News from FLAG-ERA

FET Flagship Board of Funders (BoF) meeting
December 1st, 2017

Edouard Geoffrois, FLAG-ERA Coordinator
French National Research Agency (ANR)
edouard.geoffrois@anr.fr

FLAG-ERA
Supported by the European Commission

Outline of the presentation

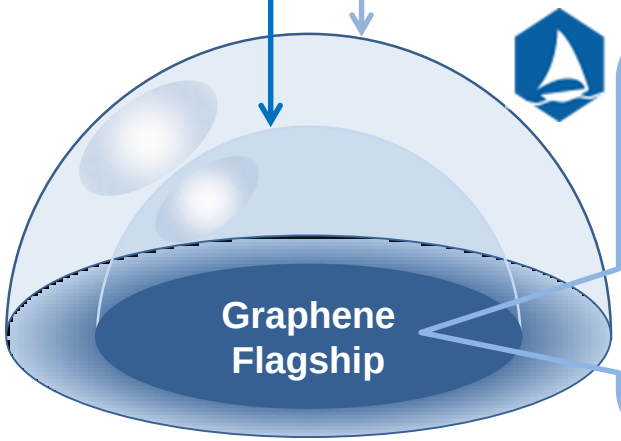
- Reminder of the FLAG-ERA context and objectives
- Preliminary statistics on the JTC 2017
  - Overview, design and timeline
  - Preliminary statistics
    - Per topic / area (numbers of projects)
    - Per country (amounts of funding)
- Preparation of the JTC 2019
- Summary of perspectives

FLAG-ERA context and main objectives

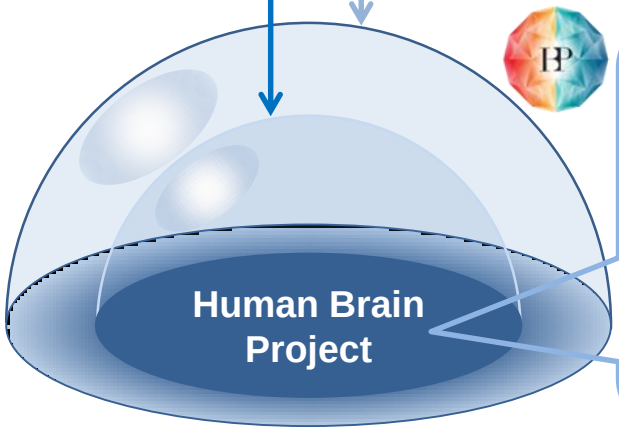
FET Flagship programme

EC FET Flagship Unit

FLAG-ERA members



Take graphene from the realm of academic laboratories into European society

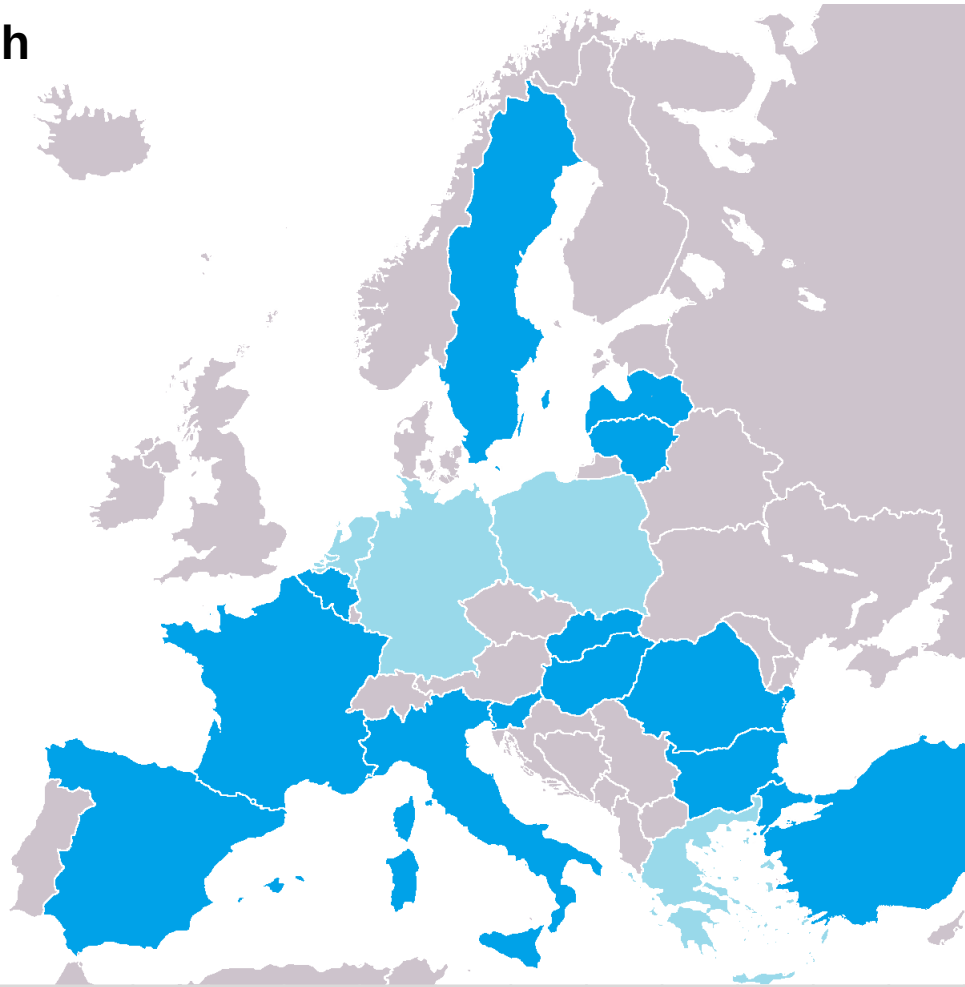


Build a research infrastructure to help advance neuroscience, medicine and computing

