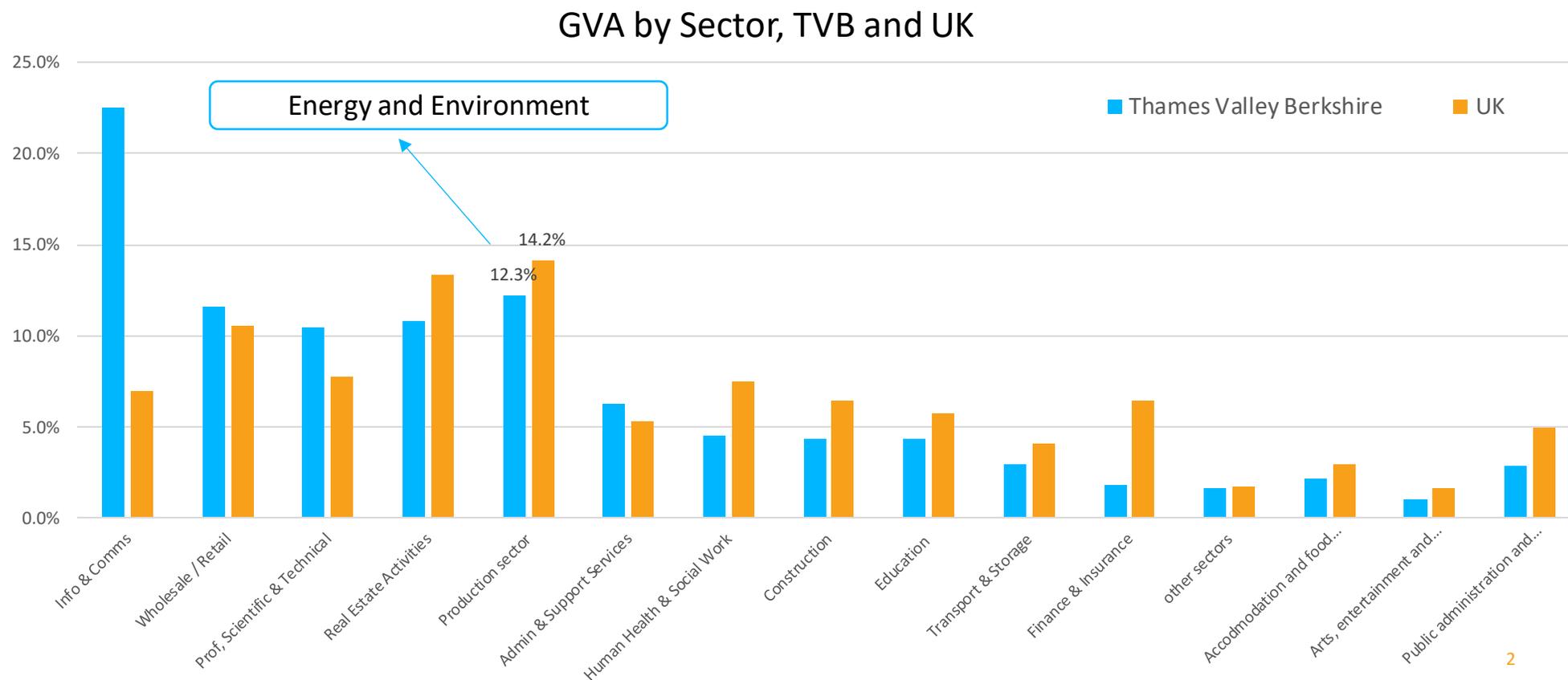


Energy and Environment Sector Proposition 2022

Thames Valley Berkshire Local Enterprise Partnership

Thames Valley Berkshire enterprises generated Gross Value Added of £44.27bn in 2019: 12.3% of this GVA was generated by the Production sector. The production sector is made up of 'Agriculture, Forestry and Fishing', 'Mining and Quarrying', 'Manufacturing', 'Electricity, Gas, Steam And Air Conditioning Supply' and 'Water Supply; Sewerage, Waste Management And Remediation Activities'

Analysing data using Standard Industrial Classification (SIC) codes enables a comparison to be made between the structure of the economies of Berkshire and the UK as a whole.



7.8% of jobs in Berkshire (39k) are in the Energy and Environment sector – 1.5 percentage points lower than the national average (9.3%).

Life Science-Energy and Environment Industries	All TVB Jobs in the Life Sciences Sector (2021)
Agriculture, Forestry and Fishing	1,415
Mining and Quarrying	239
Manufacturing	27,705
Electricity, Gas, Steam and Air Conditioning Supply	3,492
Water Supply; Sewerage, Waste Management and Remediation Activities	6,480
Total	39,331

Life Science-Energy and Environment Occupations	TVB Jobs in Life Science Occupations (2021)
Sales Accounts and Business Development Managers	1,588
Electricians and Electrical Fitters	1,461
Production Managers and Directors in Manufacturing	1,403
Metal Working Production and Maintenance Fitters	1,170
Engineering Technicians	1,022
Large Goods Vehicle Drivers	967
Other Administrative Occupations n.e.c.	801
Electrical Engineers	721
Electrical and Electronic Trades n.e.c.	665
Elementary Storage Occupations	655
Total	10,443

Reading ranks #3 in Europe, and #1 in the UK, for Foreign Direct Investment in HQs. These are primarily driven by tech sector investments, but Energy and Environment investments also made an important contribution. In 2020/21 there were 5 Environment, infrastructure and transportation FDI successes.

“From the 35 FDI successes in Berkshire in 2020/21, 24 were split across the key sectors of ‘software and computer services’, ‘electronics and communications’ and ‘environment and infrastructure and communication’.”

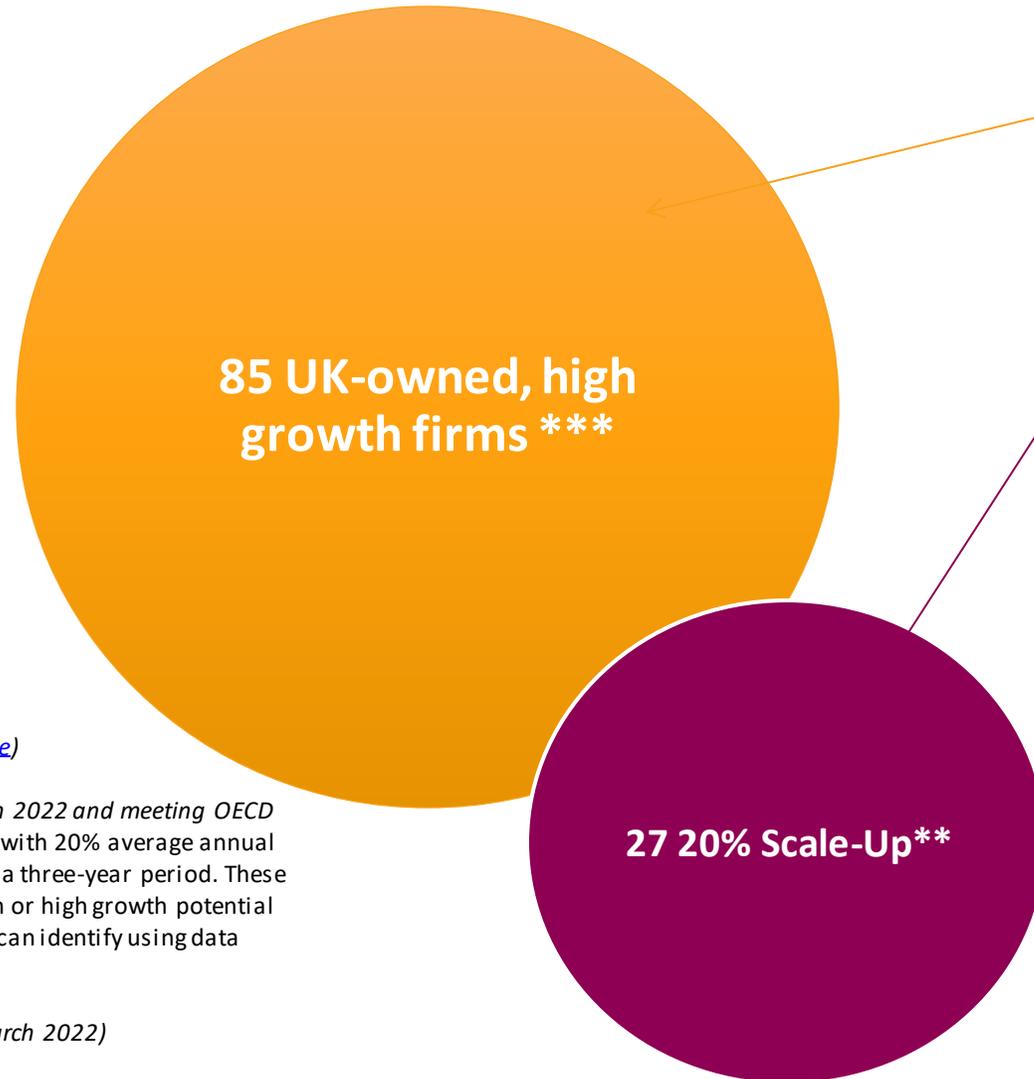
[Department for International Trade inward investment results 2020/2021.](#)



