



National Centre
for the Replacement
Refinement & Reduction
of Animals in Research

NC3Rs researchfish® 2020 overview

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1. Introduction

researchfish® is an online platform to gather outcomes and impacts arising from research. All researchers who have been awarded NC3Rs funding are required to report outputs, such as publications, collaborations, further funding, engagement, impact on policy, research materials and the next destinations of researchers working on the grant, on researchfish®. The data collected is used in conjunction with the qualitative and quantitative information on 3Rs impacts that we obtain as part of our regular interactions with Grant holders. We use information on outputs and impacts in our annual reports and research reviews, in case studies, to answer parliamentary questions, and to support funding bids for investment in the NC3Rs.

Grant holders report outputs into researchfish® that have resulted from, or are directly linked to, their NC3Rs awards. researchfish® is open to researchers all year round, but there is an annual submission period when researchers are asked to confirm that their information is accurate and up to date. All Grant holders are required to submit a report during the submission period for each year of their grant and typically for five years following the grant's completion.

We have collected data via researchfish® annually since 2013 and in 2017 3Rs impacts were included as an additional question set to complement other activities from the NC3Rs team to collate 3Rs metrics. Some Grant holders with awards that pre-date this have chosen to use researchfish®, where this data has been submitted it has been included in analysis, although the dataset is not complete. All averages have been calculated as the mean of data between 2013 and 2019 only as this is the period the NC3Rs have a complete set of reported researchfish® data. The data submitted via researchfish® is 'cleaned' by the NC3Rs team liaising with grant holders where necessary to check for accuracy, completeness and avoid duplication of data.

Each graph includes an 'n' number, which indicates the total sample presented in the graph. Differences between header statements (in highlighted boxes) and graph 'n' numbers are due to incomplete data for some of the categories of information presented in graphs. 0% indicates a value less than 1% that has been rounded down during analysis.

This page provides a summary of researchfish® data submitted by NC3Rs Grant holders in the period 3 February 2020 to 12 March 2020. The NC3Rs had 369 awards (excluding CRACK IT research contracts) on the researchfish® system, of these 237 were expected to submit in the 2020 submission period.

Submissions were received for 299 grants from 248 Grant holders – these include 23 Fellowships, 153 Research grants and 123 Studentships representing approximately £55 million of NC3Rs awarded grants. The breakdown of these submissions by researchfish® response code was as follows:

Response code	Number of submissions	Descriptor
1	230	A submission is expected this year from the PI or Fellow
2	17	No submission is expected this year. The PI or Fellow has been granted a one-year exemption
3	32	No further submissions are expected against this award due. The award is excluded from the Submission Period
4	21	A submission is expected this year from the PI or Fellow but they are no longer working at the funded organisation
5	0	The PI or Fellow is no longer expected to make a submission, but may still do so if they wish to add new outcomes

More information on response codes can be found [here](#).

If you have any questions, comments or feedback on any aspect of this report please contact the NC3Rs funding team: 3rsgrants@nc3rs.org.uk

2. 3Rs impacts

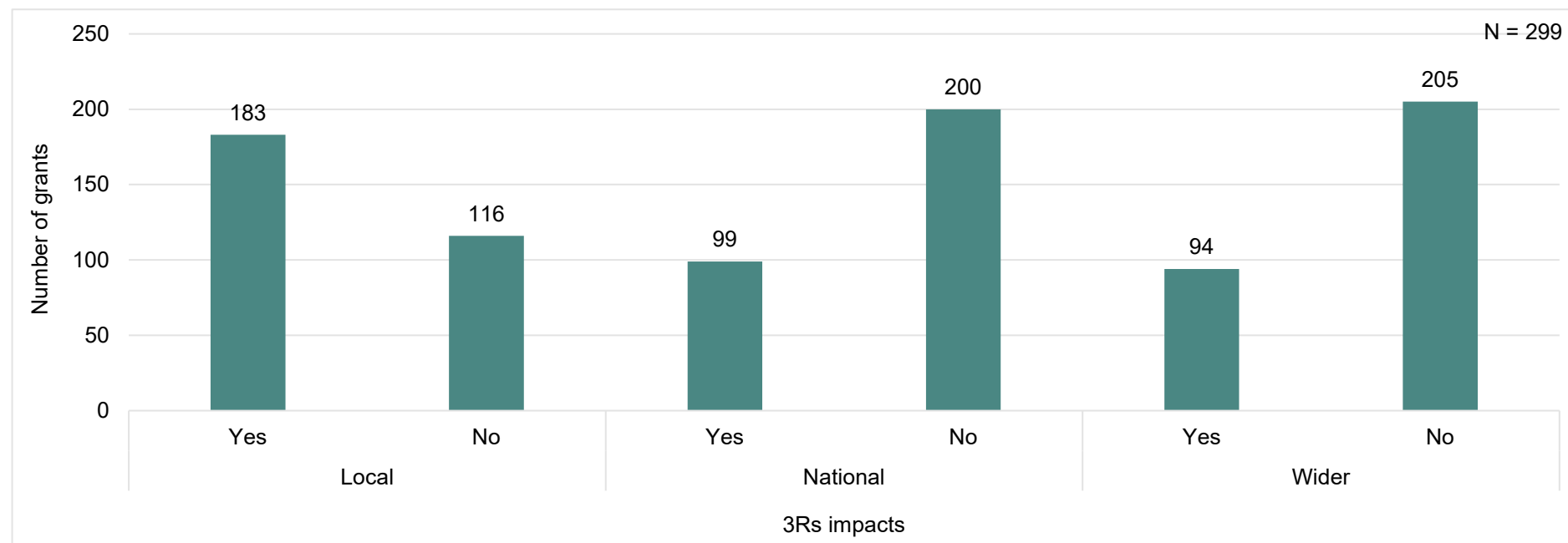
Funding 3Rs research is core to the NC3Rs mission and we use researchfish® as part of our approach to evaluate impact. We request Grant holders to report on what 3Rs impacts their project has had, whether that be in their own laboratory (local), within their university or other institutions in the UK (national) or institutions globally (wider).

From 248 Grant holders reporting on 299 grants

- 3Rs impacts were reported on 207 grants
- The majority of grants that have not reported 3Rs impacts are active awards, with 29 of these grants starting in the 12 months before the submission period

2.1. Number of grants reporting 3Rs impacts

On average, it takes a grant holder approximately just under two years to report a 3Rs impact for the first time, with local impacts on average reported initially and national and wider impacts following after.*



* This data has been calculated from grants with award years from 2016 onwards as these will have been required to report from 2017 when 3Rs impacts were first included.

3. Publications

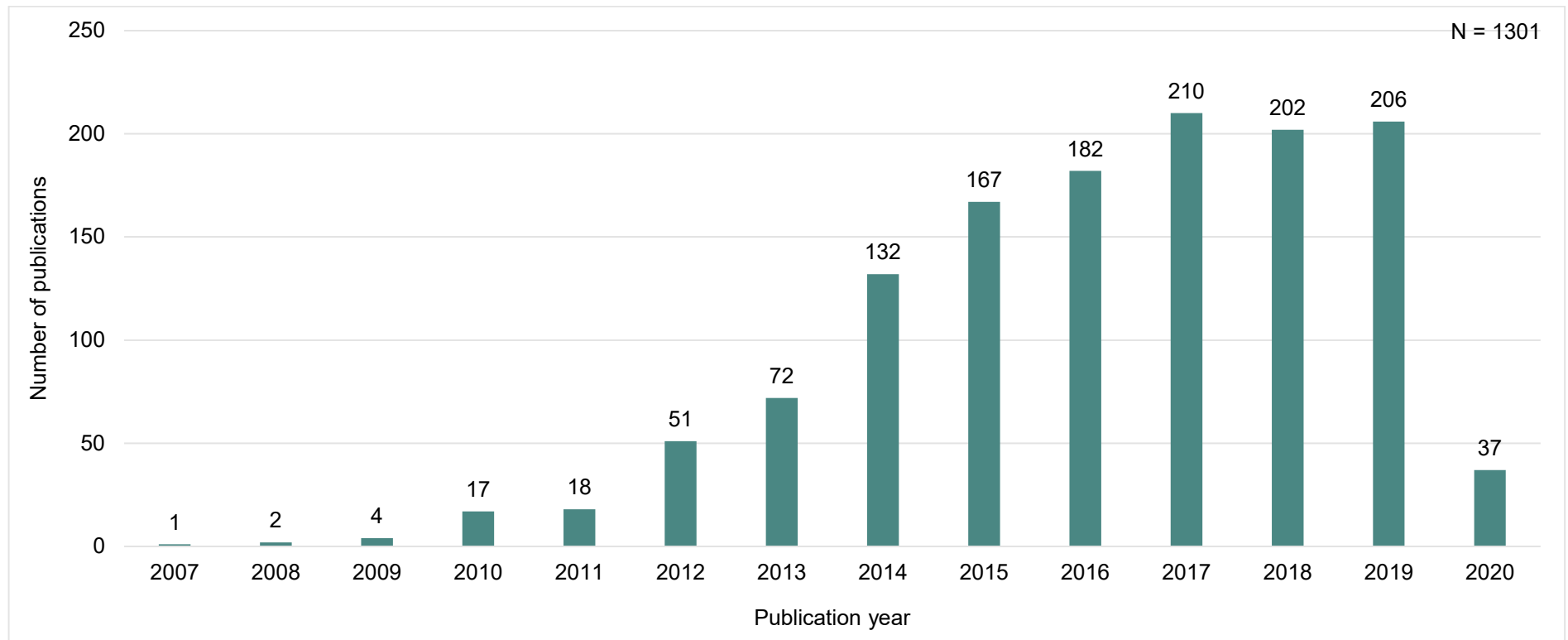
The analysis below highlights the publications (including journal articles, book chapters, conference abstracts) published by NC3Rs Grant holders.

