News from FLAG-ERA

10th FET Flagship Board of Funders (BoF) meeting
March 22nd, 2019

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Outline of the presentation

- Reminder on FLAG-ERA

- Examples of JTC 2015 & 2017 project results

- JTC 2019 submission statistics

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FLAG-ERA context and main objectives

FET Flagship programme

EC FET Flagship Unit

FLAG-ERA members

Take graphene from the realm of academic laboratories into European society

Graphene Flagship

Human Brain Project

Build a research infrastructure to help advance neuroscience, medicine and computing

- FLAG-ERA main objectives: Support the Flagship initiatives through
  - Dedicated Joint Transnational Calls (JTC 2015, JTC 2017, JTC 2019)
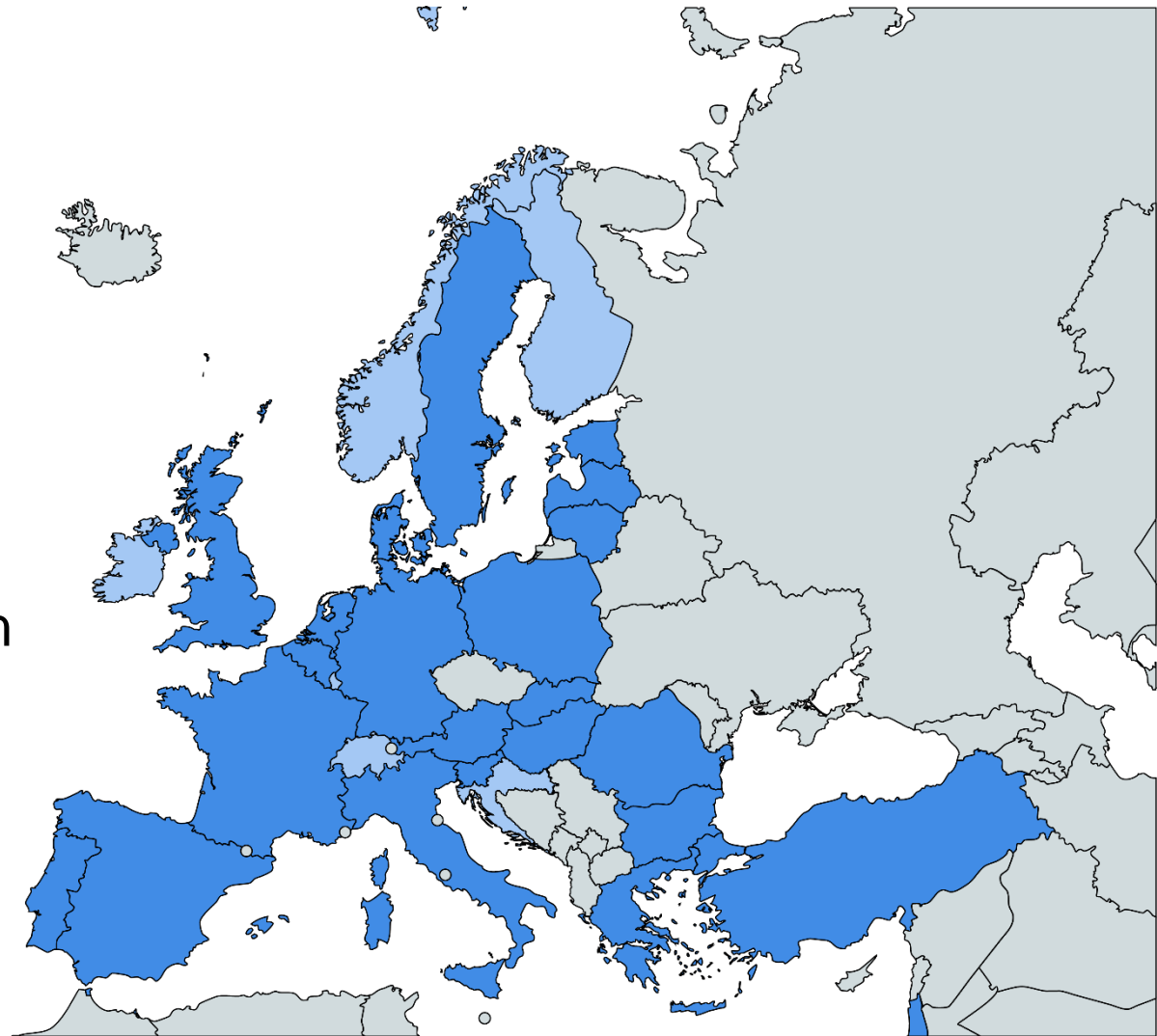 - Support to partnering projects and to their integration into the Flagship

