

## 6 Tasks, staffing, funding

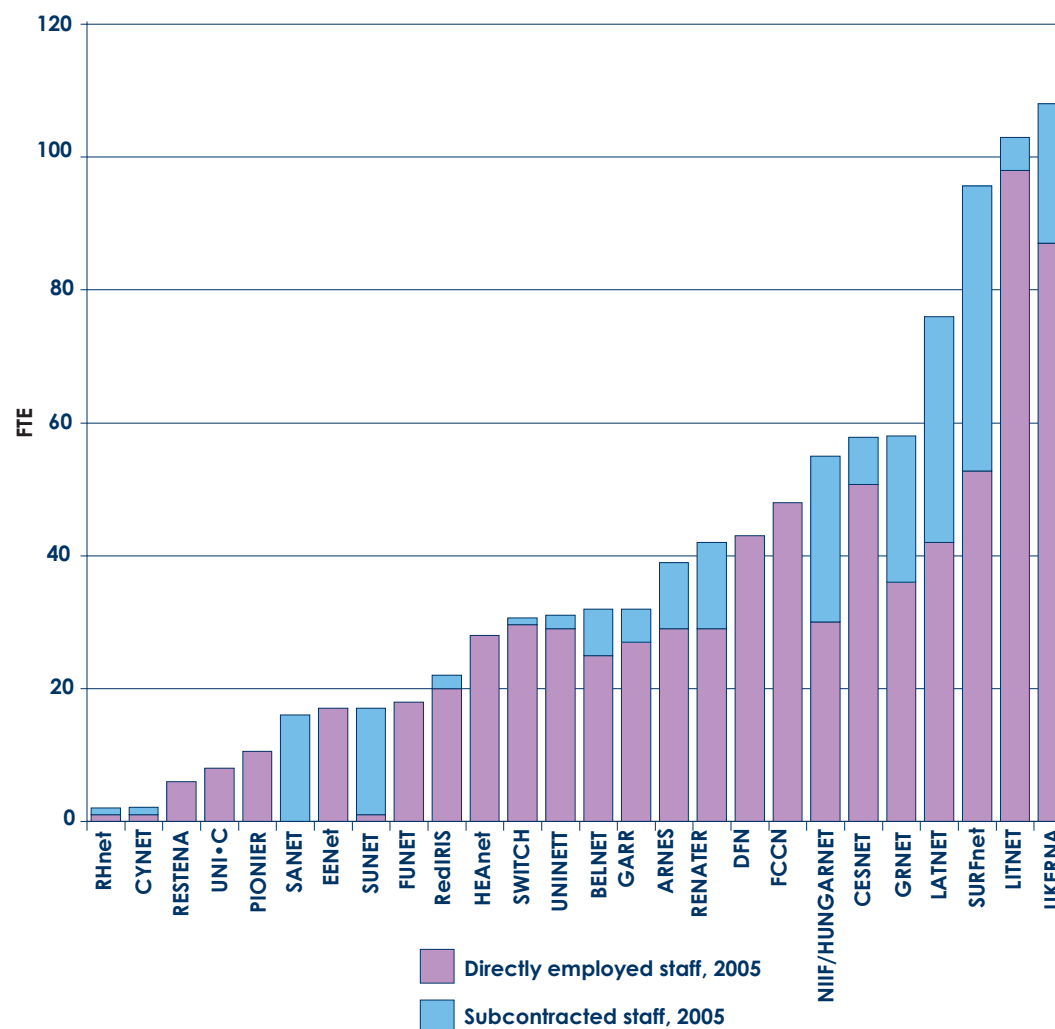
Note that some NRENs provide services only to the Research or Education communities in their country. Others provide other services as well, for example, because they administer the country-code tld or because they connect companies or institutions that are clearly outside of the Research or Education communities. For the sake of comparability, we have asked NRENs to provide information only about the activities for the Research or Education communities. For short, we have called these 'NREN activities'.

Section 6.1 provides information about various aspects of NREN staffing. Section 6.2 contains a table with some information on NREN staff effort for general research projects and for services to secondary and primary schools. Section 6.3 deals with NREN budgets and 6.4 and 6.5 provide more information about income sources and expenditure categories, respectively.

### 6.1. Staffing

Because many NRENs contract out part of their work, the staff size in itself is not a reliable measure of the amount of person-power that is available to an NREN. This section gives an overview of the

