

Research and innovation in the South West

The UK Government has committed to increase R&D spending to £20 billion a year by 2024/25, and overall investment in R&D to 2.4% of GDP by 2027. It has also outlined its ambition to secure ‘science superpower’ status by 2030, committed to levelling-up the UK and is seeking to build back better in response to COVID-19, including a focus on green growth to deliver net zero by 2050.

What does this ambition to increase investment in UK research and innovation mean for the South West and its people?

This document provides an insight into the current research and innovation landscape in the South West to inform discussions over how people across the region can contribute to and share the benefits of R&D investment in the UK.

R&D activity in the South West in 2019

FIGURE 1

R&D spend in the South West¹.

8.4% of the UK’s population is based in the South West²

£2.6bn
in 2019

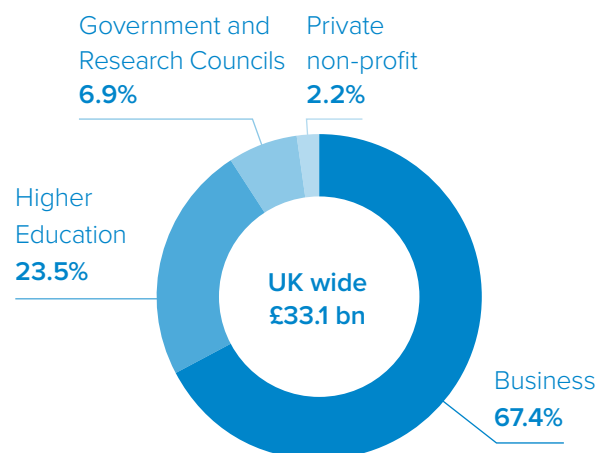
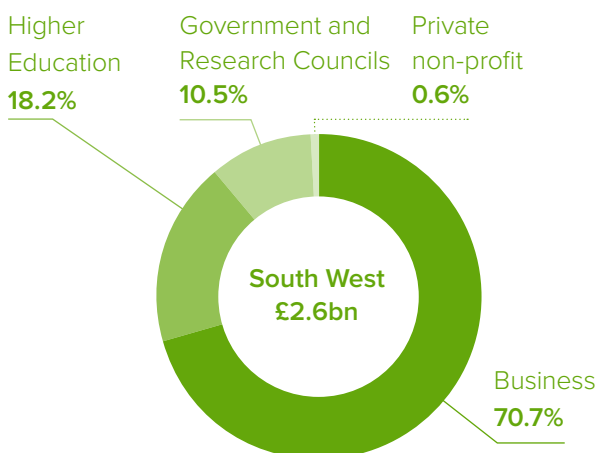
6.7% of
UK total

£459
per capita

Who performs R&D in the South West?

FIGURE 2

Percentage distribution of R&D spend in the South West and UK wide.



Source: Office for National Statistics. 2019. Gross domestic expenditure on research and development, UK: 2019.

1. Office for National Statistics. 2019. Gross domestic expenditure on research and development, by region, UK.

2. Office for National Statistics. Estimates of the population mid-2020 for the UK, England and Wales, Scotland and Ireland.

Where does R&D take place in the South West?

