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COMMISSION STAFF WORKING DOCUMENT

EVALUATION

Interim Evaluation of the Horizon Europe Framework Programme for Research and Innovation (2021 - 2024)

Accompanying the document

Communication from the Commission to the European Parliament and the Council

Horizon Europe: Research and Innovation at the heart of competitiveness

{COM(2025) 189 final}

List of Annexes:

Annex 1 Procedural information

The interim evaluation of the Horizon Europe programme (Decide reference: PLAN/2022/785) has been developed under the lead of DG RTD, under the guidance of the interservice steering group (ISSG) composed of 29 DGs (AGRI, BUDG, CLIMA, CNECT, COMM, COMP, DEFIS, EAC, ECFIN, ECHO, EMPL, ENER, ENV, GROW, HOME, HR, IAS, INTPA, JRC, MARE, MOVE, NEAR, OLAF, OP, REGIO, SANTE, SG, SJ, TRADE) and 5 Executive Agencies (CINEA, EISMEA, ERCEA, HADEA, REA), established in April 2022.

Preparatory activities started in April 2022 when the ISSG met to discuss the expectations of participating services, the draft call for evidence, the draft consultation strategy and the working methods of the ISSG. Following this ISSG the call for evidence was then published in July 2022 for four weeks and received 54 individual replies (presented in Annex 5). The ISSG met again in October 2022 to discuss the feedback received on the call for evidence and the draft questionnaire for stakeholder consultation.

The stakeholders' consultation was launched on 1 December 2022 and closed on 19 February 2023, having gathered 1663 replies for questions on Horizon Europe. This was followed by an online public event which was held on 29 June 2023 to complement the public consultation process on key themes that emerged prominently in the survey results namely: proposal preparation and project implementation in Horizon Europe, the balance between low and high TRLs across Horizon Europe as well as the Horizon Europe's novelties.

After the *ex post* evaluation of Horizon 2020 was completed and published in January 2024[1], the ISSG met that June to discuss the planning of the interim evaluation of Horizon Europe. In October 2024, the ISSG members provided comments on the first draft of the SWD. After addressing these comments and finalising the individual partnership evaluation reports, the full package of documents was shared with the ISSG for final comments in December 2024-January 2025. The Horizon Europe Executive Committee was consulted at the same time.

The final inter-service consultation took place between 12 and 25 March 2025.

[1] https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/evaluation-impact-assessment-and-monitoring/horizon-2020_en

Annex 2 Methodology and analytical methods used

The interim evaluation of Horizon Europe was coordinated by the Common Programme Analysis & Regulatory Reform Unit of the Commission's Directorate-General for Research & Innovation, with the support of: (i) a working group (the 'MEAVE' - Impact Monitoring, Evaluation and Analysis Virtual Entity) gathering together the R&I family DGs and Executive Agencies; (ii) and an interservice steering group comprising relevant Commission DGs. The interim evaluation of Horizon Europe started in 2023 and builds on: (i) a large amount of quantitative and qualitative evidence collected through a variety of methods described below; and (ii) a thorough evaluation analysis, applying triangulation of evidence from different sources, ensuring an objective and robust assessment.

Main data sources

The scope of the Horizon Europe interim evaluation covers 15 148 signed projects that closed as of 6 January 2025. Section 3 of the SWD provides data on how the situation evolved during the evaluation period since Horizon Europe was launched in April 2021 until 6 January 2025. Section 4 of the SWD provides the evaluation findings based on triangulation of evidence predating January 2025 (most external evaluation studies were carried out during 2023-2024, with programme data extracted in June/July 2023).

The analysis was based on the following data sources:

- The main source of data for the evaluation is the Common Research Data Warehouse (CORDA) Portal. The portal gathers data collected through different Commission tools, including policy monitoring at work programme level, data collected at proposal stage, grand agreement preparation and through continuous project reporting.
- Beyond CORDA, additional data were used. This was also to have comprehensive data on the whole framework programme, in particular for the EIC, different partnerships and missions (such as the EIC Impact Report[2], Biennial monitoring report[3] on partnerships in Horizon Europe, External assessment reports[4] of the EU Missions, the Commission Communication[5] and Staff Working Document[6] on the assessment of EU Missions two years on, a report[7] of the expert group on monitoring of EU Missions, and an assessment[8] of JRC by a panel of independent experts).

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[2] EISMEA, Scaling Deep Tech in Europe – the European Innovation Council Impact Report 2025, https://eic.ec.europa.eu/document/download/7b947b36-66cb-4471-a2d0-158d5ae6770f_en?filename=EIC-Impact-Report-2025.pdf

[3] European Commission, Performance of European partnerships – Biennial monitoring report 2024 on partnerships in Horizon Europe, Publications Office of the European Union, 2024

[4] Janssen, M. and Schiele, J., Mission A Soil Deal for Europe assessment report, Angelis, J. and Boski, I., Cancer Mission assessment report, Kaufmann, P. et al., Mission Climate-neutral and smart cities assessment report, Griniece, E. and Rantcheva, A., Mission Restore our Ocean and Waters assessment report, Nauwelaers, C. and Phillips, C., Mission Adaptation to Climate Change assessment report, Publications Office of the European Union, 2023

[5] COM(2023) 457

[6] SWD(2023) 260

[7] Karo, E., Barajas, A., Sarvaranta, L., Antoniou, L. et al., Commission Expert Group to support the monitoring of EU missions – Final report, Publications Office of the European Union, 2024

[8] European Commission, Interim evaluation of the activities of the Joint Research Centre under Horizon Europe and Euratom 2021-2025 – Final report of the evaluation panel, Publications Office of the European Union, 2023

- Evidence and analysis conducted in the ex-post evaluation of Horizon 2020[9] and the Commission Expert Group on the Interim Evaluation of Horizon Europe.[10]
- External datasets such as Scopus[11], Orbis[12], PATSTAT[13], Crunchbase, Dealroom, Technote, MAG/OpenAlex, PlumX, Overton, NamSor, and Unpaywall.
- Monitoring reports[14] of Horizon Europe and statistical data mainly from the Commission's internal IT Tools (Horizon Dashboard), as well as Eurostat/OECD data and Horizon Europe Performance Statement.[15]
- Extensive quantitative and qualitative analyses on specific aspects and objectives of Horizon Europe, conducted through five external evaluation studies (with multiple reports each) by independent evaluation experts, selected using a transparent process and overseen by relevant Commission services.

Five studies covered the different impact areas of the programme:

1. Evaluation study on **Excellent science in the European framework programmes for research and innovation** – interim evaluation support study, 2024, https://data.europa.eu/doi/10.2777/2295765
2. **Horizon Europe and the Green Transition** – Interim evaluation support study, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2777/67934
3. Evaluation support study on **Horizon Europe's contribution to a resilient Europe**, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2777/797281
4. **Horizon Europe and the digital & industrial transition** – Interim evaluation support study, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2777/845650
5. Evaluation study of the **European framework programmes for research and innovation for an innovative Europe** – support study for the interim evaluation of Horizon Europe, Publications Office of the European Union, 2024, https://data.europa.eu/doi/10.2777/499132
6. **Synthesis study** summarizing the findings on **programme coherence and synergies** from these five impact area studies, while providing updated e-grants data analysis: Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2777/5616419

The above-mentioned five studies included individual reports on the evaluation of institutionalised partnerships:

1. **Clean Aviation** JU: https://data.europa.eu/doi/10.2777/403632
2. **Circular Bio-Based Europe** JU: https://data.europa.eu/doi/10.2777/636121
3. **Clean Hydrogen** JU: https://data.europa.eu/doi/10.2777/577004
4. **Europe's Rail** JU: https://data.europa.eu/doi/10.2777/3737899
5. **The Global Health EDCTP3** JU: https://data.europa.eu/doi/10.2777/555121 (and its predecessor, the second European and Developing Countries Clinical Trials Partnership Programme (EDCTP2): https://data.europa.eu/doi/10.2777/017474)
6. Interim evaluation of the **innovative health initiative (IHI)** and final evaluation of the **innovative medicines initiative (IMI2)**: https://data.europa.eu/doi/10.2777/918737
7. **The Single European Sky** JU: https://data.europa.eu/doi/10.2777/7895247
8. **EIT Urban Mobility**: https://data.europa.eu/doi/10.2777/9939305
9. **EIT Climate-KIC**: https://data.europa.eu/doi/10.2777/1601692

[9] SWD (2024) 29

[10] European Commission, Align Act Accelerate – Research, technology and innovation to boost European competitiveness, Publications Office of the European Union, 2024.

[11] https://www.scopus.com/search/form.uri?display=basic#basic

[12] https://login.bvdinfo.com/R1/Orbis

[13] https://www.epo.org/en/searching-for-patents/business/patstat

[14] SME participation in Horizon Europe (2024), Country participation in the EU R&I FPs (2024), Fostering gender equality (2025), EU Missions (forthcoming 2025)

[15] Horizon Europe Performance Statement, retrieved 07/10/24 from Horizon Europe - Performance - European Commission (europa.eu)

10. **EIT Food**: https://data.europa.eu/doi/10.2777/3661526
11. **EIT InnoEnergy**: https://data.europa.eu/doi/10.2777/5626827
12. **EIT Health**: https://data.europa.eu/doi/10.2777/049770
13. **EIT KIC Manufacturing**, https://data.europa.eu/doi/10.2777/58516
14. **EIT KIC Raw materials**, https://data.europa.eu/doi/10.2777/85259
15. **EIT KIC Digital**, https://data.europa.eu/doi/10.2777/431739
16. **Key Digital technologies (Chips)** JU, https://data.europa.eu/doi/10.2777/71518
17. **Smart networks and services** JU, https://data.europa.eu/doi/10.2777/17621
18. **The European Metrology Programme**, https://data.europa.eu/doi/10.2777/39988
19. **Euro HPC**, https://data.europa.eu/doi/10.2777/561873

In addition, there were shorter individual evaluation reports on 20 co-programmed and co-funded partnerships which do not have a legal obligation for evaluation:

