



UK Research
and Innovation

UKRI Investment and Outputs Data

2022-23

Transforming tomorrow together



Research and Innovation Grants, Fellowships and Studentships

The dataset comprises competitive funding data for Research Councils, Innovate UK, and Research England. It includes activity from 1st April 2022 to 31st March 2023. The data are collected from: Joint electronic Submission system (Je-S) for the Research Councils; Innovation Funding Service for Innovate UK; Research England's application process; The Funding Service (TFS); and additional funding decisions captured outside core funding systems.

We are currently transitioning UKRI to The Funding Service (TFS), replacing legacy systems. The iterative way TFS is being developed means that some of the data fields required to produce this publication are implemented incrementally and, as such, some data will not be available before the reporting date. For this publication TFS applications are included in Table 1a but work is being undertaken before the next publication to enable TFS to be included in more tables.

The data from the Research Councils have been brought together in the newly created databank and combined with data from Research England and Innovate using a singular methodology.

The data are presented below in a series of tables showing: the demand from the sector with the number of applications received in a year; the number of competitively awarded applications and the lifetime value of that commitment; the contribution made by project partners; who our funding actively supported over the year with the number of grants, people (including studentships), organisations, and types of organisations.

The Horizon Europe Guarantee has awarded all eligible applications i.e., an award rate of 100%. This is as expected given the competitive peer review and assessment has been undertaken by the European Commission and the Guarantee is providing funds UK based applicants were unable to receive their Horizon Europe funding while the UK is in the process of associating to the programme. Therefore, Horizon Europe Guarantee are not included in tables 1 and 2 below, and its Horizon Europe Guarantee Applications Submitted and Verified figures are captured in table 2a and the regional breakdown captured in table.

Table 1. Applications received in 2022-23

The number of funding applications submitted to UKRI in 2022-23.

Grant Category	Applications	Organisations	Applied Value (£m)
Fellowship	1,964	211	1,484
Research and Innovation	27,021	11,606	13,134
Total	28,985	11,664	14,617

- the applied value is the life-time costs requested in the application
- the number of applications and organisations are unique instances
- the count of organisations includes lead organisations only for Research Councils and Research England, and lead and partner organisations for Innovate UK
- applications where the value exceeds the competition criteria have been deemed ineligible and excluded
- total count of organisations is lower than the sum of organisations applying for Research and Innovation, Fellowships as some organisations will be counted under both categories
- this does not include applications for non-competitively awarded funding, such as applications for block funding for open access costs and grant extensions
- Horizon Europe Guarantee not included

Table 1a. TFS applications received in 2022-23

Grant Category	Applications	Organisations	Applied Value (£m)
TFS	1,190	92	Not available

- TFS applications includes funding opportunities for Outlines and Expressions of Interest.

Table 2. Competitively awarded applications in 2022-23

The number of funding decisions made in 2022-23 by number and value.

Grant Category		Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)
Fellowship	By number	1,467	454	31
	By value (£m)	955	266	28
Research and Innovation award	By number	20,845	5,664	27
	By value	9,316	2,833	30
Total	By number	22,312	6,118	27
	By value (£m)	10,270	3,099	30

- the number and value of applications received is not directly comparable to awards made in 2022-23. The decisions on applications received in 2022-23 may not be made in the same financial year
- award rate is rounded to the nearest integer
- the total figure includes one successful COVID-19 funding decision
- Horizon Europe Guarantee not included

Table 2a. Horizon Europe Guarantee applications submitted and verified

Grant Category		Applications Submitted	Awards Offered
Horizon Europe Guarantee	By number	2,038	1,905
Horizon Europe Guarantee	By value (£m)	1,071	970

- submitted applications are verified to ensure they are eligible for funding

Table 3. Regional breakdown

The number of funding decisions made in 2022-23 by number and value.

