RAISE Center of Excellence

Establishment of a European RAISE network

Gulllaume Houzeaux with contributions
from all the partners

Establishment of a European RAISE network

Task 6.2 Establishment of a European RAISE network <Leader: BSC> <M1-M36>
Contributors: FZJ, UOI, CYI, BSC, CERN, CERFACS, RTU, FM Outputs: D6.5, D6.6, D6.7

The task contributors represent the responsible institutions per participating country. In this task, they establish a European RAISE network by implementing country-dependent access and contact nodes. They connect the activities of RAISE to those of their network, national, European and international. That is, FZJ establishes connections, e.g., to GCS, HAICU, and IRT in Germany as well as to PRACE together with BSC at European level. UOI connects as a hub to the Nordic countries with NeiC and COST Action CA18203, and together with RTU to EOSC-NORDIC. CYI acts as hub for the EM, has strong links with SESAME, with the Balkans through NI4OS-Europe, as well as links with the oil and gas industry (the Delphi consortium, see Sec. 4.2.2). It extends its reach to other industries through the SimEA ERA Chair project. RTU acts as a hub for the Baltic Region through SESAME Net. RWTH employs its channels to Gauss Alliance and HPC.NRW. CERN connects to INFN, Siemens, and E4 Computer Engineering. CERFACS establishes connections with academics (ISAE-Supaero, IRT, ONERA) and industrial partners (Airbus, CNES) among other within the interdisciplinary institute ANITI and the Helios multi-laboratory workgroup. FM exploits its industrial partner network. Partners involved in other CoEs or European projects establish corresponding connections, i.e., to EXCELLERAT, POP, EoCoE-II, EPI, DEEP, EMME- CARE, etc. (see. Sec. 1.3.3, Tab. 4). Furthermore, connections to ETP4HPC are established.

D6.5, D6.6, D6.7 (BSC) Periodically updated documents: (i) listing RAISE's connected networks, their user groups, contact persons and entry points; (ii) evaluating the potential to include new communities; (iii) describing information and (service) request transfer in RAISE's network

Establishment of a European RAISE network

The network is *not* an objective perse. It's a mean to attain the following activities:

- Sharing of repositories
- Establishment of common databases
- Organization of courses, trainings, workshops, hackathons, etc.
- To increase number of participants at events organized by RAISE
- Definition of use cases or standards
- Recruitment of new stakeholders
- Integration of RAISE services on existing platforms
- Delivery of RAISE derived software to a specific community
- To push the adoption of RAISE tools
- To enhance the development of scalable AI using parallel computing resources
- To propose services for commercial users
- To exploit synergies in the provision of services, education, and knowledge and technology transfer in general
- To create awareness in a broader audience
- To participate in official committees
- To provide common scientific/technological solutions
- To carry out scientific collaborations

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Networking is thus any meeting before activities start

Activities then go to: dissemination, networking, etc.