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FLAG-ERA Consortium

Full members
Associated members

40 funding organisations from 28 countries

- Full members in 22 countries
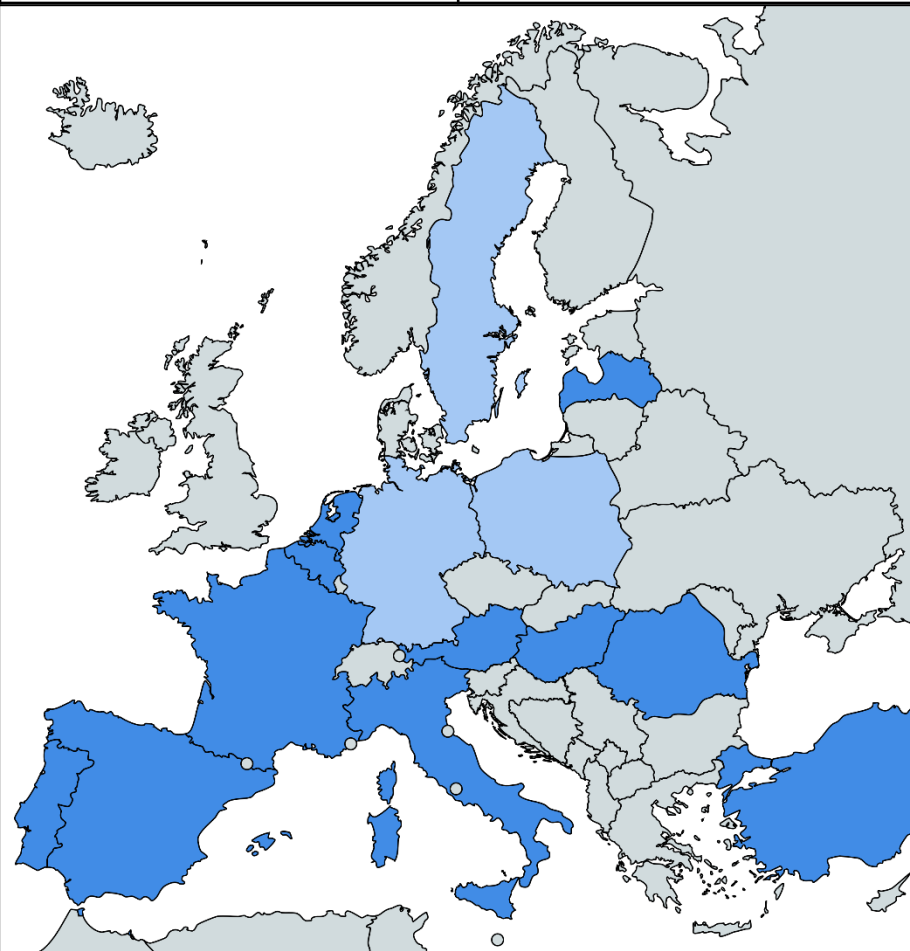- Associated members in 6 additional countries

