Cambridge to the fore as EU promises €2bn for graphene and neuroscience ICT projects

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Europe's graphene and neuroscience ICT industries will be the recipients of up to €2 billion in EU funding over the next 10 years after the European Commission selected them as its two Future and Emerging Technologies (FET).

The Human Brain Project will attempt to develop a large-scale ICT infrastructure to understand the brain and its diseases, and translate this knowledge into new computing technology.

The European Commission says this will create the world’s largest experimental facility for developing the most detailed model of the brain, for studying how the human brain works and ultimately to develop personalised treatment of neurological and related diseases.

The Graphene Flagship is an academic-industrial consortium that aims to provide a technological and commercial breakthrough for the technology. At just one atom thick, stronger than diamond, transparent, flexible and a great conductor, graphene is seen as a hugely important material for the future.

Cambridge University features in both projects as partners and helped the Graphene Flagship proposal where it played a lead in sketching out the road map for the material research and exploitation project, looking at where and how the money will be spent.

Like the strategy for the new Cambridge Graphene Centre, the Graphene Flagship will not seek to take on groups like Samsung, but instead look for competitive advantages elsewhere.

"Although the flagship is extremely extensive, it cannot cover all areas," said Professor Jari Kinaret from Chalmers University of Technology in Sweden and the Flagship’s director. "For example, we don’t intend to compete with Korea on graphene screens. Graphene production, however, is obviously central to our project."

During the 30 month ramp-up phase, the Graphene Flagship will focus on the area of communications, concentrating on ICT and on the physical transport sector and supporting applications in the fields of energy technology and sensors.

Key applications for graphene identified by the Flagship include fast electronic and optical devices, flexible electronics, functional lightweight components and advanced batteries.

The Flagships are part of the EU’s €80 billion Horizon 2020 programme that aims to simplify its science funding programmes and boost the European economy.

The EU hopes that by extending the funding cycle to 10 years with a major financial incentive behind it, the technologies can be developed faster and further than through the normal two to four year funding rounds. The Flagship projects will receive up to €54 million in the first 30 months with further funding to come from subsequent EU research framework programmes, private partners including universities, member states and industry.
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