



ecsite

6
JULIE BECKER

Mapping European science engagement networks

WHAT ARE VISITORS
LOOKING FOR WHEN THEY
VISIT MUSEUM WEBSITES?
RUI GUERRA

16
THE NETWORK

DESIGN SERIES 2
RUI GUERRA

17
NANOTECHNOLOGIES:
STUDY REVEALS EUROPEAN CITIZENS'
INTEREST. MARIA ZOLOTONOSA

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THE EC SITE MAGAZINE

12
LOOKOUTS
TESTED: SCIENCE CENTRES AS
ART AND SCIENCE INNOVATION
INCUBATORS



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ECSITE COMMUNICATIONS
MANAGER

Mapping European science engagement networks

When I joined Ecsite as Communications Manager last April I had put down on my to-do list “get clearer picture of science engagement players in each European country and connect”. August is a quieter month at the Ecsite Executive Office: a good time to tackle long-term projects that tend to lose out to urgent matters the rest of the year. Since one month seemed a little short to embark on a pan-European comparative study of science communication governance, I decided to interview one or two experts in each country. For a couple of weeks my phone was continuously engaged, resonating with enthusiastic voices and a myriad of accents – a precious antidote for us during the gloomiest August on Belgian weather records. I spoke with 32 colleagues from 30 different countries and far too many interesting ideas came out of these interviews to be shoe-horned into a single *Spokes* article. Before I can publish a more comprehensive picture on the Ecsite website, I’m offering you a first glimpse of the European science engagement landscape, concentrating on one topic: national and regional networks of science centres and science engagement professionals.

I found 17 of these networks in geographical Europe: 13 national networks, three governmental agencies fulfilling a network-like mission, and one regional network: the Nordic Science Centres Forbund (NSCF) bringing together professionals from Scandinavia, the Baltic States and Iceland. In total 21 European countries are covered by a science centres or science engagement network. Sweden and Norway count their own national organization while also belonging to the NSCF area.

A blossoming scene

The first network to see the light seems to have been the Italian Associazione Nazionale Musei Scientifici (ANMS) founded in 1974. France followed in 1982 with the Association des Musées et Centres pour le Développement de la Culture Scientifique, Technique et Industrielle (AMCSTI) and the Nordic countries gave birth to their own regional organization in 1987. The late 1990s and the 2000 decade saw a boom, with nine networks springing to life.

The field’s newborns are the Polish and Czech networks (both created in 2013), while the Russian Federation is awaiting a happy event for the end of 2014 or beginning of 2015. Spanish colleagues are upping their game: they already had a network created in 1997 whose main activity was an annual senior managers’ meeting and are now announcing the birth of an association open to a wider professional audience this November in Granada.

This last case is interesting: while most national networks emerged in times of blossoming science engagement activities, the future Spanish association is a child of the financial crisis that drastically hit all publicly-funded activities in the country. For Ernesto Páramo Sureda, Director at Parque de las Ciencias (Granada), it has now become crucial to transform a hitherto informal professional gathering into a more robust, more open and more powerful network. “This terrible financial crisis can be an opportunity to look back on our young scene and critically review what we have been doing in the past 25 or 30 years. We need to plan for the future, diversify our income sources, rethink our mission. We used to concentrate on education – now we need to look at our broader cultural role and fully participate in society, engaging in dialogue with all audiences. I’m convinced that we need to reinvest the international scene we have been neglecting a little – international collaborations are not a luxury, they are essential these days,” he declares.

Paradoxically, high governmental interest for science engagement can also mean fiercer competition for science centres.

National raisons d'être

Unsurprisingly, missions and activities respond to the specificities of each national or regional context and are partly dictated by public authorities. All networks have a representative role and most of them pursue best practice sharing activities like conferences, publications, training and sometimes exhibitions or events.

Some networks are the fruit of a close collaboration between governments and the science communication sector, with public authorities encouraging science engagement professionals to speak with one voice – which often goes with the existence of an articulated national science engagement strategy like in France, Portugal, Austria or Norway. In other countries on the contrary, networks are the result of a bottom-up attempt from the sector to self-organise.