Some of the major Energy and Environment companies located in Thames Valley Berkshire



Berkshire also houses 27 official Energy and Environment 'Scale-ups' and 85 'High Growth' Energy and Environment companies



There are 85 high-growth Life Sciences companies we can identify using data supplied by Beauhurst***

27 of these 85 Energy and Environment firms in Berkshire are classified as a 20% 'scale-ups'**.

*(2015-2018 IDBR data, ONS, cited in [ScaleUp Review 2020 ScaleUp Institute](#))

** Firms being tracked by [Beauhurst](#) in March 2022 and meeting OECD definition (firms with at least ten employees, with 20% average annual growth in either turnover or employees over a three-year period. These are part of a wider cohort of 586 high-growth or high growth potential companies across all sectors in Berkshire we can identify using data supplied by Beauhurst

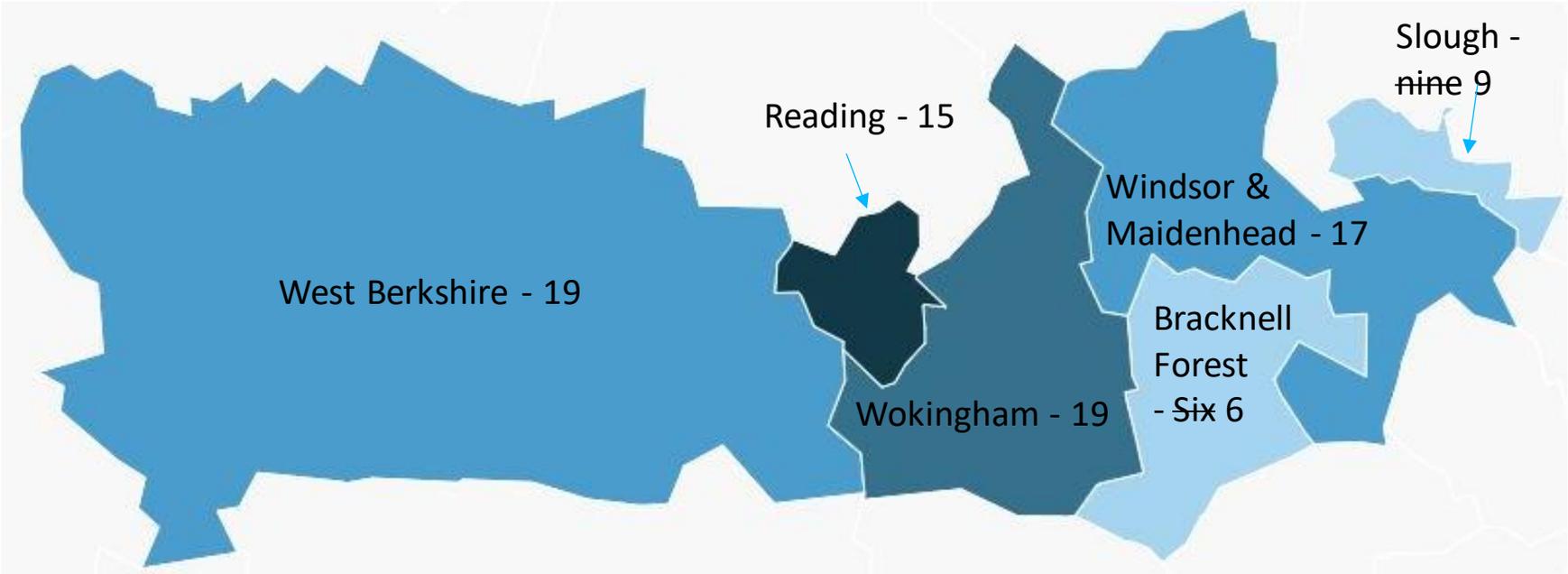
*** (all firms being tracked by [Beauhurst](#), March 2022)

** www.beauhurst.com

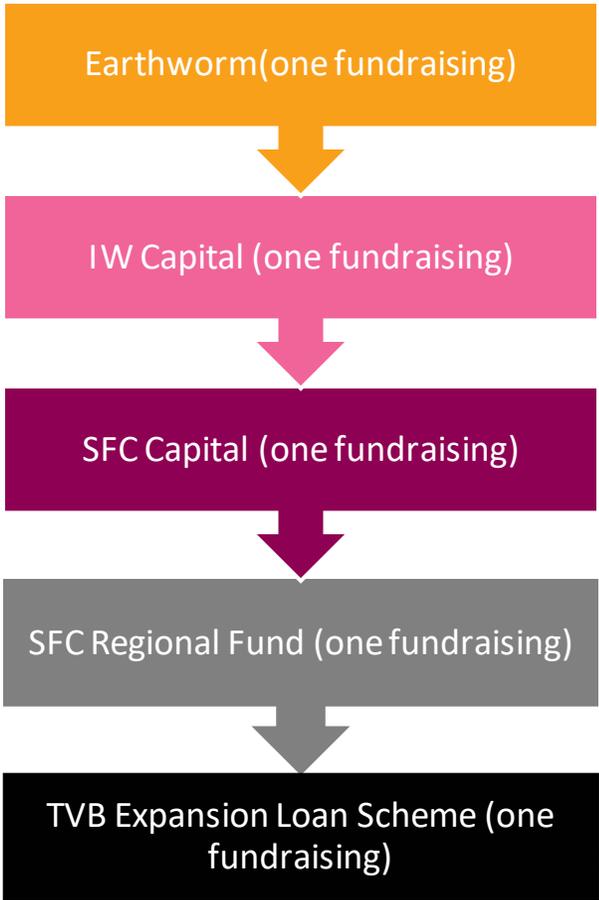
The 85 Energy and Environment High Growth firms are spread across all of the six Berkshire local authorities.

By unitary authority, Wokingham and West Berkshire dominate the area in terms of the number of high growth Energy and Environment firms.

Source: Tracked Seed, Venture, Growth and Established Life Science Companies by Unitary Authority, Beauhurst, March 2022.



Top five funders of these Energy and Environment companies by number of fundraisings



The energy and environment talent pipeline: ~~the~~ further education output is healthy and there is strong demand for related skills

- Demand and supply

- ~~Opened in September 2021~~, The Renewables Centre Newbury College (add LINK) which opened in September 2021 offers an employer-informed curriculum that will help us meet our net zero goals.
- Local employers in the housebuilding, heating, plumbing and specialist renewables sectors highlighted the need for a supply of workers with core skills in engineering, materials science, heating and plumbing systems. ~~It is important that they also possess~~ together with the capability to work on renewable technologies such as biomass, solar PV and air source heat pumps.
- ~~The~~ Newbury College responded to this local need by bidding for Capital Grants from Thames Valley Berkshire LEP. The LEP invested £450,000 into the new Renewables Centre in order to equip talented students ~~to~~ with the engineering and construction skills that will help to reduce our impact on the environment.