ITL1 (region and nation)	Competitively Assessed Applications	Competitively Awarded Applications	Value Applied (£m)	Value Awarded (£m)	Award Rate number (%)	Award rate value (%)	Horizon Europe Guarantee Number awarded	Horizon Europe Guarantee Value awarded (£m)
East Midlands	1,207	326	436	115	27	26	77	66
East of England	1,884	530	586	172	28	29	215	123
London	5,395	1,240	1,580	459	23	29	440	221
North East	842	260	287	101	31	35	62	29
North West	1,826	547	633	221	30	35	125	54
Northern Ireland	386	114	108	41	30	38	32	10
Scotland	1,977	637	787	257	32	33	205	100
South East	3,079	831	1,051	336	27	32	292	148
South West	1,870	533	618	190	29	31	180	86
Wales	689	170	241	77	25	32	49	22
West Midlands	1,324	375	486	153	28	31	125	61
Yorkshire and The Humber	1,410	468	558	151	33	27	98	49
Not known	410	80	94	12	20	12	5	1
Total	22,299	6,111	7,464	2,283	27	31	1,905	970

- the regions and nations are presented according to the Office for National Statistics' geocode standard of International Territorial Levels (ITL)
- the allocation of an award to an ITL is based on the postcode of the lead organisation. This may not be where the research takes place
- this table includes funding awarded in a single year but spent over several years
- Innovate UK have 13 applications with no lead organisation identified
- we also publish annual reports that cover more of UKRI's funding and are based on the spend in the relevant financial year: www.ukri.org/what-we-offer/what-we-have-funded/regional-distribution-of-funding

Table 4. Project partner contributions on competitively awarded applications in 2022-23

Project partners are reported at the point of application with the applicants' estimate of the financial value of their contribution to the research. Connecting different communities and sectors is key to maximising the outputs of research and innovation. This table indicates the breadth of co-investments our awards leverage.

Project Partner Sector	Number of Awards	Total Partnerships	Project Partner Organisations	Total Contribution (£m)
Academic/University/Learned Society	907	1,590	735	146
Charity/Non-profit	154	236	208	6
Private	2,166	3,836	3,048	790
Public (Including NHS trusts)	265	468	306	16
Other (including unknown)	394	710	609	30
Overall total	2,743	6,833	4,876	987

- awards included have at least one project partner; an award can involve many project partners from the same or different sectors
- project partner organisations is the count of unique organisations involved in partnerships; organisations may be involved in more than one partnership
- Research England do not attribute co-investment to specific project partners so all contributions are classed under Other (including unknown)
- Horizon Europe Guarantee not included

Table 5. Who our funding actively supported in 2022-23

Who our funding supports demonstrates the number of people and organisations who received funding during 2022-23. We support individual people as Principal Investigators, Co-Investigators, Fellows, Researcher Co-Investigators and Students.

Grant Category	Number Awards	People (Individuals)	Organisations
Research and Innovation	16,927	27,459	3,300
Fellowship	2,061	2,129	152
COVID-19	229	1,204	78
Horizon Europe Guarantee	1,700	553	504
Studentship	28,230	27,944	114
Of which Studentships starting 2022-23	5,014	4,976	95
Total	49,147	57,889	3,661

- lead organisations as reported at the application stage of the award
- the figures are distinct instances of grant reference, people, and organisations under all categories
- the count of people supported does not include Research England and Innovate UK who track the organisations they fund, not the people involved, so are unable to count the individuals involved
- the total number of people and organisations may be less than the sum of the counts by grant categories, this is because the same person or organisation can be involved in more than one grant category

- there are Fellowships with a Co-Investigator on the award
- students can be registered to more than one Studentship award

Table 6. Organisations supported in 2022-23

The type of organisation supported shows the variety of organisations receiving funding across the research and innovation landscape.