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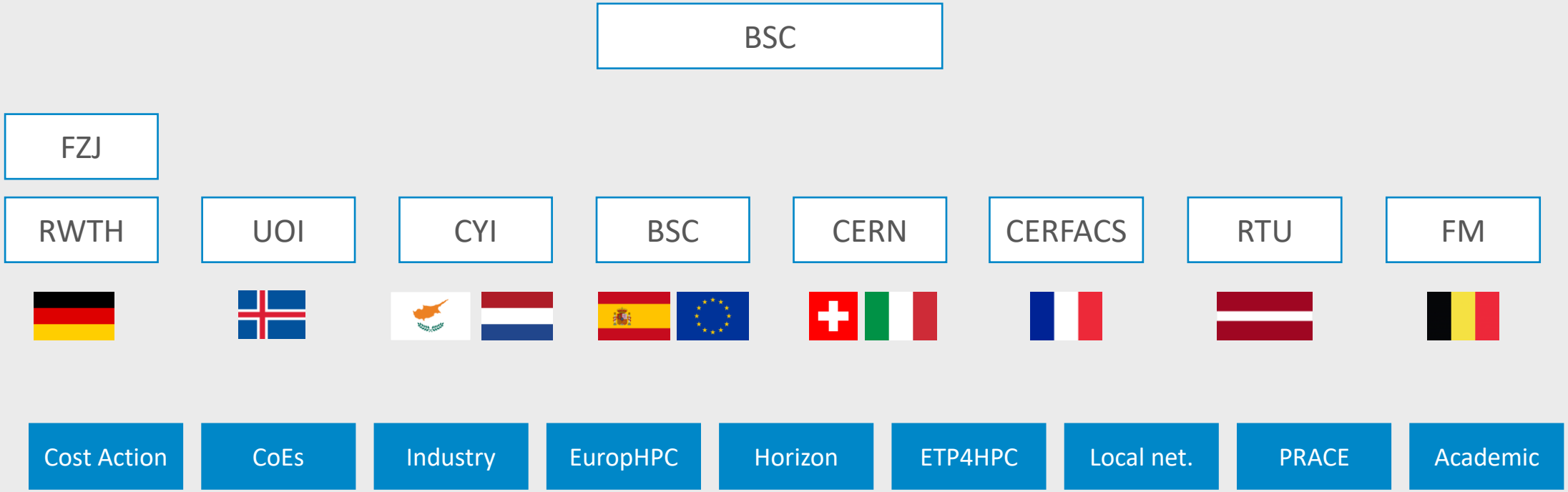

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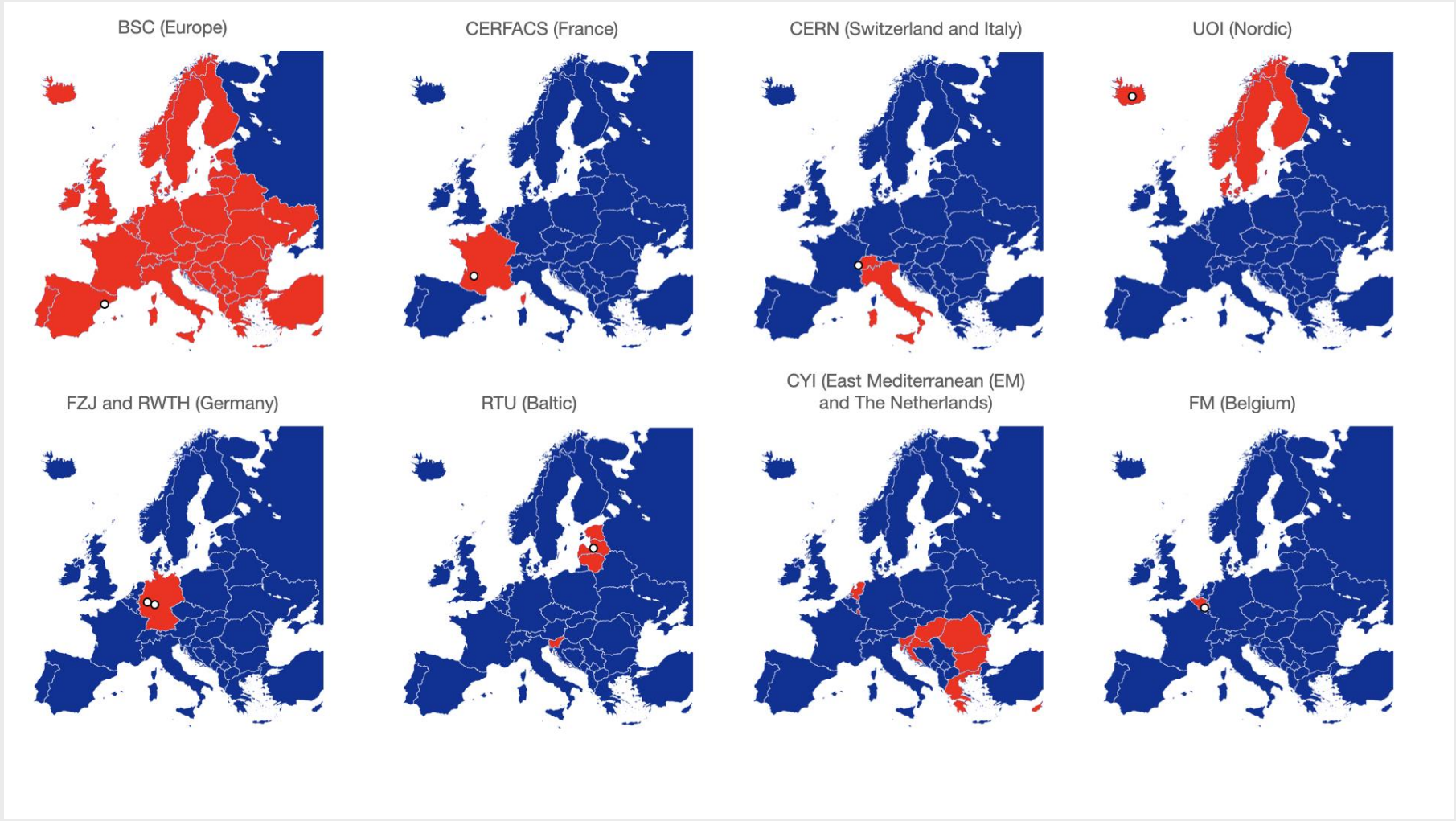