From 180 Grant holders reporting on 209 grants

- A total of 1338 unique publications were reported
- Average of 7 publications reported per grant (SD: 8.75)

3.1. Number of publications published per year

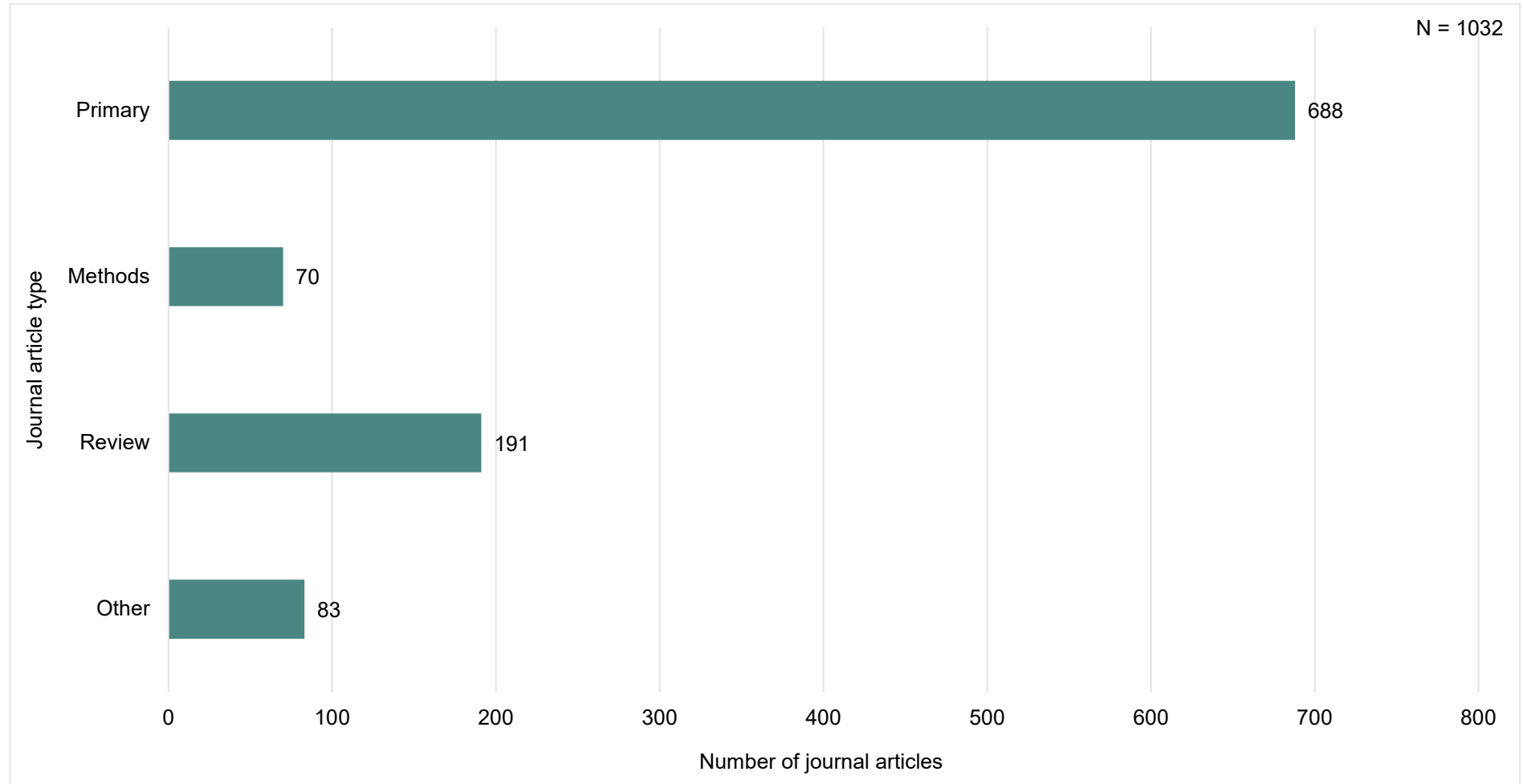
NC3Rs Grant holders report an average of 167 new publications each year.*



* The average is calculated from data for 2013 – 2019 as there is a complete dataset for these years. See page 1 for explanation.

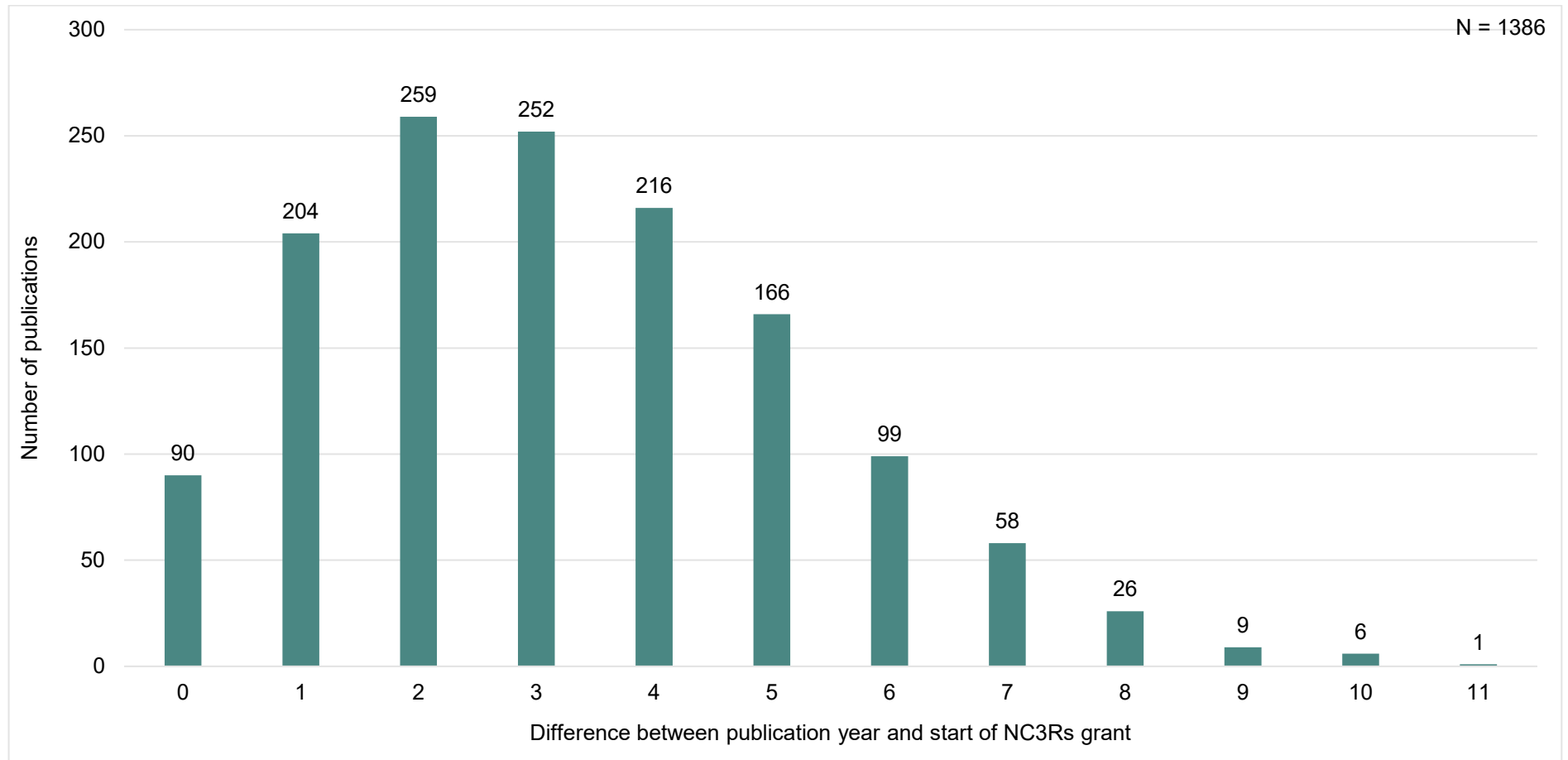
3.2. Number of journal articles by publication type

The majority of articles published by NC3Rs Grant holders are primary research papers. 'Other' includes papers such as conference proceedings published in a journal, news/views articles and editorials.



3.3. Time taken for report of publication to be made

The average time taken for an NC3Rs Grant holder to report a publication is three years after their grant begins.



4. Collaborations

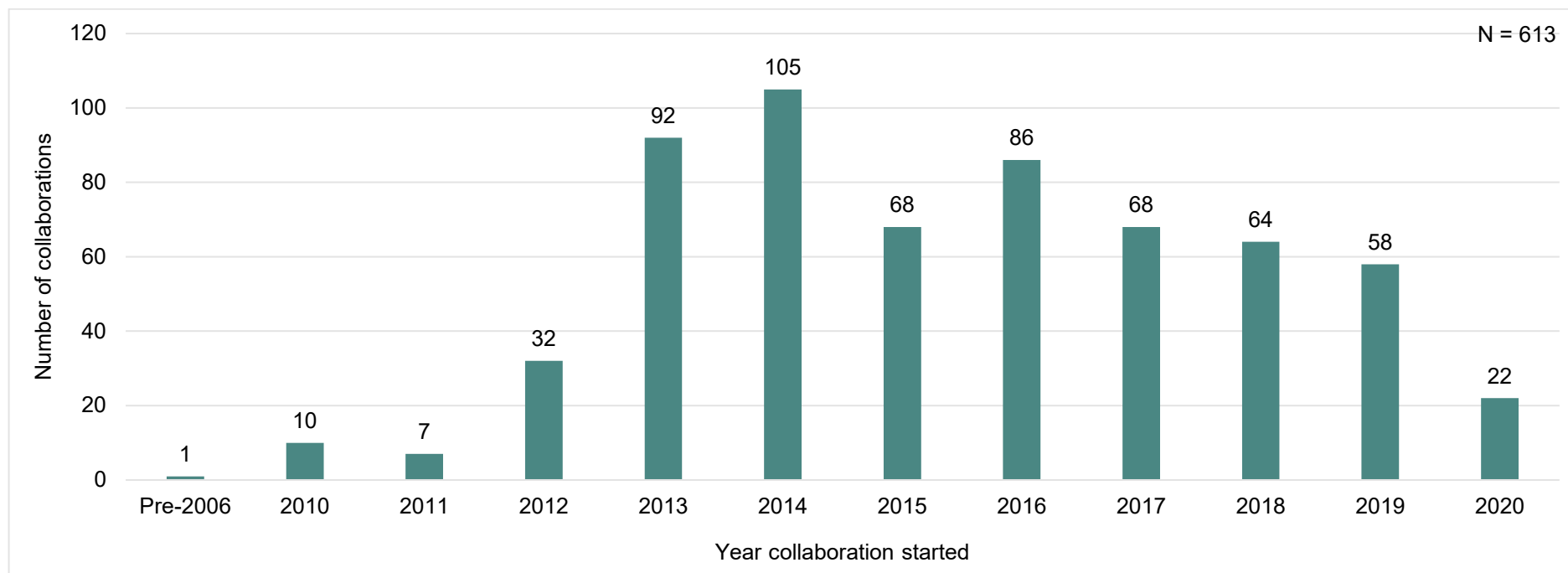
Collaborations can take the form of joint funding shared between multiple investigators, the exchange of expertise, or the use of facilities or staff. Sharing datasets, such as in meta-analyses, are also classified as collaborations in this dataset. Some collaborations may be subject to confidentiality agreements, data has been removed from analysis as appropriate.

