

**Assessment of benefits of  
international Research Infrastructure  
memberships for Finland 2020-2021**  
*Questionnaire results*



ACADEMY  
OF FINLAND

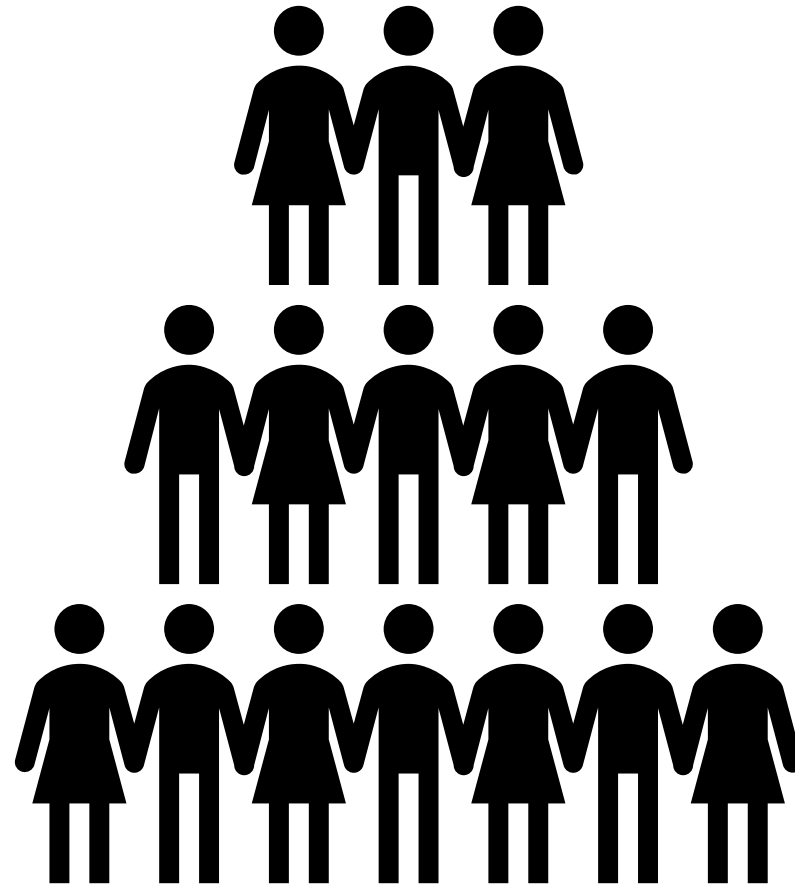
# Background of the questionnaire to international research infrastructures (RIs)

- ❑ Finland is currently a member in ca. 30 international RIs. For major part of these the membership fee is paid via Research Council of Finland (former Academy of Finland), annually ca. 20 million Euros.
- ❑ The benefits of international RI memberships for Finland are assessed at the Research Council of Finland e.g., through the biennial questionnaires.
- ❑ The aim is to identify and evaluate the added value of the memberships for Finland's research, development and innovation activities.
- ❑ The questionnaire asked for some background information and yearly statistics in 2020-2021, including questions on staff, budget, users, publications, and private sector collaboration.
- ❑ Questionnaire was implemented using webropol from June 2022 to October 2022.

# Responses

- ❑ This questionnaire was sent to 25 RIs' coordination offices.
- ❑ We received responses from 19 RI organisations
  - ❑ EISCAT, AnaEE-ERIC, CESSDA ERIC, CERN, EATRIS, CLARIN ERIC, EU-OPENSSCREEN, ICOS RI, ELIXIR, Euro-BioImaging ERIC, NeIC, ESO, ESRF, BBMRI-ERIC, EMBL, Instruct-ERIC, ESS ERIC, INFRAFRONTIER, MAX IV Lab
  - ❑ 4 Single site RIs: EISCAT, ESRF, CERN, MAX IV lab
  - ❑ 15 Distributed RIs: AnaEE-ERIC, CESSDA ERIC, EATRIS, CLARIN ERIC, EU-OPENSSCREEN, ICOS RI, ELIXIR, Euro-BioImaging ERIC, NeIC, ESO, BBMRI-ERIC, EMBL, Instruct-ERIC, ESS ERIC, INFRAFRONTIER
- ❑ One RI in construction phase: MAX IV lab

# STAFF



# Staff - summary

- ❑ Single site RIs have a more unbalanced gender distribution than distributed RIs, but both are unbalanced
- ❑ More Finns working in distributed RIs in relative and quantitative terms
- ❑ 5 of the 19 RIs have hired Finns for their head offices between 2020 and 2021: ICOS, ELIXIR, EuBI and ESO and CERN

- ❑ In total estimate there are about 3% Finns of the workforce of all the 19 RIs surveyed

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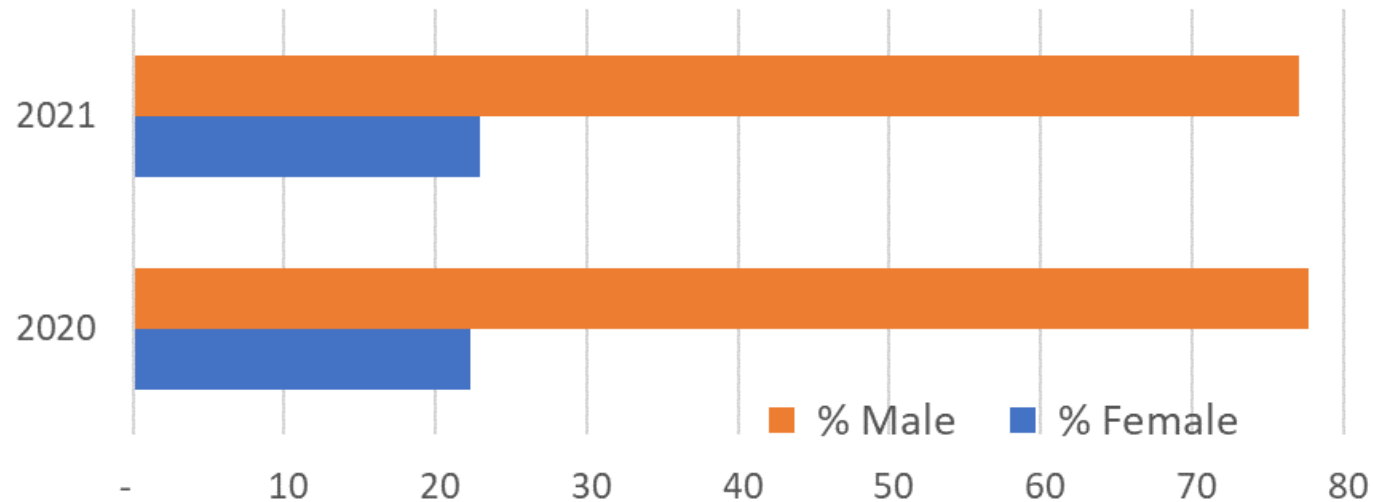
Total RI staff*, single site and distributed, respectively (ca. 4500+3700)	8 200
Finns	280
% Finns in all Ris	3%

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\*The total number of personell in the RIs, especially distributed, may be underestimated.

# STAFF – single site RI (N=4, EISCAT, CERN, MAX Lab, ESRF)

Personnell, single site RI (N=4)

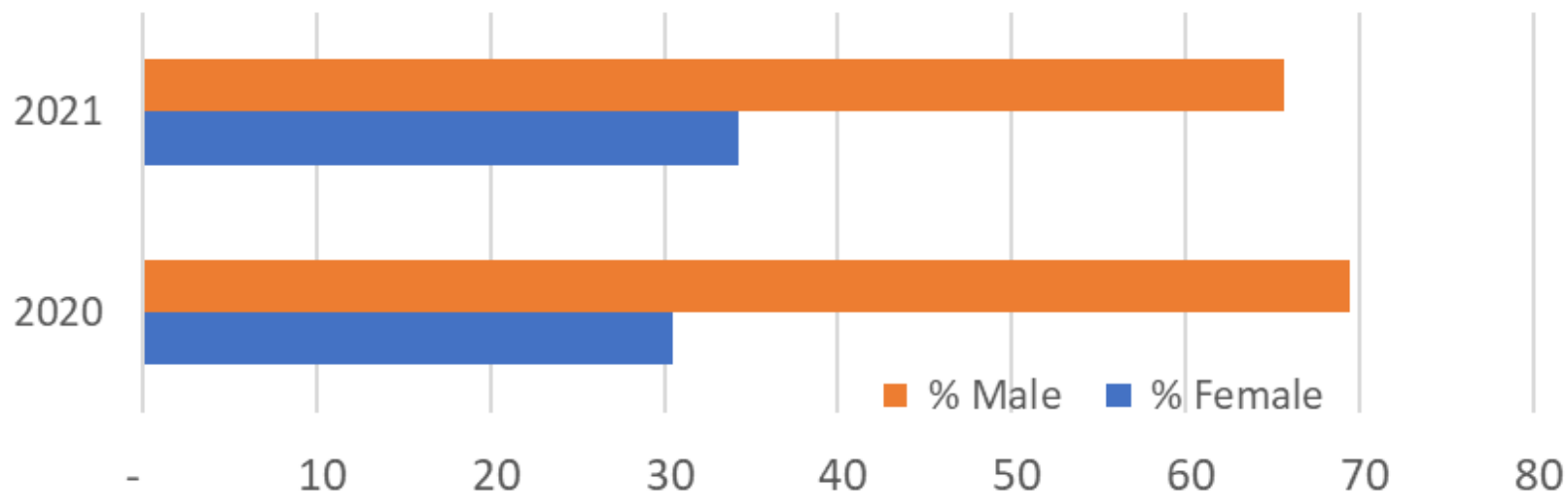


Number of female, male, Finnish and total personnel in 2020 and 2021.

