

Digital Single Market

FET Flagships

The Future & Emerging Technologies ("FET") Flagships are visionary, large-scale, science-driven research initiatives which tackle scientific and technological challenges across scientific disciplines.

The [Future and Emerging Technologies \(FET\)](#) [1] Flagships were developed over a two-and-a-half year preparatory phase. They will have a transformational impact on science, technology and society overall. They foster coordinated efforts between the EU and its Member States' national and regional programmes. Highly ambitious, they rely on cooperation among a range of disciplines, communities and programmes, requiring sustained support up to 10 years.

Two projects were selected as winners among the [pilot flagship topics](#) [2]:

- [Graphene](#) and the
- [Human Brain Project](#).

The European Commission published in September 2014 the [FET Flagship Staff Working document](#) [3], announcing the [implementation model](#) [4] for the Flagships in H2020. Read the [overview](#) [5] and [presentation](#). [6]

Graphene

[Graphene](#) [7] investigates and exploits the unique properties of a revolutionary carbon-based material. It possesses an extraordinary combination of physical and technical properties: it is the thinnest material, it conducts electricity, it is stronger than steel and entails unique optical properties.

To better understand Graphene, check out the following:

- [New Graphene video](#) [8]: How Chalmers University manufactures scalable and high-performing solid Graphene samples, the raw material used by the over 100 research groups within the Graphene Flagship.
- Follow [@GrapheneCA](#) [9] on Twitter
- [Programme launch event](#) [10] (Oct2013 - Göteborg (SE))

The Human Brain Project

Understanding the human brain is one of the greatest challenges facing 21st century science. Using

ICT-based facilities, the [Human Brain Project](#) [11] (HPB) FET Flagship aims to provide researchers worldwide with ICT tools and mathematical models for sharing and analysing large brain data they need for understanding how the human brain works and for emulating its computational capabilities. This Flagship initiative was launched in 2013 and is supported by the European Union. The HBP has the potential to revolutionise the future of neuroscience, medicine, and computing.

To better understand HPB, several resources are available:

- [The Human Brain Project Youtube Video Channel](#) [12] - check out video guides on various aspects of the project: Neuromorphic Computing, Future Medicine, Future Neuroscience, Future Computing, Ethics & Society, Neuroinformatics, Medical Informatics Platforms, High Performance Computing, Brain Stimulation Platform, Neurobotics, Mathematical and Theoretical Foundations of Brain Research;
- Follow [@HumanBrainProj](#) [13] on Twitter;
- [Programme launch event](#) [14] (Oct2013 - Lausanne (CH))

The FLAG-ERA ERA-NET

The ERA-NET, called [FLAG-ERA](#) [15] gathers ministries and most funding organisations in Europe, participating either directly or as associated members, with the goal of supporting the FET Flagship initiatives '[Graphene](#)' and '[The Human Brain Project](#)' and more generally the FET Flagship concept.

FLAG-ERA offers a platform to coordinate a wide range of sources of funding towards the realization of the very ambitious research goals of the two Flagship initiatives. The funding organisation will coordinate their funding framework conditions, adapt their thematic programs and elaborate new joint support mechanisms according to the identified needs. In particular, they can launch transnational calls enabling researchers from different countries to propose joint contributions to the Flagships.

[FLAG-ERA](#) [15] also offers support to the four non-selected "runner-ups" Flagship pilots to progress towards their goals with adapted means.

- [FuturICT](#) [16] - understanding and managing complex, global, socially interactive systems, with a focus on sustainability and resilience.
- [Guardian Angels](#) [17] - technologies for extremely energy-efficient, smart, electronic personal companions that will assist humans from infancy to old age.
- [IT Future of Medicine](#) [18] - a data-driven, individualised medicine of the future, based on the molecular, physiological, and anatomical data from individual patients.
- [RoboCom](#) [19] - Robot Companions for Citizens.

FET Flagship background

A call was published in July 2010, and six pilot projects were chosen for the so-called preparatory actions. At the end of 2012, 25 world-renowned experts evaluated the pilots' work and two winning projects were [announced](#) [20] by Vice-President Neelie Kroes on 28th January 2013.

Join the [Digital4science platform](#) [21] to engage and network with researchers.

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