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

JTC 2017 Overview

- **Joint Transnational Call for research proposals in synergy with the two FET Flagships**
  - **Graphene Flagship**
  - **Human Brain Project**
- 17 participating countries
- Funding both Core Project members and new partners, to be associated to the Flagships
- Researchers from other countries can participate in a project if they secure their own funding
- Indicative budget: 16 M€
- Pre-proposal submission deadline: March 14th, 2017



	BE	BG	DE	ES	FR	GR	HU	IT	LT	LV	NL	PL	RO	SE	SI	SK	TR
	BE	BG		ES	FR		HU	IT	LT	LV			RO	SE	SI	SK	TR

FLAG-ERA

JTC 2017 design

- Call scope provided by the Flagships
  - Draft Partnering Project application included in the application
  - Level of potential synergies with the Flagship is a criterion in step 1
  - Scientific Evaluation Panel independent of the Flagship
  - Selected projects are invited to proceed with the association using the standard Flagship association procedures
- Possibility to request funding in only 2 countries if a Flagship Core Member from another country participates in kind
- 3 sub-calls
  - Graphene: Basic research & Applied research and innovation
  - HBP: Basic and applied research
- 2-step evaluation (co-funded call)

Timeline

March 14th	Pre-proposal submission deadline
June 2nd	Feedback to applicants step 1
July 11th	Full proposal submission deadline
Oct 20th	Feedback to applicants step 2 & Publication of list of projects recommended for funding

Presentation of submission statistics at last BoF meeting

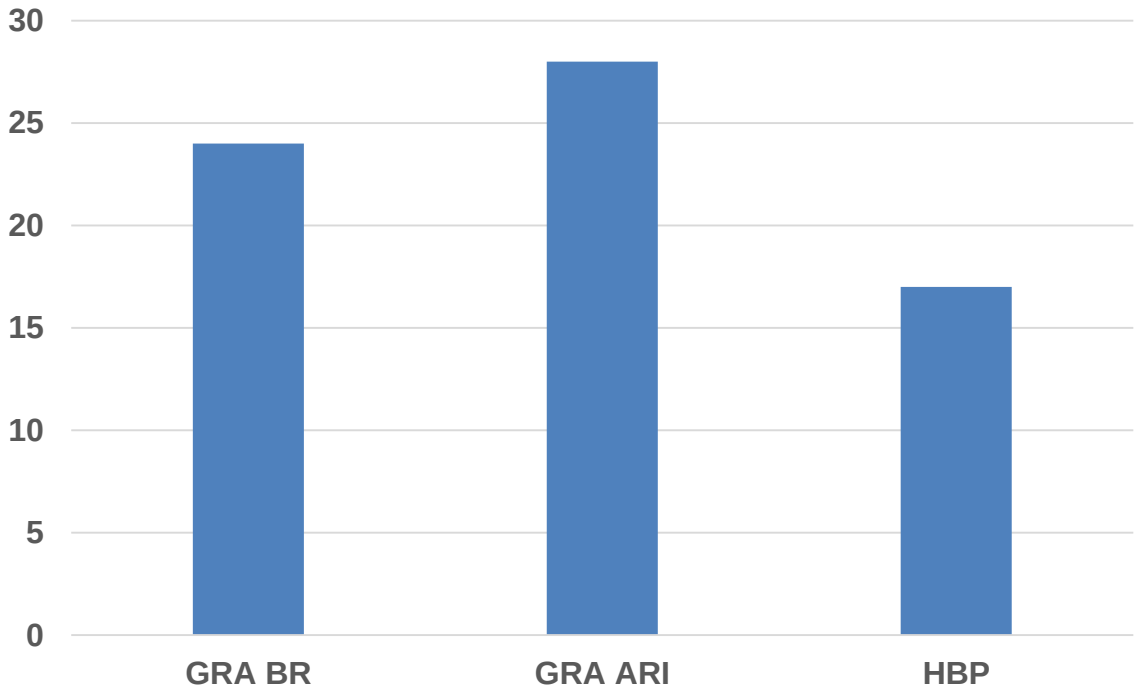
Nov-March	Negotiations, contracting
Dec-March	Project start

Presentation of preliminary outcome statistics

March — Project kick-off seminar (exact date TBC)