	2020	2021
Female	972	1 029
Male	3 382	3 451
Finnish personnell	54	58
Total personnell	4 354	4 480

# STAFF – Distributed RI (INSIDE ERIC or other legal entity coordinating the RI)

Personnell, distributed RI (N=14)

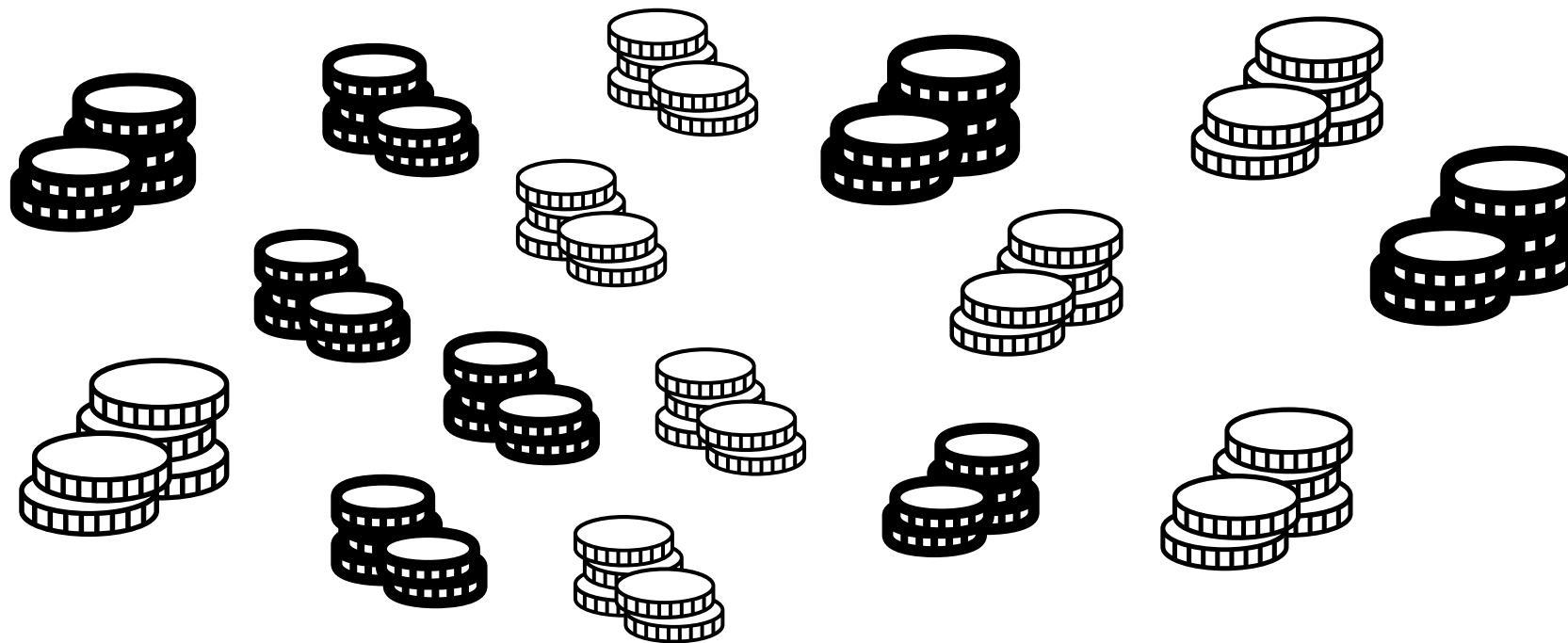


Number of female, male, Finnish and total personnell in 2020 and 2021.

	2020	2021
Female	282	316
Male	642	606
Finnish personnell (in relation to the total number of staff at headoffices)	26	29
Total personnell in the headoffices (*N=15)	942	936

\*All RIs did not provide male/female numbers

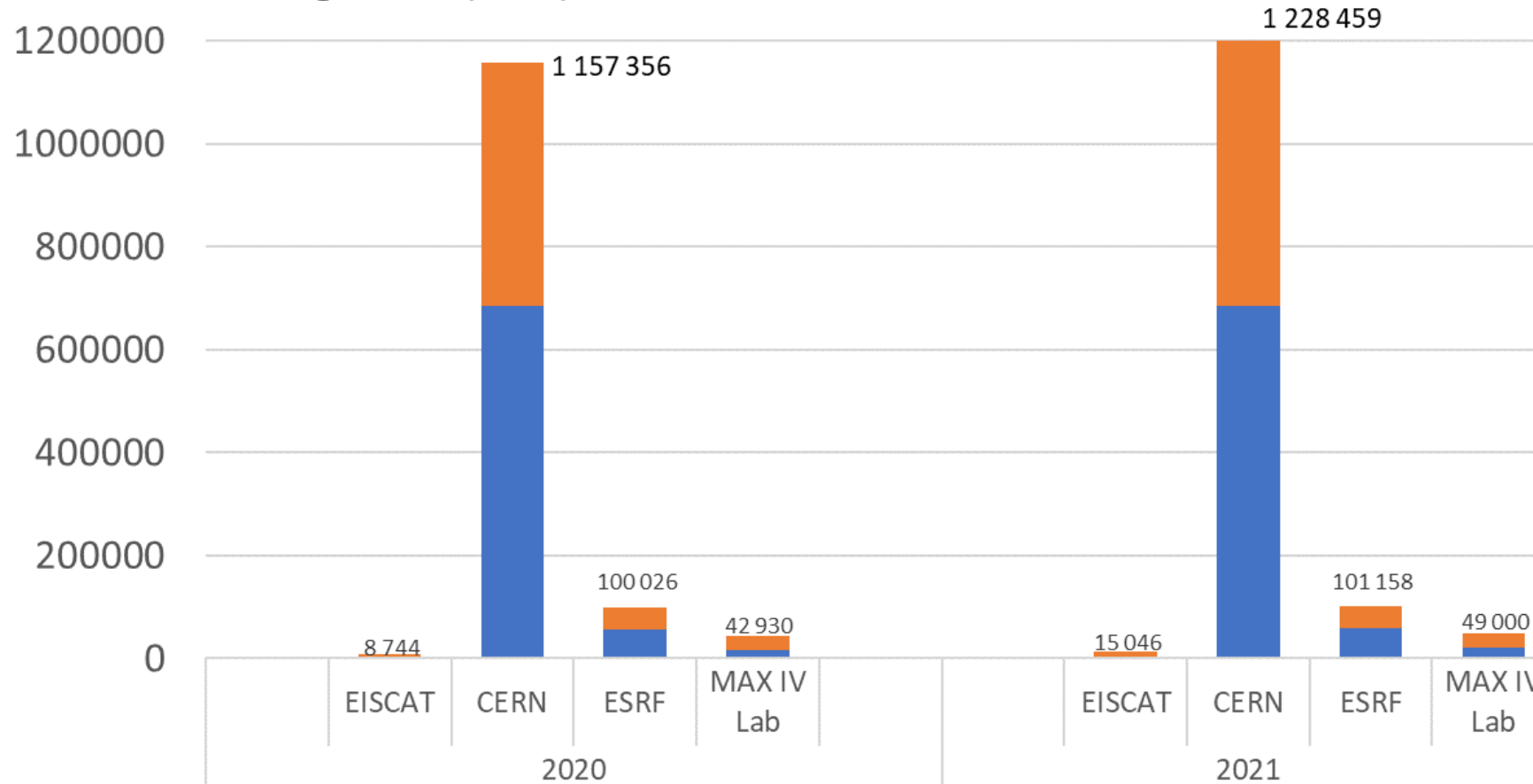
# BUDGET -COST STRUCTURE -REVENUE





# COSTS, single site

Costs kEUR, single site (N=4)

