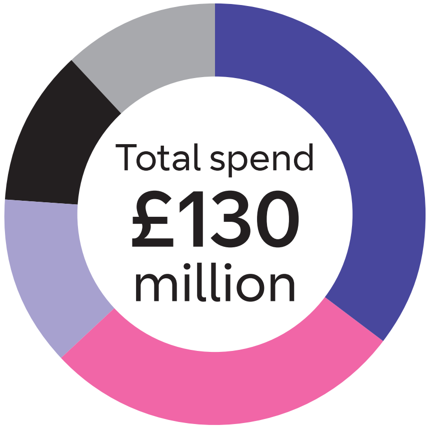
Regional impacts

Direct impact

BT Group directly employs a total of 3,750 people in the East Midlands region, with a further 738 employed as contractors. This results in £151 million in wages and salary spend across the region.

Procurement impact

BT Group spent £130 million with suppliers based in the East Midlands in 2019/20. The majority was spent on telecommunications, as illustrated in the chart below.



- **£27m** telecommunications
- **£21m** film, video, music & broadcasting activities
- **£10m** construction
- **£9m** computer programming, consultancy & related activities
- **£9m** manufacture of machinery & equipment N.E.C

£54m supplier spend with other sectors

Figure 4-13: Top five supplier sectors in the East of Midlands by value of expenditure

Source: BT Group Procurement data

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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.

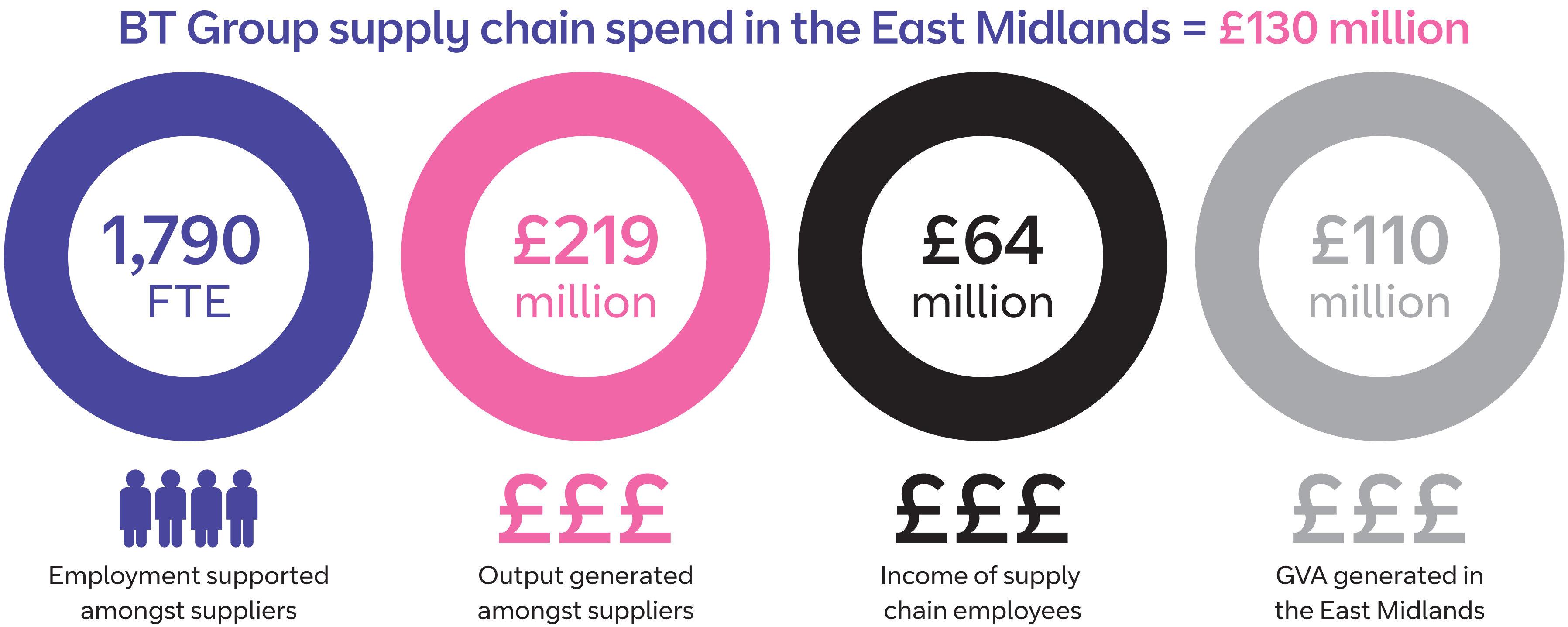

Figure 4-14: Indirect supply chain impact in the East Midlands

Source: Hatch

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Impact of employee expenditure

BT Group employees and contractors living in the East Midlands earned £174 million in 2019/20. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 4-15** below illustrates the wider induced employment and output supported through this employee expenditure.