1. European Partnership on **Transforming Health and Care Systems** (THCS) https://data.europa.eu/doi/10.2777/140226
2. **ERA for Health**, https://data.europa.eu/doi/10.2777/053085
3. European Partnership on the **Assessment of Risks from Chemicals** (PARC) https://data.europa.eu/doi/10.2777/001851
4. **Artificial Intelligence, Data and Robotics**, https://data.europa.eu/doi/10.2777/057832
5. **Made in Europe**, https://data.europa.eu/doi/10.2777/334596
6. **Photonics Europe**, https://data.europa.eu/doi/10.2777/711691
7. **Process4planet**, https://data.europa.eu/doi/10.2777/324548
8. **European partnership for batteries** (BATT4EU), https://data.europa.eu/doi/10.2777/1965736
9. **Clean steel partnership**, https://data.europa.eu/doi/10.2777/2978548
10. **Towards zero-emission road transport** (2ZERO), https://data.europa.eu/doi/10.2777/2828415
11. People-centric Sustainable Built Environment (Built4People), https://data.europa.eu/doi/10.2777/6054686
12. **Zero-emission waterborne transport**, https://data.europa.eu/doi/10.2777/2538595
13. **Connected Cooperative Automated Mobility** (CCAM), https://data.europa.eu/doi/10.2777/2675321
14. **Water4all**: Water security for the planet, https://data.europa.eu/doi/10.2777/0349316
15. **Clean Energy Transition**, https://data.europa.eu/doi/10.2777/2130749
16. **Driving urban transitions to a sustainable future** (DUT), https://data.europa.eu/doi/10.2777/7146788
17. **European Biodiversity Partnership** (Biodiversa+), https://data.europa.eu/doi/10.2777/9001288
18. A climate neutral, sustainable and productive **Blue Economy**, https://data.europa.eu/doi/10.2777/1846443
19. **Eurostars-3**, Part of the co-funded European partnership "Innovative SMEs", https://data.europa.eu/doi/10.2777/308203
20. European **Open Science Cloud** (EOSC) Association, https://data.europa.eu/doi/10.2777/7356844

- Data from other EU institutions, such as the Council Conclusions[16] on the Ex-post Evaluation of Horizon 2020, relevant Court of Auditors' reports, and reports/evaluations of the European Economic and Social Committee.[17]
- Input from the public consultation[18] on the Horizon Europe interim evaluation. This consultation received input from 1 663 respondents and 136 position papers.

[16] The ex-post evaluation of Horizon 2020 and future outlook - Council conclusions, 23 May 2024

[17] European Economic and Social Committee exploratory opinion: results and experiences of efforts to close the innovation gap in the EU in the light of Horizon 2020 and Horizon Europe; European Economic and Social Committee recommendations: interim evaluation of Horizon 2020.

[18] Horizon Europe – interim evaluation (europa.eu)

Detailed descriptions of the models and methods used in the different information sources mentioned above are available in each respective external study and internal analysis report. Below is a short overview.

Main methods used

1. Macroeconomic modelling

Measuring the full impact of R&I, i.e. capturing indirect effects on top of direct ones, is an intricate question, compounded by the often relatively long-time lags between policy initiatives and observed actual impacts. The European Commission uses complementary modelling platforms for both the ex-ante and ex-post evaluations of research and innovation policies. In this annex, macroeconomic modelling is used to quantify the economic impact of Horizon Europe in terms of GDP gain and job creation in the EU. While there is consensus that R&I is an important factor in increasing productivity, quantifying the impact of R&I policies at macroeconomic level requires modelling tools that accurately capture how R&I translates into economic gains.

There are several models available to assess the dynamic transmission channels of R&I, each with specific features. This interim evaluation uses results produced by three macroeconomic models: NEMESIS, RHOMOLO and FIDELIO. This is an interim assessment in the sense that the input data on the Horizon Europe investments are preliminary and do not yet reflect the actual disbursements during the programming period. However, the results should not be regarded as a way to exactly track and monitor the actual macroeconomic impact of the Horizon Europe interventions. This is because they rely on assumptions both on the modelling setup and on the simulation strategy adopted to simulate the investments' impact (i.e. the economic channels activated by them). NEMESIS and RHOMOLO models are publicly available in the European Commission's modelling inventory and knowledge management system (MIDAS)[19], which includes, among other things, details on model structure and approach, model inputs and outputs, and spatial-temporal resolution and extent. MIDAS is managed by the Commission's Joint research Centre (JRC).

Results from NEMESIS were produced by a team of external experts, while RHOMOLO and FIDELIO results were produced by European Commission departments (the Joint Research Centre). The strength of these models lies in their distinct features. NEMESIS is considered one of the richest models covering different types of innovation and their spillovers in the economy. RHOMOLO is the most suitable model to address the geographical concentration of innovative activities and analyse regional impacts of R&I, as it models regional economies. FIDELIO tracks the indirect and induced effects across all agents, countries, and detailed industrial sectors of the economy and is therefore the most effective model to analyse sectoral impacts.

1.1. NEMESIS

Presentation of the model

NEMESIS was developed by a European consortium[20] in 2000 to analyse the macro-sectoral impacts of EU policies, based on R&D investments and related knowledge spillovers. The model

[19] https://web.jrc.ec.europa.eu/policy-model-inventory/

[20] Lab. ERASME / Ecole Centrale Paris (now SEURECO), Federal Planning Bureau of Belgium, E3M3 lab. / ICCS /NTUA and Chambre d'Industrie et de Commerce de Paris.

became a reference tool for assessing EU and national R&I policies, and since 2004 has been used by the European Commission for several analyses. These include the assessments of: (i) the Lisbon Strategy target of 3% of EU GDP to be invested in R&D[21]; (ii) the RTD national action plan related to the Barcelona Objective[22]; and (iii) the impact of European R&I programmes (*ex-ante* assessment of the 7th Framework Programme[23], of Horizon 2020[24], and of Horizon Europe[25]).

Structure of the model

NEMESIS is a macro-econometric model comprising detailed sectoral models for every EU country. The representation of technical progress in NEMESIS is derived from the new growth theories, where innovations result from the investment in R&D by private firms and R&D undertaken by the public sector. In its latest version, used for the ex-ante evaluation of the Horizon Europe programme in 2018[26] and for the ex-post evaluation of Horizon 2020 in 2023[27], innovations still arise from private and public investments in R&D, but also from investments in two other complementary innovation inputs: ICT and Other Intangibles (including training and software). This improves the accuracy of assessing R&I policies by considering the most up-to-date theoretical and empirical findings of economic literature.[28] In that respect, NEMESIS is considered[29] the wealthiest model in terms of innovation types and policy elasticities compared to other standard macroeconomic models for R&D and innovation policies. Consequently, policy makers can design options for specific innovation types or channels using this model more easily.

[21] Brécard, D., Fougeyrollas, A., Le Mouël, P., Lemiale, L. and P. Zagamé (2006), 'Macro-economic consequences of European Research Policy: Prospects of the NEMESIS model in the year 2030', *Research Policy*, No 35(7), pp. 910-924.

[22] Chevallier, C., Fougeyrollas, A., Le Mouël, P., and P. Zagamé (2006), 'A time to sow, a time to reap for the European Countries: A macro-econometric glance at the RTD National Action Plans', *Revue de l'OFCE*, 2006/5 (No 97 bis), pp. 235-257.

[23] Delanghe, H. and U. Muldur (2007), 'Ex-ante impact assessment of research programmes: The experience of the European Union's 7th Framework Programme', Science and Public Policy, No 34(3), pp. 169-183.

[24] European Commission (2013), The Grand Challenge – The design and societal impact of Horizon 2020, Directorate-General for Research and Innovation.

[25] European Commission, Directorate-General for Research and Innovation, (2018), A new horizon for Europe: impact assessment of the 9th EU framework programme for research and innovation, Publications Office.

[26] European Commission, Boitier, B., Le-Mouël, P., Zagamé, P., Ricci, A., Support for assessment of socio-economic and environmental impacts (SEEI) of European R&I programme – The case of Horizon Europe, Publications Office of the European Union, 2018; J. Ravet, B. Boitier, M. Grancagnolo, P. Le Mouël, L. Stirbat, and P. Zagamé, The Shape of the Things to Come: Ex-ante Assessment of the Economic Impact of Horizon Europe. Journal for Research and Technology Policy Evaluation, Vol. 47, pp. 96-10, 2019

[27] European Commission, Naujokaitytė, R., Stančiauskas, V., Cakić, M., Dėlkutė, R. et al., Evaluation study of the European framework programmes for research and innovation for an innovative Europe – Annexes – Phase 1, Denham, S.(editor), Publications Office of the European Union, 2023

[28] Le Mouël. Macroeconomic evaluation of EU R&I Policies: Ways and Means. Economics and Finance. PhD thesis, Université Côte d'Azur, 2019; U. Akcigit, C. Benedetti-Fasil, G. Impullitti, O. Licandro, and M. Sanchez-Martinez. Macroeconomic Modelling of Innovation Policy. Palgrave Macmillan, 2022

[29] Joint Research Centre: Institute for Prospective Technological Studies, Di Comite, F. and Kancs, d., Macro-economic models for R&D and innovation policies, Publications Office, 2015

Box 1: The innovation mechanisms in NEMESIS

Schematically, the innovation mechanisms at the level of a firm (or a sector) can be described as follows:

- Firms determine their investments in the three innovation inputs (private R&D, ICT and OI) depending on their relative costs and degree of complementarity.
- Firms' investment effort increases their knowledge (stock variable) and the knowledge of other firms and sectors nationally or internationally through the knowledge spillover matrices (knowledge transfers). For each innovation input, the knowledge stock is modelled as a weighted sum of the stock of assets, R&D, ICT or OI, belonging to all sectors and countries. The coefficients of the matrices used to build these stocks are calibrated based on patent citations between sectors and countries. These matrices combine the citations between patents allocated by technology classes and country with the OECD concordance table to allocate these citations **between sectors[30]. For R&D, the knowledge stock is also influenced by the public investments undertaken by the public sector**.
- The growth of the knowledge stocks will generate innovations at a rate that is a positive function of the knowledge absorption capacity of the firm (measured by its investment intensity in each innovation input).
- Innovations take two forms: product and process. Product innovations increase the intrinsic quality of the product the firm sells, whereas process innovations improve the production process without changing the product quality (pure TFP effect).
- Product innovations directly positively impact internal and external demands; innovations reduce production costs and, in the context of a competitive market, lower their market price and increase demand.
- These dynamics at the firm or sectoral level are brought together, at the macro level, by the input-output tables of the model, and the combination of the sectoral interdependencies ("bottom-up") with the "top-down" macro-economic forces impulses, finally, the medium- and long-term dynamics of the model.