Graph 6.1.1 Total NREN staff in FTE, EU/EFTA countries



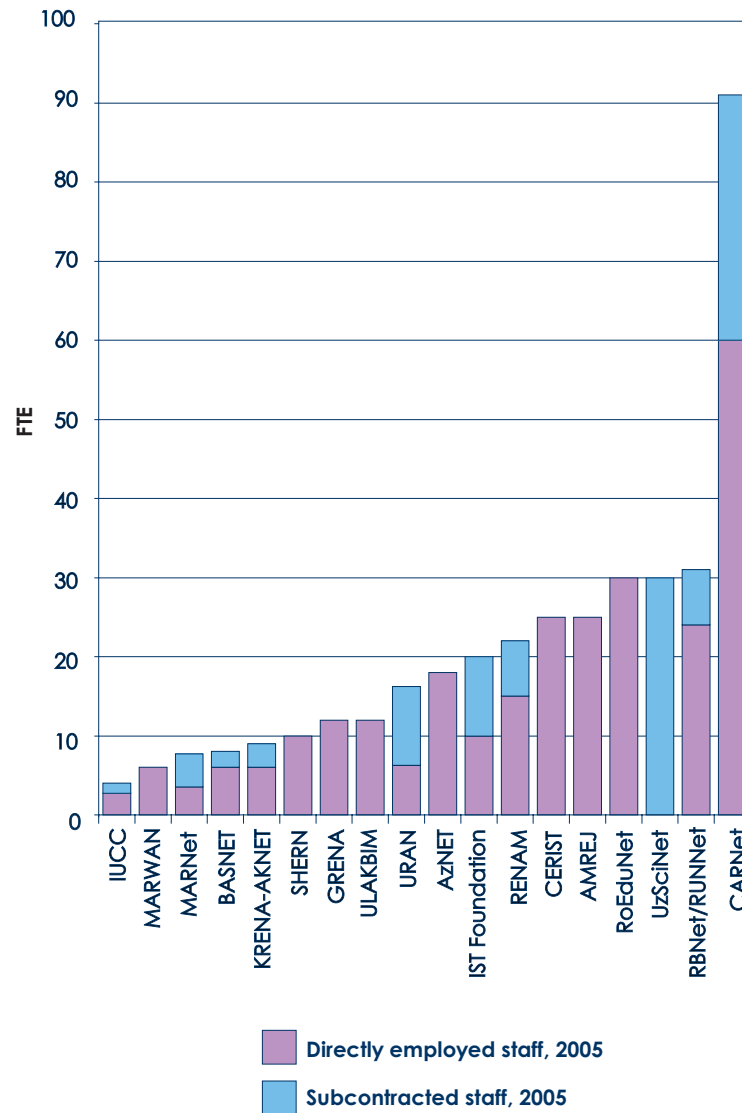
staff that is directly employed in NREN activities, plus subcontracted staff, in Full-Time Equivalents (FTE).

Graph 6.1.3 provides that information specifically for technical staff.

The tasks performed by individual NRENs are different. Some NRENs, for example, provide connection to Metropolitan Area Networks or to Access Networks, who in turn connect the institutions. Other NRENs connect institutions directly. Also, the connection policies of NRENs (see 2.2) are different, for example, with respect to secondary and primary schools. This explains some of the differences as seen in the graphs.

In some NRENs, the research network is provided as a service by a parent organisation; it is not possible for all those NRENs to give a specific estimate of the non-technical staff time devoted to the NREN functions. This may also be a factor explaining why some NRENs have a high proportion of technical staff to total staff.