From 149 Grant holders reporting on 169 grants

- A total of 613 collaborations were reported
- Average of 4 collaborations reported per grant (SD: 5.42)

4.1. Number of collaborations per year

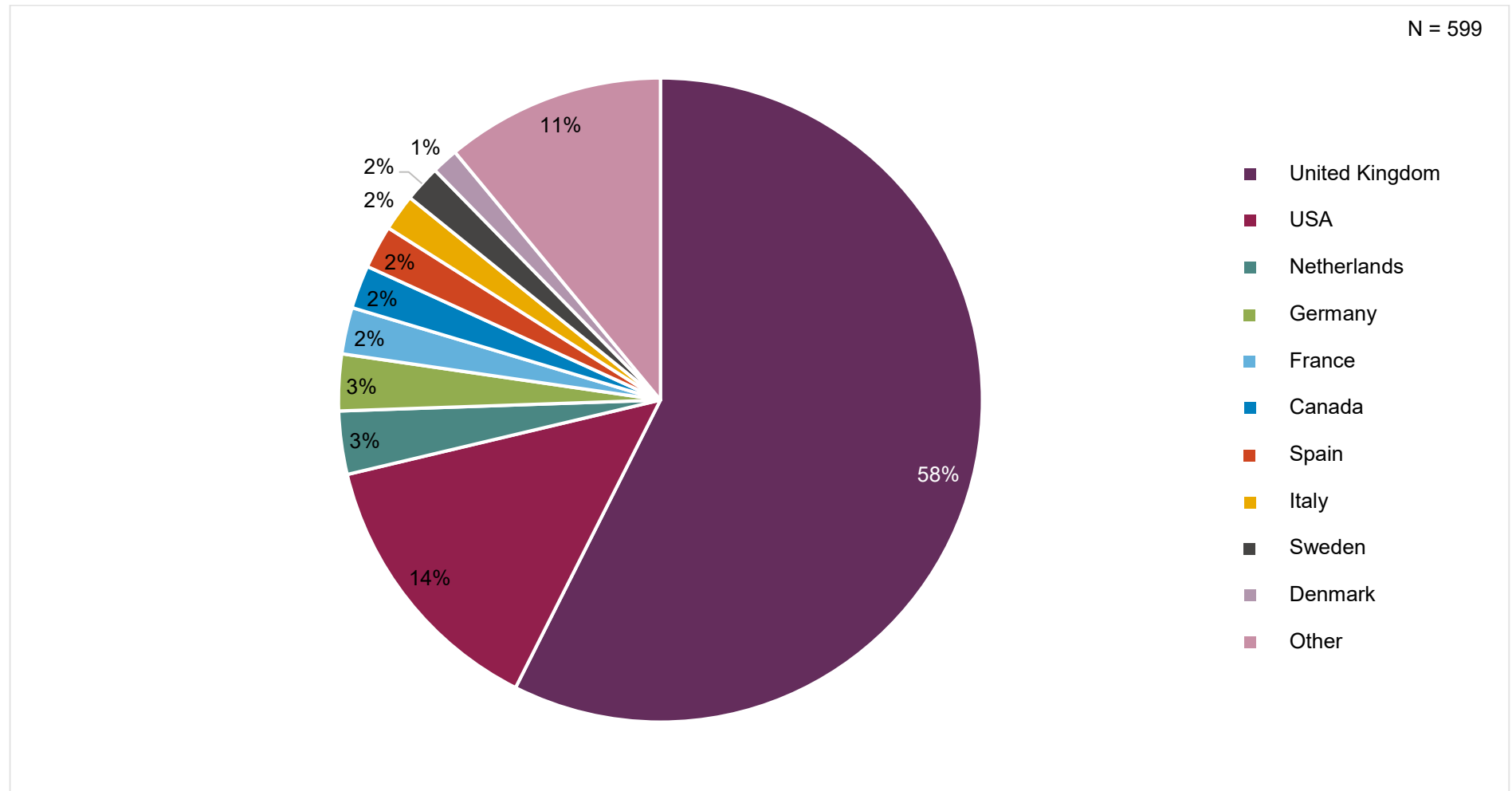
NC3Rs Grant holders report an average of 77 new collaborations per year.*



* The average is calculated from data for 2013 – 2019 as there is a complete dataset for these years. See page 1 for explanation.

4.2. Collaborations by location

Approximately 40% of collaborations reported by NC3Rs Grant holders are with an international partner.



NB. Other includes the following locations: Belgium, Switzerland, Australia, Global, Republic of Ireland, Japan, Norway, Portugal, Austria, Thailand, Brazil, Israel, Republic of Korea, Singapore, Slovenia, China, Colombia, Czech Republic, Ethiopia, European Union (EU), Finland, India, Kenya, Luxembourg, Malta, New Zealand, Nigeria

5. Engagement activities

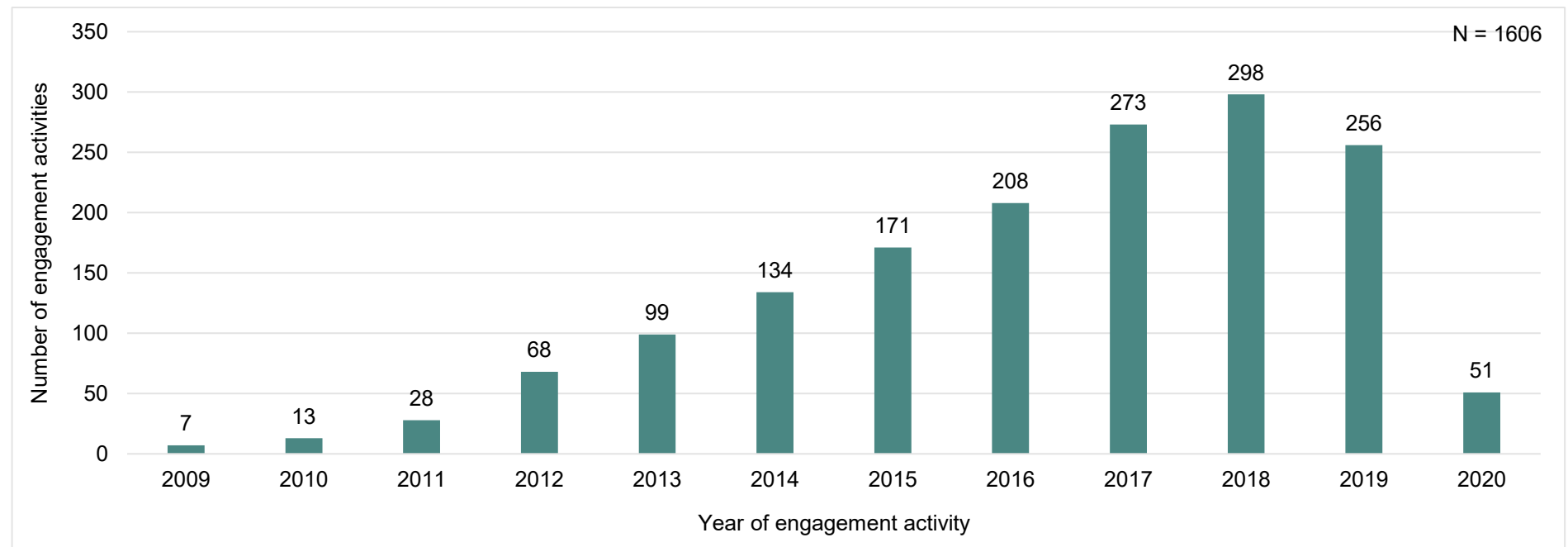
Communicating science to a wider audience is an important part of a scientist's role. This includes engaging the public, researchers, policymakers and students in a number of different ways. Engagement activities can include open days, presentations, school visits, and articles published in magazines, newsletters or on an online platform.