Key assumptions for the interim evaluation

There are three critical assumptions for the evaluation methodology:

1. **The programme's financing**: Does the evaluated Framework Programme rely on financing, or does the Framework Programme money come from "nowhere?"
2. **The direct crowding-in effect of the Framework Programme**: How much 1 EUR of Framework Programme will increase (decrease), i.e. crowd-in(-out), the R&I investments in the public and private organisations that receive this 1 EUR FP subsidy? Notably, besides this "direct" crowding-in effect of the Framework Programme on the R&D investments made by its beneficiaries, there is an "indirect" crowding-in effect, which refers to the additional R&D investments made by a research entity, financed by the

[30] D.K.N. Johnson. The OECD Technology Concordance (OTC): Patents by Industry of Manufacture and Sector of Use. OECD Science, Technology and Industry Working Papers, 2002.

Framework Programme or not, as a response to the modification of the overall economic activity that provokes the Framework Programme (and not as the direct result of the EC financial support, as with the direct crowding-in effect). The total crowding-in is, therefore, the sum of the direct and indirect crowding-in;

3. **The economic performance or European Added Value (EAV) of the Framework Programme**: How much the performance of the R&I investments provoked by the Framework Programme, in terms of R&I outcomes, is superior to those of the R&I supports from other sources of funding, and especially national ones. The assumptions are summarised in **Table 1** for the three cases ('Low', 'Medium' and 'High'). As in the ex-ante evaluation of Horizon Europe[31], it is assumed that the Horizon 2020 programme was financed by an equivalent reduction of public investment at the EU level. The degree of reduction in public investment in each Member State is proportional to their historical contribution to the EU budget. Depending on the success of each Member State to benefit from the Framework Programme and their relative contribution to the EU budget, there are net contributors and net beneficiaries.

Table 1: Key assumptions of the NEMESIS model

CASE	Financing	Direct Crowding-in effect	EAV
Low	An equivalent decrease in public investments	Basic research: EUR 0 Appl. res.: +EUR 0.0 Average: +EUR 0.0	+0%
Medium		Basic research: EUR 0 Appl. res.: +EUR 0.15 Average: +EUR 0.0975	+15%
High		Basic research: EUR 0 Appl. res.: +EUR 0.35 Average: +EUR 0.2275	+20%

The three cases - for sensitivity ('Low', 'Medium', and 'High') - assume that there is no direct crowding-in and no direct crowding-out effect of the Framework Programme on basic research, the same assumption as in the ex-post evaluation of FP7[32] and the survey of the dedicated literature realised for the ex-ante assessment of Horizon Europe.[33] At the same time, the (direct) crowding-in effect of the Framework Programme on applied research and the EAV of the Framework Programme vary according to case. The 'Low' case uses conservative assumptions, no direct crowding-in effect of the Framework Programme for applied research, and no EAV compared to

[31] European Commission, Boitier, B., Le-Mouël, P., Zagamé, P., Ricci, A., Support for assessment of socio-economic and environmental impacts (SEEI) of European R&I programme – The case of Horizon Europe, Publications Office of the European Union, 2018; J. Ravet, B. Boitier, M. Grancagnolo, P. Le Mouël, L. Stirbat, and P. Zagamé, The Shape of the Things to Come: Ex-ante Assessment of the Economic Impact of Horizon Europe. Journal for Research and Technology Policy Evaluation, 2019, Vol. 47, pp. 96-10

[32] European Commission: Directorate-General for Research and Innovation, Assessment of the Union added value and the economic impact of the EU Framework Programmes – Final report, Publications Office, 2017

[33] European Commission, Boitier, B., Le-Mouël, P., Zagamé, P., Ricci, A., Support for assessment of socio-economic and environmental impacts (SEEI) of European R&I programme – The case of Horizon Europe, Publications Office of the European Union, 2018

national funding, delivering a low bound for evaluating the impacts. This 'Low' case uses similar assumptions to the ex-ante evaluation of Horizon Europe done by DG ECFIN with the QUEST III model.[34] For the 'Medium' case, the direct crowding-in effect of the Framework Programme on applied research is 0.15 EUR, following the median value from the literature review realised for the ex-ante assessment of Horizon Europe.[35] Economic performance, +0.15% for the EAV, has also been used by NEMESIS as a central assumption since the ex-ante impact assessment of Horizon 2020[36] and based on the evaluation of past FPs. In the 'High' case, the value of EUR 0.35 for the direct crowding-in effect of the Framework Programme on applied research is implemented as for the ex-post evaluation of the Horizon 2020 programme. This value was recently supported by the Phase II results from the OECD Microberd+ project[37], which found an average marginal additional effect of direct support to private R&D in OECD at +EUR 0.48, with a 90% confidence interval: [+EUR 0.30 - +EUR 0.66]. Retaining the (conservative) lower value of the confidence interval and adding +EUR0.05 from the literature[38] on the additional crowding-in effect of EC direct R&D supports compared to national R&D supports, ends therefore on this +EUR 0.35 value. For the EAV, we assumed +20% that comes out of the microanalysis done for the ex-post evaluation of FP7.[39] It can indicate that the +15% used in the past may be too conservative. An EAV of +20% compared with national funding was based notably on the following findings:

- For FP7 comparing SJR (Scientific Journal Ranking), it comes out that the publications produced in Framework Programme projects were published in higher impact journals than non-FP publications published by the same authors who participated in EU-funded projects from 2007 to 2015. It represents a higher scientific impact of about +21%.
- According to the analysis of FP7 survey data, the EU FPs' research teams were around 40% more likely to be granted patents or produce patent applications and 25% of funded research units produced at least one IPR output in 2015 compared to 18% for non-funded units.
- For FP7, the patent analysis shows that the patents produced in the FPs were of higher quality and likely commercial value than similar patents made elsewhere. One of the most often used indicators for a patent's value is the number of citations it received from other patents, and the analysis found that FP7 patents were cited significantly more from the control sample (randomly selected non-FP sample) with a higher score of about +70%.

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[34] J. Ravet, B. Boitier, M. Grancagnolo, P. Le Mouël, L. Stirbat, and P. Zagamé, The Shape of the Things to Come: Ex-ante Assessment of the Economic Impact of Horizon Europe. Journal for Research and Technology Policy Evaluation, 2019, Vol. 47, pp. 96-10

[35] European Commission, Boitier, B., Le-Mouël, P., Zagamé, P., Ricci, A., Support for assessment of socio-economic and environmental impacts (SEEI) of European R&I programme – The case of Horizon Europe, Publications Office of the European Union, 2018

[36] European Commission (2013), The Grand Challenge – The design and societal impact of Horizon 2020, Directorate-General for Research and Innovation.

[37] OECD. The impact of R&D tax incentives: Results from the OECD microBeRD+ project. OECD science, technology and industry policy papers. October 2023. N° 159.

[38] European Commission, Boitier, B., Le-Mouël, P., Zagamé, P., Ricci, A., Support for assessment of socio-economic and environmental impacts (SEEI) of European R&I programme – The case of Horizon Europe, Publications Office of the European Union, 2018

[39] European Commission: Directorate-General for Research and Innovation, Assessment of the Union added value and the economic impact of the EU Framework Programmes – Final report, Publications Office, 2017

- FP7 patents cited non-patent literature +11% more often than non-FP patents, suggesting that FP patents are likely to be of higher technological value and more likely to be based on cutting-edge scientific knowledge.

Finally, **Table 2** reports the assumptions underlying the precise outline of the framework programme budget, its annual layout, and the distribution of the Commission contribution between basic and applied research, Member States and the different economic activities.

Table 2: Horizon Europe budget and its repartition

HE budget (EC contribution, in constant million € 2020)	Average duration of HE projects (in years)	Repartition between basic and applied research	Geographical allocation of funds	Sectoral allocation of funds
Reduced by 7.6% in constant terms compared to what was assumed in 2020, due to inflationary crisis	3	Basic: 38% Applied: 62%	Based on eCorda	Based on CORDA data and Orbis for private companies

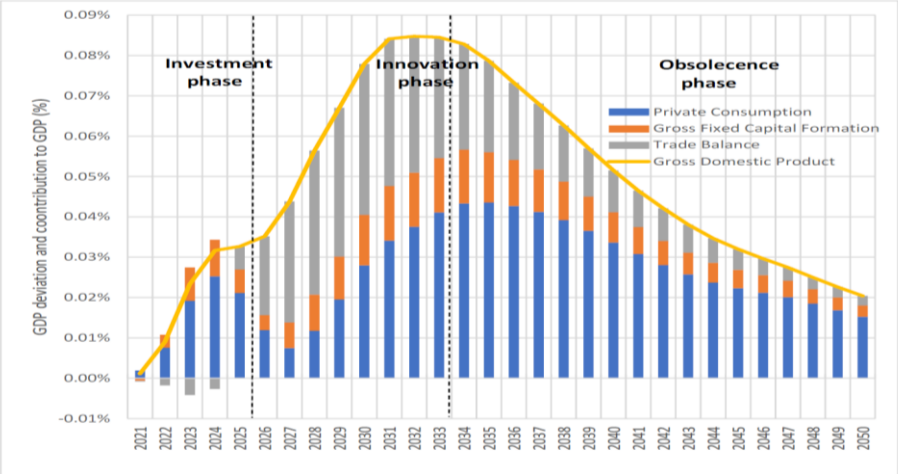
The data used for NEMESIS go up to 10 June 2023, with 9,457 projects signed for EUR 24,732 billion of EC contribution. Out of a total budget of 24.732 billion of EC contribution, only 22,841 billion was retained in the study. This was done by subtracting the part of the EC contribution that benefits countries outside the EU-28. In the model, EC funding is implemented in constant euros. Consequently, the Horizon Europe budget decreases from EUR 22.8 billion to only EUR 17.8 billion when converted from current euros to constant euros of 2020. In addition, the current inflationary crisis has an important impact on the Horizon Europe budget measured in euro constant 2020. Consequently, the budget implemented in NEMESIS was reduced by 7.6% in constant terms compared to what was assumed when the Horizon Europe budget was adopted in December 2020. The average duration of the financed project was estimated to be about three years. The split between basic and applied research was 38% for basic and 62% for applied. This distribution was determined by assuming that the EC contribution benefiting public bodies and higher education institutions finances basic research, with the remaining portion allocated to applied research. The geographical allocation of the funds was based on eCORDA. Finally, the Horizon Europe budget was introduced at a sectoral level in NEMESIS by considering that the basic research is performed by the public sector and the applied one by the private sector, with a sectoral repartition based on CORDA data and Orbis for private companies.