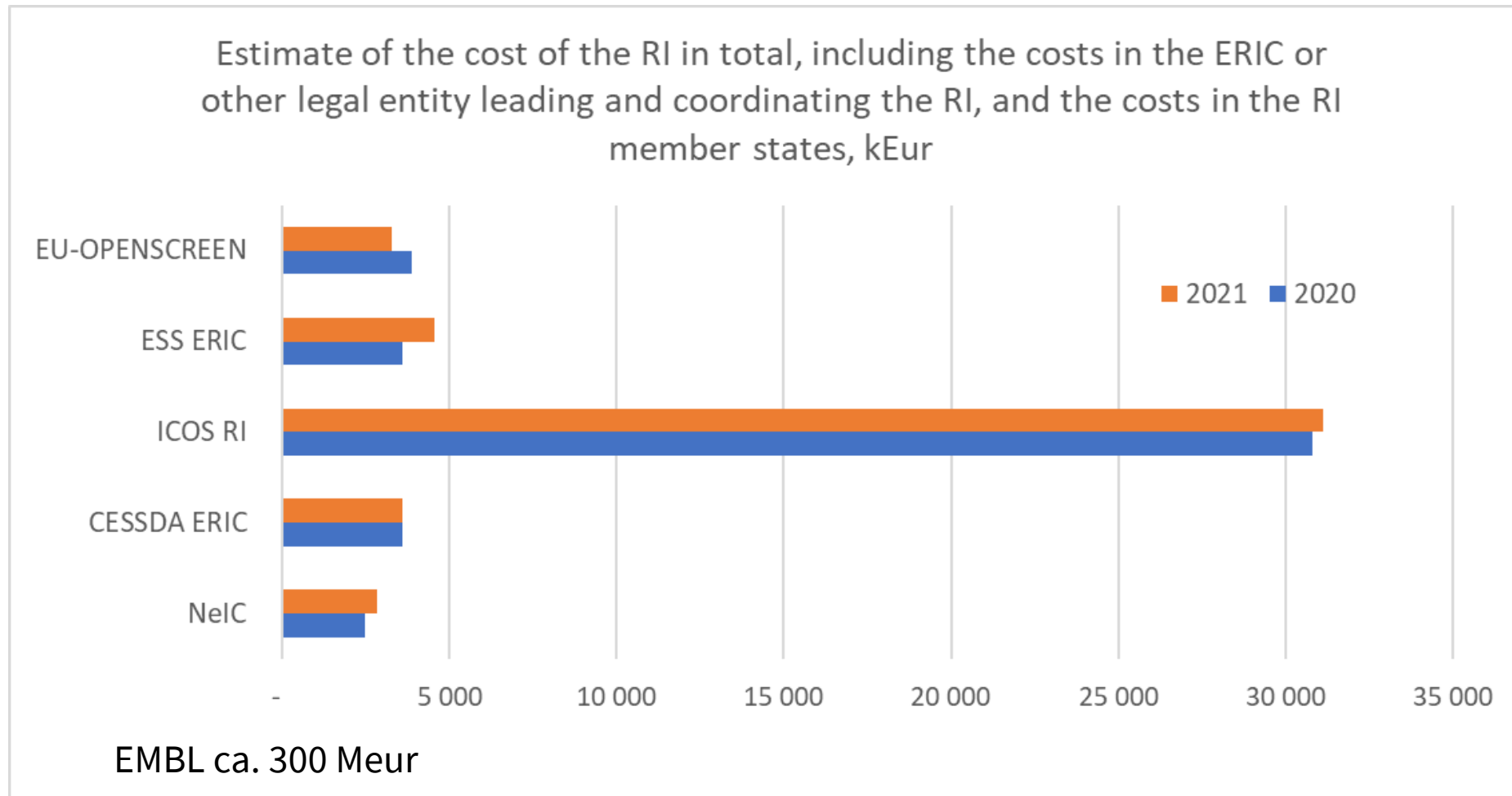


Total costs	8 744	1 157 356	100 026	42 930	15 046	1 228 459	101 158	49 000
All other costs	6 264	472 011	44 017	25 530	12 431	542 451	42 175	28 600
Personnel costs	2 480	685 345	56 009	17 400	2 615	686 008	58 983	20 400

# COSTS, distributed RIs

- ❑ 6/15 distributed RI are able to estimate the total costs of the RI activities.
- ❑ The RIs differ in their activities and the way they calculate their total value.
  - ❑ Estimates of the total costs of the European wide RI activities varies between 3 Meur to over 300 Meur.
- ❑ 13/15 RIs provide cost structure data for the coordinating entity, most often ERIC.
- ❑ The proportion of staff costs for ERICs (or other coordinating entity) range from 20% to over 90%, depending on the structure and activities of the particular RI.

# Estimate of the cost of the RI in total (incl. costs in the ERIC or other coordinating entity, and the costs of the RI in its member states) for those 6 distributed RIs that can provide an estimation

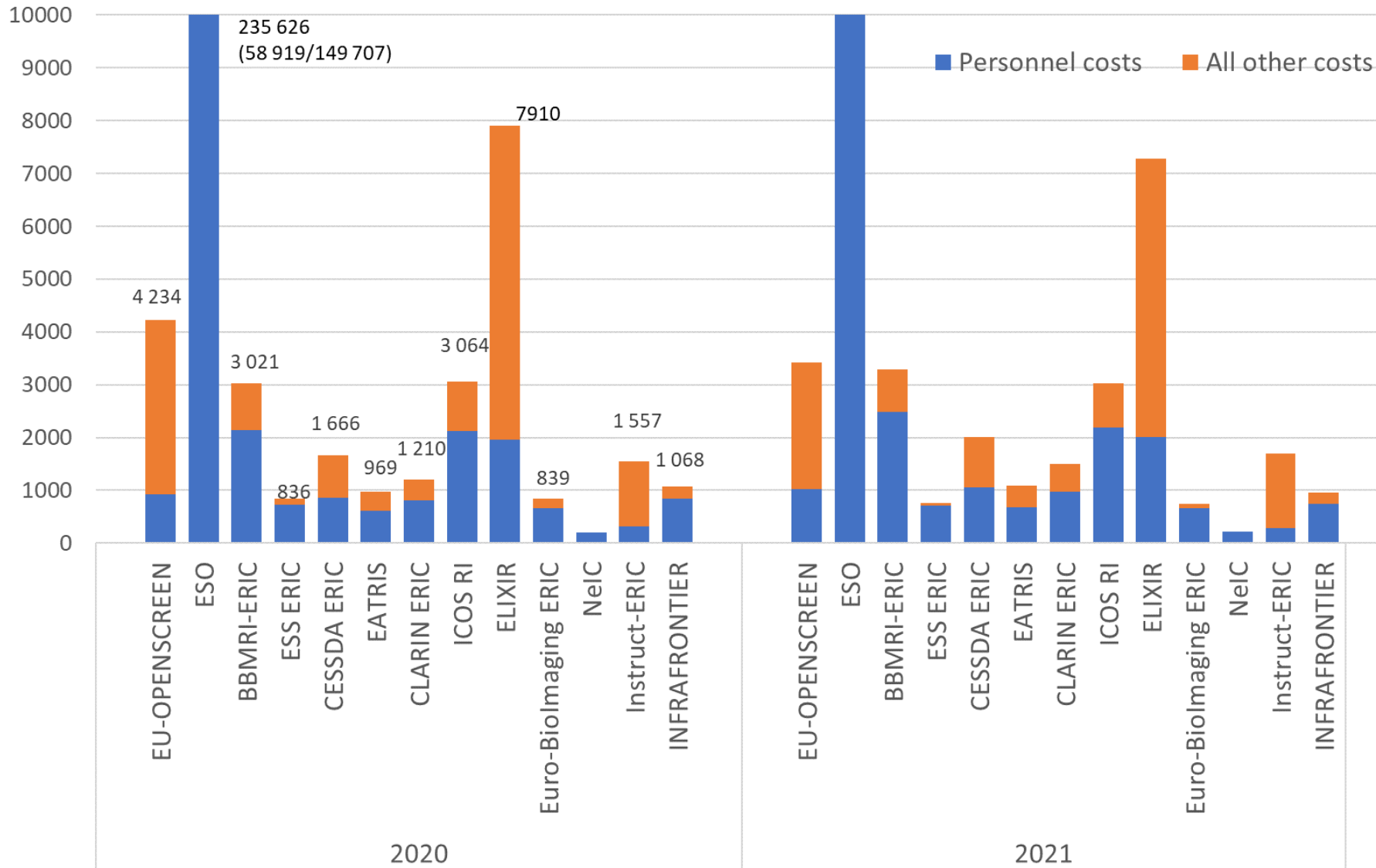


## Cost structure of the ERIC or other legal entity leading and coordinating the RI (headoffice) in kEur (N=12)

Research Infrastructure	Personnel costs		All other costs		Total costs	
	%		%		kEUR	
	2020	2021	2020	2021	2020	2021
CESSDA ERIC	52	53	48	47	1 666	2 002
EATRIS ERIC	63	62	37	38	969	1 090
CLARIN ERIC	68	65	32	35	1 210	1 503
EU-OPENSREEN ERIC	22	30	78	70	4 234	3 427
ICOS ERIC	69	72	31	28	3 064	3 028
ELIXIR	25	28	75	72	7 910	7 285
Euro-BioImaging ERIC	79	90	21	10	839	739
ESO	36	38	64	62	235 626	230 347
BBMRI-ERIC	71	75	29	25	3 021	3 291
Instruct-ERIC	20	17	80	83	1 557	1 691
European Social Survey ERIC	86	95	14	6	836	756
INFRAFRONTIER RI	79	78	21	22	1 068	959

NeiC and EMBL do not identify costs for the coordinating activity.

