



# Economic Impact of University of Reading, 2021/22 Academic Year

A Report by Hatch  
October 2023

# University of Reading

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October 2023

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# Contents Page

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<b>Executive Summary</b>	<b>1</b>
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<b>1. Introduction</b>	<b>4</b>
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<b>2. Core economic contribution</b>	<b>6</b>
Direct effects	6
Indirect effects	7
Induced effects	8
Student expenditure effects	9
Visitor-related effects	10
Summary of economic contributions	10

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<b>3. Skills contributions</b>	<b>12</b>
Graduate Overall Outcomes	12
Graduate Employment Sectors	12
Graduate Occupations	14

---

<b>4. Research, innovation and enterprise</b>	<b>16</b>
Research	16
Innovation and Partnerships	17
Business engagement and facilities	18

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<b>5. Conclusion</b>	<b>20</b>
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<b>Appendix A - Technical Appendix</b>	<b>22</b>
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<b>Disclaimer &amp; Limitations of Use</b>	<b>26</b>
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## Executive Summary

- i. The University of Reading makes a significant economic contribution both locally and nationally. Overall, Hatch estimates that the University generated around £580 million in GVA and 8,600 Full Time Equivalents (FTEs) nationally in 2021/22. This rises to approximately £1 billion and 12,300 FTEs if the economic footprint of the university-owned commercial space<sup>1</sup> is included.
- ii. Around half of this economic footprint accrues to Reading and Wokingham<sup>2</sup>. To put this in context, this means that:
  - Around 1 in every 26 jobs in the whole of Reading and Wokingham can be traced back to the University.
  - This GVA contribution is equivalent to 2.9% of all GVA in the local area.
  - For every direct job at the University, a further 2.8 jobs are supported across the UK economy.

Demand side economic impacts of University of Reading for the UK, 2021/22		
Impact	GVA (£m)	Jobs supported (FTE)
Direct	175	3,250
Indirect	60	1,200
Induced	90	990
Student expenditure	250	3,100
Visitors	1	18
Commercial Space – Direct	210	1,800
Commercial Space – Indirect and induced	210	1,900
<b>Total (excluding commercial space)</b>	<b>580</b>	<b>8,600</b>
<b>Total (including commercial space)</b>	<b>1,000</b>	<b>12,300</b>

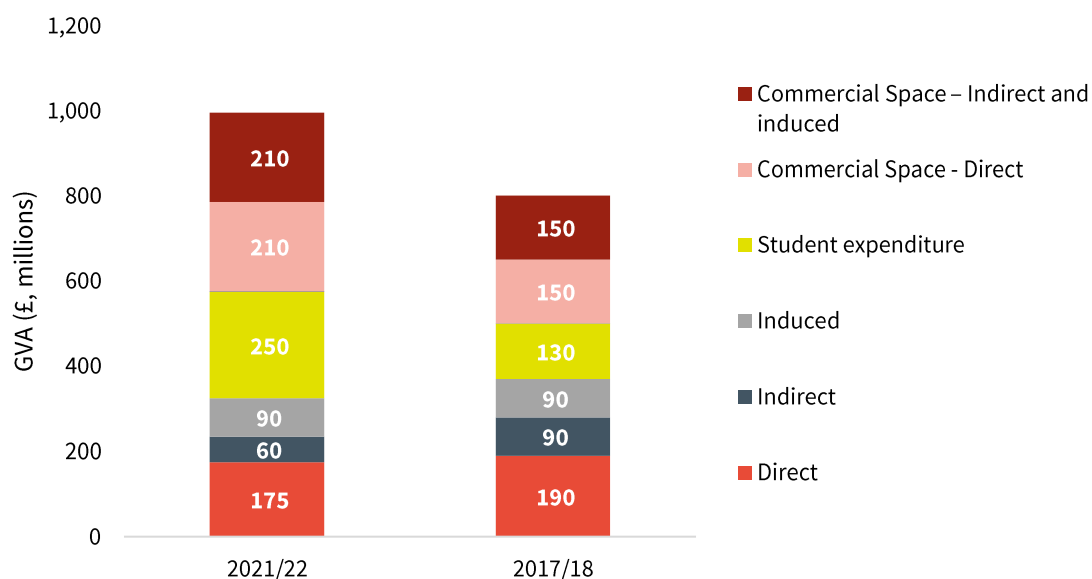
Source: Calculations done by Hatch Urban Solutions based on data provided by University of Reading and HESA. Note number be not add up due to rounding.

- iii. The UK level economic contribution of the University is approximately 24% larger than when measured in the previous study, which captured impacts for the 2017/18 academic year. The composition of impacts at the national level is shown below, split by the various sources of economic contribution, and compared to the previous assessment.

<sup>1</sup> Including Thames Valley Science Park, Shinfield Studios, British Museum research and storage facility as well as other University of Reading commercial lettings.

<sup>2</sup>Gross Value Added (GVA) is the key measure of the value of goods and services produced by an organisation, sector or region. It is measured as the difference between income and the value of bought in goods and services, or the sum of gross profits before interest costs, taxes, depreciation and amortisation and total employment costs. A full-time equivalent (FTE) is a unit of measurement used to figure out the number of full-time hours worked by all employees in a business. If a business considers 40 hours to be a full-time workweek, then an employee working 40 hours per week would have an FTE of 1.0. In contrast, a part-time employee working only 20 hours per week would have an FTE of 0.5—which shows that their hours worked are equivalent to half of a full-time employee.

### GVA contribution of University of Reading by category



Source: Calculations done by Hatch Urban Solutions based on data provided by University of Reading and HESA. Note: **Visitor-related GVA impact** was negligible in relative terms in both years so is not shown in the chart.

- iv. Beyond these quantitative economic measures, the University of Reading supports the local and regional economies by supplying high skilled graduates:
- Around 86% of graduates go into high skilled occupations shortly after graduating, compared to 79% of all UK graduates.
  - Just under 40% of graduates go into the education and health sectors, plugging vital skills gaps
  - Graduates from the University are also likely to go into high value sectors such as professional, scientific and technical activities - as well as information and communication - than the average UK graduate.
- v. The University of Reading also makes contributions to the global community through its research, 86% of which is categorised as ‘world leading’ or ‘internationally excellent.’ Its research covers global issues surrounding the themes of agriculture, food and health; heritage and creativity; environment and prosperity and resilience. In 2021/22, the University of Reading generated £38 million in research income, which Hatch estimates generated around £270 million in private sector spillovers.
- vi. Finally, the University drives business productivity through its innovation centres, continuing professional development (CPD) courses and facilities. In terms of revenue, Reading is the 13<sup>th</sup> highest deliverer of CPD in the UK and the 4<sup>th</sup> in the South East. It also provides commercial space on its campus and the Thames Valley Science Park. Hatch estimates that this commercial space directly employs 1,800 people and generates a £210 million in direct GVA<sup>3</sup>.

<sup>3</sup> These impacts are included in the table above.