Graph 6.1.2 Total NREN staff in FTE, other countries



Graph 6.1.3 NREN technical staff in FTE

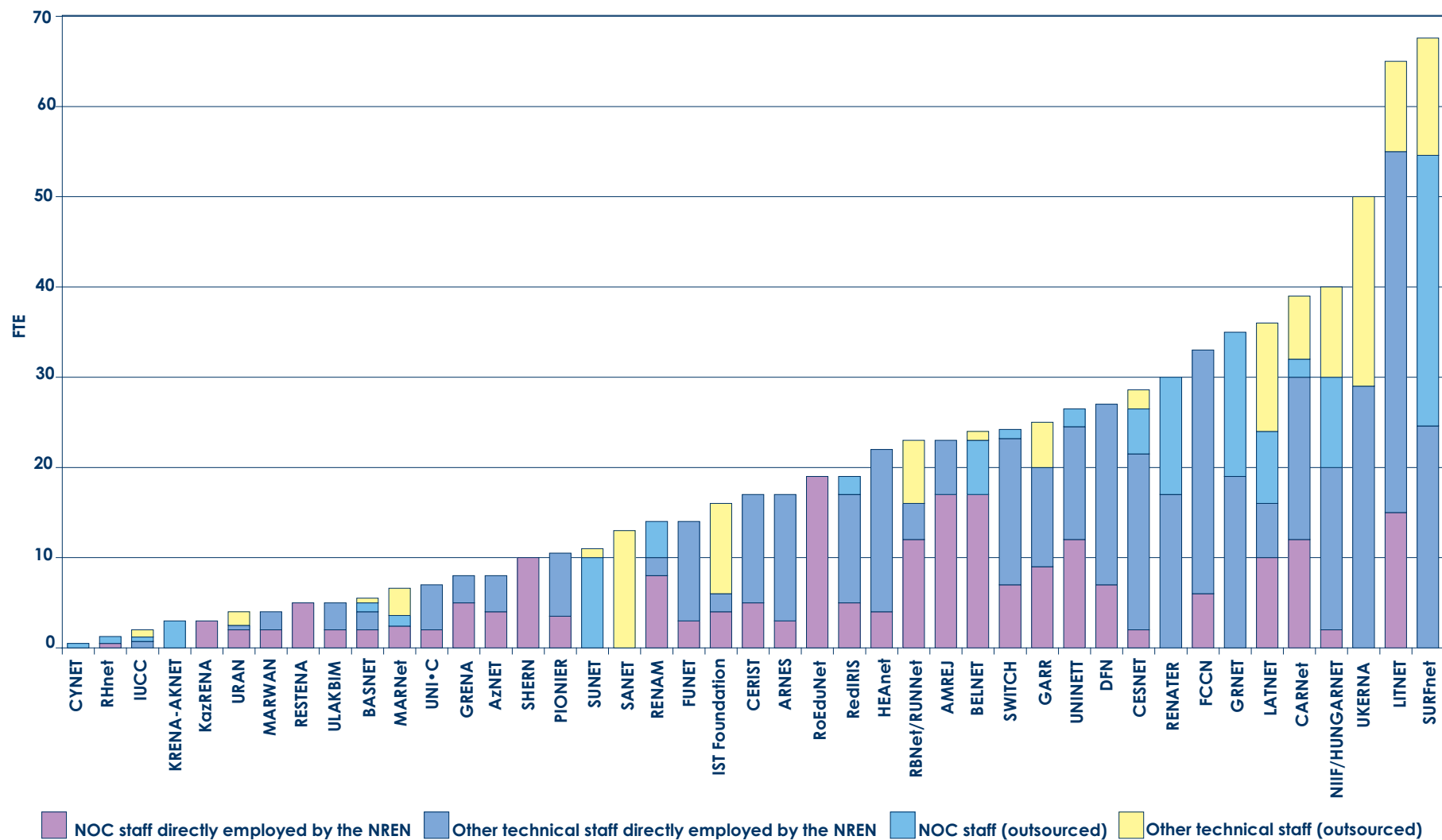


Table 6.1.4 Proportion of technical staff to total staff

	NREN	Total staff			Technical staff			Technical staff as % of total staff
		Directly employed	Outsourced	Total	Directly employed	Outsourced	Total	
EU/EFTA countries								
Belgium	BELNET	25	7	32	17	7	24	75%
Cyprus	CYNET	1	1.1	2.1	0	0.5	0.5	24%
Czech Republic	CESNET	50.7	7.1	57.8	21.5	7.1	28.6	49%
Denmark	UNI•C	8	0	8	7	0	7	88%
Finland	FUNET	18	0	18	14	0	14	78%
France	RENATER	29	13	42	17	13	30	71%
Germany	DFN	43	0	43	27	0	27	63%
Greece	GRNET	36	22	58	19	16	35	60%
Hungary	NIIF/ HUNGARNET	30	25	55	20	20	40	73%
Iceland	RHnet	1	1	2	0.5	0.75	1.25	63%
Ireland	HEAnet	28	0	28	22	0	22	79%
Italy	GARR	27	5	32	20	5	25	78%
Latvia	LATNET	42	34	76	16	20	36	47%
Lithuania	LITNET	98	5	103	55	10	65	63%
Luxembourg	RESTENA	6	0	6	5	0	5	83%
Netherlands	SURFnet	52.7	43	95.7	24.6	43	67.6	71%
Norway	UNINETT	29	2	31	24.5	2	26.5	85%
Poland	PIONIER	10.5	0	10.5	10.5	0	10.5	100%
Portugal	FCCN	48	0	48	33	0	33	69%
Slovakia	SANET	0	16	16	0	13	13	81%
Slovenia	ARNES	29	10	39	17	0	17	44%
Spain	RedIRIS	20	2	22	17	2	19	86%
Sweden	SUNET	1	16	17	0	11	11	65%
Switzerland	SWITCH	29.6	1	30.6	23.2	1	24.2	79%
United Kingdom	UKERNA	87	21	108	29	21	50	46%

Table 6.1.4 Proportion of technical staff to total staff (continued)

	NREN	Total staff			Technical staff			Technical staff as % of total staff
		Directly employed	Outsourced	Total	Directly employed	Outsourced	Total	
Other countries								
Algeria	CERIST	25	0	25	17	0	17	68%
Azerbaijan	AzNET	18	0	18	8	0	8	44%
Belarus	BASNET	6	2	8	4	1.5	5.5	69%
Bulgaria	IST Foundation	10	10	20	6	10	16	80%
Croatia	CARNet	60	31	91	30	9	39	43%
Georgia	GRENA	12	0	12	8	0	8	67%
Israel	IUCC	2.7	1.3	4	0.7	1.3	2	50%
Kyrgyzstan	KRENA-AKNET	6	3	9	0	3	3	33%
Macedonia, FYRo	MARNet	3.5	4.2	7.7	2.4	4.2	6.6	86%
Moldova	RENAM	15	7	22	10	4	14	64%
Morocco	MARWAN	6	0	6	4	0	4	67%
Romania	RoEduNet	30	0	30	19	0	19	63%
Russian Federation	RBNet/RUNNet	24	7	31	16	7	23	74%
Serbia / Montenegro	AMREJ	25	0	25	23	0	23	92%
Syria	SHERN	10	0	10	10	0	10	100%
Turkey	ULAKBIM	12	0	12	5	0	5	42%
Ukraine	URAN	6.25	10	16.25	2.5	1.5	4	25%

## 6.2 Percentage of staff effort for secondary and primary schools and for research

We have asked NRENs to estimate how much of their staff effort is going towards connections, production services and support for secondary and primary schools. We have also asked them how much is going towards general research projects.

