



UK Science & Innovation Network Country Snapshot

Belgium

BELGIUM - Science and Innovation landscape

R&D: Belgium has seen the highest increase in R&D expenditure as a percentage of GDP in the EU over the last decade, with a steady increase from 2.00% of GDP in 2009 to **2.89% of GDP in 2019** (compared to the EU's 2.19% of GDP in 2019).¹ In 2019, GDP expenditure on R&D was approx. €13.8bn.² However, R&D figures differ amongst the three regions in Belgium, with each regional government competent for its own economic and innovation policy.

Science, research and innovation **competencies are split amongst the six Belgian governments** (Federal/ Flemish/ Brussels Capital Region/ Walloon Region/ French-speaking Community/ German-speaking Community):

- **Innovation is primarily a regional competency:** Each region has their own R&D initiatives, policy and spending. (Relevant governments: Flemish Government, Walloon Regional Government, Brussels Capital Regional Government).
- **Research can be a Federal, Regional and Community competency**, given that:
 - o **Higher Education** (including universities) falls under the Community governments;
 - o **Research**, if linked to a specific competency, belongs to the federated entity in charge of the competency.

The **Federal Government** coordinates Belgian participation to **European programmes** with the Communities and Regions, through the Federal Science Policy Office ([BELSPO](https://www.belspo.be/belspo/coordination/biCoop_en.stm)). BELSPO is also responsible for coordinating “the scientific section of the **bilateral agreements** for economic, industrial, scientific and technological cooperation which Belgium has concluded with a number of countries”. (More information is available here: https://www.belspo.be/belspo/coordination/biCoop_en.stm).

The **three regions** have their own R&D initiatives, policy, institutions and spending. For example, Brussels Capital Regional (BCR) has its **Regional Innovation Plan 2021-2027**, which focuses on five thematic strategic innovation domains: 1) Climate – climate robust buildings and infrastructure; 2) Optimal use of resources; 3) Intelligent urban flows; 4) Personalised and integrated health and care; 5) Social innovation, public innovation and social inclusion.³ A key player stimulating innovation in Brussels is **Innoviris**, the Brussels Institute for Research and Innovation, who finance innovative projects for enterprises, research organisations and non-profit organisations. In 2020, Innoviris granted €49.32m in subsidies and financed 358 projects.⁴

¹ Provisional figure from Eurostat (2020, 27 November). *R&D expenditure in the EU at 2.19% of GDP in 2019* [online]. Retrieved June 28, 2021, from <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20201127-1>. See also Eurostat (2021). *Research and development expenditure, by sectors of performance, % of GDP* [online dataset]. Retrieved June 28, 2021, from <https://ec.europa.eu/eurostat/databrowser/view/TSC00001/default/table>. To note, R&D expenditures include all expenditures for R&D performed within the business enterprise sector (BERD) on the national territory during a given period, regardless of the source of funds. R&D expenditure in BERD are shown as a percentage of GDP (R&D intensity).

² Provision figure from OECD (2019). *Gross domestic expenditure on R&D by sector of performance and source of funds* [online]. Retrieved June 30, 2021, from https://stats.oecd.org/Index.aspx?DataSetCode=GERD_SOF

³ Innoviris. (2019). *The Regional Innovation Plan 2021-2027* [online]. Retrieved June 30, 2021, from <https://innoviris.brussels/nl/gewestelijk-innovatieplan>

⁴ Innoviris. *Activiteitenverslag 2020* [online]. Retrieved June 30, 2021, from <https://innoviris.brussels/nl/activiteitenverslagen>



The **FNRS** and **FWO** are the key funding institutions for fundamental research in the francophone and Dutch-speaking communities respectively.

- Researchers can find the **F.R.S.-FNRS (international) calls** listed here: <https://www.frs-fnrs.be/en/calendrier-des-appels>
- More information on the **FWO's fellowships and funding** can be found here: <https://www.fwo.be/en/fellowships-funding/>

Within Belgium, **universities** are important actors within the science and innovation landscape and highly successful EU funding recipients. KU Leuven University tops the top-ten 10 Belgian Horizon 2020 Net EU Contribution beneficiaries with approx. €363m.⁵ The following universities also feature in the top-ten: Ghent University, Vrije Universiteit Brussel, University of Antwerp, Université Catholique de Louvain, Université Libre de Bruxelles.

The KU Leuven University was elected the **most innovative European University for the fourth year in a row** by Reuters since 2016,⁶ whilst the city of Leuven was also elected the 2020 European Capital of Innovation.⁷

At the national level, **Belgium has also proved a key innovation player** – ranking 22nd in the 2020 Global Innovation Index⁸ and having been elected as an innovation leader and the top four in innovation performance in the 2021 European innovation scoreboard, with strengths in 'Attractive research systems', 'Use of information technologies', and 'Linkages'.⁹

Belgium – UK collaboration:

**Just under
16,000**

UK and Belgium co-publications (2017-2019, all subjects, Elsevier Scopus data)

UK position in Belgium's Horizon 2020 collaboration:
5th

Belgian position in 2020 Global Innovation Index:
22nd

As of October 2020, Belgium has participated in 4,255 Horizon 2020 projects. Out of these, 844 projects have at least one UK and one Belgian beneficiary.