Results

This section provides an overview of the results of the interim evaluation of Horizon Europe, covering Horizon Europe financing engaged from January 2021 to June 2023 and for Horizon Europe only, i.e. isolated from FP7 and Horizon 2020. The results are displayed for the 'Medium' case, where the assumptions retained for the direct crowding-in effect and the EAV of Horizon Europe have medium values. The results indicate that Horizon Europe produces positive effects on GDP. **Figure 1** displays the results from the simulation across three main phases: *Investment,*

Innovation and Obsolescence.[40] The GDP gains, although limited during the *investment* phase, are about +0.02 of GDP percentage points (GDP ppt) on average between 2021 and 2025. During these first years, the programme's positive effects on GDP come mainly from its crowding-in on the R&D investments by Framework Programme's beneficiaries. The programme is financed by an equivalent cut in public investments in Member States, but the crowding-in effect induces a net positive impact on investment at the macroeconomic level. Compared to other forms of investments, the high and direct content in the labour of R&D investments also raises households' income and final consumption, where the main GDP gains originate during this first phase. There are, in return, inflationary pressures that deteriorate the external balance during the first four years of simulation. Still, the situation begins to ameliorate in 2024, with the arrival of the first *innovations* that the programme has financed. The GDP gains increase reaching a maximum annual average of about +0.085 ppt in 2031 up to 2033, and an average of about +0.067 ppt in 2026-2033. Finally, after 2033, the reduction in R&D investments induced by Horizon Europe after 2025, along with the gradual *obsolescence* of the new knowledge and innovations it has contributed to create, gradually offsets the GDP gains. The external balance (and investment) remains positively impacted by the programme from 2033 to 2050. Nevertheless, final consumption emerges as the primary contributor to GDP gains, with a growing relative contribution during this obsolescence phase.

Figure 1: The impact of Horizon Europe on EU GDP and its components



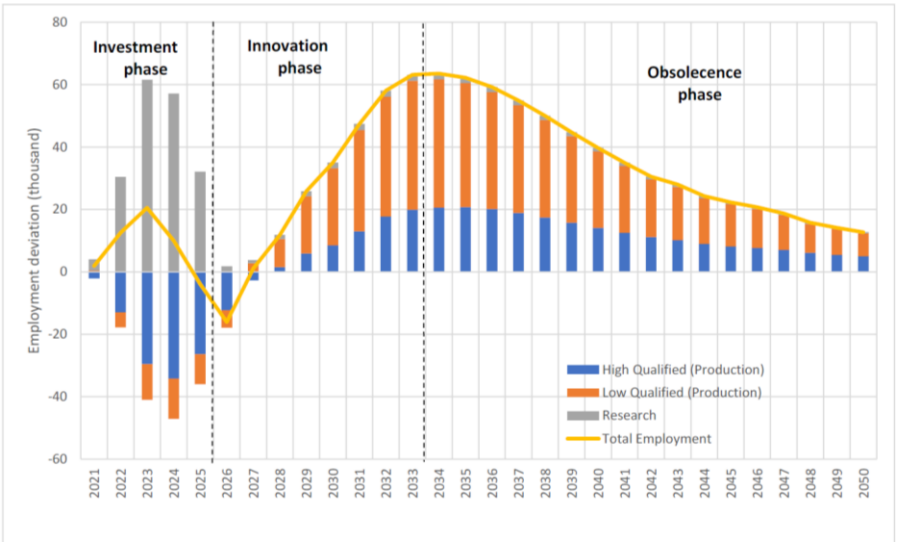
Source: Innovative Europe Annex, NEMESIS simulation, p. 430

Positive effects are observed also on the employment level. As reported in **Figure 2**, the *Investment* phase is characterised by a significant increase in the number of persons employed in the research sector, with the creation of up to 60,000 jobs in research by 2023-2024. There is, in return, a fall in highly qualified employment in production activities. Doctors, engineers, and technicians employed by research entities are scarce in the labour market of highly qualified workers. Thus, the rise in qualified workers wages reduces the overall demand for this category of workers. Similarly, but to a much lower extent, low-qualified employment declines slightly. This crowding-

[40] For simplicity, the three phases follow each other chronologically in the figures, but in reality they overlap.

out effect of research employment on production employment means that total employment increases only very slightly in this first phase. During the *Innovation* period, Horizon Europe funding and investment in research goes down and research employment stabilises by about +1,650 between 2026 and 2033, compared to the reference scenario. Research employment does not crowd out any more research employment, and the market deployment of the provoked innovations leads to large job creation in every economic sector. On average, in 2026-2033, the gain in total employment is about +28,000, with +1,650 for research employment and +6,440 and +20,181 for high and low-qualified jobs, respectively. During the *Obsolescence* phase, similarly to GDP, the employment gains decrease gradually from +64,000 in 2034, at their maximum, to +13,000 in 2050.

Figure 2: The impact of Horizon Europe on employment



Source: Innovative Europe Annex, NEMESIS simulation, p. 431

In addition to 'medium' case of Horizon Europe only, effects on GDP and employment were also simulated using NEMESIS model for the case where Horizon Europe – covering financial engagement from January 2021 to June 2023 – is considered altogether with the two past FPs (FP7 and Horizon 2020) and compared with 'low' and 'high' case.[41]

Limitations of the model

While NEMESIS' strengths justify its relevance when measuring the impact of R&I policies, the model's specific features also imply a number of limitations to be considered when interpreting the results. First, the model relies on the empirical observation of relationships and allows for flexibility in behavioural functions, which may generate inconsistencies between the most recent

[41] European Commission, Naujokaitytė, R., Cakić, M., Didžiulytė, M., Zharkalliu-Roussou, K. et al., Annexes for the evaluation study of the European framework programmes for research and innovation for innovative Europe – Phase 2 – Supporting the interim evaluation of Horizon Europe, Publications Office of the European Union, 2024, p. 429 – 462.

developments in macroeconomic theory. Furthermore, it uses adaptive expectations rather than forward-looking ones. NEMESIS also does not link the use of human capital with investments in the educational system.

1.2. RHOMOLO

Presentation of the model

RHOMOLO[42] is the macroeconomic model of the European Commission focusing on EU regions. It has been developed and maintained by the Joint Research Centre, in cooperation with the Directorate-General for Regional and Urban Policy. It is used for policy impact assessment and provides sector-, region- and time-specific simulations on investments and reforms covering a wide array of policies. RHOMOLO is built on a micro-founded general equilibrium approach and is used to provide a breakdown of results by region and sector.

Structure of the model

RHOMOLO is a spatial dynamic computable general equilibrium (CGE) model with new economic geography features.[43] The version of the model used for this evaluation covers 276 NUTS 2 regions of the EU and the UK. Each region contains ten economic sectors operating under monopolistic competition (with the exception of agriculture and public services, which operate under perfect competition). Regional goods are produced by combining labour and capital with domestic and imported intermediate inputs. Public capital enters the production function as an unpaid factor.

Final goods are consumed by households, government and investors. Each region is inhabited by a representative household, which supplies labour of three skill types, consumes and saves part of its income. The government collects taxes, purchases public consumption goods, invests in the economy and transfers resources to the various agents in the economy. Goods and services can either be sold within the domestic economy or exported to other regions. Trade between regions is associated with a set of bilateral regional transport costs.[44] The RHOMOLO model incorporates imperfect competition in the labour market and allows for unemployment. Wage formation is assumed to follow a wage curve specification[45], which implies that lower unemployment increases workers' bargaining power and thus real wages.

The RHOMOLO model includes two types of capital: sector-specific private capital and public capital. The latter is accumulated by the government through public investment, and it is considered an unpaid factor of production freely available to firms in all sectors within each

[42] Christou, T., Crucitti, F., García Rodríguez, A., Lazarou, N.J., and Salotti, S. (2023), 'The RHOMOLO ex-post impact assessment of the 2014-2020 European research and innovation funding programme (Horizon 2020)', JRC Working Papers on Territorial Modelling and Analysis, No. 01/2024, European Commission, Seville, JRC133690.
[43] Lecca, P., Barbero, J., Christensen, M.A., Conte, A., Di Comite, F., Diaz-Lanchas, J., Diukanova, O., Mandras, G., Persyn, D., and Sakkas, S. (2018). RHOMOLO V3: A spatial modelling framework. JRC Technical Reports JRC111861, EUR 29229 EN, Publications Office of the European Union, Luxembourg.
[44] Persyn, D., Díaz-Lanchas, J., and Barbero, J. (2022). Estimating distance and road transport costs between and within European Union regions. Transport Policy 124, 33-42.
[45] Blanchflower, D.G., and Oswald, A.J. (1995). An introduction to the wage curve. Journal of Economic Perspectives 9(3), 153-167.

region.[46] Public capital is subject to congestion[47], so its efficiency declines as production increases, and the elasticity of output to public capital is set to 0.08.[48] Sector-specific private capital is accumulated by private investors. The investment-capital ratio is a function of the rate of return on capital and the user cost of capital, allowing the capital stock to reach its desired level smoothly over time.

Box 2: How RHOMOLO models innovation

- R&D expenditure is modelled as private investment. Therefore, R&I expenditure generates demand for capital goods. In addition, R&I expenditure leads to the accumulation of an intangible knowledge capital stock, which has a positive effect on total factor productivity (TFP).
- Public spending to support R&I is introduced into the model as a reduction in the user cost of capital, which in turn generates an increase in private investment.
- The impact of R&I spending on TFP through the accumulated stock of knowledge capital is captured by a set of regional elasticities, ranging between 0.01 and 0.04, that are positively related to regional research and development (R&D) intensity.
- The intuition is that firms in regions that already spend a lot on R&D signal their pre-existing capacity to generate value from innovation activities. The range of R&D elasticities is between 0.01 and 0.04, which is in line with the existing literature[49] on this topic.
- Expectations are assumed to be myopic and the model is solved sequentially, with stocks being updated at the start of each period. For this particular exercise, capital mobility within the EU was assumed, but no labour mobility.