As can be seen from the table, the percentage of effort for secondary and primary schools varies greatly, from nothing in many countries to 80% with ARNES in Slovenia (which also manages the equipment at the end sites).

Differences are equally great for the general research effort, with percentages varying between nothing and 50% for CESNET and SURFnet and 86% for RedIRIS.

One factor that explains the high percentage for RedIRIS is that RedIRIS probably does not fully account for the overhead staff effort of its parent organisation in its work. Another factor may be that not all NRENs apply the same interpretation to the term 'general research projects'. The conclusion seems to be justified that research is an important aspect of the work of many NRENs.

Table 6.2

	NREN	% of staff effort towards:	
		Secondary and primary schools	General research
EU/EFTA countries			
Belgium	BELNET	0	10
Cyprus	CYNET	0	0
Czech Republic	CESNET	0	50
Denmark	UNI•C	0	5
Estonia	EENet	0	0
Finland	FUNET	0	5
France	RENATER	0	0
Germany	DFN	0	6
Greece	GRNET	67	7
Hungary	NIIF/HUNGARNET	1	50
Iceland	RHnet	0	0
Ireland	HEAnet	30	30
Italy	GARR	2	10
Latvia	LATNET	10	5
Lithuania	LITNET	50	10
Luxembourg	RESTENA	50	10
Netherlands	SURFnet	0	50
Norway	UNINETT	10	25
Poland	PIONIER	0	0
Portugal	FCCN	6	35
Slovakia	SANET	0	20
Slovenia	ARNES	80	5
Spain	RedIRIS	0	86
Sweden	SUNET	0	2
Switzerland	SWITCH	0	0
United Kingdom	UKERNA	0	0

	NREN	% of staff effort towards:	
		Secondary and primary schools	General research
Other countries			
Algeria	CERIST	0	60
Azerbaijan	AzNET	80	20
Belarus	BASNET	0	70
Bulgaria	IST Foundation	0	0
Croatia	CARNet	10	10
Georgia	GRENA	10	10
Israel	IUCC	0	5
Kazakhstan	KazRENA	0	0
Kyrgyzstan	KRENA-AKNET	12	10
Macedonia, FYRo	MARNet	0	40
Moldova	RENAM	5	20
Morocco	MARWAN	0	0
Romania	RoEduNet	20	30
Russian Federation	RBNet/RUNNet	0	0
Serbia / Montenegro	AMREJ	0	20
Syria	SHERN	0	0
Turkey	ULAKBIM	0	10
Ukraine	URAN	0	25

### 6.3 Total budgets, 2004 and 2005

The following graphs give the total NREN budgets for 2004 and 2005.

Note that the budget year of CERIST (Algeria) runs from March to February; that of UKERNA (UK) runs from August to July. In those cases, the 2004 budget is really the 2004/2005 figure.

NREN budgets may fluctuate from year to year, because investments can vary considerably from year to year.

Note that NRENs have many different tasks and are organised in different ways. Some NRENs provide services only to the Research or Education communities in their country. Others provide additional services as well, for example, because they administer the country-code top-level domain or because they connect others who are clearly outside of the Research or Education communities. For the sake of comparability, we have asked NRENs to provide information only about the budget for the activities for the Research and Education communities in their countries.

Even so, a comparison between the budgets of different NRENs is tedious. We have asked NRENs if the budget figure given includes the EU grant for the GÉANT activity - for some NRENs, this grant is shown in the budget, for others, it appears as a reduced cost and is not shown in the budget.

In graph 6.3.1, the NRENs that include the GÉANT subsidy in their budget have been marked with an asterisk.

There are also other reasons why comparisons are difficult:

- \* Funding for regional and/or metropolitan area networks is handled differently in different countries;
- \* In some countries, clients pay for their line to the nearest NREN PoP, in others the NREN pays for this;
- \* Some NRENs spend a large part of their budget on connecting secondary and primary schools, others do not;

- \* In section, 6.5 it seems that some NRENs do not spend money on salaries. Yet, they do have staff, but this staff is not paid from the NREN budget. Similar situations may apply for other budget categories as well.