# Economic Impact of University of Reading 2023

## University of Reading Overview



### A top university

Ranked in the top 20% of world higher education institutions



### An international institution

With three campuses in the UK and one in Malaysia



### Quality research

98% of research is 'internationally recognised' and 78% is 'internationally excellent'



### A community for innovation

Home to the Thames Valley Science Park, The Science & Technology Centre and Reading Enterprise Centre

## Total Economic Impact

### Direct, Indirect and Induced effects



£317m



£325m



5,440

Generated in **income**

Generated in direct, indirect and induced **GVA** for the UK

Direct, indirect and induced **jobs** supported for the UK

### Student, visitor and commercial space effects

£250m

#### GVA

generated by student and visitor expenditure

£420m

#### GVA

generated by tenants on University's commercial space

3,100

#### Jobs

supported by student and visitor expenditure

3,700

#### Jobs

supported by these tenants

## Other Impacts



### Skills

86% of graduates go into high skilled roles versus 79% of UK graduates



### Vital sectors

The most common sectors for graduates to enter are 'Education' and 'Health.'



### Research

Output generated £270 million in spillovers



### Key Partnerships

The University teams up with business, academia and governments to solve key issues



### Business engagement

The University is in the top 20% in the UK for 'Working with business'



### Space for enterprise

Around 1,800 people are directly employed on the commercial space associated with the University

# 1. Introduction

## Purpose

- 1.1 Hatch has been commissioned by the University of Reading to carry out an assessment of the University's contribution to Reading, the South East and the UK.
- 1.2 The University of Reading is ranked in the top 20% of world institutions and has campuses at Whiteknights, Greenlands, London Road and Henley Business School as well as one in Malaysia. Reading is also considered a research-intensive University. According to the Research Excellence Framework 2021, 40% of its research is 'world leading' (4\*) and another 46% is 'internationally excellent' (3\*). This represents a 10% increase in 4\* and 3\* research since the last REF assessment in 2014.
- 1.3 Aside from its research, the University is clearly successful in its role as a provider of higher skills and preparing students for the job market, with 89% of graduates in work or further study after graduating.<sup>4</sup> According to the Financial Times, Henley Business School ranks number three in the UK for executive education programmes.<sup>5</sup>
- 1.4 The multi-faceted nature of the University means that it generates a wide range of contributions to the economy. According to the institution's latest Strategic Plan<sup>6</sup>, the University aims to have an impact beyond its campuses, which includes playing 'a positive role in the social, cultural, environmental and economic life' of the local community. In light of this principle, one of the University of Reading's KPIs is to generate £1bn in Gross Value Added (GVA) for the UK economy.
- 1.5 This report seeks to provide a detailed examination of the University of Reading's socio-economic contributions local, regionally and nationally for the 2021/22 year academic and will therefore focus on the following sources of economic contribution:
  - **Core economic contribution (Section 2):** the university's economic footprint, arising from its role as an employer and purchaser of local goods and services.
  - **Student and visitor related impacts (also Section 2):** the economic impact generated from the university's role as an attractor of students and visitors to Reading.
  - **Skills contributions (Section 3):** the array of contributions made to the wider economy through the supply of higher-level skills.
  - **Research, innovation and enterprise (Section 4):** the effects that come to fruition through the University's stimulation of enterprise, innovation, research and international links.
- 1.6 The impacts covered in the first two bullet points are *demand side* effects whereas the latter two are *supply side* effects.
- 1.7 It is important to note that not all impacts generated by the University can be quantified or monetised and, in these instances, some of the benefits produced by the institution will be considered in a more qualitative manner.

<sup>4</sup> HESA, Graduate Outcomes, 2020/21

<sup>5</sup> Financial Times, Business School Rankings, 2023

<sup>6</sup> University of Reading, 2020-2026 Strategic Plan, 2020

## Approach

- 1.8 The report makes use of a range of existing datasets and other material supplied by the University, economic modelling and published economic data provided by the Office for National Statistics (ONS) and the Higher Education Statistics Agency (HESA).
- 1.9 A full summary of the methodology is provided in Appendix A. The most important elements are outlined here.

### Time period and impact geographies

- 1.10 The majority of the study draws upon data from the academic year 2021/22, making selective reference to recent trends where appropriate, whilst also covering information mentioned in future plans.
- 1.11 The study focuses on three spatial impact areas:
- The local authority districts of Reading and Wokingham
  - The South East
  - The UK.

### Measures of impact

- 1.12 Where possible, the report quantifies impacts in economic terms. The two key measures of impact are:
- **Gross Value Added (GVA)**  
This is the commonly accepted measure of wealth creation for an organisation, sector or regional economy. GVA is the difference between gross output and bought in goods and services, or to put it another way, the money distributed as surpluses, wages and salaries and to fund capital investment.
  - **Employment**  
The other key indicator of economic contribution is the number of jobs that are supported by each of the various effects described above. This is expressed as Full Time Equivalents (FTEs), a measure that converts full and part-time jobs into a common currency.
- 1.13 Where socio-economic contributions cannot be meaningfully or robustly expressed, other statistics are drawn on to illustrate the scale of the impact. Qualitative material such as case studies will also be used where appropriate.



## 2. Core economic contribution

- The University is the fourth highest income generator amongst higher education institutions (HEIs) in the South East, earning £317 million in 2021/22.
- The University directly employs around 3,250 FTEs and generates £175 million in direct GVA.
- The University indirectly supports a further £62 million and 1,200 jobs through purchasing of goods and services from its suppliers.
- The expenditure of staff within the university and the supply chain also supports a further £90million and 990 jobs in the UK economy
- The expenditure of the University's students supports £250 million in GVA and 3,100 FTEs.
- The commercial space on the University and the Science Park directly supports 1,800 FTEs and £130 million in GVA.

2.1 Hatch has examined various sources of the University's directly quantifiable contribution to the economy. This demand-side assessment has several distinct elements, outlined below.

- Direct effects: the economic activity supported on UK campuses, both within the University and the tenants of the Science Park.
- Indirect effects: the University's role as a purchaser of goods and services from other organisations, and the consequent multiplier effects that are generated.
- Induced effects: the further multiplier effects supported by the personal expenditure of the University's staff and those in its supply chain.
- Student expenditure effects: the economic impacts arising from the off-campus expenditure of students.
- Visitor expenditure effects: the additional expenditure and economic impact generated via the attraction of visitors to Reading and Wokingham.

2.2 This section considers each of these in turn and puts them into context.

### Direct effects

2.3 As of 2021/22, the University of Reading employed around 3,250 FTEs representing an 8% increase on 2014/15 levels (the earliest available year on HESA).

2.4 The roles span a range of occupations including academics, professional services, management and administration. The jobs tend to be highly skilled with the average worker earning £41,700. This represents a 16% increase from 2016/17 levels, when the last impact study was conducted, and exceeds the regional and national averages of £38,900 and £38,100 respectively. Most live locally with just under a third living in Reading (32%) and a quarter in Wokingham.