Key assumptions for the interim evaluation

The RHOMOLO analysis covered the investments made under Horizon Europe programme between 2021 and 2024. The data related to these investments was based on the CORDA database, in monetary terms by NUTS 2 region and by year, and include only projects signed before 1 July 2024. The key assumptions retained for the simulation of the results are summarised in Table 3.

[46] Barro, R.J. (1990). Government spending in a simple model of endogenous growth. Journal of Political Economy 98(5), S103-S125; Baxter, M., and King, R.G. (1993). Fiscal policy in general equilibrium. American Economic Review 83(3), 315-334.

[47] Fisher, W.H., and Turnovsky, S.J. (1998). Public investment, congestion, and private capital accumulation. The Economic Journal 108(447), 399-413.

[48] in line with the findings by Bom, P. R., and Ligthart, J. E., (2014). What have we learned from three decades of research on the productivity of public capital? Journal of Economic Surveys 28(5), 889-916, and the modelling choices made by Pfeiffer, P., Varga, J., and in 't Veld, J., (2021). Quantifying spillovers of Next Generation EU investment. European Economy Discussion Papers no. 144, July.

[49] Männasoo, K., Hein, H., and Ruubel, R. (2018). The contributions of human capital, R&D spending and convergence to total factor productivity growth. Regional Studies 52(12), 1598-1611.

Table 3: Key assumptions for the RHOMOLO model

Key assumptions	
Budget size and allocation	The total amount of funding examined is €33,890,389,958
Support to basic vs applied research	It is assumed that 30% of the funding are allocated to basic research and 70% to applied research
Regional spillovers	Regional spillovers in the model are related mainly to trade flows and interregional capital mobility.
Direct leverage effect	European applied research funds crowd in additional private investment (+15%)
Economic performance	The output elasticity of public capital accumulated thanks to Horizon Europe (EU funding) is 15% higher than the standard elasticity (national funding). The same is true for the Total Factor Productivity elasticity of private investment funded by Horizon Europe.
Financing	Lump sum
EU Added Value	To account for the added value of the EU-level instruments, a 15% increase was applied to the output elasticity of the additional public capital accumulated thanks to the Horizon Europe funds and to the TFP elasticity of private investment.

Firstly, it is assumed that 30% of the funding are allocated to basic research and 70% to applied research. The funds allocated to public bodies and higher education institutions are considered as basic research and the rest as applied research (a similar split had also been used in the ex-post evaluation of Horizon 2020).

In RHOMOLO, basic research funding is simulated via an increase in public investment, which leads to a temporary increase in the public capital stock of the regions (which depreciates at a rate of 5% per year). Due to the role of public capital in the production function, in addition to the demand-side effect of increased (public) investment, this increases the productivity of firms.

It is assumed that the applied research funds reduce the user cost of capital, leading to an increase in private investment. This is a demand-side effect that also leads to a temporary increase in the private capital stock (which depreciates at an annual rate of 15%). Based on the NEMESIS assumption regarding leverage, the change in the user cost of capital is calibrated so that the European applied research funds crowd in additional private investment (+15%). It is also assumed that this R&I investment leads to an increase in TFP, subject to an annual depreciation rate of 5% and with an elasticity that depends on the R&D intensity.

Based on the evidence[50] and to be consistent with the NEMESIS analysis, the output elasticity of the additional public capital accumulated thanks to the Horizon Europe funds was increased by 15%, and the TFP elasticity of private investment was also increased by 15% to account for the added value of EU-level investments that lead to economies of scale and scope and increased cooperation between institutions.

Finally, it is assumed that the policy is financed by lump-sum transfers. In order to mimic the financing of the EU budget, regional contributions are proportional to the GDP weight of each

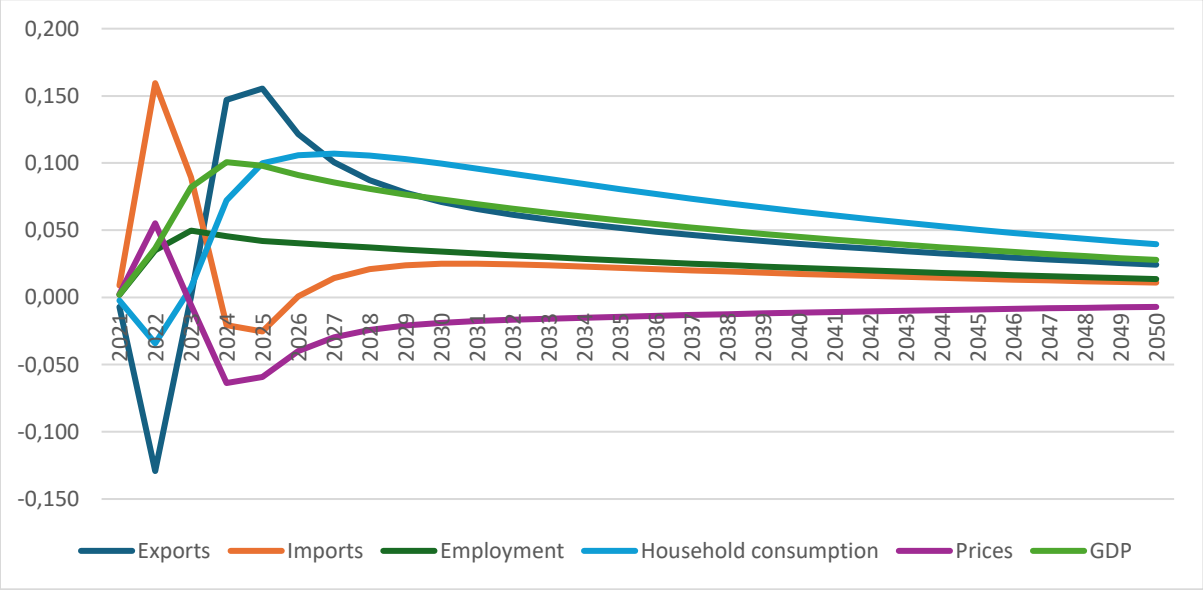
[50] Mitra, A., Canton, E., Ravet, J., and Steeman, J.T. (2024). The added value of European investments in research and innovation. Publications Office of the European Union, 2024

region in the EU GDP. In other words, a region does not necessarily have to finance the policy with a contribution equal to the amount of Horizon Europe earmarked for the region itself, but instead the contribution depends on the share of EU GDP generated in the region.

Results

The impact on GDP increases steadily over the implementation period, peaking at +0.10% in 2024. It then gradually declines as the simulated monetary injection ends, the increased private and public capital stocks depreciate and the temporary increase in TFP fades. In 2050, the residual effects of the policy are relatively small, as GDP is 0.03% above its initial level. The policy injection also leads to improvements in employment, whose impact peaks at +0.05% in 2023, amounting to about 94,600 persons (the total number of persons employed in the EU in the reference year of the model (2020) is 190 million).

Figure 3: Horizon Europe (2021-2024) impact over time on selected macroeconomic variables (EU27)



Source: JRC - RHOMOLO simulations.

The other variables presented in Figure 3 show that the Horizon Europe injections lead to an initial deterioration in the EU's trade balance with the rest of the world, as imports increase and exports decrease in the early years of the simulation. This is due to the initial increase in demand caused by the policy injection and the subsequent increase in prices (measured here by the changes in the GDP deflator). Competitiveness then improves, leading to a fall in the price level, with a positive impact on exports and hence on the trade balance.

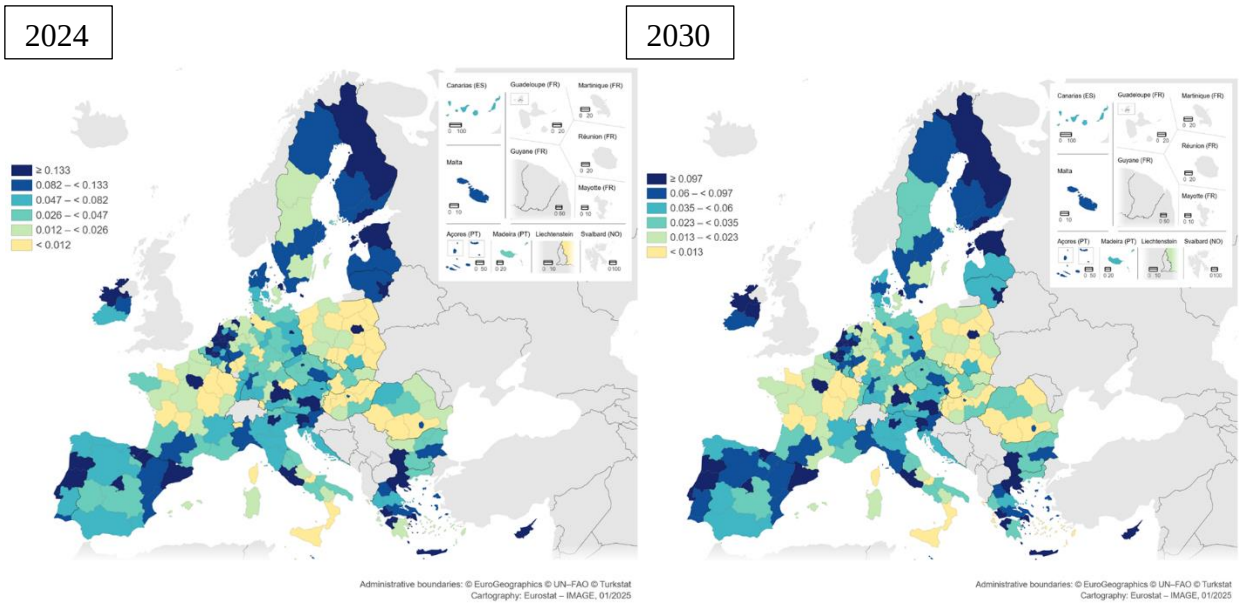
Figure 4 presents the territorial distribution of the GDP impact of Horizon Europe investment, expressed as percentage deviations from the baseline (i.e. a hypothetical scenario without Horizon Europe) in 2024, 2030, 2034 and 2050. The impact on GDP in 2024 is stronger in the regions targeted by the Horizon Europe policy. For example, the macroeconomic impact of the policy is relatively high in the Scandinavian regions, Central Europe and the Iberian Peninsula. Moreover, in most countries the capital regions benefit more than the other regions, which is particularly

evident in countries such as Poland, the Czech Republic, Slovakia, Hungary, Bulgaria, and Romania.