Salaries of BT Group employees and contractors in the East Midlands = £174 million

3,520 FTE
Employment supported in consumer industries

£306 million
Output generated in consumer industries

£74 million
Income of supported employees

£160 million
GVA generated in the East Midlands

Figure 4-15: Induced (wage expenditure) impacts in the East Midlands

Source: Hatch

4

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 4-16** below.

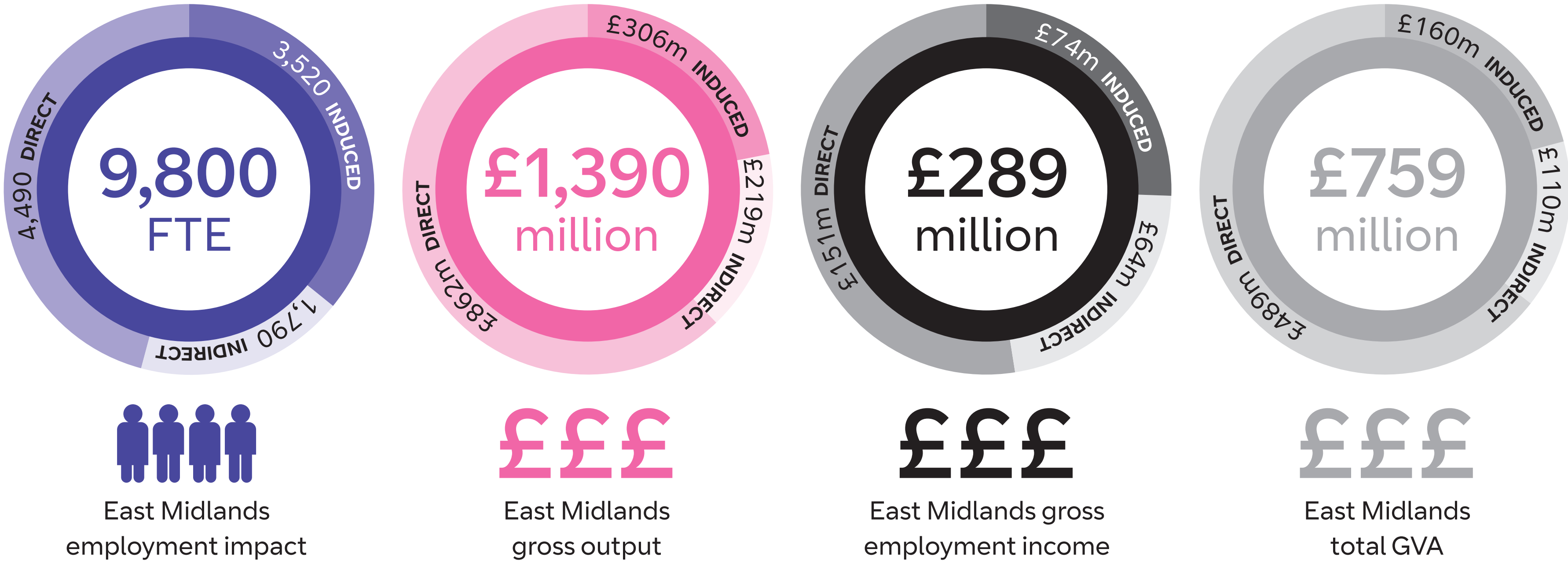

Figure 4-16: Total impact of BT Group in the East Midlands

Source: Hatch

Sub-regional impact

The table below illustrates the economic impact of BT Group at a sub-regional level in the East Midlands.

