



FLAG-ERA

Joint Transnational Call (JTC) 2019

for transnational research proposals in
synergy with the two FET Flagships:

Graphene Flagship

Human Brain Project



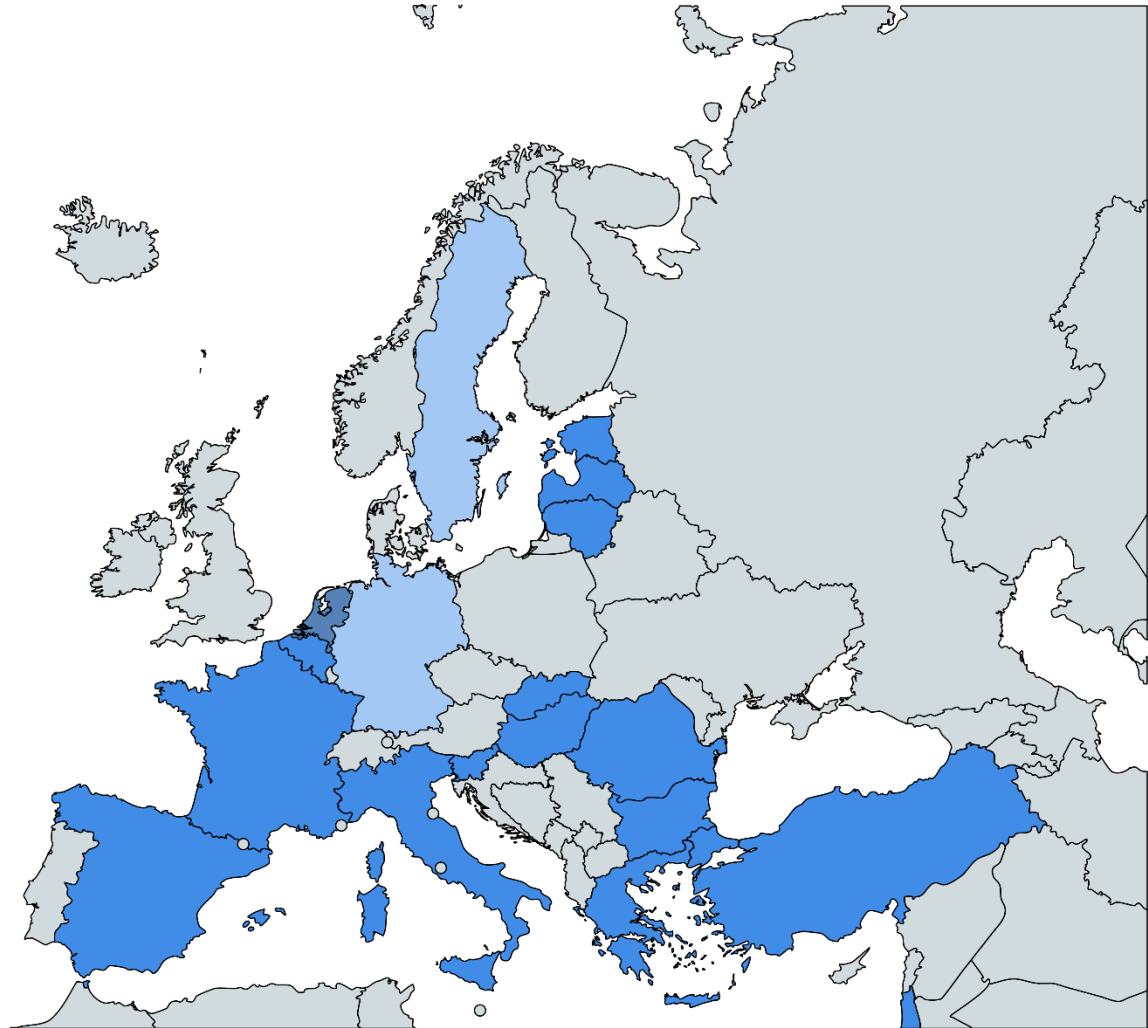
Statistics on Submissions and Outcome of Evaluation 1st Step

Call announcement overview

- **Joint call for transnational research proposals in synergy with the two FET Flagships**
 - Graphene Flagship
 - Human Brain Project
- Funding both Core Project members and new partners (expected to become Associated Members of the Flagship)
- 18 participating countries
- Total initial budget: 20 M€
- Submission deadline: February 19th, 2019

