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Acronym/Term	Definition
ERN	European Researchers' Night

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INTRODUCTION

In order to know the participants' opinion about the events of the 2018 European Researcher's Night edition, an Ex-Ante and an Ex-Post questionnaire were set up, along with a Kids questionnaire.

Analysis purpose and limit

The purpose is to collect suggestions that will be useful for improvements of future events and to confirm the expected performance, through the use of graphics, i.e. elaborations that further strengthen the expectations, demonstrating the reliability of the study carried out. These steps have been followed:

- 1- Definition of the target audience reached during the European Researchers' Night 2018 within the context of the BEES project.
- 2- Measuring the expectations about commitment, knowledge and understanding of the researchers' activities.
- 3- Understanding the differences between Italy and Europe perceived by the public, regarding financing and consideration given to the research.
- 4- Analyzing how much the role of research is considered important in Italy and in Europe.
- 5- Evaluating which type of media and advertising have been effective to communicate about the Researchers' Night 2018.
- 6- Identifying the level of appreciation of the events and the performance of the organizational processes.

The group interviewed during ex post may not coincide with those interviewed through the ex-ante questionnaire.

1. ANALYSIS

The data analysis has been developed by extracting data from a survey available on the Frascati Scienza website and re-encoding the data by using Ms Excel software. The Ex-Ante questionnaire has been available from 15 September 2018 until 28 September 2018. The Ex-post and the Kids questionnaires have been published online on 24 September 2018 and made available to be filled in until 12 October 2018. In total, we have collected 2029 questionnaires (of which 786 Ex-Ante questionnaires, 169 Kids questionnaires and 1074 Ex-post questionnaires).

This year we have decided to slightly modify the questionnaires, especially the ex-ante and the kids ones in order to make them lighter and easier to be filled in. For achieving this goal, we have requested only to the effective participants of the activities (ex-post) to provide information about the cities where they have participated to the events. The cities in which the questionnaires have been collected and the number of completed questionnaires are reported in the table 1 and in figure 1.

Table 1 Questionnaires sorted by cities

Cities	Ex-Post
No response	49
Alghero	2
Ariccia	9
Carbonia	2
Cassino	1
Cave	1
Colleferro	22
Due Carrare	1
Frascati	579
Gaeta	1
Isnello	26
Matera	100
Monteporzio Catone	2
Palermo	1
Potenza	26
Rocca di Papa	1
Roma	221
Villanova d'Asti	8

As it is evident from the table above and in the figure below, the cities where the attendants to the event contributed more are Frascati, Roma and Matera. Compared to the previous year, the other cities contributed less to fill in the questionnaires. This can be related to the fact that new smaller partners, like scientific associations joined the ERN 2018, compared to

the research centers, who are not used to involve citizens in contributing to the impact assessment. For sure, this is a relevant takeaway to be considered for improving the process in the ERN 2019.

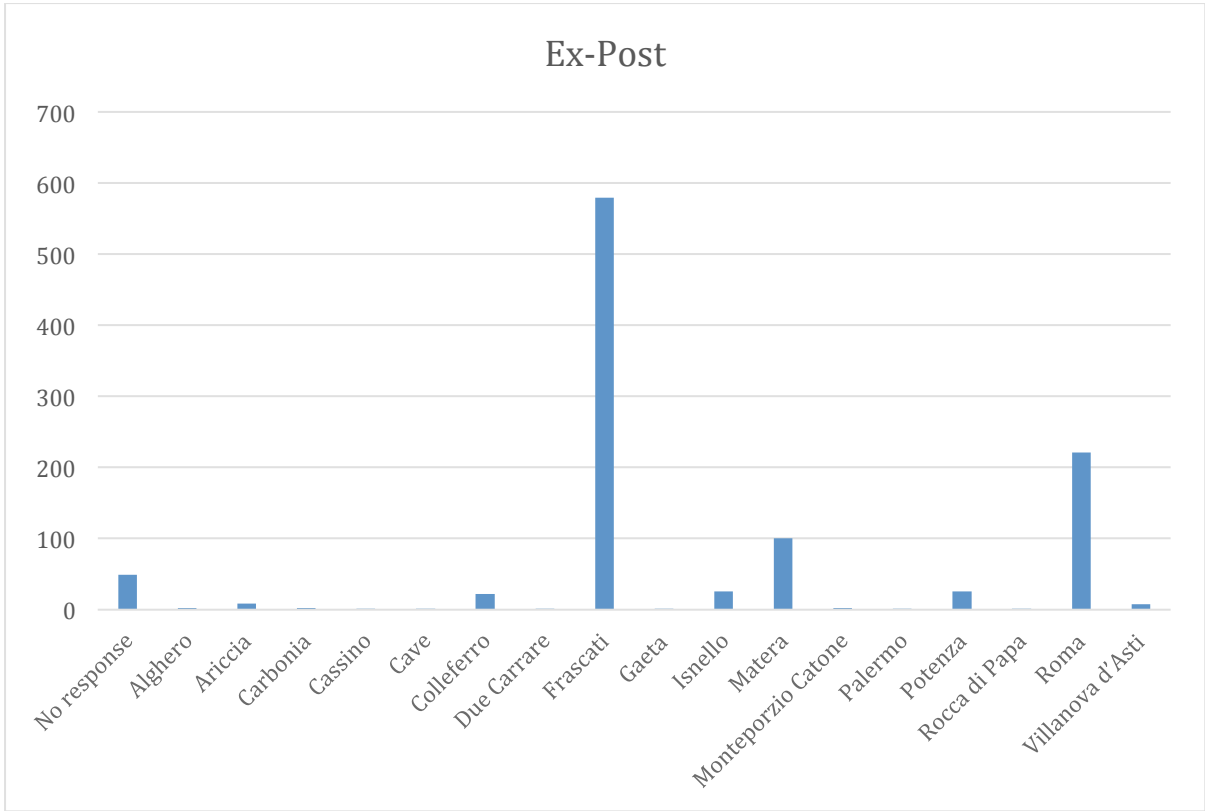


Figure 1 Distribution of questionnaires sorted by city

2. EX-ANTE DATA ANALYSIS

2.1 Gender

The majority of the respondents to the ex-ante questionnaire are female (62%). Compared to the men who filled in the questionnaire (38%), the number of women is almost double.

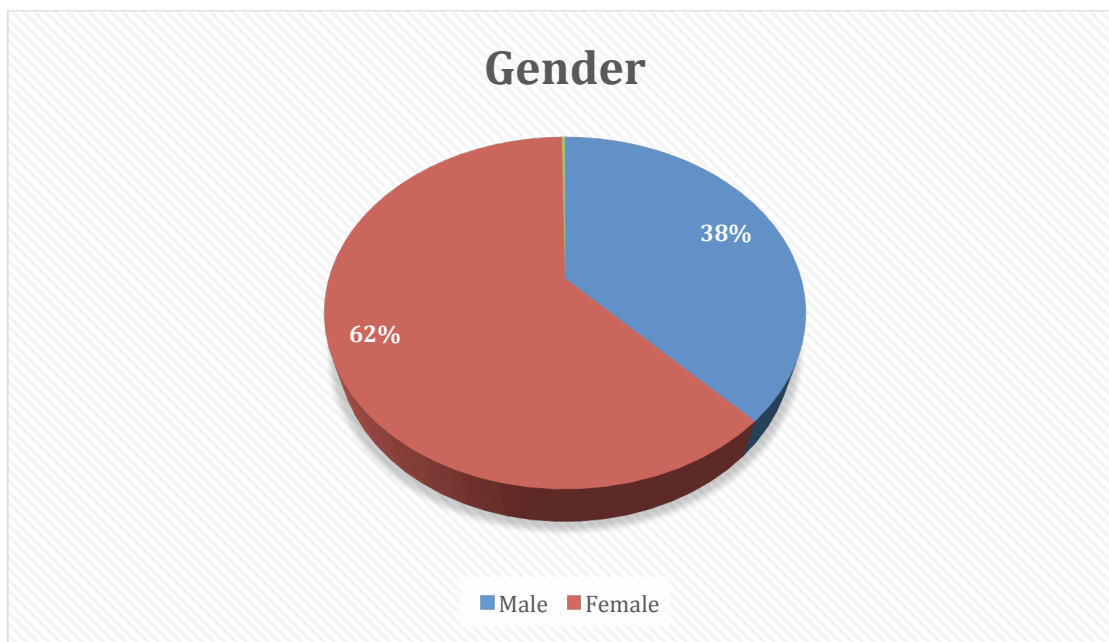


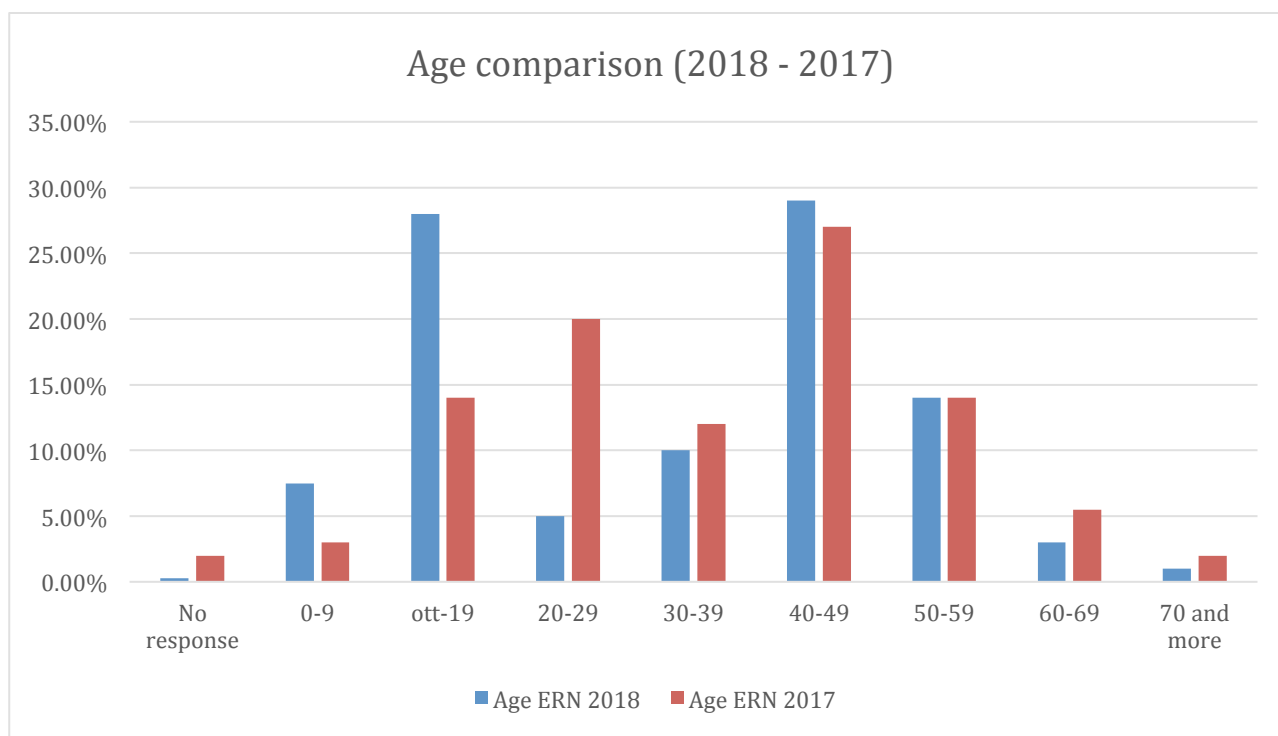
Figure 2 Ex-ante gender distribution

2.2 Age

Most of the respondent to the ex-ante questionnaire is in the age range of 40-49 years old, followed by 10-19 years old people. Compared to last year data, it is clear that the target audience of the ERN 2018 has been composed by youngsters and their parents. Table 3 indicates in detail the differences in responses between the two years. Figure 3 shows the distribution of ages within the two different editions. As it is clearly visualized in the table and figure below, the number of respondents to the questionnaire who is expected to participate in the ERN 2018 in the age range of 0-9 years old has highly increased, as well as the category of 10-19, while the age range of 20-29 years old has consistently decreased. This is an interesting factor to be considered for the typology of activities that should be organized in the ERN 2019.

Table 2 Comparison of ages of expected participants in ERN 2018 and ERN

	Percentage 2018	Percentage 2017
No response	0, 25%	2%
0-9	7,5%	3%
10-19	28%	14%
20-29	5%	20%
30-39	10%	12%
40-49	29%	27%
50-59	14%	14%
60-69	3%	5,5%
70 and more	1%	2%

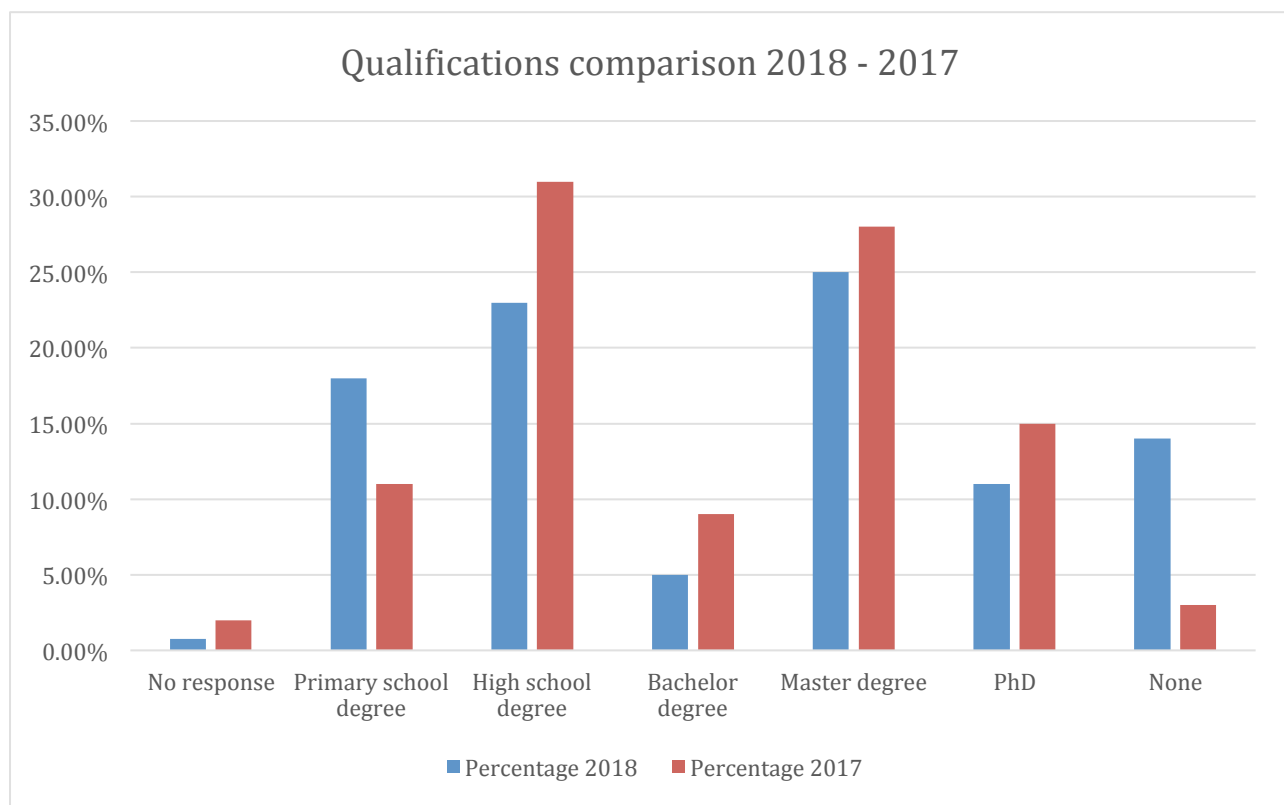
*Figure 3 Comparison of ages of expected participants in ERN 2018 and ERN 2017*

2.3 Qualifications

Most of the respondents has a Master Degree (25%), followed by a High School Degree (23%) and a Primary School Diploma (18%), as shown in Figure 5. Compared to 2017, the expected participants to the ERN 2018 have less Master and PhD degrees, while higher Primary School Degrees.