	BT Group employees & contractors		Total impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
Derbyshire	927	1,040	1,680	268	148
Leicestershire	1,470	1,500	2,480	376	208
Lincolnshire	622	740	925	146	81
Northamptonshire	719	819	1,730	235	128
Nottinghamshire	737	870	2,900	353	189

Table 4-7: County impact – East Midlands

Source: Hatch

4

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 five 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	2,510	2,810	5,570	790	437
Greater Cambridge & Greater Peterborough	814	898	3,440	370	212
Leicester & Leicestershire	1,470	1,500	2,480	376	208
Derby, Derbyshire, Nottingham & Nottinghamshire	1,660	1,910	4,580	622	337
Greater Lincolnshire	792	951	1,110	184	102

Table 4-8: LEP impact – East Midlands

Source: Hatch

Note: The 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 October 2020). We have used information published by the Office of National Statistics which is available at the following location: https://opendata.arcgis.com/datasets/a46c859088a94898a7c462eeffa0f31a_0.csv
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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South East Midlands LEP	1 in every 120 employees working in the area is supported by BT Group's full economic impact
Greater Cambridge & Greater Peterborough LEP	1 in every 28 employees working in the IT and communications sector in the area are directly employed by BT Group
Leicester & Leicestershire LEP	1 in every 8 employees working in the IT and communications sector in the area are directly employed by BT Group
Derby, Derbyshire, Nottingham & Nottinghamshire LEP	1 in every 16 employees working in the IT and communications sector in the area are directly employed by BT Group
Greater Lincolnshire LEP	1 in every 8 employees working in the IT and communications sector in the area are directly employed by BT Group

4 West Midlands

Across the West Midlands in 2019/20

5,940 BT Group employees live in the region (FTE)

6,070 BT Group employees work in the region (FTE)

£224 million total income of BT Group employees working in the region

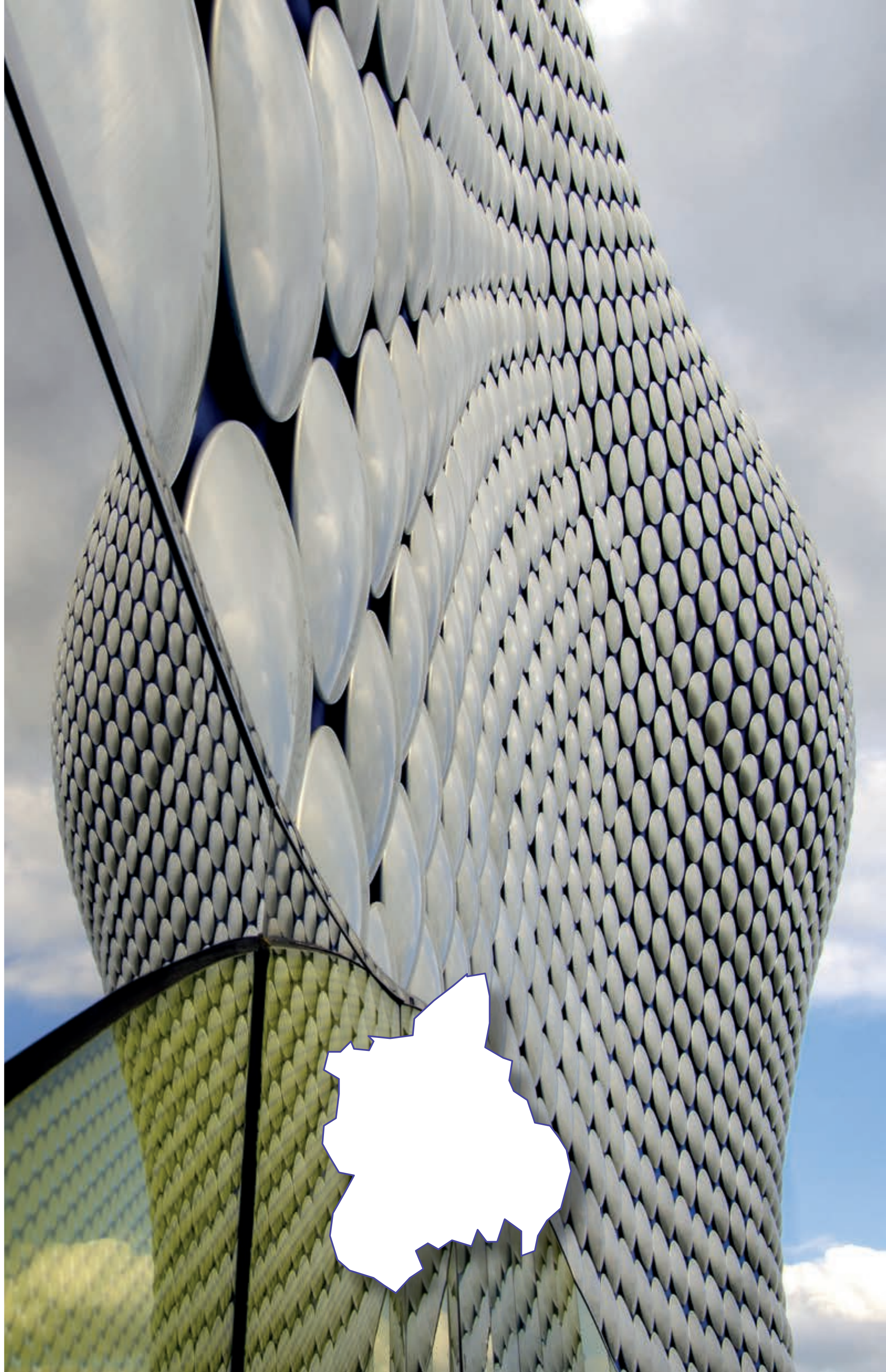
£636 million spend with suppliers based in the region