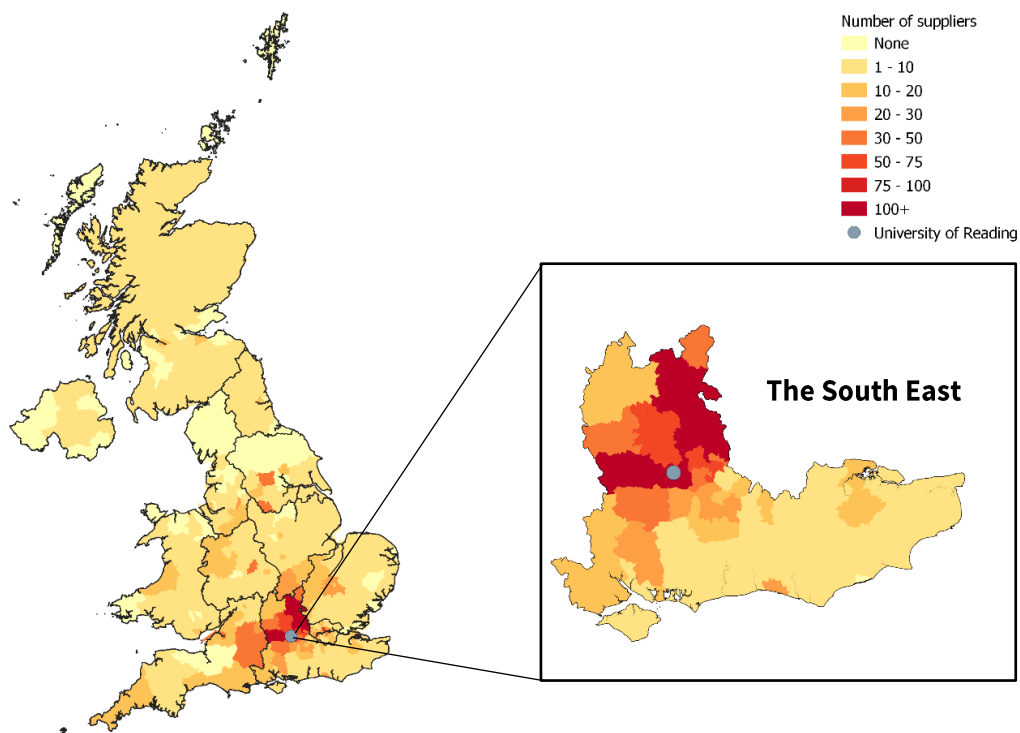
2.5 The University has one of the largest land holdings of any University in the UK: the third largest after Oxford and Cambridge. In addition to the core University jobs, the University also hosts a community of innovation and knowledge-based companies at the Thames Valley Science Park (TVSP) in the 70,000 square feet Gateway 1 building. The University also hosts Shinfield Studios, a 1 million square feet TV and film production hub, and a British Museum storage and research facility.

- 2.6 We estimate that the companies who occupy this commercial space collectively employ up to a total of 1,800 direct FTEs, representing a 24% increase from 2018.
- 2.7 The University generated an income of £317m in 2021/22, making it the fourth largest income generator in the South East region after the universities of Oxford, Southampton and Sussex<sup>7</sup>. This represents a 10% increase since 2016/17.
- 2.8 This income supported £175 million in direct Gross Value Added (GVA) in 2021/22 for the University, with an additional £210 million in direct GVA from the other companies based on campus and at the TVSP.

## Indirect effects

- 2.9 The University has made substantial investment in facilities in recent years, averaging a capital expenditure of £42m per year from 2013/14 to 2021/22. This totals to £377 million over eight years.
- 2.10 In 2021/22, the University of Reading spent over £82 million on goods and services from UK-based businesses (including both operating and capital purchases), of which £30 million was spent in the South East. The map below shows that the University tends to source locally. A high density of suppliers are located in the surrounding areas of the University.

Figure 2.1 Map of suppliers by local authority district, 2021/22



Source: Hatch Urban Solutions based on data provided by the University of Reading.

- 2.11 Hatch estimates that through this supply chain expenditure, the University of Reading supported £60m in GVA and 1,200 FTE jobs across the UK in 2021/22.

<sup>7</sup> Not including The Open University

Table 2.1 Indirect Economic Impacts, 2021/22

	GVA impact (£m, 2021/22 prices)	Jobs supported (FTE)
Reading and Wokingham	6	130
South East England	20	430
UK	60	1,200

Source: Calculations done by Hatch Urban Solutions based on data provided by University of Reading. Note: Excludes indirect jobs supported by tenants based at the TVSP and other facilities.

## Induced effects

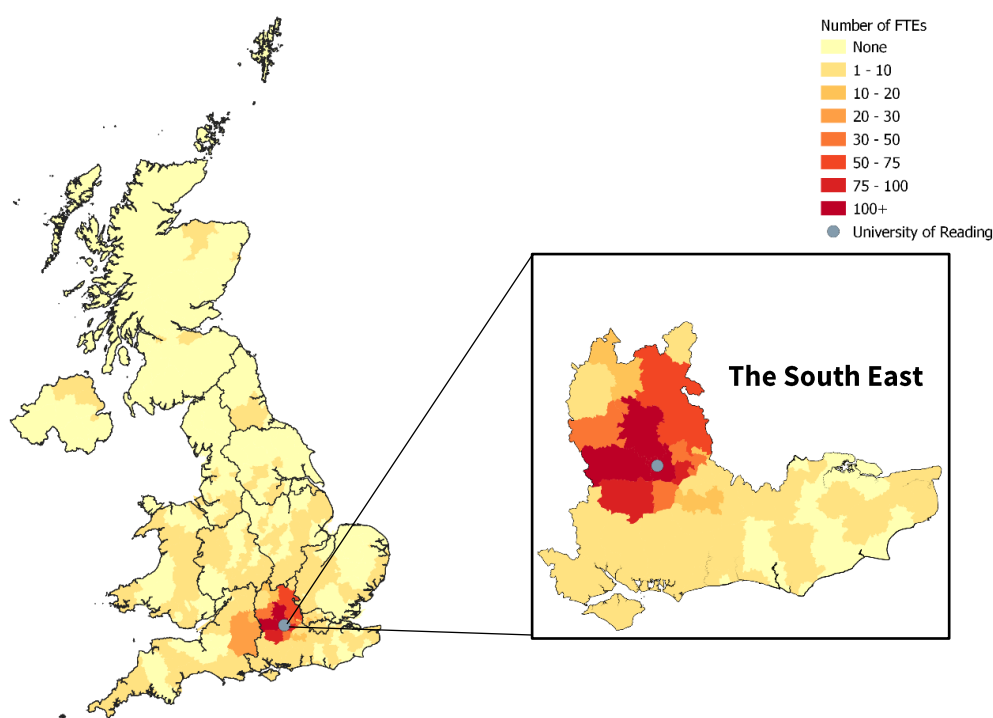
- 2.12 As stated earlier, the University supports many high skilled jobs and well-paid roles, meaning its employees tend to have higher than average disposable income. The economic impacts generated through their expenditure and those in the supply chain (known as *induced effects*) are summarised below.

Table 2.2 Induced Economic Impacts, 2021/22

	GVA impact (£m, 2021/22 prices)	Jobs supported (FTE)
Reading and Wokingham	20	160
South East England	60	620
UK	90	990

Source: Calculations done by Hatch based on data provided by University of Reading. Note: Excludes induced jobs supported by tenants based at the TVSP and other facilities.

Figure 2.2 Map of staff locations by local authority district, 2021/22



Source: Hatch analysis based on data provided by the University of Reading.

2.13 The tenants occupying the University’s commercial space also generate indirect and induced effects. The total economic impact of this commercial space is summarised in the table below.

Table 2.3 Economic Impact of commercial space, 2021/22

	GVA impact (£m, 2021/22 prices)	Jobs supported (FTE)
Reading and Wokingham	230	2,000
South East England	330	2,800
UK	420	3,700

Source: Calculations done by Hatch based on data provided by University of Reading. Note: Includes direct, indirect and induced impacts.