## Cost structure of the ERIC or other legal entity leading and coordinating the RI in kEur



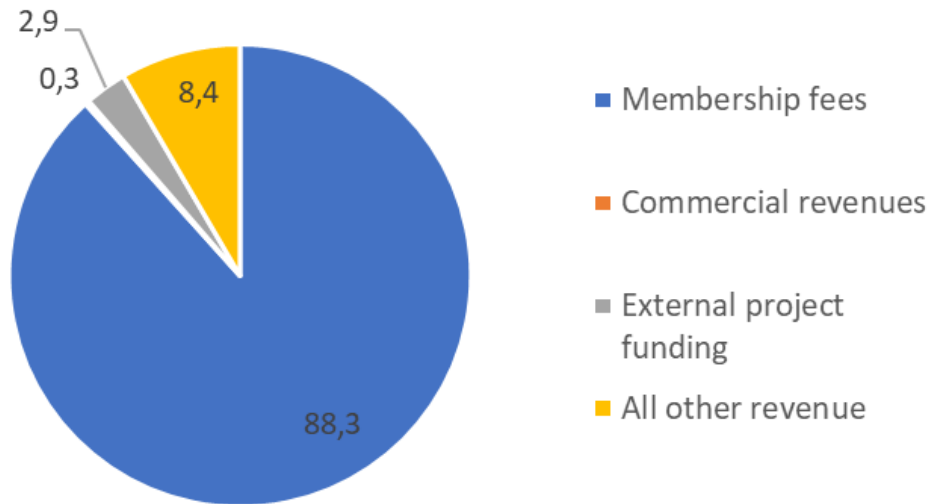
NeiC included here because it provides personnell costs.

# INCOME

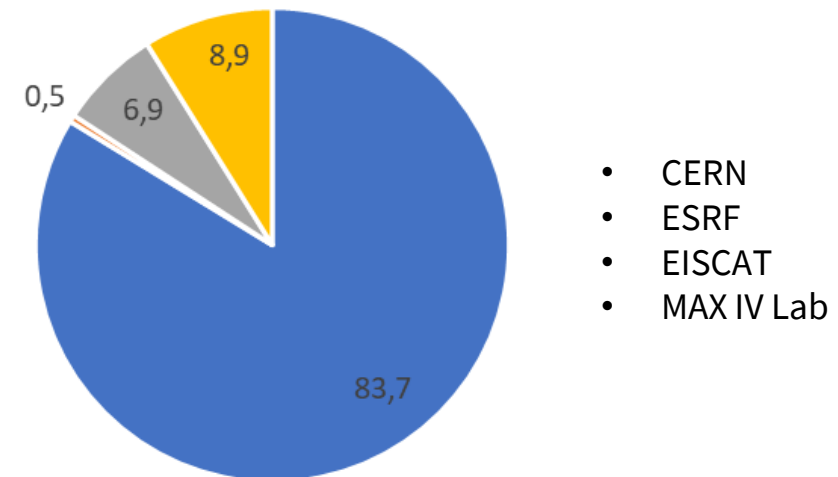
- ❑ < 80% of distributed RIs' revenue comes from membership fees (N=12)
- ❑ Approximately 85% of single site infrastructure revenue comes from membership fees (N=4)

# INCOME – single site RI (N=4)

Revenue sources of the single site RIs 2020, %



Revenue sources of the single site RIs 2021, %

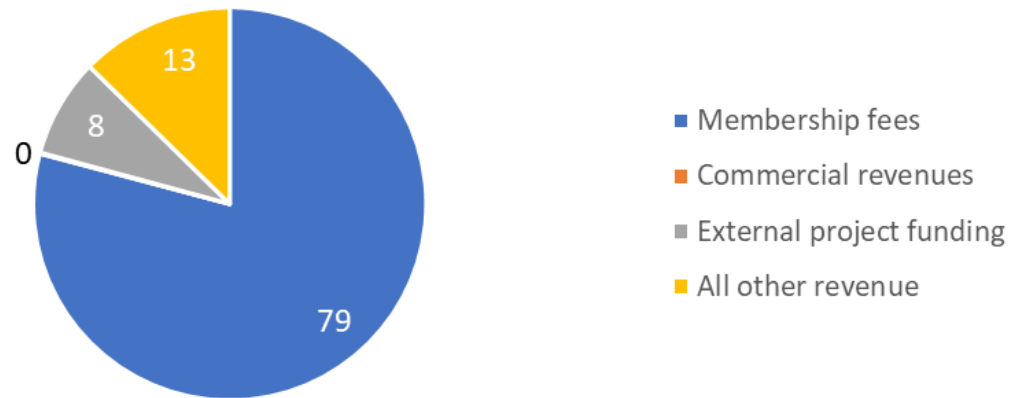


- CERN
- ESRF
- EISCAT
- MAX IV Lab

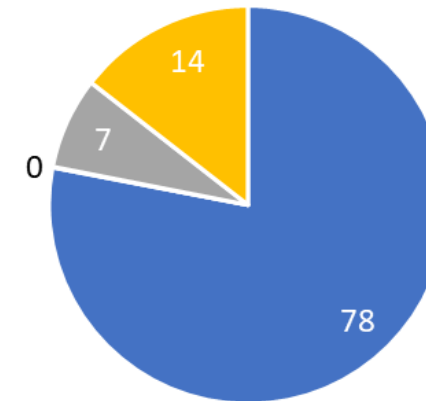
Revenue sources, in kEur	Membership fees	Commercial revenues	External project funding	All other revenue	Total revenue
2020	1 294 007	4 430	43 101	123 447	1 464 985
2021	1 296 763	7 286	107 173	137 605	1 548 827

# INCOME – distributed (only coordinating entity, e.g. ERIC)

Revenue sources of distributed RIs 2020, %  
(N=12, head office)



Revenue sources of distributed RIs 2021, %  
(N=12, head office)