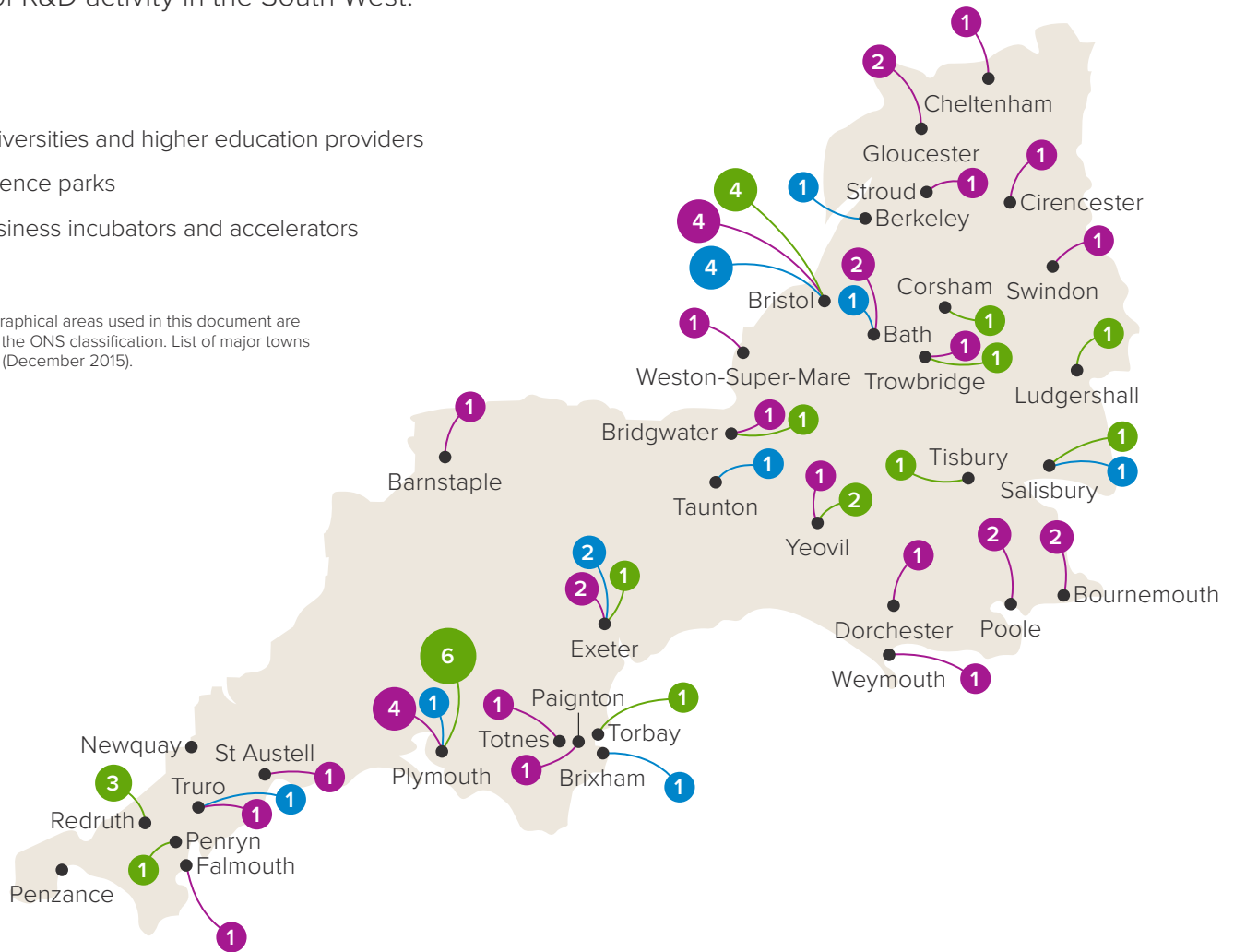
FIGURE 3

Map of R&D activity in the South West.

KEY

- Universities and higher education providers
- Science parks
- Business incubators and accelerators

The geographical areas used in this document are based on the ONS classification. List of major towns and cities (December 2015).



42,025 workplaces in the science and technology sector³

34 universities and higher education providers⁴

5% of the UK's research infrastructures⁵

13 science parks⁶

24 business incubators and accelerators⁷

3. Office for National Statistics. 2017. Employees and workplaces in Science and Technology in Local Authorities of the UK, 2016 (user requested data). Data correspond to figures for 2016. Data released on 17 January 2017. Workplace is defined as local units or branches of an organisation present in the region, and may belong to private, public, or charity sector. Science and technology is defined based on SIC07 industrial classification codes.
4. Higher Education Statistics Agency 2019/20 Higher Education providers. Data retrieved in March 2022. Figure includes publicly funded universities and other HE institutions. Institutions were linked to main campus site only.
5. Royal Society. 2018. A snapshot of UK research infrastructures. Report released on 22 January 2018.
6. UK Science Park Association 2022.
7. Figures obtained from Cornwall Innovation, <https://cornwallinnovation.co.uk> (accessed on 5 April 2022); UWE Bristol, see <https://www.uwe.ac.uk/business/university-enterprise-zone> (accessed on 5 April 2022); Swindon and Wiltshire Economic Assessment 2018, see [appendix-2-economic-asset-audit-may-2018.pdf](https://www.swlep.co.uk/appendix-2-economic-asset-audit-may-2018.pdf) (swlep.co.uk) (accessed on 5 April 2022); Heart of the South West Innovation Ecosystem – Building our evidence base. <https://heartofswlep.co.uk/wp-content/uploads/2021/04/6.-HotSW-Innovation-Ecosystem-Building-our-Evidence-Base-FINAL.pdf> (accessed on 5 April 2022); Unlocking Potential, <https://www.unlocking-potential.co.uk> (accessed on 5 April 2022). These sources may not include all business incubators and accelerators in the region.