The opportunities

- There will be increased demand for construction skills in Berkshire due to the pipeline of planned **construction** work across Thames Valley Berkshire over the next five years, including more than £6bn for housing developments and more than £1.7bn ~~planned~~ for commercial developments.
- Our endeavours to meet sustainability targets provide new opportunities. Analysis of a Local Government Association report on the jobs required for a net zero economy in England shows that the emerging skills gaps in Berkshire will focus on the following areas:
 - Low carbon electricity
 - Low carbon heat
 - Low carbon services
 - [Thames Valley Berkshire Local Skills Report, 2022](#)

The University of Reading: School of the Built Environment

- The School is internationally renowned for its research and education relating to the design, construction and operation of the buildings and places within which we live, work and play.
- The University's areas of expertise include architecture, construction management, energy systems and environmental engineering. It has a strong orientation towards interdisciplinary 'real-world' problems, and has a proud track record of active engagement with the professions.
- The School is ranked 3rd in the UK for the impact of its research in architecture, built environment and planning. 83% of ~~our~~ its research is rated world leading (4*) or internationally excellent (3*).



University of Reading

Research Divisions

- [Organisations, People and Technology](#)
- [Energy and Environmental Engineering](#)
- [Urban Living](#)

[Reading University: The School of the Built Environment](#)

The Energy and Environment Talent Pipeline: Graduate/Post Graduate qualifiers from local universities number just shy of 4k

The annual number of degree and post-grad qualifiers from **local top-ranking universities**, in relevant Energy and Environment disciplines, numbered c. 3,995 in 2019/20

Establishments <ul style="list-style-type: none"> • The University of Reading • The University of Oxford • University College London (UCL) • Kings College, London • Imperial College, London • London School of Economics 	Agriculture, Food and Related Studies - Undergraduate qualifiers	Agriculture, Food and Related Studies – Postgraduate qualifiers	Physical Sciences – Undergraduate qualifiers	Physical Sciences – Postgraduate qualifiers	Geography, earth and environmental studies (natural sciences) – Undergraduate qualifiers	Geography, earth and environmental studies (natural sciences) – Postgraduate qualifiers
<i>Total within one hour catchment</i>	80	65	1,425	1,165	400	860

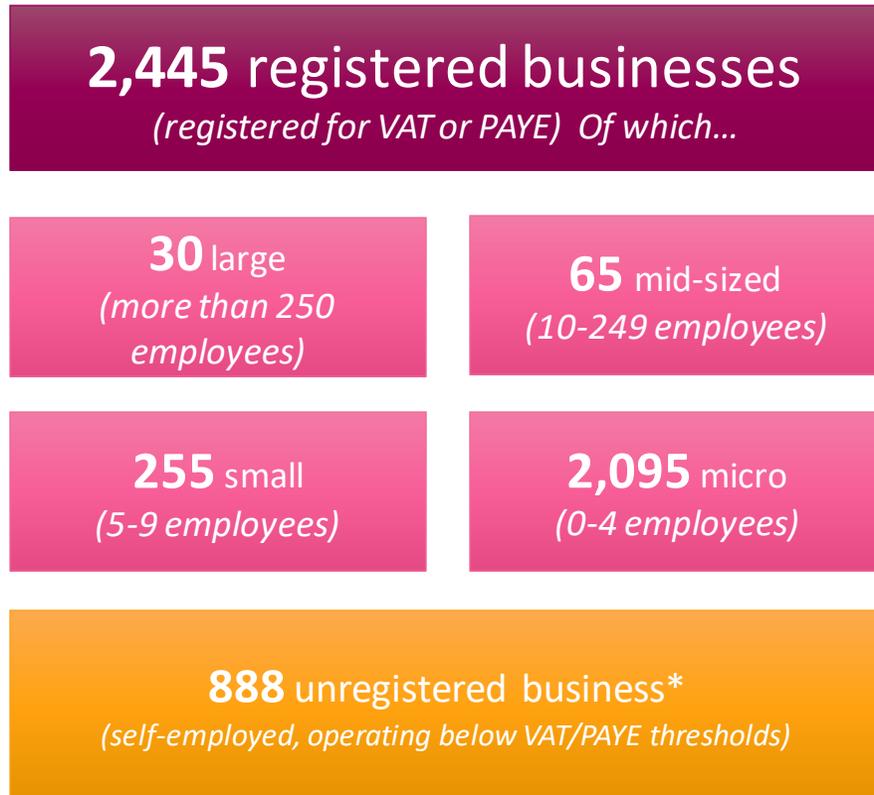


Source: 1. [Times Higher Education University Rankings, 2022](#)
 2. [HE qualifiers by HE provider and subject of study - a academic year 2019/20, HESA](#)

Berkshire's Energy and Environment Sub Sector Specialisms

Thames Valley Berkshire Local Enterprise Partnership

Berkshire Energy and Environment businesses by size



There are 3,333 Energy and Environment businesses in Berkshire, of which 2,445 (73.4%) are registered for VAT and/or PAYE.

The number of registered Energy and environment businesses in Berkshire grew by an average annual growth rate of 1% between 2010 and 2021.

The vast majority (85.7%) of registered businesses in Berkshire are micro (zero-four employees) or small (five-nine employee enterprises).**

*estimated using Business Population Estimates data for the South East

**definitions vary slightly from those conventionally used in order to illustrate the dominance of firms with zero-four employees

Energy and Environment Sector

5 Major Energy and Environment Sub Sector Specialisms

Agriculture, Forestry and
Fishing

Mining and Quarrying

Manufacturing

Electricity, Gas, Steam and Air
Conditioning Supply

Water Supply; Sewerage,
Waste Management and
Remediation Activities

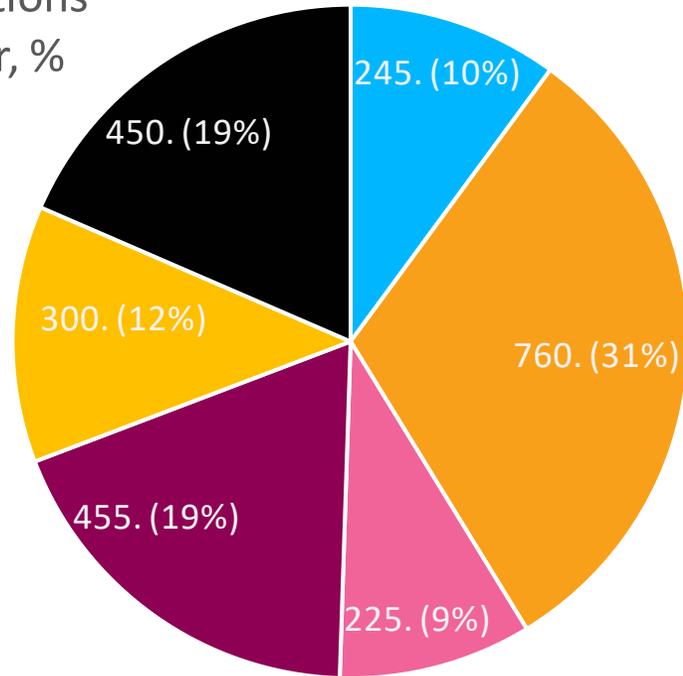


Examples of Energy and Environment Specialisms in Berkshire



Number of 'Energy and Environment' Companies by Local Authority

Number of organisations in sector, %



- 296,485 companies in 'core energy and environment' in the UK with 2,435 in Berkshire (see left)
- The South-East as a whole hosts 31,755 companies within the core energy and environment, meaning that Berkshire hosts almost 8% of **energy and environment** life-science related businesses within the South-East.
- The core life sciences sector (comprised of the Five Major Energy and Environment Sub Sector Specialisms found on Slide 13) employed 39,825 people in Thames Valley Berkshire in 2021.



[Source: UK Business Counts, 2021](#)

Summary: why Thames Valley Berkshire for Energy and Environment?

Thames Valley Berkshire LEP

Why Thames Valley Berkshire for Energy and Environment?

12.3% of Berkshire's GVA was generated by the Production sector.

Reading ranks #3 in Europe, and #1 in the UK, for FDI in HQs. In 2020/21 there were 5 Environment, infrastructure and **communication?** FDI successes.