In this category one finds two types of networks. First, very politically active ones like the UK Association of Science and Discovery Centres (ASDC) that follows a pro-active strategy to influence policy making or SPIN in Poland whose wide ambition is to foster democratic dialogue between science and society. Second, much more pragmatic collaborations centred on training, professional development or common exhibition projects like the Nordic Science Centre Forbund or German MINTaktiv that voluntarily keeps running costs low with no permanent staff but raised €900,000 for projects since it started four years ago.

Supportive governments

The majority of networks receiving financial support from their governments are funded in an effort to improve science education and inspire today's children and teenagers to become the engineers and researchers our knowledge economies will badly need tomorrow. A few national governments like Austria, Sweden or Norway combine economic interests with a broader science and society vision. They finance science engagement networks as a tool to equip scientifically literate citizens with the skills needed to participate in informed and democratic dialogue about scientific issues.

Strong governmental support seems to result in bigger operational budgets: four out of the five networks boasting a yearly operational budget of €200,000 or more receive at least 50% of public subsidies (Portugal, Austria, France, The Netherlands). A mixed blessing that can make networks sensitive to governmental changes and structural reforms. French AMCSTI is currently undergoing "a transition period" in its own director's words: "On the one hand we had a strong national push for "scientific culture" as we call it with a special €100M project-dedicated fund put in place in 2013. On the other hand scientific culture competencies and budgets were transferred from the central government to the regions in 2013, a transition still in the making. As a network we still contribute to the definition of a national strategy and try to help our members re-organize in the face of changing public funding sources and increased pressure for the mutualisation of resources. We also work closely with the OCIM (Office de Coopération et d'Information Muséales), the public body in charge of professional training in our sector," Didier Michel explains. One can't contemplate the French science engagement landscape without also mentioning Universcience, whose activities largely go beyond the running of its two Parisian venues Cité des Sciences et de l'Industrie and Palais de la Découverte. In 2010, this public body was given the mission to assist the creation of local networks for each region and set up a national council advising the government, associating science centres and museums, universities, research institutes, popular education NGOs, local governments, schools...

Paradoxically, high governmental interest for science engagement can also mean fiercer competition for science centres. One of the *raison d'être* of Svenska Science Centers was to prevent detrimental competition between an increasing number of science centres eligible to apply for a grant from the Swedish National Agency – a case successfully argued, resulting in a larger overall dotation. These days competition is coming from "outside": "Everyone is worried about plummeting results in international science education tests. New actors are entering the scene such as major companies willing to spend big amounts of

Some governments go one step further and directly manage public science engagement agencies whose mission encompasses network-like coordination activities.

cash – but also demanding ‘new stuff’. Some of them are ignoring existing structures and creating new projects and activities – in this context we have to be particularly vocal to keep science centres at the heart of informal science education,” regrets Lena Engelmark, CEO of Svenska Science Centers.

Network-like public agencies

Some governments go one step further and directly manage public science engagement agencies whose mission encompasses network-like coordination activities. The Fonds National de la Recherche in Luxembourg for instance is trying to bring together its rather young research and science communication scene. The Science Popularisation Unit of the Malta Council for Science and Technology (set up in 2010) and the Center for the Promotion of Science in Serbia (created in 2011) are both planning the opening of major national science centres (respective project budgets of €26M and €60M) but also mobilizing and structuring existing science engagement players. “We ambition for the new science centre to be the focal point for all actors and a resource and support centre for other initiatives,” states Karl Azzopardi from Malta. “We want to cater for the public interest we have been generating and to become the home of scientists and innovators,” echoes Aleksandra Drecun whose agency also redistributes small project grants in Serbia. Similarly the Portuguese Ciência Viva success story started with a small team working inside the Ministry of Science and Technology in 1996. Almost twenty years later Ciência Viva has become a foundation and funding redistribution agency whose yearly €10 million budget (50% of which directly comes from public sources) is divided between its flagship Lisbon-based science centre (the Pavilion of Knowledge) and hundreds of local initiatives ran by the twenty sister Ciência Viva centres spread throughout the country but also by countless other science engagement actors like schools, botanical gardens, museums, NGOs...