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INSTITUTION	CATEGORY	RAISE REGION	FZJ + RWTH	BSC	UOI	CYI	RTU	RWTH	CERN	CERFACS	FM
GCS	Supercomputing Centers	GERMANY	■								
HAICU	Research hub	GERMANY	■								
IRT	Academic Institute	GERMANY	■								
PRACE	Association	EU	■	■							
Nordic e-Infrastructure Collaboration (NeiC)	Network	NORDIC			■						
COST Action CA18203	Cost action	NORDIC			■						
EOSC-NORDIC	Project	NORDIC			■		■				
SESAME NET	Company	EM/BALTIC				■	■				
NI4OS-Europe	Partnership	BALTIC REGION				■					
Delphi Consortium	Consortium	The NETHERLANDS				■					
SimEA ERA Chair project	Project	EM				■					
Gauss Alliance	Association	GERMANY						■			
HPC NRW	Competence network	GERMANY						■			
INFN	Institute	ITALY							■		
SIEMENS	Company	GERMANY							■		
E4 Computer Engineering	Company	ITALY							■		
ISAE-Supaero	Education	FRANCE								■	
IRT	Education	FRANCE								■	
ONERA	National laboratory	FRANCE								■	
AIRBUS	Company	FRANCE								■	
CNES	National laboratory	FRANCE								■	
SAFRAN	Aerospace company	FRANCE								■	
Artificial and Natural Intelligence Toulouse Institute (ANITI)	Laboratory AI	FRANCE								■	
Helios Multi-laboratory workgroup	Academic multi-lab	FRANCE								■	
FM Industrial Network	Research Center	BELGIUM/EU									■
EXCELLERAT	CoE	EU	■								
POP	CoE	EU		■							
EoCoE-II	CoE	EU	■								
CoEC	CoE	EU		■							
CHEESE	CoE	EU		■							
EPI	Project	EU		■							
DEEP	Project	EU		■							
EMME-CARE	Research Center	EU		■		■					
ETP4HPC	Private association	EU		■							

Table 1: Stakeholder identification and responsible

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What we initially asked you to do?

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To fill in a template to register your interactions

Name of Institution:	**CHEESE**
RAISE REGION:	EU
Register of the interaction	Include reference to all the minutes of the meeting (i.e. RAISE_MoM_Stakeholder_YYMMDD)
Type of organization	Center of Excellence
Contact persons	Dr Arnau Folch, Dr. Piero Lanucara
Web page	https://cheese-coe.eu/
Entry points (through LinkedIn, personal, joint R&D projects, RAISE partner is member of the organization, …)	BSC is CHEESE leading partner
Stakeholder community (hydrodynamics, manufacturing, physics, turbomachinery, and aerospace. In case of another please specify)	Solid earth
Information and (service) request transfer in RAISE network (which interest does the stakeholder have that allows RAISE to establish a synergy?)	ML techniques applied to new cutting edge numerical simulations, including mesh generation, etc.
Main outcomes of the discussion and next planned actions	

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And asked you the following additional info in the deliverables:

1.1 France

1.1.1 **Status of the region**

1.1.2 **Stakeholder interactions**

1.1.2.1 Contacted stakeholders (M6)

1.1.2.2 Contacted stakeholders (M18)

1.1.3 **Review and opportunities**

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We understood the interaction Table was a bit…

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So now what do we ask for?