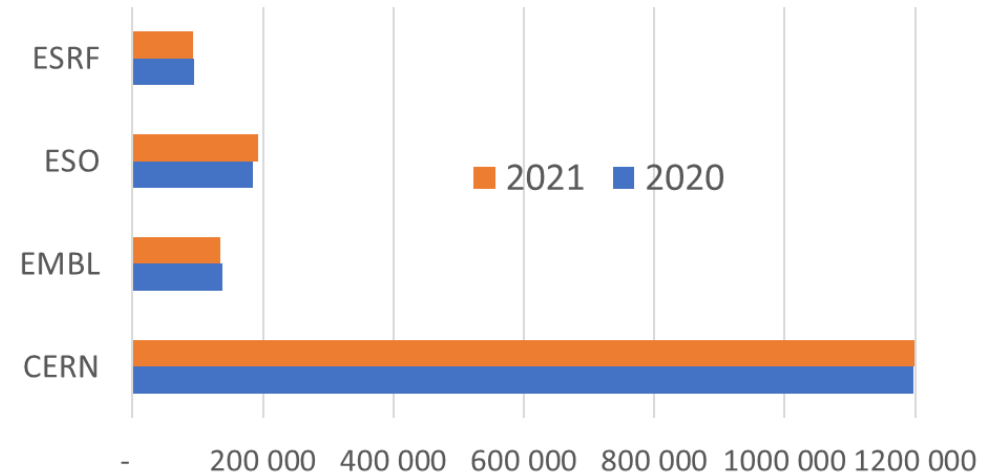
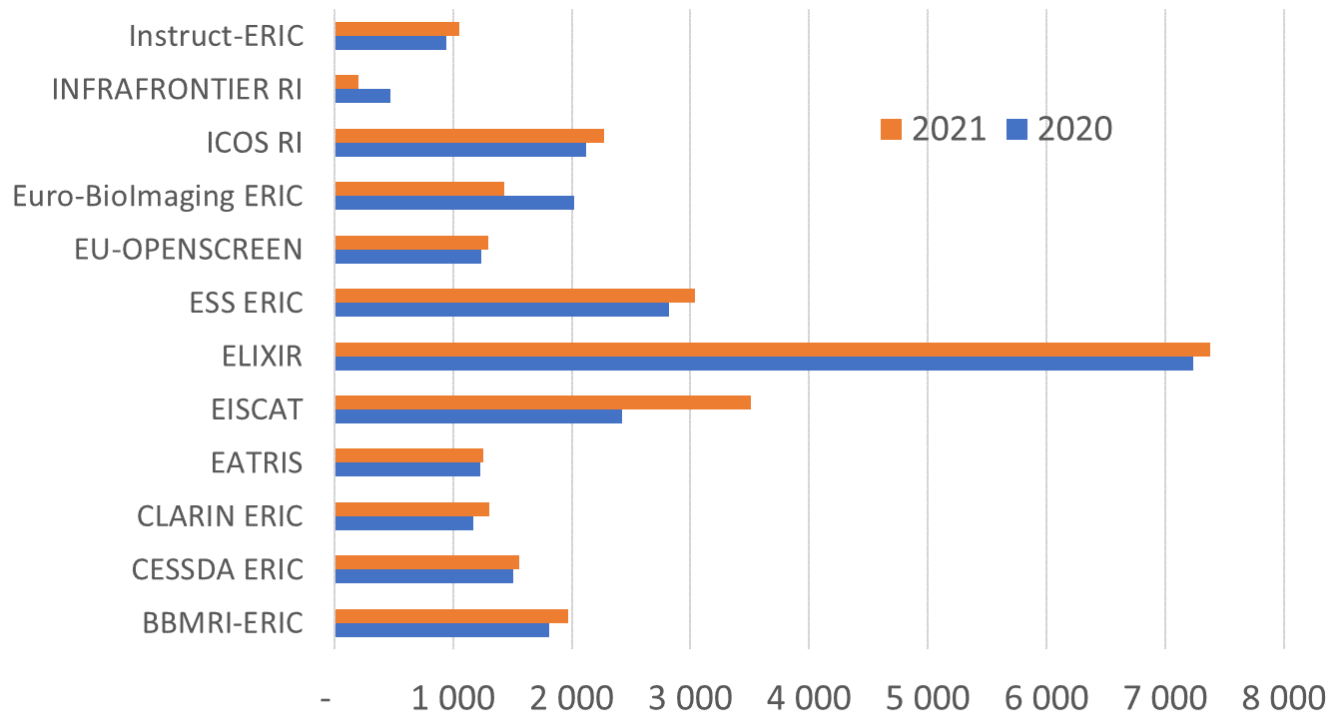
- CESSDA ERIC
- EATRIS
- CLARIN ERIC
- EU-OPENSOURCE
- ICOS RI
- ELIXIR
- Euro-BioImaging ERIC
- ESO
- BBMRI-ERIC
- Instruct-ERIC
- ESS ERIC
- INFRAFRONTIER RI

## Revenue sources, kEur

	Membership fees	Commercial revenues	External project funding	All other revenue	Total revenue
2020	207 872	232	21 323	33 291	262 718
2021	215 994	164	20 657	40 022	276 845