Table 3 Comparison of qualifications of expected participants (ERN 2018 - ERN 2017)

	Percentage 2018	Percentage 2017
No response	0,75%	2%
Primary school degree	18%	11%
High school degree	23%	31%
Bachelor degree	5%	9%
Master degree	25%	28%
PhD	11%	15%
None	14%	3%

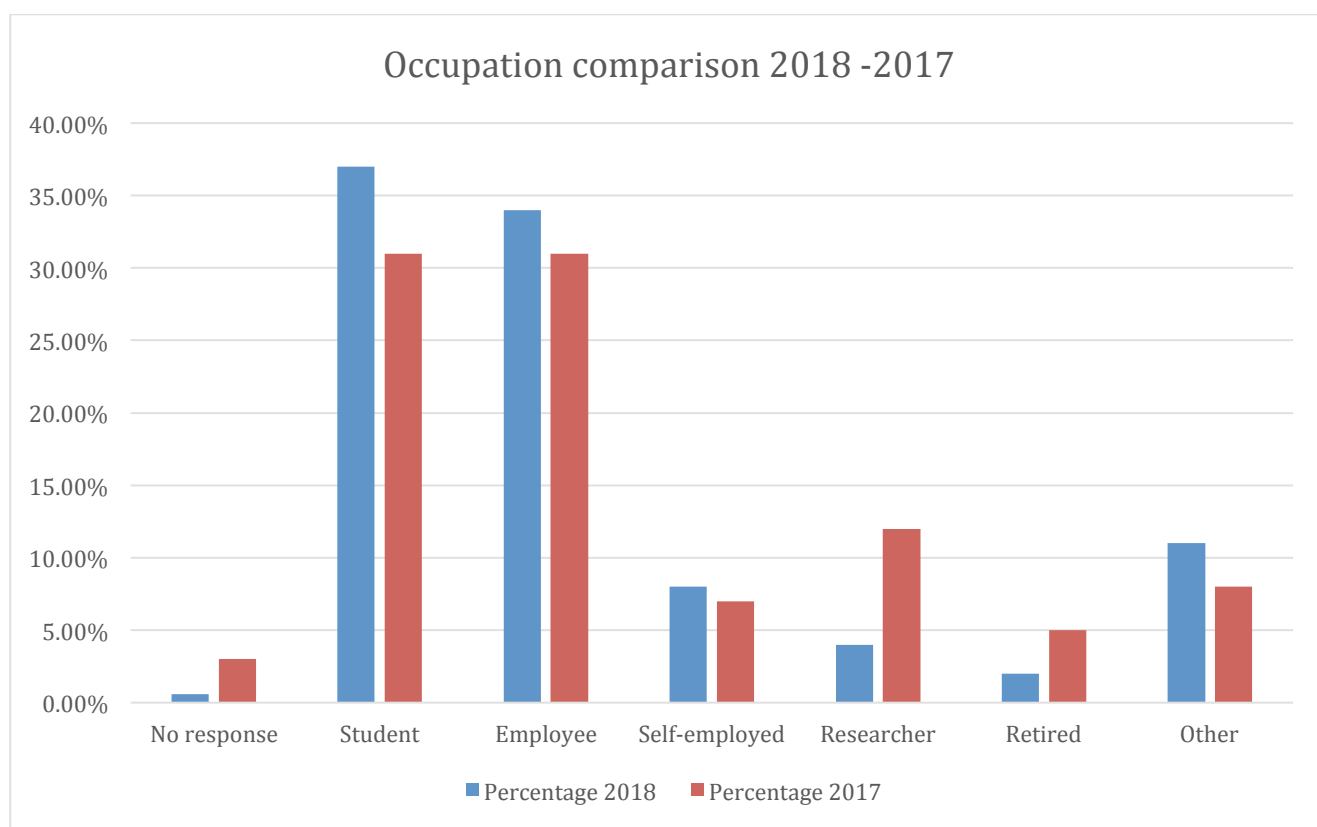
*Figure 4 Comparison of qualifications of expected participants in ERN 2018 and ERN 2017*

2.4 Occupation

Most of the respondents to the ex-ante questionnaire are students (37%) and employees (34%). Only few of them are researchers (4%). Compared to the numbers of expected participants of ERN 2017, the respondents to the ex-ante questionnaire for the ERN 2018 are less working in the research sector, while there are more students and employees. Table 4 and figure 5 clearly shows this result.

Table 4 Comparison of occupation of the expected participants (ERN 2018- ERN 2017)

	Percentage 2018	Percentage 2017
No response	0,6%	3%
Student	37%	31%
Employee	34%	31%
Self-employed	8%	7%
Researcher	4%	12%
Retired	2%	5%
Other	11%	8%

*Figure 5 Comparison of occupation of expected participants in ERN 2018 and ERN 2017*

2.5 How did you get to know about the ERN 2018?

Most of the respondents to the ex-ante questionnaire knew about the ERN 2018 thanks to friends (44%) and websites (28%), while a consistent part of them responded “other” (25%). It is important to analyse the category “other” to what specifically refers. Mainly, this category includes the Frascati Scienza newsletter, email mailing lists from the partners of

Frascati Scienza, information provided by schools and internal emails to employees from institutions and organizations participating to the event.

Table 5 Percentages' analysis on how expected participants knew about the ERN 2018

No response	0,25%
Friends	44%
Ads on newspapers	3%
Facebook	6%
Twitter	1%
Journals	3%
Websites	28%
Radio	2%
TV	2%
Other	25%

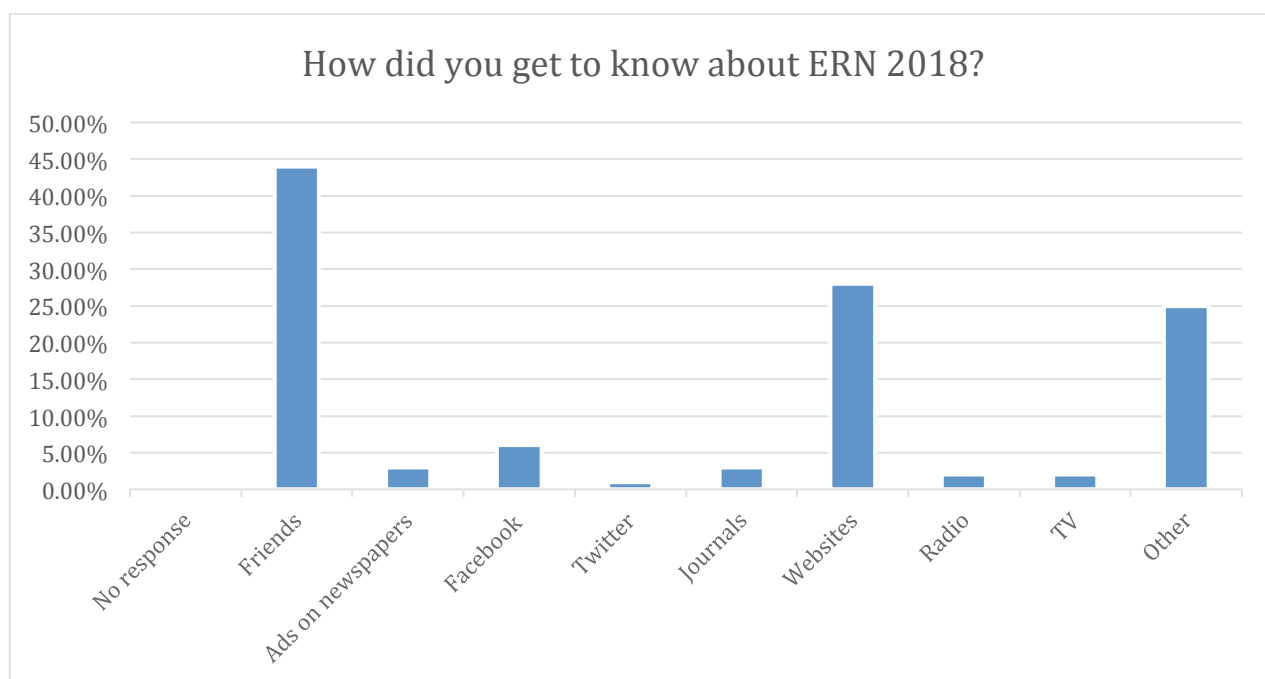


Figure 6 Distribution of modes to get to know about the ERN 2018 (ex-ante)

2.6 Why would you like to join the ERN 2018?

As it is clearly shown in the following tables and figures, most of the respondents to the ex-ante questionnaire of ERN 2018 participates in the event mainly because they would like to actively get involved in research activities, thus experimenting that science is fun. Indeed, it seems evident that the researchers' work is well known at this point by the expected participants to the ERN 2018, as we can assume that most of them have already participated in the previous editions of the ERN organized by Frascati Scienza throughout Italy. Only a

little part of the respondents to the ex-ante questionnaire would like to participate to the event to understand if they are willing to become researchers. This result clearly shown that even though the expected target audience of the event is not interested in being a researcher, the event constitutes an excellent venue to get people involved in the daily lives of scientists, and to show them the benefits they generate for the society. Below a detailed representation of all the questions and related replies by using a likert scale.

- **To understand the benefits that research generates for the society**

Table 6 Likert scale 1: percentage of people joining the ERN 2018 to understand the benefits of research for society

A lot	52%
More than enough	20%
Enough	20%
A little	2%
Not at all	1%

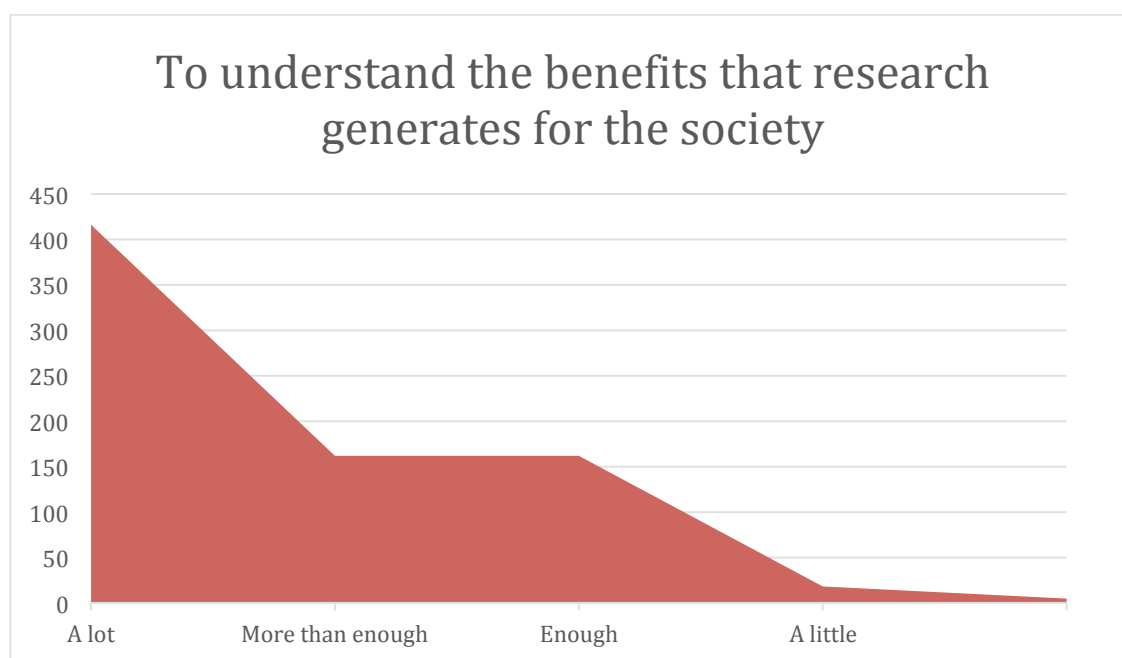


Figure 7 Graphic representation of likert scale 1

- **To get to know the researcher's work in the different sectors**

Table 7 Likert scale 2: percentage of people joining the ERN 2018 to get to know the researcher's work in different sectors

A lot	52%
More than enough	24%

Enough	5%
A little	2%
Not at all	1%

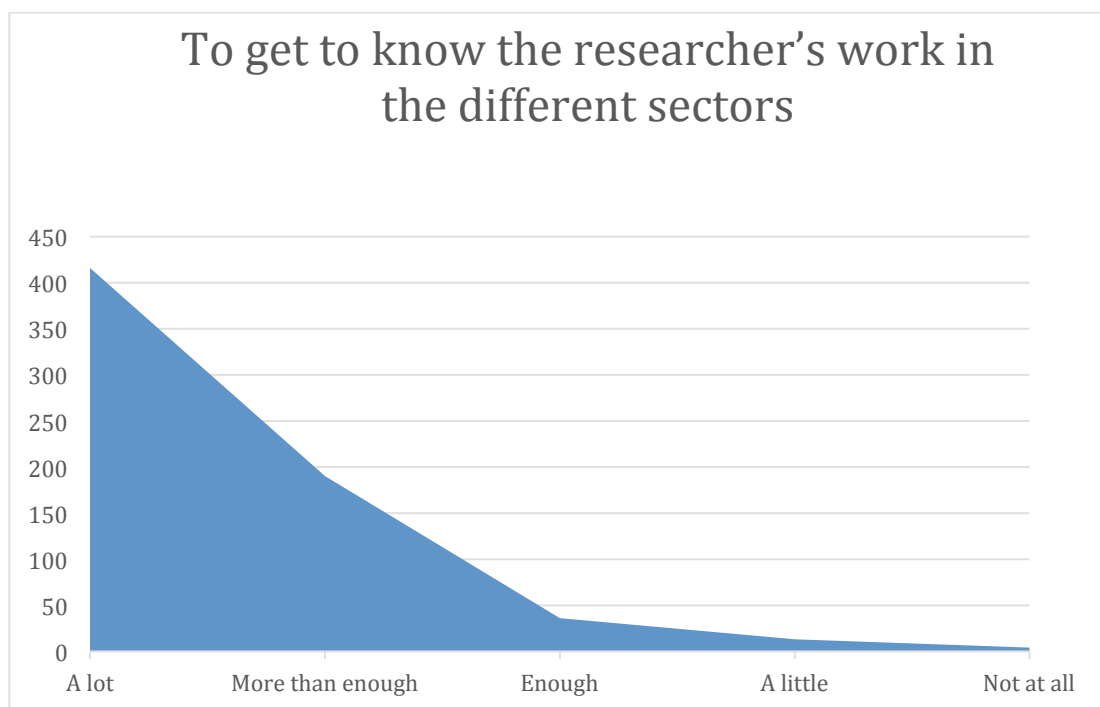


Figure 8 Graphic representation of likert scale 2

- To understand why doing research is important

Table 8 Likert scale 3: percentage of people joining the ERN 2018 to understand why doing research is important