UK exception

The UK boasts what many consider one of the most vibrant European science centre scenes. Yet English science centres get no operational public funding at all, while their Welsh, Northern Irish and Scottish colleagues receive what many continental counterparts would consider a rather meagre allocation.

To my knowledge the UK is the only European country where science centres have built a strong national network in spite of low governmental financial support.

“I’m regularly asked to make contributions to national strategies and I work closely with Ministers and Government. The UK science centres attract 20 million visits each year and we are the only UK network bringing them together strategically yet we receive no regular public funding for ASDC. All our income is self-generated: we create exciting national science programmes and bid for funding to deliver them with the science centres which generates around 90% of our annual income, with 10% of income from membership fees. Budget balancing becomes an extreme sport and submitting multi-partner funding proposals takes up the time and energy we would love to dedicate to more strategic questions,” says Dr Penny Fidler, CEO of ASDC. Interestingly, Ecsite finds itself in a similar situation: without a national government to seek operational funding from, the organization relies on self-generated income and EU-funded projects.

Contrasting membership policies

Except for the three governmental agencies mentioned before, all networks are private non-profit organizations. All of them have a typical governance system with an elected Board, internal regulations etc. and most of them collect membership fees. In terms of membership composition, one finds networks open to science centres only at one end of the spectrum (the young Czech Association of Science Centres and its eight members, its Swedish counterpart or the NSCF) ; organizations also welcoming museums and companies in the middle (like MINTaktiv in

Will networks be able to welcome a new generation of professionals and attract talents from bottom-up hyper-connected movements like the Makers or Hackers?

Germany, the VSC in the Netherlands or ASDC in the UK); and associations open to all science engagement bodies and sometimes individuals at the other end of the spectrum the AMCSTI in France, the ANMS in Italy or SPiN in Poland).

One network has no member at all: the Science Centre Netzwerk in Austria. It is without doubt the most grass roots, malleable and intriguing of all movements I encountered on my European tour.

It emerged in 2005 at a time when there was no science centre in the country. Two social scientists specialized in complex systems instigated this structure, advising against an umbrella organization. “We believed that if you want to induce important changes in a complex system like the Austrian society, you have to change attitudes and ways of thinking. We thought that a hub would allow that,” explains Barbara Streicher, Executive Manager. “We now gather 140 partners. They don’t pay a membership fee. The only condition for joining is to be actively interested in “science centre type activities” – something that we have defined together. There is no hierarchy: a big institution does not weigh more than an individual speaking in their own name. At first we considered putting together a code of conduct for the network but we soon realized that we did not need it: while our partners are collectively very active we take very few decisions as an organization. We help spread ideas, facilitate discussions – and when we work on projects we then agree on ad hoc management structures with involved partners. Basically, our organization echoes the principles of informal learning: you don’t have to engage, you are free to interact and it’s up to you to get something out of it.”

In the category of innovative practices, I must mention the Dutch VSC, whose only full-time staff member Marjelle van Hoorn is ubiquitous on Twitter but almost never to be found in her office. “I travel around a lot, holding “inspiration sessions” and a book club and working when possible at members’ offices: that’s how I can generate and facilitate the exchange of information and best practice which I consider the most crucial part of my job,” Marjelle van Hoorn states.