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To fill in a simple Excel sheet to register your interactions

Region	Activity	Institution/company	Community	Interaction description	Date	Minutes
Germany	Generic	Gauss Centre for Supercomputing (GCS)	HPC	Association consisting of the three largest HPC centers in Germany that provide resources on Tier-0 and Tier-1	M6	
Germany	Generic	Helmholtz AI (previously named HAICU)	AI	Research-driven hub for applied AI as part of the Helmholtz Association in Germany. An informal meeting with I	M6	
Germany	To create awareness in a broa	Industry Relations Team (IRT)	HPC	The IRT is part of JSC and is responsible for bridging HPC, AI, and HPDA expertise from JSC to industrial cust	M6	
Germany	To propose services for comme	Gauss Centre for Supercomputing (GCS)	HPC	Discussion with Claus-Axel Müller (Drirector of GCS) on business development and a possible participation to t	M20	
Germany	To create awareness in a broa	NHR - National High Performance Computi	HPC	Association consisting of the eight large HPC centers located at universities in Germany that provide resources	M6	
Germany	To create awareness in a broa	GA - Gauss Alliance:	HPC	Association consisting of 18 HPC centers in Germany that provide resources on Tier-2 and/or Tier-3 level. As a	M6	
Germany	To create awareness in a broa	HPC.NRW	HPC	Association consisting of the eight large HPC centers located at universities in Germany that provide resources	M6	
Germany	To provide common scientific/t	NCC Germany	HPC, AI, Industry	The National Competence Center (NCC) Germany. Informal exchange between RAISE and FZJ's participants t	M18	
Germany	To carry out scientific collabora	Helmholtz AI (previously named HAICU)	AI	Stefan Kesselheim contributed in-kind to the internal review of Deliverable D2.14 "Report on porting & performa	M18	
EU	Organization of courses, trainir	BSC	HPC,AI	Discussion at SC 2022 with Rosa Badia about joint workshops / trainings together for eFlow4HPC	M23	
Germany	To propose services for comme	scapos AG	HPC,AI,Engineering,Industry	Exchange with Guy Londsdale, director of scapos AG (commercial part of Germany's Fraunhofer Association)	M23	
EU	To enhance the development o	EUPEX	HPC	Exchange with Filippo Mantovani (BSC) at SC 2022 on access to the EUPEX prototype	M23	
EU	Delivery of RAISE derived soft	EXCELLERAT	HPC, Engineering	Center of Excellence addressed to general engineering community in academia and industry. First informal mee	M6	
EU	To participate in official commit	FocusCoE / HPC3	HPC, CoE applications	Since 11/2020, the CoE RAISE coordinator participates to the HPC3 meetings. The minutes are available on th	M6	

Just ask me to access!

https://docs.google.com/spreadsheets/d/12RvaPWCQT6uGXEQKcPTbh7j_N7o6lr-YRMY-Ty8mOu4/edit?usp=sharing

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This info will be used for last deliverable