A lot	56%
More than enough	8%
Enough	7%
A little	2%
Not at all	1%

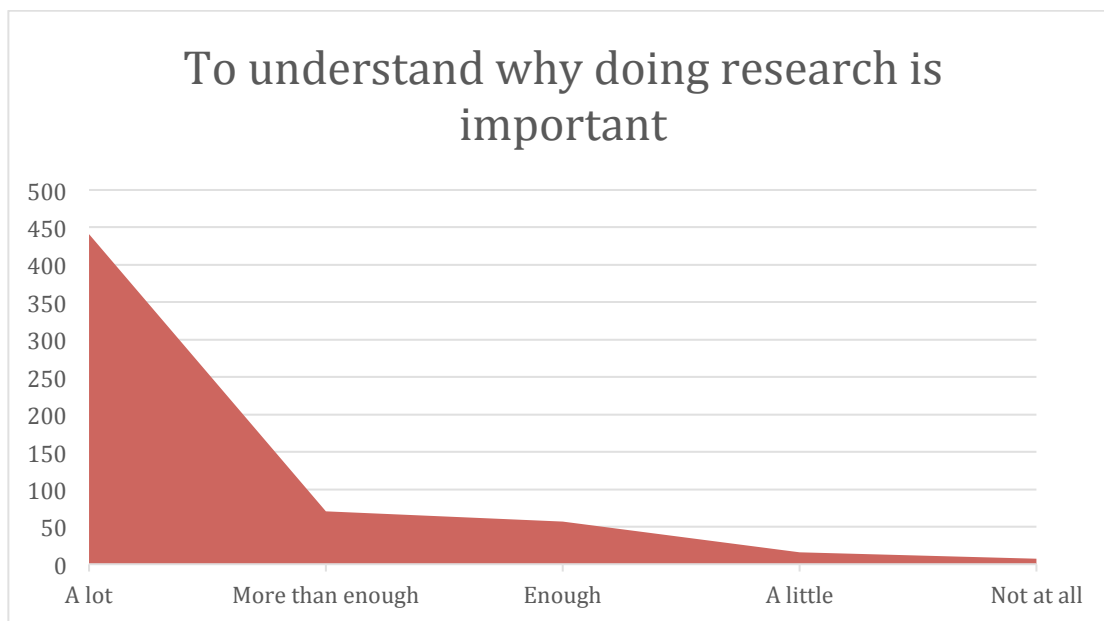


Figure 9 Graphic representation of likert scale

- To understand that science is fun

Table 9 Likert scale 4: percentage of people joining the ERN 2018 to understand that science is fun

A lot	60%
More than enough	16%
Enough	16%
A little	4%
Not at all	1%

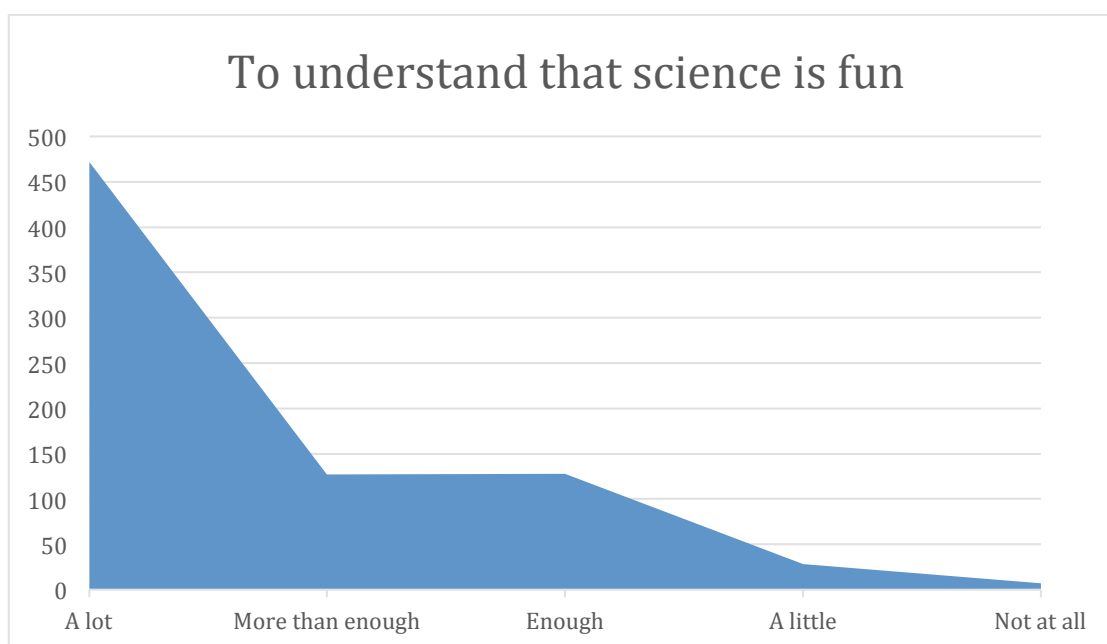


Figure 10 Graphic representation of likert scale 4

- **Because this event is an opportunity for citizens to be actively involved in research activities**

Table 10 Likert scale 2: percentage of people joining the ERN 2018 because the event actively involves citizens in research

A lot	66%
More than enough	17%
Enough	10%
A little	2%
Not at all	1%

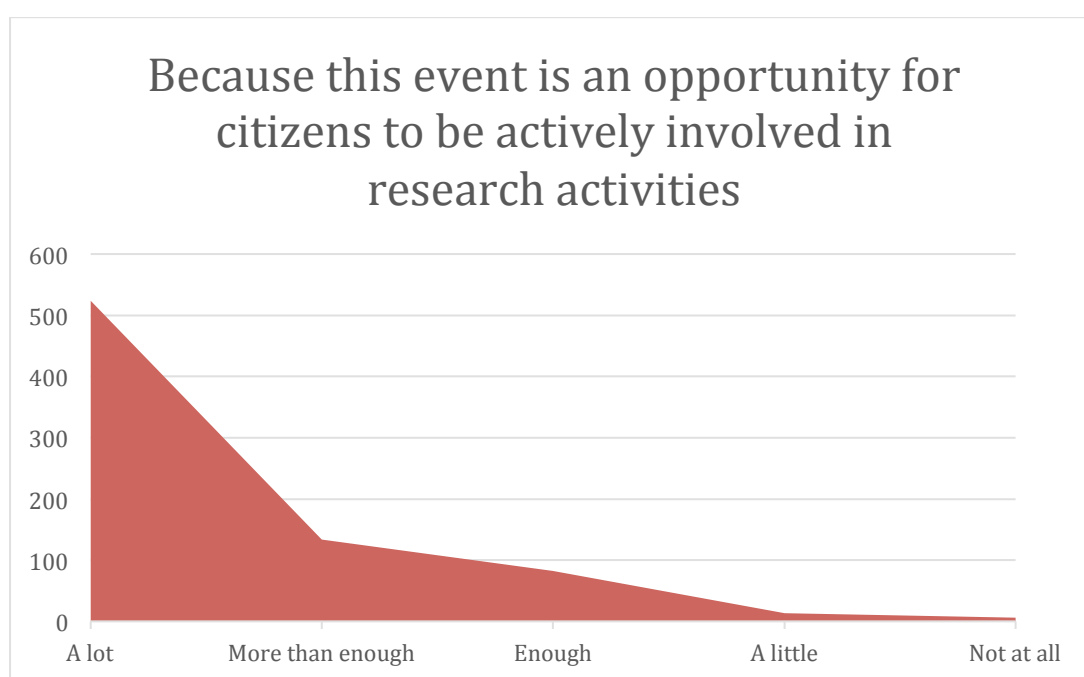


Figure 11 Graphic representation of likert scale 5

- **To understand if I would like to become a researcher**

Table 11 Likert scale 6: percentage of people joining the ERN 2018 to understand if they would become researchers

A lot	27%
More than enough	14%
Enough	14%
A little	22%
Not at all	20%

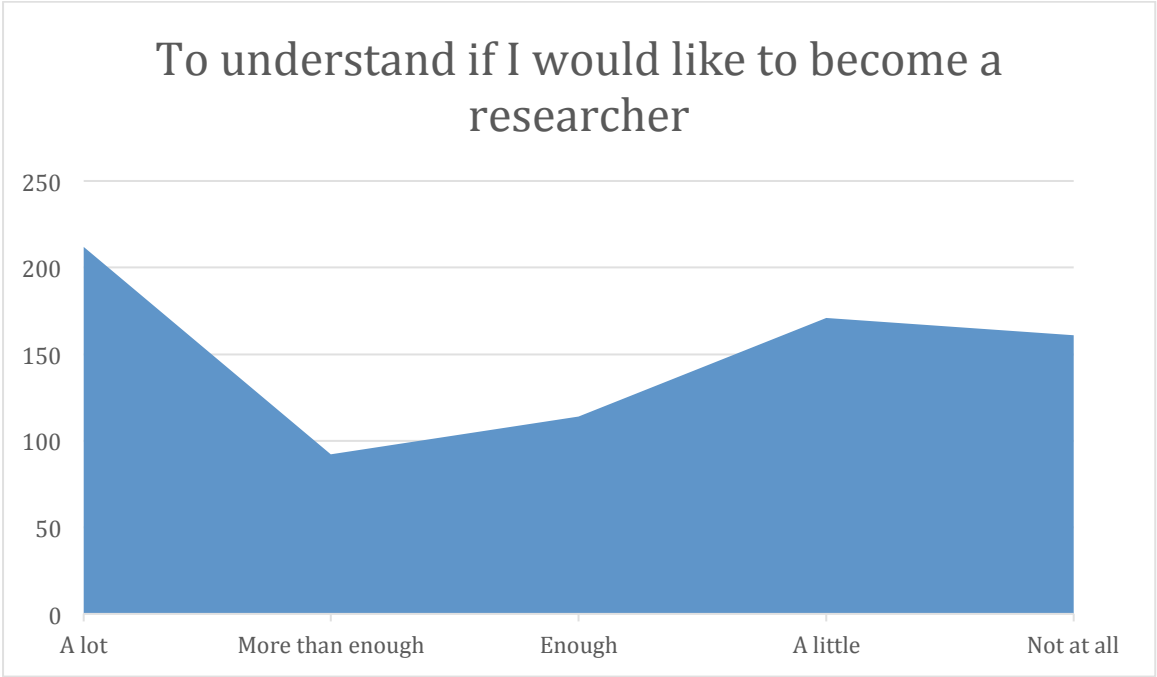


Figure 12 Graphic representation of likert scale 6

3. EX-POST DATA ANALYSIS

3.1 Gender

The majority of the respondents to the ex-post questionnaire are female (61%), compared to the men who filled in the questionnaire (37%). This result shows the increasing trend of the event to involve more women than men, especially if we compare the data from the previous edition of ERN, where women were 58% of the attendants.