World-class Research and Development facilities and Centres of Excellence. These include the European Centre for Medium-Range Weather Forecasting and The Walker Institute.

7.8% of jobs in Berkshire (39k) are in the Energy and Environment sector – 1.5 percentage points lower than the national average (9.3%).

Energy and Environment-related Graduate/Post Graduate qualifiers from local universities numbered just shy of 4k in 2020

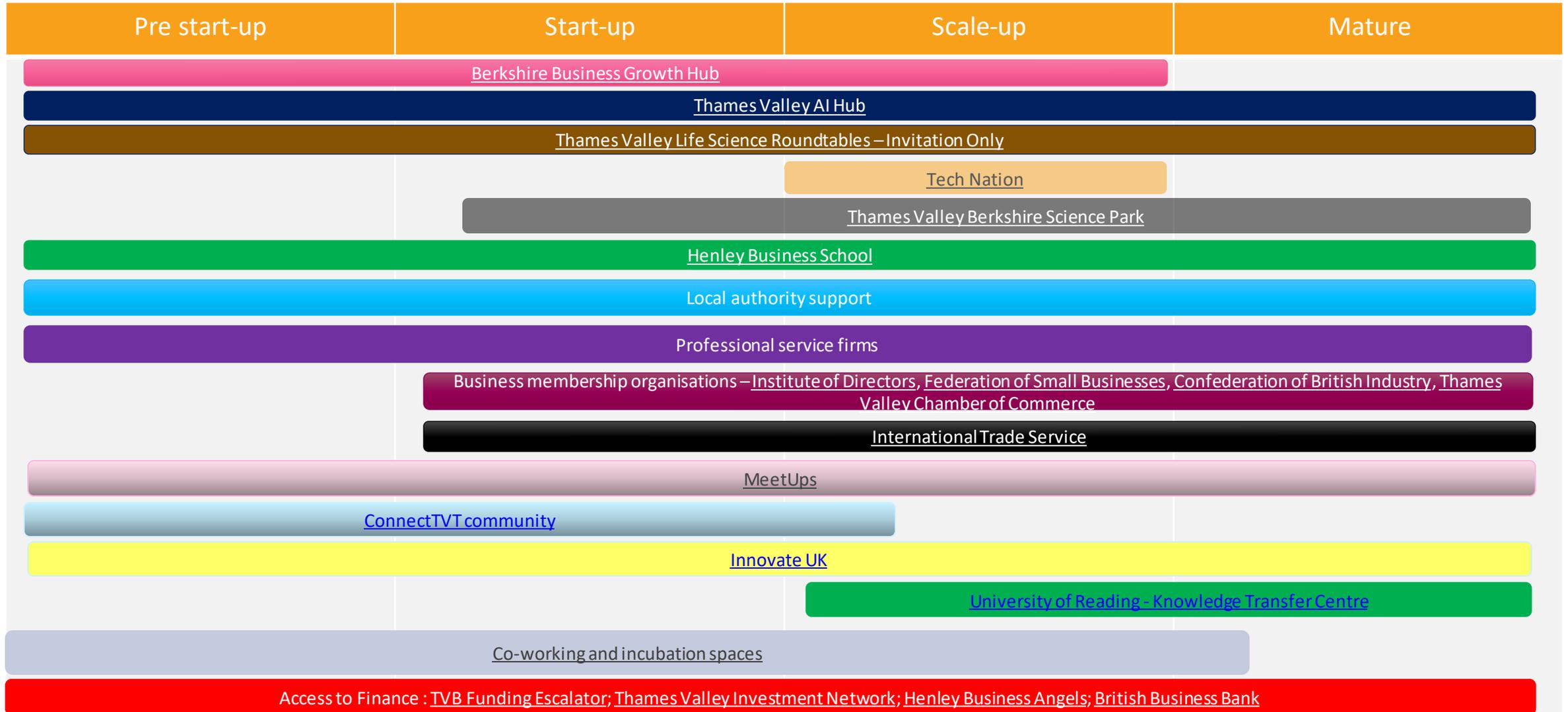
Berkshire offers a high volume of prestigious office and co-working spaces, with remaining capacity and is still building

Berkshire's transport links are exceptional: its towns top connectivity rankings amongst EU Micro & Small 'cities'

<u>Top 10: Local Enterprise Partnerships of the Future</u>	<u>Top 10: Local Enterprise Partnerships of the Future (economic potential)</u>	<u>Top 10: Local Enterprise Partnerships of the Future (business friendliness)</u>	<u>Top 10: Local Enterprise Partnerships of the Future (human capital)</u>
<ol style="list-style-type: none"> 1. London 2. Thames Valley Berkshire 3. Oxfordshire 	<ol style="list-style-type: none"> 1. London 2. Thames Valley Berkshire 3. Oxfordshire 	<ol style="list-style-type: none"> 1. London 2. Thames Valley Berkshire 8. Oxfordshire 	<ol style="list-style-type: none"> 1. London 4. Oxfordshire 10. Thames Valley Berkshire

Local Business support ecosystem

Advice & knowledge exchange services which can be accessed through the Berkshire Business Growth Hub



ACCESS TO FINANCE

- In addition to national funding opportunities, local sources of funding for certain types of businesses (some of which is restricted to Thames Valley Berkshire based firms) are listed here.
- More details on these and national opportunities are available from the [Berkshire Business Growth Hub](#) and the [British Business Bank](#)

About

[TVB Funding Escalator](#)

Thames Valley Berkshire LEP created a funding escalator of loans and equity across three funding initiatives managed by The FSE Group. FSE fund managers offer guidance and support during the application process and further help after the loan or investment is made

[Thames Valley Investment Network](#)

Part of the OION Ltd group of angel networks, TVIN works with entrepreneurs and companies that are looking to raise finance by connecting them with highly active potential investors

[Henley Business Angels](#)

A network of experienced business leaders, successful entrepreneurs and investors. Its aim is to facilitate opportunities for members to invest in and mentor (S)EIS registered early stage businesses launched by entrepreneurs who graduated from or are connected with the Henley Business School and University of Reading

Key Berkshire business support facilitators

- With some of the highest start-up and scale-up rates in the country, Berkshire has a strong business support system for new and growing firms.

The Berkshire Growth Hub is the local first-stop-shop for business support within Thames Valley Berkshire. It aims to enhance and accelerate business performance and help more businesses to take advantage of national and local support programmes.

www.berkshirebusinesshub.co.uk



The Thames Valley Berkshire Funding Escalator provides loans and equity to support early-stage SMEs and offers finance to those that have the potential to deliver growth but are unable to access finance from traditional sources.

<http://www.thefsegroupp.com/thames-valley-berkshire-funding-escalator/>



BERKSHIRE TRANSPORT LINKS

Airport Connections		
Route	Car	Train
Reading to Heathrow Airport	36 mins	55 mins
Reading to Gatwick Airport	1 hr 8 mins	1 hr 30 mins
Reading to Stanstead Airport	1 hour 33 mins	1 hr 44 mins
Reading to Luton Airport	1 hr 9 mins	1 hrs 50 mins
Reading to Bristol Airport	1 hr 39 mins	1 hr 53 mins
Reading to Southampton Airport	1 hour 1 mins	43 mins

Train Connections	
Route	Duration
Reading to London Paddington	25 mins
Reading to Birmingham	1 hr 34 mins
Reading to Manchester	3 hrs 9 mins
Reading to Leeds	3 hrs 12 mins
Reading to Cardiff	1 hr 26 mins
Reading Bristol	1 hr 11 mins
Reading to Edinburgh	5 hrs 59 mins

Driving Connections



- Major motorway (M4) run horizontally through the Thames Valley Berkshire
 - Ease of access to M3 (South East), M5 (West) and M25 (London Circular)

Top ten: Small European Cities of the Future (connectivity)*	Top ten: Micro European Cities of the Future (connectivity)*
1. Slough	1. Windsor
7. Reading	2. Maidenhead
9. Bracknell	

*Source: [fDi's European Cities and Regions of the Future 2020/21 – Winners](#)