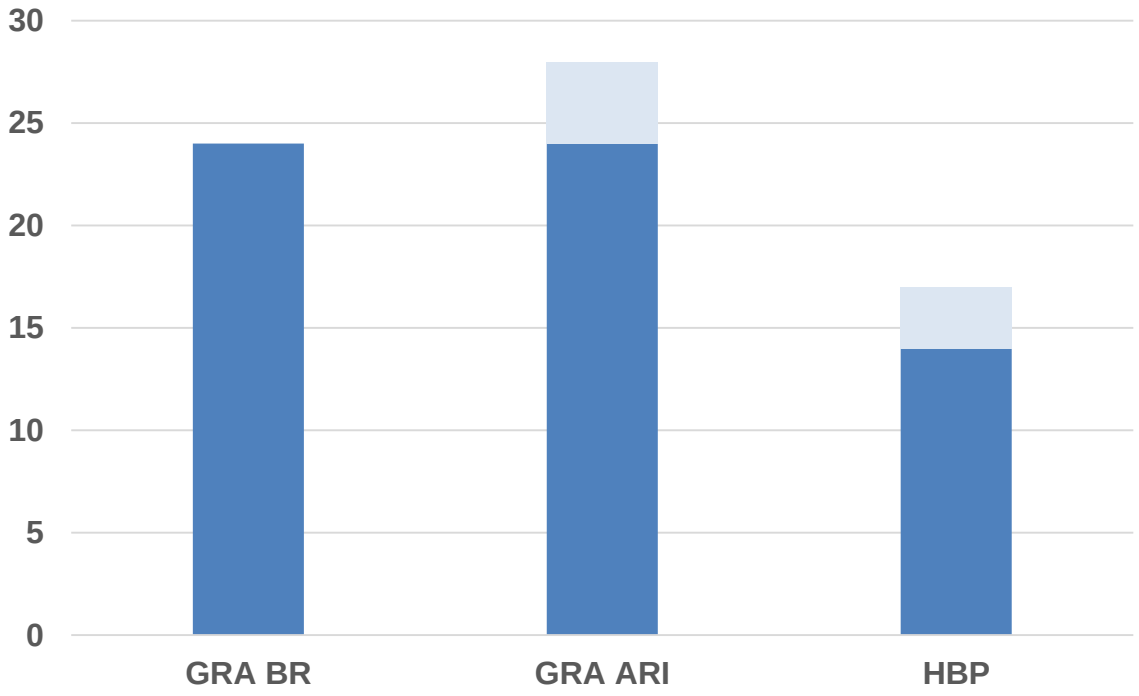
Number of pre-proposals submitted

GRA – Basic research (BR)	24
GRA – Applied research and Innovation (ARI)	28
HBP – Basic and applied research	17
Total	69



Number of pre-proposals eligible

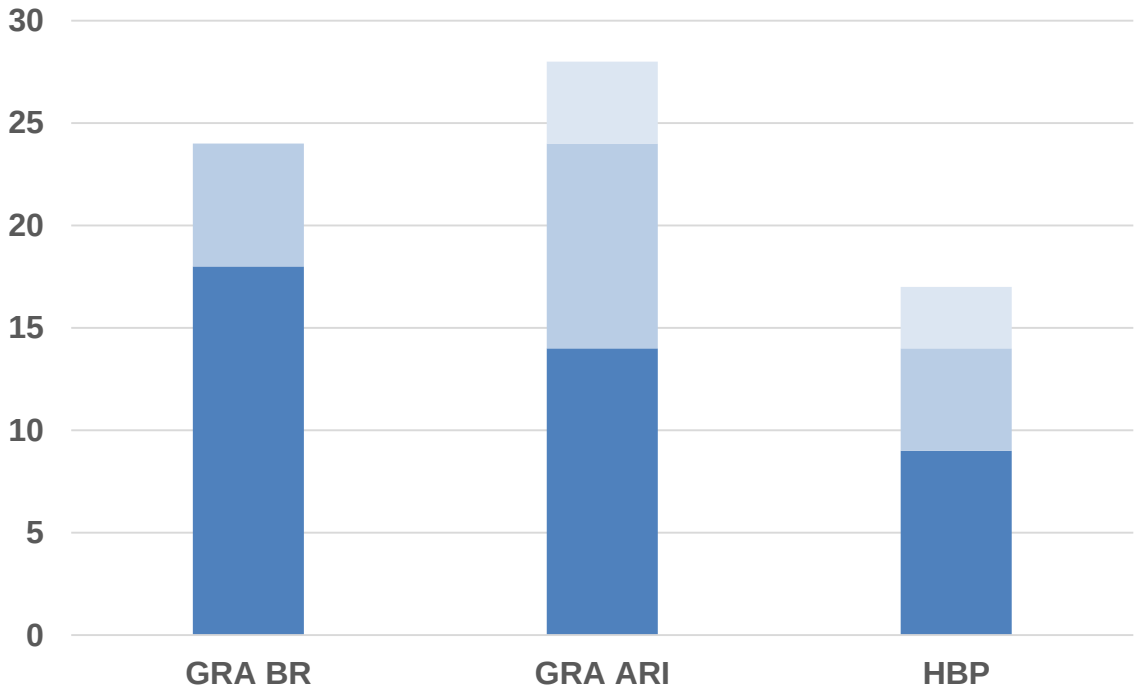
GRA – Basic research (BR)	24	24
GRA – Applied research and Innovation (ARI)	28	24
HBP – Basic and applied research	17	14
Total	69	62