Network-less countries

A word should be devoted to those 25 countries (out of which 9 EU member states) that don’t count a science centres network. They tend to belong to two categories. Firstly, countries whose small size makes a formal network organization less of a necessity, such as Finland: “The Finnish science engagement landscape is perfectly healthy, with six science centres, many festivals, universities pursuing public engagement activities and an active science journalists association. We have a national strategy and a dedicated agency at governmental level. There are few enough of us to allow for rather informal exchanges – and we meet at NSCF and Ecsite events!” explains Mikko Myllykoski from Heureka, the Finnish Science Centre. Secondly, countries with fledgling science engagement landscapes: “Romania had its first science festival in 2013. As we wrote in *Spokes* last year, a science engagement scene is slowly emerging in our country. Right now we’re busy supporting particularly active municipalities and universities. The context is not quite ripe yet but we are sure that we’ll see the emergence of a national network in the coming years,” hope Iris Opris and Miruna Amza, active players on the young Romanian scene.

Looking ahead

When asked about future perspectives, many network representatives promptly brush aside obvious funding challenges and speak of their hopes of collaborative endeavours at national and European level and visions of democratic dialogue and science for and with society. For many, the future of science centres networks – and of the science engagement sector at large – depends on its capacity to remain open to social changes. Will networks be able to welcome a new generation of professionals and attract talents from bottom-up hyper-connected movements like the Makers or Hackers?

This is what Natalia Sergievskaya from the re-emerging Association of Russian Science and Technology Museums wonders: “A new generation is emerging. Many young people in their

twenties are conducting their own initiatives, outside of traditional and state-run frameworks. Will we manage to bring them in?”

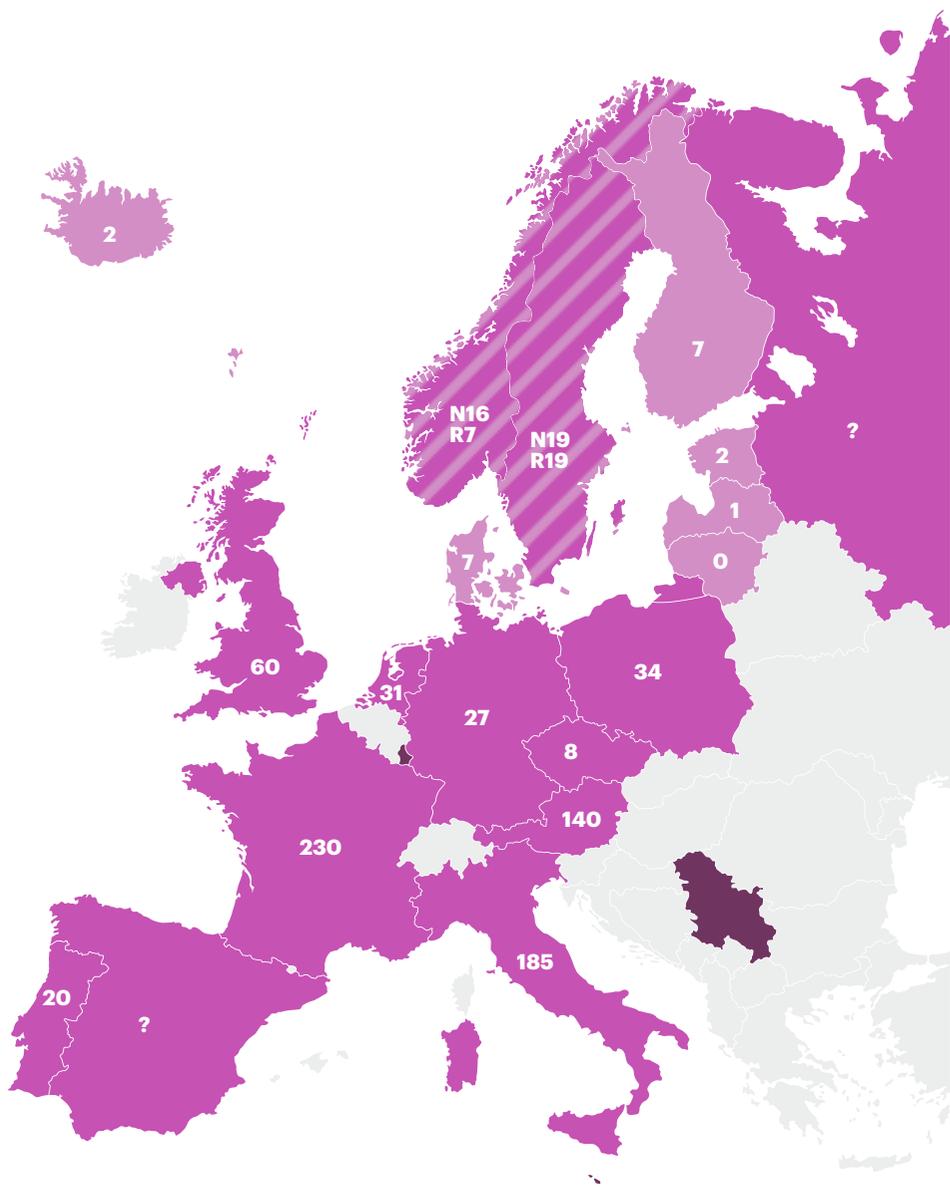
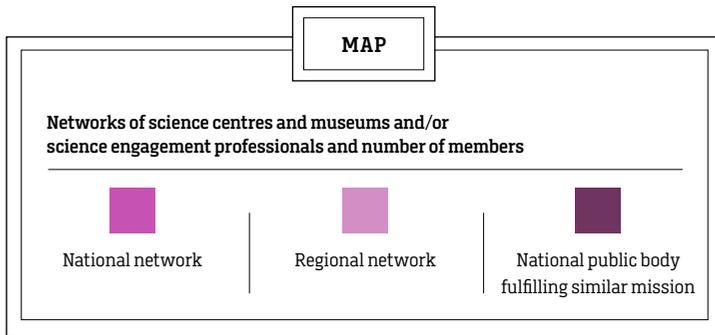
Stay tuned