## Student expenditure effects

2.14 In 2021/22, there were around 22,500 students studying at the University. Some of these students were part time or in the process of writing-up theses. Hence there were 15,900 full-time equivalent students studying at Reading<sup>8</sup>. Around 1 in 21 students in all 33 South East universities are at Reading. The University has a significant proportion of students coming from overseas to study in the UK (20%), which is higher than the sector average of 16% across all South East universities.

<sup>8</sup> A ‘writing-up’ student is someone who has entered the new academic year outside of their registration period without submitting a thesis.

- 2.15 Indeed, large numbers of students (94%) are from outside Reading and, as consequence of its wide reach, the University effectively draws in additional expenditure to the local economy in term time from these students. The expenditure of the large cohort of international students represents a source of export earnings for the UK. Hatch estimates that the university's international students alone spend at least £46 million per annum off-campus.
- 2.16 The University of Reading students spend an estimated £260m in the UK economy annually outside the campus itself. A significant proportion of this spend is captured by retail services, while students also have high levels of expenditure in the night-time economy, and student housing sector.<sup>9</sup>
- 2.17 In total, Hatch estimates that this student expenditure supports 3,100 FTE jobs in the UK, of which around 2,000 are in the South East and 920 are in Reading. The vast majority of those located in Reading and the region are net additional jobs due to the fact that a large proportion of students are moving to the area to study.

Table 2.4 Summary economic impact of University of Reading students' expenditure, 2021/22

	Total impact: all students		Of which FT students from outside the area	
	GVA	Jobs (FTE)	GVA	Jobs (FTE)
Reading and Wokingham	80	920	70	800
South East England	170	2,000	60	710
<b>UK</b>	<b>250</b>	<b>3,100</b>	<b>50</b>	<b>590</b>

Source: Hatch calculations based on data provided by the University of Reading

## Visitor-related effects

- 2.18 The University attracts a significant volume of visitors, and hence associated expenditure, to Reading. This happens through several channels including, for example, open days, graduations, conferences, and events for the public. In total over the 2021/22 academic year, there were at least 52,200 recorded visits to these events, which is roughly equivalent to ten times the capacity of the Royal Albert Hall. Although we do not have data on this, given the nature of the events, a significant proportion can be expected to come from outside Reading.
- 2.19 Given the numbers of students from outside the area, these students attract a significant volume of visits to Reading from friends and relatives, a large portion of which will be from overseas given the international cohort. We estimate that such visits supported a further £1 million in GVA in Reading and Wokingham in 2021/22.

## Summary of economic contributions

- 2.20 Drawing all of these demand-side contributions together, Hatch estimates that the University supported a total of 12,300 FTE jobs in the UK and £1 billion in GVA, of which just under half is retained in the local area. To put this into context, this means that:

<sup>9</sup> As was the case for the previous assessment, an element of housing expenditure is likely to "leak" out of the local economy if rental income goes to landlords based outside Reading and the South East, although there is no data to confirm this.

- around 1 in every 26 jobs in Reading and Wokingham can be traced back to the University.
- this GVA contribution is equivalent to 2.3% of GVA in Reading and Wokingham.
- For every direct job at the University there are a further 2.8 jobs supported across the UK economy.

**Table 2.5 Economic Contribution of Reading University, 2021/22**

	Excluding commercial space		Including commercial space	
	GVA impact (£m, 2021/22 prices)	Jobs supported (FTE)	GVA impact (£m, 2021/22 prices)	Jobs supported (FTE)
Reading	270	4,500	500	6,500
South East England	420	6,400	750	9,200
UK	580	8,600	1,000	12,300

Source: Calculations done by Hatch Urban Solutions based on data provided by University of Reading.

### 3. Skills contributions

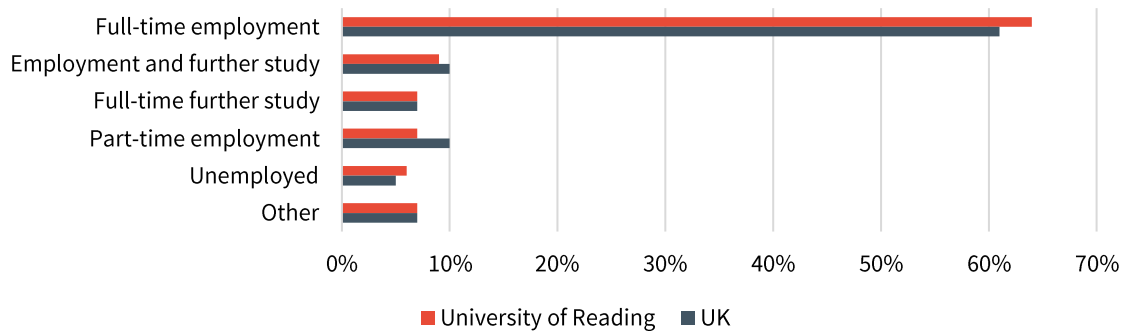
- Most University of Reading (64%) students go into full-time employment shortly after completing their studies.
- A significant proportion (36%) of those entering the workforce enter the education and health sectors, thereby performing roles that make significant contributions to the productivity of the economy and plugging vital skills gaps.
- Relative to workers in England and graduates across the country, a large proportion enter high value sectors such as professional, scientific and technical activities (17%), real estate activities (5%) and the information and communication industry (8%).
- 86% of graduates entering the workforce occupy ‘high skilled’ positions shortly after completing their studies.

3.1 This section provides a summary of the University of Reading’s role in contributing higher level skills to the wider economy. It principally focuses on graduates’ outcomes, summarising which sectors and occupations they go into after completing their studies.

#### Graduate Overall Outcomes

3.2 Shortly after leaving university, most graduates go into full-time employment (64%), which compares favourably to the UK sector average (61%). A further 7% go into part-time employment. Only 14% go onto full-time or part-time further studies whilst a further 9% study whilst working.

Figure 3.1 Graduate activities after 6 months



Source: Graduate Outcomes Survey, 2020/21. Note: based on a sample of 3,200 known responses.