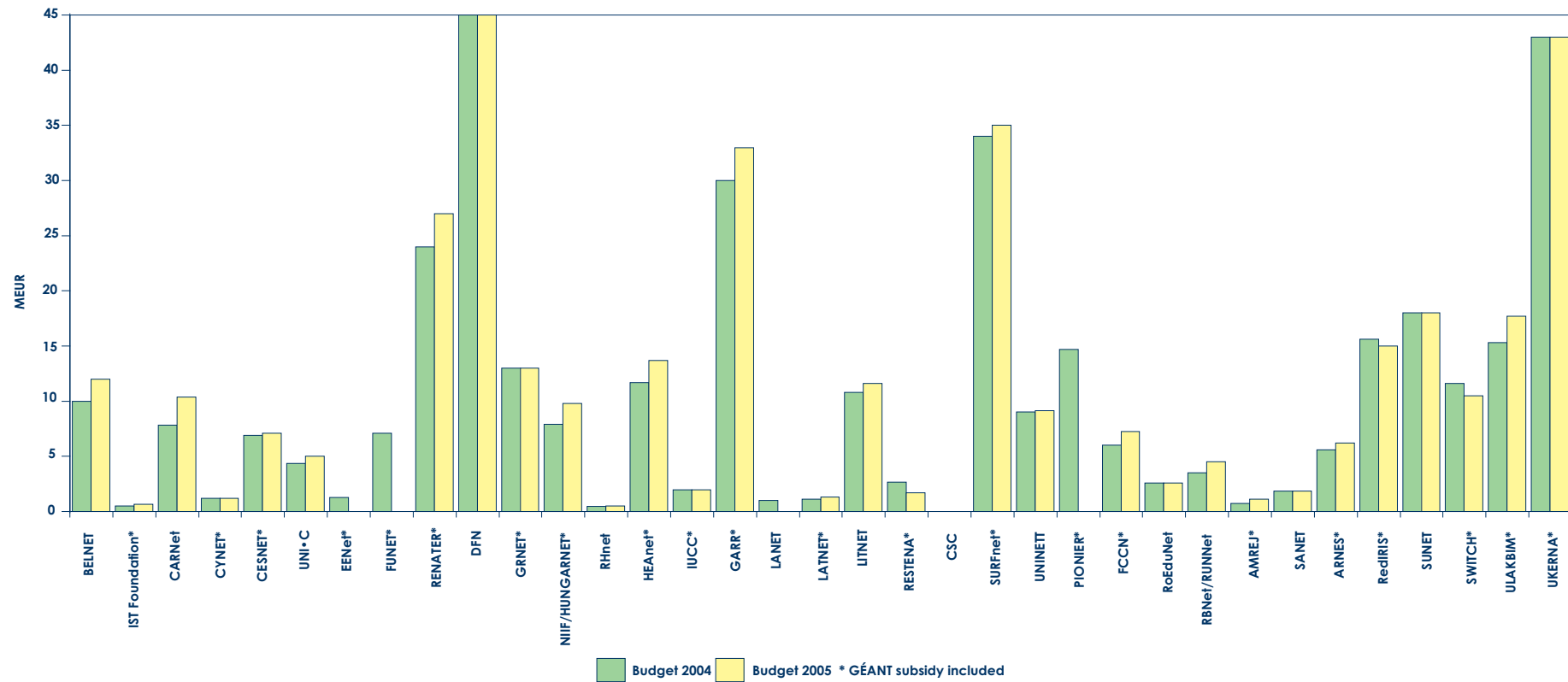
When comparing current budget data with data from previous versions of the Compendium, it becomes clear that NREN budgets tend to be stable over time. There are fluctuations from year to year, depending on whether or not an important investment takes place during that year. But on the whole, the trend is that budgets stay relatively stable and that NRENs are able to deliver more bandwidth and more services for roughly the same amount of money.

The exception to this general trend seems to be the situation in the less developed NRENs. There, new possibilities for significantly upgrading international bandwidth (for example under the GN2, EUMEDCONNECT or SEEREN projects) seem to act as a catalyst for increased national NREN budgets. A case in point is CERIST of Algeria. For 2005, it has received extra funding for a major upgrade of its backbone and of the access network. It could be that this increase has in fact been catalysed in part by the

