

## KEY HIGHLIGHTS

Horizon 2020 in general has been a springboard for Luxembourg, entering the framework programme as a Widening country and steadily improving its performance. Partnership participation under Horizon 2020 was mainly used to build up collaborative networks, which are now coalescing into projects in other parts of the framework programme. National schemes offer complementary opportunities for international collaborations. Future participation in Horizon Europe partnerships will be based on the national research strategy as well as a critical mass of research in the respective domains.

**21** H2020 public partnerships (\*)

Or  
**21.21%**  
of total  
(99 partnerships)

**21** H2020 public partnerships (\*) participations

Or  
**0.93%**  
of total

**0** H2020 public partnerships (\*) coordinations

Or  
**0%**  
of total

Source: ERA-LEARN database (cut-off date June 2021), H2020 period (2014-2020) Excluding EIT-KICs, EuroHPC and ECSEL

(\*) Horizon 2020 public-public partnerships include ERA-NET Cofund, EJPs, Art 185 initiatives and JPIs.

Partnership participations: number of partnerships a specific country takes part as participant – for certain countries more than one national organisation may take part thus the participations may be more than the number of partnerships a country is part of. Total partnership participations: number of partners from a specific country participating with any role (i.e. coordinator, participant, observer, other) in partnerships. Partnership coordinations: number of partnerships a specific country coordinates.

**€9.47 million**

in actual national contributions in public partnerships during H2020 (2014-2020)

Or **0.43%** of total

**€3 304**

per researcher FTE (average between 2014-2019 based on EUROSTAT data)

Source: ERA-LEARN database (cut-off date June 2021), H2020 period (2014-2020)

Actual national contributions is the funding given by each country to cover the participation of national science and technology groups in the funded projects of the joint transnational calls launched by the public partnerships. Actual contributions for each researcher are the total actual contributions by a country divided by the number of researchers in the country estimated in full-time equivalents (FTE) average between 2014-2019 based on EUROSTAT data.

## KEY INTENTIONS FOR THE FUTURE

Public partnerships have been used prominently for health research in accordance with significant investment by the government in that area. ICT and material science research are integral parts of Luxembourg's economy and feature a higher degree of private participants. Future priorities include:

- industrial and service transformation
- personalised healthcare
- sustainable and responsible development
- 21<sup>st</sup> century education.

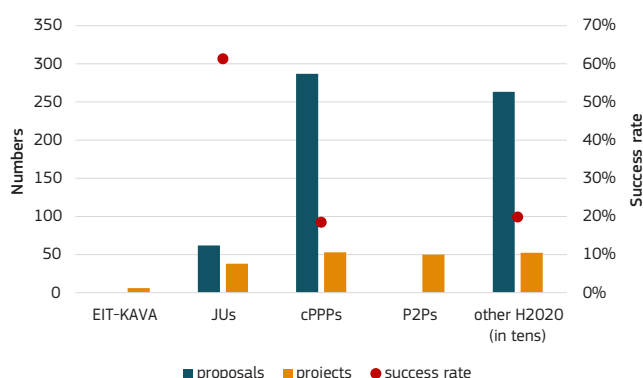


**TABLE 1: Distribution of funding under the different H2020 instruments (P2Ps, JUs, cPPPs and other H2020 projects, i.e. CSAs, RIAs, IAs, etc.) across thematic priorities**

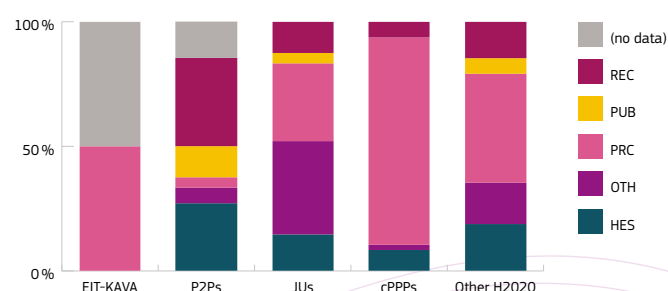
THEMATIC PRIORITIES	P2Ps PROJECTS	JUs PROJECTS	cPPPs PROJECTS	OTHER H2020 PROJECTS
Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, Biotechnology	28.43 %	0.00 %	1.78 %	12.52 %
Climate action, environment, resource efficiency and raw materials	0.00 %	0.00 %	0.12 %	1.59 %
Europe in a changing world - inclusive, innovative and reflective Societies	6.68 %		20.58 %	15.29 %
Food security, sustainable agriculture and forestry, marine and maritime and inland water research	3.95 %	0.68 %		3.44 %
Future and Emerging Technologies	0.00 %		0.00 %	4.07 %
Health, demographic change and wellbeing	60.54 %	73.02 %		18.51 %
Information and Communication Technologies		13.03 %	75.95 %	26.63 %
Secure, clean and efficient energy	0.40 %	9.69 %	1.57 %	8.92 %
Smart, green and integrated transport	0.00 %	3.57 %		9.02 %
	100,00 %	100,00 %	100,00 %	100,00 %