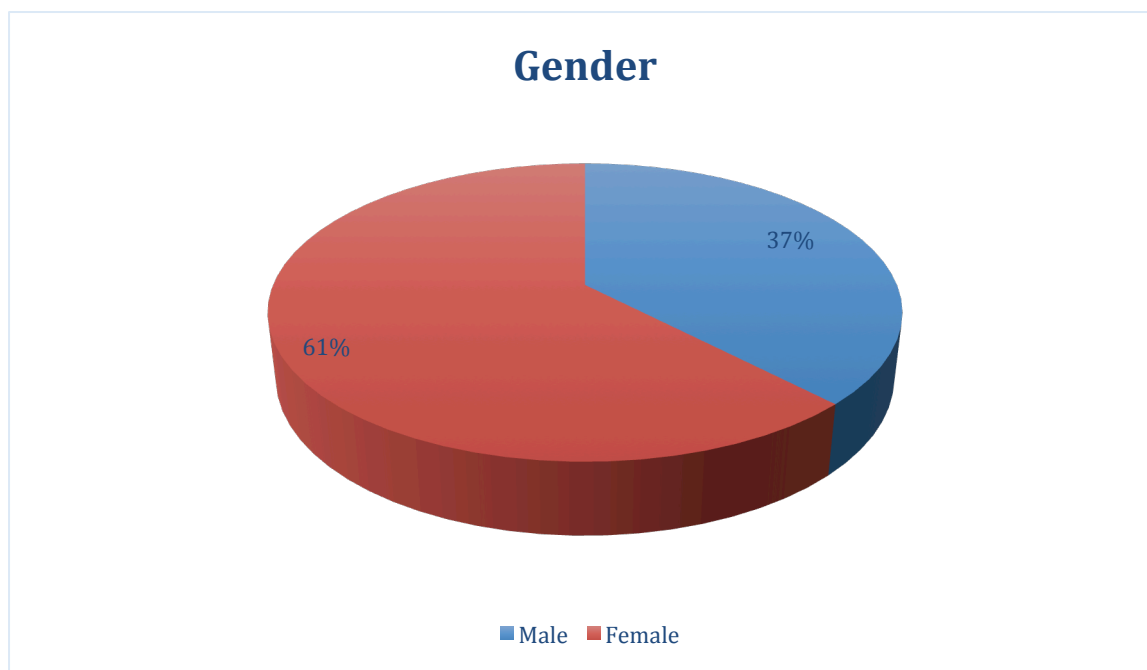


Figure 13 Ex-post Gender distribution

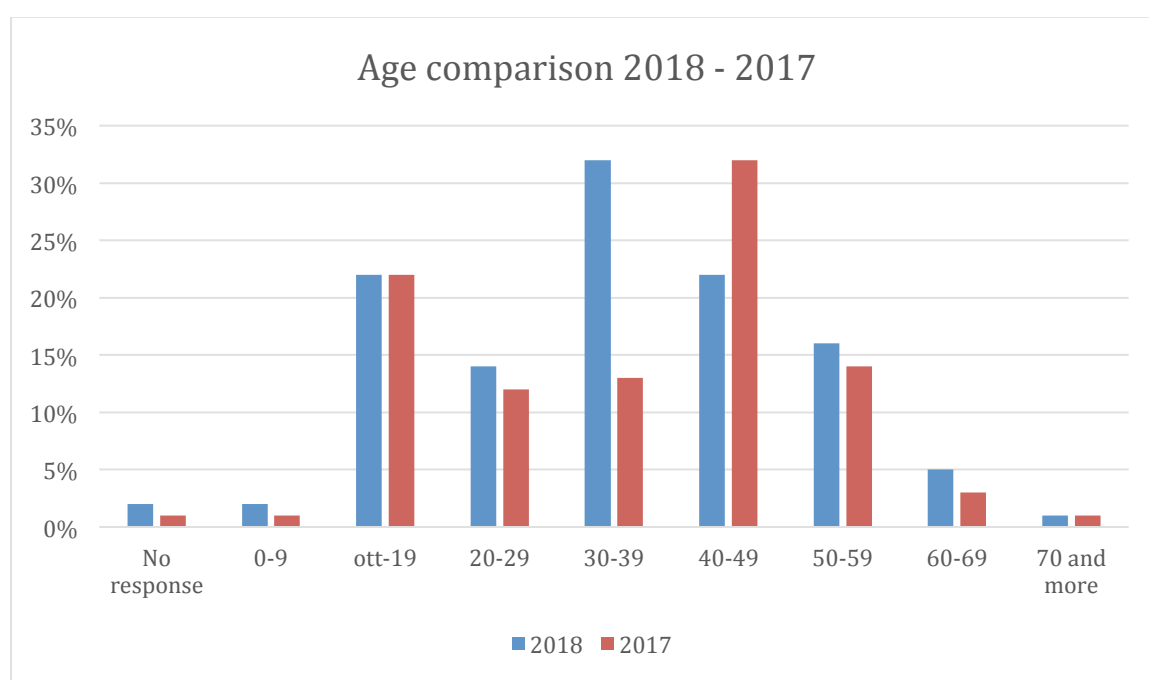
3.2 Age

Most of the respondents to the ex-post questionnaire are in the age range of 30-39 years old, followed by 10-19 and 40-49 years old people. Compared to last year data, younger people participated more to the event, as the category of 30-39 years old was less represented (only 13%).

Table 3 indicates in detail the differences in responses between the two years. This is also true if we compare this information to the ex-ante questionnaire data of 2018, as the category of 30-39 years old is represented more with respect to the 40-49 years old.

Table 12 Age of participants in ERN 2018 compared with attendants to ERN 2017

	Percentage 2018	Percentage 2017
No response	2%	1%
0-9	2%	1%
10-19	22%	22%
20-29	14%	12%
30-39	32%	13%
40-49	22%	32%
50-59	16%	14%
60-69	5%	3%
70 and more	1%	1%

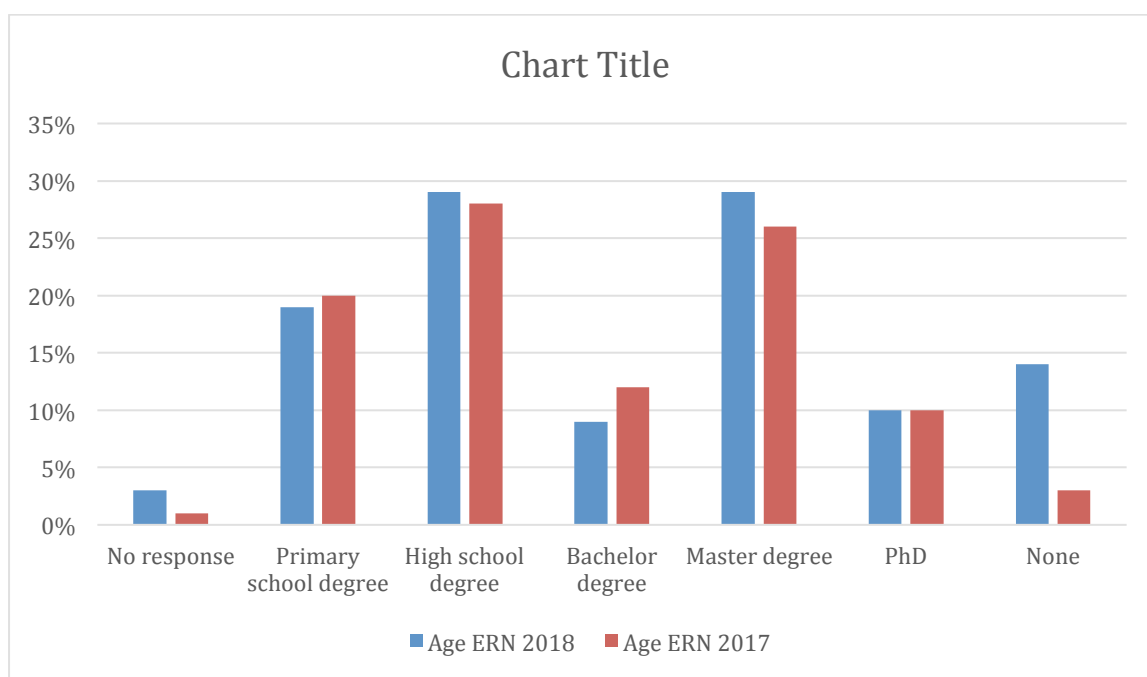
*Figure 14 Comparison of ages of participants in ERN 2018 and ERN 2017*

3.3 Qualifications

Most of the respondents to the ex-post questionnaire has a Master Degree (29%) and/or a High School Degree (29%), followed by a Primary School Degree (19%). Compared to 2017 edition of ERN, the participants to the ERN 2018 shows more or less the same level of qualifications, as reflected by figure 14.

Table 13 Comparison of qualifications of participants (ERN 2018- ERN 2017)

	Percentage 2018	Percentage 2017
No response	3%	1%
Primary school degree	19%	20%
High school degree	29%	28%
Bachelor degree	9%	12%
Master degree	29%	26%
PhD	10%	10%
None	14%	3%

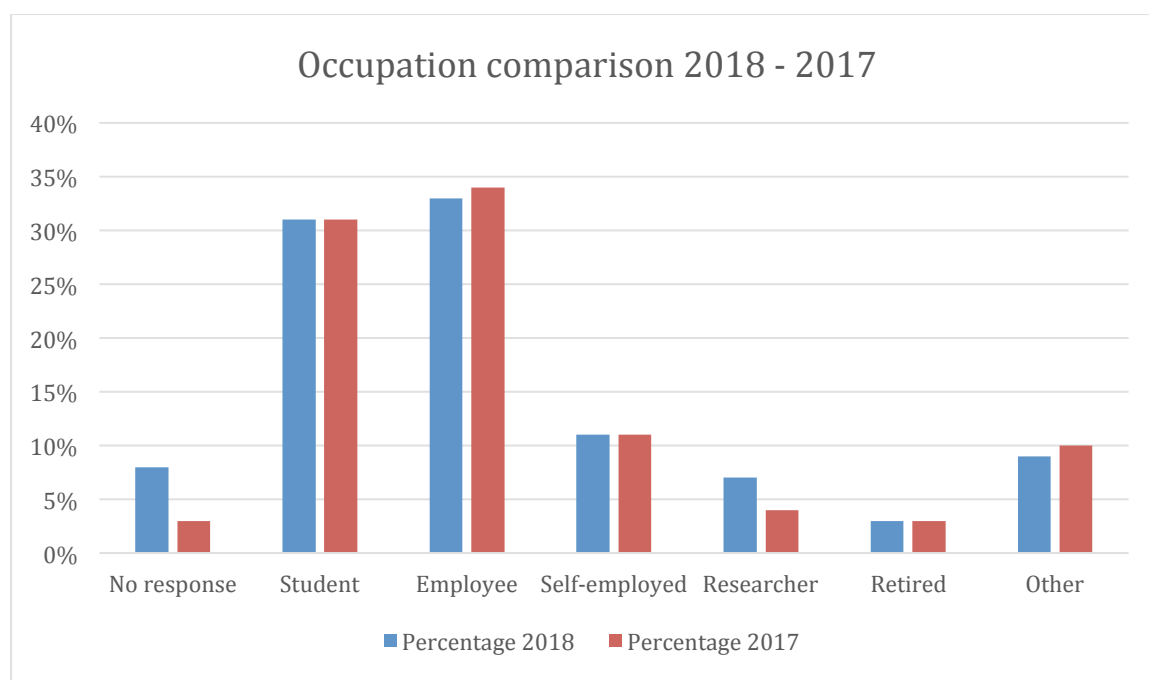
*Figure 15 Comparison of qualifications of participants in ERN 2018 and ERN 2017*

3.4 Occupation

Most of the respondents to the ex-post questionnaire are employees (33%), followed by students (31%). Only few of them are researchers (4%). Compared to the participants of ERN 2017, the results are almost similar. Table 4 and figure 5 clearly show this result.

Table 14 Comparison of occupation of participants (ERN 2018 - ERN 2017)

	Percentage 2018	Percentage 2017
No response	8%	3%
Student	31%	31%
Employee	33%	34%
Self-employed	11%	11%
Researcher	7%	4%
Retired	3%	3%
Other	9%	10%

*Figure 16 Comparison of occupation of participants in ERN 2018 and ERN 2017*

3.5 How did you get to know about the ERN 2018?

Most of the respondents to the ex-post questionnaire knew about the ERN 2018 thanks to friends (35%) and websites (34%), while a consistent part of them responded through Facebook (20%). Compared to the data of the ex-ante questionnaire, it is clear that the use of websites was predominant and it is also interesting to see the high increase of the involvement of the participants through Facebook.

Table 15 Percentage of responses on how participants to ERN 2018 knew about the event (ex-post)

No response	3%
Friends	35%
Ads on newspapers	5%
Facebook	20%
Twitter	2%
Journals	5%
Websites	34%
Radio	2%
TV	4%
Other	2%

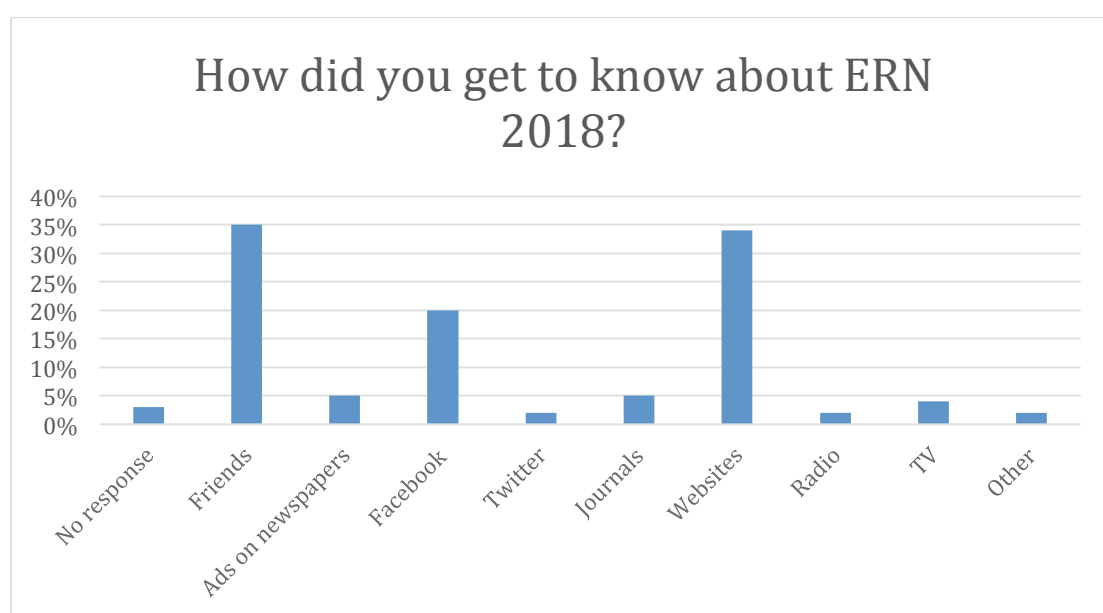


Figure 17 Distribution of modes to get to know about the ERN 2018 (ex-post)

3.6 Did you already participate in other editions of ERN?

More than half of the respondents to the ex-post questionnaire of ERN 2018 has already participated in previous editions of the event. This result shows the numbers slightly increased if compared with the data collected during the ERN 2017. Hence, a positive trend

is on the way to have people involved in the long term to participate in the events organized by Frascati Scienza for the European Researchers' Night.

Table 16 Participation in previous editions, comparison ERN 2018 – ERN 2017

	Total % ERN 2018	Total % ERN 2017
No response	6%	2%
Yes	53%	47%
No	44%	52%

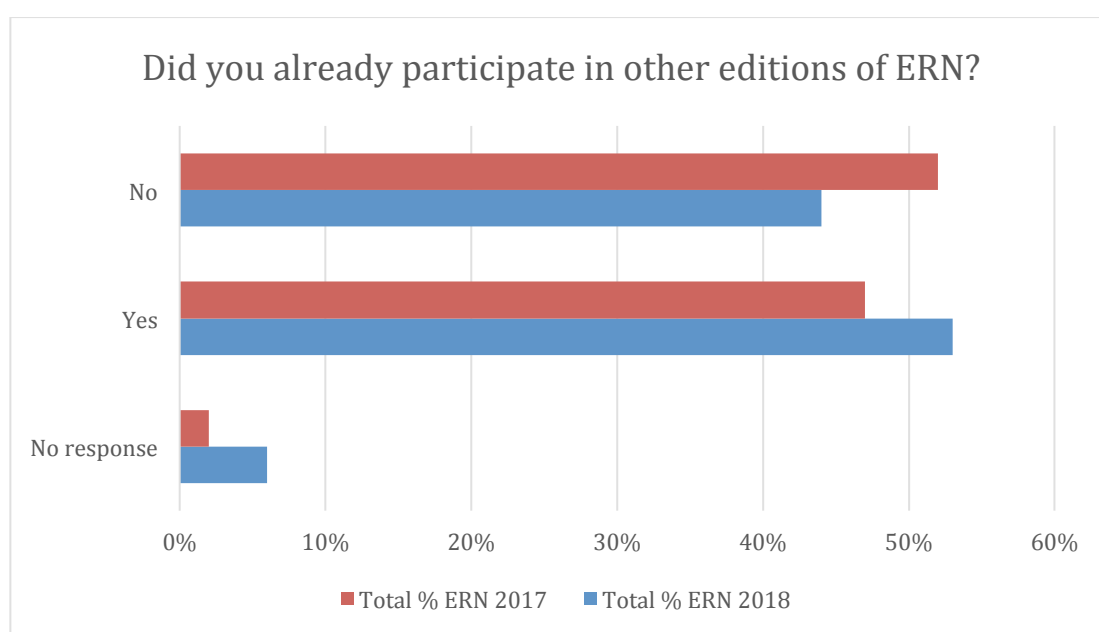


Figure 18 Comparison of participation in previous editions (ERN 2018 - ERN 2017)

3.7 If yes, in how many?

Data collected through the ex-post questionnaire clearly represents that most of the attendants has participated in average to 2/3 of the previous editions (28%). Basically the results achieved in 2018 are similar to the ones gathered in 2017, with only a slight increase of attendants who have participated already in 1 of the previous editions of ERN.