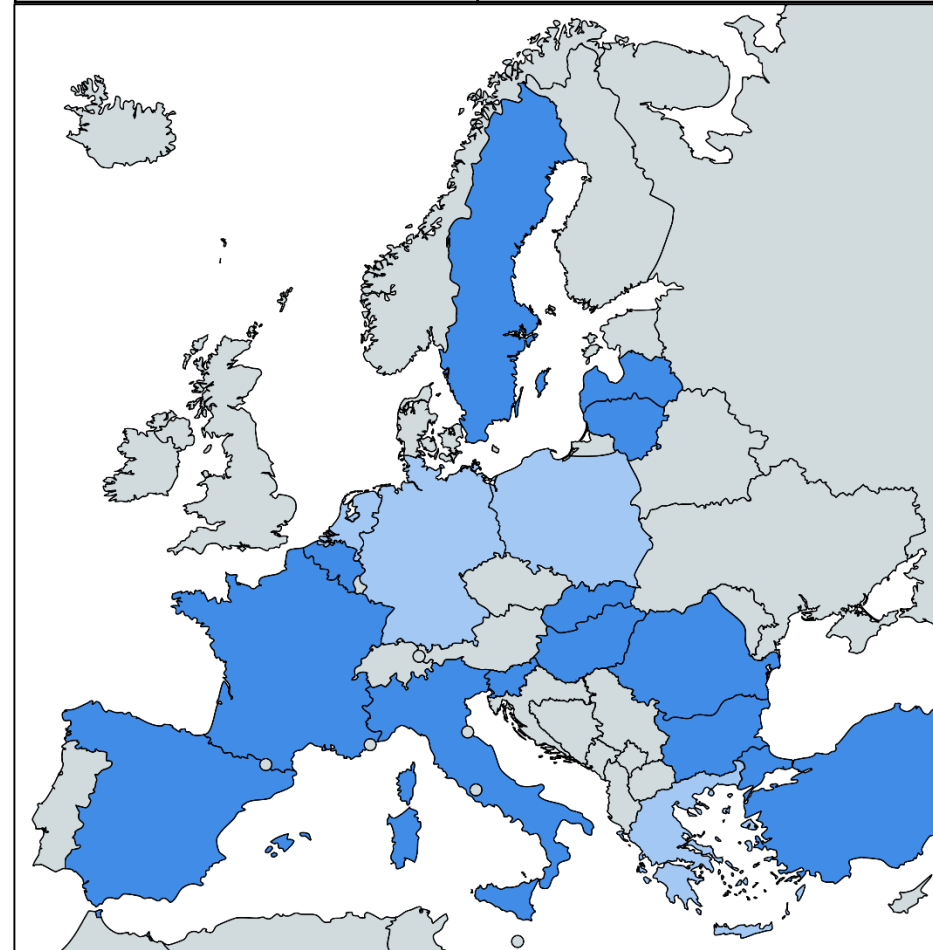Each funding organisation participates in the calls it is interested in

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JTC 2015 & 2017 country participation

