



UK Science & Innovation Network Country Summary

1. Science and Innovation Landscape

Denmark is among the most innovative countries in the world, ranking 1st on the European Innovation Scoreboard¹, 1st in the World Competitiveness Ranking² and 9th on the Global Innovation Index 2023³. In addition, Denmark ranks 4th (2nd in Europe) on the Global Talent Competitiveness Index with strengths around fostering and retaining talent⁴.

Danish R&D excellence

Denmark has a strong academic base and thriving innovation ecosystem across a range of thematic areas. Highlights include *Life Sciences* (an impressive 20% of Danish export revenue) with a strong academic base, a thriving start-up and biotech sector and industry giants like Novo Nordisk. *Engineering biology/Biosolutions* is a growing priority politically, backing up a solid academic foundation, excellent engineering tradition. The Technical University of Denmark ranks 3rd in the World, 1st in Europe on Biotechnology⁵), and strong industry actors, particularly around food and medicinal sectors. In *Quantum technologies*, Denmark has a strong academic tradition (legacy of Niels Bohr and boasting the highest incidence of Quantum graduates in the world). Denmark benefits from a growing commercial ecosystem with good links to the UK sector. Denmark is a front-runner on *green/clean tec*h and R&D to support the green transition continues to be a priority and strength.

Research funding and public-private partnerships

Denmark spends around 3% of GDP on research and development in its eight public universities and through private-sector research activities. In addition, to national public research councils and innovations funds, Denmark is highly successful in attracting EU funding. Three Danish universities (University of Copenhagen, Technical University of Denmark, and University of Southern Denmark) are among the top 10 recipients of 2021-2023 Horizon Europe funding.⁶

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A significant part of Danish Research & Development (R&D) takes place in industry, with pharmaceutical companies and clean energy companies as prime examples. In addition, a large proportion (app. 40%) of university research is supported via the Danish tradition for philanthropic, business-owning foundations. Almost 1400 such foundations exist, the largest being the Novo Nordisk Foundation (on par with Wellcome in terms of donations. This is the largest foundation in the World in terms of assets), supporting Danish R&D through a mix of bottom-up research grants and strategic research centres in Danish universities. This is often with international collaboration components. Together with a strong tradition for public-private partnerships and an agile political system, this allows systemic flexibility and strategic pushes for key priority areas.

Kingdom of Denmark

Greenland and the Faroe Islands are also home to universities, research institutions and private sector research. Strong ties with Danish research entities but have their own research councils and foster unique research environments. Interest in UK collaboration around Arctic science, Oceans, Climate and Environmental Science.

2. UK-Denmark Science, Innovation and Technology partnerships

Bilateral cooperation agreements:

A couple of recent bilateral agreements set the direction for the overarching DK-UK relationship. These include a June 2023 Joint Statement, highlighting collaboration on science and technology as a key pillar, and an April 2023 Memorandum of Understanding on Climate/Energy.

UK-Denmark

The UK and Denmark share a lot of complementary expertise and have a strong tradition for academic collaboration and many institutional links. Much of this has been driven from a bottom-up approach by direct researcher-to-researcher connections founded in student and early career researcher exchanges. Such exchanges have decreased due to the UK's exit from the EU, and more targeted strategic initiatives may be necessary to ensure continued mutually beneficial collaboration.

Denmark's regulatory environment is very friendly to entrepreneurs (ranking 4th in the World (1st in Europe)) on the World Bank Ease of Doing Business 2023 index⁷). Together with an excellent talent base and desirable living conditions, this translates into a thriving start-up environment. In addition to Danish tech start-ups looking to the UK, we see

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increasing interest from British and other international R&D companies in establishing European offices in Denmark.

Beyond complementary scientific strengths and flexible funding, Denmark is a likeminded partner on strategic, cross-cutting work on research security, research culture and strategic work on securing infrastructure and supply chains.

SIN Denmark focus areas

SIN works to support the wider bilateral relationship on science, innovation and technology across sectors and scientific fields. Current thematic focus points centre on strategic bilateral dialogues on Quantum technologies, Engineering Biology, Health and Life Sciences (including AMR and pandemic preparedness). We also directly fund and support Arctic Science partnerships with researchers in Greenland and Iceland and increased UK collaboration with the Arctic Council Working Groups.

3. SIN contacts

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Sources

- 1. World Competitiveness Ranking 2023 IMD business school for management and leadership courses
- 2. European innovation scoreboard 2023 European Commission (europa.eu)
- 3. Global Innovation Index 2023: Innovation in the face of uncertainty (wipo.int)
- 4. Global Talent Competitiveness Index | INSEAD
- 5. ShanghaiRanking's Global Ranking of Academic Subjects
- 6. Projects & results | CORDIS | European Commission (europa.eu)
- 7. Ease of doing business rank (1=most business-friendly regulations) | Data (worldbank.org)