From 190 Grant holders reporting on 220 grants

- A total of 1608 unique engagement activities were reported
- Average of 8 engagement activities reported per grant (SD: 10.1)

5.1. Number of engagement activities reported per year

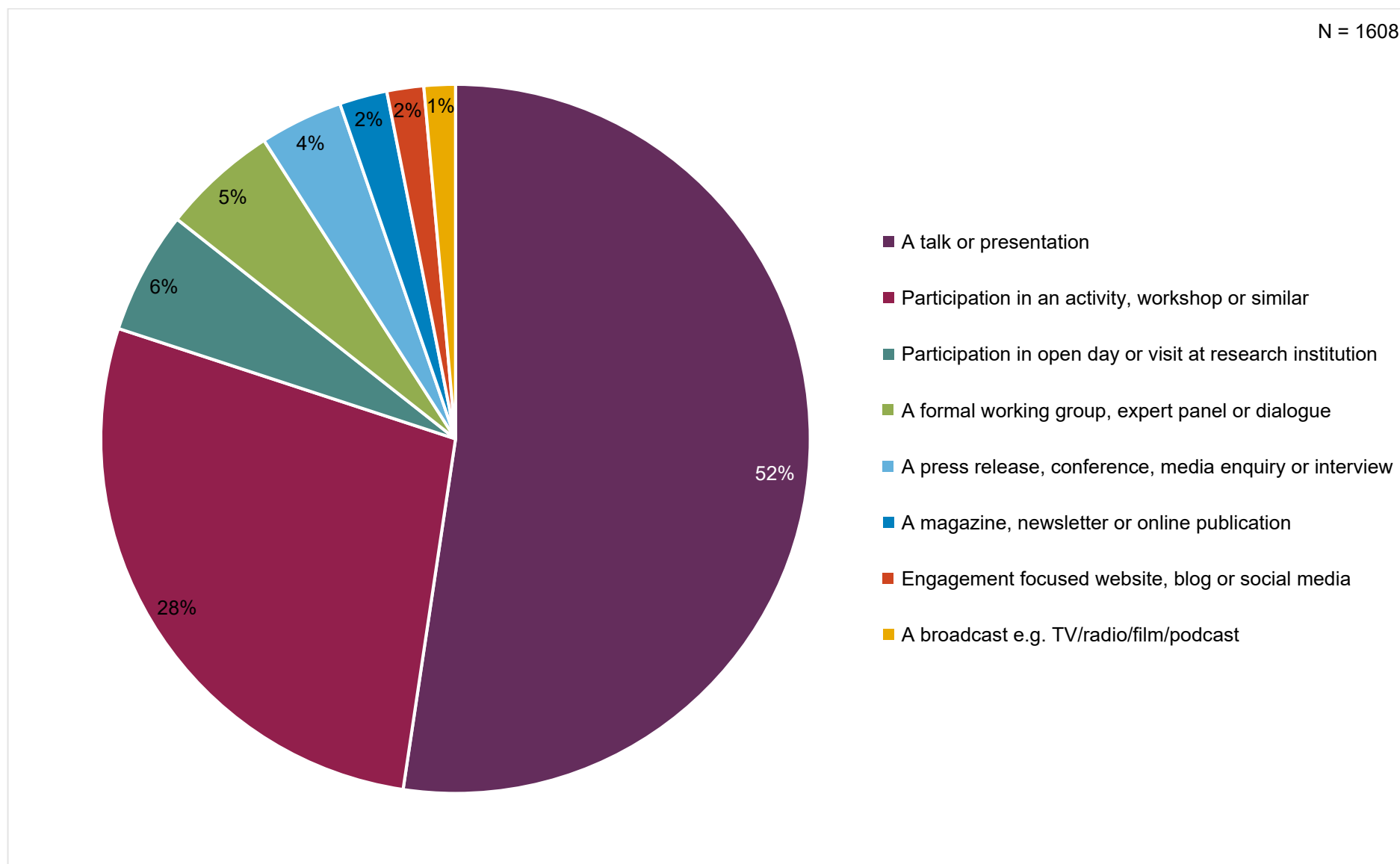
NC3Rs Grant holders report, on average, approximately 206 unique engagement activities a year.*



* The average is calculated from data for 2013 – 2019 as there is a complete dataset for these years. See page 1 for explanation.

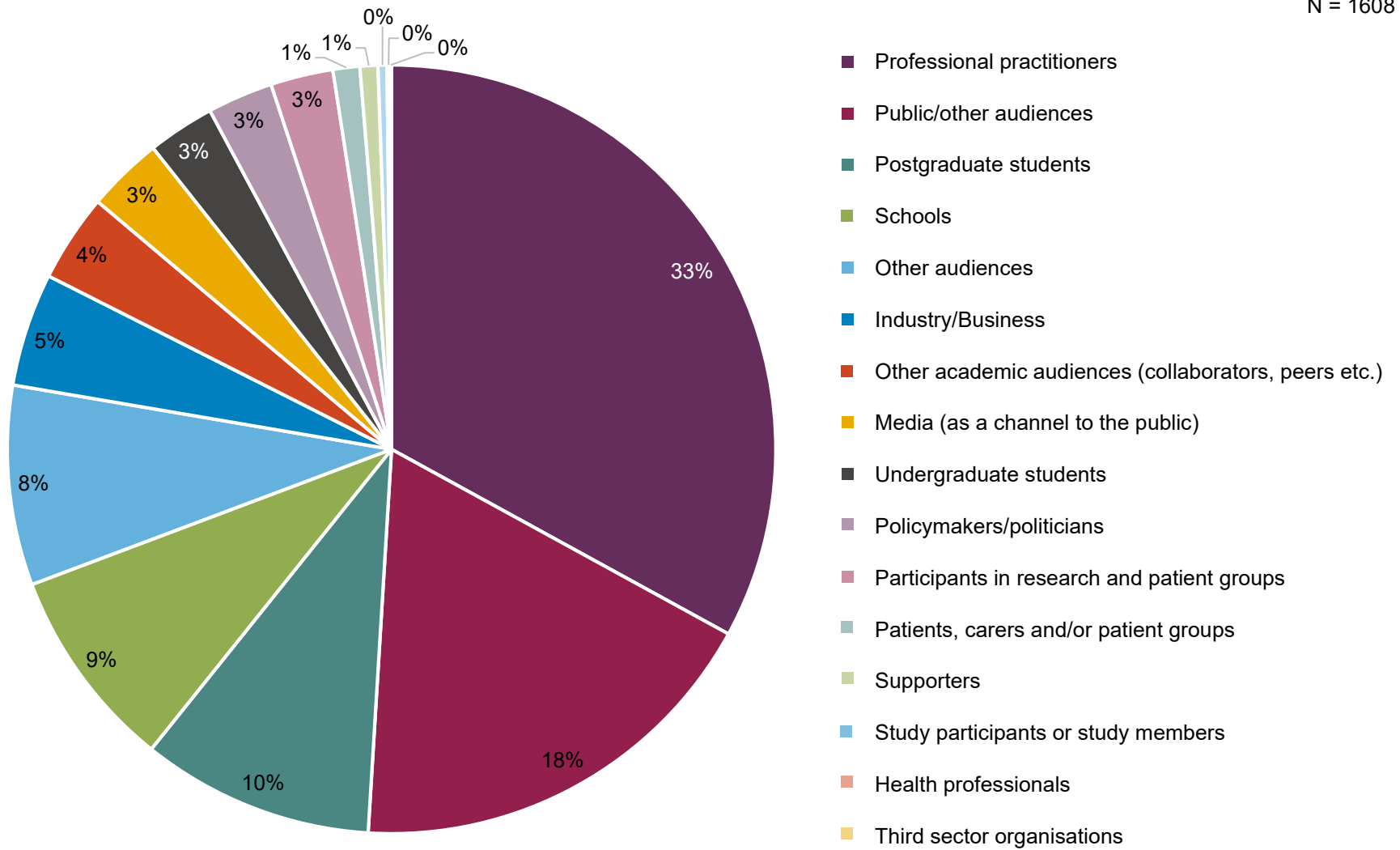
5.2. Engagement activity types

Talks and presentations are the most common engagement activity for NC3Rs Grant holders.



5.3. Engagement audience types

N = 1608



6. Further funding

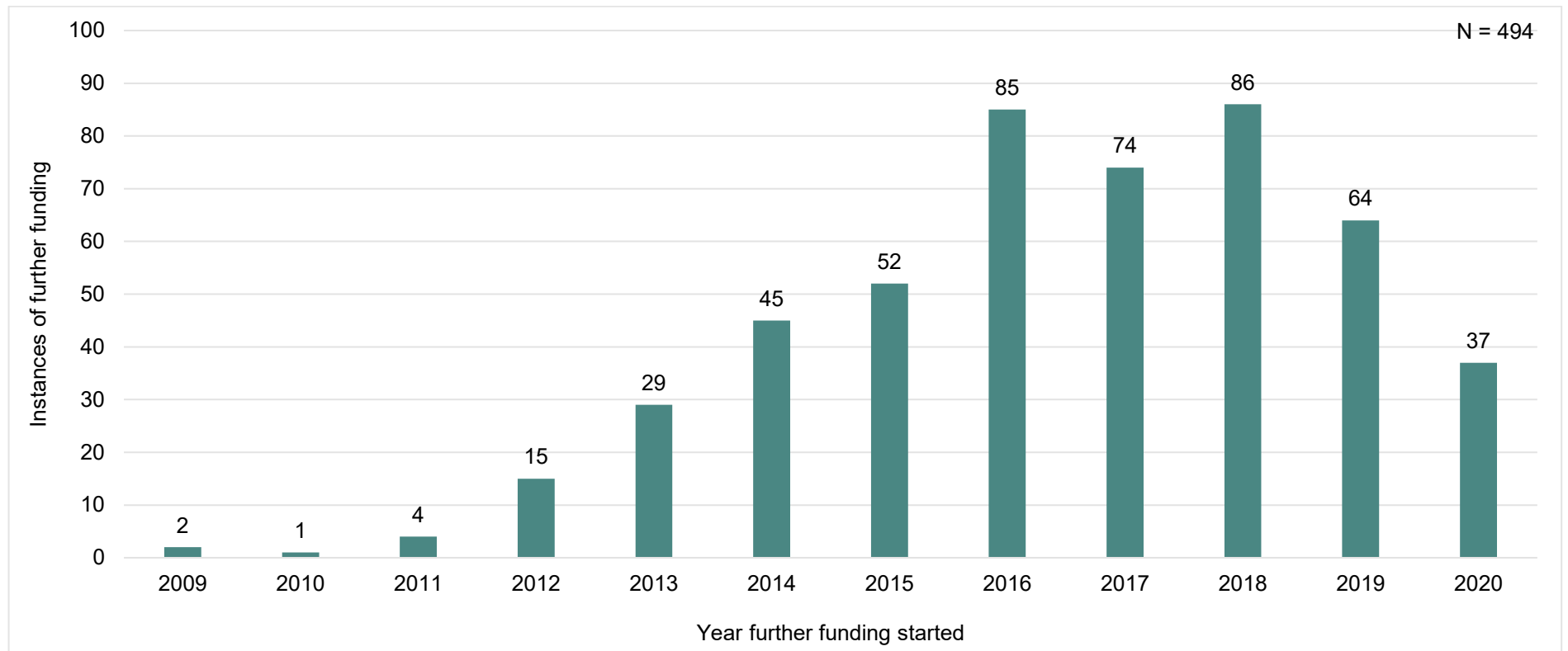
The analysis below highlights the number of instances of further funding secured by Grant holders including the award type, funding source and amount.