All interviews conducted as part of my European tour will be published on the Ecsite website by the end of 2014 or beginning of 2015.

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Special thanks and special apologies to Brigitte Coutant from Universcience, whose idea to explore the science centre’s diplomatic role lead to this endeavour - having drifted rather far away from her original suggestion.

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Apologies for any
organization I might
have overseen - please
get in touch!
communications@ecsite.eu

Organization's name	Country	Year of creation	Number of members	Approx. yearly budget	Operational public funding	Staff (full time equivalent)	Contact
Ecsite	Geographical Europe	1991	380	€1.5M	0	9,5	www.ecsite.eu info@ecsite.eu
Science Centre Netzwerk	Austria	2005	140 partners	€700,000	70%	6.5	www.science-center-net.at Barbara Streicher streicher@science-center-net.at
Čzech Association of Science Centres	Czech Republic	2013	8	€23,000	0	1	www.hvezdarna.cz/sciencecenter Aleš Kuták ales.kutak@techmania.cz
Nordisk Science Center Forbund	Denmark, Estonia, Finland, Iceland, Latvia, Norway, Sweden (membership open to Lithuania too)	1987	34	€9,000	0	0	www.nordicscience.net Pilvi Kolk Pilvi.Kolk@ahhaa.ee
Association des Musées et Centres pour le Développement de la Culture Scientifique, Technique et Industrielle (AMCSTI)	France	1982	230	€200,000	60%	4	www.amcsti.fr/en Didier Michel didier.michel@amcsti.fr
MINTaktiv	Germany	2010	27	€10,000 €	Unknown	0	Achim Englert englert@phaenomena.com
Assoziacione Nazionale Musei Scientifici (ANMS)	Italy	1974	185	Unknown	Unknown	Unknown	www.anms.it Fausto Barbagli presidente@anms.it
Science and Society Unit at Fonds National de la Recherche	Luxembourg	Mid 2000s	No membership – governmental agency	Unknown	100% (governmental agency)	3.5	www.science.lu Jean-Paul Bertemes jean-paul.bertemes@fnr.lu
Malta Council for Science and Technology - Science Popularization Unit	Malta	2010	No membership – governmental agency	Unknown	100% (governmental agency)	15	www.mcst.gov.mt/science-popularisation-unit Karl Azzopardi karl.azzopardi@gov.mt
Norwegian science centre association	Norway	2008	16	€6,000	100%	0	Tove Marienborg tove.marienborg@nordnorsk.vitensenter.no
Dutch network of science museums and science centres (VSC)	The Netherlands	1999	31	190,000 €	100%	1	www.vsc-netwerk.nl Marjelle van Hoorn Marjelle@vsc-netwerk.nl
SPiN	Poland	2013	34	0	0	0	Dorota Wiślicka dorota.wislicka@kopernik.org.pl
Ciência Viva	Portugal	1998	20	€10 M (includes other activities)	50%	-	Carlos Catalao catalao.alves@gmail.com
Association of Russian Science and Technology Museums	Russian Federation	2014-15	Yet unknown	Yet unknown	Yet unknown	0	Natalia Sergievskaya nsergievskaya@gmail.com
Centre for the promotion of science	Serbia	2011	No membership – governmental agency	Unknown	100% (governmental agency)	Unknown	www.cpn.rs Aleksandra Drecun centar@cpn.rs
Red de Museos de Ciencia + new association in the making	Spain	Red de Museos de Ciencia: 1997 New association: 2014	New association: around 25 at first	Unknown	FECYT foundation supporting both	0	Ignasi López Verdeguer ilopez@fundaciolacaixa.es
Svenska Science Centers	Sweden	Around 2002	19	€65,000	35%	0.5	www.fssc.se Lena Engelmark lena@fssc.se
UK Association for Science and Discovery Centres (ASDC)	United Kingdom	Mid 2000s	Over 60	€ 250-350,000	0	2.6	www.sciencecentres.org.uk Penny Fidler +44 117 915 0186