FLAG-ERA

Number of pre-proposals selected

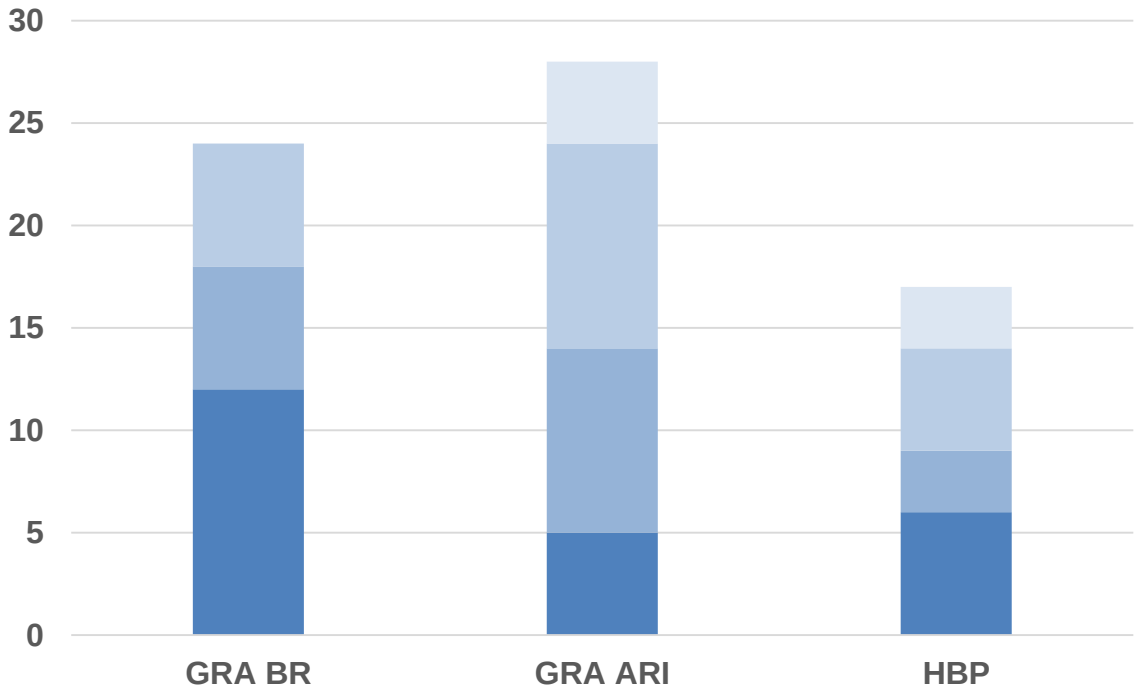
GRA – Basic research (BR)	24	24	18
GRA – Applied research and Innovation (ARI)	28	24	14
HBP – Basic and applied research	17	14	9
Total	69	62	41