Organisation Type	Number of Organisations
Academic/University/Learned Society	296
of which are UK HEP	142
Charity/Non-Profit	16
Private	3,071
of which are SME	2,750
Public (including NHS Trusts)	128
Other (including unknown)	224
Total	3,661

- HEP, Higher Education Provider as defined by HESA (Higher Education Statistics Agency) see: [/www.hesa.ac.uk/support/providers](https://www.hesa.ac.uk/support/providers)
- Horizon Europe Guarantee included

Table 7. Number of Research Council funded PhDs submitted by calendar year

Research Councils conduct a yearly submission survey, which captures those students who have been submitted for qualification within 2022.

Year Submitted	Number of PhDs reported 2022 survey
2018	4,424
2019	4,724
2020	4,973
2021	3,639
2022	4,628

- there is a time lag between a student submitting their PhD and the student submission survey being completed. The numbers in 2022 are lower and we expect this to increase over time

Table 8. Applications from 2020-21 to 2022-23

	2020-21 (Inc. COVID-19 Applications)	2020-21 (Exc. COVID-19 Applications)	2021-22 (Inc. COVID-19 Applications)	2021-22 (Exc. COVID-19 Applications)	2022-23 (No COVID-19 Applications)
Total applications received (number)	46,462	25,640	24,421	22,998	28,985
Applied for value (£m)	17,544	14,198	11,178	11,103	14,617

- all applications for funding received by Research Councils, Innovate UK, and Research England between 1st of April 2020 and 31st March 2023. This does not include applications for non-competitively awarded funding, such as applications for block funding for open access costs and grant extensions
- Research and Innovation applications have been deemed ineligible and excluded from the dataset if the application value exceeded the competition criteria
- the applied value is the life-time costs requested in the application

Table 9. Competitively awarded applications from 2020-21 to 2022-23

	2020-21 Totals Exclude and (Include) COVID-19			2021-22 Totals Include COVID-19			2022-23		
	Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)	Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)	Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)
Fellowships									
By Number	2,355	524	22	2,517	501	20	1,467	454	31
By Value (£m)	1,641	351	21	1,825	309	17	955	266	28
Research and Innovation									
By Number	19,497	4,144	21	19,872	4,676	24	20,845	5,664	27
By Value (£m)	10,046	2,770	28	10,052	2,603	26	9,316	2,833	30
COVID-19 Rapid Response & UKRI response to COVID-19									
By Number	17,256	3,381	20	1,202	320	27	n/a	n/a	n/a
By Value (£m)	2,931	551	19	74	35	47	n/a	n/a	n/a
Total	21,852 (39,108)	4,668 (8,049)	21 (21)	23,591	5,497	23	22,312	6,118	27
Total	11,687 (14,618)	3,121 (3,671)	26 (25)	11,952	2,947	25	10,270	3,099	30

- data set: applications for competitive assessed opportunities to Research Councils, Innovate UK, and Research England with funding decisions between 1st of April 2020 and 31st March 2023
- applications may have been received in the financial year prior to that of the decision point
- Horizon Europe Guarantee not included

Output data for Research and Innovation Grants and Fellowships

Outputs include data for Research Councils and Innovate UK. Research England are currently not included. The data are collected using Researchfish for the Research Councils and by annual survey for Innovate UK. The data does not include studentships outputs reported via Researchfish.

Research Councils have consistently used the Researchfish system to collect outcomes since 2014. Recipients of funding are required to report emerging outputs, outcomes, and impacts for the duration of their award and for at least 5 years beyond. Once a year there is a formal submission period when researchers are required to confirm that their outcomes information is accurate and up to date. The data in this report are taken from the submission period that closed March 2023.

Innovate UK has used an online survey tool since February 2018. It is used to collect outcome information from all project participants when the project nears completion. Each participant is routed through the survey depending on their organisation type, role in the project, and responses to questions. The outcome survey is completed once for each project.

Data from the two collections has been combined and is presented below in a series of tables showing numbers of outcomes by year of award starting. The data are self-reported and not meant to be exhaustive of all outcomes realised, but indicative of data reported over time.