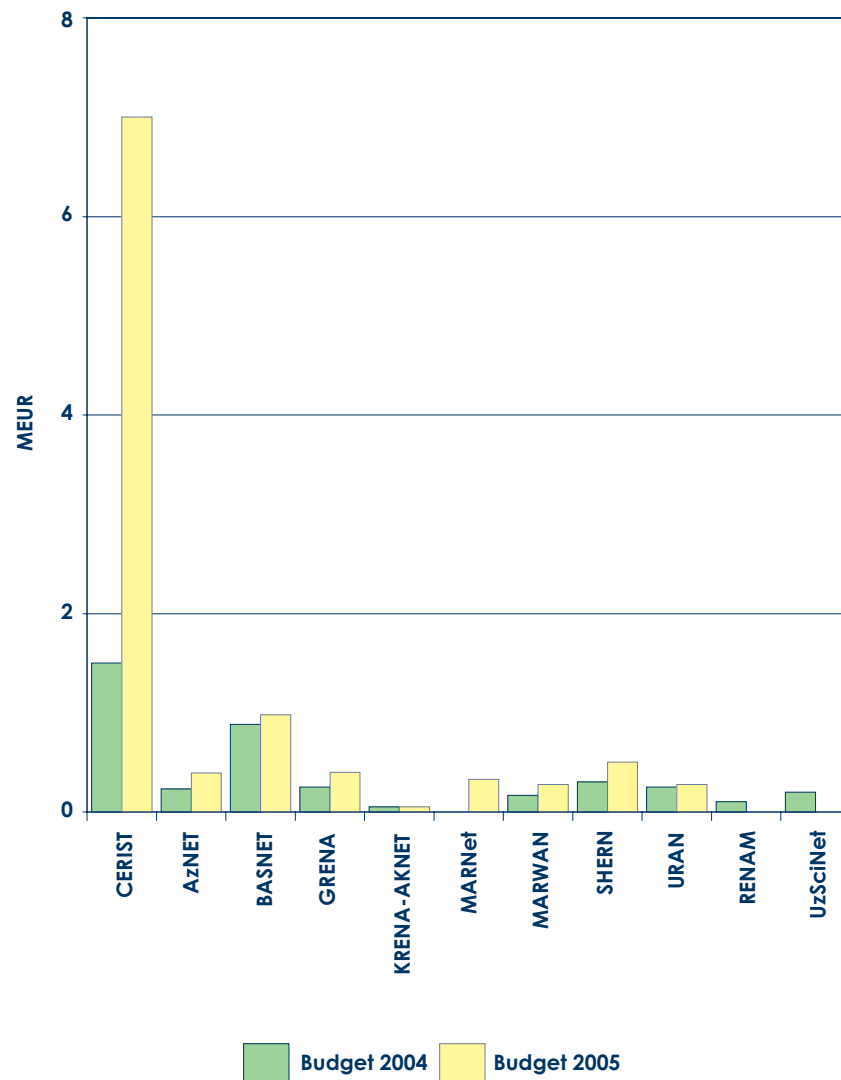
improved international connectivity that has become available to CERIST through the EUMEDCONNECT project.



Graph 6.3.1 Total budget 2004 and 2005, GN2 partner countries



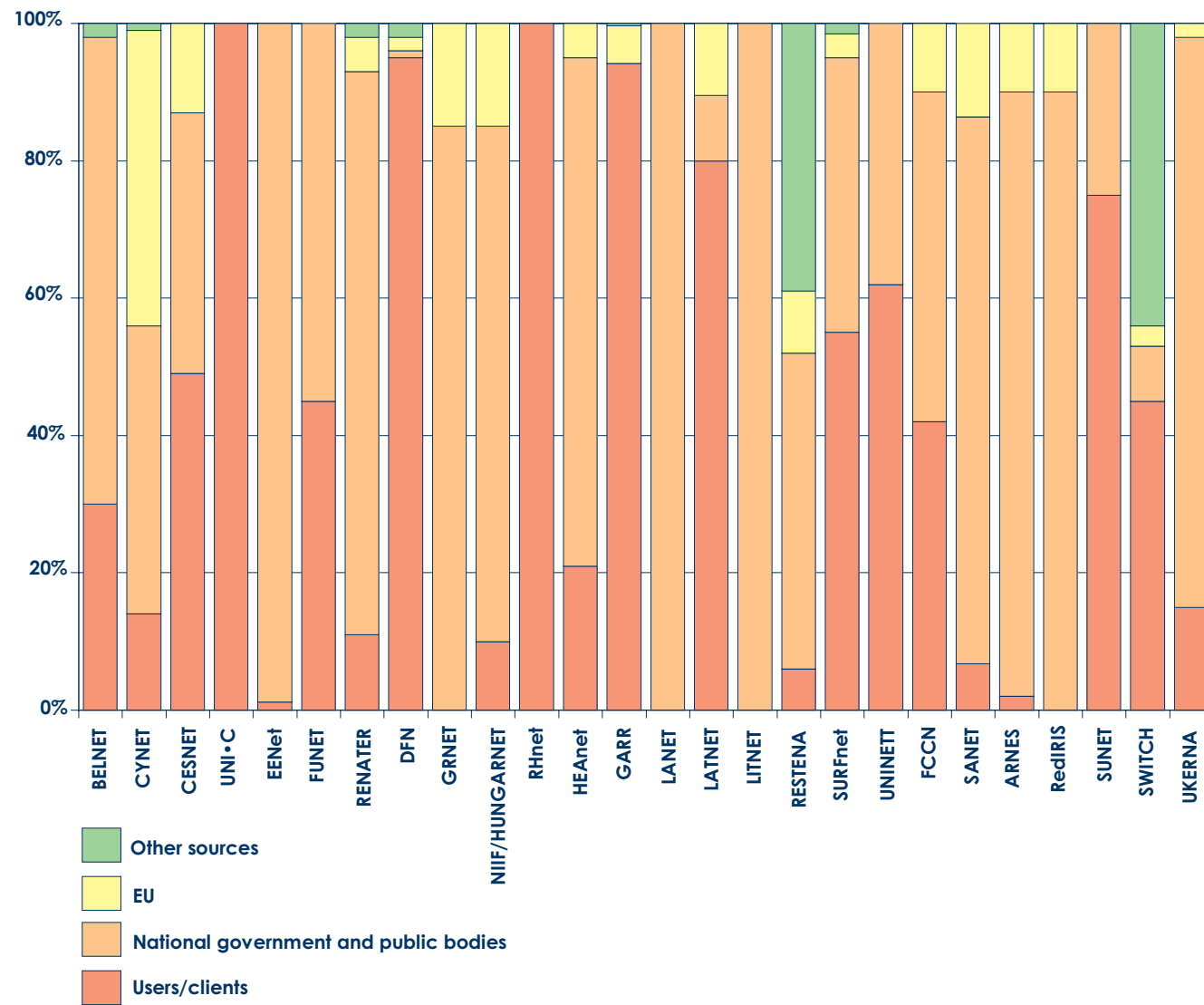
Graph 6.3.2 Total budget, 2004 and 2005, other countries