Country participation

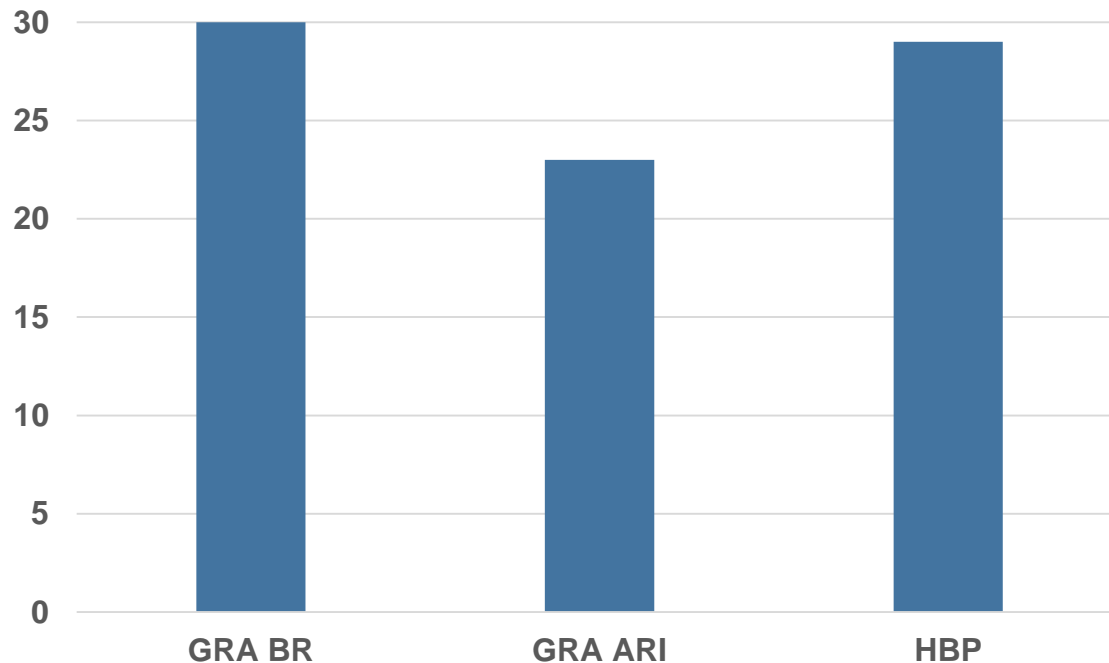
Graphene 17	HBP 16
BE	BE
BG	BG
DE	
EE	EE
ES	ES
FR	FR
GR	GR
HU	HU
IL	IL
IT	IT
LT	LT
LV	LV
	NL
RO	RO
SE	
SI	SI
SK	SK
TR	TR



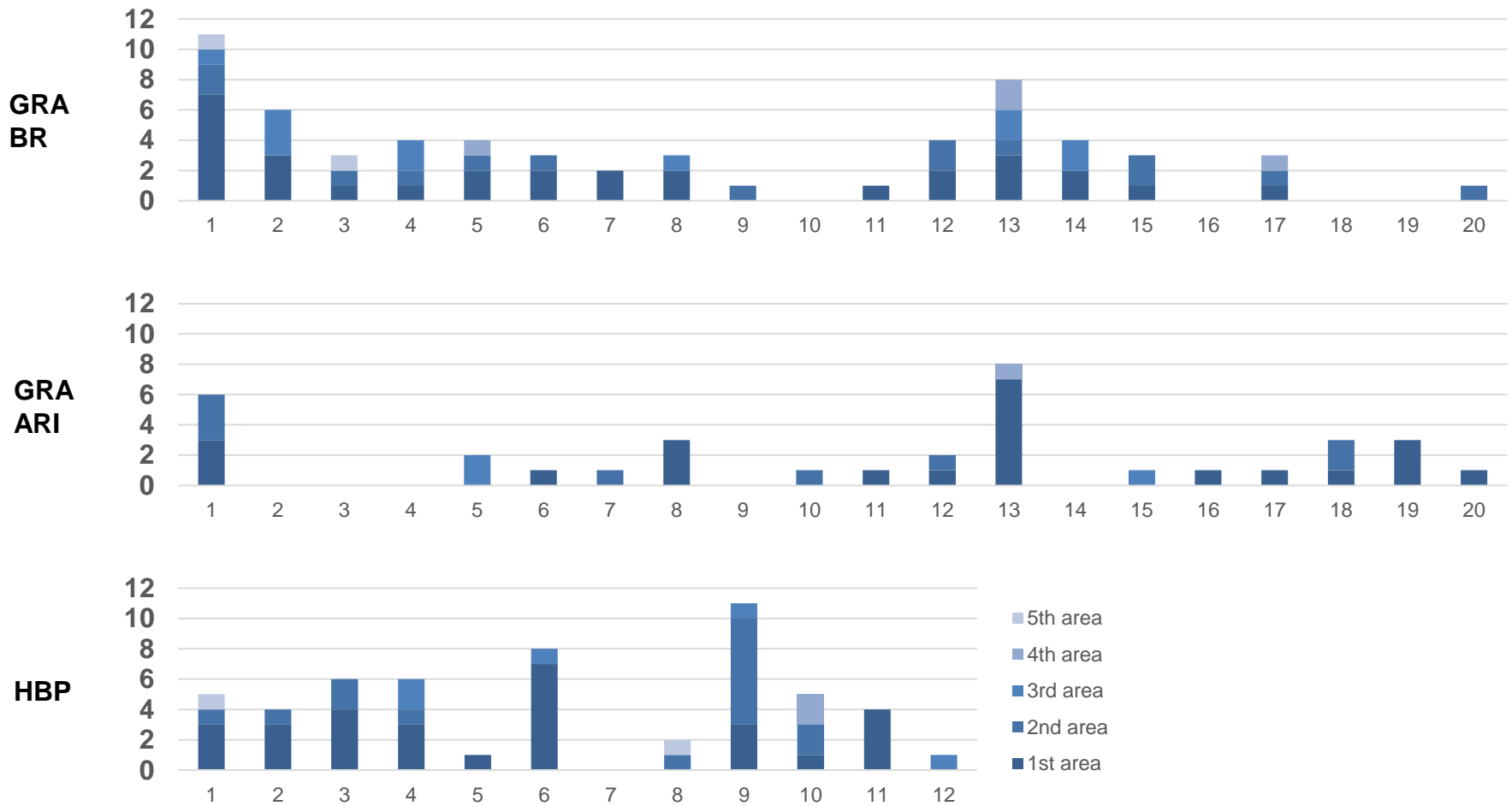
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Number of pre-proposals submitted