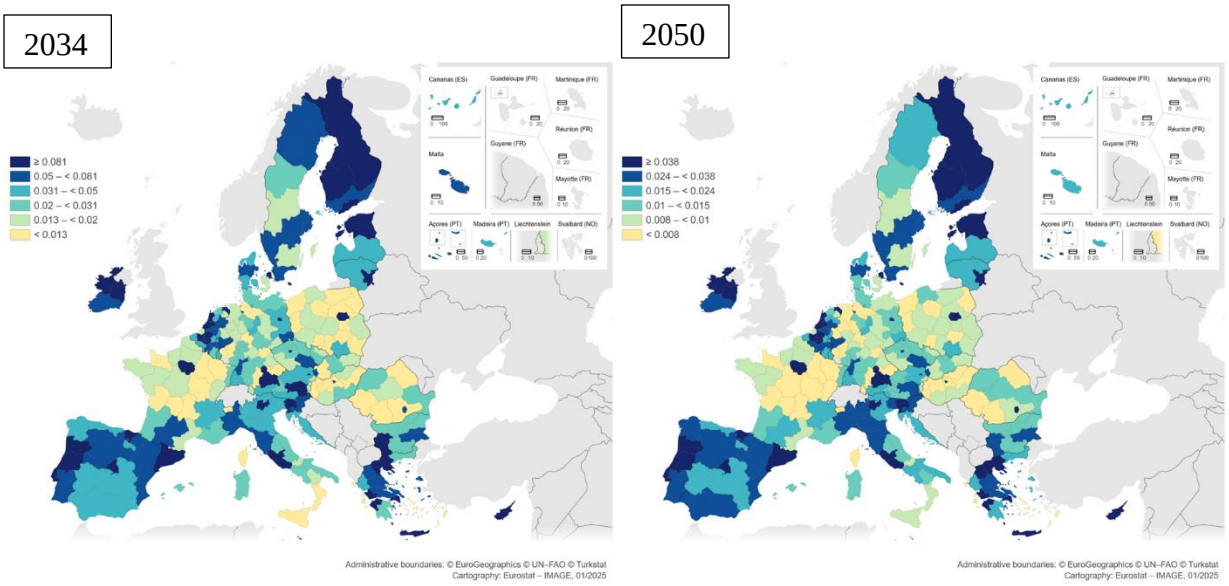
Over time, in countries such as Spain, Italy, France, Germany and Poland, the effects gradually spill over to regions receiving relatively less Horizon Europe funding (2021-2024). However, this does not seem to be the case in all EU countries, as the effects remain mostly concentrated in the richest regions, which are also the capital regions in Hungary, Bulgaria and Romania. This last finding is not entirely surprising: investments in the capital regions show little spillover to the peripheral regions, because the trade flows of the richest regions are mostly with regions abroad and therefore investments there do not stimulate production in the neighbouring regions of the same country.[51]

Overall, the magnitude of the impact decreases across the board, due to the temporary nature of the investments and the assumed depreciation rates of the temporarily increased private and public capital stocks, as well as the decay rate of the TFP improvements.

Figure 4: Territorial distribution of the GDP impact of the Horizon Europe funds (2021-2024) in 2024-2050



[51] Barbero, J., et al. (2024). A spatial macroeconomic analysis of the equity-efficiency trade-off of the European cohesion policy. Spatial Economic Analysis 19(3), 394-410.



Source: JRC - RHOMOLO simulations.

Limitations of the model

The results presented above assume that all funds allocated through Horizon Europe are used efficiently and activate the economic channels used in the model to simulate their impact. Also, the timing assumption is that the funds start affecting the economy as soon as the projects are signed, but it is realistic to expect delays in terms of deployment of the money with respect to the date of project signature. The distinction between basic and applied research can be considered as a strong assumption, in particular due to its homogeneity across EU regions. Finally, the results are inevitably affected by the parameterisation of the shocks used to simulate the impact of the policy (including the elasticity used to govern the changes in TFP brought about by the Horizon Europe investments or the output elasticity of public capital). The uncertainty of results is limited by using values that are consistent with the existing literature on the subject.

1.3. FIDELIO

11Presentation of the model

FIDELIO is a macroeconomic model developed by the Joint research Centre of the European Commission to analyse at industrial level how investment grants stimulate growth in the EU economy. The model simulates the impact of R&I funding by incorporating R&D expenditures as secondary activities within a wide range of industries (64), and disentangles the Gross Expenditures in R&D (GERD), by institutional sectors (BERD, GOVERD, HERD), by NACE industry and country-wise economic effects. With its granularity in terms of economic sectors and its ability to capture sectoral spillover and dependency effects, it provides valuable insights for policy impact assessment.

Structure of the model

FIDELIO is a Multi-sector Dynamic General Equilibrium economic model, designed for policy impact assessment, providing industrial-, country-, and time-specific simulations. The model

compares counterfactual and baseline equilibriums to assess interaction effects between economic agents.

As an Input-Output model, FIDELIO is able to capture all sectoral spillover and dependency effects of any policy under analysis due to its granularity in terms of economic sectors and regions. In fact, FIDELIO describes 64 economic sectors, and is a multi-regional model, describing agents' choices in 41 countries (27 + 1 EU countries and 13 non-EU countries). The model also captures how a policy can change trade balances, relative prices and comparative advantage in the international trade arena.

To produce, firms use four production factors: capital, labour, energy intermediates, and non-energy intermediates or materials. From the production processes, firms pay the cost of the other factors of production (labour and capital) to households and to the government. Goods and services can either be sold within the domestic economy or exported to other regions. Households receive their income through wages, a share of the gross operating surplus, property income and the governmental and non-governmental transfers. Household income, net of taxes and social security contributions, is used to consume or to save.

The Government raises its revenue from five main sources: operating surplus that goes to the government, production taxes, taxes less subsidies on products, social security contributions and taxes on household income. This revenue is then used to finance the government interest, the government capital formation, the government transfers to the households, and the government consumption that is another component of the total demand. The budget balance is calculated as the difference between government revenues and expenses, and it determines the variation in public debt.

Box 3: Modelling of R&I activities in FIDELIO

- FIDELIO is an Input-Output model that includes some of the most important properties of endogenous growth theory (innovation and knowledge spillovers) to simulate the potential effect of R&D subsidies on economic growth. In this sense, two types of economic effects are expected.
- The first effect refers to the rippling effect throughout the economy brought about by spending on R&I. This is called the Keynesian multiplier effect and occurs with spending on any type of product. The allocation of inputs to the R&D process are reflected in enlarged levels of future output of economic sectors from one period to another. That is, incremental changes in direct input coefficients, productivity growth and changes of R&D capital-output intensities.
- The second effect is the increase in productivity due to technical progress and only occurs through spending on R&D. This is called the return on R&D. This is part of the dynamics of the model introduced in a second stage, in which the sectoral interlinkages are modelled on the values that are assumed to be exogenous at the beginning of the next period(s). Current decisions regarding R&D expenditures shape future production functions and investment decision, thus, additional value added by country and sector is included in the investment trajectory as a future expenditure in R&D. Consequently, R&D funds, which are considered exogenous to the short-run decision process, can be fed into the system and long-term effects of parameter changes can be studied.

- The modelling approach is sequential since, at the beginning of each period (first stage), the industries have to decide on their current period R&D inputs on the basis of their previous output levels and the prevailing production functions in their R&D sector. The complete set of these short-run equations yields current output, R&D, employment and final demand levels (static input-output model in each period).

Table 4: Key assumptions for the interim evaluation

FIDELIO	Key assumptions
Budget size and allocation	The total amount of funding examined is €33,884,503,833
Support to basic vs applied research	It is assumed that 30% of the funding is dedicated to basic research, specifically in the NACE M72 category from the BERD sector, 30% to the HERD sector, 3% to the GOVERD sector, and the remaining 37% is allocated to applied research, covering the remaining BERD sector categories.
Regional spillovers	Country spillovers are primarily linked to trade flows at the industry level.
Direct leverage effect	European applied research funds crowd in additional private investment (+17%)
Economic performance	It is assumed that BERD, HERD, and GOVERD sectors display varying degrees of Value-Added elasticities due to the industries' distinct contributions to the economy. The average value at the European level for Business R&D performance, focused on nurturing innovation and productivity within industries, exhibits a 3.5% elasticity to the economy. On the other hand, Public R&D performance demonstrates a higher responsiveness. HERD, emphasizing human capital development and knowledge generation, boasts a 6.1% elasticity, while GOVERD, which funds basic research, exhibits a 3.6% elasticity.
Financing	Lump sum
EU Added Value	EU R&I investment in not modelled as generating an increased sectoral performance compared to national or regional R&I investment.

In FIDELIO modelling, both basic and applied research are funded. For basic research in the BERD sector, the sectoral R&D activities are embodied in the coproduction of product "CPA-M72 - Scientific research and development services" on the supply side. The coproduction of product M72 increases according to the allocation of Horizon Europe funding by country and by sector.

In terms of the effect of innovation, all three types of expenditure (BERD, HERD, and GOVERD)[52] contribute to fostering innovation. BERD drives innovation within the private sector,

[52] Gross Expenditures in R&D encompasses the total expenditure on R&D across all sectors of the economy, including higher education, business enterprises, and government. HERD refers specifically to R&D spending by higher education institutions, such as universities and colleges. BERD pertains to R&D expenditures made by private businesses and companies, while GOVERD refers to the R&D investments made by government entities or public sector organizations.