The data do not show outcomes realised in any given year. The data show outcomes by award start date and the figures presented for each 'Year Award Started' will include outcomes that were realised over several years. It relates to the maturity of the multi-year grant. Not all awards are multi-year but they still give rise to outcomes after the award is finished.

Awards starting in more recent years are expected to continue to produce outputs for several years and increases across reporting years are due to cumulative outputs reported over time.

Table 10. Number of awards reporting outcomes

This is based on data collected up until 31 March 2023.

Year Award Started	2018	2019	2020	2021	2022
Number of UKRI awards started	6,082	5,743	8,540	5,904	6,777
Number in Researchfish	3,134	3,063	3,225	3,288	2,232
Innovate UK – Number of awards with a Project Completion Form	1,081	1,036	1,736	960	412
Number of participants completing a PCF	2,200	2,047	2,839	1,517	450
Total of awards reporting an outcome	4,215	4,099	4,961	4,248	2,644

Table 11. Collaborations and type of collaborators

Research collaborations might take the form of joint funding, exchanging expertise, access to wide ranging facilities and equipment, accessing datasets, working across different sectors, and bringing together inter-disciplinary teams required to tackle complex problems. This indicator highlights new collaborations as reported after the award has started. It relates to the maturity of the multi-year grant, with the increase due to cumulative collaborations monitored over time. Researchers may also report collaborations that were in place at the point of application. Collaborations are only included in the indicator for the year the award started but the collaboration may continue for several years after this date.

Year Award Started	2018	2019	2020	2021	2022	
Instances of Collaborations	7,737	7,147	5,547	3,759	1,653	
number reported in 2021-22	6,661	5,538	3,944	1,561	1,653	
(%) increase since 2021-22	16	29	41	141	-	
Instances of Collaborators	10,727	10,225	7,675	5,050	2,025	
Types of Collaborators	Academic/University/ Learned Society	5,349	5,405	3,480	2,282	918
	Charity/Non-Profit	1,096	1,221	969	429	182
	Other (inc unknown)	829	1,172	1,351	1,121	439
	Private	1,919	1,123	734	580	192
	Public (inc. Hospitals)	1,534	1,304	1,141	638	294
Number of Awards reporting at least one collaboration	1,928	1,748	1,647	1,364	670	
Percentage of Total Awards reporting at least one collaboration	54	52	46	38	28	
Total Number of Awards	3,544	3,393	3,551	3,550	2,375	

- the dataset comprises awards in Researchfish and includes awards made by Research Councils only.
- the data are not meant to be exhaustive of all outcomes realised by our grant funding in any single year as outcomes data is reported over time and impacts are monitored over years, this is reflected in the descending numbers in recent years
- definition of Collaboration, an interaction or set of interactions focused on a distinct project
- definition of Collaborator, the participating institutions involved in collaborations
- total count of collaborations will be lower than the count of collaborators, as one collaboration can involve many collaborators

Table 12. UK and international collaborators

International collaboration shows that researchers are collaborating and exchanging expertise around the world and gaining access to international facilities and infrastructure. This indicator highlights new collaborations as reported after the award has started. It relates to the multi-year grant, with the increase due to cumulative collaborations monitored over time. Collaborations are only included in the year the award started but the collaboration may continue for several years after this date.

Year Award Started	2018	2019	2020	2021	2022
Number of awards with only UK collaborators	610	540	608	528	256
Number of UK collaborators involved	1,483	1,329	1,535	1,124	504
Number of awards with only International collaborators	551	531	429	356	195
Number of International collaborators involved	1,135	1,065	881	572	277
Number of awards with both UK and international collaborators	727	617	501	334	142
Number of UK collaborators involved (on awards with both UK and International collaborators)	4,088	3,554	2,113	1,277	472
Number of international collaborators involved (on awards with both UK and International collaborators)	3,139	3,096	1,808	938	332
The total number of awards with collaborators	1,888	1,688	1,538	1,218	593
number reported in 2021-22	1,754	1,477	1,227	597	-
(%) increase since 2021-22	8	14	25	104	-
The total number of UK collaborators involved	5,544	4,867	3,630	2,397	976
number reported in 2021-22	4,843	3,764	2,665	1,013	-
(%) increase since 2021-22	14	29	36	137	-
The total number of international collaborators involved	4,239	4,150	2,684	1,506	607
number reported in 2021-22	3,769	3,284	2,013	672	-
(%) increase since 2021-22	12	26	33	124	-