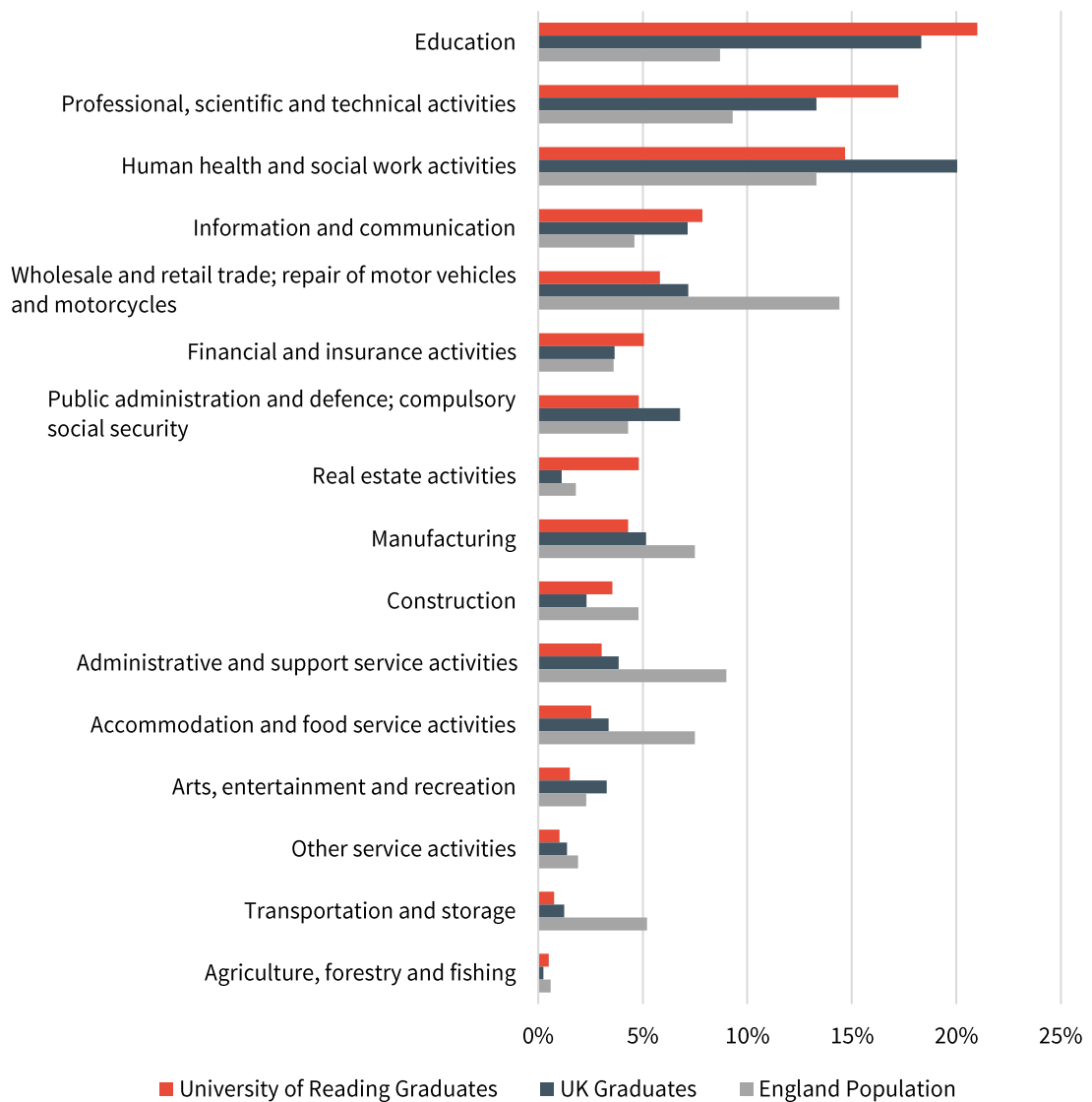
#### Graduate Employment Sectors

3.3 The graph below shows the sectors that University of Reading graduates enter within six months after graduating, based on a sample of over 2,000 students who graduated in 2020/21<sup>10</sup>.

<sup>10</sup> HESA, Graduate Outcomes Data, 2021. The academic year 2020/21 reflects most recently released data at time of writing.

3.4 According to the Graduates Outcomes Survey, the majority of graduates who enter the workforce shortly after graduating enter the education sector, professional, scientific and technical activities<sup>11</sup> and the health sector.

Figure 3.2 Industry destinations of University of Reading graduates, UK graduates and England workers



Source: Graduate Outcomes Survey, 2020/21 and ONS, Business Register and Employment Survey (BRES), 2022. Note: BRES does not have UK wide data so England was selected.

3.5 University of Reading graduates are particularly well equipped for high value sectors in comparison to the general English population and UK graduates. Graduates from the University are 30% and 10% more likely to enter professional, scientific and technical activities and the information and communication sectors than UK graduates, respectively. These figures increase to 85% and 71% when compared to England workers. A slightly higher share of University of Reading graduates are employed within the education sector than UK graduates overall (18%).

<sup>11</sup> These include, for example, management consulting, scientific research, accounting and architecture roles.



3.6 The evidence suggests that a significant proportion of graduates go into roles that are vital for the productivity of the economy, such as teachers or health workers. There is also evidence to suggest they are helping to fill vital skills gaps. English schools have witnessed a staffing crisis with the number of vacant teaching posts increasing by 44% between 2021 and 2022<sup>12</sup>. Additionally, there is also a skills shortage in the health and social work sector, particularly for managerial and professional occupations<sup>13</sup>.

## Graduate Occupations

3.7 The Graduate Outcomes Survey also collects data on the occupations that employed graduates go into shortly after leaving university.

3.8 Based on a sample of 2,070 graduates, 86% of University of Reading graduates go into ‘highly skilled’ positions versus 79% of UK graduates and 51% of UK workers<sup>14</sup>. Additionally, 60% of Reading graduates go into professional occupations versus just over a half of UK graduates and a quarter of UK employees.

**Table 3.1 Standard occupation classification of Reading graduates versus UK employees**

<b>Standard occupational classification</b>	<b>University of Reading Graduates (%)</b>	<b>UK Graduates (%)</b>	<b>UK Workers (%)</b>
1: Managers, directors and senior officials	6%	5%	10%
2: Professional occupations	60%	52%	26%
3: Associate professional occupations	20%	22%	15%
4: Administrative and secretarial occupations	4%	6%	11%
5: Skilled trades occupations	1%	2%	9%
6: Caring, leisure and other service occupations	3%	5%	8%
7: Sales and customer service occupations	3%	4%	7%
8: Process, plant and machine operatives	0%	1%	6%
9: Elementary occupations	3%	4%	9%

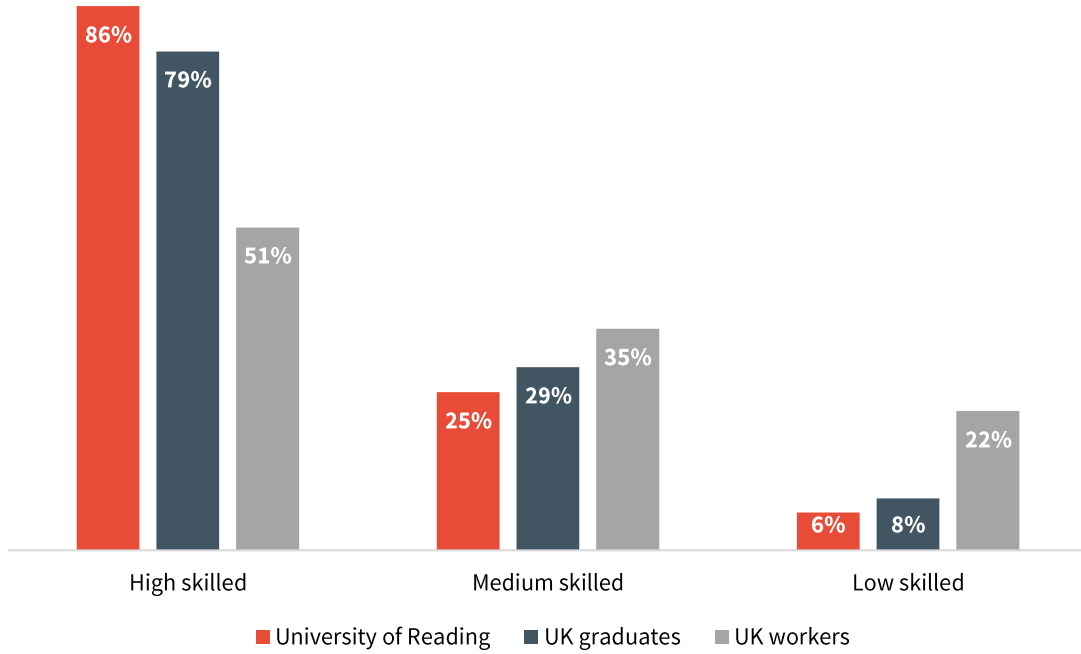
Source: Graduate Outcomes Survey and ONS. Annual Population Survey, 2023

<sup>12</sup> [Guardian Article](#), June 2023

<sup>13</sup> UK Commission for Employment and Skills, Sector Skills Insights: Health and Social Care, 2016

<sup>14</sup> High skilled positions include standard occupational classifications 1-3, medium skilled positions include SOCs 4-6, and low skilled positions include SOCs 6-9.