2015	Graphene: 14
	HBP: 11

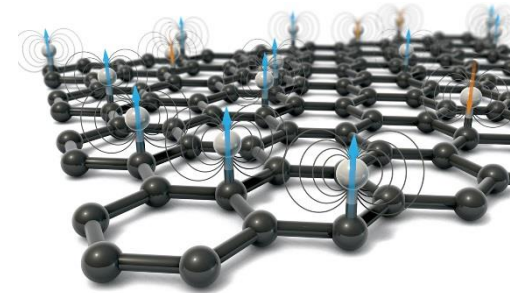| 2017	Graphene: 17
	HBP: 13

Examples of project results

HiMagGraphene: Magnetism in graphene can be controlled with hydrogen atoms

CO2-DETECT: Resistance of graphene-metal contacts in electronic circuits is not affected by moisture
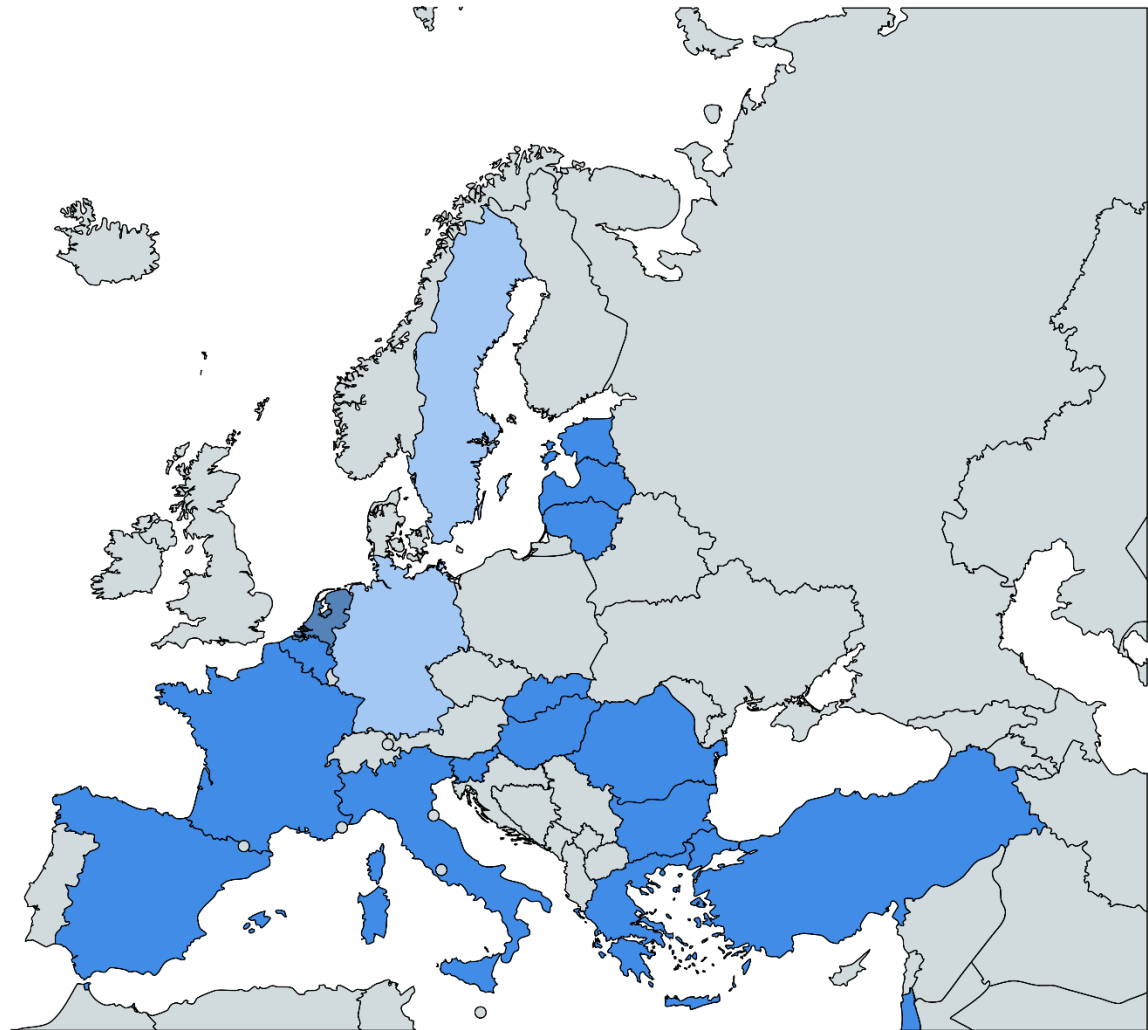

FUSIMICE: New ultrasound technique shows the brain of rodents in action

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JTC 2019 country participation