- the dataset comprises awards in Researchfish and includes awards made by Research Councils only
- the data are not meant to be exhaustive of all outcomes realised by our grant funding in any single year as outcomes data is reported over time and impacts are monitored over years, this is reflected in the descending numbers in recent years
- data only includes collaborators where the location of the collaborator is known
- definition of Collaboration, an interaction or set of interactions focused on an individual award
- definition of Collaborator, the participating institutions involved in collaborations
- total count of collaborations will be lower than the count of collaborators, as one collaboration can involve many collaborators

Table 13. Engagement activities

Researchers engage with a wide variety of audiences and stakeholders to communicate research outcomes, disseminate knowledge, stimulate public awareness, and encourage public engagement and dialogue. The engagement activities indicator helps demonstrate the extent to which researchers are engaging with others including audiences outside academia.

Year Award Started	2018	2019	2020	2021	2022
Instances of Engagement Activities	35,843	38,179	24,598	14,941	5,702
number reported in 2021-22	30,169	27,856	15,156	5,159	-
(%) increase since 2021-22	19	37	62	190	-
Number of Awards reporting at least one Engagement Activity	2,392	2,189	2,174	1,898	1,024
Percentage of Total Awards reporting at least one Engagement Activity	67	65	61	53	43
Total Awards	3,544	3,393	3,551	3,550	2,375

- the dataset comprises awards in Researchfish and includes awards made by Research Councils only
- the data are not meant to be exhaustive of all outcomes realised by our grant funding in any single year as outcomes data is reported over time and impacts are monitored over years, this is reflected in the descending numbers in recent years

Table 14. Knowledge output

To support our understanding of the impact of our research, we measure how and when our researchers publish. This supports the dissemination of research finding to a wider audience and increases the visibility of research.

Year Award Started	2018	2019	2020	2021	2022
Books	545	477	251	109	27
Book Chapters	1,542	1,236	757	321	80
Journal Articles	47,886	36,486	20,713	9,555	2,518
Other Publications	9,809	9,103	5,896	2,726	894
Total Instances of Publications	59,780	47,301	27,617	12,710	3,519
number reported in 2021-22	47,141	33,762	16,585	4,375	–
(%) increase since 2021-22	27	40	67	191	–
Number of Total Awards reporting at least one Publication	3,219	2,895	2,735	2,159	753
Percentage of Total Awards reporting at least one Publication	70	65	52	48	27
Total Awards	4,625	4,429	5,287	4,510	2,787

- the dataset comprises awards in Researchfish and for which the Innovate UK Project Completion Form has been completed
- the data are not meant to be exhaustive of all outcomes realised by our grant funding in any single year as outcomes data is reported over time and impacts are monitored over years, this is reflected in the descending numbers in recent years
- instances of publications is not a count of unique publications. Duplicate publications may occur where different researchers have entered similar information independently of one another. Publications may also occur from more than one award. Efforts have been made to remove some duplications using Digital Object Identifier (DOI), but not all publications have a DOI
- other publications include for example, edited book, conference paper, policy briefing

Table 15. Other types of knowledge output

In addition to Publications, we measure the diverse ways in which our research translates into types of knowledge outputs across the research and innovation sector. Other types of knowledge generation are included below.