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

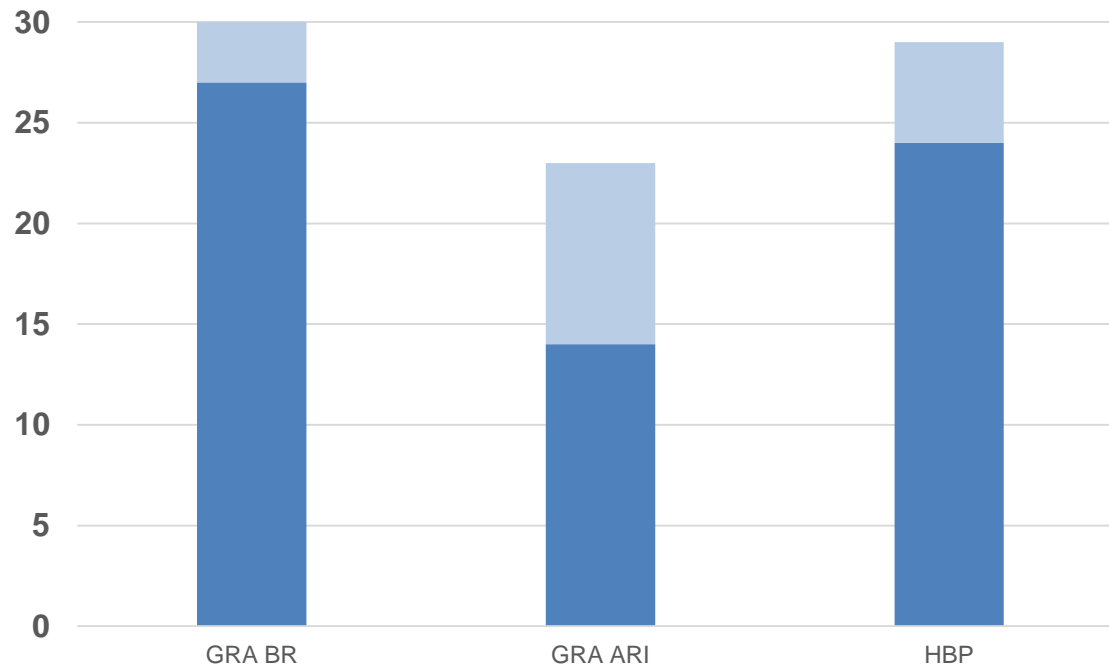
1. Synthesis and characterization of layered materials beyond graphene
2. Graphene and related materials (GRMs) for Quantum Technologies
3. Optimized GRM-based tunnel barriers for efficient spin injection and detection into graphene under operational conditions
4. Spin torque and layered-materials-based 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