Figure 3.3 Skill level of roles occupied by University of Reading graduates, UK graduates and UK workers



Source: Graduate Outcomes Survey and ONS, Annual Population Survey, 2023

## 4. Research, innovation and enterprise

- 86% of the University's research is considered world leading or internationally excellent, according to the Research Excellence Framework 2021.
- According to the Knowledge Exchange Framework (KEF), published by UK Research and Innovation (UKRI), the University of Reading is in the top quintile for 'Working with businesses'.
- The University received £38 million in research income, generating an estimated private sector spillover worth £270 million.

4.1 Alongside its core role in the supply of skilled graduates to the wider economy, the University of Reading works with business and academic partners around the globe to develop new ideas, products and processes. This section summarises the University of Reading's research, innovation and enterprise activities through case studies and economic impact modelling where possible.

### Research

- 4.2 As a research-intensive higher education institution, the University of Reading's primary objective is to conduct excellent research that 'changes our understanding of the world, past, present and future; promotes innovation; and tackles current and future challenges facing societies.<sup>15</sup>'
- 4.3 The University's research is divided into four broad themes: Agriculture, Food & Health; Environment; Heritage & Creativity and Prosperity & Resilience. Under these themes sit the University's 35 research divisions<sup>16</sup>. Around 86% of the University's research is considered world leading or internationally excellent, according to the Research Excellence Framework 2021. Below provides some examples of this quality research.

<sup>15</sup> University of Reading, Research and Innovation Strategy, 2019

<sup>16</sup> [Themes \(reading.ac.uk\)](https://www.reading.ac.uk/themes)

### **Driving a step change in international policy to protect pollinators**

International commitments to protect pollinators have been catalysed by University of Reading research to understand the status, trends and values of bees and other pollinating insects within the context of the UN Sustainable Development Goals. This substantial and sustained body of research made a major contribution to the first comprehensive global assessment of pollinators, itself co-chaired by Professor Simon Potts. The assessment report, which clearly demonstrated pollinators' critical role in crop production and causes of their loss, was endorsed by all 124 signatory governments of the United Nations (UN)'s Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and was subsequently adopted into the UN Convention on Biological Diversity together with recommendations for national government action to prevent these losses.

### **Developing a Housing Market Model to Improve Housing Policy**

Research at Reading has informed a number of government policies aimed at improving the affordability of and access to housing; these include the government's annual house construction target (300,000), set with a view to increasing supply, and therefore improving affordability. The empirical model developed at Reading is fully embedded in policy cycles across numerous government departments, including the Ministry of Housing, Communities and Local Government (MHCLG). It also underpins the twice-yearly housing market forecasts conducted by the Office for Budget Responsibility and used in negotiations with HM Treasury over public expenditure planning.

### **Vitamin B6 supplements could reduce anxiety and depression**

Taking high-dose Vitamin B6 tablets has been shown by new research to reduce feelings of anxiety and depression. Scientists at the University of Reading measured the impact of high doses of Vitamin B6 on young adults and found that they reported feeling less anxious and depressed after taking the supplements every day for a month. The study, led by Dr David Field from the School of Psychology and Clinical Language Sciences and published in the journal *Human Psychopharmacology: Clinical and Experimental*, provides valuable evidence to support the use of supplements thought to modify levels of activity in the brain for preventing or treating mood disorders.

- 4.4 In 2021/22, the University generated £38 million in research income, representing a £2.4 million increase since 2016/17 and producing an estimated private sector spillover worth **£270 million in GVA**.

## **Innovation and Partnerships**

- 4.5 The University of Reading has particular innovation strengths in built environment, food and nutrition, agriculture, climate, health, social science and computation sciences. It has also established partnerships at the local, national and global levels with academia, business, research organisations and government.
- 4.6 The University has three innovation centres:
- Agrimetrics
  - EIT Food
  - Institute for Environmental Analytics

- 4.7 Through these innovation centres, the University has established knowledge exchange partnerships at the local, national and global levels with academia, business, research organisations and government. Some key examples of these are given below.

### **Shaping Agricultural Policy**

Agriculture policy decisions, including a replacement for the EU's Common Agricultural Policy, are being informed by University of Reading survey of financial data from 1,750 farms across England, collected by a consortium of universities including Reading. The University of Reading Farm Business Survey (FBS) is the main piece of government research in evaluating all aspects of the economics of agriculture and horticulture in England. The FBS covers all types and sizes of farm and horticultural businesses. It is the most representative and independent survey of farm incomes of its kind. Its results inform farmers and growers, the agricultural and horticultural industries, government, the EU and the general public about the economic state of farmers' and growers' businesses and helps to inform policy decisions.

### **Feeding Innovation**

The University is a major food and nutrition research university, with the connections, impact and facilities to improve the world's food system. The University's Institute for Food, Nutrition and Health (IFNH) interacts with EIT Food, a Knowledge and Innovation Community (KIC) that seeks to transform the way in which we produce, distribute and consume food throughout Europe to improve consumer confidence and health. Reading academics are collaborating with industry and research partners and other universities across the EU in 28 new research, communication and education projects for 2019.

### **Weather Forecasting Innovation**

Through a 40-year partnership with The European Centre for Medium Range Weather Forecasts (ECMWF) the University is advancing the understanding of weather and climate, training the next generation of climate scientists and making a real-world impact on the humanitarian aid response to extreme weather events. The University is also advancing innovations in weather, climate, earth observation and data assimilation science through a diverse range of research programmes, knowledge exchange activities and external partnerships. In 2019, 35 live joint projects including large European Union projects have enabled the latest Reading research to support ECMWF's work as the world-leading centre for medium-range weather forecasting (forecasts of weather three to ten days ahead).

- 4.8 In 2021/22, the University generated £8.3 million in collaborative research income, representing a 6% increase from 2016/17 levels.

## **Business engagement and facilities**

- 4.9 According to the Knowledge Exchange Framework (KEF), published by UK Research and Innovation (UKRI), the University of Reading is in the top quintile for 'Working with businesses.'<sup>17</sup> The University engages with enterprise in various ways, including continuing professional development (CPD). In 2021/22, the University earned £10.6 million in income through CPD, which is considerably higher than the regional (£4.5 million) and national (£3.1 million) averages, delivering 12,800 learner days. This makes it the 13<sup>th</sup> highest CPD revenue generator in the UK

<sup>17</sup> [Knowledge exchange framework – UKRI](#)

and the 4<sup>th</sup> in the South East (3<sup>rd</sup> if you exclude the Open University). Hatch estimates that this CPD delivery generated **£40 million in GVA**.