From 160 Grant holders reporting on 182 grants

- A total of 495 unique instances of securing further funding were reported
- Average of 3 further funding sources reported per grant (SD: 2.90)

6.1. Number of instances of further funding reported per year to March 2020

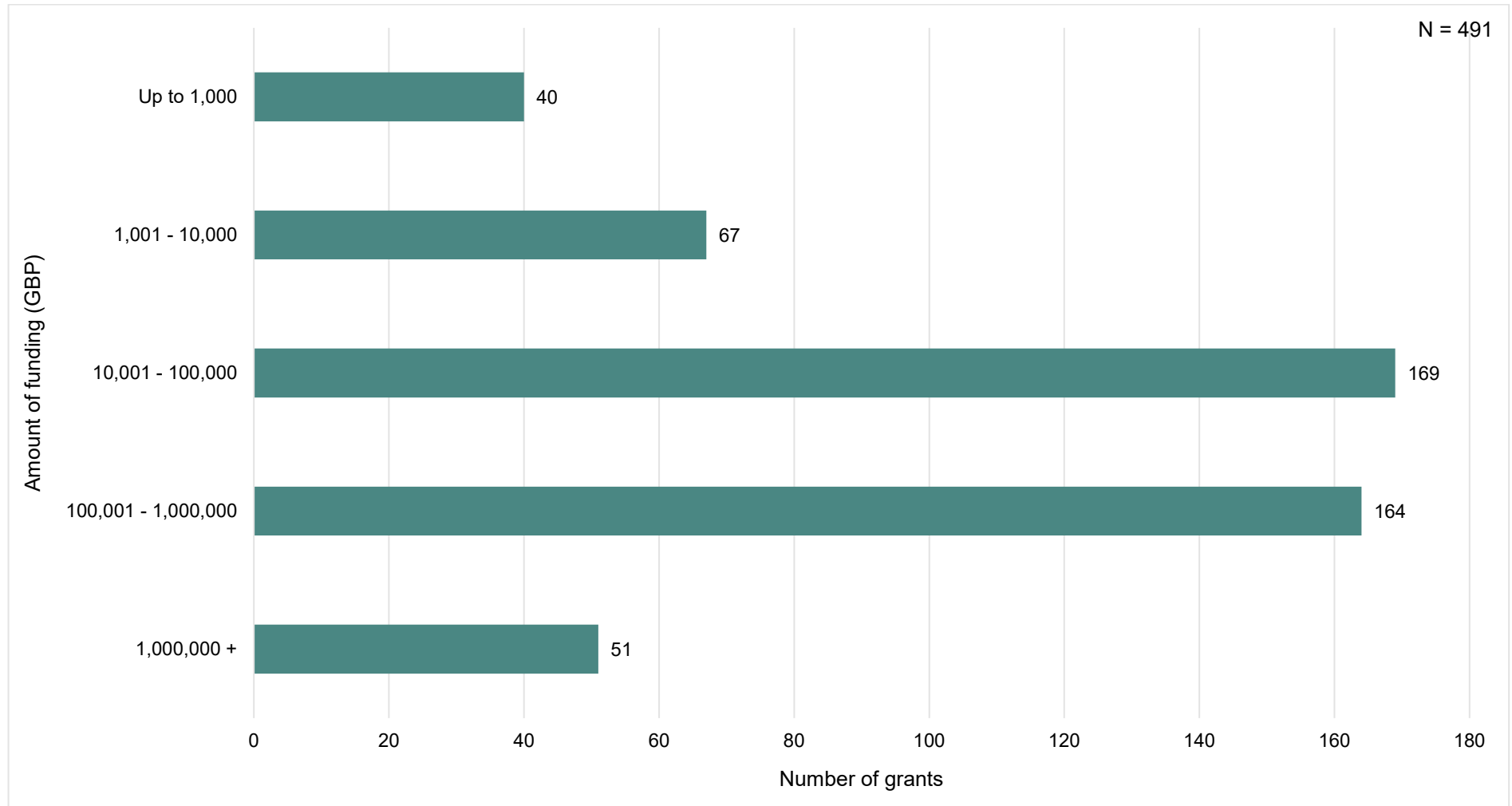
NC3Rs Grant holders report an average of 62 instances of further funding per year.*



* The average is calculated from data for 2013 – 2019 as there is a complete dataset for these years. See page 1 for explanation.

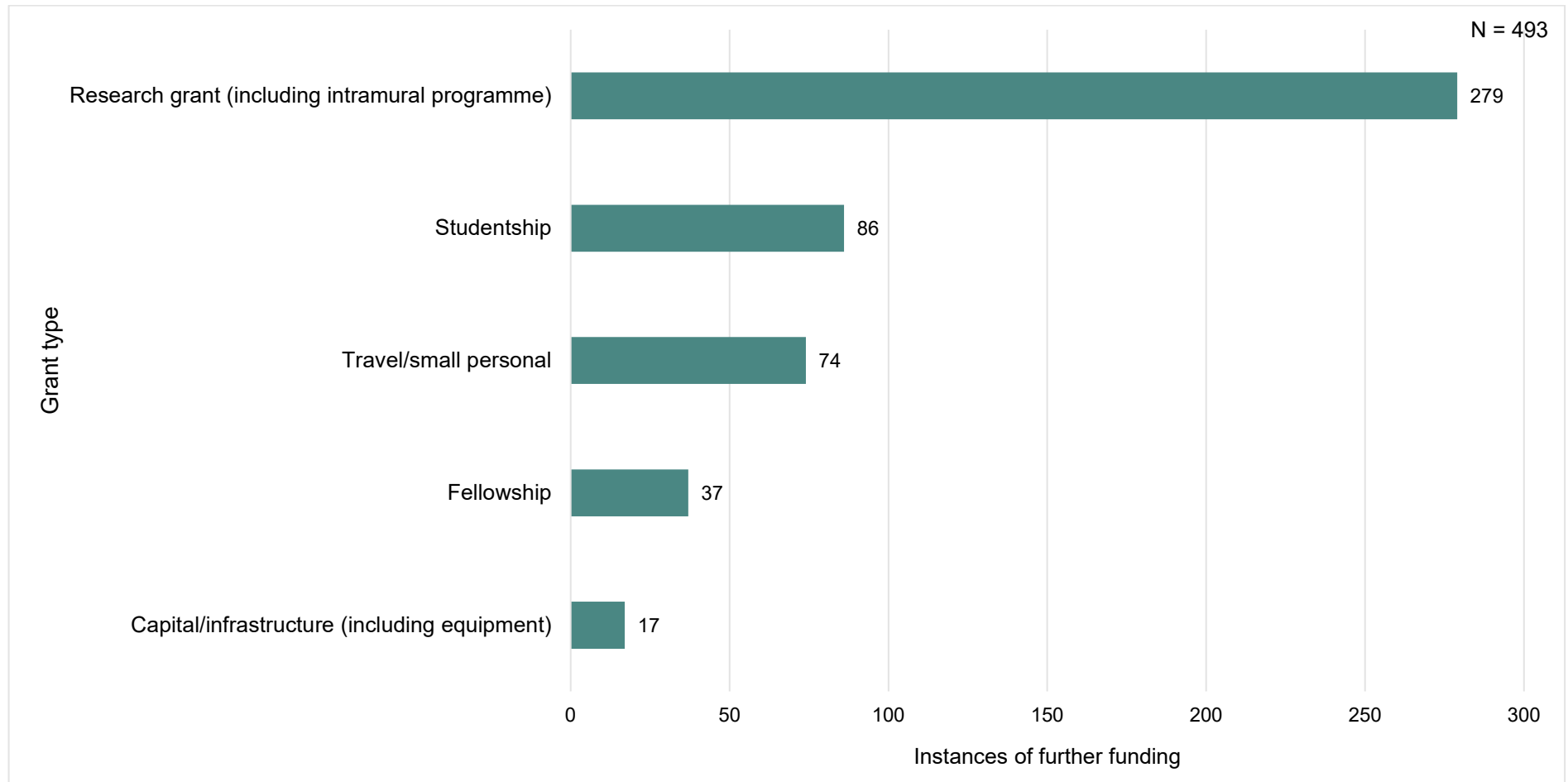
6.2. Instances of further funding by award value

NC3Rs Grant holders receive on average £509,261 of further funding in connection with work arising from their NC3Rs grant.