Green Park, Slough Trading Estate and Thames Valley Park



Green Park, Reading

61 Occupiers

Over 1,600,000 sq. ft of accommodation



Slough Trading Estate, Slough

321 Occupiers

87 current property vacancies

Europe's largest trading estate in single ownership



Thames Valley Park, Reading

18 Occupiers

Over 279,000 sq. ft available

22-acre park on bank of the Thames



Arlington Business Park, Arlington Square and Newbury Business Park



Arlington Business Park, Theale
81 Active Occupiers
Over 83,000 sq. ft available



Arlington Square Business Park, Bracknell
100 Active Occupiers
74,000 sq. ft available



Newbury Business Park, Newbury
18 Active Occupiers
Over 28,000 sq. ft



Winnersh Triangle, Greenham Business Park, Ascot Business Park and Thames Valley Science Park



Winnersh Triangle, Wokingham
61 Active Occupiers
Over 178,000 sq. ft available



Greenham Business Park, Thatcham
Over 180 Active Occupiers



Ascot Business Park, Ascot
26 Active Occupiers
4,774 sq. ft available



Thames Valley Science Park, Reading
Around 80 Active Occupiers

Berkshire also has a wealth of Co-Working/Innovation spaces



[Work.Life](#) based in Reading



[The Curious Lounge](#) based in Reading



[The Work Station](#) based in Wokingham



[Arena members' hubs](#) based across Berkshire



[The Workary Maidenhead](#) based in the Royal Borough of Windsor & Maidenhead



[The Porter Building](#) based in Slough



[Bracknell Enterprise & Innovation Hub](#) based in Bracknell



Broader Business Environment

Thames Valley Berkshire LEP

Berkshire businesses by size

45,715 registered businesses
(registered for VAT or PAYE) Of which...

265 large
(more than 250 employees)

4,240 mid-sized
(10-249 employees)

4,050 small
(5-9 employees)

37,165 micro
(0-4 employees)

59,312 unregistered business*
(self-employed, operating below VAT/PAYE thresholds)

There are 105,237 businesses in Berkshire, of which 45,715 (43%) are registered for VAT and/or PAYE.

The number of registered businesses in Berkshire grew by an average annual growth rate of 3.2% between 2010 and 2020.

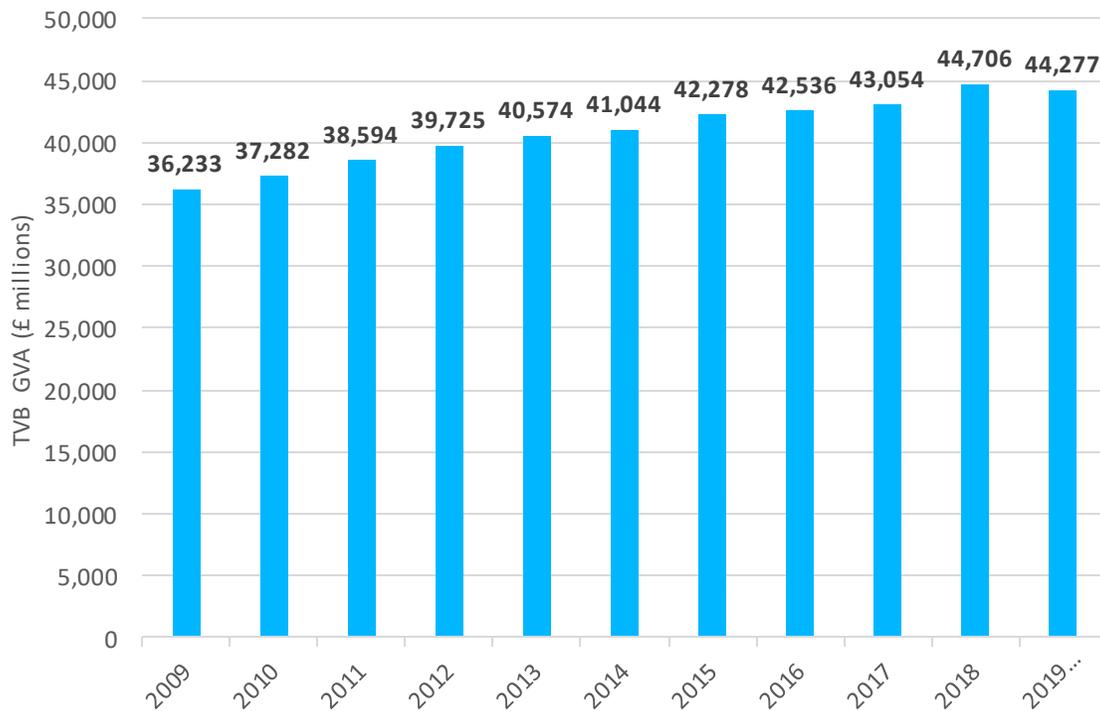
The vast majority (90.2%) of registered businesses in Berkshire are micro (zero-four employees) or small (five-nine employee enterprises).**

*estimated using Business Population Estimates data for the South East

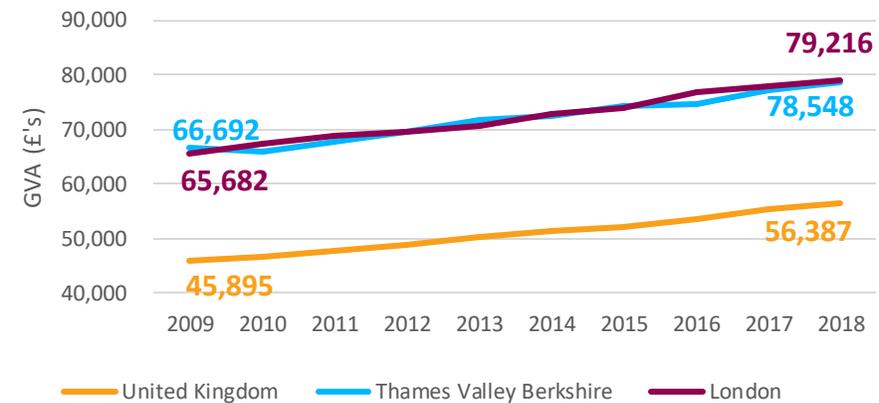
**definitions vary slightly from those conventionally used in order to illustrate the dominance of firms with zero-four employees

Thames Valley Berkshire: TOTAL GVA, GVA per job filled and GVA per hour

Berkshire's GVA growth
(chained value measures, 2018 prices)

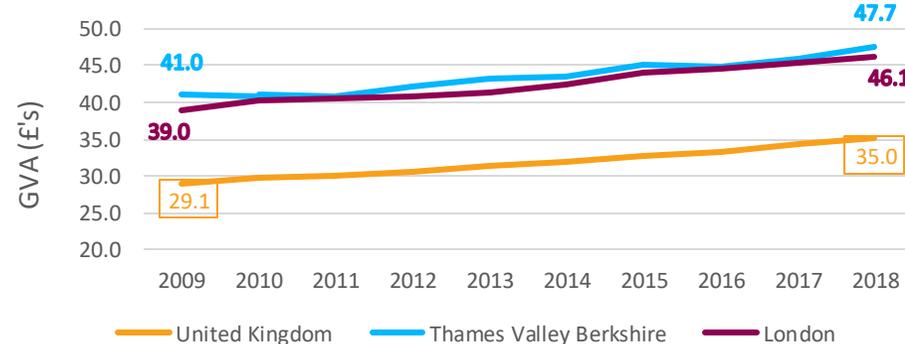


Nominal (unsmoothed) GVA per filled job (£'s)