£1,560 million total GVA impact (including indirect and induced effects)

BT Group employed **1 in every 300 employees** working in the private sector, and **1 in every 12 employees** working in the IT and communications sectors

£1 in every £180 of GVA is generated directly by BT Group

BT Group supported **1 in every 80 employees** working in the private sector and **£1 in every £90** of GVA as a result of BT Group's full economic impact



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Regional impacts

Direct impact

BT Group directly employs a total of 5,470 people in the West Midlands region, with a further 600 employed as contractors. These employees earned £224 million in wages and salaries.

Procurement impact

BT Group spent £636 million with suppliers based in the West Midlands in 2019/20. The largest single item was repair and maintenance of aircraft and spacecraft, as illustrated in the chart below.

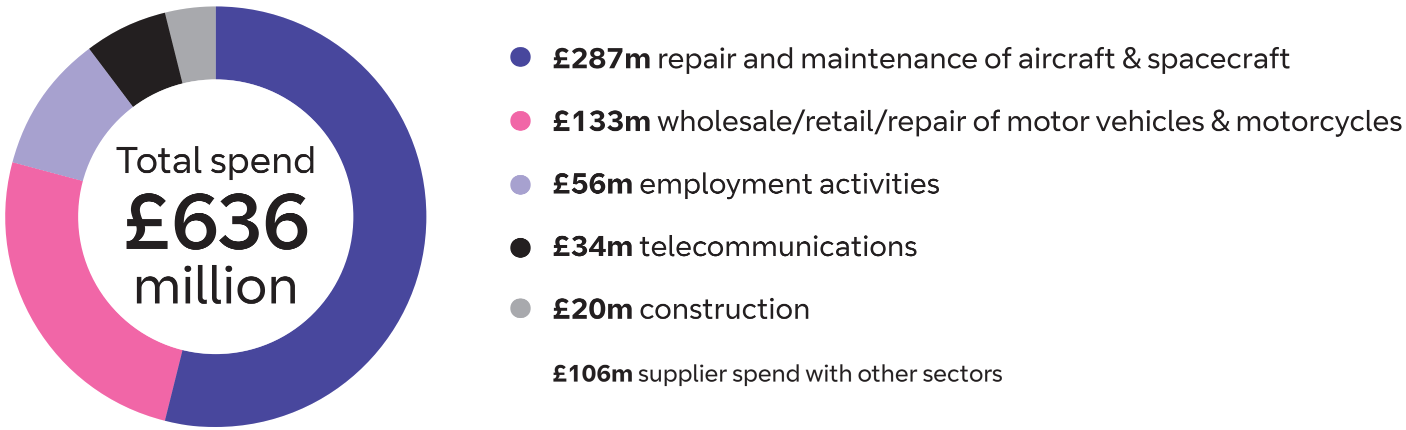

Figure 4-17: Top five supplier sectors in the West of Midlands by value of expenditure

Source: BT Group Procurement data

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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 = £636 million

11,100 FTE
Employment supported amongst suppliers

£1,120 million
Output generated amongst suppliers

£345 million
Income of supply chain employees

£526 million
GVA generated in the West Midlands

Figure 4-18: Indirect supply chain impact in the West Midlands

Source: Hatch

Impact of employee expenditure

BT Group employees and contractors living in the West Midlands earned £219 million in 2019/20. In turn, their expenditure supports further employment and output in consumer industries in the region. **Figure 4-19** below illustrates the wider induced employment and output supported through this employee expenditure.