Table 17 Number of ERN editions previously attended

	Total % ERN 2018	Total % ERN 2017
No response	48%	54%
1	15%	14%

2/3	28%	22%
4/6	7%	8%
7	1%	1%
More than 7	2%	1%

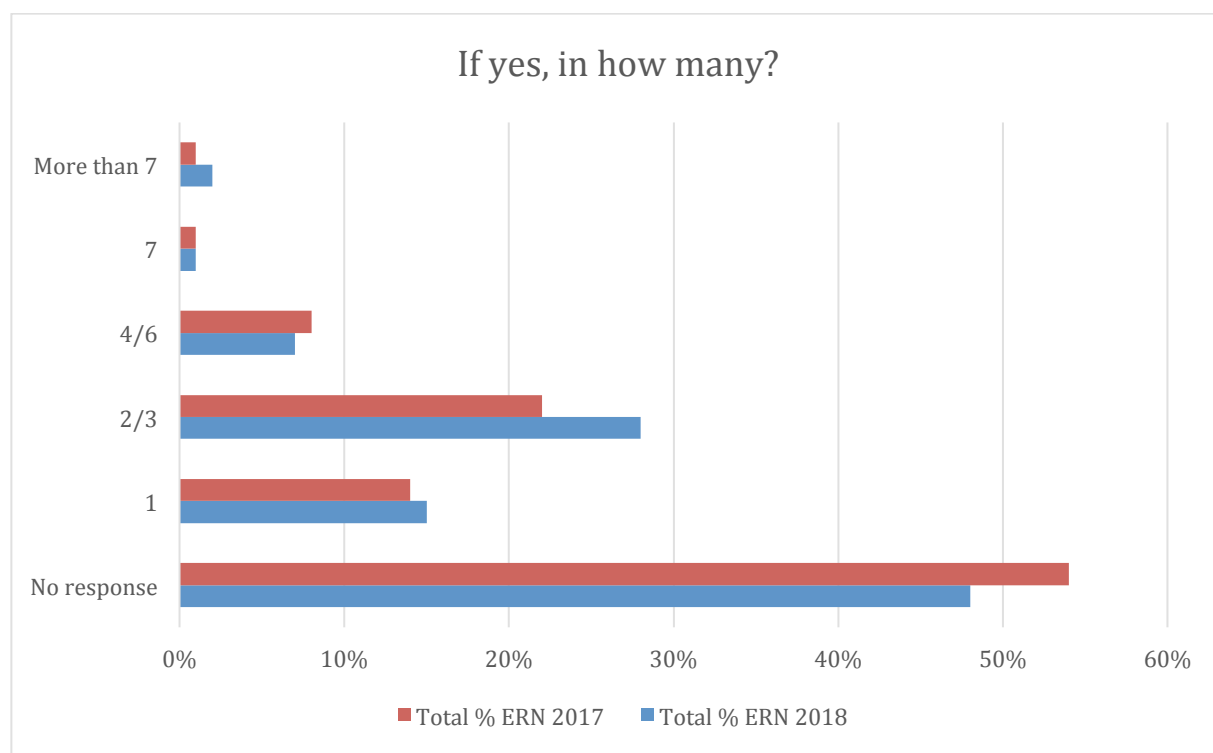


Figure 19 Number of ERN editions attended, comparison ERN 2018 - ERN 2017

3.8 Do you think that the ERN 2018 mostly contributed ...?

The data collected through the ex-post questionnaire related to this specific question do not show any significant variation compared to the information previously analysed in the ex-ante questionnaire. Most of the respondents think that the ERN 2018 has contributed to let people understand that science is fun (60% responded a lot), and that the event is a good way to have citizens actively involved in science (57 responded a lot). What is relevant to emphasize here was the difficulty of the respondents to reply to the last question (To understand if I would like to become a researcher), as most of them were already working and in the age category of 30 – 49 years old, yet too late to think about a research career.

- To understand the benefits that research generates for the society

Table 18 Likert scale 1: percentage of people joining the ERN 2018 to understand the benefits of research for society (ex-post data)

A lot	42%
-------	-----

More than enough	40%
Enough	17%
A little	1%
Not at all	1%

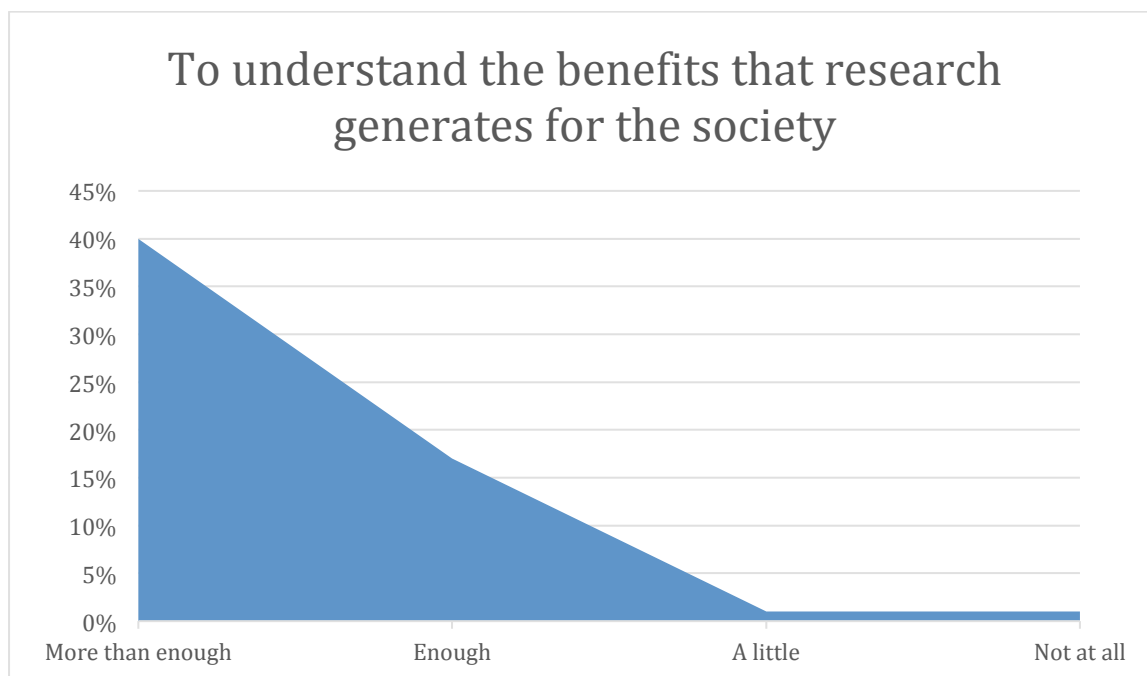


Figure 20 Graphic representation of likert scale 1 (ex-post)

- **To get to know the researcher's work in the different sectors**

Table 19 Likert scale 2: percentage of people joining the ERN 2018 to get to know the researcher's work in different sectors

A lot	40%
More than enough	38%
Enough	17%
A little	2%
Not at all	1%

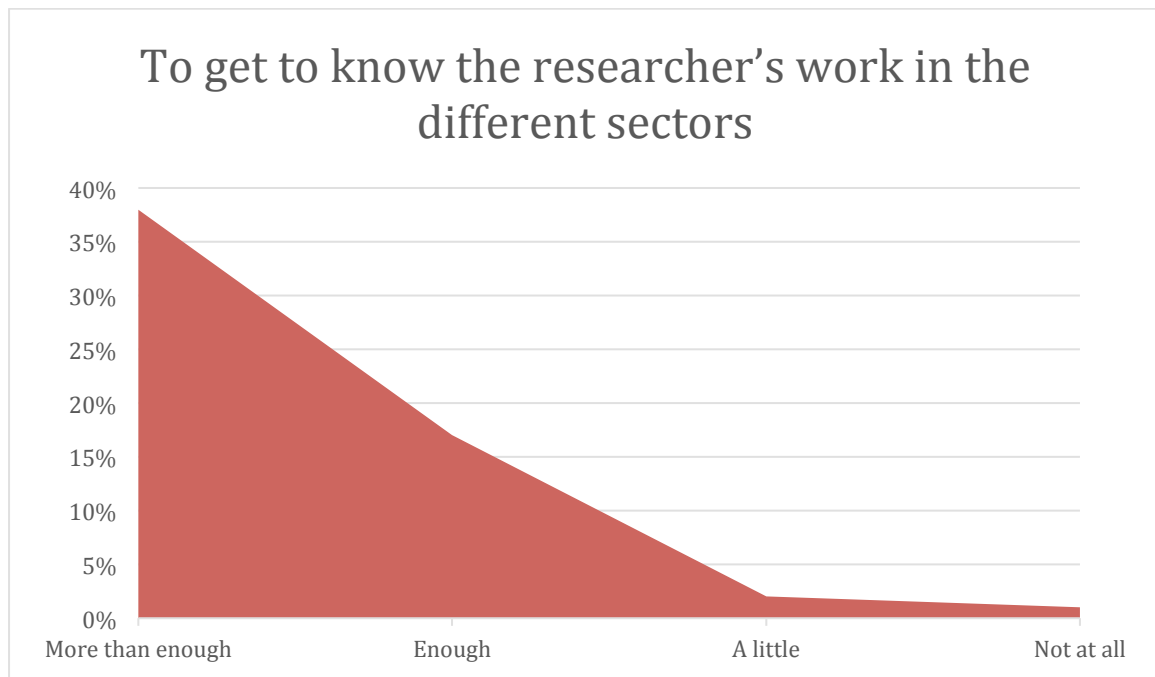


Figure 21 Graphic representation of likert scale 2 (ex-post)

- To understand why doing research is important

Table 20 Likert scale 3: percentage of people joining the ERN 2018 to understand why doing research is important

A lot	54%
More than enough	31%
Enough	11%
A little	2%
Not at all	1%

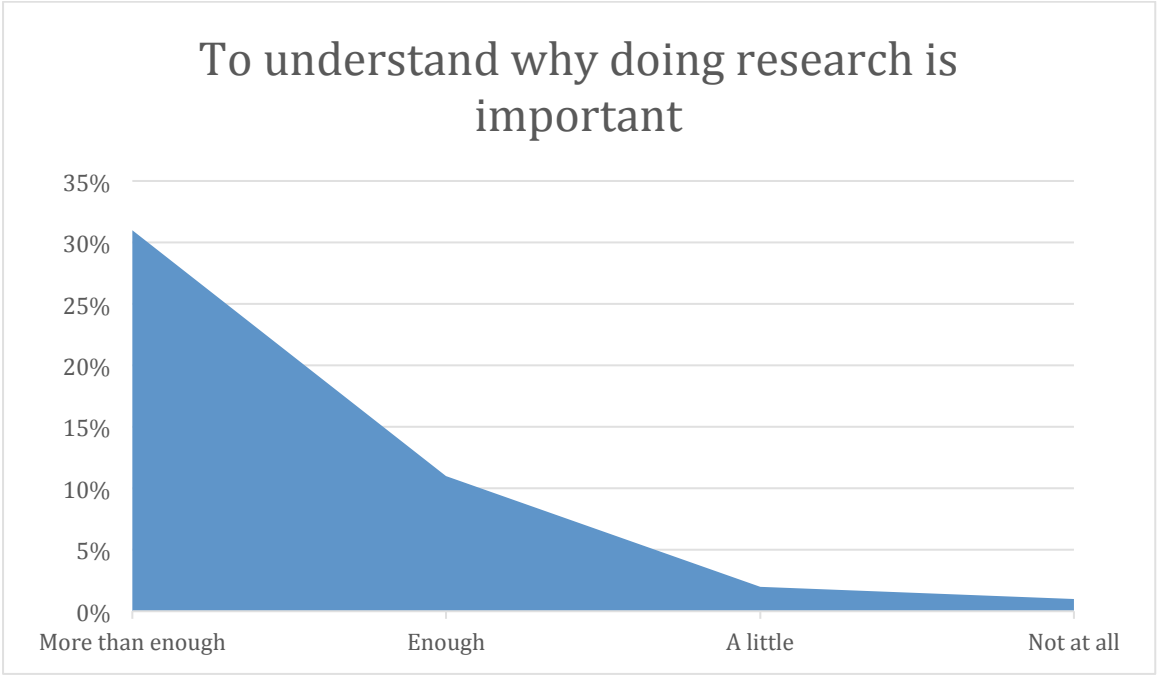


Figure 22 Graphic representation of likert scale 3 (ex-post)

- To understand that science is fun

Table 21 Likert scale 4: percentage of people joining the ERN 2018 to understand that science is fun

