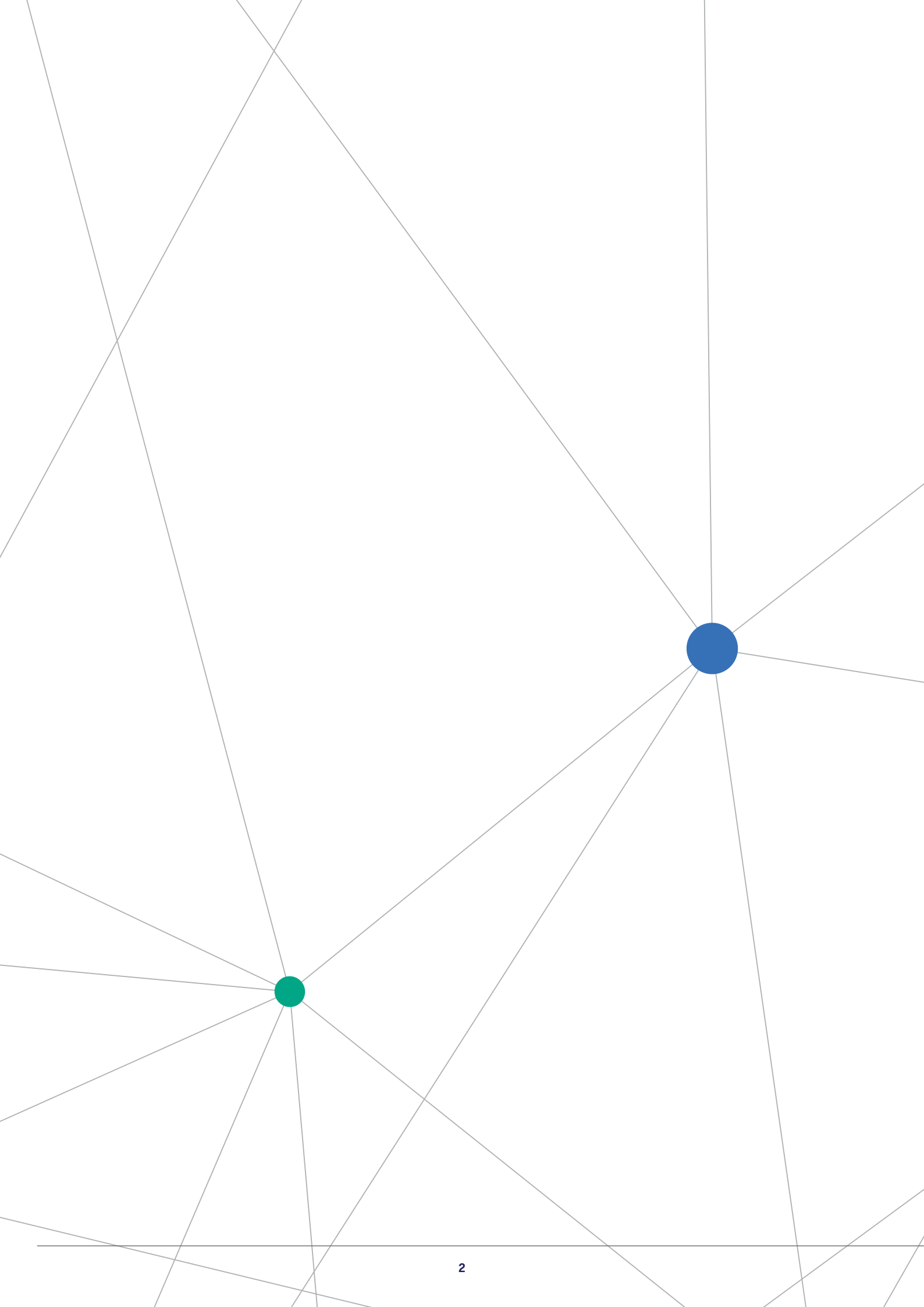![UKRI UK Research and Innovation]

UKRI Investment and Outputs Data 2021–22

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 1 April 2021 to 31 March 2022. 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; and additional funding decisions captured outside core funding systems.

The data from the different systems have been brought together with a singular methodology using similar data fields available.

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.

Table 1: Applications received in 2021-22

The number of funding applications submitted to UKRI in 2021-22.

Grant Category	Number Applications	Number Organisations	Applied Value £m
Fellowship	1,790	159	1,050
Research and Innovation	21,208	10,869	10,053
UKRI response to COVID-19	1,423	1,362	75
Total	**24,421**	***11,923**	**11,178**

- 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, and the UKRI response to Covid-19 as some organisations will be counted under both categories.