Graphene 17	HBP 16
BE	BE
BG	BG
DE	
EE	EE
ES	ES
FR	FR
GR	GR
HU	HU
IL	IL
IT	IT
LT	LT
LV	LV
	NL
RO	RO
SE	
SI	SI
SK	SK
TR	TR

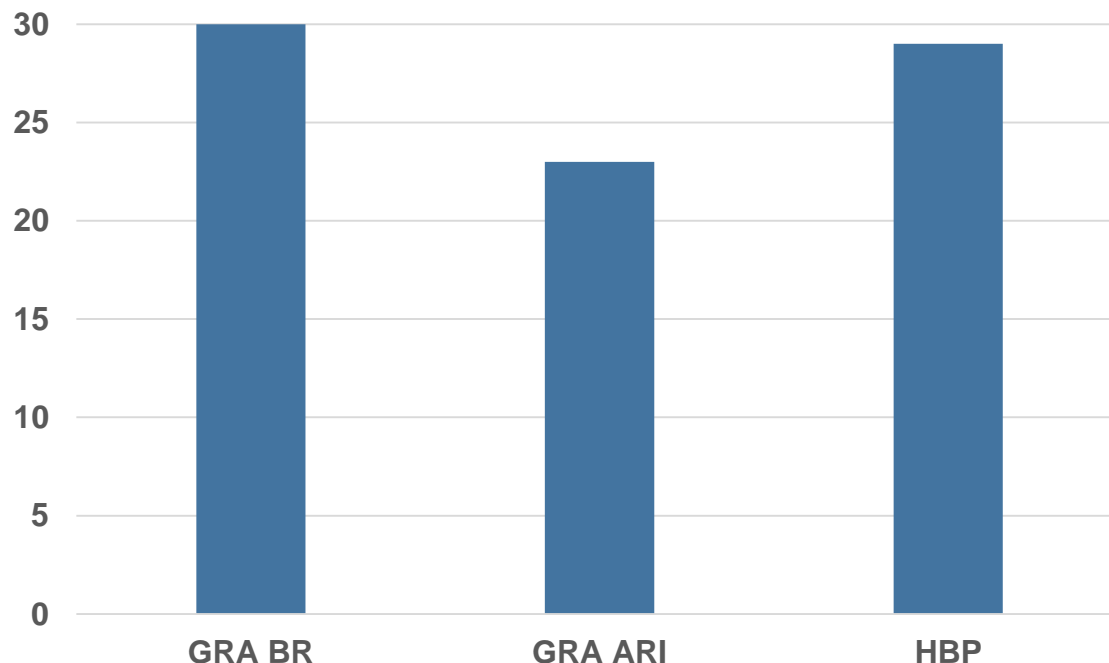Created with mapchart.net ©

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FLAG-ERA JTC 2019 Overview

- **Joint call for transnational research proposals in synergy with the two FET Flagships**
  - **Graphene Flagship**
  - **Human Brain Project**