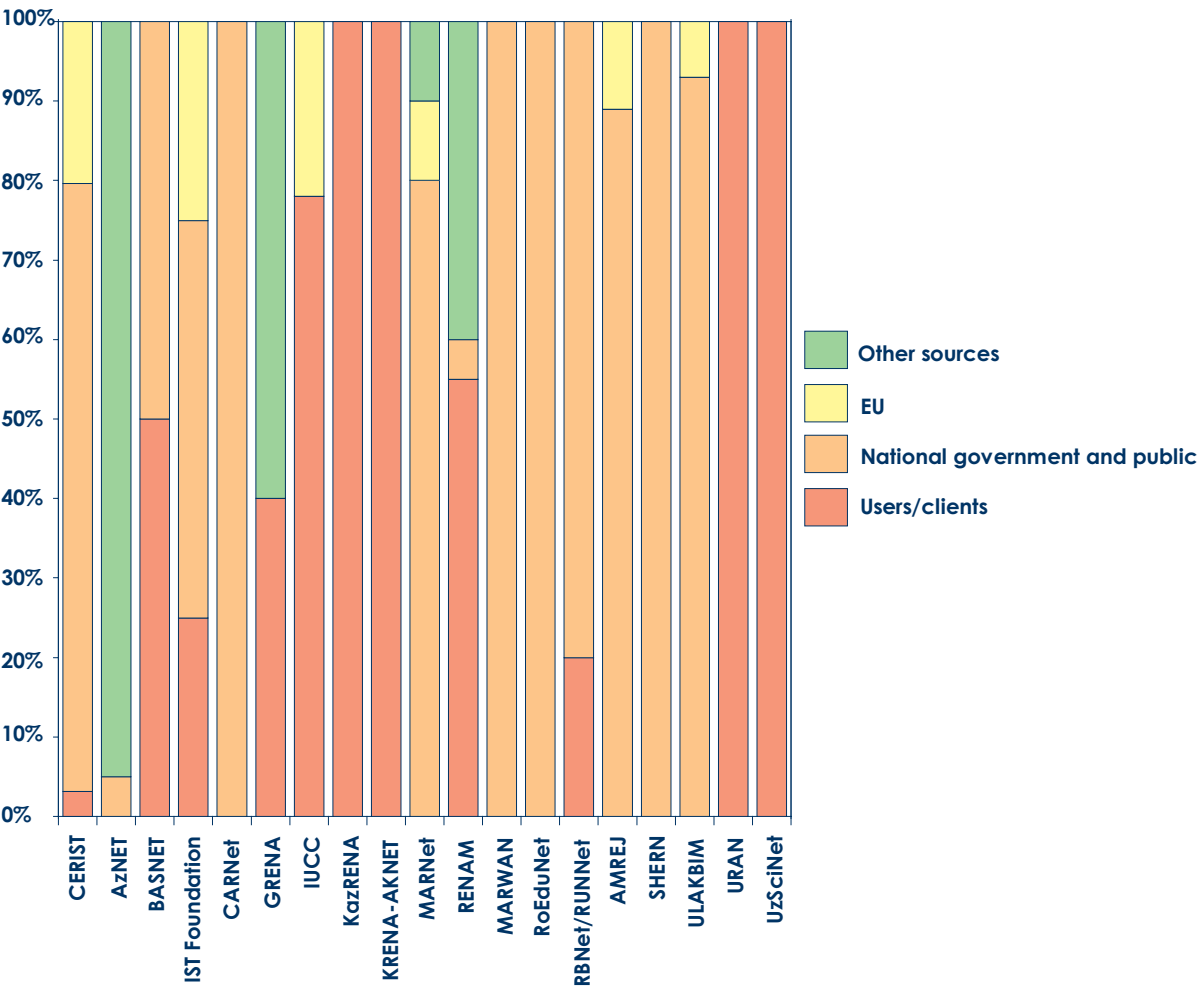
## 6.4. Income sources

NRENs are funded in different ways: some receive their funding directly from the National Government, others are funded by their users (who may in turn be government funded). Graphs 6.4.1 and 6.4.2 give information on what percentage of NREN funds come from which source and clearly show the differences. Note that in many cases (see also table 6.3.1) the amount of funding received from the EU is not shown in this table.