FLAG-ERA

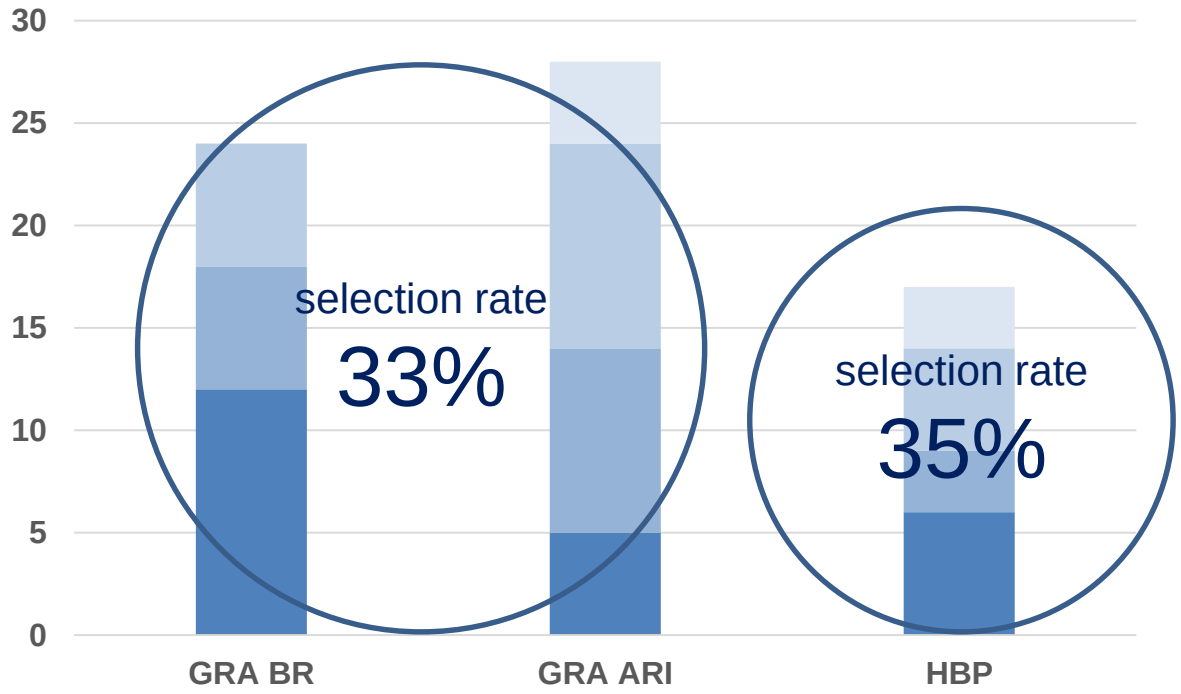
Number of full proposals selected

GRA – Basic research (BR)	24	24	18	12
GRA – Applied research and Innovation (ARI)	28	24	14	5
HBP – Basic and applied research	17	14	9	6
Total	69	62	41	23



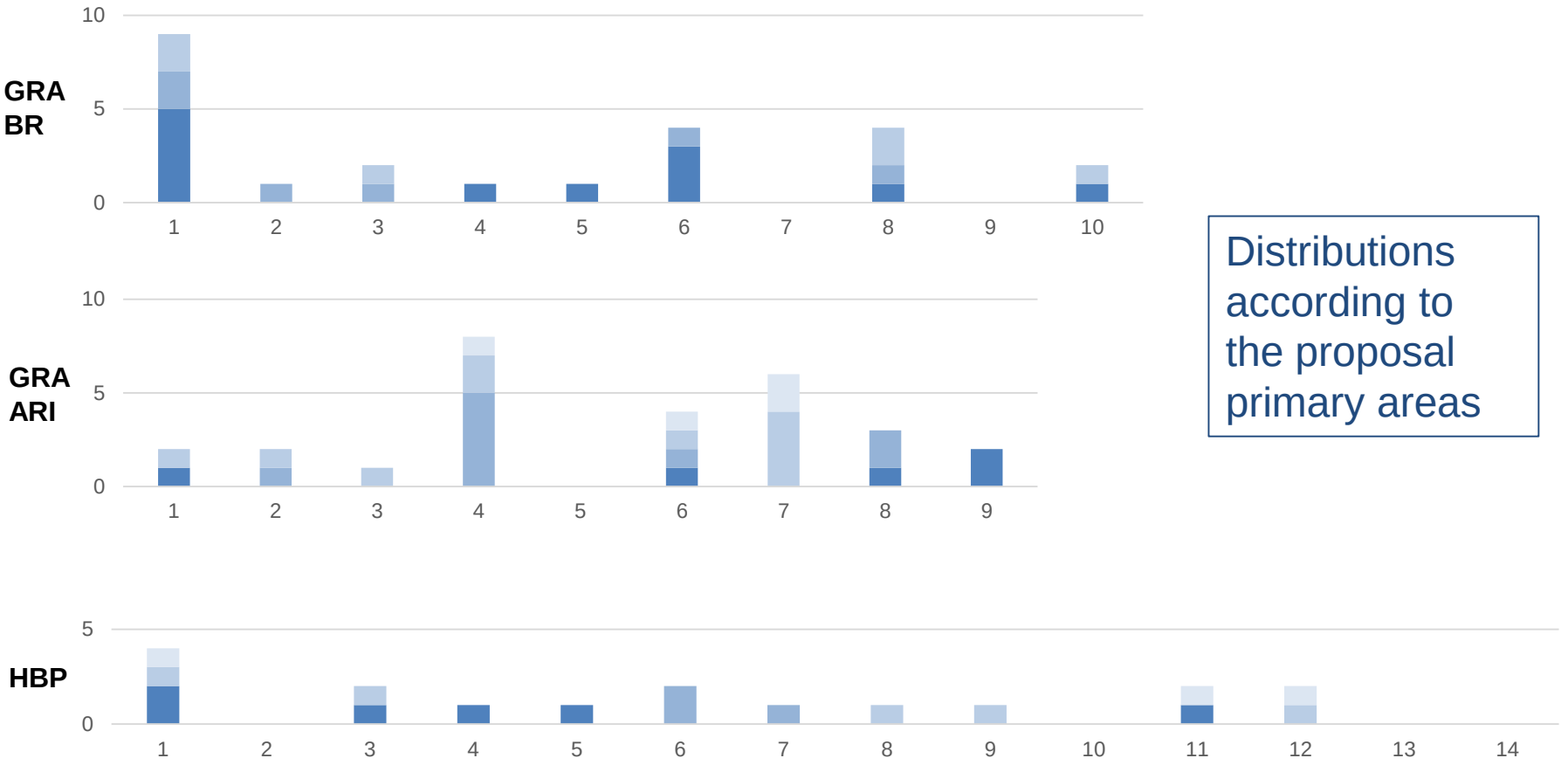
Number of full proposals selected

GRA – Basic research (BR)	24	24	18	12
GRA – Applied research and Innovation (ARI)	28	24	14	5
HBP – Basic and applied research	17	14	9	6
Total	69	62	41	23