Salaries of BT Group employees and contractors in the West Midlands = £219 million

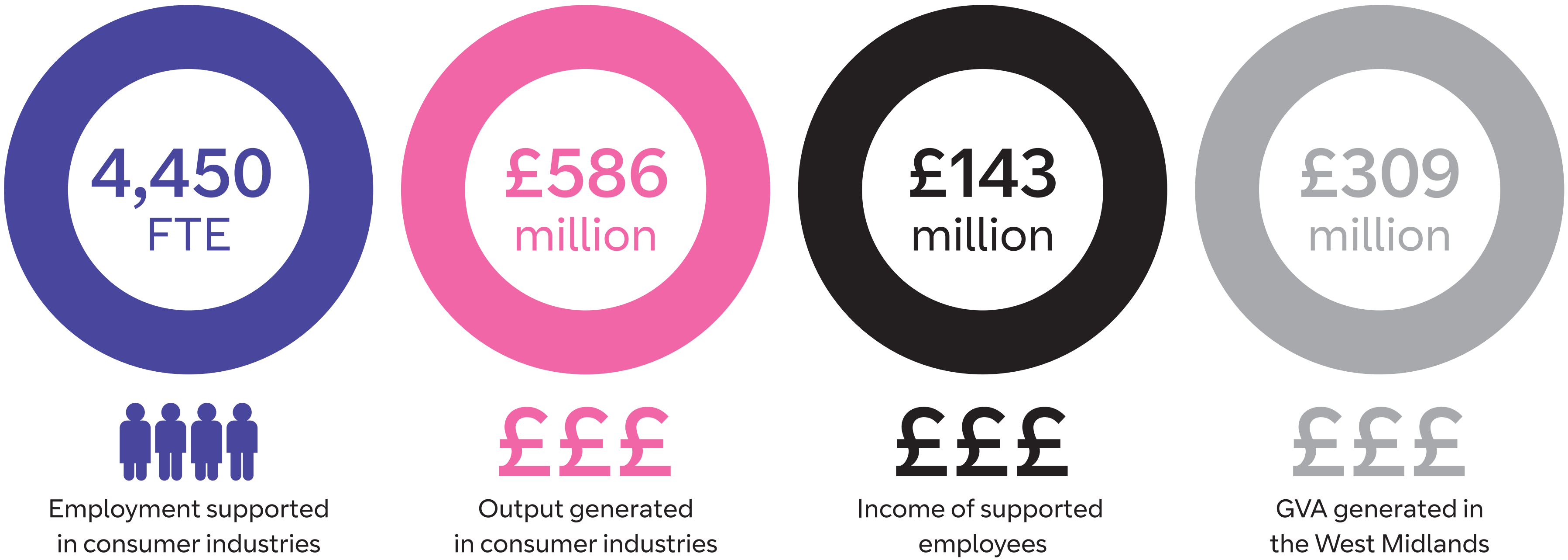

Figure 4-19: Induced (wage expenditure) impacts in the West Midlands

Source: Hatch

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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 4-20** below.