Of the 94,000 collaborative links Belgium has formed within Horizon 2020, 8,500 have been with UK organisations.¹⁰ The UK ranks 5th as a collaborative partner for Belgium, whilst Belgium is ranked 7th as a collaborative partner for the UK.¹¹

Belgium and the UK enjoy a strong bilateral research relationship, as highlighted by the high number of joint patents and publications. According to OECD data, in 2016, Belgium filed c.700 patent applications to the European Patent Office with at least one foreign co-inventor, of which c.80 (around 11%) involved the UK.^[1] According to Elsevier Scopus data, between 2017 and 2019, the UK and Belgium produced just under 16,000 research publications together with an average Field Weighted Citation Index (FWCI) score of 3.57.¹² Belgium and the UK also collaborate in many multilateral academic and innovation networks, including via EUREKA, LERU and Yerun.

⁵ Horizon Dashboard [online], extracted on June 30, 2021, from <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard>

⁶ Reuters. (2019, October 23). Stanford, MIT and Harvard top the fifth annual Reuters Top 100 ranking of the most innovative universities. *PR Newswire* [online]. Retrieved on January 14, 2020, from <https://www.prnewswire.com/news-releases/stanford-mit-and-harvard-top-the-fifth-annual-reuters-top-100-ranking-of-the-most-innovative-universities-300943569.html>

⁷ Kirk, F. (2020, September 24). *Leuven named the 2020 European capital of Innovation* [online]. Retrieved June 30, 2021, from [//horizon-magazine.eu/article/leuven-named-2020-european-capital-innovation.html](https://horizon-magazine.eu/article/leuven-named-2020-european-capital-innovation.html)

⁸ Cornell University, INSEAD, and WIPO (2020). *The Global Innovation Index 2020: Who Will Finance Innovation?* [online]. Retrieved June 30, 2021, from <https://www.globalinnovationindex.org/gii-2020-report>

⁹ European Commission (July 2021). *European innovation scoreboard* [online]. Retrieved June 30, 2021, from https://ec.europa.eu/growth/industry/policy/innovation/scoreboards_en. European Commission (July 2021). *Belgium* [online]. Retrieved June 30, 2021, from <https://ec.europa.eu/docsroom/documents/45905>

¹⁰ Source: eCORDA (European Commission), as of October 2020.

¹¹ Source: eCORDA (European Commission), as of October 2020.

¹² OECD Patent Statistics, <https://stats.oecd.org/>

¹³ Elsevier Scopus, <https://www.scopus.com/>



Examples

UK-Belgian collaboration occurs across a range of fields, including in global health, as exemplified by the following projects:

- As part of the [ARTIC Network](#)¹³, funded by the Wellcome Trust, UK, Belgian and US universities have been collaborating to monitor viral evolution during outbreaks such as Ebola and the Covid-19 pandemic.
- [Controlling Emergent Anopheles stephensi in Ethiopia and Sudan' \(CEASE\) project](#): Funded by the Wellcome Trust and led by the Liverpool School of Tropical Medicine, researchers from the Institute of Tropical Medicine (ITM) in Antwerp are collaborating in this interdisciplinary research project mapping the social and environmental factors impacting the spread of *Anopheles stephensi* malaria in Ethiopia and Sudan.¹⁴

SIN Belgium objectives

Our Science & Innovation Network (SIN) Office for Belgium is based in Brussels. SIN Belgium supports UK science and innovation policy objectives by facilitating bilateral research, science and innovation collaboration between UK and Belgian counterparts. This includes the communication of UK science and innovation policy to Belgian partners and stakeholders as well as reporting on key Belgian S&I trends and the wider landscape. In 2021, SIN Belgium's work will primarily focus on global health and climate change.

SIN Belgium contact

Lauren Bruffaerts, Science & Innovation Officer – Lauren.Bruffaerts@fcdo.gov.uk

The information in this document is believed correct at the time of distribution. However, HM Government accepts no liability for any loss or damage incurred as a result of any inaccuracies, howsoever caused.

¹³ <https://artic.network/>

¹⁴ See Institute of Tropical Medicine (2021, 22 April). *Invasive malaria mosquito finds way to cities in the Horn of Africa* [online]. Retrieved June 30, 2021, from <https://www.itg.be/E/Article/invasive-malaria-mosquito>. LSTM (2020, 17 November), *LSTM receives Wellcome grant to investigate the origins, epidemiological importance and control of the invasive malaria mosquito Anopheles stephensi in the Horn of Africa* [online]. Retrieved June 30, 2021, from <https://www.lstmed.ac.uk/news-events/news/lstm-receives-wellcome-grant-to-investigate-the-origins-epidemiological-importance>