- Funding both Flagship Core Project partners and new partners (expected to become Associated Members of the Flagship)
- 22 funding organisations from 18 countries
- Indicative budget: 20 M€
- Two-step evaluation process
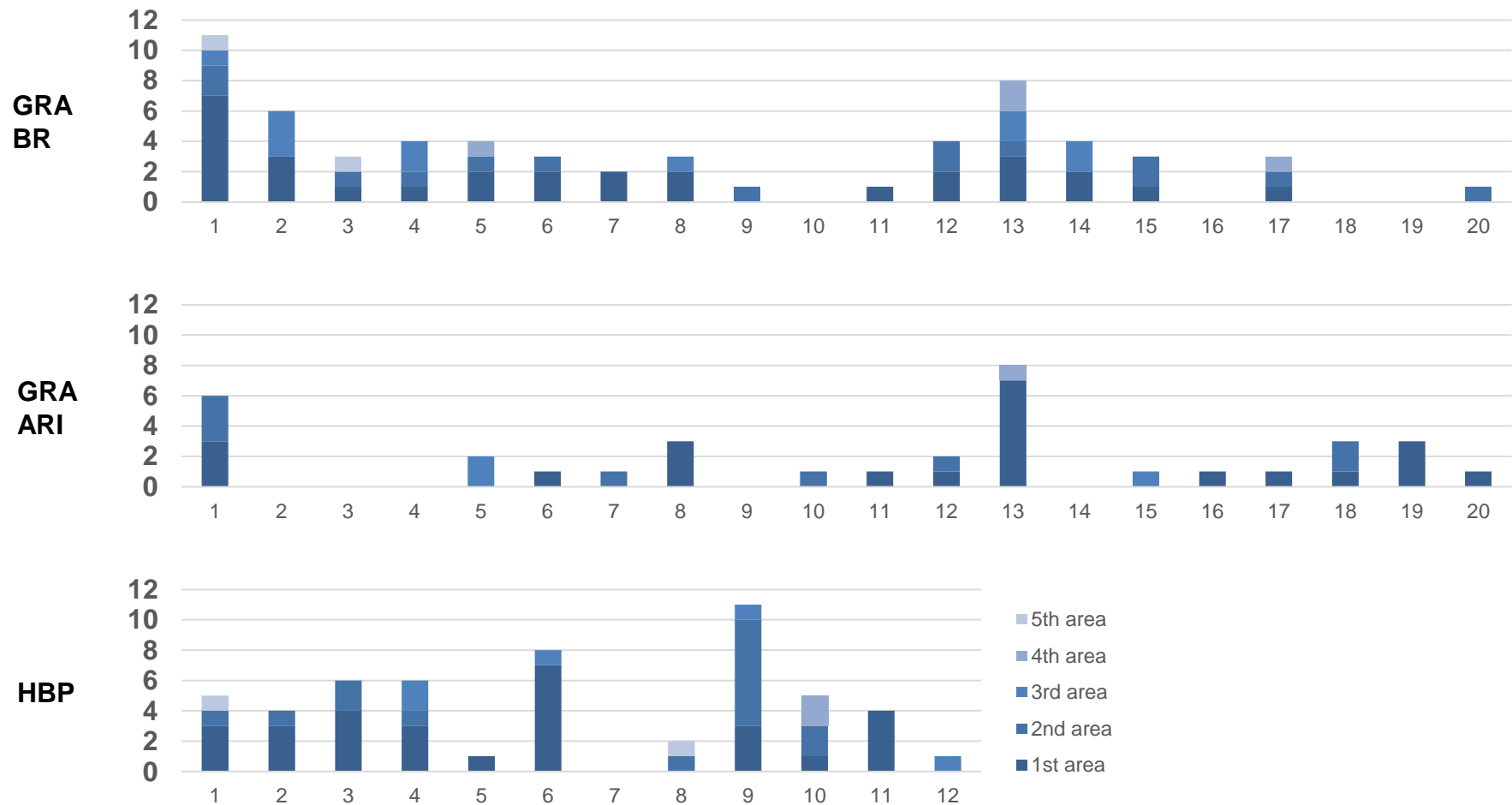- **Pre-proposal deadline: February 19th, 2019, 17:00 CET**

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Number of pre-proposals submitted