Source: ERA-LEARN database (cut-off date June 2021) based on actual national contributions for P2Ps; eCORDA based on net EU contribution; values are calculated as the share of investments of the specific instrument in the specific theme in the total investments under the specific instrument

**FIGURE 1: Eligible proposals, projects and success rates**



**FIGURE 2: Types of project beneficiaries (%)**



Source: ERA-LEARN database for P2Ps (cut-off date June 2021); eCORDA for EIT-KAVA, JUs, cPPPs, other H2020 projects (RIAs, CSAs, etc.)

No proposal data for P2Ps, EIT-KICs (Figure 1). EIT-KAVA: KIC Added Value Activities; HES: higher education; OTH: other; PRC: private for-profit companies; PUB: public bodies; REC: research organisations (Figure 2)

Luxembourg has a high overall success rate under Horizon 2020. Participation in the JU Innovative Medicines Initiative has been proven to be of high interest and success among all the partnerships. As can be seen in Figure 2, Luxembourg has an above average participation by the private sector in Horizon 2020, as there is a significant share of specialised private companies active in these fields.



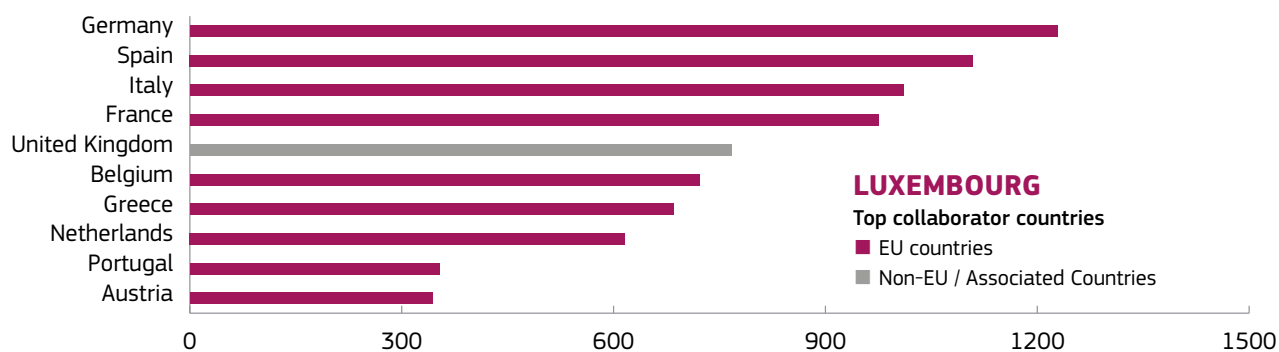
### COMPLEMENTARY AND CUMULATIVE FUNDING

A specific programme was set up to financially incentivise the participation of companies in certain parts of the framework programme. In parallel, public researchers that are the most successful in Horizon 2020 can receive an additional research funding bonus.

### ADDITIONAL INVESTMENTS TRIGGERED

Partnerships are complemented by additional national funding instruments that support bilateral and multilateral RD&I projects, some of which are follow-up projects or initiators of EU-funded projects.

**FIGURE 3: Top collaborators of Luxembourgian researchers under Horizon 2020 projects (including JUs, cPPPs, P2Ps and other H2020 projects)**



Source: eCorda; Showing top-10 collaborator-countries



## SUCCESS STORIES

- ✦ Overall, participation in Horizon partnerships has contributed to the structuring of the national RD&I landscape. Health-related partnerships, for example, have contributed to the consolidation of that domain, which has been defined as a national priority area only a little over 10 years ago. For example, national flagship projects such as the National Centre of Excellence in Research on Parkinson's Disease (NCER-PD) have been complemented by participation in the JPND and other Horizon 2020 programmes.
- ✦ National strategies such as the Data-Driven Innovation Strategy for the Development of a Trusted and Sustainable Economy as well as the National Research and Innovation Strategy are well aligned with and complement participation in partnerships such as EuroHPC, which has its headquarters established in the country.
- ✦ Other relevant partnerships in the areas of clean steel, hydrogen, energy transition, and process industries are also strongly aligned with key industrial sectors in the country and the national priority of sustainable development.
- ✦ Under EuroHPC, Luxembourg is hosting the MeluXina supercomputer which became operational in 2021.