A lot	60%
More than enough	25%
Enough	11%
A little	2%
Not at all	1%

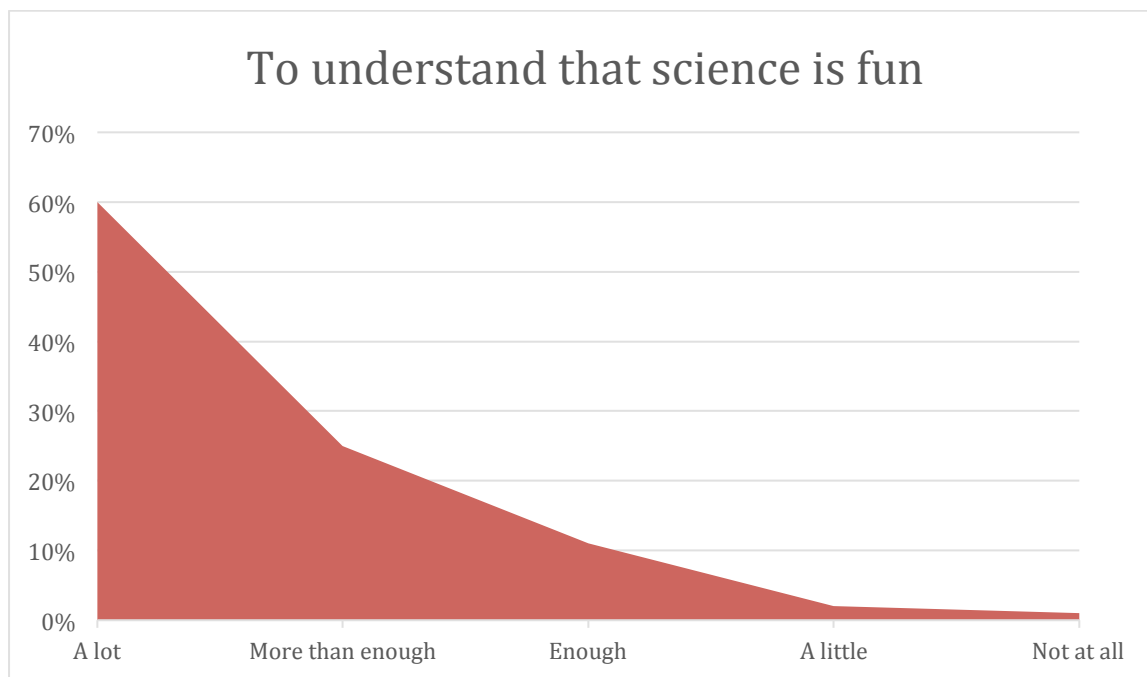


Figure 23 Graphic representation of likert scale 4 (ex-post)

- **Because this event is an opportunity for citizens to be actively involved in research activities**

Table 22 Likert scale 5: percentage of people joining the ERN 2018 because the event actively involves citizens in research

A lot	57%
More than enough	27%
Enough	11%
A little	3%
Not at all	1%

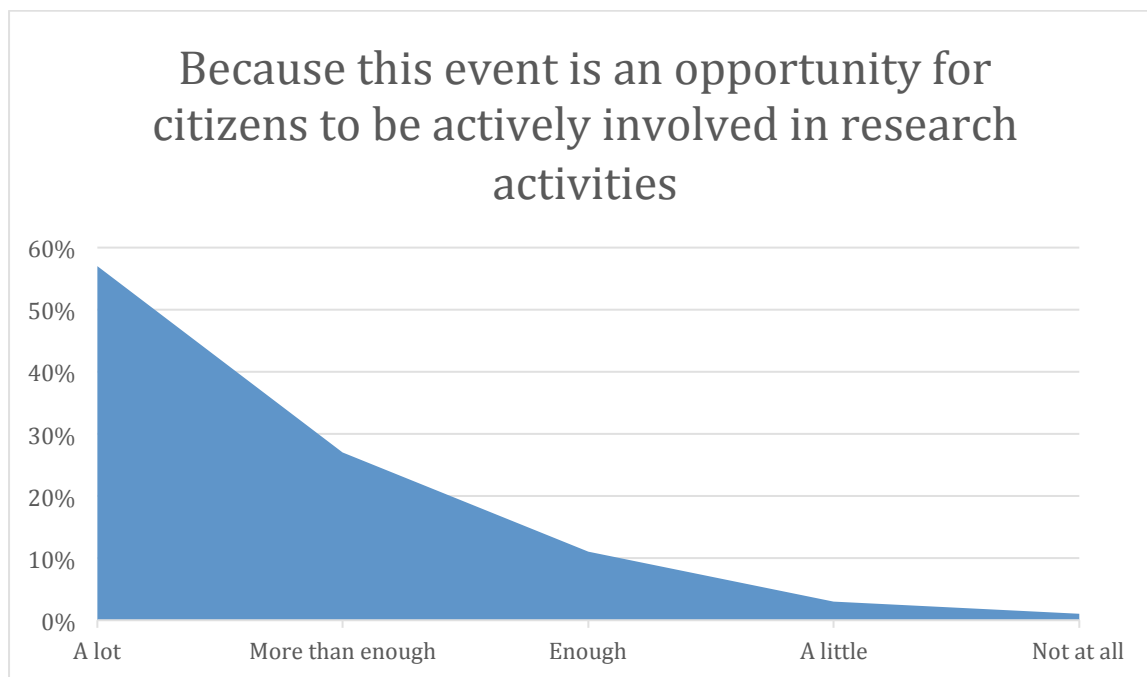


Figure 24 Graphic representation of likert scale 5 (ex-post)

- To understand if I would like to become a researcher

Table 23 Likert scale 6: percentage of people joining the ERN 2018 to understand if they would become researchers

A lot	37%
More than enough	23%
Enough	23%
A little	9%
Not at all	4%



Figure 25 Graphic representation of likert scale 6 (ex-post)

3.9 How much do you think the role of the research is relevant for the development of our country?

The majority of the attendants to the ERN 2018 believes that the role of research is very relevant for our country (a lot 73%). The result is surprisingly equal to the importance of research in Europe (a lot 73%).

Table 24 The role of research in Italy (percentages)

No response	4%
A lot	73%
More than enough	20%
Enough	4%
A little	1%
Not at all	1%

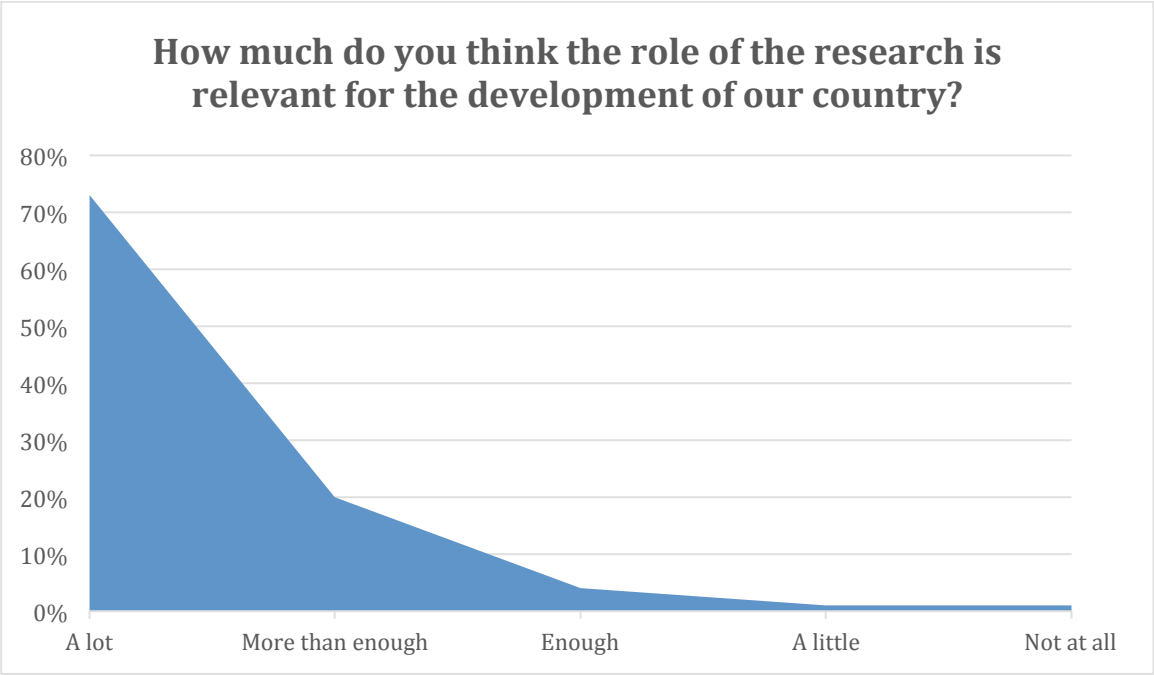


Figure 26 Graphic representation of the role of research in Italy

3.10 And in Europe?

Table 25 The role of research in Europe (percentages)

No response	4%
A lot	73%
More than enough	20%
Enough	4%
A little	1%
Not at all	1%

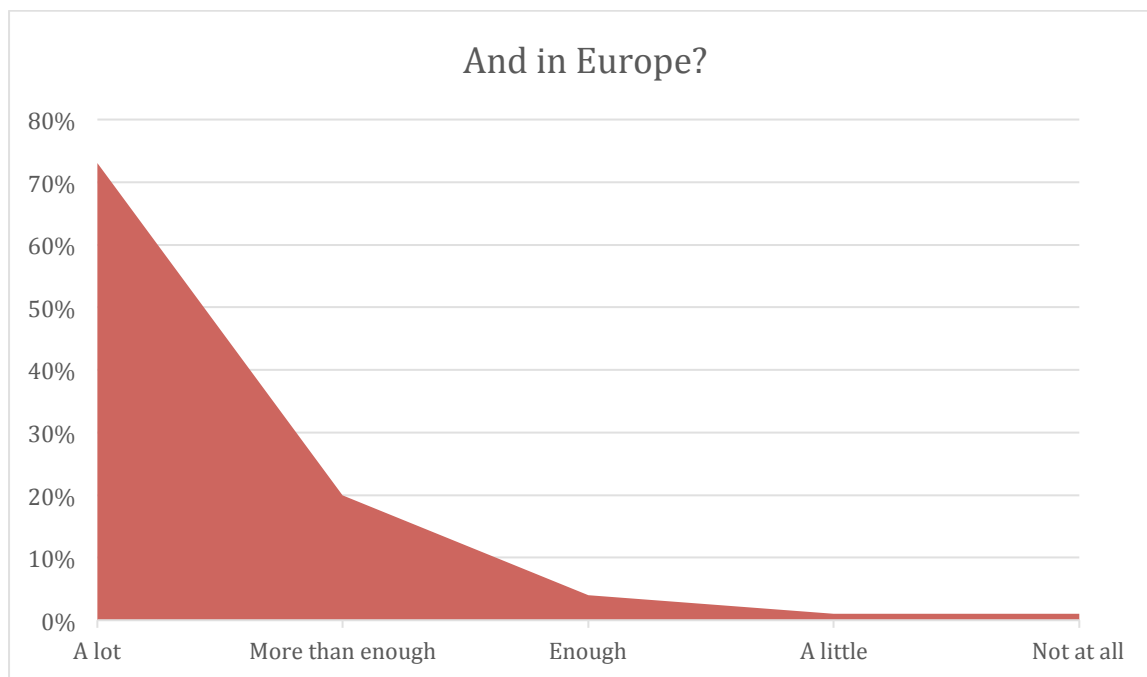


Figure 27 Graphic representation of the role of research in Europe

3.11 How would you rate the organisation of the ERN 2018?

More than half of the respondents to the ex-post questionnaire rates the ERN 2018 as very good (60%). This is a great result considering that 32% of the respondents also think that the event has been well organized (good).

Table 26 Rate of the organisation of the ERN 2018 (percentages)

No response	4%
Very good	60%
Good	32%
Sufficient	4%
Bad	1%
Very bad	1%

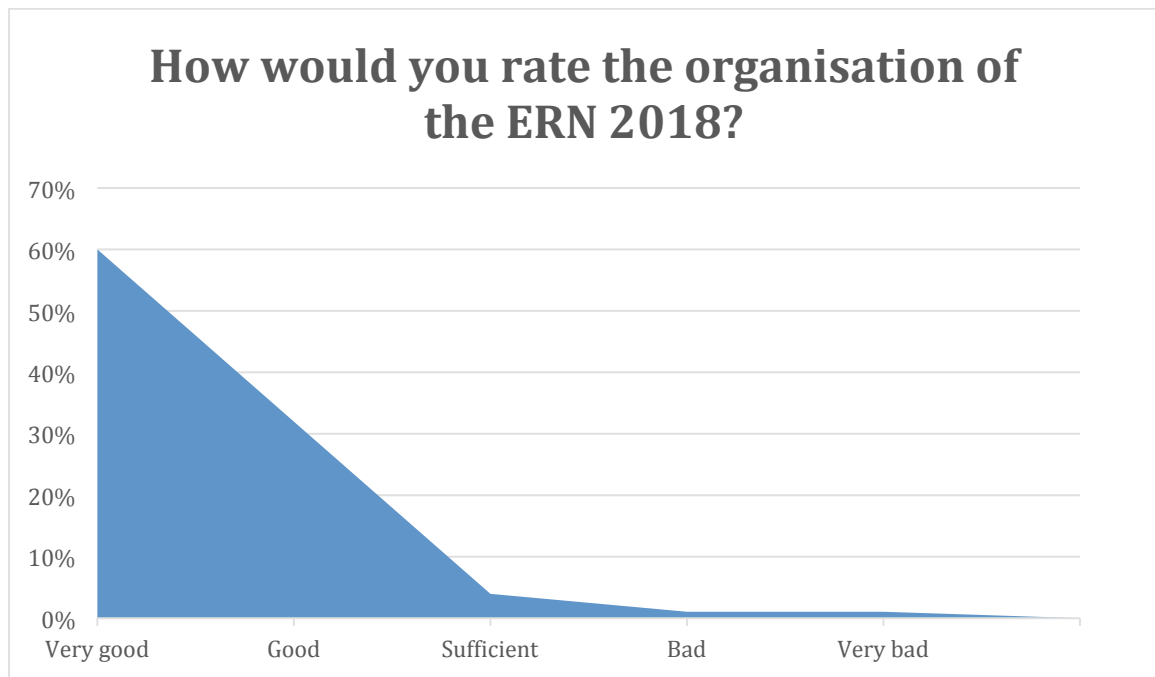


Figure 28 Representation of the rate of the organisation of the ERN 2018

3.12 Comments and suggestions

Looking at the comments the attendants sent to us through the ex-post questionnaire, it is evident the majority of them is happy with the result of the event:

- Super!
- Keep up with the good work, especially for the kids!
- It has been perfect.
- Beautiful! It is a pity the activity lasts only one hour, I want to be there for the whole week!
- Amazing initiative, original and different from all the others.
- Interesting and very constructive.
- Never give up! You are even more a light at the end of the tunnel!
- I learned new things and I think the event is very interesting.
- I went to the event with my 7 years old son and in the end he told me: “Mommy, it has been a beautiful evening”. Thanks!
- Congratulations! Every year is always better!

Considering then the very few critics to the event, in order to understand how to improve it, we received the following comments:

- Advertising of the event should be increased.
- Some spaces are too small for the events in Frascati.

- Only few activities for small kids (2-5 years old).
- Some activities are too complex.
- The booking system is too rigid and it does not allow to make changes.
- It would be useful to define a journey among the different stands in Frascati.

4. KIDS EX-POST QUESTIONNAIRE

4.1 Gender

In total 170 people filled in the Kids questionnaire. Surprisingly, in terms of gender, they are half female (49%) and half male (49%).