How is R&D in the South West funded and supported?

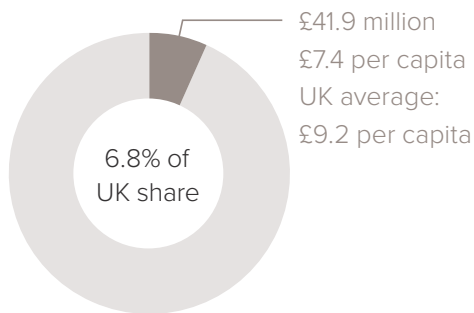
R&D is funded and supported in many different ways. This includes direct investment from public, private, charitable and overseas sources, as well as indirect measures that encourage further private investment such as R&D tax credits.

FIGURE 4

Examples of R&D funders in the South West.

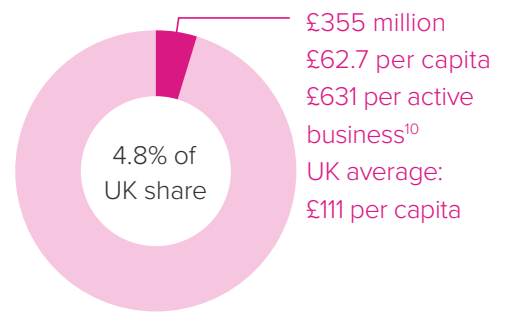
Horizon 2020⁸

2020 – 2021



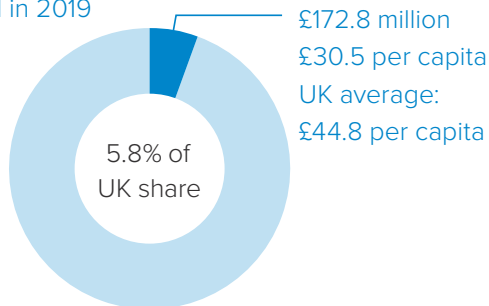
R&D tax credits⁹

2019 – 2020



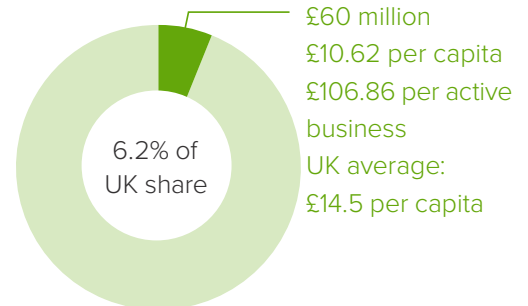
Research councils¹¹

Awards started in 2019



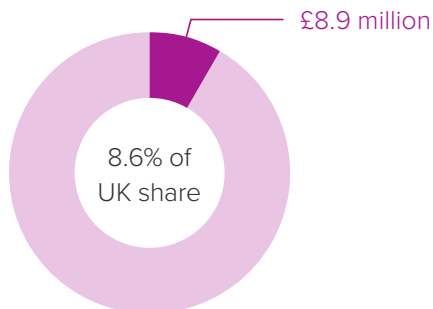
Innovate UK¹²

2019 – 2020



The Royal Society¹³

2020 – 2021



8. European Commission. Data from Horizon Dashboard. See <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard> (accessed on 29 March 2022). Figures represent net EU contribution for successful projects submitted during the 2020 and 2021 calls for project proposals. Funding figures in EUR were converted to GBP using Xe Currency Converter (accessed on 29 March 2022).

9. HM Revenue and Customs. 2019/2020 Research and Development Tax Credits. Regional split is based on the location of the registered office making the claim and may not be where the R&D activity is carried out.

