



Multi-billion partnerships for EU research

Solving major challenges like finding alternatives to fossil fuels and new antibiotics, boosting the competitiveness of EU industry in sectors that provide good jobs, and bringing research to market – these are the main aims of the EUR 22 billion research partnerships between the EU, industry and Member States that the European Commission announced on 10 July.

11 July 2013 - By GARY FINNEGAN AND MARTIN BANKS

The EU has linked up with some of Europe's biggest companies to stimulate innovation and tackle issues like the need to cut carbon emissions and the challenges of an ageing population. 'These partnerships are focused on areas where the market alone has not been able to find a solution quickly, often because the return on investment is not guaranteed,' said Máire Geoghegan-Quinn, European Commissioner for Research, Innovation and Science. 'But solving these challenges will improve our quality of life, reduce the burden on our societies and create markets for exciting new products and services,' she said.

Under the initiative, the EU will pool resources with innovative industries and EU Member States to invest EUR 22 billion in a series of research collaborations. The Commission proposed five new Joint Technology Initiatives (JTIs) to boost the fields of innovative medicines, aeronautics, bio-based industries, fuel cells and hydrogen, and electronics. These are industries that already provide more than 4 million jobs and have the potential to deliver much more. They also represent sectors where public funding is seen as essential to advancing research in high-risk areas like fuel cell technologies or the development of much-needed new antibiotics.

Neelie Kroes, Vice-President of the European Commission responsible for the Digital Agenda, said that investing in future sources of growth is essential. 'This investment is something we need to do for the sake of all those who are looking for a job and worried about the future,' she said.

In addition to the five JTIs, another public-private partnership in a different form will aim to modernise air traffic management in Europe. The 'Innovation Investment Package' also includes four so-called public-public partnerships between the Commission and EU Member States. These will explore new treatments against poverty-related diseases, measurement technologies for industrial competitiveness, support for high-tech

small- and medium sized enterprises (SMEs), and solutions for the elderly and disabled to live safely in their homes.

In total, the Commission's plan, which will now be scrutinised by MEPs and national governments, proposes an EUR 8 billion investment from Horizon 2020, the EU's next seven-year research and innovation programme, that will leverage around EUR 10 billion from industry and EUR 4 billion from EU Member States.

Global competitiveness

Major European companies including Siemens, Novartis and Airbus have signed up to the new partnerships, pledging cash and in-kind support. Public budgets will provide funding in return.

For Commissioner Geoghegan-Quinn, the JTIs are evidence that research-based industry is putting its money where its mouth is. 'I had the opportunity to eyeball each of the CEOs that will be involved and was left in no doubt that they are committed to being actively involved, to working with competitors, and to bringing money to the table,' she said.

She said the concerted effort of European policymakers and industrialists is essential if Europe is to keep pace with global competitors. For example, while the EU boasts the world's first commercial scale advanced bio-refinery for cellulosic biomass, there are reports that China plans to have nine such facilities by 2015.

'So no-one can rest on their laurels. We need to bolster both public and private spending if we are to stay in, never mind ahead of the game. To put it more bluntly: without new ideas, Europe is not going to get out of this crisis quickly, if at all,' said Commissioner Geoghegan-Quinn.

Dirk Carrez, executive director of the Biobased Industries Consortium (BIC), said: 'The proposal to set up a PPP on bio-based industries is the opportunity to reverse current investment trends and translate Europe's excellence in bio-based technologies into everyday greener products.'

One of the initiatives covers aviation. © Clean Sky

One of the initiatives covers aviation. © Clean Sky

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'The PPP provides a stable, predictable and long-term framework that guarantees and attracts investments. It is a unique opportunity and I thank the Commission for its level of ambition and the excellent public and private collaboration so far. It is a good omen.'

The JTIs are open to a wide range of participants from across Europe – including SMEs, universities, research organisations and others – who can apply for funding. Several of the initiatives will pick up from where existing partnerships leave off.

The Innovative Medicines Initiative, Clean Sky, and Fuel Cells and Hydrogen JTIs have been up-and-running since 2008 but will now have significantly greater budgets and simpler application procedures. The Electronics (ECSEL) JTI combines two current partnerships while the Bio-based Industries initiative is a new venture. The existing partnerships have so far funded 587 projects that had a total of 4 777 participants with SMEs representing about a quarter.

They have already scored some significant successes. For example, the Fuel Cells and Hydrogen JTI has introduced hydrogen-powered buses, forklifts and new back-up power units to the market. Technologies developed by the Clean Sky JTI, such as new types of aircraft wing, should help reduce aviation CO₂ emissions by more than 20 %. The Innovative Medicines Initiative JTI has enabled discoveries that bring new hope to diabetes sufferers. And research by the ENIAC and ARTEMIS JTIs, which are being merged into the new ECSEL JTI, has resulted in drastically higher efficiency of electric vehicles and much greater reliability of electronic systems used in transportation.

Innovation investment package: where does the money come from?

In total EUR 17.5 billion of the EUR 22 billion to be invested will come through five JTI's. These focus on areas where Europe faces major economic, societal and environmental challenges:

- Clean Sky 2 (CS2): to develop cleaner, quieter aircraft with significantly less CO₂ emissions – total budget EUR 4.05 billion
- Innovative Medicines 2 (IMI2): to develop next generation vaccines, medicines and treatments, such as new antibiotics – total budget EUR 3.45 billion
- Fuel Cells and Hydrogen 2 (FCH2): to expand the use of clean and efficient technologies in transport, industry and energy – total budget EUR 1.4 billion
- Bio-based Industries (BBI): to use renewable natural resources and innovative technologies for greener everyday products – total budget EUR 3.8 billion
- Electronics (ECSEL): to boost Europe's electronics manufacturing capabilities – total budget EUR 4.815

Joint programmes with the Member States will see investment of another EUR 3.5 billion in total (EU contribution EUR 1.4 billion) in several initiatives aimed at boosting clinical trial partnerships, metrology research, a dedicated SME research programme, and an active and assisted living research programme.

In addition, the European Commission is also proposing to extend the SESAR (Single European Sky ATM Research) project. This is the technical pillar of the Single European Sky initiative, which aims to modernise air traffic management in Europe. This will see a total investment of EUR 1.6 billion (EU contribution EUR 600 million).

[European Commission press release: Investing in partnerships in research and innovation](#)

More info

[Innovative Medicines JTI](#)

[Fuel Cells and Hydrogen JTI](#)

[Clean Sky JTI](#)

[Bio-based Industries JTI](#)

[Electronic Components and Systems](#)

[European Commission communication on PPPs](#)

[Horizon 2020](#)