Graph 6.4.1 Income sources, EU and EFTA countries



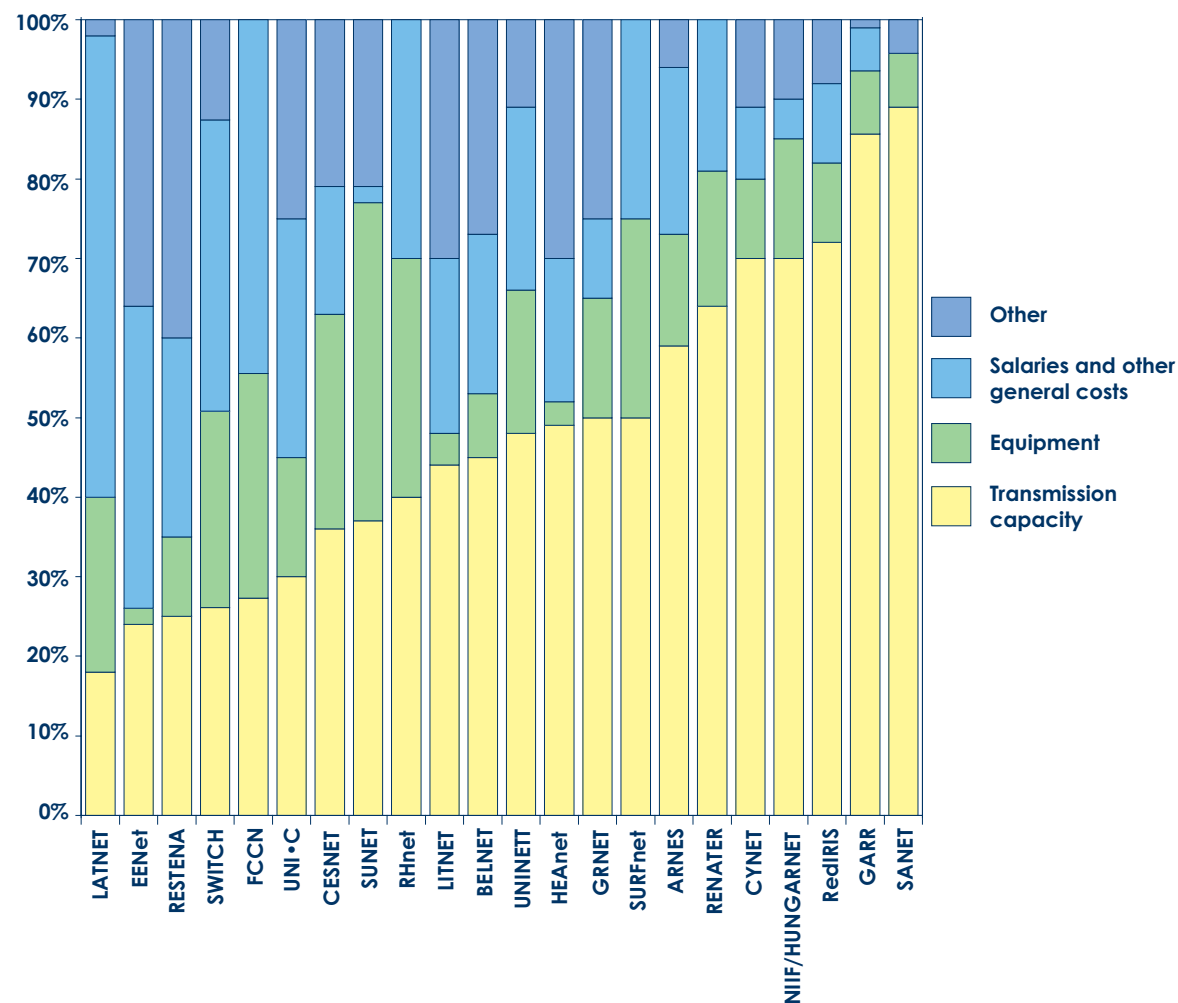
Graph 6.4.2 Income sources, other countries



## 6.5 Expenditure by category

Graphs 6.5.1 and 6.5.2 show which percentage of NREN income is spent on which categories of expenditure. For ease of readability, the data has been sorted in the order of the largest expenditure category, which for most NRENs is the transmission capacity. Note that not everything may be funded through the NREN budget in all countries. More information about this can also be found in the “Focus Study on Funding, Management and Operation of European Research Networks analysed by network hierarchy” by John Martin and Baiba Kaškina, TERENA, May 2004.

Graph 6.5.1 Expenditure by category, EU and EFTA countries



Graph 6.5.2 Expenditure by category, other countries

