

French S&I Landscape

In 2015, France spent 2.22% of GDP on R&D (UK, 1.70%). The French Government allocated a budget of €23.85bn to Research and Higher Education for 2017, an increase of €850 million from 2016. The 2018 budget will see a further €700m increase.

France is 6th ranking nation in terms of global scientific publications in 2016 (UK, 3rd) and 6th in terms of numbers of citations (UK, 2nd). France ranked 11th in 2016 EU Innovation Union Scoreboard (UK, 5th) and 15th in the 2017 Global Innovation Index (UK, 5th). On industrial R&D investment by the top 2000 R&D investing companies, France ranks 2nd behind Germany (UK = 3rd, DE = 1st), and comes 3rd, behind Germany (1st) and the UK (2nd) as being prime location of the top 2000 R&D spending companies.

Public R&D spending in France tends to be dominated by large, state-funded research organisations such as the CNRS (basic and multi-disciplinary science), CEA (alternative energies and atomic energy), INSERM (health and medical research), INRIA (digital science and technology) and INRA (agronomy). A small proportion of public R&D spend is allocated competitively via the National Research Agency, ANR, although the main state-backed players are in pole position to win funding through this route. France also hosts international agencies and research organisations such as the International Thermonuclear Experimental Reactor (ITER), the European Space Agency (ESA) and the OECD.

Reforms to fiscal policies and the research and innovation sector have seen massive investment in R&D to increase international competitiveness through the Future Investments Programme (€47bn invested since 2010). Now in its third phase, the programme aims to support closer collaboration between higher education and research in order to foster innovation; increasing the value of public research through knowledge and technology transfer; and accelerate the modernisation of SMEs and medium-sized companies. Further higher education reforms have led to universities grouping together to form larger academic-research clusters, with the aim of giving them more weighting in international rankings and more visibility with international students. In 2017, President Macron announced his intention to give universities more autonomy and allocate additional places for new students. He also launched an ambitious programme to fund innovation by protecting the research tax credit and creating a €10 billion innovation fund from the disposal of state-controlled companies in the competitive sector whose interest (€300 million in a year) could be invested in innovative projects.

UK Science & Innovation in France

The UK research base enjoys strong links with France and continues to identify areas for bilateral collaboration. France is the UK's fourth most important international research partner. Researchers in France form the third largest national group of co-authors with the UK behind the US and Germany. Furthermore, each year around 18,000 French students come to the UK to study, with around 8,000 UK students heading in the other direction. Strong links exist between the UK and France in international fora, including in the EU (e.g. EASAC) where we coordinate on policy as far as possible. The EU's Horizon 2020 programme is a strong source of financing for UK-France collaboration; there were 3,609 separate research projects involving research organizations in both the UK and France during FP7, Horizon 2020's predecessor.

SIN France recent success stories/forward look

- The team made a significant contribution to the January 2018 UK-France bilateral Summit (Sandhurst Treaty), which reaffirmed the close links between the UK and France, including in Science and Innovation. The main Science & Innovation agreements include joint work on:
 - Smart Energy and a low carbon task force to drive the transition away from fossil fuels;
 - A new Genomic Medicine partnership to embed genomic technology into the healthcare system;
 - A bilateral Research Mobility Fund to support academic exchanges and scientific collaboration;

- Further Space collaboration to build Europe's first Mars Rover and work together in climate science;
- An exchange of best practice to address the Nuclear skills gap;
- Closer collaboration between UK and French research and innovation sectors by bringing together key businesses and academics and supporting the UK's Catapults and French Instituts Carnot to work together on cutting-edge issues;

The team is now working with French and British stakeholders to implement these agreements.

- On space and satellites, former UK Research Minister Jo Johnson attended the signing of the Microcarb UK-France satellite partnership in London in April 2017 confirming joint work to build a satellite to monitor Co2 and COP21 commitments, following up on agreements in the 2016 UK – France summit.
- On cyber security, in November 2017, we showcased UK academic excellence at a workshop entitled “Testing France and the UK’s cyber defences” which resulted in new investment leads to pursue and potential partnerships between UK and French academic institutions.
- On energy, we are taking forward joint work on smart energy technology and low emission vehicles in line with HMG’s objective to improve air quality and end the sales of all new conventional cars and vans by 2040.
- SIN France organised in June 2017 a seminar to promote the benefits of the UK as an attractive destination for internationally mobile researchers. The seminar, which took place at the British Ambassador’s residence in Paris, starred keynote speaker Dr Julie Maxton, executive director of The Royal Society, who talked about the UK’s offer on international mobility.
- As part of Dame Sally Davies’ Paris visit on 16 and 17 October, the team organised a reception at the British Embassy for the UN Inter-Agency Co-ordination Group (IACG) on Antimicrobial Resistance (AMR). The IACG, co-chaired by Dame Sally Davies, was established in response to the UN General Assembly AMR Declaration in 2016, following the UK’s determined push to stimulate international action on AMR.
- SIN France organised a bilateral conference on Artificial Intelligence (AI) in February 2017, bringing together around 120 participants from government and regulatory bodies as well as AI experts from industry, non-profit and academia.

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