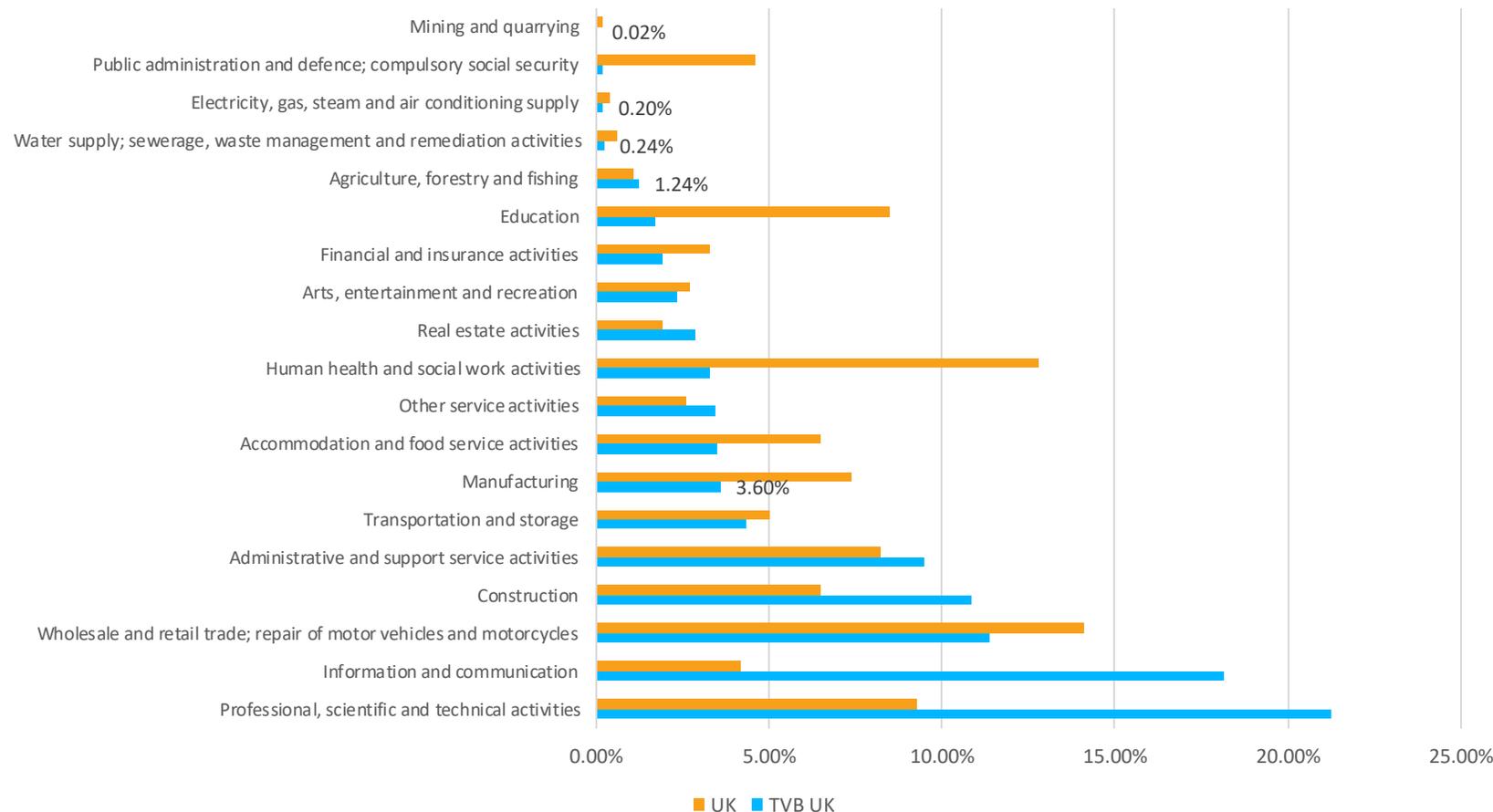
TVB's GVA per filled job is approximately **£22,161 (39%)** above the UK figure and second only to London by LEP

Nominal (unsmoothed) GVA per hour worked (£'s)



TVB is Ranked **1st** by the GVA per hour worked (£'s) 2018 Index for LEPs – above London

Approximately 5.3% of Berkshire businesses operate in the Production sector



Analysing data using Standard Industrial Classification (SIC) codes enables a comparison to be made between the structure of the economies of Berkshire and the UK as a whole.

Around 5.3% of Berkshire firms operate in the 'Production' sector.

Source: [UK Business Count, 2021, Office for National Statistics](#)

Berkshire-based FTSE 100 companies

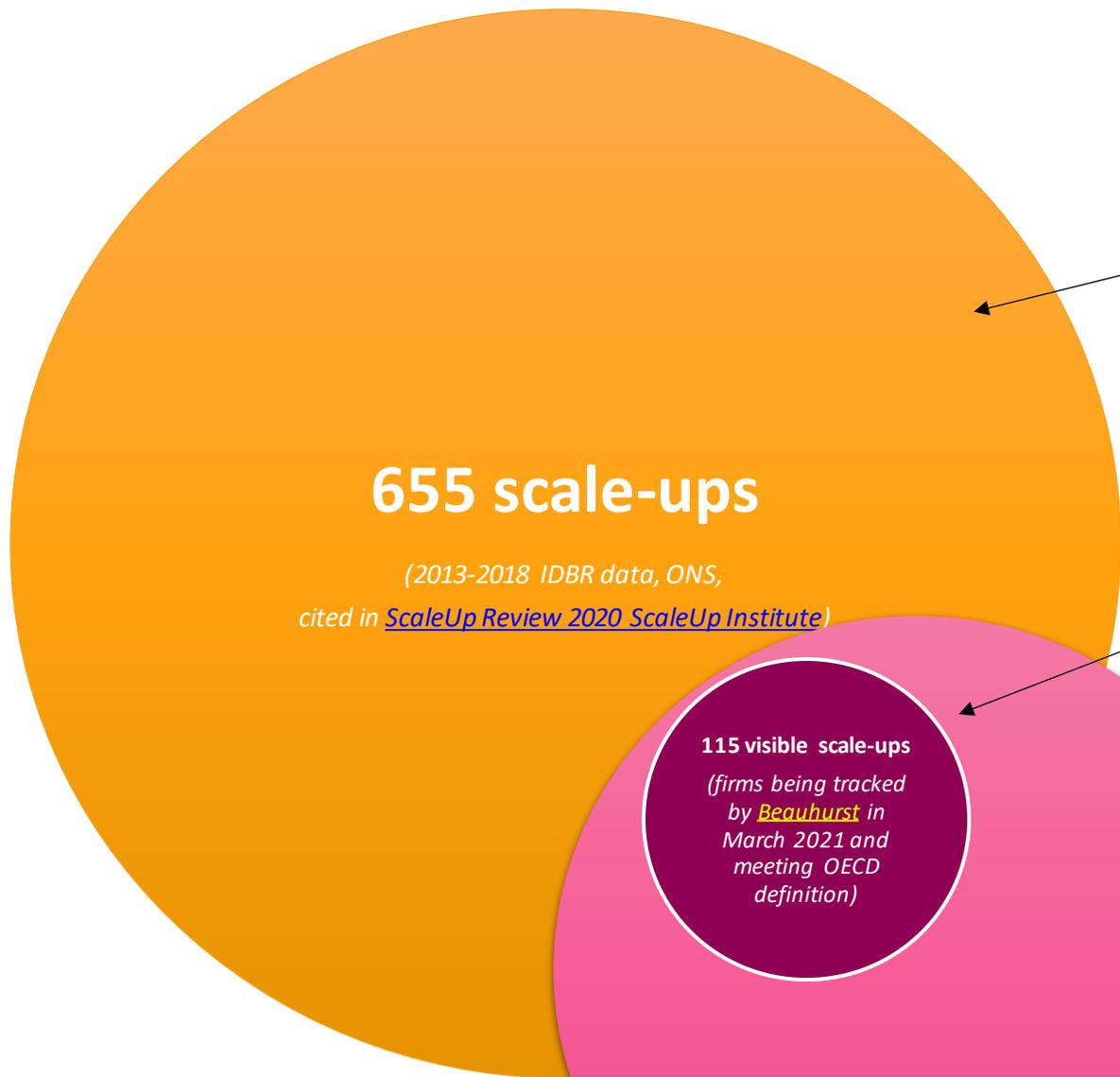
	Location	Sector
<u>Ferguson plc</u>	Wokingham	Support Services
<u>GlaxoSmithKline</u>	M Maidenhead and Slough	Pharmaceuticals & Biotechnology
<u>Johnson Matthey</u>	Reading	Chemicals
<u>National Grid plc</u>	Wokingham	Gas, Water & Multi-utilities
<u>Prudential plc</u>	Reading	Life Insurance
<u>Reckitt Benckiser</u>	Slough	Household Goods & Home Construction
<u>Sage Group</u>	Reading and Winnersh	Software & Computer Services
<u>Segro</u>	Slough	Real Estate Investment Trusts
<u>SSE plc</u>	Reading	Gas, Electricity & Multi-utilities
<u>Vodafone Group</u>	Newbury and Bracknell	Mobile Telecommunications