# Membership fees 2020 and 2021, kEur

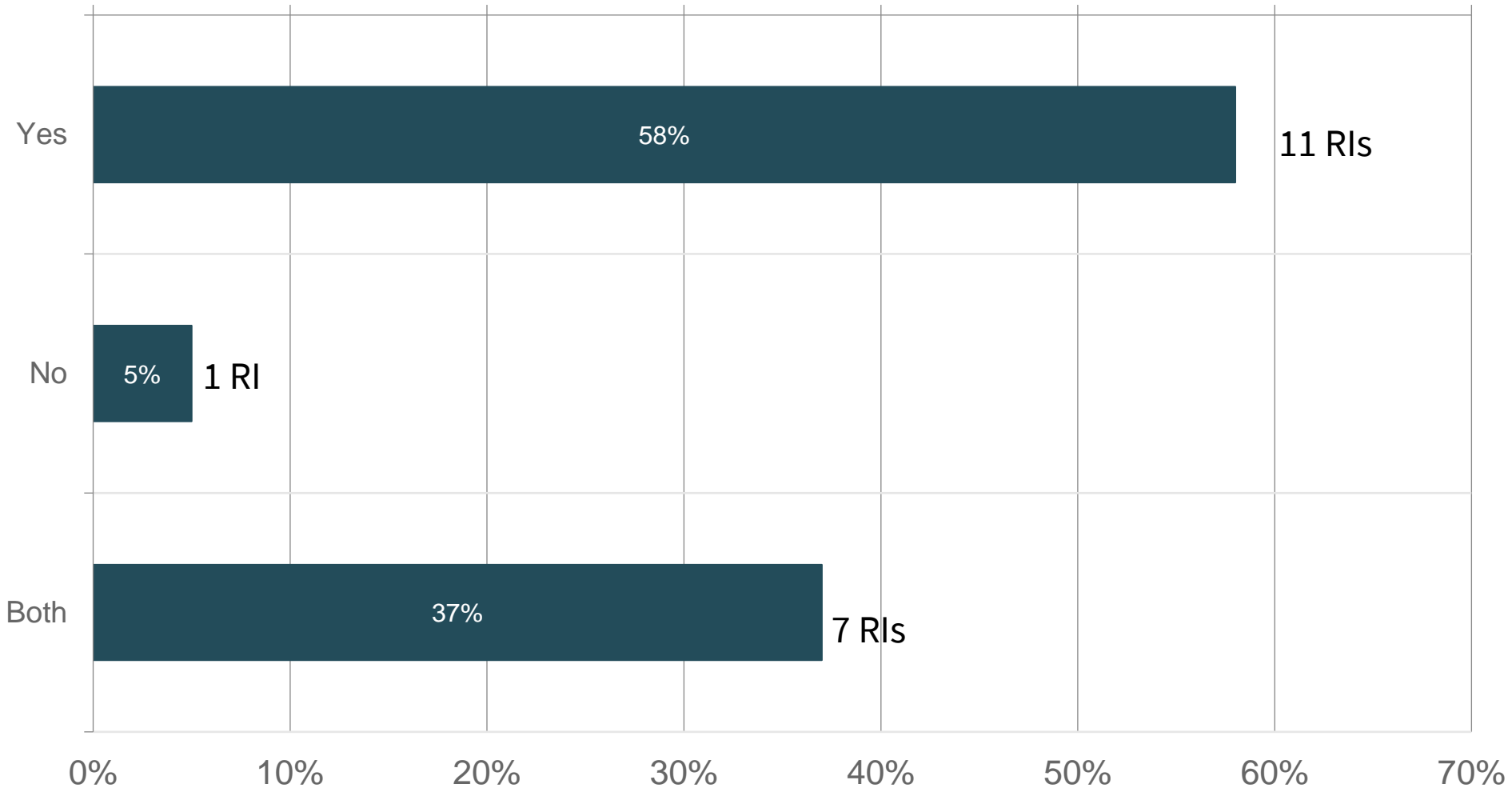


# Enabling scientific excellence

## USERS

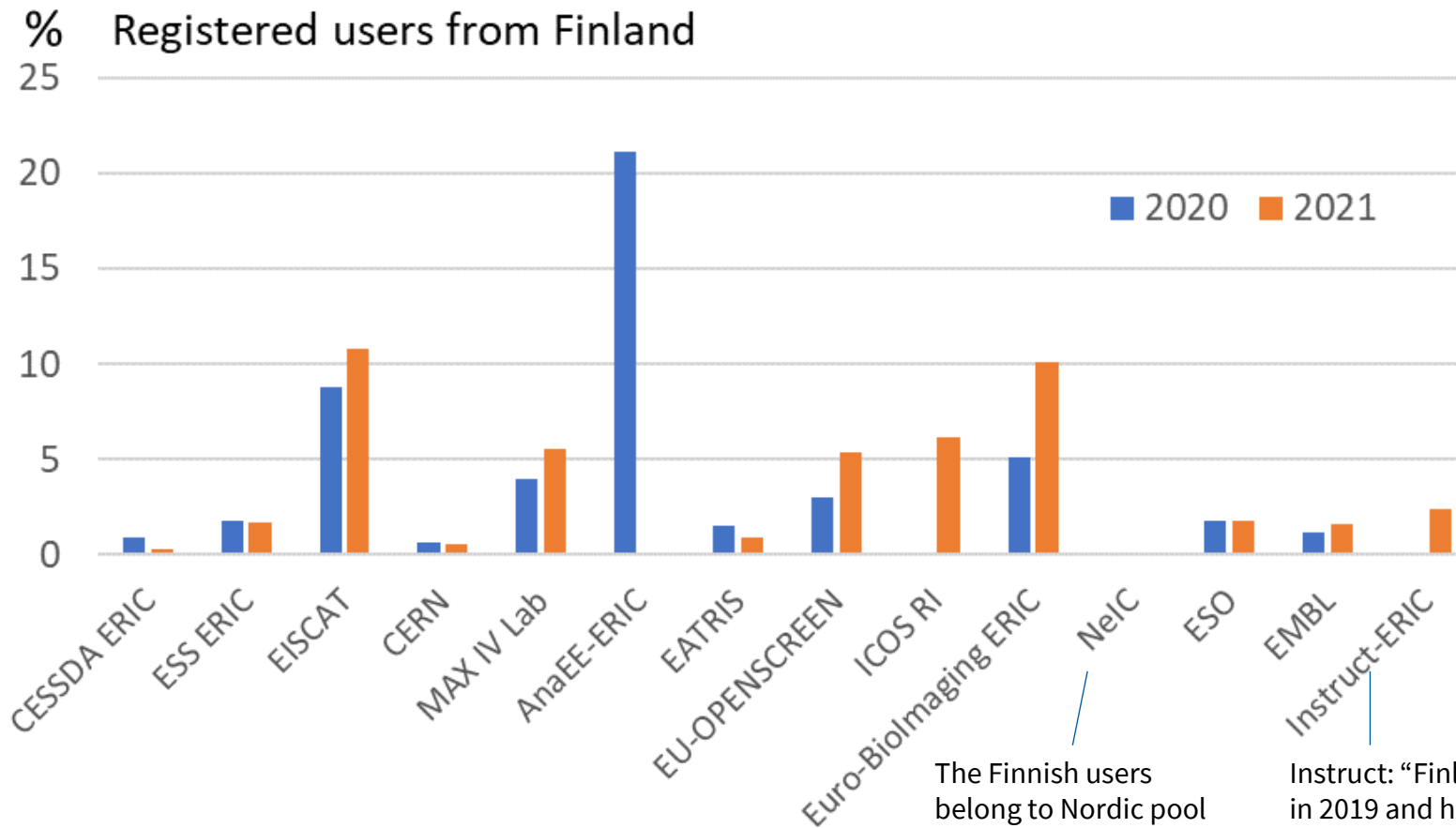
- The number of Finnish registered users ranges from <1% to 10% of all registered users.
  - Diversity of RIs: for example 3500 out of 1.1 million CESSDA users are Finnish; 4 out of 40 EISCAT users are Finnish; 70 out of 11200 CERN users are Finnish
- The definition of user and the user data is highly variable and heterogenic.
- 15/19 research infrastructures have information on the Finnish user numbers.

# User registration required in order to access the RI services or resources



Number of respondents: 19

# Percentage of Finnish registered users on 14 infrastructures



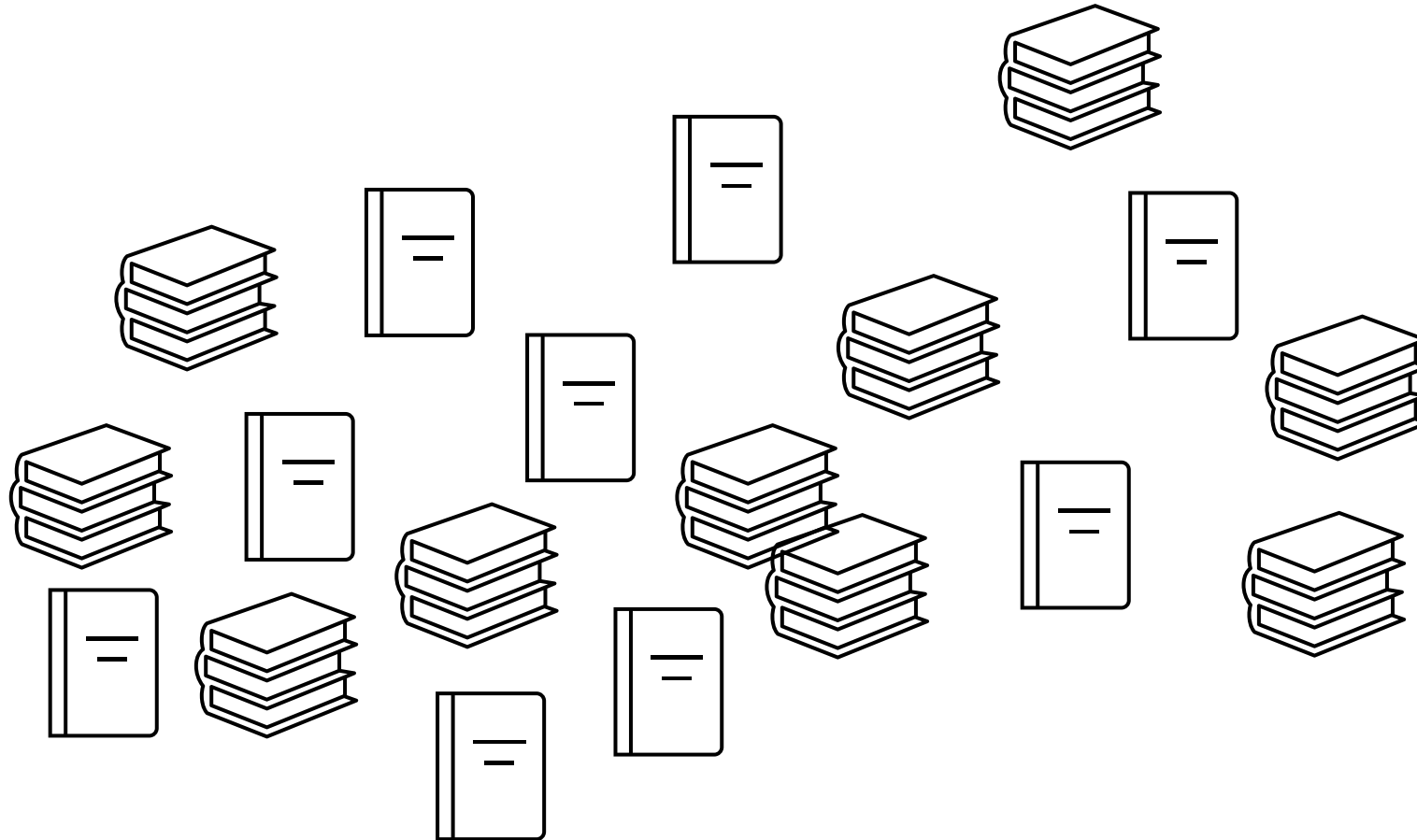
Examples of additional information why number of users cannot be provided, e.g.:

- Users are not registered by nationality
- Services are only partly centrally managed/Access is managed at the national level (questionnaire was sent to the head offices)
- Only a few of the hundreds of RI services require registration

The Finnish users belong to Nordic pool of 2000 users and cannot be separated.

Instruct: "Finland became an Instruct-ERIC member in 2019 and has made great steps becoming the country with the fourth highest number of applications in 2021."