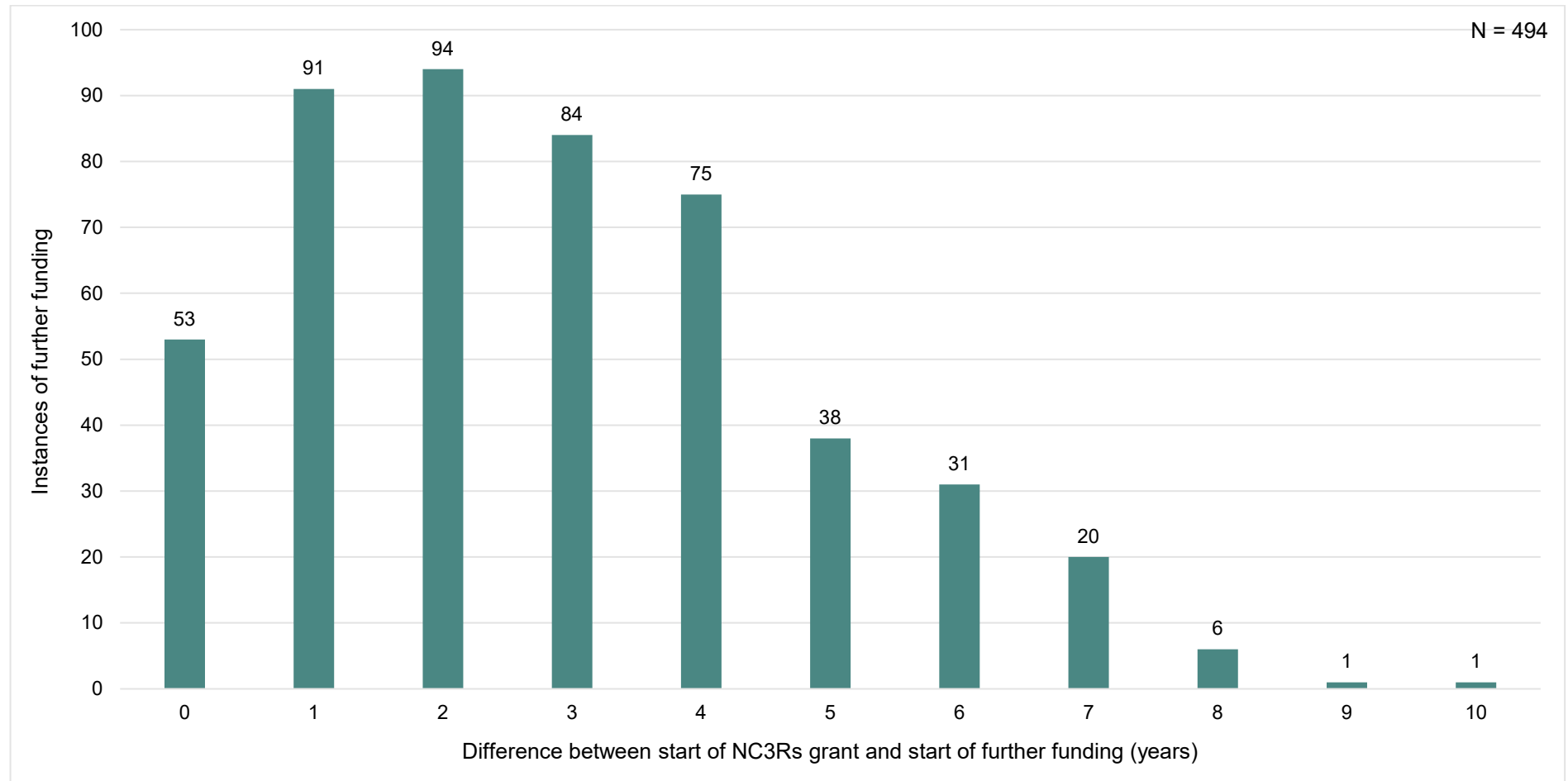
6.3. Instances of further funding by grant type

Research grants are the most frequently reported further funding type received by NC3Rs Grant holders.



6.4. Time taken for instance of further funding to be reported

On average, NC3Rs Grant holders report receiving further funding three years after the start date of their NC3Rs grant.



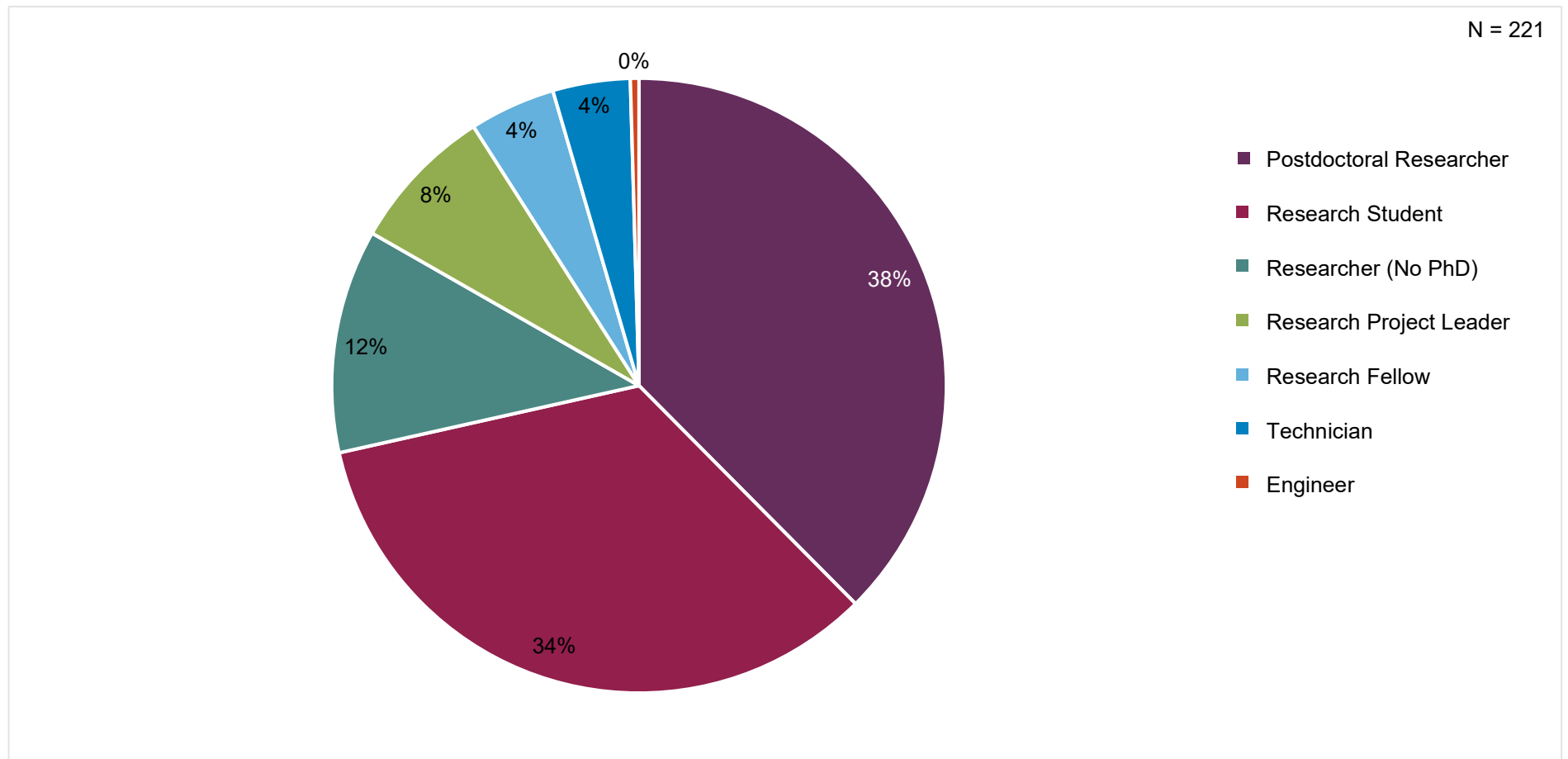
7. Next destinations

Grant holders are asked to report next destinations for researchers working on the project. The analysis below highlights researchers who have moved on to a new role and what sector the new role is in.

From 117 Grant holders reporting from 130 grants:

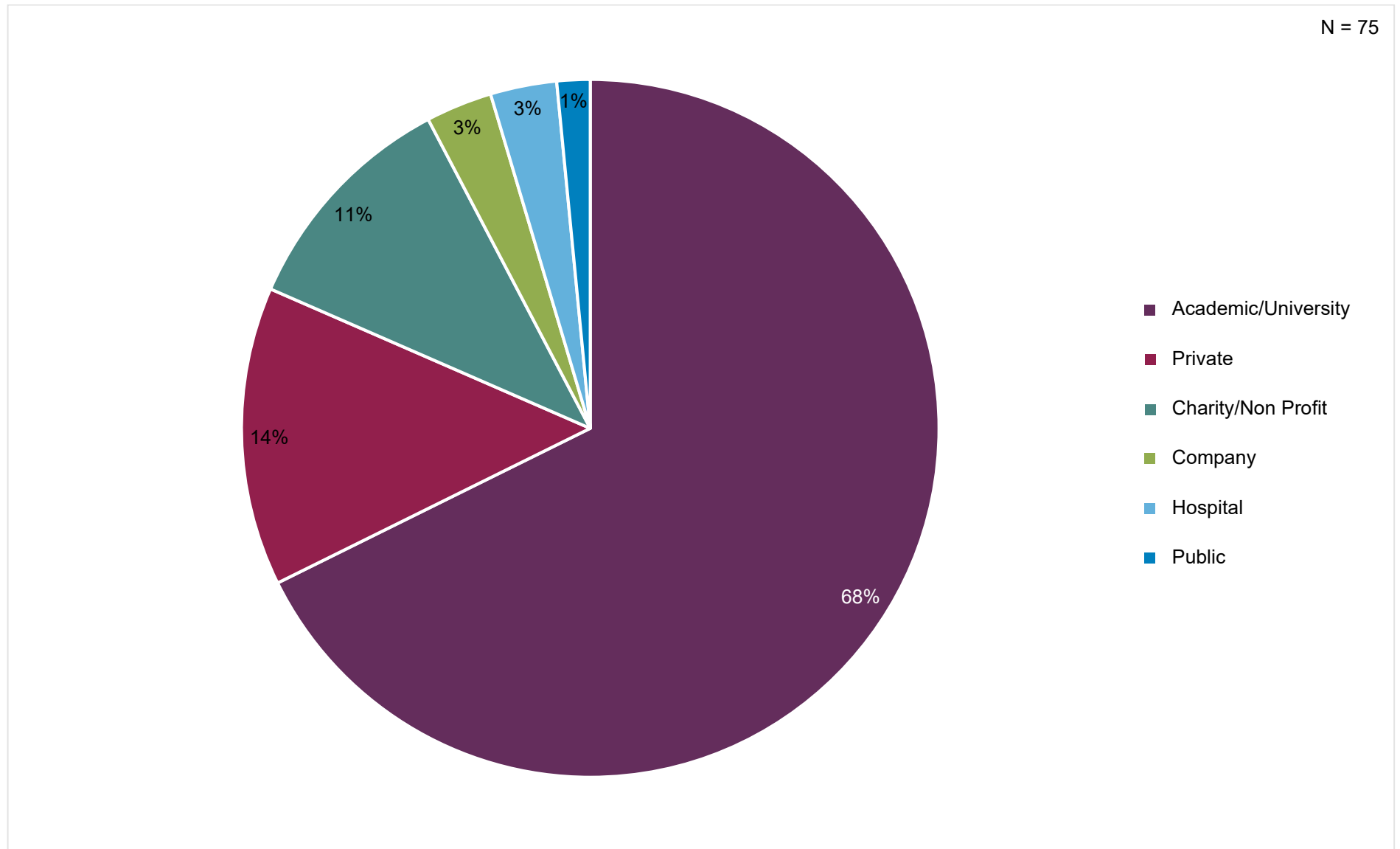
- 221 people on NC3Rs grants moved to a next destination

7.1. Roles leaving NC3Rs support



7.2. Next destination of research students (PhDs, masters, undergraduates)

68% of NC3Rs research students remain in academia after completing their studies.