Table 2: Competitively awarded applications in 2021-22

The number of funding decisions made in 2021-22 by number and value.

Grant Category		Competitive Funding Decisions	Successful Decisions to Fund	Award Rate %
Fellowship	By Number	2,517	501	20
	By Value (£m)	1,825	309	17
Research and Innovation award	By Number	19,872	4,676	24
	By Value (£m)	10,052	2,603	26
UKRI response to COVID-19	By Number	1,202	320	27
	By Value (£m)	74	35	47
Total	**By Number**	**23,591**	**5,497**	**23**
	By value (£m)	**11,952**	**2,947**	**25**

- The number and value of applications received is not directly comparable to awards made in 2021-22. The decisions on applications received in 2021-22 may not be made in the same financial year

Table 3: Regional breakdown

The number of funding decisions made in 2021-22 by number and value.

ITL1 (region and nation)	Competitively Assessed Applications	Competitively Assessed Applications	Value Applied (£m)	Value Awarded (£m)	Award Rate number (%)	Award rate value (%)
East Midlands	1,196	298	655	171	25%	26%
East of England	2,036	488	998	235	24%	24%
London	5,924	1,150	2,642	578	19%	21%
North East	849	220	443	102	26%	23%
North West	1,764	482	860	223	27%	26%
Northern Ireland	454	123	258	105	27%	39%
Scotland	2,293	583	1,249	328	25%	26%
South East	3,409	775	1,799	446	23%	24%
South West	1,841	421	928	232	23%	25%
Wales	805	167	431	107	21%	24%
West Midlands	1,429	353	830	166	25%	20%
Yorkshire and The Humber	1,537	422	788	249	28%	32%
Total	**23,537**	**5,482**	**11,833**	**2,943**	**23%**	**25%**

- 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.

- 15 awards have an unknown ITL, or the organisation is based outside the UK.

- We publish more information about our regional distribution of funding see: https://www.ukri.org/what-we-offer/what-we-have-funded/regional-distribution-of-funding/

Table 4: Project partner contributions on competitively awarded applications in 2021-22

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 maximizing 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	636	1,528	732	140
Charity / Non-profit	157	236	193	4
Private	1,767	3,678	2,896	587
Public (Including NHS trusts)	312	597	374	39
Other (including unknown)	493	960	808	138
Overall total	**2,361**	**6,999**	**5,003**	**908**

- 2,361 awards included 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 a project partner. The count of project partner organisations therefore does not include partners on Research England awards; however, these awards are reflected in the count of awards, partnerships, and contributions.

Table 5: Who our funding actively supported in 2021-22

Who our funding supports demonstrates the number of people and organisations who received funding during 2021-22. We support individual people as Principal Investigators, Co-Investigators, Fellows, Researcher Co-Investigators and Students

Grant Category	Number Awards	People (Individuals)	Number Organisations
Research and Innovation	16,319	28,008	2,658
Fellowship	2,010	2,074	147
COVID	1,599	2,562	1,098
Studentship	29,642	29,301	110
Studentships starting 2021-22	*5,066*	*5,010*	*94*
Total	**49,570**	**60,285**	**3,375**

■ 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.

■ There are Fellowships with a Co-Investigator on the award.

■ Students can be registered to more than one Studentship award.

■ 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

Table 6: Organisations supported in 2021-22

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

Organisation Type	Number Organisations
Academic/University/Learned Society	294
of which are UK HEP	*140*
Charity/Non-Profit	16
Private	2,928
of which are SME	*2,650*
Public (including NHS trusts)	55
Other (including blank)	82
Total	**3,375**

■ HEP, Higher Education Provider as defined by HESA (Higher Education Statistics Agency) see: https://www.hesa.ac.uk/support/providers

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 2020.

Year Submitted	Number of PhDs reported 2021 survey
2017	4,423
2018	4,725
2019	4,942
2020	3,328
2021	1,255

- There is a time lag between a student submitting their PhD and the student submission survey being completed. The numbers in 2020 and 2021 are lower and we expect this to increase over time.