...and a myriad of other large public and world-renowned private sector enterprises

Name	Employees (local estimate)	Location
NHS	16,500	Various
Six Unitary Authorities	9,300	Various
Vodafone	5,000	Newbury and Bracknell
AWE	4,500	Aldermaston and Burghfield
University of Reading	4,000	Reading
Waitrose (HQ and distribution centre)	3,400	Bracknell
Microsoft	3,000	Wokingham (Thames Valley Park)
Telefonica O2	2,500	Slough
GlaxoSmithKline	2,000	Maidenhead and Slough
Merlin (Legoland)	2,000	Windsor
Oracle	2,000	Wokingham (Thames Valley Park)
Royal Mail	2,000	Slough
SSE	2,000	Reading
Fujitsu	1,600	Bracknell
Virgin Media	1,500	Reading (Green Park)





655 scale-ups

(2013-2018 IDBR data, ONS,
cited in [ScaleUp Review 2020](#) [ScaleUp Institute](#))

115 visible scale-ups

(firms being tracked
by [Beauhurst](#) in
March 2021 and
meeting OECD
definition)

586 high growth and high growth potential firms

(all firms being tracked by [Beauhurst](#), May 2021)

655 firms in Berkshire are classified as 'scale-ups'*, of which 525 are turnover scale-ups, 270 are employment scale-ups and 140 scaled both their employees and turnover

Of these, 115 are 'visible', in that we can identify who they are via the data they submit to Companies House

These 115 are part of a wider cohort of 586 high-growth or high growth potential companies we can identify using data supplied by Beauhurst**

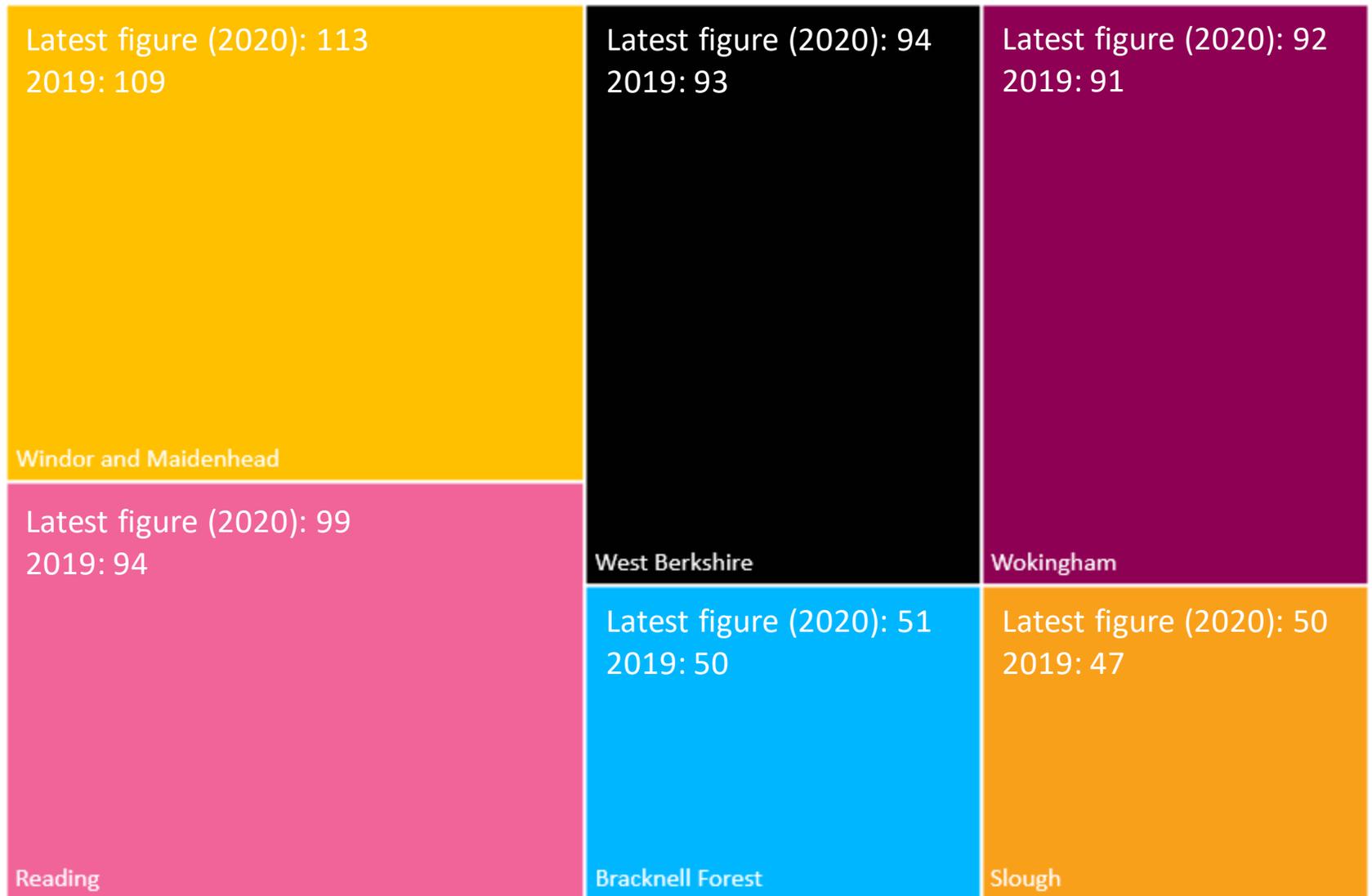
*using the OECD definition of:
firms with at least 10 employees, with 20% average annual growth in
either turnover or employees over a three-year period.
Note: IDBR stands for Inter-Departmental Business Register

**www.beauhurst.com

High Growth / High growth potential Firms

Although all unitary authorities have seen an increase in high growth or high growth potential firms in the past year, some have seen a greater increase than others; Reading and Windsor & Maidenhead with particularly noticeable increases.

Source: [Tracked Seed, Venture, Growth and Established Companies by Unitary Authority, Beauphurst, March 2022](#)



Centres of excellence



Firms undertaking significant R&D activity in Berkshire:

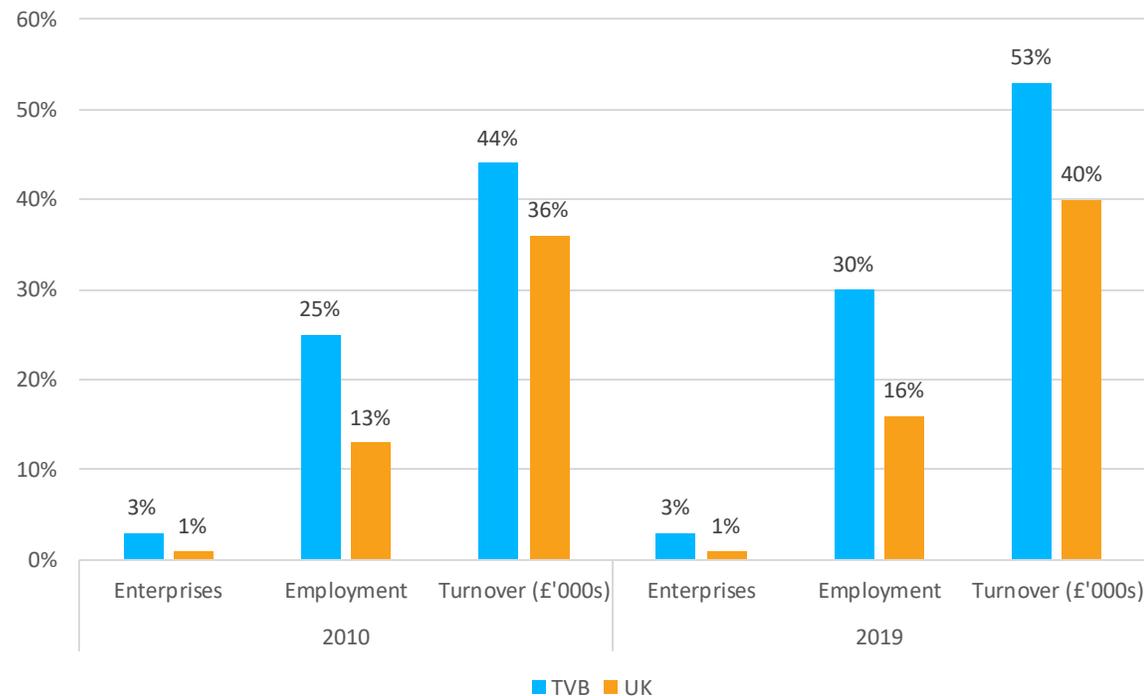
- Mars
- Johnson & Johnson
- Thales
- Syngenta
- AWE
- Gillette (P&G)
- Costain
- Vodafone (5G)
- Hanovia (UV technology)