So if you want to optimize work, fill it continuously

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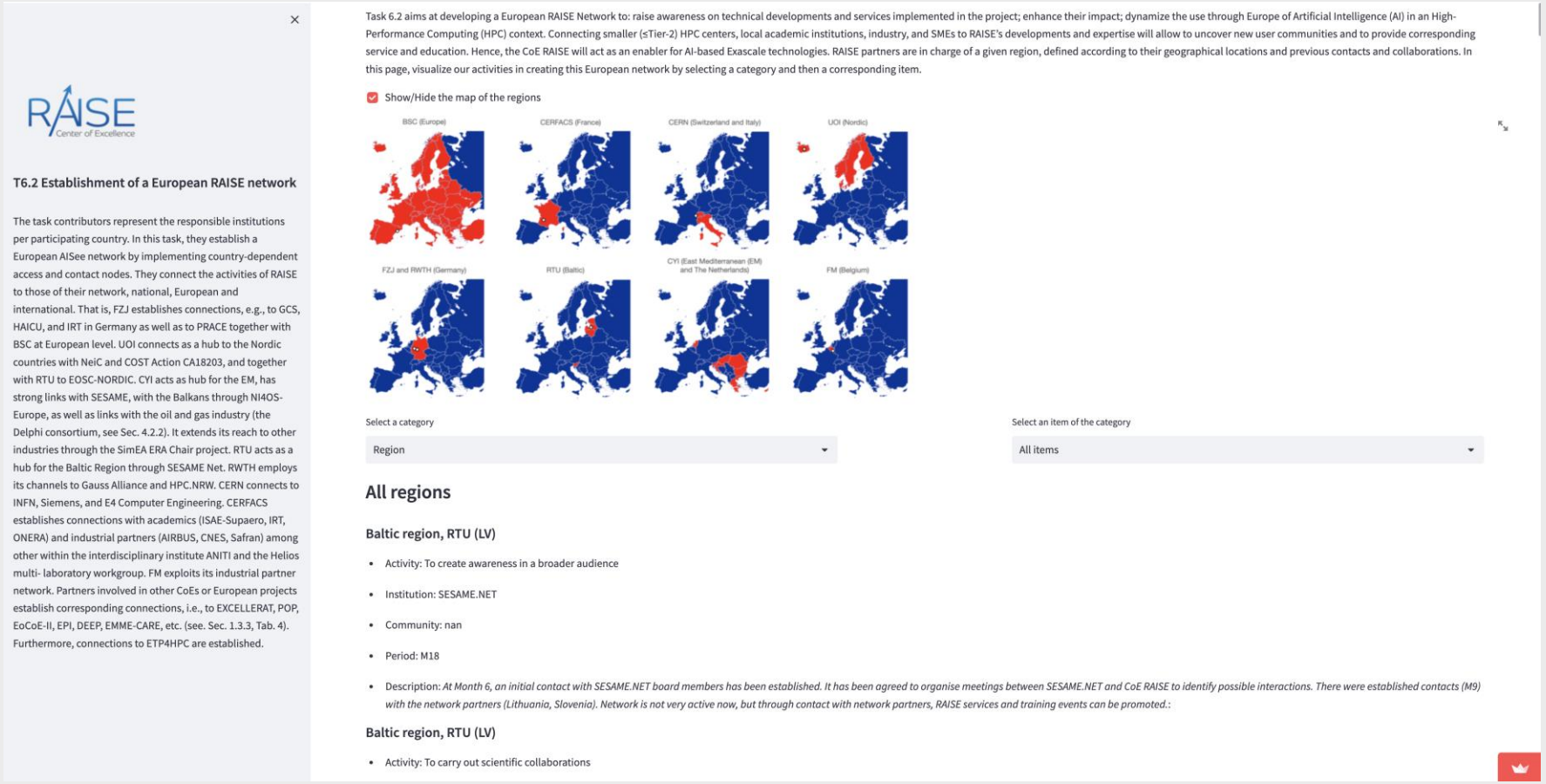
The results are organized and visualized on a webpage



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T6.2 Establishment of a European RAISE network

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Task 6.2 aims at developing a European RAISE Network to: raise awareness on technical developments and services implemented in the project; enhance their impact; dynamize the use through Europe of Artificial Intelligence (AI) in an High-Performance Computing (HPC) context. Connecting smaller (≤Tier-2) HPC centers, local academic institutions, industry, and SMEs to RAISE's developments and expertise will allow to uncover new user communities and to provide corresponding service and education. Hence, the CoE RAISE will act as an enabler for AI-based Exascale technologies. RAISE partners are in charge of a given region, defined according to their geographical locations and previous contacts and collaborations. In this page, visualize our activities in creating this European network by selecting a category and then a corresponding item.

