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## Digital Single Market

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# Graphene and Human Brain Project win largest research excellence award in history

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The European Commission announced the winners of a multi-billion euro competition of Future and Emerging Technologies (FET).



The winning Graphene and Human Brain initiatives are set to receive one billion euros each, to deliver 10 years of world-beating science at the crossroads of science and technology. Each initiative involves researchers from at least 15 EU Member States and nearly 200 research institutes.

"Graphene" will investigate and exploit the unique properties of a revolutionary carbon-based material. Graphene is an extraordinary combination of physical and chemical properties: it is the thinnest material, it conducts electricity much better than copper, it is 100-300 times stronger than steel and it has unique optical properties. The use of graphene was made possible by European scientists in 2004, and the substance is set to become the wonder material of the 21st century, as plastics were to the 20th century, including by replacing silicon in ICT products.

The "Human Brain Project" 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. This research lays the scientific and technical foundations for medical progress that has the potential to will dramatically improve the quality of life for millions of Europeans.

The European Commission will support "Graphene" and the "Human Brain Project" as FET "flagships" over 10 years through its research and innovation funding programmes. Sustained funding for the full duration of the project will come from the EU's research framework programmes, principally from the Horizon 2020 programme (2014-2020) which is currently negotiated in the European Parliament and

Council.

European Commission Vice President Neelie Kroes said: *"Europe's position as a knowledge superpower depends on thinking the unthinkable and exploiting the best ideas. This multi-billion competition rewards home-grown scientific breakthroughs and shows that when we are ambitious we can develop the best research in Europe. To keep Europe competitive, to keep Europe as the home of scientific excellence, EU governments must agree an ambitious budget for the Horizon 2020 programme in the coming weeks."*

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