8. Awards and recognition

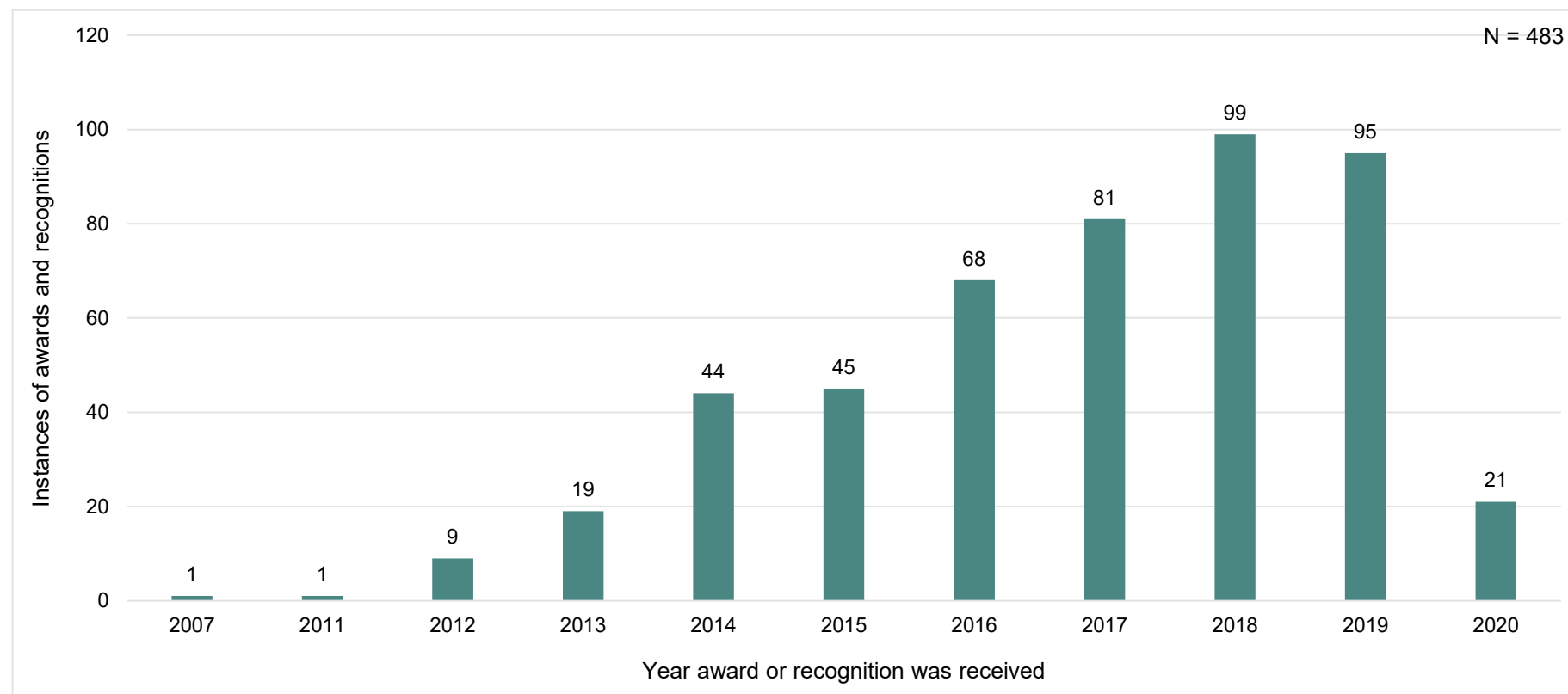
Many NC3Rs Grant holders are recognised for their research either in the form of a prize or being appointed to a prestigious position. This section highlights those achievements arising from NC3Rs funding.

From 118 Grant holders reporting on 129 grants

- 485 unique awards and recognitions reported

8.1. Number of instances of awards by year the award or recognition received

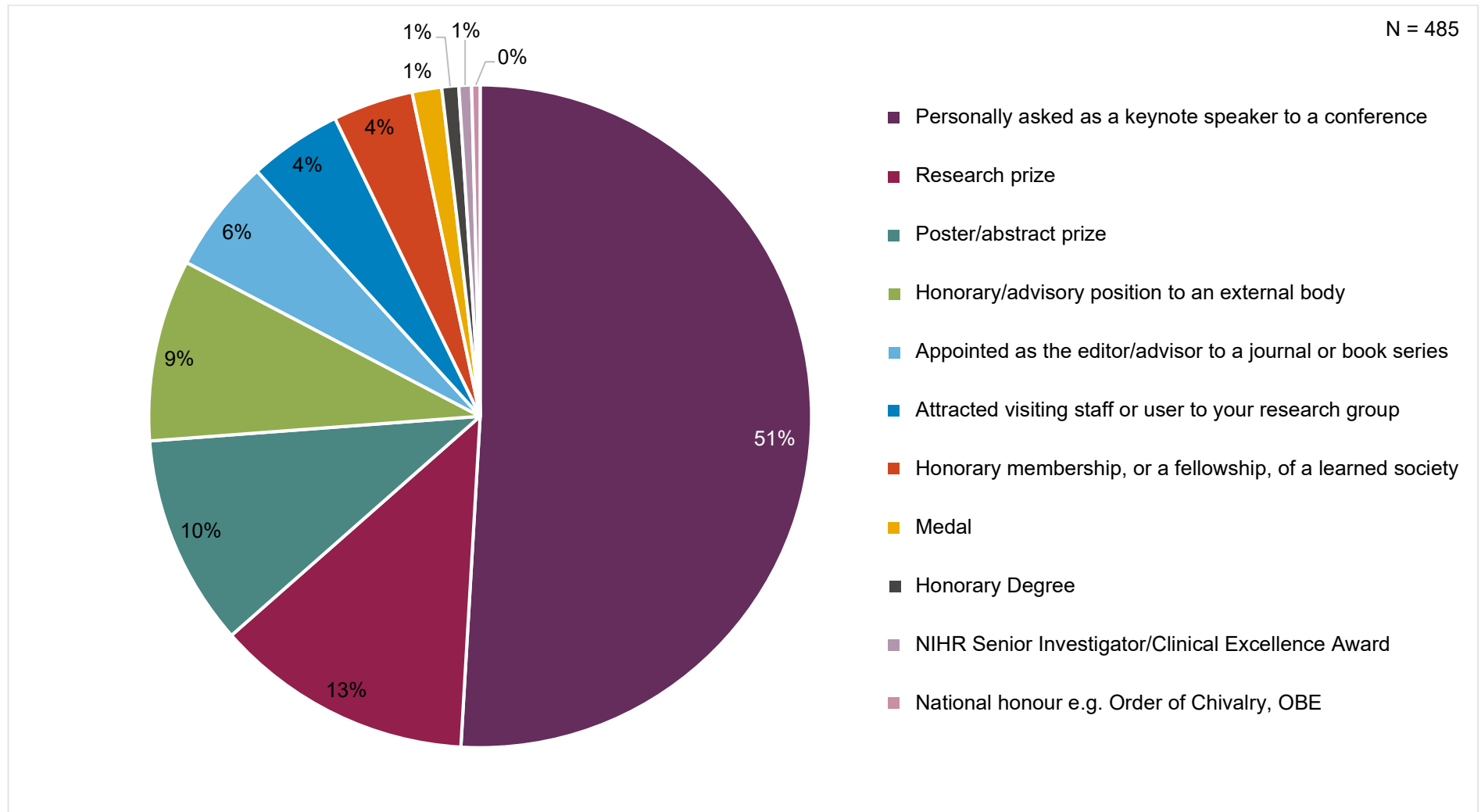
An average of 64 awards and recognitions have been reported each year by NC3Rs Grant holders.*



* The average is calculated from data for 2013 – 2019 as there is a complete dataset for these years. See page 1 for explanation.

8.2. Instances of awards and recognition by type

Over half of reported awards and recognitions are NC3Rs Grant holders being asked to present as a keynote speaker at a conference.



9. Influence on policy and practice

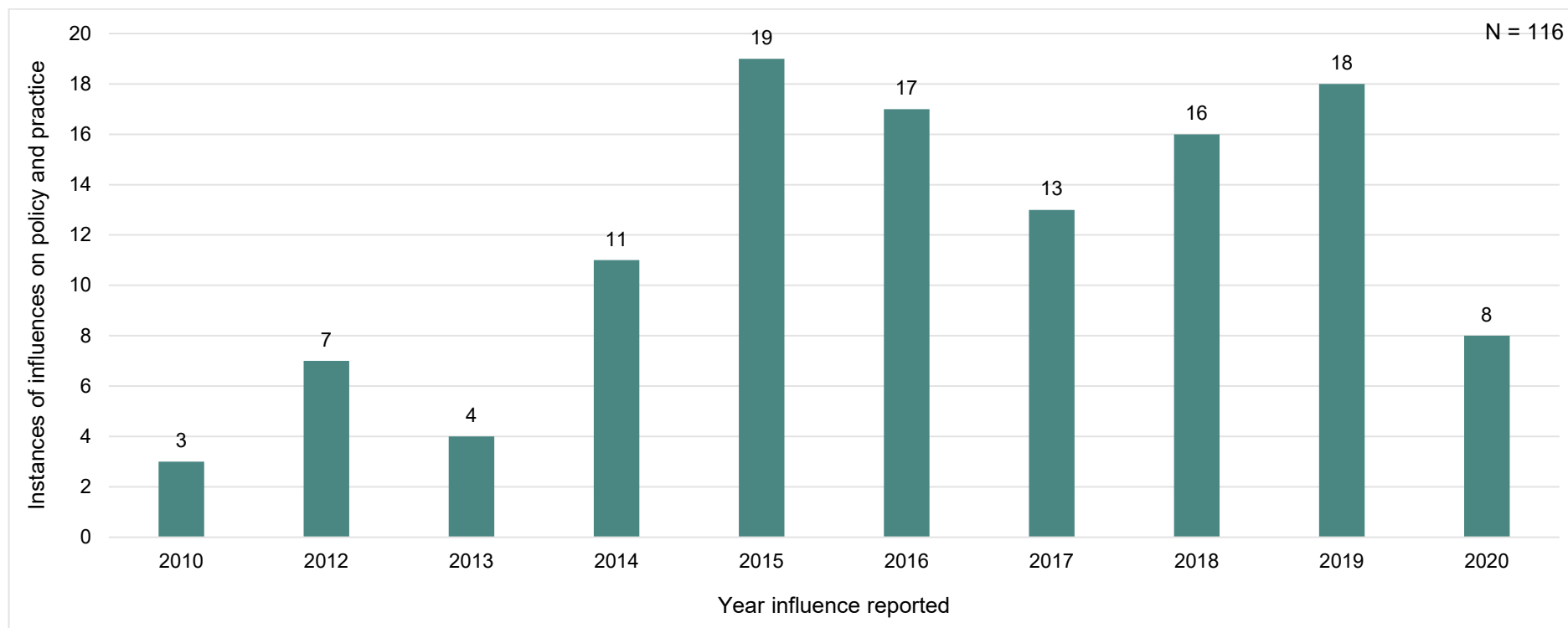
Influences on policies and practices that affect society or the economy can happen at many levels including locally, regionally, nationally or internationally levels. Data being included in a systematic review, guidelines or policy documents, where the project is shaping recommendations, are also recorded in this section.