Show/Hide the map of the regions

BSC (Europe) CERFACS (France) CERN (Switzerland and Italy) UOI (Nordic)

FZJ and RWTH (Germany) RTU (Baltic) CYI (East Mediterranean (EM) and The Netherlands) FM (Belgium)

Select a category: Region

Select an item of the category: All items

All regions

Baltic region, RTU (LV)

- Activity: To create awareness in a broader audience
- Institution: SESAME.NET
- Community: nan
- Period: M18
- Description: *At Month 6, an initial contact with SESAME.NET board members has been established. It has been agreed to organise meetings between SESAME.NET and CoE RAISE to identify possible interactions. There were established contacts (M9) with the network partners (Lithuania, Slovenia). Network is not very active now, but through contact with network partners, RAISE services and training events can be promoted.:*

Baltic region, RTU (LV)

- Activity: To carry out scientific collaborations

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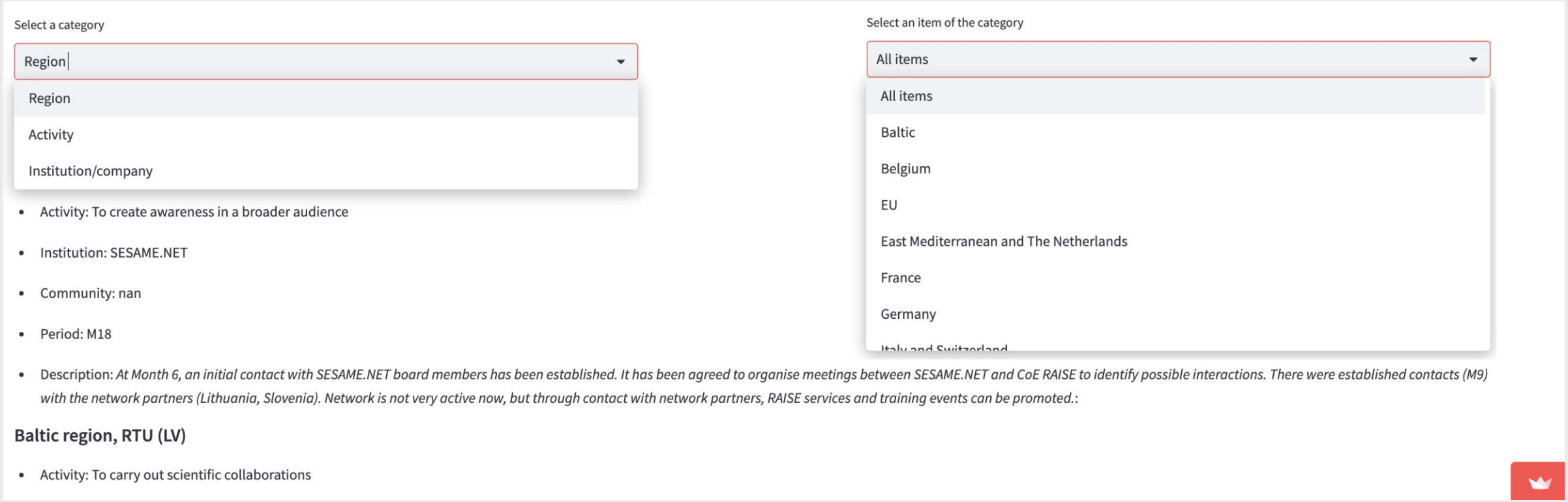
You can select a category (or all) and a particular region (or all)