- 4.10 The University also hosts commercial space on its campus as well as the Thames Valley Science Park. TVSP is home to Shinfield Studios – a 1 million square foot UK film, tv studio and production hub<sup>18</sup>.

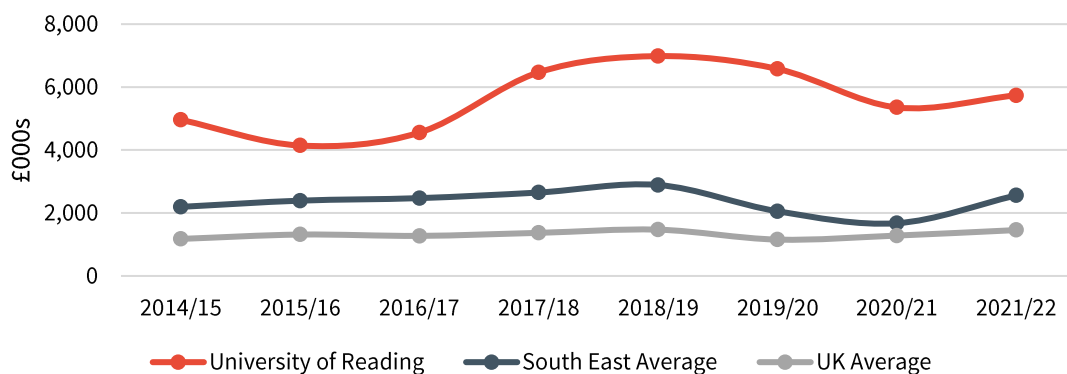
### Shinfield Studios

Shinfield Studios is a new UK Film, TV Studio & production hub currently in development. Nine fully soundproofed stages are already open with more film and tv studio facilities opening on a rolling basis over the next 2 years. A further four stages are due to be completed by Autumn 2023, alongside new workshops and offices, and development will be complete by 2024. Building on the UK’s global reputation for producing world class content, Shinfield Studios will offer film and television producers nearly 1 million square feet of studio space, comprised of 18 new purpose-built sound stages, workshop and mill space plus a contemporary office environment and post production facility.

- 4.11 Hatch estimates that approximately 1,800 people are directly employed on the commercial space associated with the University of Reading, generating a direct GVA impact of around £210 million.

- 4.12 The University of Reading ranked ninth in the UK for income generated from facilities and equipment in 2021/22 and third in the South East (beating Oxford) having received £5.8 million in revenue. Hatch estimates that this generated **£20 million in GVA**.

Figure 4.1 Revenue from facilities and equipment



Source: Graduate Outcomes Survey and ONS, Annual Population Survey, 2023

<sup>18</sup> [UK Film and TV Studio | Shinfield Studios](#)

## 5. Conclusion

5.1 This updated economic impact assessment shows that the University of Reading's economic contribution has grown since the previous assessment conducted in 2017/18:

- In the 2021/22 academic year, it supported a total of £580 million in GVA and 8,600 FTE jobs in the UK
- If we include the economic activity taking place within the university-owned commercial premises such as the Science Park, this rises to approximately £1 billion in GVA and 12,300 jobs
- Around half of this economic footprint accrues to Reading and Wokingham. Indeed, around 1 in every 26 jobs in the whole of Reading and Wokingham can be traced back to the University, and the GVA contribution is equivalent to 2.9% of all GVA in the local area
- For every direct job at the University, a further 2.8 jobs are supported across the UK economy.

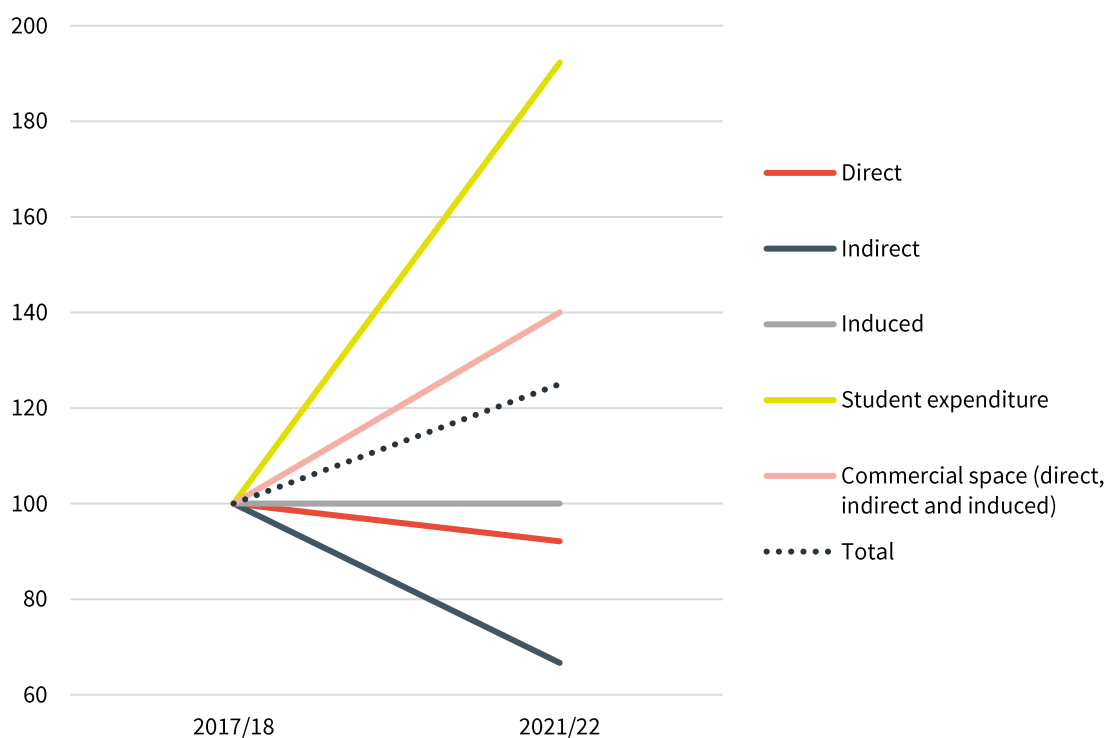
5.2 The table below summarises the demand side employment and GVA impacts of the University.

Impact	GVA (£m)	Jobs supported (FTE)
Direct	175	3,250
Indirect	60	1,200
Induced	90	990
Student expenditure	250	3,100
Visitors	1	18
Commercial Space – Direct	210	1,800
Commercial Space – Indirect and induced	210	1,900
<b>Total (excluding commercial space)</b>	<b>580</b>	<b>8,600</b>
<b>Total (including commercial space)</b>	<b>1,000</b>	<b>12,300</b>

Source: Calculations done by Hatch Urban Solutions based on data provided by University of Reading and HESA.  
Note number be not add up due to rounding.

5.3 In comparison to 2017/18, when the last impact assessment as conducted, the University's contribution to the UK economy has grown by 25%. As the graph below shows much of this growth can be attributed to the growth in the student population – and associated expenditure effects - as well as the increase in the institution's commercial space.