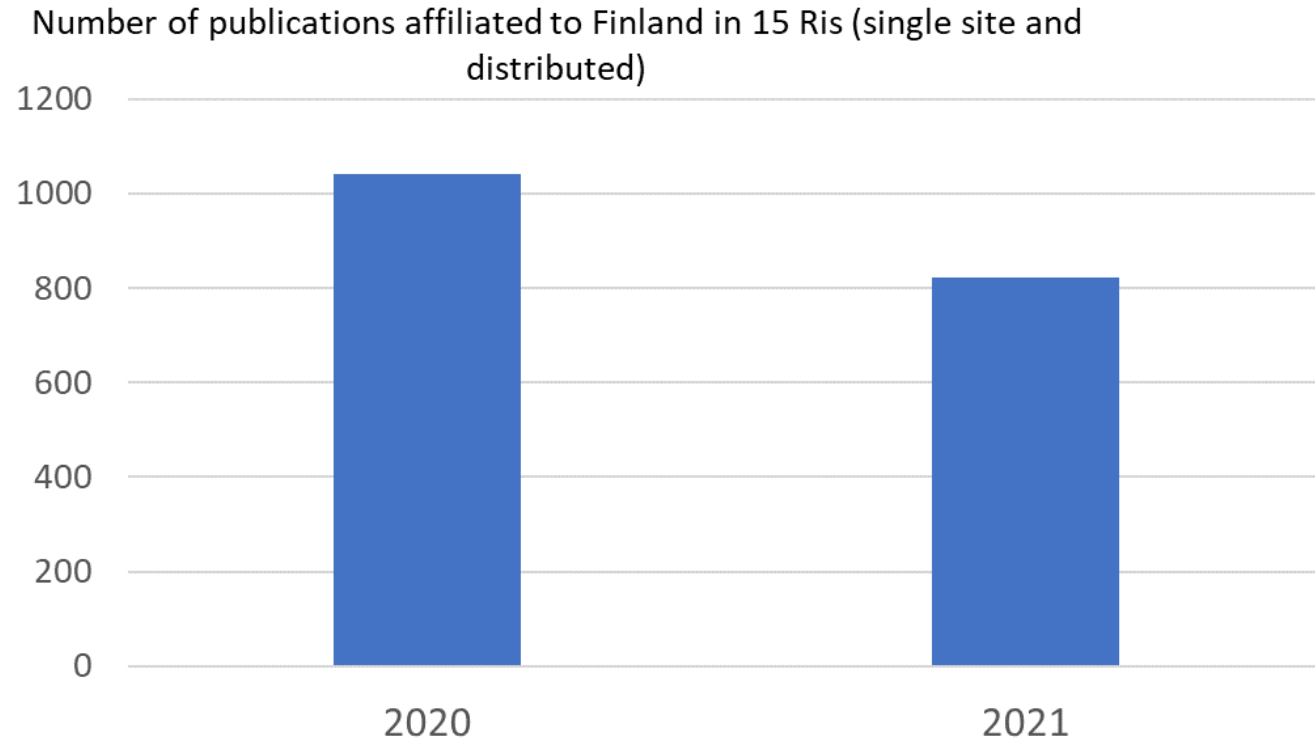
# PUBLICATIONS / RESULTS



Publications* per year	Research infrastructure	The category of publication volume in which the research infrastructure self-assessed in the questionnaire								Total number of publications affiliated to Finland in 2020 and 2021
		<50	50- 100	101- 200	201- 500	501- 1000	1001- 1500	1501- 3000	>3001	
<b>&lt;50</b>	EISCAT	1	0	0	0	0	0	0	0	11
	EU-OPENSREEN	1	0	0	0	0	0	0	0	0
	Euro-BioImaging ERIC	1	0	0	0	0	0	0	0	0
	AnaEE-ERIC	1	0	0	0	0	0	0	0	21
<b>50-200</b>	EATRIS	0	1	0	0	0	0	0	0	9
	INFRAFRONTIER	0	1	0	0	0	0	0	0	0
	MAX IV Lab	0	0	1	0	0	0	0	0	22
	NeIC	0	0	1	0	0	0	0	0	239
<b>201-1500</b>	Instruct-ERIC	0	0	0	1	0	0	0	0	51
	EMBL	0	0	0	0	1	0	0	0	39
	CERN	0	0	0	0	0	1	0	0	382
	CLARIN ERIC	0	0	0	0	0	1	0	0	278
	ESO	0	0	0	0	0	1	0	0	91
	ESRF	0	0	0	0	0	1	0	0	57
<b>1501 - &gt;3000</b>	ICOS RI	0	0	0	0	0	0	1	0	92
	ELIXIR	0	0	0	0	0	0	0	1	392
	CESSDA ERIC	0	0	0	0	0	0	0	1	155
	ESS ERIC	0	0	0	0	0	0	0	1	24

\*peer reviewed articles and book chapters, based on the research performed using facilities/resources of the RI

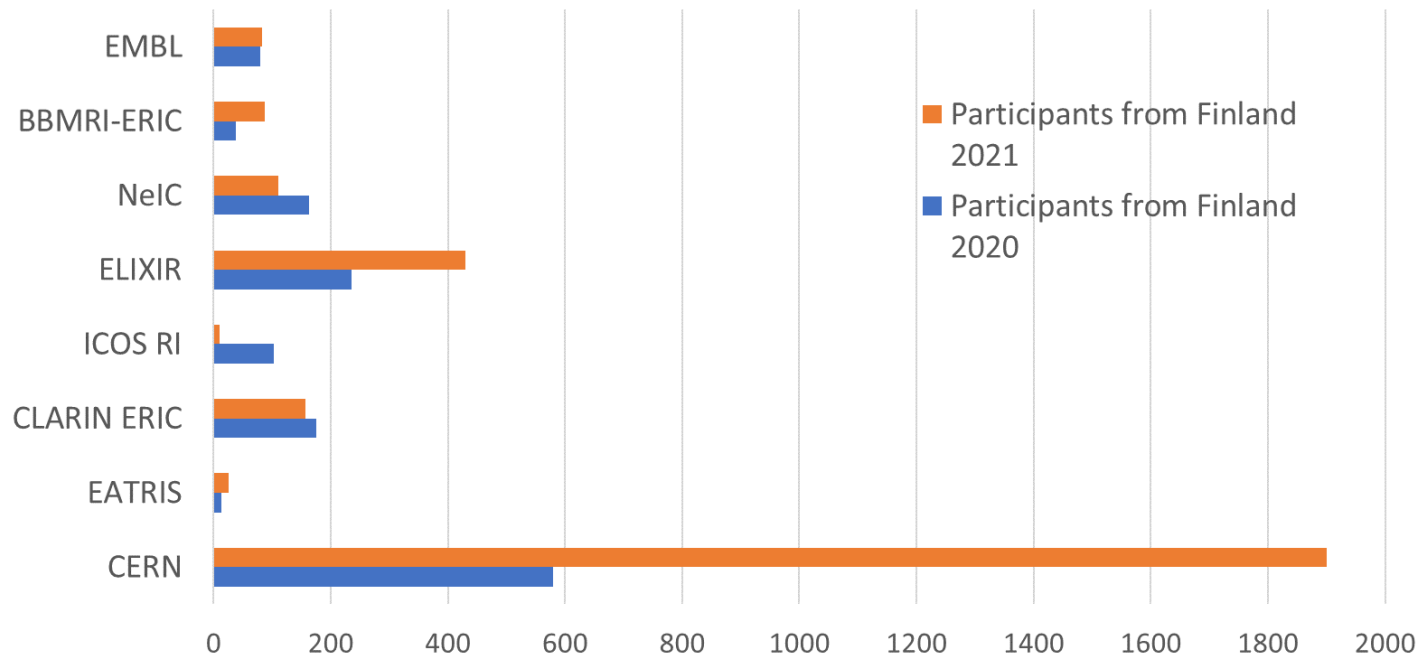
# Publications affiliated to Finland



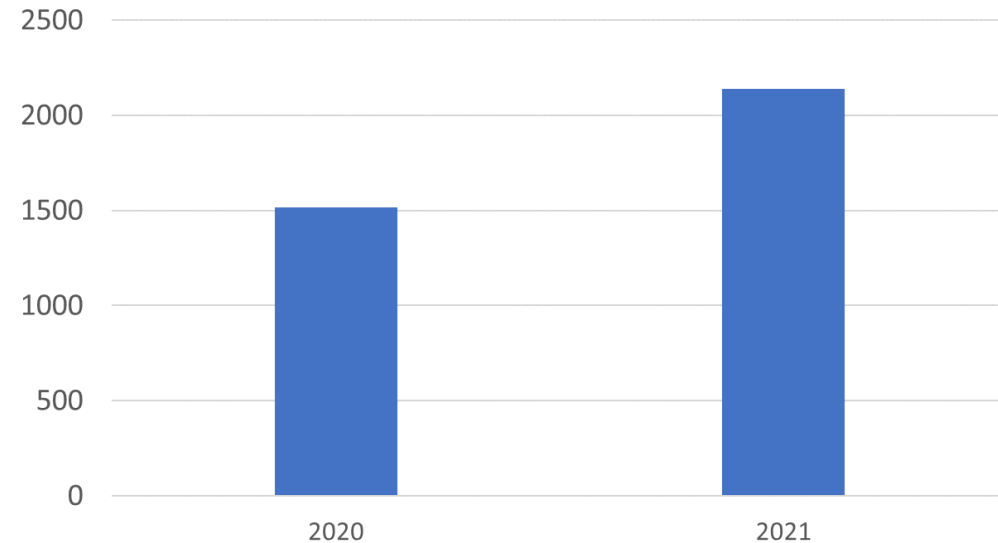
- Some comments underpinning the challenges in RI recognition
- “...these figures are clearly underestimating the actual number of publications that have used the Finnish infrastructure due to poor acknowledgement practices from the part of infrastructure users
- “Counted publications only include papers acknowledging ...ERIC and is therefore an underestimate.”