Year Award Started	2018	2019	2020	2021	2022
Artistic and Creative	2,262	1,847	4,001	985	215
Medical Products, Interventions and Clinical Trials	141	87	78	66	13
Research Models and Databases	2,952	1,586	1,367	814	122
Research Tools and Methods	1,508	941	890	539	376
Software and Technical Products	1,237	726	560	468	105
Total Instances of Other Knowledge Output	8,100	5,187	6,896	2,872	831
number reported in 2021-22	6,245	3,862	3,678	1,048	–
(%) increase since 2021-22	30	34	87	174	–
Number of Awards reporting at least one instance of these Knowledge Outputs	1,655	1,364	1,274	978	326
Percentage of Total Awards reporting at least one instance of these Knowledge Outputs	47	40	36	28	14
Total Awards	3,544	3,393	3,551	3,550	2,375

- the dataset comprises awards in Researchfish and includes awards made by Research Councils only
- the data are not meant to be exhaustive of all outcomes realised by our grant funding in any single year as outcomes data is reported over time and impacts are monitored over years, this is reflected in the descending numbers in recent years

Table 16. Awards that have obtained further funding

Researchers also obtain funding to continue or advance their work. This data includes additional funding from UKRI and other funders.

Year Award Started	2018	2019	2020	2021	2022
Instances of Further Funding	7,425	5,217	4,263	2,428	780
number reported in 2021-22	5,950	3,565	2,399	692	–
(%) increase since 2021-22	25	46	78	251	–
Number of Awards with at least one instance of Further Funding	1,900	1,845	1,920	1,298	487
Percentage of Total Awards with at least one instance of Further Funding	41	42	36	29	17
Total Awards	4,625	4,429	5,287	4,510	2,787

Table 17. Awards that have resulted in instances of Intellectual Property

This indicator includes the generation of patents and trademarks as an output of the research. This data does not include Innovate UK as their current online survey collects data on IP (Intellectual Property) used as part of the project.

Year Award Started	2018	2019	2020	2021	2022
Instances of IP	260	135	84	66	12
number reported in 2021-22	205	87	37	9	–
(%) increase since 2021-22	27	55	127	633	–
Number of Awards reporting at least one instance of IP	159	96	58	49	12
Percentage of Total Awards with at least one instance of IP	4	3	2	1	0
Total Awards	3,544	3,393	3,551	3,550	2,375

- the dataset comprises awards in Researchfish and includes awards made by Research Councils only

Table 18. Awards reporting a spinout

Researchers are asked to provide details of links between their research and the establishment of new private sector organisations, including for profit and not-for-profit organisations. Data provided in Researchfish@ has been verified using supplementary information to identify duplicate spin-out companies where applicable e.g., Companies House IDs for UK companies.

Spinout Status	Number of Spinouts	Number of Awards Attributed to the Spinouts
Total Spinouts	1,167	1,681
Of which Active in April 2023	910	1,395
Total Spinouts reported in 2021-22	1,027	1,440

- spinouts reported through Researchfish that have incorporated since 2004 combined with spinouts reported through the 2019-2022 Project Completion Forms

Table 19. FTE (Full Time Equivalent) jobs created

This is the number of full-time equivalent jobs created because of the project funding.

Year Award Started	Number of Awards	FTE Jobs created
2018	1,081	2,181
2019	1,036	2,269
2020	1,736	3,284
2021	960	1,666
2022	412	376

- the dataset comprises awards made by Innovate UK only, for which the Project Completion Form has been completed
- participants provide an estimate of the numbers of jobs created/retained during the project
- the number of jobs has been capped to 10 FTE per participant on a project
- Researchfish does not capture FTE in a way that we can report on

Table 20. Number of new products, services, and processes

This is the planned production within a year of the project end. This is an indication of market impact as a result of the project.

Year Award Started	Planned production within a year
2018	510
2019	497
2020	817
2021	450
2022	158

- the dataset comprises awards made by Innovate UK only, for which the Project Completion Form has been completed
- planned production within a year of project end



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