Key Centres of Excellence:

- [European Centre for Medium-Range Weather Forecasting](#)
- [Thatcham Research \(Car Safety Research\)](#)
- [TRL \(Transport Research\)](#)
- [BSRIA \(Engineering\)](#)
- [Deloitte Cyber Intelligence Centre](#)
- [EIT Food, at the University of Reading](#)
- [StoryFutures \(AR/VR Creative Cluster\)](#)
- [National Foundation for Educational Research](#)
- [Rutherford Cancer Centre \(Proton Beam Therapy\)](#)
- [Centre for Integrative Neuroscience and Neurodynamics \(CINN\)](#)

International economy

Foreign-Owned Companies: contribution to employment and turnover



Berkshire has the highest concentration of Foreign-Owned Companies of all LEP areas.

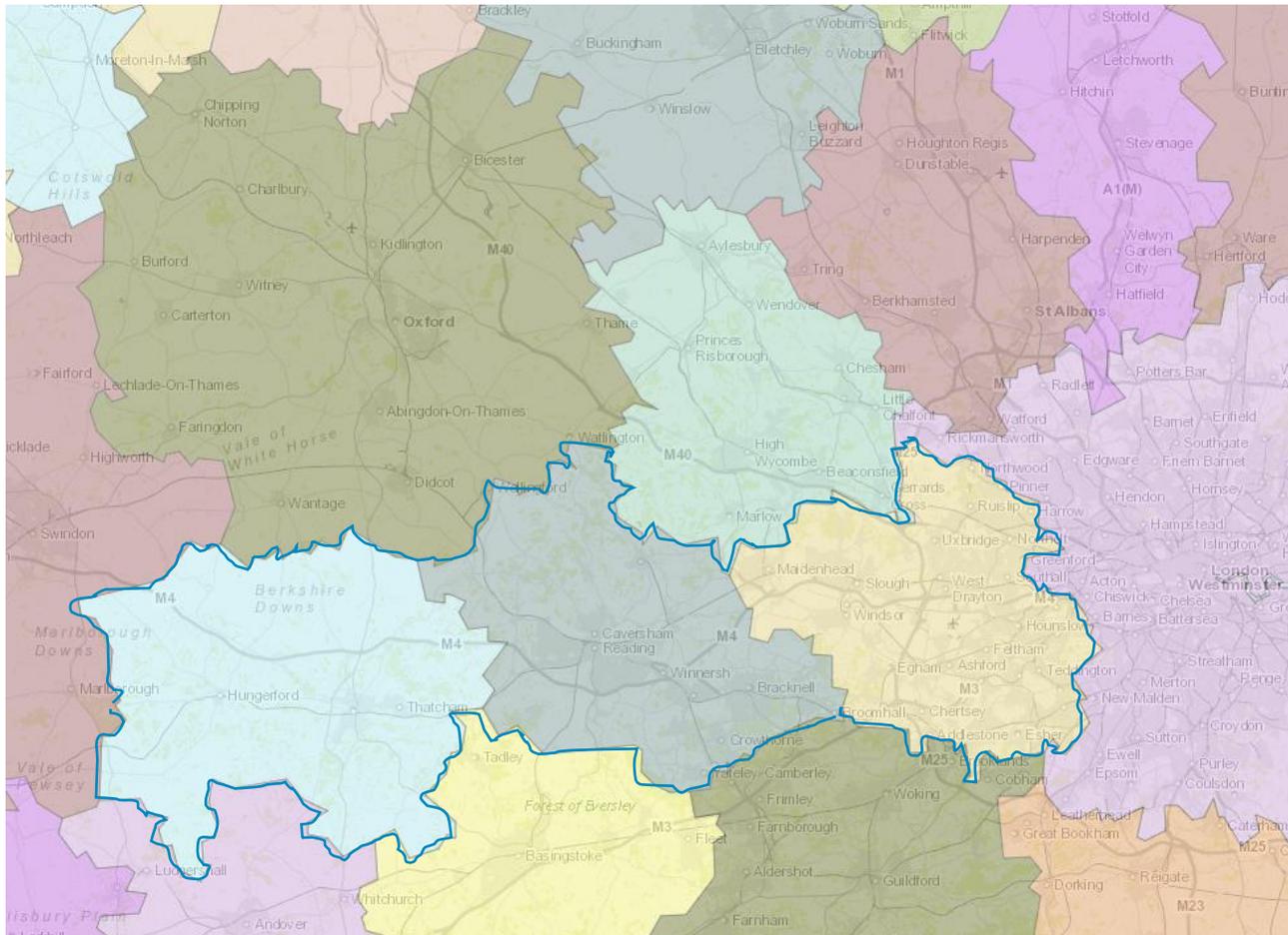
Berkshire has achieved strong Foreign Direct Investment figures in recent years, leading to an increase in the number of Foreign-Owned Companies, from 945 in 2010 to 1,295 in 2019.

Whilst Berkshire's Foreign-Owned Companies only represented 3% of all local businesses in 2019, they generated 30% of local employment and 53% of local turnover.

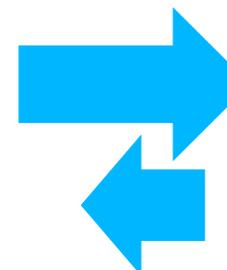
Since 2010, the proportion of local jobs in Foreign-Owned Companies has increased from 25% to 30%. Slough has the greatest proportion of employment in EU owned firms and Bracknell in 'rest of the world' owned firms (details overleaf).

Source: [ONS, February 2020](#)

Access to skills: Berkshire draws from wider Travel to Work Areas (TTWAs), but also loses workers – notably to London



	Newbury TTWA	Reading TTWA	Slough / Heathrow TTWA	Thames Valley Berkshire	Additional potential
Population (2011)	129k	558k	1,662k	Minus 911k (2018)	= 1,438k
Working Aged Population (16-64) (2019)	86k	352k	1,094k	Minus 576k	= 1,532k
Workforce (16-64) => potential pool (2019)	70k	285k	830k	Minus 473k	= 712k



43k residents from Thames Valley Berkshire commute into London

24k London residents commute out into Thames Valley Berkshire (Census 2011)



Access to skills: wage levels for employees in Berkshire are 22.7% higher than the UK average

	Mean wage of employees working in (2020)	YoY change (2019-20)
Bracknell Forest	£42,024	+10.9%
Reading	£36,754	+5.9%
Slough	£36,126	-15.9%
West Berks	£36,480	+0.9%
Windsor & Maidenhead	£40,315	+6.9%
Wokingham	£40,918	-3.3%
Thames Valley Berkshire	£38,770	
London	£47,345	+4.2%
UK	£31,590	+3.0%
TVB versus UK	22.7%	



HM Government



Thames
Valley
Berkshire
LOCAL ENTERPRISE PARTNERSHIP

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