Table 8: Applications from 2019-20 to 2021-22

Grant Category	2019-20	2020-21 (Inc. COVID-19 Applications)	2020-21 (Exc. COVID-19 Applications)	2021-22 (Inc. COVID-19 Applications)	2021-22 (Exc. COVID-19 Applications)
Total applications received (number)	20,890	46,462	25,640	24,421	2,658
Applied for value (£m)		24,316	2,074		147

- All applications for funding received by Research Councils, Innovate UK, and Research England between 1st of April 2019 and 31st March 2022. This includes applications for competitive funding opportunities and 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 assessed applications from 2019-20 to 2021-22

		2019-2020			2020-2021 Totals Exclude and (Include) COVID-19			2021-2022 Totals Include COVID-19		
		Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)	Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)	Competitively Assessed Applications	Competitively Awarded Applications	Award Rate (%)
Research and Innovation	By Number	15,450	3,829	25	19,497	4,144	21	19,872	4,676	24
	By Value (£m)	8,325	2,566	31	10,046	2,770	28	10,052	2,603	26
Fellowships	By Number	2,042	441	22	2,355	524	22	2,517	501	20
	By Value (£m)	1,352	252	19	1,641	351	21	1,825	309	17
Covid 19 Rapid Response & UKRI response to COVID	By Number	-	-	-	17,256	3,381	20	1,202	320	27
	By Value (£m)	-	-	-	2,931	551	19	74	35	47
Total	**By Number**	**17,492**	**4,270**	**24**	**21,852 (39,108)**	**4,668 (8,049)**	**21 (21)**	**23,591**	**5,497**	**23**
	By Value (£m)	**9,676**	**2,819**	**29**	**11,687 (14,618)**	**3,121 (3,671)**	**26 (25)**	**11,952**	**2,947**	**25**

■ Data set: applications for competitive assessed opportunities to Research Councils, Innovate UK, and Research England with funding decisions between 1st of April 2019 and 31st March 2022.

■ Applications may have been received in the financial year prior to that of the decision point.

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.

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 2022.

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.

Better data linkage across UKRI's legacy systems has improved the quality of our datasets, and the 2020-21 data presented has been reproduced to offer a comparison. As a result, there are small discrepancies with the data published in the 2020-21 Performance Metrics.

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

Year Award Started	2017	2018	2019	2020	2021
Number of awards started	6,603	6,060	5,767	8,577	5,982
researchfish®	3,814	3,574	3,401	3,561	2,554
Innovate UK – Project Completion Form	1,037	1,028	876	1,306	255
Number of participants completing a PCF	*2,041*	*1,992*	*1,578*	*1,794*	*339*
Total of awards reporting an outcome	**4,851**	**4,602**	**4,277**	**4,867**	**2,809**

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	2016	2017	2018	2019	2020
	Instances of Collaborations	8,511	6,661	5,538	3,944	1,561
	of which are new in 2021-22	*1,208*	*1,302*	*1,596*	*2,151*	*1,561*
	an increase (%) on those reported in 2020-21	*17%*	*24%*	*40%*	*120%*	*-*
	Instances of Collaborators	6,471	4,669	4,097	2,463	989
Types of Collaborators	Academic/University/Learned Society	1,554	981	1,040	789	190
	Charity/Non-Profit	673	598	791	844	523
	Other (inc unknown)	2,513	1,708	902	565	235
	Private	1,734	1,362	1,040	871	277
	Public (inc. Hospitals)	1,216	1,465	1,089	739	387
	Number of Awards reporting more than one Collaboration	2,028	1,786	1,515	1,311	674
	Percentage of Total Awards reporting more than one Collaboration	53	50	45	37	26
	Total Number of Awards	**3,814**	**3,574**	**3,401**	**3,561**	**2,554**

- The dataset comprises awards in Researchfish® and includes awards made by Research Councils only.

- The data are not meant to be exhaustive of all outcome s 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, all 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	2016	2017	2018	2019	2020
Number of awards with only UK collaborators	610	582	490	518	293
Number of UK collaborators involved	1,278	1,327	1,147	1,277	619
Number of awards with only International collaborators	579	534	504	361	171
Number of International collaborators involved	1,267	1,122	1,012	722	277
Number of awards with both UK and international collaborators	805	638	483	348	133
Number of UK collaborators involved (on awards with both UK and International collaborators)	5,057	3,536	2,625	1,398	395
Number of international collaborators involved (on awards with both UK and International collaborators)	4,501	2,680	2,281	1,295	395
The total number of awards with collaborators	1,994	1,754	1,477	1,227	597
of which new since 2021	*64*	*131*	*201*	*614*	*-*
an increase of (%) since 2020-21	*3*	*7*	*14*	*50*	*-*
The total number of UK collaborators involved	6,306	4,843	3,764	2,665	1,013
of which new since 2021	*1,268*	*1,011*	*1,092*	*1,546*	*-*
an increase of (%) since 2020-21	*25*	*26*	*41*	*138*	*-*
The total number of international collaborators involved	5,729	3,769	3,284	2,013	672
of which new since 2021	*685*	*636*	*982*	*1,178*	*-*
an increase of (%) since 2020-21	*14*	*20*	*43*	*141*	*-*

- 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 realized 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, all 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. Activities are only reported in the year the award started, though many will have been delivered after that year.