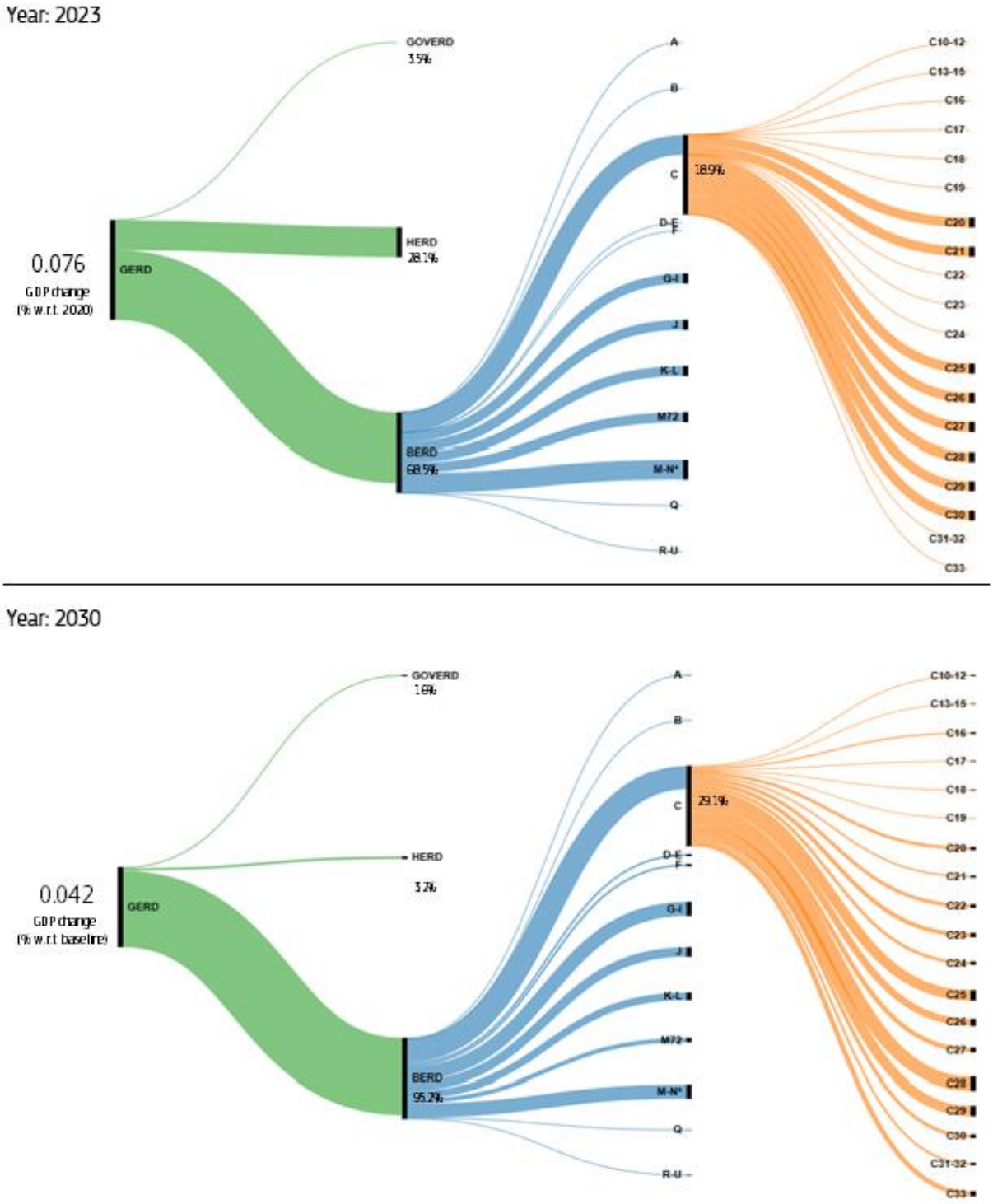
HERD supports the development of innovative ideas and human capital in higher education institutions, and GOVERD ensures the funding of long-term, basic research, and strategic R&D priorities. Together, these expenditures create a synergistic effect that promotes technological advancements, economic growth, and societal well-being.

Results

The impact analysis of Horizon Europe using the FIDELIO model demonstrates a positive effect on the European economy, particularly in the manufacturing sector. In particular, simulations results indicate that investments in R&D contribute to consistent GDP growth throughout the policy implementation period, with the GDP being 0.08% higher than the 2020 baseline scenario in 2023. The GDP multiplier increases over time, as the impact on GDP remains positive throughout the simulation period, while the policy shocks are confined to the initial four years. As the policy implementation nears its conclusion, the multiplier gradually approaches 1 and eventually surpasses 1.6 by the end of the programming period in 2027. The supply-side effects of the policy contribute to its continued rise, leading the multiplier to exceed 4.7 in 2050.

The impact of Horizon Europe funds on the EU can be broken down by institutional sector (HERD, BERD, GERD) and by industry (NACE codes). In 2023, within the EU, 68.5% of the impact is directed towards BERD, followed by 28.1% towards HERD, while the impact on GOVERD is relatively small (3.5%). Following the Sankey diagram in Figure 5, the disaggregation of the impact on BERD by industry can be visualized. The impact on the manufacturing sector (C) stands out, with the top benefiting sectors being machinery and equipment (C28), computer, electronic, and optical products (C26), motor vehicles, trailers, and semi-trailers (C29), and fabricated metal products (C25). The positive effects on innovations gains, in the BERD sector investments contribute to substantial GDP gains following the conclusion of the four-year intervention period.

Figure 5: Horizon Europe impact on EU, by institutional sector and industry.



Source: FIDELIO simulations, JRC.

Limitations of the model

Similarly to the RHOMOLO model, the results presented above assume that all funds allocated through Horizon Europe are used efficiently and activate the economic channels used in the model

to simulate their impact. Also, the timing assumption is that the funds start affecting the economy as soon as the projects are signed, but it is realistic to expect delays in terms of deployment of the money with respect to the date of project signature. The results are also affected by the assumed sectoral value-added elasticities (for BERD, HERD and GOVERD) which are the key parameters in the simulation of the impact of sectoral R&D performance on the economy. The uncertainty of results is limited by using values that are consistent with the existing literature on the subject.

Analysis of monitoring data

Monitoring flashes[53] on Horizon Europe, presenting internal analysis on specific topics of interest, were also used to feed into the evaluation report.

2. Documentary review / desk research

Extensive desk research was conducted to ensure background information, as well as to provide evidence that was then triangulated with other sources of information to draft the answers to the evaluation questions. Documents reviewed included legal texts, strategic documents, previous evaluations and policy analyses.

3. Analysis of unstructured data

The following types of unstructured analyses were carried out: text mining to detect patterns and trends relating to sustainability practices in MSCA research[54], to analyse how different parts of Horizon Europe contributed to SDGs and to new or fast-growing research and innovation topics.[55]

Limitations of SDG analysis

Direct comparison of EU contributions to SDGs in Horizon Europe and Horizon 2020 was not possible for the following reasons: 1) Horizon 2020 analysis was based on closed projects, 2) the early stage of the Horizon Europe programme, 3) Horizon 2020 analysis was based on publications data, and in Horizon Europe on the proposal text (description of action).

4. Interviews

The primary purpose of the interviews was to collect evidence from the different actors concerned by the framework programme. This would give an objective assessment of what has happened by taking into account the different points of view. This method was used in particular in case studies and international benchmarks. Interviews were also conducted to confirm and complement the data collection, with a view to drafting the findings and conclusions. Some 1 049 interviews were conducted (including some with the same actors on different topics), gathering the perspectives of Commission staff, Member States, associated countries, and a large range of stakeholders (universities, companies, umbrella organisations, etc.).

5. Targeted survey

[53] SME participation in Horizon Europe (2024), Country participation in the EU R&I FPs (2024), Fostering gender equality (2025), EU Missions (2025).
[54] Excellent Science evaluation study, 2024, Annex 2.3, p. 309, 333
[55] Innovative Europe evaluation study, 2024, Annex 6, pp. 397-417, Resilient Europe study, Annex 3, p. 205-208.

A targeted evaluation survey[56] was designed by independent contractors to collect data for the interim evaluation of the programme. The survey was conducted between May and July 2023 and covered beneficiaries and unsuccessful applicants in Horizon Europe. The surveys gathered evidence on the needs and motivation for engaging with Horizon Europe, perceptions of expected project outcomes and impacts, and obstacles encountered during the application and project implementation.

The survey of Horizon Europe's **beneficiaries** included six different questionnaires:

1. MSCA Postdoctoral Fellowships beneficiary researchers;
2. ERC beneficiary Principal Investigators (PIs);
3. Beneficiary organisations under collaborative actions, including:
    a. Pillar I: MSCA (Doctoral Networks; Staff Exchanges; and COFUND), Research Infrastructures.
    b. Pillar II: Global Challenges & European Industrial Competitiveness (Clusters 1-6).
    c. Pillar III: beneficiaries of European Innovation ecosystems;
    d. Horizontal actions: WIDERA.
4. European Innovation Council (EIC): Pathfinder and Transition grants;
5. EIC Accelerator grants.

The survey of Horizon Europe's **unsuccessful applicants** included three questionnaires:

1. MSCA Postdoctoral fellowships and ERC;
2. Horizon Europe's collaborative actions, including:
    a. Pillar I: MSCA (Doctoral Networks; Staff Exchanges; and COFUND), Research Infrastructures.
    b. Pillar II: Global Challenges & European Industrial Competitiveness (Clusters 1-6) grants.
    c. Pillar III: European Innovation Ecosystems grants and EIC Pathfinder and Transition grants.
    d. Horizontal actions: WIDERA.
3. EIC Accelerator grants.

The survey invitations were sent to all the Horizon Europe beneficiaries and unsuccessful applicants under the relevant programme parts. This strategy allowed collecting survey answers from the maximum number of respondents. Before sending the survey invitations, several steps were taken to clean and prepare the eCORDA contact data. This involved removing ineligible or irrelevant applications, filtering out irrelevant calls, program parts, and contact types, and

[56] Catalano G., Consiglio, G., Delponte L., Monaco, F. and Santoro, C. *Survey Visualisation Report – Feedback of Horizon Europe Beneficiaries and Unsuccessful Applicants: Supporting the interim Evaluation of Horizon Europe.* Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2777/2180607

eliminating duplicate contacts to ensure each individual received only one survey invite per project. Contacts who had previously requested not to be contacted were also removed, along with invalid email addresses. After these steps, the final contact list included 111,095 unique individuals, comprising 28,843 successful applicants and 82,252 unsuccessful applicants.

