



UK Science & Innovation Network Country Summary

France

1. Science and Innovation Landscape

Overview

In 2024, the French Science, Innovation and Technology (S,I&T) budget for public research is estimated at €26.6bn¹, an increase of €1.2bn compared to 2023 and €4.4bn since 2017. Domestic R&D spending in France amounted to €63.5bn in 2021 and represents 2.22% of gross domestic product (GDP)². France ranks 5th among the six largest OECD countries in terms of volume of gross domestic R&D expenditure, ahead of the United Kingdom (1.76%).

France engages in a high level of international collaboration, comparable to that of Germany and the UK. In 2020, the rate of co-publication with at least one institution abroad is 65% for France, slightly lower than that of the United Kingdom (67%) and slightly higher than that of Germany (61%). France's first partner country is the USA, with more than a quarter of international co-publications. The UK is France's second largest partner, with a slightly higher share than Germany³.

France ranks 11th among the 132 economies featured in the 2023 Global Innovation Index⁴. In the European Innovation Scoreboard (July 2023), France is a 'Strong Innovator'⁵ out of a four-scale classification of Innovation leaders.

France is home to four of the top 100 universities (PSL, Sorbonne, Polytechnique and Saclay) in the world and five in the top 200 (PSL, Sorbonne, Polytechnique, Paris-Saclay, Paris Cité)⁶. In 2020, 665,600 people were involved in R&D activity in France, of which two-thirds were researchers and one-third were research support staff. For every ten researchers, on average, six work in companies and four in the public sector⁷.

Landscape & Structure

France has a well-developed, structured, funded science and innovation ecosystems. Funding is mostly awarded in the form of grants (61%) from the Inter-Ministerial Mission for Research and Higher Education and through competitive funding calls (25%), awarded through public funding agencies such as the ANR, the energy transition agency (ADEME), the Public Investment Bank (BPI France), the Caisse des Dépôts and regional authorities.⁸ Approximately 15% comes from own funds (capital etc).

Public sector research in France is conducted in dedicated research institutes categorised by the French government into 'science & technology' establishments and 'industrial & commercial' establishments, higher

France also hosts international agencies and research organisations such as the International Thermonuclear Experimental Reactor (ITER), the European Space Agency (ESA), UNESCO and the OECD, as well as research

¹ [Projet de loi de finances 2024 | enseignementsup-recherche.gouv.fr](https://projetlois.finances.gouv.fr/enseignementsup-recherche)

² <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

³ https://publication.enseignementsup-recherche.gouv.fr/eesr/FR/T033/la_position_scientifique_de_la_france_dans_le_monde_a_travers_ses_publications/

⁴ [France ranks 11th among the 132 economies featured in the GII 2022](https://www.gii.gov.uk/)

⁵ https://research-and-innovation.ec.europa.eu/statistics/performance-indicators/european-innovation-scoreboard_en

⁶ [World University Rankings 2023 | Times Higher Education \(THE\)](https://www.timeshighereducation.com/world-university-rankings)

⁷ [les moyens humains de la recherche et développement - état de l'Enseignement supérieur, de la Recherche et de l'Innovation en France n°15 \(enseignementsup-recherche.gouv.fr\)](https://enseignementsup-recherche.gouv.fr/les-moyens-humains-de-la-recherche-et-developpement-etat-de-l-enseignement-superieur-de-la-recherche-et-de-l-innovation-en-france-n15)

⁸ 'Groupe de travail 1 : Financement de la recherche', September 2019, p17 (in French)



infrastructures such as the ILL (neutron research), the ESFP (synchrotron radiation) and EMBL (molecular biology).

Priorities and Policies

Reforms to fiscal policies have seen significant investment in R&D and innovation and increased international competitiveness through the **Future Investments Programme** (PIA) with a budget of around €57bn and covering 2010-2020. Now in its 4th phase with a budget of over €20bn, the PIA aims to support closer collaboration between higher education and research in order to foster innovation; increase the value of public research through knowledge and technology transfer; and accelerate the modernisation of SMEs and medium-sized companies.

Complementing the PIA, **France 2030** is a €54bn Investment Plan aiming to sustainably transform the key sectors of the economy (energy, automotive, aeronautics and space) through research, innovation and industrial investment and is managed by the ANR, in tandem with BPI France and ADEME. Launched in October 2021, nearly half of the funding has already been allocated. More than 3,200 projects backed by 3,500 research centres and companies, half of them small and medium-sized enterprises (SMEs), are benefiting from public funding to the tune of around 30% of the sums invested.

The **Multi-annual Research Programming Law** (LPR) promising €25bn in additional budgetary programming over 10 years was launched in 2020 to restore budgetary growth to French research, improve the attractiveness of research careers and strengthen France's place on the international scene. The reform also identifies 5-7 'grand societal challenges' in which France can develop world-leading technological solutions, and provide strategic support for these over 10-15 years: digital technologies, digital health, decarbonisation, responsible agriculture, sustainable mobility, cities of tomorrow, digital education.

In 2023, President Macron's announced his [vision for the future of research](#), which included transforming the national research organisations into **seven programme agencies**, giving more autonomy to universities and launching a presidential science council. This science council will be made up of twelve renowned researchers and will be a permanent body which will play "an internal advisory role" for the President of the Republic and will meet every trimester.

2. UK- France Partnership on S,I&T

Institutional cooperation

The UK research base enjoys strong links with France and continues to identify areas for bilateral and multilateral collaboration in several sectors including emerging technologies, health and energy and climate change. Other issues of mutual interest include G7 priorities nuclear energy, research security/culture, open & inclusive research, researchers at risk. There are many existing collaborations, such as:

- CNRS-Imperial International Research Centre for Translational Science and Technology;
- Institut Pasteur - Oxford University PhD exchange programme focused on AMR;
- Inria-UK AI Safety Institute agreement;
- Inria London programme on AI;
- Joint UKSA-CNES satellite launches and cooperation.

Government to government cooperation

At the 2023 UK-France leadership summit, PM Sunak and President Macron agreed to enhance scientific cooperation in priority fields such as emerging technologies, space, health, or climate change by setting up a joint committee for science, technology and innovation as a high-level scientific dialogue, building on existing relations and ongoing collaborations. The first science, innovation and technology dialogue took place in London in February 2024, prioritising cooperation in the areas of AI, Hydrogen, Space and Research Security, awarding funding associated to these areas. The next dialogue will take place in France in 2026.



UK Science
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