FET Flagships
Calls for Proposals
Workprogramme 2014-15

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European Commission
Brussels

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In Horizon 2020 FET is positioned as a cross-thematic programme.
"FET Flagships- pursuing grand interdisciplinary scientific and technological challenges

Research initiatives within this strand are science- and technology-driven, large-scale, multidisciplinary and built around a visionary unifying goal. They tackle grand science and technology challenges requiring cooperation among a range of disciplines, communities and programmes. The scientific and technological advance should provide a strong and broad basis for future innovation and economic exploitation, as well as novel benefits for society of a potential high impact. The overarching nature and magnitude implies that they can only be realised through a collaborative long-term and sustained effort."

Partnerships for scientific leadership

- To tackle **grand S&T challenges** requiring a **common European effort** and long term support (up to 10 years)
  - **Visionary** and **highly ambitious initiatives** in terms of S&T challenges addressed and resources to be deployed
  - Large-scale, **science-driven, multidisciplinary** endeavours with a **unifying goal**

- To enable **alignment of national, regional and EU actions** and initiatives

- To deliver **transformational impact** on science, technology and society

- **budget** of 1BEuros (10 years), 50% EU Funding
Timeline

Preparatory Phase
05/11 - 04/12

Stimulating ideas & structuring the scientific community
2009 - 2010

Flagship selection
6 → 2 end 2012

Start of:
- HBP,
- GRAPHENE
- FLAG-ERA
10/13

Operational phase
2016 - 2023
Graphene FET Flagship

Graphene, is a 2D material, a single layer of carbon atoms, stronger than diamond, yet lightweight and flexible and an exceptional electricity conductor.

The Graphene Flagship will bring graphene, and related 2D materials, from academic labs to industry, manufacturing and society.

Examples Applications:

∑ electronic paper; bendable smartphones; enhanced solar cells and batteries; lighter and more energy efficient airplanes ...

∑ On the longer term, graphene is expected to give rise to new computers and revolutionary medical applications such as artificial retinas.
Graphene competitive call:

Closing date 5 February 2014


GF01 - Standardisation
GF02 - Chemical sensor, bio-sensors and bio-interfaces
GF03 - Membrane technologies: from nanofluidics to nanoresonators
GF04 - Catalysts for energy applications
GF05 - Functionalized materials for composites and energy applications
GF06 - Functional coatings and interfaces in high-performance, low-weight technological applications
GF07 - Integration of graphene and related materials (GRMs) with semiconductor devices: a scalable back-end approach
GF08 - New layered materials and heterostructures
GF09 - Passive components for RF-applications
GF10 - Integration with Si photonics
GF11 - Prototypes based on graphene, related two-dimensional crystals, and hybrid systems
GF12 - Open topic
GF13 - Updating the Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems

8,7 M euro
The Human Brain Project (HBP)

HBP will create the world's largest **experimental facility for developing the most detailed models of the brain** (from genes to mind), for studying how the human brain works and ultimately for simulating and developing personalised treatment of brain diseases.

This research lays the scientific and **technical foundation for medical progress**: identifying new drug targets and treatment, in response to the urgent need to combat brain diseases and their associated costs to society.

HBP will also produce brain-inspired ‘neuromorphic’ computing systems that could drastically reduce power-consumption for super-computers and enhance robots.
FLAG-ERA:

Started 01 October 2013
2.0 MEuros, 36 months
Coordinator: ANR (Fr)

31 Ministries & Non-Research Funding Organizations from:
- Member States (MS)
- Associated Countries (AC)
- European Regions (MS/AC)

Enhanced complementarities and synergies of regional, national, European and international research programmes and initiatives, with:

a) Networking / discussions of matters of interest related to the two FET Flagships;

b) Identification of areas that complement the core projects and to launch future (trans)national calls for research projects;

c) Reducing the fragmentation of the ERA by taking up new opportunities for Excellence
Specific challenge:

The objective is to establish, for each of the FET Flagships, a stable and structured partnership between the EC and the institutions and organisations who commit themselves to establish, maintain and implement the strategic research roadmap of the flagship. These partnerships will be set up through a Framework Partnership Agreement (FPA) which will cover the full initiative in order to enable the completion of the research roadmap within the context of the agreement.

The consortia responding to the call may include research institutes, universities, foundations, industry, SMEs as well as other organisations that can play a role in the realisation of the Flagships. The Framework Partnership Agreement shall specify the common objectives, the nature of the actions planned, and the procedure for awarding specific grants.
The Framework Partnership Agreements will be the framework for implementing Specific Grant Agreements (SGAs).

The SGAs will be launched to support a Core project to implement the 10-year strategic roadmap (FPA Action plan) (in WP2014-2015 + later WPs) (2x89Meuros budgeted in WP2015)

Complementary projects are foreseen to complement the core project (as from WP2016 + later WPs)

A Call for an ERA-NET CoFund project is expected in WP2016, as follow-up to the current ERA-NET ("FLAG-ERA"), and in later WPs
Implementation Model

Ramp-up Phase
2013 – 2015
FP7

Budgets:
HBP: 72M€
Graphene: 75M€
EU funding: 54 M€ each

Operational Phase
2016 – 2023
H2020

50 M€/year EU funding
~100 M€/year budget
Specific challenge:

The overall challenge is to foster a common European effort by contributing to dissemination efforts, impact assessments and other actions which support and strengthen the FET Flagship initiatives. This also extends to enhancing the interplay between FET Flagships and other Union policies and technology transfer of technologies towards exploitation. Any proposal has to demonstrate that it adds value beyond the activities implemented in each the FET Flagships Graphene and HBP.
H2020 FETFLAG-2-2014  **Policy environment for FET Flagships**
Total Call Budget €1,600,000  Deadline 2014-04-10  17:00 (Brussels time)
Type of action: **Coordination and Support Actions**

**Scope:**

Actions supporting the policy environment of the FET Flagships, addressing aspects such as:

- Supporting collaboration between the FET Flagships and international programmes;
- Assessing the impacts of FET Flagship initiatives, including through metrics and indicators;
- Analysing market potential and supporting technology transfer;
- Collection of information need for policy making, e.g. through consultation actions and surveys.
WP2014 Proposals: Timetable

Submission Deadline: 10 April 2014, 17:00
Evaluation: early June
Deadline for ESRs: 10 September
Deadline for Grant signature: 10 December
Projects start work: 01 Dec 2014 or 01 Jan 2015

FPAs: 2 Projects (Zero funding)
CSAs: 1.6 MEuro funding; 3-5 projects \textit{(indicative)}

\[WP2015: 2 \text{ SGA projects: } 89 \text{ Meuro each}\]
Further information:


• http://www.graphene-flagship.eu/

• https://www.humanbrainproject.eu