Figure 5.1 GVA Impacts Index (2017/18 = 100)



Source: Graduate Outcomes Survey and ONS, Annual Population Survey, 2023. Note: **Visitor impact** removed as it was negligible in both years.

5.4 The University also contributes to the wider economy through its role as a hub for research, innovation, enterprise and skills development. These impacts are referred to as ‘supply-side’ effects, and the quantifiable impacts are summarised in the table below, in terms of GVA generated.

Table 5.2 Supply side impacts of University of Reading, 2021/22

Supply side effect	GVA Impact (£m, 2021/22)
CPD	40
Consultancy	1
Facilities and equipment hire	20
Contract research	20
Graduate start ups	-
Research spillovers	270
<b>Total</b>	<b>350</b>

Source: Calculations done by Hatch Urban Solutions based on data provided by University of Reading and HESA.



# Appendix A - Technical Appendix

A.1 Here we set out the methodology used to assess the range of economic impacts of the university.

## Core Economic Impacts

### Direct

A.2 Direct impacts refer to the employment and wealth creation resulting from the university's activities, measured in terms of Full Time Equivalent (FTE) employment and Gross Value Added (GVA):

A.3 **Employment** numbers have been sourced from a snapshot from University of Reading's HR database covering the 2021/22 academic year. This captures the number of direct employees by type (academic/professional and support), mode (Full Time/Part Time), contract terms (permanent/temporary), campus location, residential location and salary. Employee headcount has been converted to FTEs using the information on their contracted hours.

A.4 **Gross Value Added (GVA)** is the key measure of economic output at the level of a firm, sector or region. It can be measured in a number of ways and typically for a firm this is done using the income approach, as the sum of EBITDA and compensation of employees. These figures have been sourced from the university's Report and Accounts for 2021/22.

### Indirect

A.5 Indirect impacts refer to the employment and GVA supported by University of Reading's external expenditure (capital and revenue) on local suppliers. This expenditure creates employment and value added within the university's immediate suppliers and within all subsequent tiers of the supply chain, as the university's suppliers make purchases from their own suppliers, and so on.

A.6 University of Reading holds a database of expenditure on external suppliers, which contains information for each supplier on their location, the total level of university spend and their sectoral classification.

A.7 University of Reading's sectoral classification was mapped onto the Standard Industrial Classification (SIC) contained in Hatch's Input-output model for the UK and the regions, and the postcode information was used to determine the location of each supplier (London/UK).

A.8 The full economic impacts of this expenditure were then estimated using our input-output model. The model is based on data from the UK National Accounts and allows us to estimate the supply chain multiplier effects from an initial injection of expenditure in a particular sector.

### Induced

A.9 Induced effects refer to the effects of spending by employees whose jobs are supported directly within the University and indirectly within its supply chain.

A.10 Impacts from expenditure by the university's employees have been estimated using data on wages and salaries from University of Reading's HR database, adjusting for income tax (PAYE),

National Insurance contributions, pension contributions and saving rates. Different rates of leakage of expenditure are assumed for the different impact areas. Our input-output model has been used to estimate the economic impacts from this spending.

- A.11 Impacts from expenditure by employees in the supply chain have been estimated using the Type 2 (indirect and induced) multipliers within our input-output model.

## **Student Impacts**

### **Expenditure**

- A.12 Expenditure by University of Reading's students is an important source of the university's economic contribution. The National Student Income and Expenditure Survey, published by BEIS, provides detailed data on the spending behaviour of students in UK universities, split by full time/part time students and the goods and services purchased (other breakdowns are also available). A further study by PWC<sup>47</sup> used the survey data to estimate the expenditure by international students, also split by full-time and part-time mode of study. We have used this data, along with University of Reading data on the student population, to estimate the economic impacts of this expenditure.
- A.13 The approach is as follows:
- Work out how many full time and part time students live in each impact area (London and the UK), split by those who live in university-owned accommodation and those who live in other accommodation (using data from the University of Reading)
  - Analyse how many of these originally came from outside the impact area before moving to study there (using data from the University of Reading) – this includes both domestic and international students
  - Apply the average expenditure per student (split by full- and part-time) to these breakdowns of the student population (excluding expenditure which represents a transfer to the university, such as tuition fees and rents, for those living in university accommodation)
  - Allocate this expenditure to sectoral categories in our input-output model, using a best fit analysis of the categories in the Student Income and Expenditure Survey and the study on international student spend.
  - Apply leakage rates for each of the impact areas, to each expenditure category
  - Estimate the economic impacts from this expenditure using our input-output model.
- A.14 We have estimated the total economic impact from this expenditure, as well as the portion which comes from students who were originally from outside the impact area.

### **Student Visitor Impacts**

- A.15 As set out in section 4 of the report, the university generates visits to London and the UK in a number of ways. The challenge is to understand how many visits there are, how much these visitors spend in the local economy, what they spend their money on, and what the consequent economic impacts are.

A.16 We have estimated the economic value generated by visits from friends and relatives of students. The process has been to:

- Analyse the origin of all Full-Time students, including the country of origin of international students (using data from University of Reading);
- Analyse the total residential population by country of birth (using data Census 2011);
- Analyse the total number of international visits to London for the purpose of visiting friends and relatives, and associated expenditure, by country of origin (using data from the ONS International Passenger Survey);
- Assume that the number of visits and expenditure attributable to the university is proportional to the share of University of Reading students in the total population, by country of origin;
- Use data from the ONS Tourism Satellite Accounts to estimate the breakdown of this expenditure.

A.17 Use our input-output model to estimate the economic impacts from this expenditure.

A.18 Given the lack of direct data on visitors and expenditure, this should be seen as a best, indicative estimate.

### **Impact of Visitors to Events**

A.19 The University of Reading holds some data on visits to various events but does not systematically collect data on the origin of visitors. We do not quantify the economic impact generated by these visitors because we cannot say what proportion attended purely for the purpose of seeing the events. Therefore, we cannot say conclusively how much of the impact is attributable to the University.

A.20 We have presented the gross numbers of visitors at these events, and have estimated their origin and spend:

- The profile of visitors can be estimated using research by Imperial War Museum, which hosted the Dazzle Ship. It estimates that around 34% of visitors come from overseas.<sup>48</sup>
- The GB Day visits survey estimates that 75% of domestic museum visitors to London are local, with 25% from outside Greater London. In a similar vein we estimate that three quarters of domestic visitors to the University's events are from the South East and a quarter are from outside.
- Finally, using data on spend by type of visitors,<sup>49</sup> we are able to estimate how much money is injected into the South East and UK economies as a result of visitors to University of Reading's events.

### **Impact of Commercial Space**

A.21 Using data provided by the University, we calculated the lettable areas of each use type. The commercial space can be categorized into the following uses: office, leisure, retail, light industrial, laboratory and mixed use.

- A.22 Using the Homes & Communities Agency Employment Density Guide, we then estimated the jobs associated with each of these use types<sup>19</sup>. Using the average GVA per FTE figure for Reading, we were then able to quantify the direct economic impact associated with the University's commercial space<sup>20</sup>.
- A.23 Using results from the core economic impacts, we were able to derive the local, regional and UK economic multipliers associated with the University. We used these to quantify the total economic and employment impact associated with the commercial space.

<sup>19</sup> Homes & Community Agency, Employment Density Guide, 2015

<sup>20</sup> ONS, Subregional productivity in the UK, 2022

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