10. Department for Business, Energy & Industrial Strategy. Business population estimates 2020. <https://www.gov.uk/government/statistics/business-population-estimates-2020> (accessed on 1 April 2022)

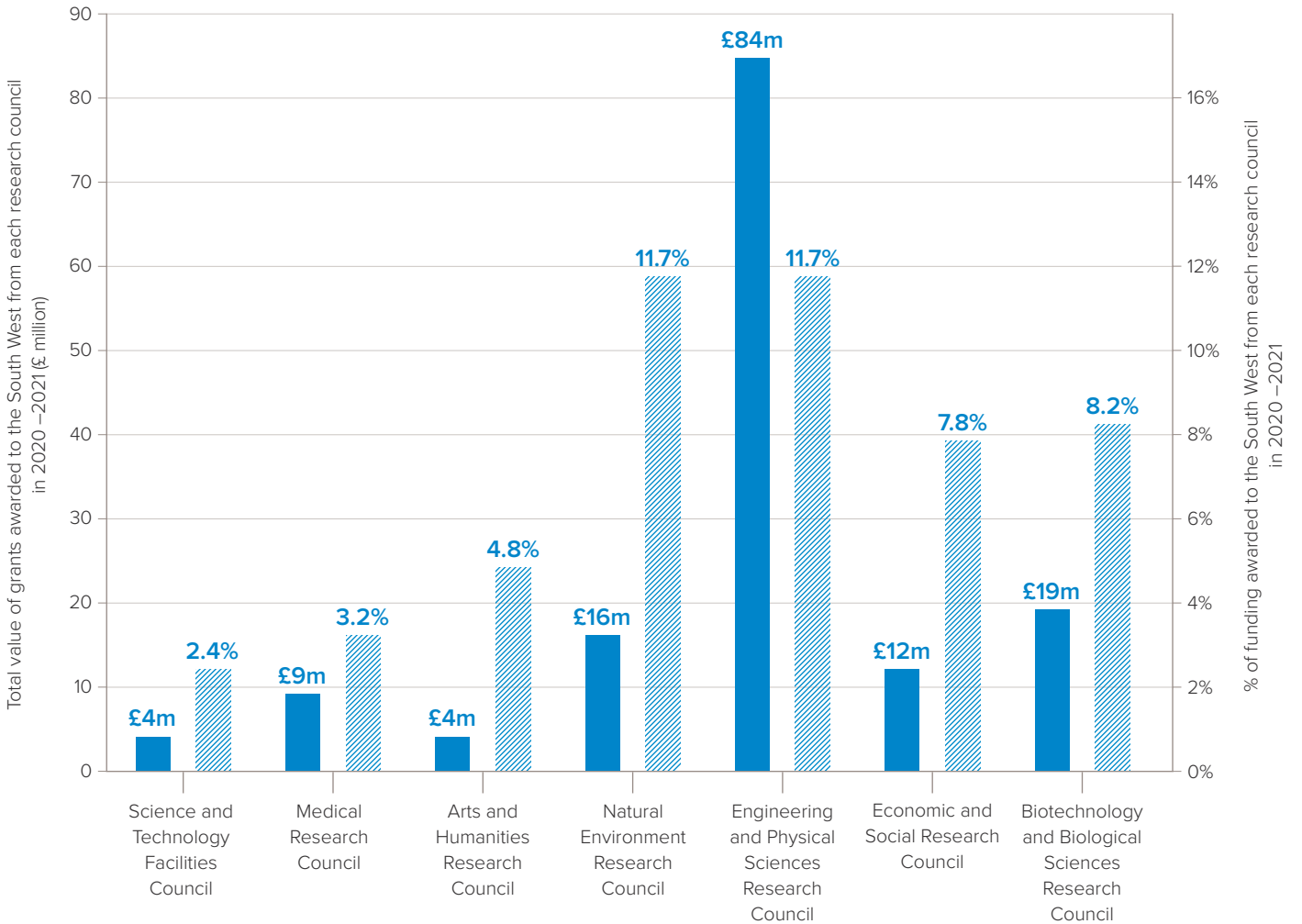
11. UK Research and Innovation. Gateway to Research. <https://gtr.ukri.org/> (accessed on 31 March 2022). Figures correspond to grants awarded with funding commencing in 2019 by AHRC, BBSRC, EPSRC, ESRC, MRC, NERC, and STFC. These may be spent over several years and outside the region via collaborations. Awards made in previous years may have also been spent in 2019 and are not included here.

12. UK Research and Innovation. Innovate UK funded projects since 2004. <https://www.ukri.org/publications/innovate-uk-funded-projects-since-2004/> (accessed on 1 April 2022). Figures correspond to awards from the 2019/2020 competition year; but the awards may be spent over several years.

13. Royal Society. The data capture grants allocated under any of the Society's funding streams to UK research institutions in the 2020/21 financial year. The figure excludes payments to overseas research institutions regardless of fund and also excludes a small amount of funding allocated to UK companies, UK schools, and overseas individuals.