AUSTRIA

Inhabitants in millions (2013)	8.4
% of GDP spent on R&D (last available figure)	2.84
Member of the European Union	•
Number of Ecsite members	14
Financial support	***

Name of network(s):

Science Centre Netzwerk
140 partners

ITALY

Inhabitants in millions (2013)	59.7
% of GDP spent on R&D (last available figure)	1.27
Member of the European Union	•
Number of Ecsite members	31
Financial support	-

Name of network(s):

Associazione Nazionale Musei Scientifici (ANMS)
185 members

SPAIN

Inhabitants in millions (2013)	46.7
% of GDP spent on R&D (last available figure)	1.30
Member of the European Union	•
Number of Ecsite members	20
Financial support	**

Name of network(s):

Red de Museos de Ciencia + new association in the making

IDENTITY CARDS

Financial support from public authorities to network's operational costs

- * Low (0-25%)
- ** Medium (25-50%)
- *** High (over 50%)

CZECH REPUBLIC

Inhabitants in millions (2013)	10.5
% of GDP spent on R&D (last available figure)	1.8
Member of the European Union	•
Number of Ecsite members	7
Financial support	*

Name of network(s):

Čzech Association of Science Centres
8 members



FRANCE

Inhabitants in millions (2013)	65.6
% of GDP spent on R&D (last available figure)	2.26
Member of the European Union	•
Number of Ecsite members	29
Financial support	***

Name of network(s):

Association des Musées et Centres pour le Développement de la Culture Scientifique, Technique et Industrielle (AMCSTI)
230 members



GERMANY

Inhabitants in millions (2013)	80.5
% of GDP spent on R&D (last available figure)	2.92
Member of the European Union	•
Number of Ecsite members	40
Financial support	*

Name of network(s):

MINTaktiv
27 members



THE NETHERLANDS

Inhabitants in millions (2013)	16.8
% of GDP spent on R&D (last available figure)	2.16
Member of the European Union	•
Number of Ecsite members	21
Financial support	***

Name of network(s):

Dutch network of science museums and science centres (VSC)
31 members



POLAND

Inhabitants in millions (2013)	38.5
% of GDP spent on R&D (last available figure)	0.90
Member of the European Union	•
Number of Ecsite members	7
Financial support	*