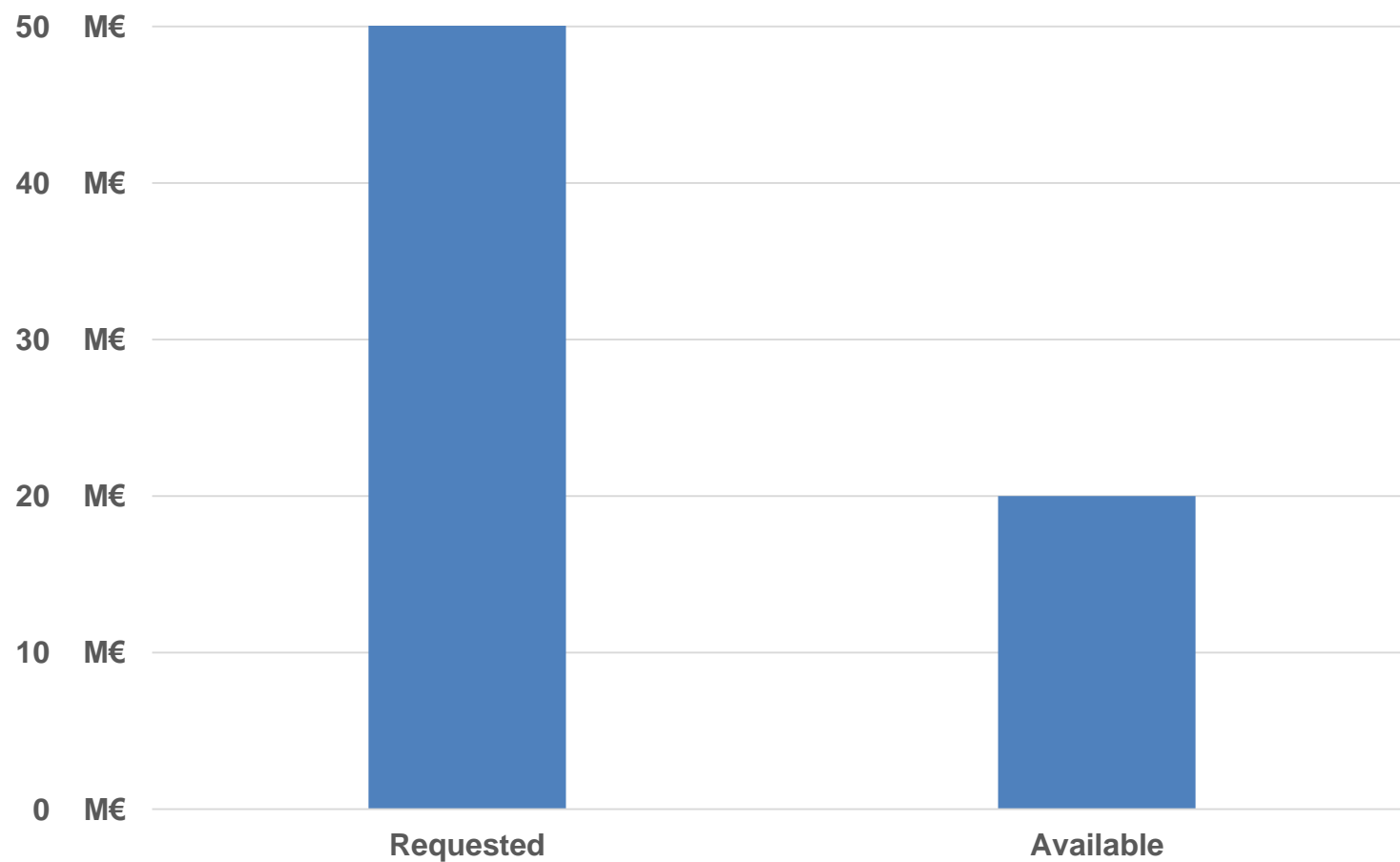|	
GRA – Basic research (BR)	30
GRA – Applied research and Innovation (ARI)	23
HBP – Basic and applied research	29
Total	82