FLAG-ERA

Distribution across research areas



Distributions according to the proposal primary areas

Research Areas – Graphene

Basic Research

1. **Synthesis and characterization of Layered Materials (LMs) beyond graphene**
2. Large scale production of heterostructures based on LMs
3. Vertical and lateral epitaxy of Graphene and Related Materials (GRMs) for optoelectronics
4. **Functional ceramics incorporating GRMs**
5. **Inks for printing stable, GRM-based, semiconducting thin films**
6. **Modelling charge and heat transport in GRM-based composites**
7. Ecotoxicology of GRMs
8. **Nanofluidics using GRMs**
9. Novel device concepts based on GRMs for quantum communication
10. **Beyond CMOS switches and new computing paradigms based on GRMs**

Applied Research and Innovation

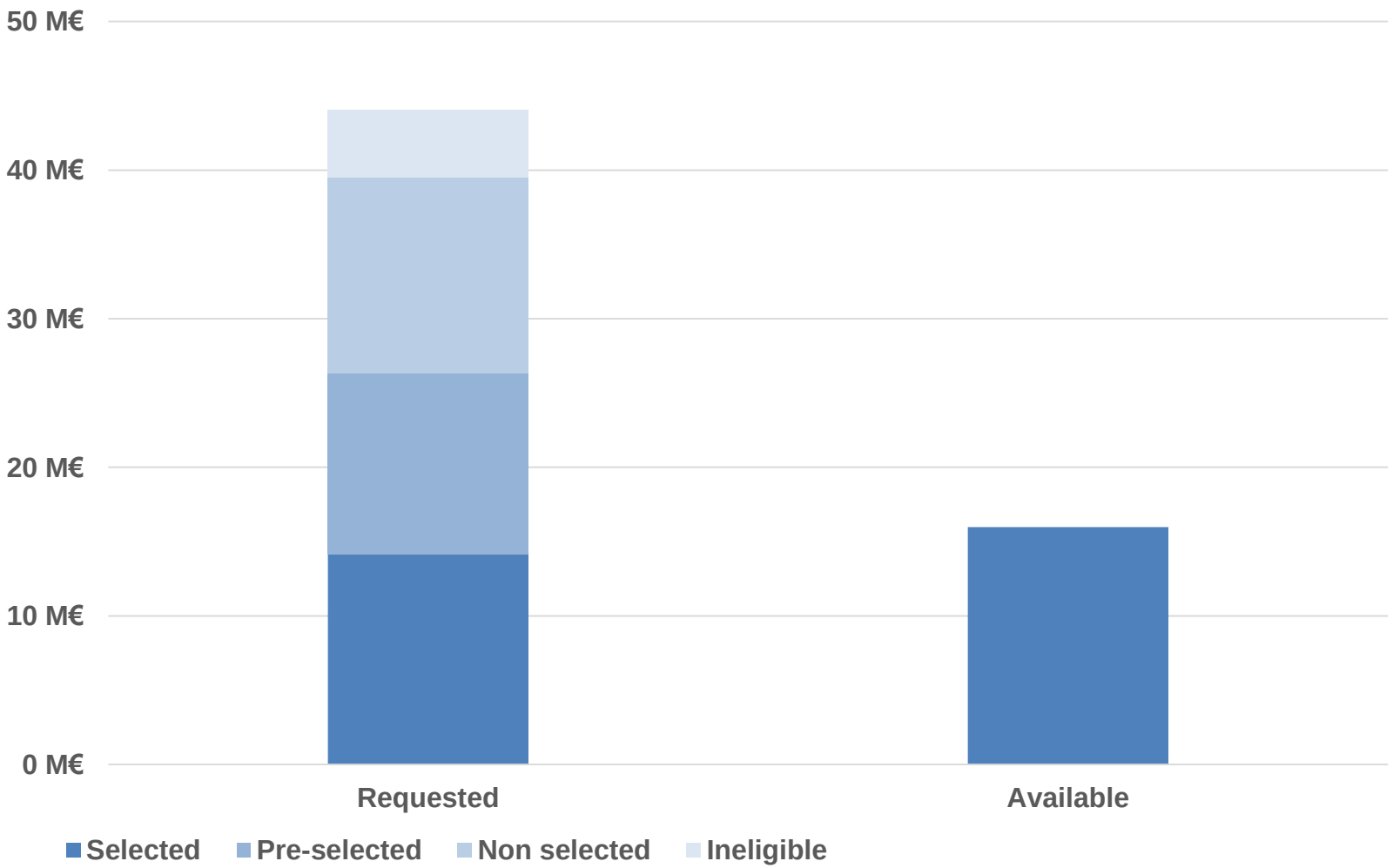
1. **In-situ and ex-situ quality control of GRMs**
2. Controlling doping in high quality large-area graphene
3. GRMs for smart textiles
4. Functional coatings using GRMs
5. GRMs for corrosion prevention and as lubricants
6. **GRMs for thermal management and thermoelectrics**
7. Biorecognition of specific disease markers using GRMs
8. **Highly selective gas sensors based on GRMs**
9. **GRM-based bioelectronic technologies**