FIGURE 5

How much did each of the research councils invest in the South West in 2020 – 2021?¹⁴



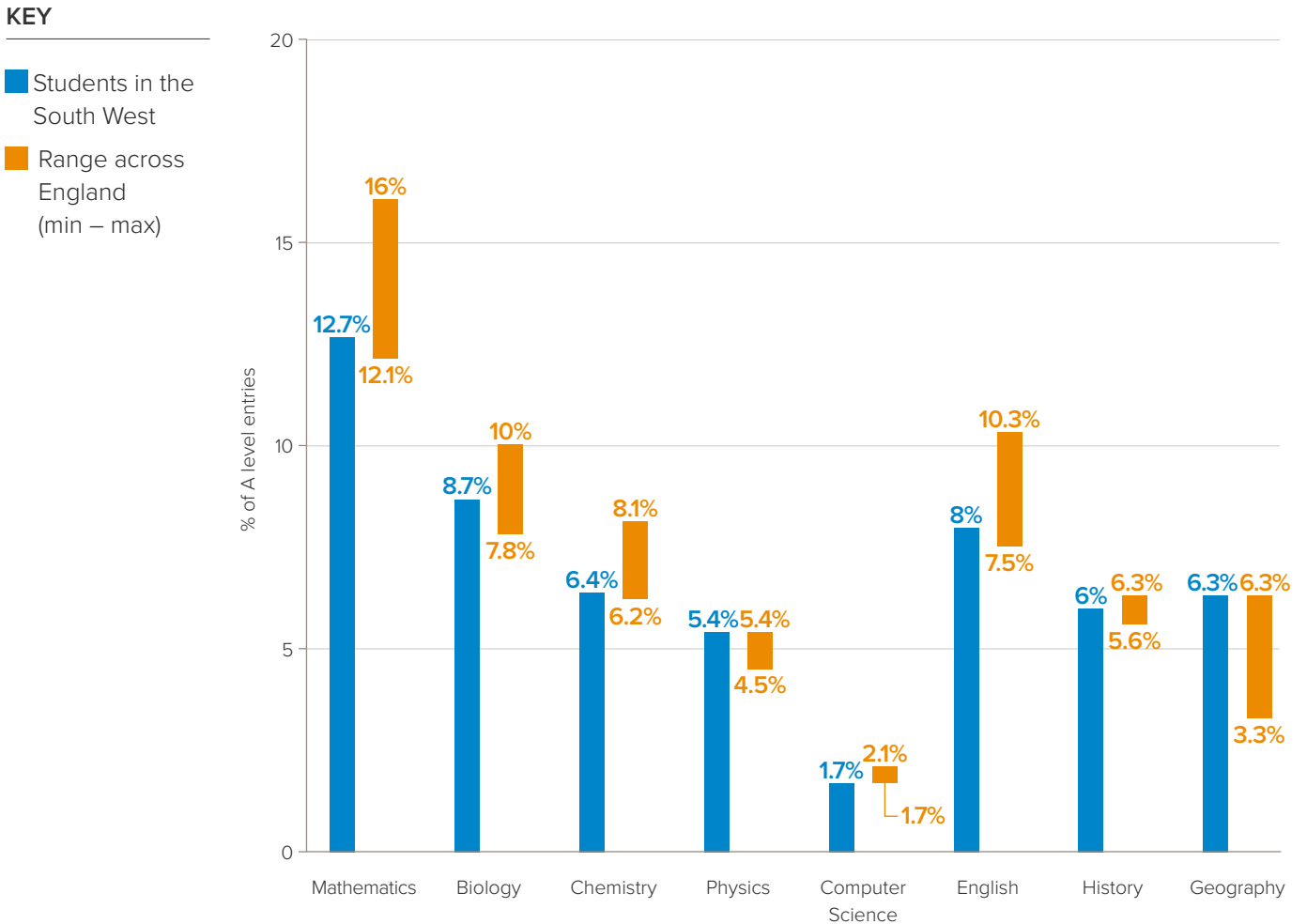
14. UK Research and Innovation. UKRI Competitive Funding Decisions 2020-21. See <https://www.ukri.org/what-we-offer/what-we-have-funded> (accessed on 30 March 2022). Funding decisions for UKRI response to COVID are excluded.

There is no R&D without people

A thriving R&D environment in the South West requires a talented workforce to perform research and young people in the pipeline who are equipped with the skills they will need in the future economy.