Table 27 Gender Kids ERN 2018

	Total %
No response	2%
Female	49%
Male	49%

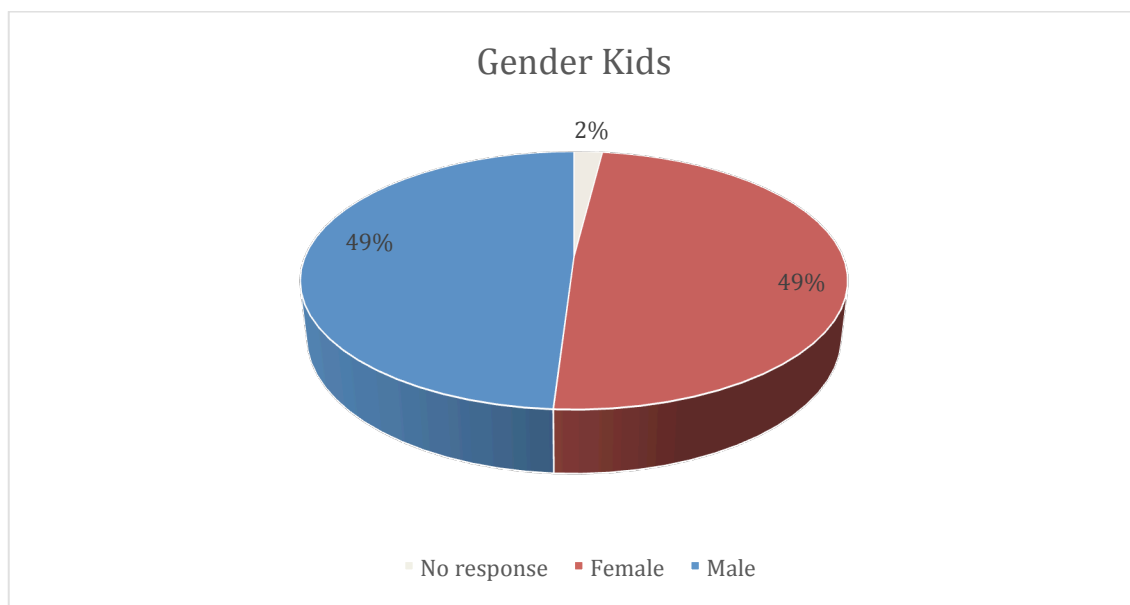


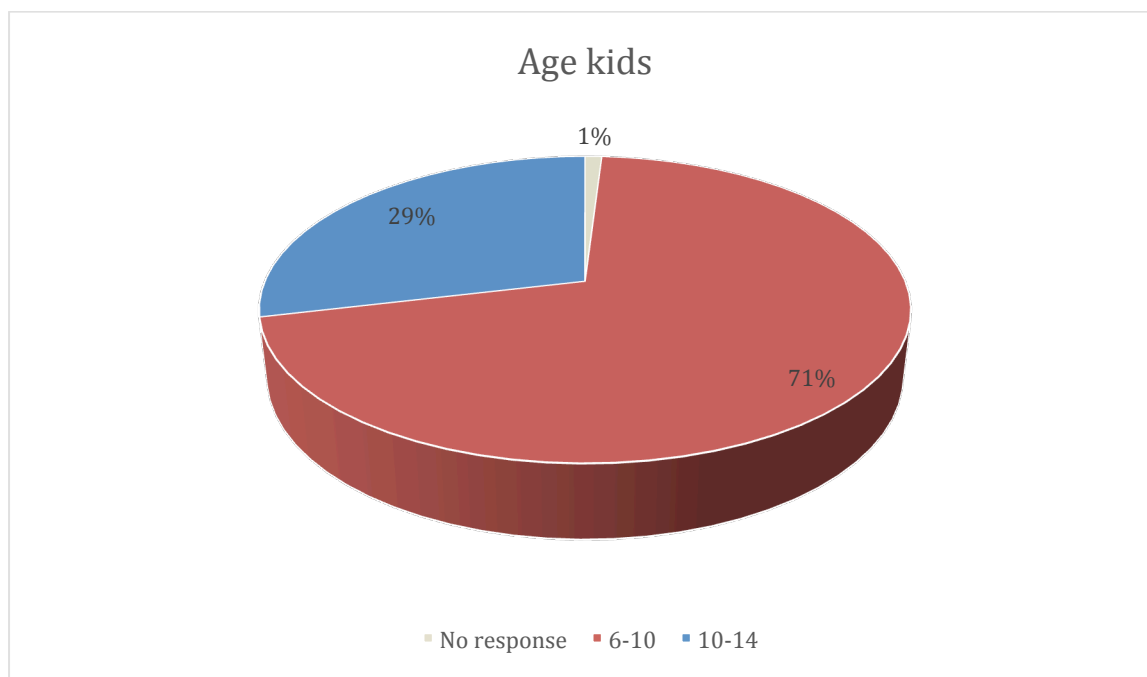
Figure 29 Representation of gender Kids ERN 2018

4.2 Age

The Frascati Scienza team has requested to kids between 6 and 14 years old to fill in this specific questionnaire. More than half of the respondents to the kids questionnaire are in the age range of 6-10 years old (71%). It has also been clear that older kids (11-14 years old) have preferred in most of the cases to fill in the usual ex-post questionnaire. This is a relevant information to reflect on for refining the ex-post questionnaire for next year.

Table 28 Age Kids ERN 2018

	Total %
No response	1%
6-10	71%
11-14	29%

*Figure 30 Representation age Kids ERN 2018*

4.3 How much would you like to become a researcher?

Most of the respondents to the kids questionnaire who participated in the ERN 2018 would like to become researchers. Only few of them are not really interested in it (A little 5% and Not at all 4%).

Table 29 Percentage of kids who would like to become researchers

	Total %
No response	1%
A lot	46%
More than enough	15%
Enough	28%
A little	5%
Not at all	4%

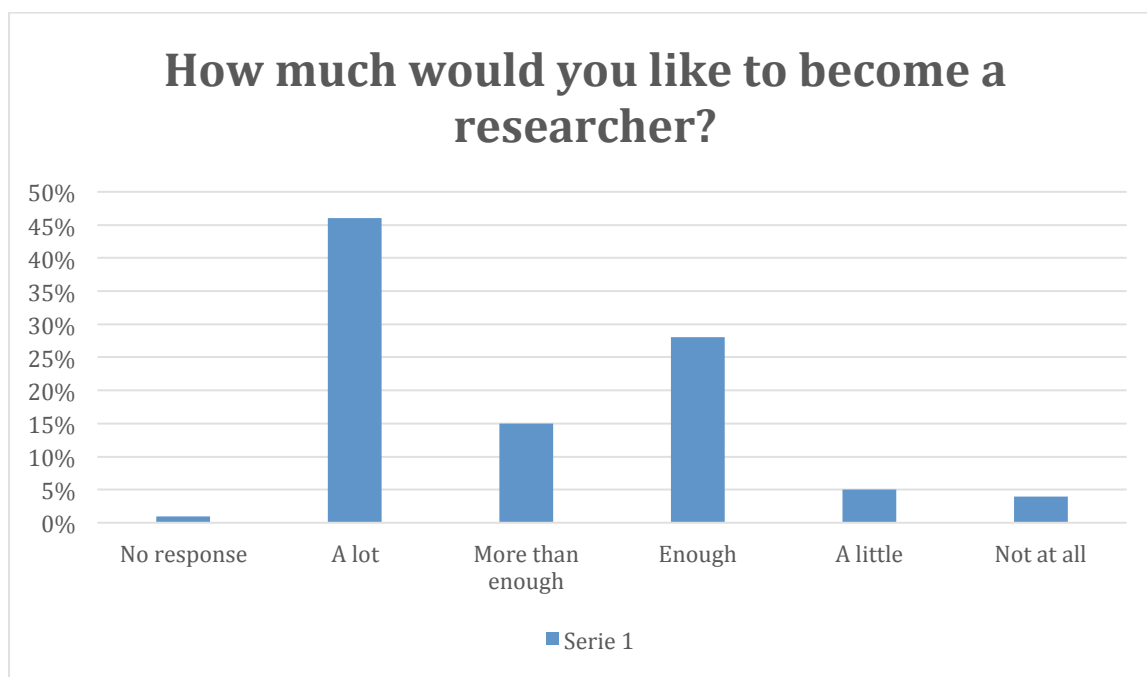


Figure 31 Representation of kids who would like to become researchers

4.4 How much did you learn about the researcher work thanks to ERN 2018?

It is evident from the data analysis that kids learned a lot thanks to the ERN 2018, as most of them replied positively to the question. In the last question is also reflected this good result, considering that most of the kids attended the event to increase their knowledge about science and make new discoveries (See question 4.6).

Table 30 Percentage of kids learning thanks to ERN 2018

	Total %
No response	2%
A lot	56%
More than enough	18%
Enough	17%
A little	5%
Not at all	1%

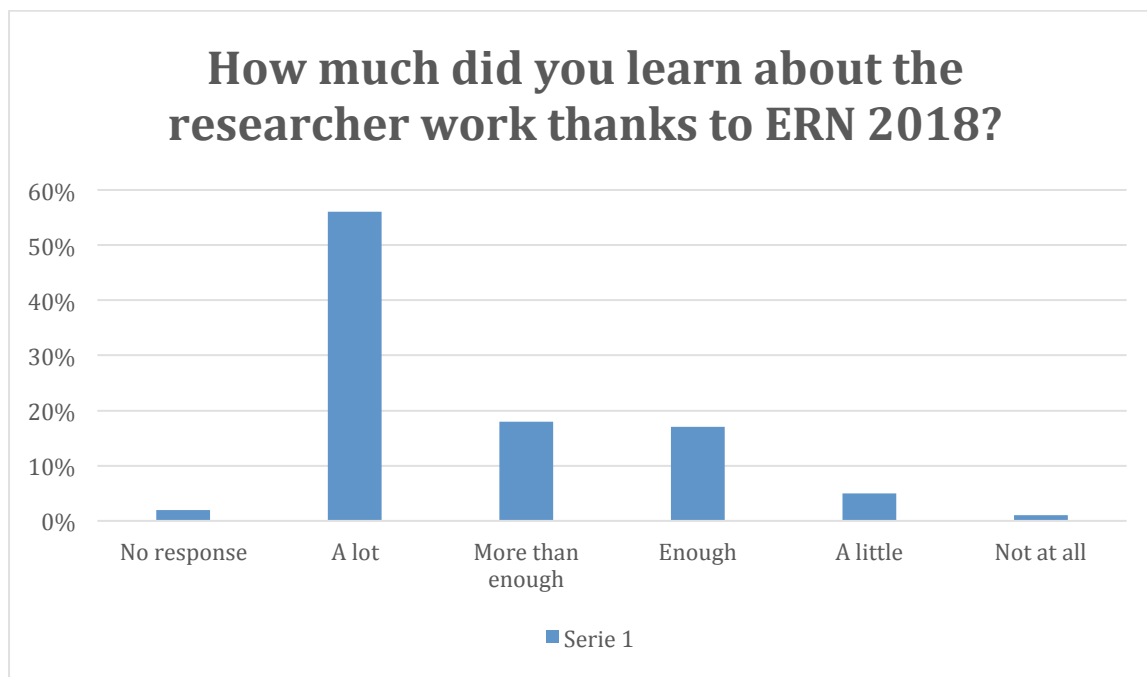


Figure 32 Representation of kids learning thanks to ERN 2018

4.5 How much did you enjoy the event?

The results aimed to understand if kids enjoyed the ERN 2018 are very positive. Indeed, most of them replied a lot (82%) and more than enough (9%). This is an encouraging result to take into account in terms of expectations for the next edition of ERN.

Table 31 Percentage of kids enjoying the ERN 2018

	Total %
No response	1%
A lot	82%
More than enough	9%
Enough	6%
A little	0%
Not at all	1%

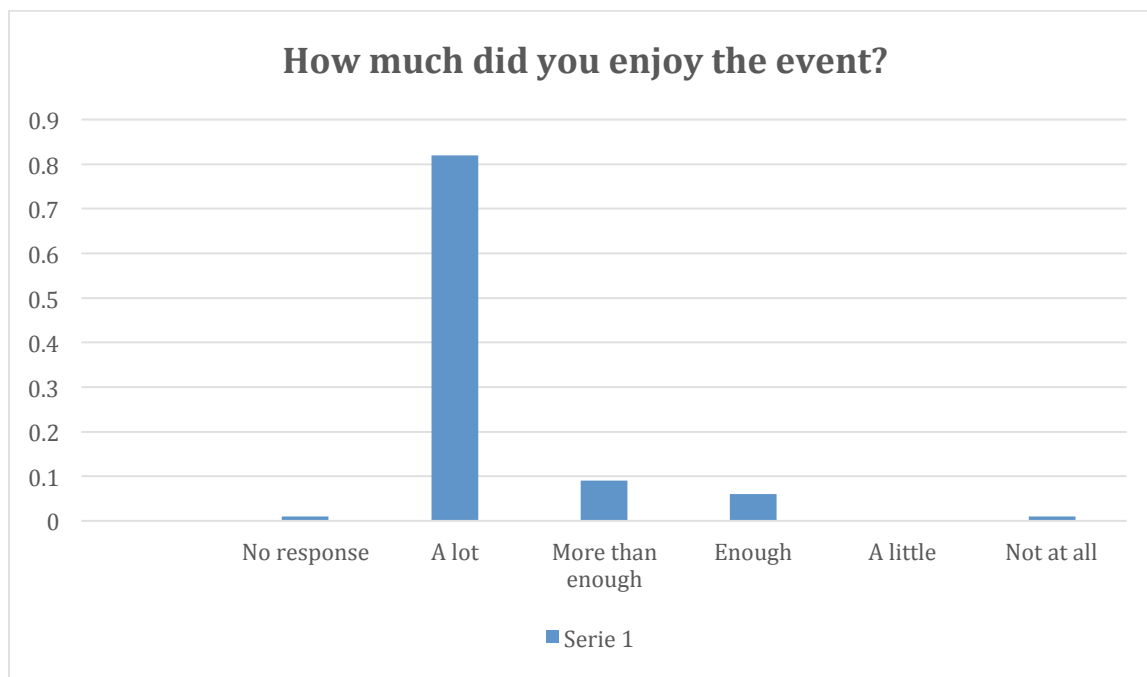


Figure 33 Representation of kids enjoying the ERN 2018

4.6 Why doing research is important for you?

Kids provided their opinion about why doing research is important for them by filling in an open question. The majority of them provided a response to this question, thus helping us in identifying relevant insights for the work of Frascati Scienza within the European Researchers' Night.

Research is important for kids:

- Because I love science.
- To learn new things and have fun.
- To discover new things.
- To improve our health.
- To understand how the world works.
- To reduce waste and pollute less.
- To increase the human being knowledge.
- To teach it to others.
- To get more info on how and where we live.
- Because science is beautiful.
- Because there are a lot of questions still not answered.
- To make new discoveries.
- To learn new things to communicate to the world.
- To improve the quality of our lives and save human lives.
- To solve problems and find new cures, as in the medicine.
- To understand how life works.
- To help protect our planet.