Research Areas – HBP

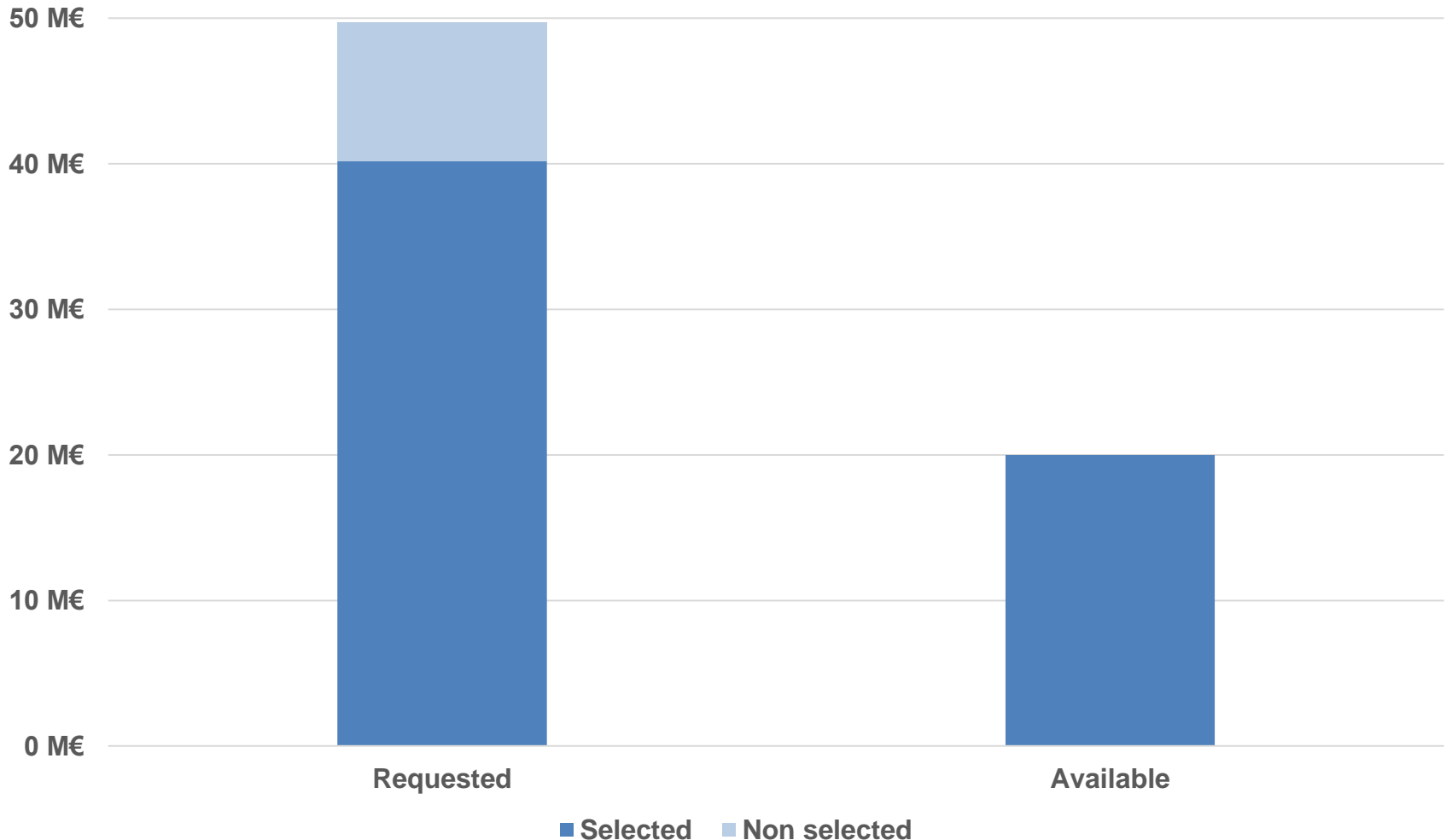
1. Development and maturation of cognitive processes and multisensory integration at micro- and macro-scales
2. The role of neurotransmitter systems in human cognition
3. Subcortical structures: from cognition to action
4. The neuroscience of decision-making
5. Studies on biological deep learning and 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

Number of pre-proposals selected

GRA – Basic research (BR)	30	27
GRA – Applied research and Innovation (ARI)	23	14
HBP – Basic and applied research	29	24
Total	82	65



Requested and available funding (overall)



Next steps

- Full proposal submission deadline: 2 July 2019
- Notification of results: November 2019
- Project start: Dec 2019 - March 2020