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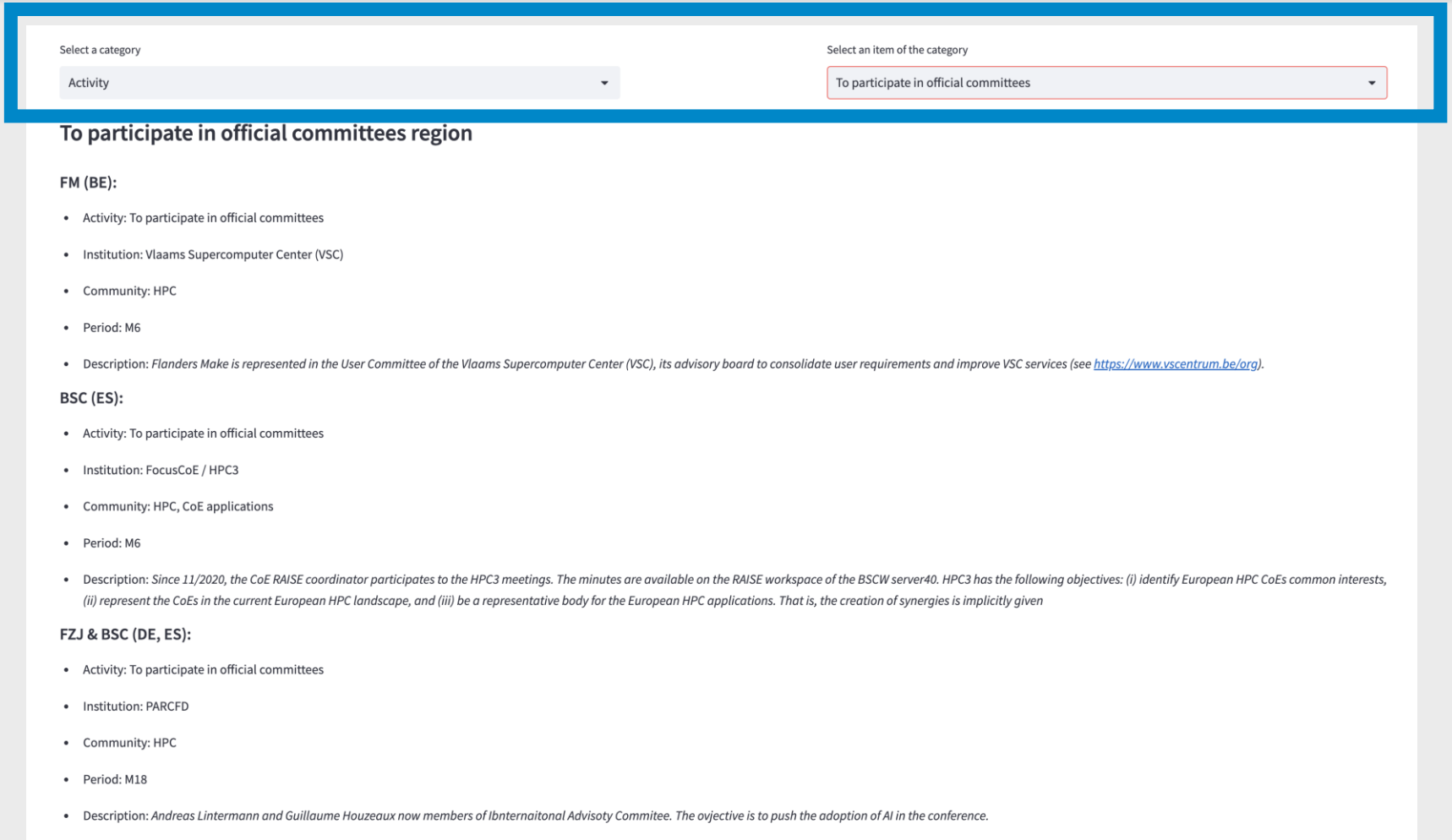
Example



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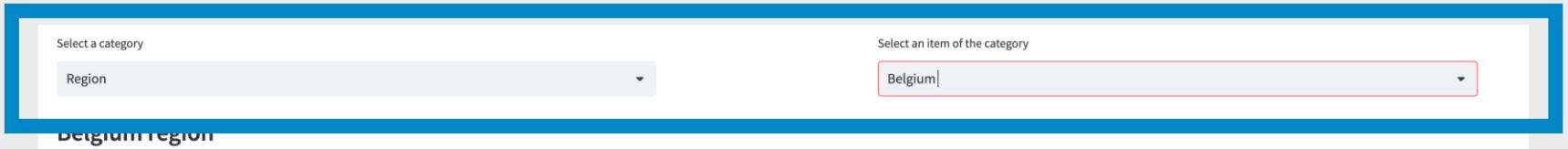
Example