Year Award Started	2016	2017	2018	2019	2020
Instances of Engagement Activities	46,936	30,169	27,856	15,156	5,159
of which are new in 2021-22	*6,167*	*7,161*	*10,042*	*10,495*	
an increase of (%) since 2020-21	*15*	*31*	*56*	*225*	
Number of Awards with at least one instance of Further Funding	2,581	2,263	1,906	1,794	966
Percentage of Total Awards with at least one instance of Further Funding	68	63	56	50	38
Total Awards	**3,814**	**3,574**	**3,401**	**3,561**	**2,554**

■ 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 realized 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	2016	2017	2018	2019	2020
Books	652	420	333	148	35
Book Chapters	1,652	1,243	822	430	112
Journal Articles	55,698	37,737	25,882	12,427	3,307
Other Publications	11,087	7,741	6,725	3,580	921
Total Instances of Publications	69,089	47,141	33,762	16,585	4,375
of which are new in 2021-22	*14,751*	*13,805*	*13,767*	*11,900*	*-*
an increase of (%) since 2020-21	*27*	*41*	*69*	*254*	*-*
Percentage of Total Awards reporting at least one Publication	69	66	58	44	34
Total Awards	**4,851**	**4,602**	**4,277**	**4,867**	**2,809**

■ The dataset comprises awards in Researchfish® and or for which the Innovate UK Project Completion Form has been completed.

■ The data are not meant to be exhaustive of all outcomes realized 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	2016	2017	2018	2019	2020
Artistic and Creative	1,962	1,275	1,166	1,705	327
Medical Products, Interventions and Clinical Trials	136	135	72	55	32
Research Models and Databases	3,092	2,516	1,410	973	332
Research Tools and Methods	1,671	1,315	719	604	206
Software and Technical Products	1,045	1,004	495	341	151
Total Instances of Other Knowledge Output	7,906	6,245	3,862	3,678	1,048
Total instances of Other Knowledge Output 2020-2021	6,205	4,394	2,348	1,055	-
of which are new in 2021-22	*1,701*	*1,851*	*1,514*	*2,623*	*-*
an increase of (%) since 2020-21	*27*	*42*	*64*	*249*	*-*
Number of Awards reporting at least one instance of these Knowledge Outputs	1,757	1,549	1,151	967	453
Percentage of Total Awards reporting at least one instance of these Knowledge Outputs	46	43	34	27	18
Total Awards	**3,814**	**3,574**	**3,401**	**3,561**	**2,554**

- ■ 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 realized 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	2016	2017	2018	2019	2020
Instances of Engagement Activities	8,249	5,950	3,565	2,399	692
of which new since 2020-21	*1,512*	*1,667*	*1,478*	*1,725*	
an increase of (%) since 2020-21	*22*	*39*	*71*	*256*	
Number of Awards with at least one instance of Further Funding	1,938	1,661	1,419	1,289	423
Percentage of Total Awards with at least one instance of Further Funding	40	36	33	26	15
Total Awards	**4,851**	**4,602**	**4,277**	**4,867**	**2,809**

- ■ The dataset comprises awards in Researchfish® and includes awards made by Research Councils only.

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

This indicator includes the generation of patents, copyrights, 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	2016	2017	2018	2019	2020
Instances of IP	364	205	87	37	9
of which are reported new since 2020-21	*75*	*53*	*31*	*24*	*-*
an increase of (%) since 2020-21	*26*	*35*	*55*	*185*	*-*
Number of Awards reporting at least one instance of IP	209	132	65	25	8
Percentage of Total Awards with at least one instance of IP	5	4	2	1	0
Total Awards	**3,814**	**3,574**	**3,401**	**3,561**	**2,554**

- 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	1027	1,440
Of which Active in April 2022	*843*	*1,250*
Total Spinouts reported in 2020-21	973	1,424

- 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	Number of FTE Jobs created
2017	1,017	1,929
2018	1,001	1,934
2019	839	1,664
2020	1,241	2,168
2021	208	258

- The dataset comprises awards made by Innovate UK only, for which the Project Completion Form has been completed.

- The number of jobs has been capped to 10 FTE per award.

- Figures are as reported by lead organisation on Project Completion Form

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
2017	453
2018	471
2019	395
2020	565
2021	98

- 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.

UK Research and Innovation

UK Research and Innovation (UKRI)
Polaris House
North Star Avenue
Swindon SN2 1ET

T: 01793 444000
E: communications@ukri.org

www.ukri.org