# Training events (e.g. courses, workshops, PhD training and user support) organized as part of the RI operation to train people who are not RI staff

Number of participants in training events from Finland in 2020 ja 2021



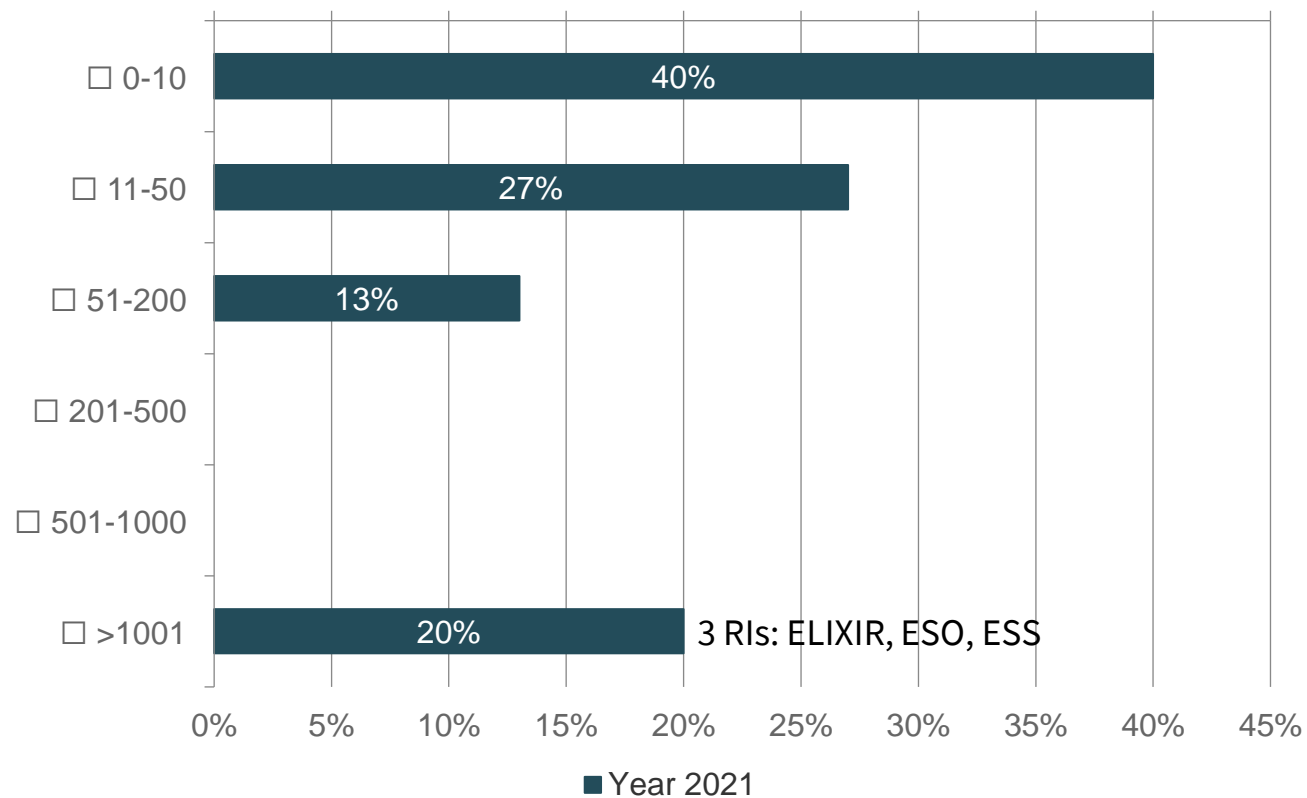
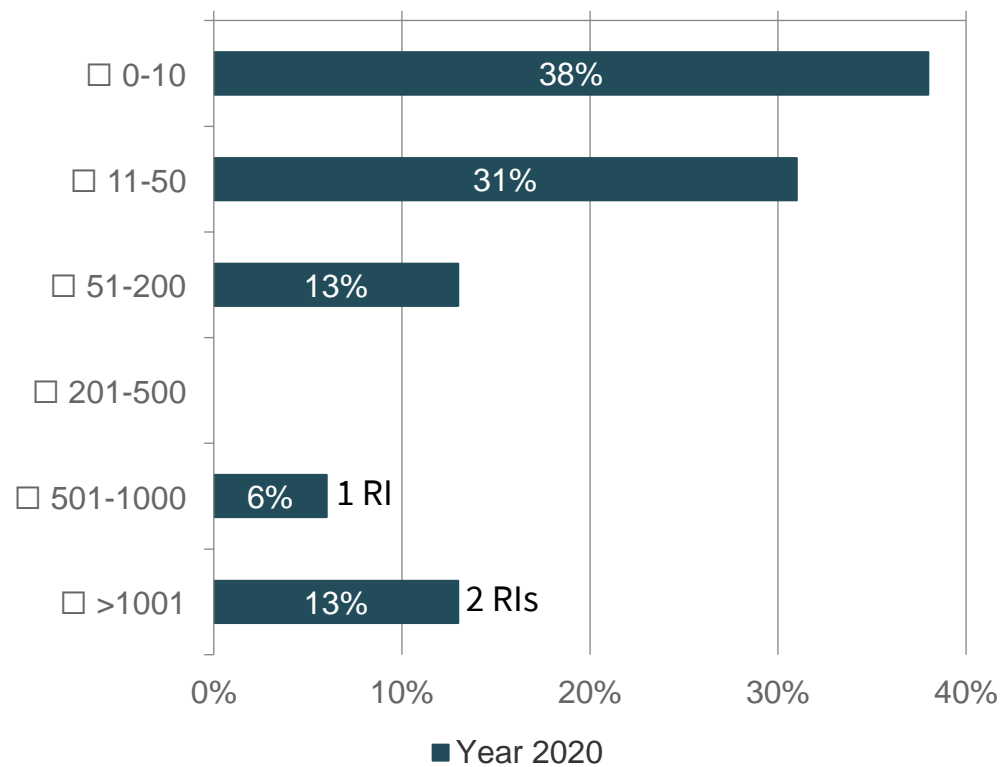
Number of training events organised as part of the RI operation (N=16)



“ Due to GDPR requirements we do not store the nationality of participants in the training courses.”



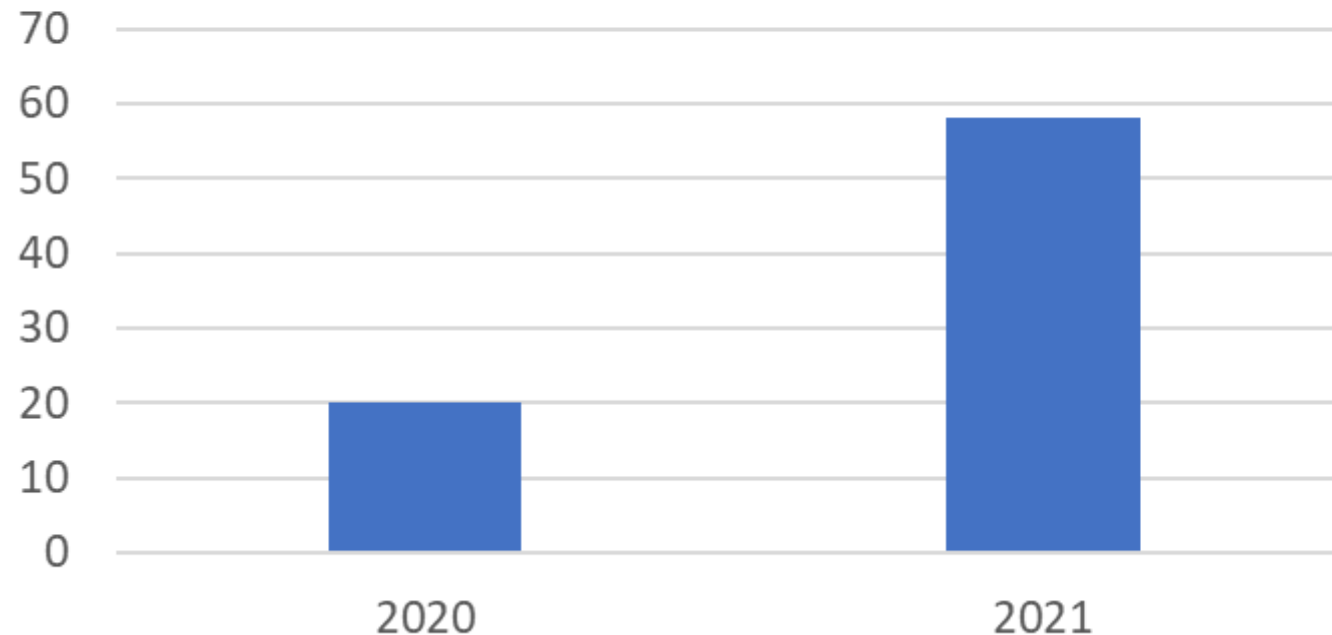
# Categories of number of companies using the RI services



Number of respondents: 16

# COLLABORATION WITH THE PRIVATE SECTOR REPORTED BY 6 RIs

The number of companies from Finland using the services and collaborating with the RI



# Next steps

- ❑ We continue to develop the monitoring of the effectiveness of the international RI memberships.
- ❑ In the future, Finnish coordinators/contact persons will be asked for more in-depth information about our user base and participation in the international RI activities.
- ❑ A more concise survey will continue to be sent to headoffices.
- ❑ While the RIs are developing their KPIs and adopting some common indicators on European level, we aim to use this existing knowledge as it becomes available.