FM (BE):

- Activity: To participate in official committees
- Institution: Vlaams Supercomputer Center (VSC)
- Community: HPC
- Period: M6
- Description: *Flanders Make is represented in the User Committee of the Vlaams Supercomputer Center (VSC), its advisory board to consolidate user requirements and improve VSC services (see https://www.vscentrum.be/org).*

FM (BE):

- Activity: To create awareness in a broader audience
- Institution: Industrial manufacturing companies
- Community: nan
- Period: M18
- Description: *During Q1 2022, a newsletter was sent around to the FM Industrial Network, consisting of industrial manufacturing companies with more than 150 members. The content of the news article was mainly focussed on the contribution of FM to the RAISE project regarding defect- free metal additive manufacturing. Tangible outputs related to other use-cases relevant to the manufacturing industry are still limited in this phase of the project. As a result of this newsletter, one member of the network requested to be kept informed about further results obtained. Melotte is located in Belgium and focuses on 3D metal printing and high precision manufacturing. Melotte will be contacted during a later phase in the project when tangible results from task 4.3 are available. Other companies in the 3D manufacturing business and member of the FM industrial network, e.g., Materialise, Layerwise, and ESMA, have not responded to the newsletter.*

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The numbers up to now

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Partner	# interactions
BSC	18
BULL	1
CERFACS	4
CERN	2
CYI	2
FM	2
FZJ	36
FZJ & BSC	5
RTU	3
RWTH	3
UOI	9
	85

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Activity	# interactions
Definition of use cases	1
Delivery of RAISE derived software to a specific community	2
Generic	2
Organization of courses, trainings, workshops, hackathons, etc.	14
Recruitment of new stakeholders	5
To carry out scientific collaborations	11
To create awareness in a broader audience	22
To enhance the development of scalable AI using parallel computing resources	4
To exploit synergies in the provision of services, education…	3
To participate in official committees	4
To propose services for commercial users	3
To provide common scientific/technological solutions	6
To push the adoption of RAISE tools	8

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Activity	Baltic	B	Med+NL	EU	F	D	IT+CH	non-EU	Nordic	Total
Definition of use cases				1						1
Delivery of RAISE derived software to a specific community				2						2
Generic						2				2
Organization of courses, trainings, workshops, hackathons, etc.	1			7		3		1	2	14
Recruitment of new stakeholders				2		3				5
To carry out scientific collaborations	1		1	2	1	3	3			11
To create awareness in a broader audience	2	1		8	2	7		1	1	22
To enhance the development of scalable AI using parallel computing				1					3	4
To exploit synergies in the provision of services, education…									3	3
To participate in official committees		1		3						4
To propose services for commercial users			1			2				3
To provide common scientific/technological solutions				4	1	1				6
To push the adoption of RAISE tools				3		3		1	1	8
Total	**4**	**2**	**2**	**33**	**4**	**24**	**3**	**3**	**10**	**85**

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https://houzeaux-raise-network-guillaume-lkxz1r.streamlit.app/

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Please make sure the information is correct as it will be used in last deliverable

https://docs.google.com/spreadsheets/d/12RvaPWCQT6uGXEQKcPTbh7j_N7o6lr-YRMY-Ty8mOu4/edit?usp=sharing

Establishment of a European RAISE network

Status of deliverables:

D6.5, **D6.6**, **D6.7** (BSC) Periodically updated documents:

- listing RAISE's connected networks, their user groups, contact persons and entry points;
- evaluating the potential to include new communities;
- describing information and (service) request transfer in RAISE's network

Deliverable	Due date	Status
D6.5	M6	Submitted
D6.6	M18	Submitted
D6.7	M36	**Ongoing**

drive. enable. innovate.

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Research and Innovation Framework Programme
H2020-INFRAEDI-2019-1 under grant agreement no. 951733

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