Research Areas – HBP

Basic and Applied Research

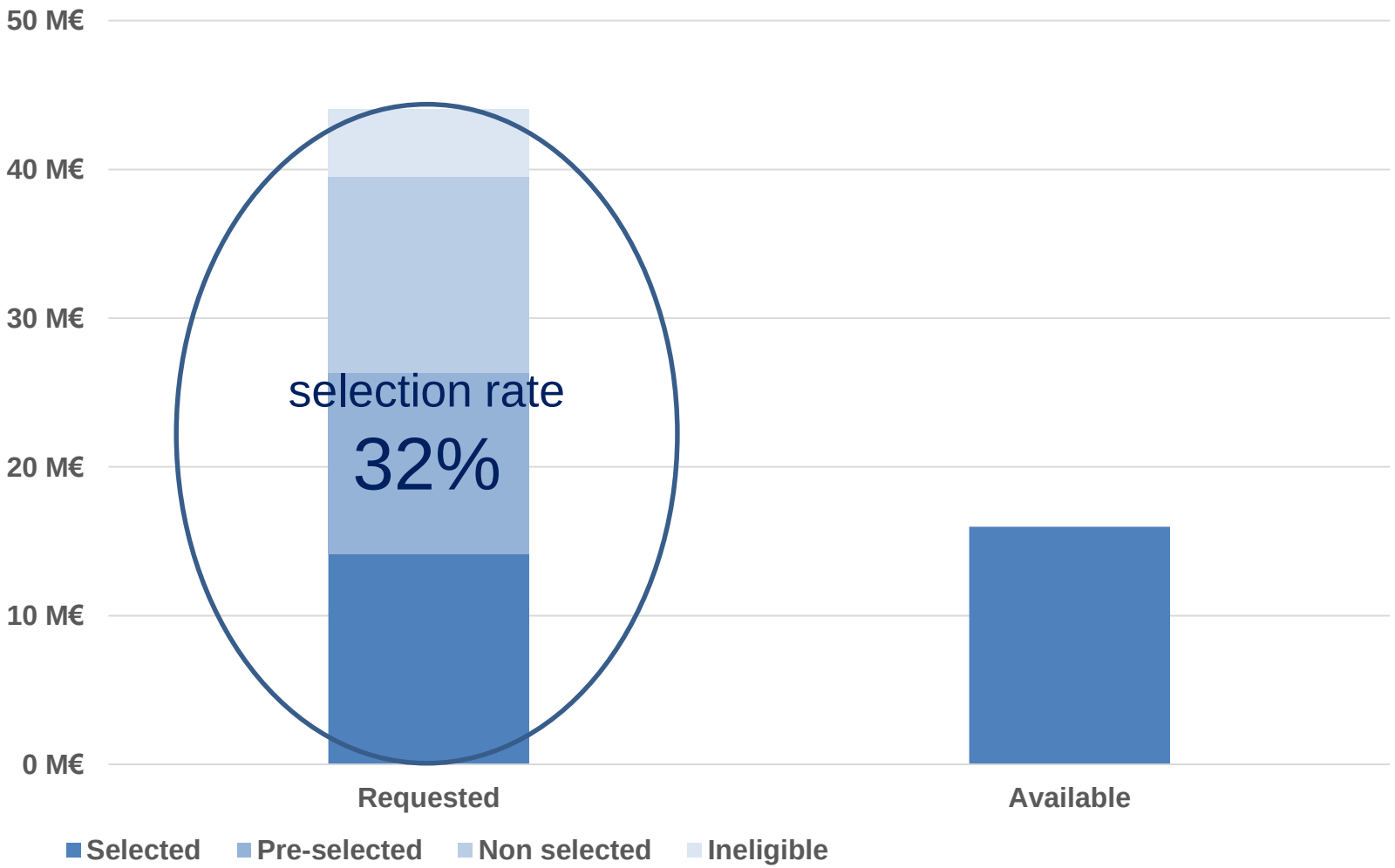
1. **Human brain intracranial data and their relationship to other aspects of brain organisation**
2. Comparing morphology and physiology of cortical cell types in human and non-human primates
3. **Comparative aspects of brain function and connectivity**
4. **Cross-species multi-scale data constraints for visuo-motor integration**
5. **The neural bases of spatial navigation and episodic memory**
6. Models of auditory processing
7. Dynamics and representation in multi-level systems of human cognitive functions
8. Modelling dendrites within active networks
9. Testing predictive coding and attractor network models
10. Biological deep learning
11. **Disease modelling and simulation**
12. Innovative modelling for allosteric drug discovery
13. Integration of simulation tools, neuromorphic computing and robotics with brain and behavioural studies for developing next-generation brain-computer interfaces
14. Text mining of cellular, synaptic, connectomic or functional properties of the brain

Requested and available funding (overall)