Name of network(s):

SPiN
34 members



PORTUGAL

Inhabitants in millions (2013)	10.5
% of GDP spent on R&D (last available figure)	1.50
Member of the European Union	•
Number of Ecsite members	17
Financial support	***

Name of network(s):

Ciência Viva
20 members



RUSSIAN FEDERATION

Inhabitants in millions (2013)	143.2
% of GDP spent on R&D (last available figure)	1.12
Member of the European Union	-
Number of Ecsite members	3
Financial support	-

Name of network(s):

Association of Russian Science and Technology Museums



UNITED KINGDOM

Inhabitants in millions (2013)	63.9
% of GDP spent on R&D (last available figure)	1.72
Member of the European Union	•
Number of Ecsite members	30
Financial support	*

Name of network(s):

UK Association for Science and Discovery Centres (ASDC)
60 members



NORWAY

Inhabitants in millions (2013)	5.0
% of GDP spent on R&D (last available figure)	1.66
Member of the European Union	-
Number of Ecsite members	11
Financial support	***

Name of network(s):

Nordisk Science Center Forbund + Norwegian science centre association
Respectively 16 and 7 members

**SWEDEN**

Inhabitants in millions (2013)	9.5
% of GDP spent on R&D (last available figure)	3.41
Member of the European Union	•
Number of Ecsite members	24
Financial support	**

Name of network(s):

Nordisk Science Center Forbund + Svenska Science Centers
Respectively 19 and 19 members

**DENMARK**

Inhabitants in millions (2013)	5.6
% of GDP spent on R&D (last available figure)	2.99
Member of the European Union	•
Number of Ecsite members	8
Financial support	*

Name of network(s):

Nordisk Science Center Forbund
7 members

**ESTONIA**

Inhabitants in millions (2013)	1.3
% of GDP spent on R&D (last available figure)	1.18
Member of the European Union	•
Number of Ecsite members	2
Financial support	*

Name of network(s):

Nordisk Science Center Forbund
2 members

**FINLAND**

Inhabitants in millions (2013)	5.4
% of GDP spent on R&D (last available figure)	3.55
Member of the European Union	•
Number of Ecsite members	6
Financial support	*

Name of network(s):

Nordisk Science Center Forbund
7 members

**ICELAND**

Inhabitants in millions (2013)	0.3
% of GDP spent on R&D (last available figure)	2.40
Member of the European Union	-
Number of Ecsite members	1
Financial support	-

Name of network(s):

Nordisk Science Center Forbund
2 members

**LATVIA**

Inhabitants in millions (2013)	2.0
% of GDP spent on R&D (last available figure)	0.66
Member of the European Union	•
Number of Ecsite members	3
Financial support	-

Name of network(s):

Nordisk Science Center Forbund
1 members

**LITHUANIA**

Inhabitants in millions (2013)	3.0
% of GDP spent on R&D (last available figure)	0.90
Member of the European Union	•
Number of Ecsite members	-
Financial support	-

Name of network(s):

Nordisk Science Center Forbund
No member yet

**LUXEMBOURG**

Inhabitants in millions (2013)	0.537
% of GDP spent on R&D (last available figure)	1.51
Member of the European Union	•
Number of Ecsite members	1
Financial support	***

Name of network(s):

Science and Society Unit at Fonds National de la Recherche



MALTA

Inhabitants in millions (2013)	0.4
% of GDP spent on R&D (last available figure)	0.84
Member of the European Union	•
Number of Ecsite members	1
Financial support	***

Name of network(s):

Malta Council for Science and Technology -
Science Popularization Unit

SERBIA

Inhabitants in millions (2013)	7.2
% of GDP spent on R&D (last available figure)	0.96
Member of the European Union	-
Number of Ecsite members	2
Financial support	***

Name of network(s):

Centre for the promotion of science



Exchange of ideas an best practice lies at the heart of most networks' activities. Here: book club session organised by the Dutch network of science museums and science centres (VSC).