5. TRIVIA NIGHT



Figure 34 Opening of the TRIVIA NIGHT event

This event within the ERN 2018 has been very successful. 60 people participated to the activity and challenged themselves through this exciting set of quizzes. Six teams of 10 people were split and they contributed both to reply to scientific questions, and to provide their qualitative opinion about the organisation and results achieved in the ERN 2018. The main objective of this event was to collect as much as possible qualitative information in an informal setting, that otherwise would not be so easy to gather. The game took place at the Valadier Walls, one of the venues that hosted the events in Frascati, an historical space that was brought to light and given again to the city in the sign of Science.

This year, the questions of the TRIVIA NIGHT were focused on the citizen science, in order to understand how much people are familiar with this concept, and as a result to increase their knowledge about it, along with collecting qualitative information on the results of the ERN 2018.

In total, we presented 7 projects funded at international level by the European Commission, selected to be the most successful ones in terms of development of citizen science activities. For each project, after a short introduction, we challenged the participants to develop a scientific test to define some results. After each of these tests, we asked the 7 teams to participate in another quiz with a specific question about how they evaluate the ERN 2018.



Figure 35 One of the scientific set of quiz during TRIVIA NIGHT 2018

Here below you can find a short description of the EU funded projects selected for the quizzes of the TRIVIA NIGHT 2018.

- 1. STEM4YOUTH:** Our Citizen Science toolkit will allow young kids and class-groups to be active participants of a real scientific laboratory. The toolkit will be an ample repertoire of digital and non-digital techniques, strategies, contents and resources which allow you and your community to participate in existing citizen science projects or even to develop your own projects. Shared concerns and common interests will drive scientific projects. Special attention will however also be devoted to pop-up collective experiments in urban contexts. Key issues will be human mobility, collective decision mechanisms and common behaviours; social, demographic and economic indicators will be enriched/complemented with new metrics of social welfare created by students and gathered in public spaces. We will collect the experience of three schools in Barcelona with informal contexts from Greece and Poland. Link: <http://www.stem4youth.eu/citizen-science/>
- 2. SavingEnergy@Home:** The temperature maps applications will create an alternative collection of thermal data based on the contributions from volunteers in different communities. We want to collect the exact temperature across a city in order to create temperature maps. Volunteer citizens will be asked to measure the temperature inside and outside their houses and work places at specific points in time. Using

common thermometers, volunteers will collect the data and send it back to the scientists who will analyze, aggregate and model the collected data. Volunteers will benefit from the project as they will have a report about the best way to heat their house. Several interactive real-time maps showing the collected data, the volunteers network and its evolution will be created and made accessible to a broad public. Furthermore, we'll address people creativity and artistic capabilities by allowing volunteers to upload their own pictures taken at home from meteorologic phenomena in an interactive portal. Link: <http://socientize.eu/?q=eu/node/365>

3. **Sun4All experiment:** The project Sun4All aims to promote science in general and astronomy in particular. The project is based on an asset of over 30000 images of the Sun (spectroheliograms) that are kept at the Astronomical Observatory of the University of Coimbra, as result of a work of over 80 years of daily solar observations, started in 1926. This is a Sun observation collection of great scientific value. The project aims at involving all citizens in the analysis and counting of the sunspots is a very important aspect of the study of the phenomena occurring on the surface of Sun and to understand the solar activity and solar cycle. On the other hand studying the sunspots, besides being interesting itself, presents an important tool to understand much of what happens on the Earth climate. Link: <http://socientize.eu/?q=eu/node/963>
4. **Cell Spotting:** y compiling and adding answers to questions like "Is this cell round or elongated?" or "Is the nucleus color homogeneous or mottled?" we will know what is happening in each cell culture, helping researchers to know in every moment how the samples of medicaments applied to each cell culture are working. Instead of researches having to review each of the videos obtained for each sample, the videos are split into images, and time series of these images are distributed to the volunteers. This task allows citizen scientist to have a better understanding of the scientific method and generate useful data which would be more costly to obtain without the help of a large number of people involved. Link: <http://socientize.eu/?q=eu/node/382>
5. **Collective Music Experiment:** Collective Music Experiment (CME) is a citizen science experiment by the BIFI of the University of Zaragoza, Socientize and Ibercivis. Is the collective able to solve a given complex problem which is unsolvable for individuals? Is the collective more creative than the most talented of their members? To address these questions we launch CME, a participatory research action to provide new knowledge of the ways by which large-groups of individuals produce creative results collectively. Our challenge is to exploit the power and the passion of the music-based community in action. Link: <http://socientize.eu/?q=eu/node/1519>
6. **Mind Paths:** What we will create is a citizen science application based on a gaming approach, which will trace the distance of thousands of words. We will ask people to select which words lead from one fixed starting word to the goal word creating a visual map of distance between words. Results of this research will be important for the scientific as well as the business world with lots of applications being based on

semantic analysis. New generation of web sites will be constructed over the semantic keys. Link: <http://socientize.eu/?q=eu/node/361>

7. **European Marine BOARD:** it launched Working Group Citizen Science in 2015 to provide new ideas and directions for further development of Marine Citizen Science. Objectives: Identify common factors of success in Citizen Science programmes; assess the types of marine data that are amenable to collection or analysis by non-specialists; provide recommendations on best practice for incorporating Citizen Science into marine research projects, e.g. how to engage citizens and keep them engaged and how to best meet the expectations of both citizens and scientists; based on the findings, provide overall recommendations for marine research that is most suitable for citizen science, provide new ideas and directions for Marine Citizen Science and outline what is needed to support Citizen Science in a marine context into the future.

In terms of the questions collected aiming to analyse qualitatively the results achieved through the ERN 2018, please see below them in detail.

1. Why the researchers' night is useful? Write as much as possible motivations and opportunities in 3 minutes maximum.
2. Define 5 motivations about why the ERN 2018 has been successful.
3. Assign a score from 1 to 10 to the ERN 2018 in these categories: website, advertising, richness of the activities', its attractiveness and oddness, location of the events.
4. Define which are the events of the ERN 2018 that were most interesting and to which ones you would have liked to participate but you could not (in 3 minutes)
5. Write the identikit of a researcher defining 3 strength and 3 weaknesses in only 2 minutes.
6. Which is the media used by Frascati Scienza to reach the target audience of the ERN 2018 that has been the most efficacy? And the second one? And the less efficacy?
7. Among the citizen science projects presented during the TRIVIA NIGHT, which is the most interesting and why? Reply in 3 minutes maximum.

5.1 Results

Data have been collected through a smartphone by using the Whatsapp application. The results have been included in an excel file for further analysis.

- *Why the researchers' night is useful?* Most of the respondents said that the event is useful to let people understand that research is fun, to learn new things and enable the society to be part of science. It was interesting to see that they think the event is useful to not commit the same mistakes of the past and to prepare kids to the future. Moreover, the European Researchers Night raises awareness also on issues relevant for the whole community, not only on science.
- *Define 5 motivations about why the ERN 2018 has been successful.* Because is for everyone. Contents include a lot of disciplines. It is very interactive. Because of the

staff and their work. For the gadgets. Events' organization, knowledge, inspire, fun. Very well advertised, stimulates the mind.

- *Assign a score from 1 to 10 to the ERN 2018 in these categories: website, advertising, richness of the activities, its attractiveness and oddness, location of the events.* Website: 7.8; Advertising: 6.6; Richness of the activities: 9.8; Attractiveness: 9.6; Oddness: 9.4; Location: 8.6;
- *Define which are the events of the ERN 2018 that were most interesting and to which ones you would have liked to participate but you could not:* Essenza di cimice e bava di lumaca; Archeologo per un giorno; Escape room; Surgery Theater; Anticorpi in gioco; Nanomateriali; A come Sangue; Scienza rap; Internet alla provola del 9; La belle époque della scienza; Lo strano caso della cellula X; L'ispettore Cavendish e il giallo delle banane scomparse; Viaggio nel cosmo in 3d; Astronomi per passione; Oh my robots!; Un giorno da entomologo; Essenza di cimice e bava di lumaca; Sala operatoria; il telescopio, il grafene, anticorpi in gioco, la cellula X, archeologo per un giorno, il cervello, Trivia Night, Giove Inside Out; scienza in tavola, la belle époque della scienza. I would have participated to: Piero Angela; Escape room; Microscopio zoo particelle.
- *Write the identikit of a researcher defining 3 strength and 3 weaknesses.* Strengths: Curious, methodic, eccentric, skeptical, smart, determined, one who shares. Weaknesses: mad, lengthy, complicated, dreamer, strange, asocial, nerd.
- *Which is the media used by Frascati Scienza to reach the target audience of the ERN 2018 that has been the most efficacy? And the second one? And the less efficacy?* Most efficacy: Social networks, newsletters and websites (including banners). Less efficacy: advertisement on billboards and newspapers, articles on journals, brochures and leaflets.
- *Among the citizen science projects presented during the TRIVIA NIGHT, which is the most interesting and why?* Stem4Youth, because it supports kids to become the scientists of the future. Cell spot, because it is useful for solving a relevant problem in the society. Mind Paths and Collective music experiment have been also considered as interesting.

6. CONCLUSIONS

This year, more women (61%) than male participated to the ERN2018. The highest percentage of respondents to the ex-post questionnaire are in the age range of 30-39 years old (32%). Most of them has a Master Degree (29%) and/or a High School Degree (29%), followed by a Primary School Degree (19%).

Most of the respondents to the ex-post questionnaire knew about the ERN 2018 thanks to friends (35%) and websites (34%), while a consistent part of them responded through Facebook (20%).

More than half of the respondents to the ex-post questionnaire of ERN 2018 has already participated in previous editions of the event (in average to 2/3 editions).

The majority of them think that the ERN 2018 has strongly contributed to show mainly that research is fun (60% replied a lot) and why it is important doing research (54% replied a lot). Mostly all of the participants agree that the role of research is important for both the development of our country (73% replied a lot) and of Europe (73%), even though most of them is not aiming to become a researcher.

82% of the respondents to the ex-post questionnaire think that the organisation of ERN 2018 has been very good. In general the overall opinion of the event is very positive, both as result of the ex-post questionnaire, kids questionnaire and the qualitative analysis of data coming from the TRIVIA NIGHT. Only few comments shown some space for improvement, especially in terms of advertising the event and the booking system that seems to be too rigid.



ANNEX 1 EX-ANTE IMPACT ASSESSMENT QUESTIONNAIRE ERN 2018

1. Gender ☐M ☐F

2. Age:

- ☐0-9
- ☐10-19
- ☐20-29
- ☐30-39
- ☐40-49
- ☐50-59
- ☐60-69
- ☐70 and more

3. Degree:

- ☐None
- ☐Middle School Degree
- ☐High School Degree
- ☐Laurea triennale
- ☐Laurea specialistica
- ☐PhD or other post laurea degree

4. Occupazione

- ☐Student
- ☐Researcher
- ☐Employee
- ☐Indipendent consultant
- ☐Retired
- ☐Other _____

5. How did you get to know about the ERN 2018?

- ☐ Tv
- ☐ Radio
- ☐ Advertisement on newspapers
- ☐ Journals
- ☐ Websites
- ☐ Facebook
- ☐ Twitter
- ☐ Friends
- ☐ Other _____

6. Why would you like to join the ERN 2018?

- To understand the benefits that research generates for the society
 - ☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all
- To get to know the researcher's work in the different sectors
 - ☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all
- To understand why doing research is important
 - ☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all
- To understand that science is fun
 - ☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all
- Because this event is an opportunity for citizens to be actively involved in research activities
 - ☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all
- To understand if I would like to become a researcher
 - ☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all
- Other _____



ANNEX 2 EX-POST IMPACT ASSESSMENT QUESTIONNAIRE ERN 2018

1. Gender ☐ M ☐ F

2. Age:

- ☐ 0-9
- ☐ 10-19
- ☐ 20-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60-69
- ☐ 70 and more

3. Degree:

- ☐ None
- ☐ Middle School Degree
- ☐ High School Degree
- ☐ Bachelor Degree
- ☐ Master Degree
- ☐ PhD or other post-graduation diploma

4. Occupazione

- ☐ Student
- ☐ Researcher
- ☐ Employee
- ☐ Independent consultant

☐Retired

☐Other _____

5. How did you get to know about the ERN 2018?

☐Tv

☐Radio

☐Advertisement on newspapers

☐Journals

☐Websites

☐Facebook

☐Twitter

☐Friends

☐Other _____

6. In which city did you participate to the events of ERN 2018?

☐Alghero

☐Anzio

☐Ariccia

☐Brisighella

☐Carbonia

☐Cassino

☐Castelcerino di Soave

☐Cave

☐Colleferro

☐Due Carrare

☐Frascati

☐Gaeta

☐Gorga

☐Guarcino

☐Isnello

☐Latina

☐Matera

☐Monteporzio Catone

☐Nuoro

☐Padova

☐Palermo

☐Pastena

☐Piombino

☐Pompei

☐Potenza

☐Ravenna

☐Rocca di Papa

- ☐ Roma
- ☐ San Donà di Piave
- ☐ Sassari
- ☐ Scicli
- ☐ Sovicille
- ☐ Torino
- ☐ Villanova d'Asti
- ☐ Other _____

7. Did you already participate in other editions of ERN?

- ☐ Yes
- ☐ No

8. If yes, in how many?

- ☐ 1
- ☐ 2/3
- ☐ 4/6
- ☐ 7
- ☐ more than 7

9. Do you think that the ERN 2018 contributed to ...

- To understand the benefits that research generates for the society

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

- To get to know the researcher's work in the different sectors

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

- To understand why doing research is important

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

- Because science is fun

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

- Because this event is an opportunity for citizens to be actively involved in research activities

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

- To understand if I would like to become a researcher

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

- Other _____

10. How much do you think the role of the research is relevant for the development of our country?

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

11. And in Europe?

☐ A lot ☐ More than enough ☐ Enough ☐ A little ☐ Not at all

12. How would you rate the organisation of the ERN 2018?

☐ Very good ☐ Good ☐ Sufficient ☐ Bad ☐ Very bad

13. Comments and suggestions



ANNEX 3 KIDS IMPACT ASSESSMENT QUESTIONNAIRE ERN 2018

(Colour the selected star)

1. Gender ☐ M ☐ F

2. Age:

☐ 6-10

☐ 11-14

3. How much would you like to become a researcher?

★ A lot ★ More than enough ★ Enough ★ A little ★ Not at all

4. How much did you learn about the researcher work thanks to ERN 2018?

★ A lot ★ More than enough ★ Enough ★ A little ★ Not at all

5. How much did you enjoy the event?

★ A lot ★ More than enough ★ Enough ★ A little ★ Not at all

6. Why doing research is important for you?