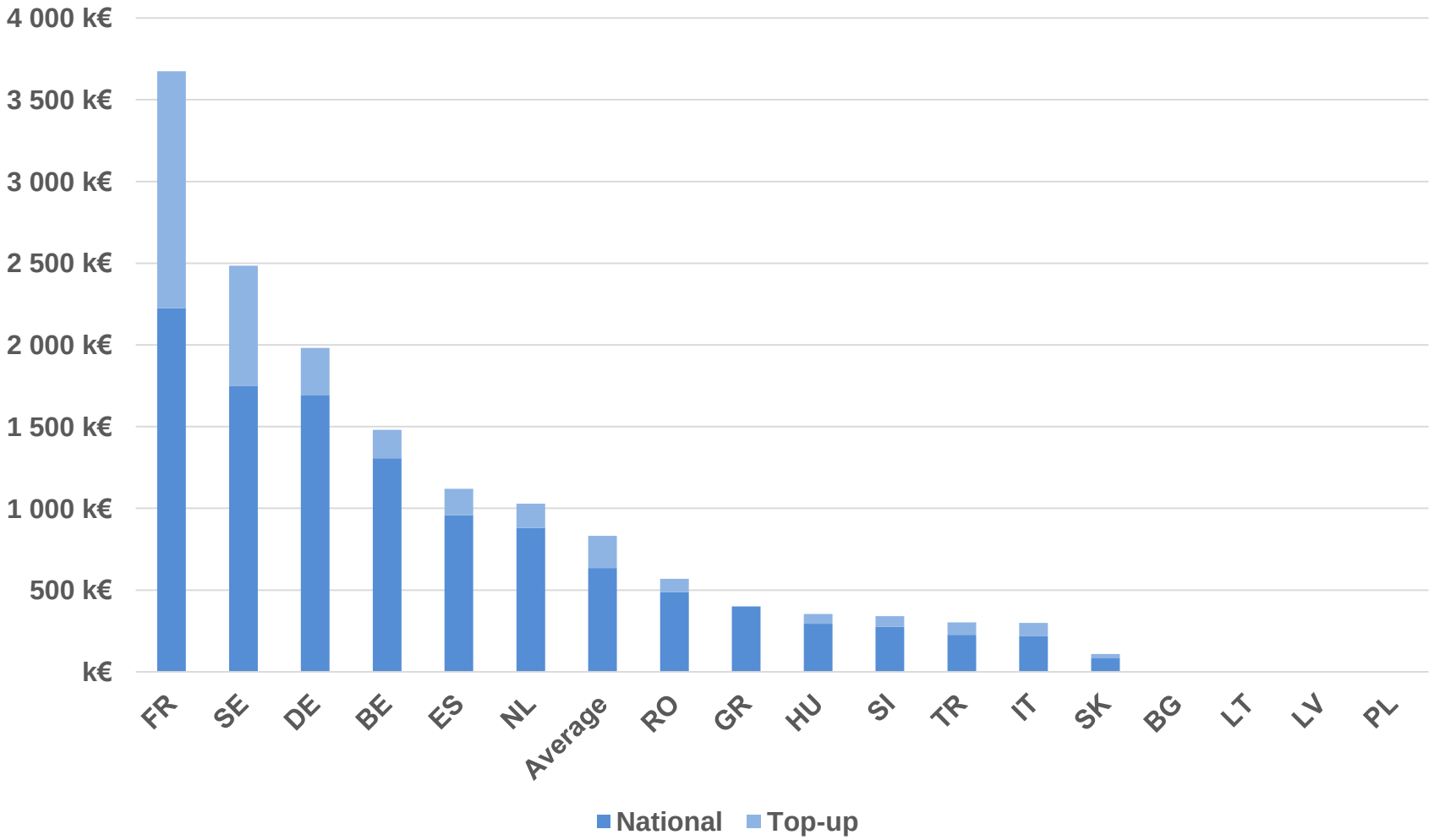
FLAG-ERA

Requested and available funding (overall)



FLAG-ERA

Funding per country



FLAG-ERA

Summary of Partnering Projects

In anticipation of the association of the JTC 2017 projects

Graphene Flagship

	Nb projects	Funding	Nb countries
FLAG-ERA JTCs	30	18.6 M€	15
National calls	1	0.8 M€	1
EC (incl. ERC)	4	3.8-17.4 M€	-
Total	35	23.2-36.8 M€	16

Human Brain Project

	Nb projects	Funding	Nb countries
FLAG-ERA JTCs	12	6.2 M€	7
National calls	1	0.2 M€	1
EC (incl. ERC)	-	-	-
Total	13	6.4 M€	8

Preparation of the JTC 2019

- In the framework of FLAG-ERA III to be submitted to the EC on April 17th, 2018
  - ERA-NET Cofund, 10 M€ in the Work Programme → Ambitious funding target
- Call topics under definition
  - First draft already discussed, final draft expected in December
  - 3 sub-calls as in JTC 2017
- Main evolution w.r.t. JTC 2017: Process for the HBP sub-call adapted to the infrastructure nature of HBP
  - Topics are defined mainly by the funding organisations
  - Partnering project applications will be provided to Flagship representatives and their comments will be provided as additional input to the Scientific Evaluation Panel

Summary of perspectives

- Finalise the contracts and association of the JTC 2017 projects, convene at the kick-off seminar in March
- Prepare the JTC 2019 and the FLAG-ERA III submission
- Develop a more comprehensive and shared vision of the scientific and funding landscape, in view of identifying potential partnering projects

Thank you for your attention

more information on

www.flagera.eu