

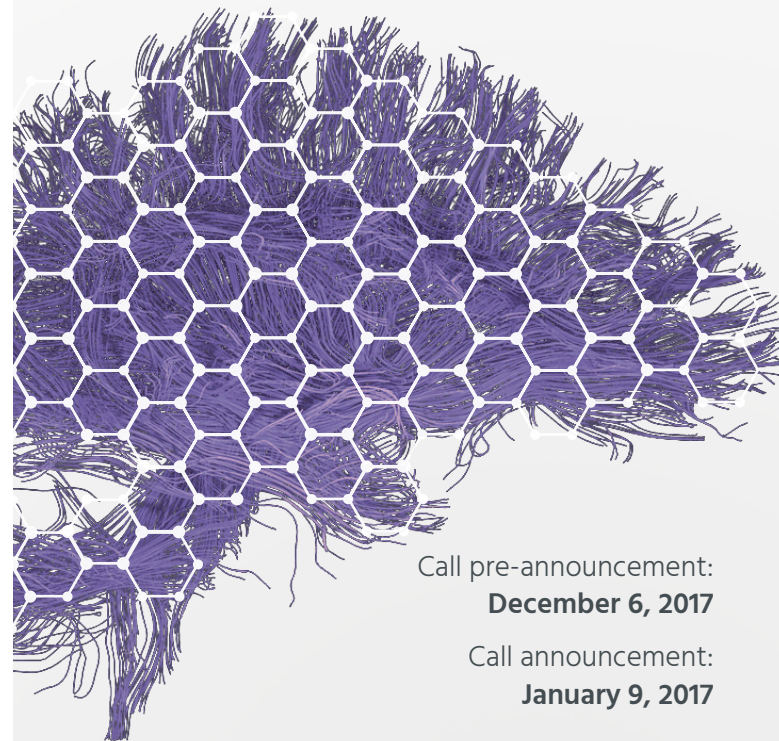


## JOINT TRANSNATIONAL CALL (JTC) 2017

Supporting transnational research projects in synergy  
with the two FET Flagships:

<https://www.flagera.eu/flag-era-calls/jtc-2017/>

### GRAPHENE FLAGSHIP HUMAN BRAIN PROJECT



Call pre-announcement:  
**December 6, 2017**

Call announcement:  
**January 9, 2017**

Submission deadline:  
**March 14, 2017, 17:00 CET**



FLAG-ERA is supported by the European Commission under the  
ERA-NET schema of the Horizon 2020 programme.

## FLAG-ERA

FLAG-ERA (the Flagship ERA-NET) gathers National and Regional Funding Organisations (NRFOs) in Europe and beyond with the goal of supporting, together with the European Commission, the FET Flagship initiatives, i.e., the Graphene Flagship and the Human Brain Project (HBP).

### TOPICS OF JTC 2017

#### 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 for printing stable, GRM-based, semiconducting thin films
5. Modelling charge and heat transport in GRM-based composites
6. Ecotoxicology of GRMs
7. Nanofluidics using GRMs
8. Novel device concepts based on GRMs for quantum communication
9. Beyond CMOS switches and new computing paradigms based on GRMs

#### GRAPHENE (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

#### 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

## ELIGIBILITY OF APPLICANTS AND CONSORTIA

While applications shall be submitted jointly by groups from several countries, each team will be funded by its respective NRFO. The applications are therefore subjected to eligibility criteria of individual funding organisations (please refer to the Call Announcement on:

<http://www.flagera.eu/flag-era-calls-jtc-2017>

Each consortium submitting a proposal must involve at least 3 partners from 3 different countries and fulfil at least one of the following two options:

- At least 3 partners requesting funding from 3 different countries participating in the JTC.
- or
- At least 2 partners requesting funding from 2 different countries participating in the JTC plus a Flagship Core Project partner from a different country, not requesting funding in the framework of the JTC and securing its own funding.

## EVALUATION AND SELECTION

JTC 2017 follows a 2-stage evaluation and selection process. Projects are evaluated by an independent international Scientific Evaluation Panel at both stages. Selection of funded projects is based on the ranking and the available funding.

## ASSOCIATION TO THE FLAGSHIPS

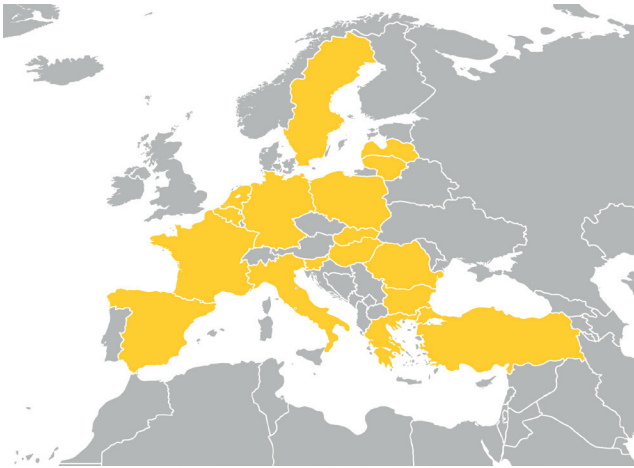
Submissions must include information on the foreseen Flagship partnership. Projects recommended for funding are invited to proceed with the formal association to the Flagship, using the Flagship standard association procedure. Any issue at this stage is treated through classical project risk management.

Projects may be funded for up to 36 months.



CONTACT POINTS FOR THE NRFOS PARTICIPATING IN THE JTC

COUNTRY	NRFO	NAME	EMAIL	PHONE	GRAPHENE Basic	HBP Applied
Belgium	FRS-FNRS	Florence Quist	florence.quist@frs-fnrs.be	+32 2 504 93 51	×	×
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FLAG-ERA JTC 2017 CALL  
PARTNERS