FIGURE 6

What proportion of A levels being taken in the South West are in science subjects?



Source: Department for Education. 2022. A level and other 16 to 18 results: Academic year 2020/21. Entries and results – A level by region and subject (end of 16-18 study). Figures refer to number of A-level entries. Mathematics includes all maths subjects. Selected non-science subjects given as example of uptake in other disciplines. For comparison, figures from regions with lowest/highest percentage of A level entries in selected subjects are shown.

FIGURE 7

Undergraduate science students in the South West¹⁵.

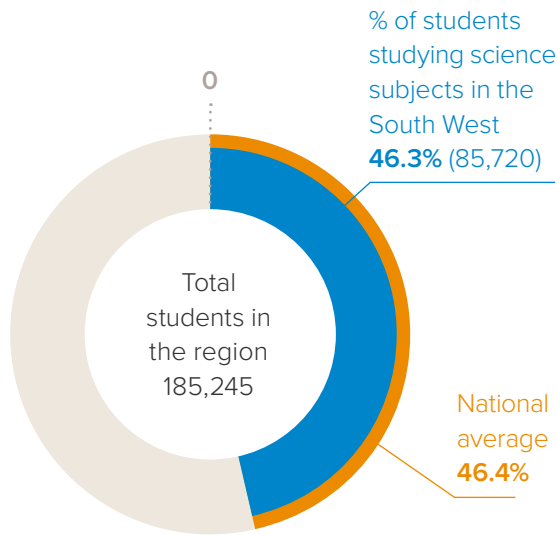
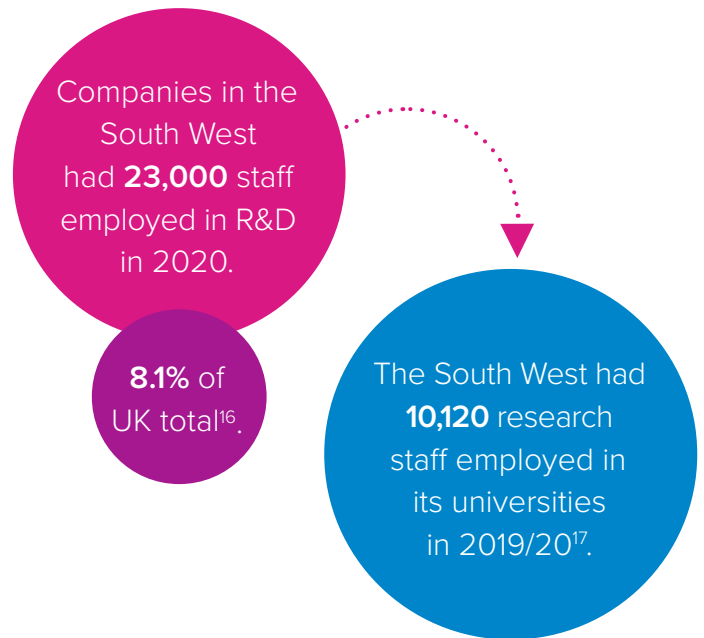


FIGURE 8

How many people are employed in R&D in the South West?



Find out more

Investing in UK R&D

Explore research and innovation in other areas of the UK and read our briefings on R&D investment in the UK produced together with the other UK National Academies. Find out more on royalsociety.org/topics-policy/projects/investing-in-uk-research-development

Industry programme

The Royal Society's Science and Industry programme connects industry with the Society and promotes the value of science to the economy by bringing together industry, academia and government. Find out more on royalsociety.org/industry

Promoting excellence in science

We promote excellence in science and support international collaborations by funding research in the life and physical sciences, including engineering, in the UK and internationally. Find out more about our grants programmes on royalsociety.org/grants

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15. Higher Education Statistics Agency. HESA Student Record 2020/21 via HeidiPlus. <https://heidiplus.hesa.ac.uk> (accessed 31 March 2022). The HESA science grouping includes subjects like medicine, nursing, and agriculture which may not be included in other definitions of STEM (science, technology, engineering, and maths).

16. Office for National Statistics. 2021 Business enterprise research and development. Figures refer to full-time equivalent staff.

17. Higher Education Statistics Agency. HESA Staff Record 2019/20, via HeidiPlus. <https://heidiplus.hesa.ac.uk> (accessed 31 March 2022). Research staff refers to those with roles in both teaching and research or in research only. Both full-time and part-time research staff are included in the figure.