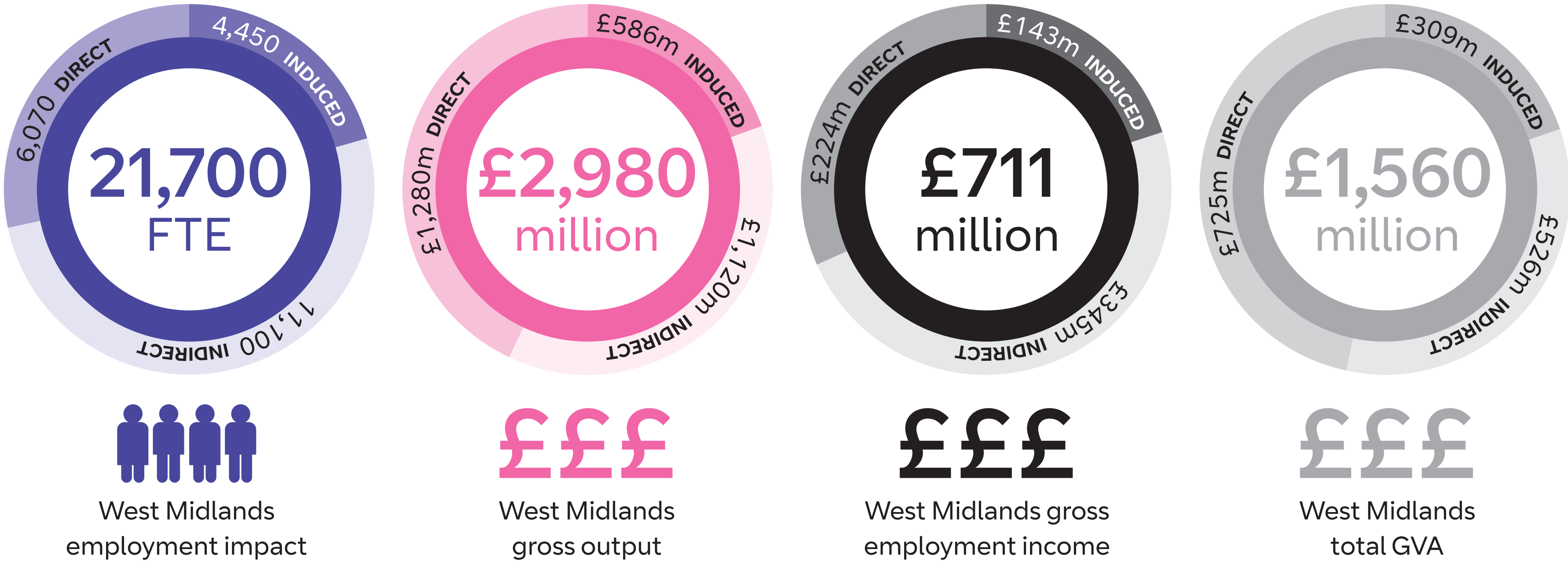

Figure 4-20: Total impact of BT Group in the West Midlands

Source: Hatch

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Sub-regional impact

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

	BT Group employees & contractors		Total impact		
	Work in area	Resident in area	Employment	Output £ million	GVA £ million
Birmingham	1,730	1,150	2,680	480	264
Coventry	489	336	638	123	68
Herefordshire	228	245	355	60	33
Shropshire	784	746	1,010	201	112
Solihull	395	311	4,790	569	286
Staffordshire	827	1,080	1,370	220	120
Warwickshire	213	516	7,710	864	427
Worcestershire	392	543	677	112	61

Table 4-9: County impact – West Midlands

Source: Hatch

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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 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	1,010	992	1,360	262	145
Stoke & Staffordshire	827	1,080	1,370	220	120
Greater Birmingham & Solihull	2,450	2,070	8,030	1,140	601
Coventry & Warwickshire	702	853	8,350	987	495
Black Country	1,010	1,020	2,420	353	188
Worcestershire	392	543	677	112	61

Table 4-10: LEP impact – West Midlands

Source: Hatch

† The information provided on LEPs and Enterprise Zones is correct at the time of publication of this report (as at October 2020). We have used information published by the Office of National Statistics which is available at the following location: https://opendata.arcgis.com/datasets/a46c859088a94898a7c462eeffa0f31a_0.csv
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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Marches LEP	1 in every 8 employees working in the IT and communications sector in the area are directly employed by BT Group
Stoke and Staffordshire LEP	£1 in every £260 of GVA in the area is generated directly by BT Group
Greater Birmingham and Solihull LEP	1 in every 10 employees working in the IT and communications sector in the area are directly employed by BT Group
Coventry and Warwickshire LEP	1 in every 22 employees working in the IT and communications sector in the area are directly employed by BT Group
Black Country LEP	1 in every 6 employees working in the IT and communications sector in the area are directly employed by BT Group
Worcestershire LEP	1 in every 20 employees working in the IT and communications sector in the area are directly employed by BT Group

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Technical appendices

5 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.

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Methodology and data sources

The methodology used to estimate BT Group's economic impacts for 2019/20 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 2019/20 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 2019/20 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 Urban Solutions' 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.

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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, 2018).

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, 2018).

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 selfemployed). (Source: ONS, BRES, 2018).

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, 2019) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2019).

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, 2018) multiplied by the average gross annual pay for all employees in that geographical area (source: Annual Survey of Hours and Earnings, 2019).

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, 2018 and ONS, GVA for Local Enterprise Partnerships, 1998-2018).

Offices Worldwide

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