Distribution across research areas

Research Areas - Graphene

1. Synthesis and characterization of layered materials beyond graphene
2. Graphene and related materials (GRMs) for Quantum Technologies
3. Optimized GRM-based tunnel barriers for efficient spin injection and detection into graphene under operational conditions
4. Spin torque and layered-materials-based memory building block
5. Synthesis of monolayers of non-layered compounds
6. Bacterial degradation of GRMs
7. Osteoinductivity and immunisation capacity of GRMs
8. Soft graphene-based materials for tissue engineering
9. GRM-based large-area light emitters and arrays
10. Low temperature growth of layered semiconductors for flexible applications
11. Nanofluidics based on GRMs
12. CVD growth of graphene on insulators
13. Sensors from GRMs and their heterostructures
14. Passive components for radio frequency electronics based on GRMs
15. Infrared photodetectors based on GRMs and their heterostructures
16. LIDAR based on GRMs for autonomous vehicles
17. Moore's law continued through GRMs
18. GRM-based tandem solar modules
19. Graphene-based cathode materials for Li-ion batteries
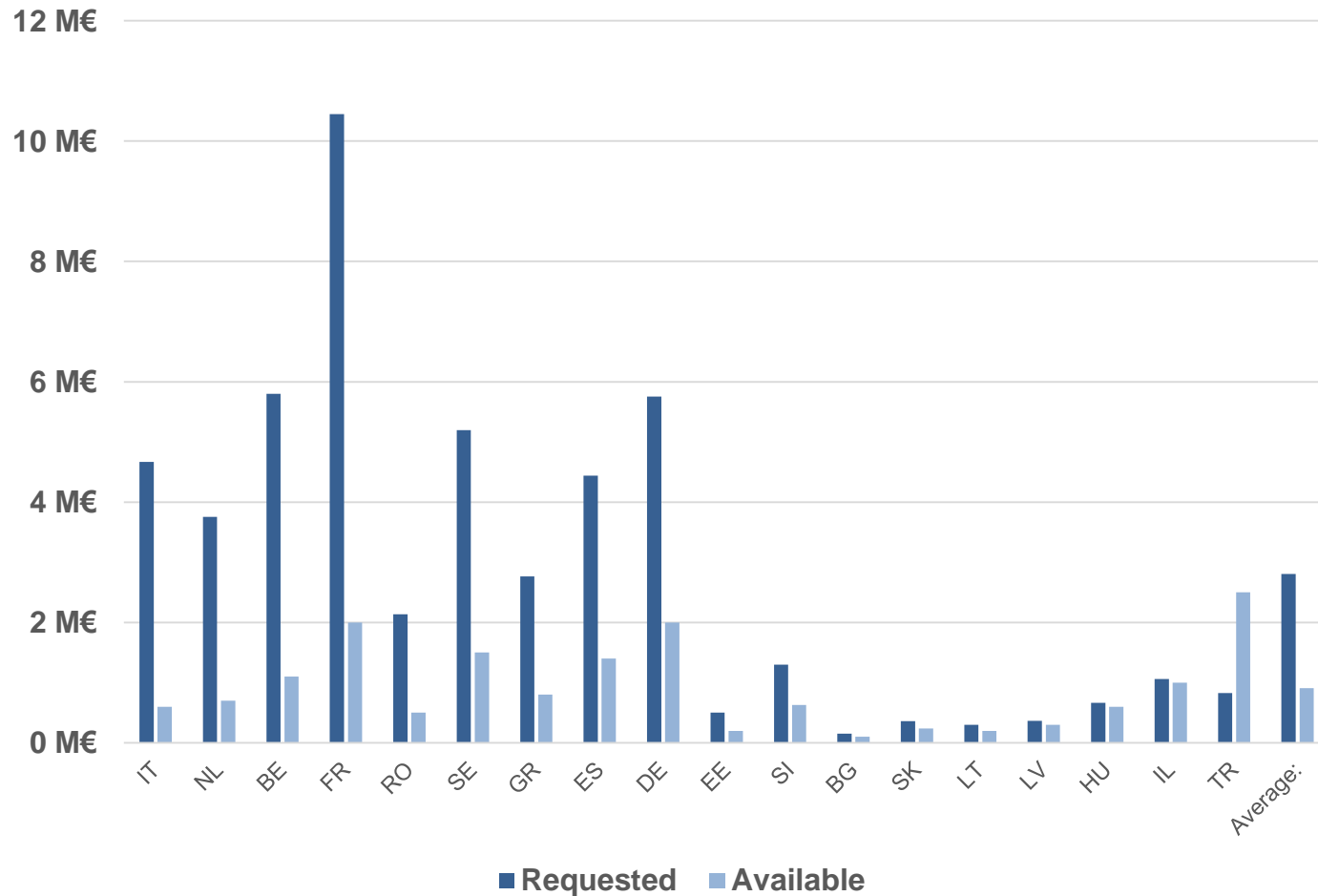20. Re-usable templates for graphene production

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Research Areas – HBP

1. Development and maturation of cognitive processes and multisensory integration at micro- and macro-scales
2. The role of neurotransmitter systems in human cognition
3. Subcortical structures: from cognition to action
4. The neuroscience of decision-making
5. Studies on biological deep learning and combined declarative and working memory
6. Disease modelling and simulation
7. Single cell RNA sequencing of human and mouse brain
8. Predictive neuroinformatics: A trans-species approach
9. Testing neuronal models at multiple scales
10. Automated construction and analysis of models of neurons and networks
11. Reconstruction of neuronal morphology from microscopic image data
12. Neuron data format standardization

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Requested and available funding (overall)

Requested and available funding (per country)

Timeline of next steps

May 2019   Notification of accepted short proposals

July 2019   Full proposal submission deadline

Nov 2019   Notification of accepted full proposals

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Thank you for your attention

more information on

`www.flagera.eu`