From 46 Grant holders reporting on 52 grants:

- 117 unique instances of influence on policy and practice were reported

9.1. Number of policy influences by year influence reported

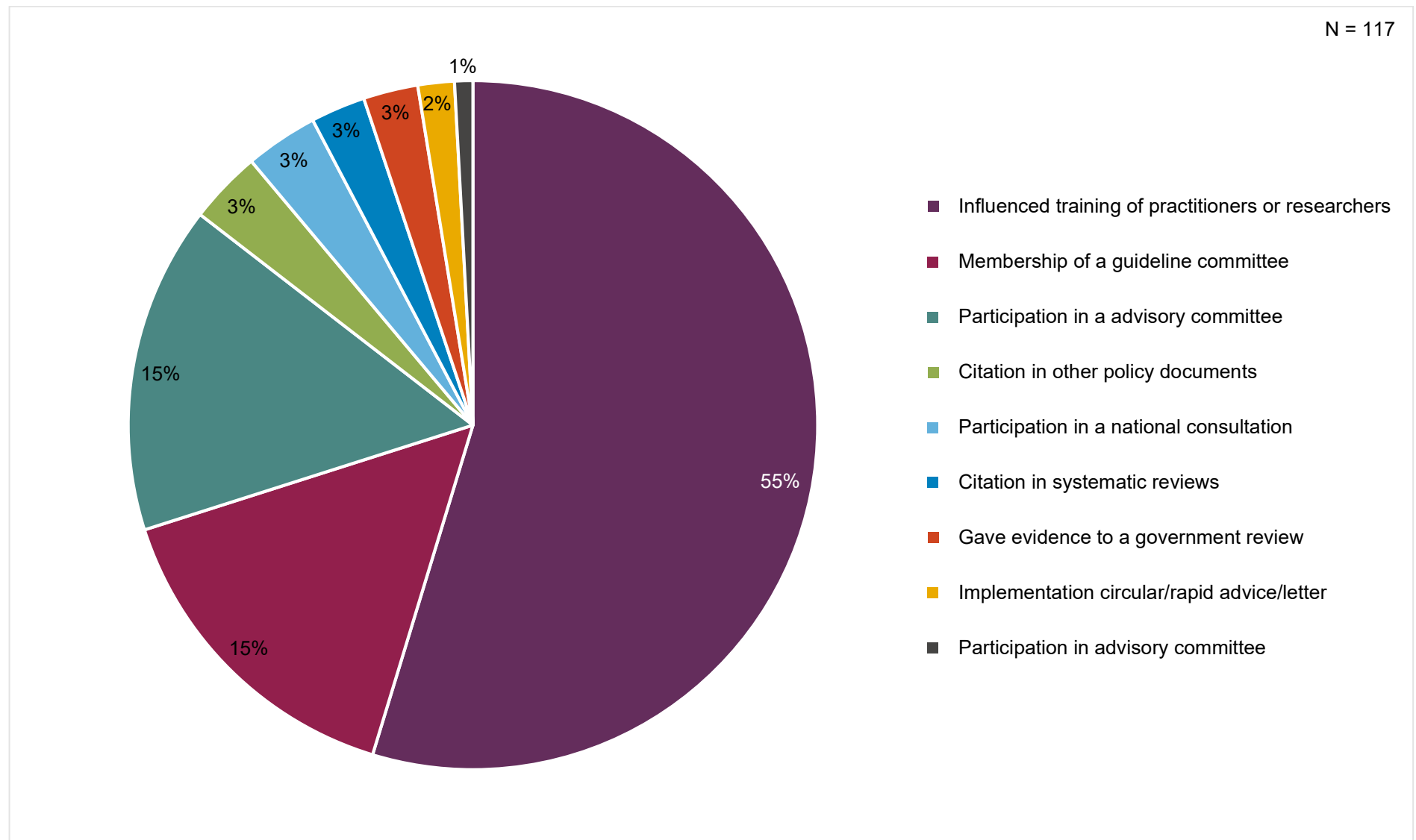
An average of 14 instances of policy influence are reported each year by NC3Rs Grant holders.*



* The average is calculated from data for 2013 – 2019 as there is a complete dataset for these years. See page 1 for explanation.

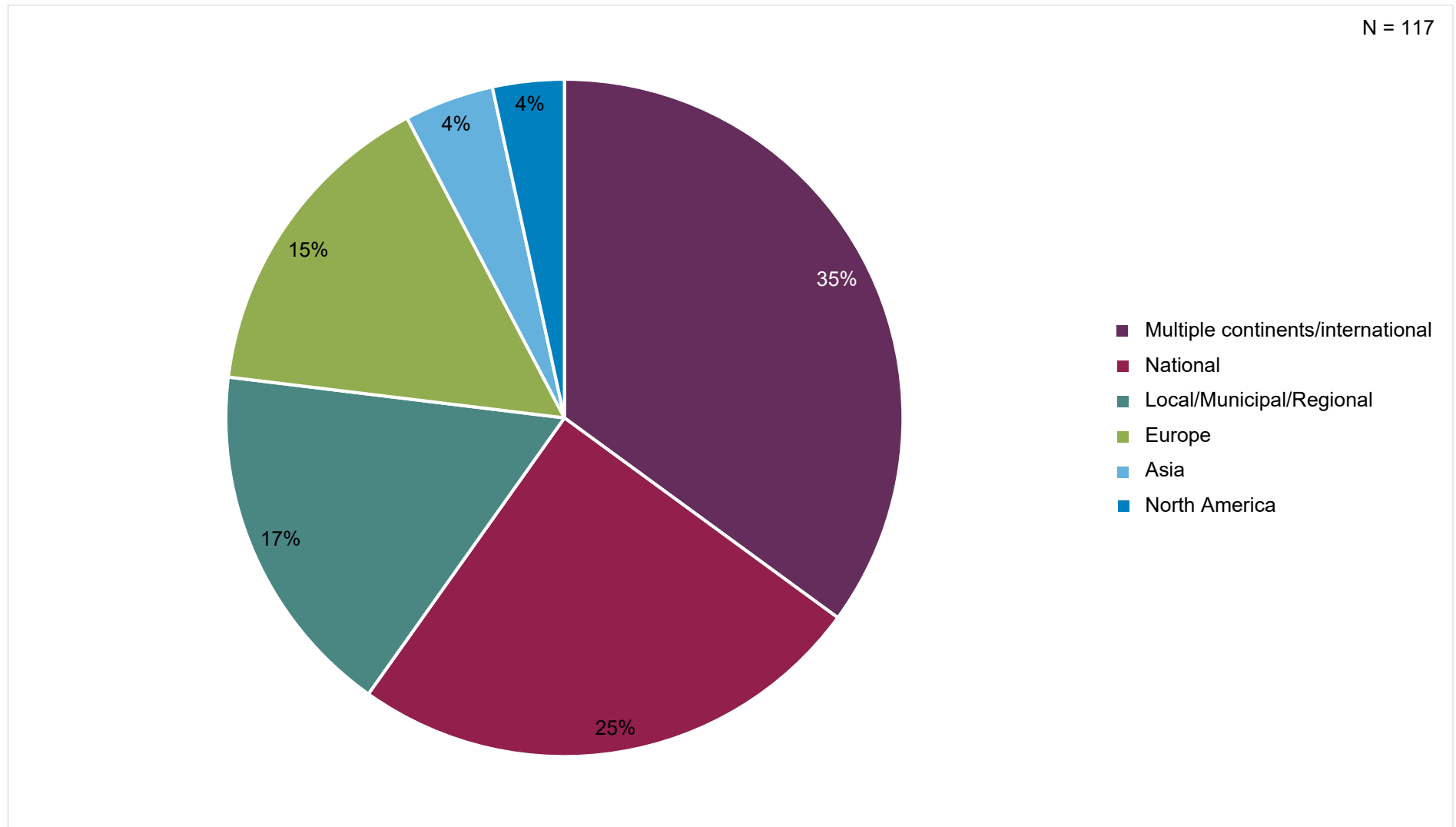
9.2. Instances of policy influence by type

Over half of all policy influences reported by NC3Rs Grant holders are directly influencing the training of other practitioners or researchers.



9.3. Instances of policy influence by location

58% of instances of policy influence reported by NC3Rs Grant holders are international.



10. Research Materials

As part of a research project, new materials can be developed that can have an impact on the project, or research of others achieving this is key to the NC3Rs mission. These may be new models, new cell lines or the development of new software. This section highlights the materials developed through NC3Rs grants.

From 128 Grant holders reporting from 138 grants:

- 244 instances of research materials developed were reported

10.1. Instances of research methods by type

54% of the research methods generated by NC3Rs Grant holders are assays or reagents, *in vitro* models or cell lines.