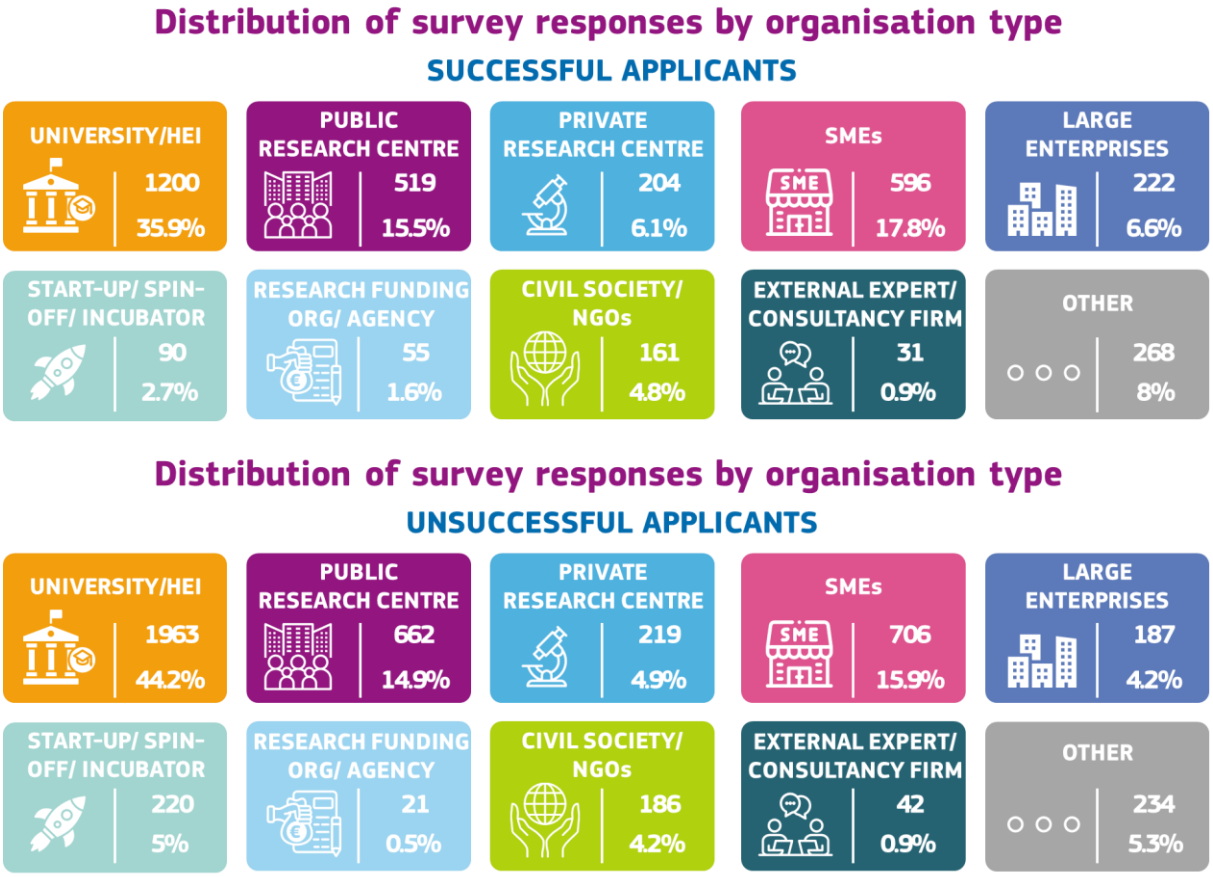
Figure 6 presents the survey response rates by program component. Both the total number of completed responses and the percentages indicating representativeness within each group are illustrated. The total number of respondents among programme beneficiaries is 5 414, while the number of unsuccessful applicants who responded to the survey is 10 290.

Figure 6: Survey response rate across Horizon Europe programme parts

Source: Survey Visualisation Report - Feedback of Horizon Europe Beneficiaries and Unsuccessful Applicants.

To ensure that there were no underrepresented groups among the different programme parts covered in the survey, the distribution of survey responses by type of organisation was also assessed. The analysis showed that there were no underrepresented groups, and the response pool reflected the structure of Horizon Europe's applicant population (**Figure 7**).

Figure 7: Survey response rate by categories of stakeholders



Source: Survey Visualisation Report: Feedback of Horizon Europe Beneficiaries and Unsuccessful Applicants.

6. Network analysis

Network analysis was performed in Digital Europe, Excellent Science, Innovative Europe and Resilient Europe evaluation support studies and involved analysis of connectedness of Horizon Europe programme parts, networks and cross-collaborations within WIDERA. It also included analysis of geographic dimension, and continuity of researchers across the FP.

7. Patent analysis

This analysis[57] served to investigate if the FP is attracting patenting companies. The analysis involved extracting metadata from eCorda (June 2023) on Horizon Europe beneficiaries and applicants and identifying matches between them and PATSTAT[58] applicants. Out of 4,759 unique Horizon Europe private-for-profit beneficiaries, 1,556 (33%) were identified in PATSTAT. For non-funded applicants, the shares of identified companies in PATSTAT were similar, with the Horizon Europe share at 30%.

[57] Innovative Europe evaluation study, 2024, Annex 6, pp. 417-419
[58] https://www.epo.org/en/searching-for-patents/business/patstat

The analysis of both Horizon Europe beneficiary companies and non-funded applicants matched to PATSTAT looked at the following key metrics:

- number of companies matched to PATSTAT by the Horizon Europe pillar;
- patent value metrics based on: (a) number of patents; (b) number of triadic patents, i.e. patents registered with the European, US and Japanese patent offices; (c) number of high-value patents, i.e. patents that can yield substantial economic gains and may be used to protect one's own products or to create licensing income; and (d) average number of patents per company.

8. Bibliometric analysis

The KIP monitoring framework recommends that scientific outputs such as journal publications or citations towards these publications be evaluated at least two years after the supported projects have been completed. On this basis, as of fall 2023, it was not appropriate, nor is even the necessary data available, to conduct a (even partial or initial) bibliometrics evaluation exercise of Horizon Europe journal-publication-mediated scientific outputs. Instead, a so-called calibre analysis was performed in two evaluation studies[59], which measured enabling factors of Horizon Europe effectiveness, on the prior scientific achievements of researchers involved in projects selected for Horizon Europe funding. In both evaluation studies, Cluster 4, Cluster 5 and Cluster 6 researchers' prior publications (from 2017 to 2021) were retrieved from Scopus to establish their track records on dimensions such as academic-private co-publication, cross-disciplinarity, or scientific excellence (proxied through citation impact), among others. It was hypothesized that Horizon Europe funding competitions should select, for example, researchers with past experience in conducting cross-disciplinary research, as a mechanism to increase the likelihood that societal impacts will be realized from supported projects. In the **Green transition** evaluation study, three altmetric indicators were used:

- citation from online policy-related documents
- Wikipedia mentions
- trade and journalistic news outlets mentions

The indicators used in the **Digital and Industrial transition** evaluation study were:

- Share of international co-publications
- Share of open access publications
- Share of highly cited publications at the 10% level
- Citation distribution index and citation distribution chart
- Interdisciplinary integration
- Multidisciplinary integration
- Publication-level average of authorships held by women
- Share of publications that are academic–private co-publications
- Percentage shares of publications associated with policy-related outcomes
- Percentage shares of publications associated with journalistic mentions or Facebook and Twitter attention.

[59] Green Transition evaluation study, 2024, Appendix E, p. 201-207; Digital and Industrial Transition evaluation study, 2024, Annex VI, p. 579-622

9. Benchmarks

Benchmarking activities provided evidence to inform evaluation questions and identified lessons learnt from best practices worldwide supporting research and innovation. In addition, they put in perspective the framework programme's performance in the area covered by the study. As a minimum, the benchmarks were based on desk research, project monitoring and publication data, and interviews with stakeholders and beneficiaries. The following benchmark was used in the staff working document:

Table 5: Benchmarks

International benchmark	Comparison with:
Evidence from the benchmark study[60] demonstrated that Horizon Europe showed similar approaches towards the COVID-19 response to the NIH. The responses are particularly similar in ensuring open data access and data sharing in the field of infectious diseases, infectious disease surveillance on different levels, the development of vaccines and therapeutics to prevent and treat COVID-19, as well as emerging infectious diseases and dedicating further research efforts to understand the emerging coronavirus variants. To this end, Horizon Europe also demonstrates flexibility in coping with changing circumstances in the world, such as COVID-19, as the FP continues its funding efforts and directs initiatives towards COVID-19 and coronavirus research, including the preparations for the emerging variants.	US medical research agency National institutes of Health (NIH)

10. Case studies

Overall, 76 case studies were conducted, covering the specific policy objectives, cross-cutting issues, and specific aspects of Horizon Europe such as institutionalised, co-programmed and co-funded partnerships. The impact area evaluation studies had 15 case studies each (except for Innovative Europe evaluation study that had 16).

11. Policy workshops

Some 6 policy workshops were conducted to support this evaluation. The workshops were implemented in the context of the independent external studies. They were used to consolidate and increase the robustness of the findings and conclusions arising from the data collection conducted through other methods, addressing evidence gaps whenever needed.

12. Public consultation

The public consultation on the interim evaluation of Horizon Europe was part of a larger joint consultation exercise looking at the past present and future of the R&I framework programmes (ex post evaluation Horizon 2020, interim evaluation Horizon Europe and the 2025-2027 strategic plan). In full compliance with the Better Regulation requirements, the online questionnaire was published, among other places, on the Have your Say portal[61], also offering the possibility to submit position papers. It ran from 1 December 2022 until 23 February 2023.

[60] Resilient Europe evaluation study, Annex 5, p.21
[61] Horizon Europe – interim evaluation (europa.eu)

For the section on Horizon Europe, 1 663 responses were submitted along with 136 position papers. The factual summary report and position papers have been published on Have your Say portal. To analyse the responses received through the public consultation, *quantitative analysis* was conducted by means of descriptive statistics, differentiating and comparing responses of different groups of respondents. Correct representation and interpretation of results are fundamental to drawing coherent conclusions which is why the number of respondents has been shown along with percentages. Linkages between answers and respondents' characteristics such as participation in the programme, country affiliation and type of respondent (e.g. Member State and business organisation representatives, researchers). When evident, correlations between answers given in closed questions have been explored. The summary statistics were bundled in .xml format which allowed for swift cross-comparison among the various dimensions covered in the public consultation survey.

Key messages were extracted from *qualitative* contributions, primarily position papers and open questions present in the public consultation survey. Same holds true for the analysis of the feedback contributions received for the call for evidence. Contributions were clustered by topics and specific aspects raised in both position papers and open questions by means of using Excel, presenting findings in a contribution matrix.

Although there was some coordination between some of the respondents (e.g., those participating in the same network, cluster, or country), as testified by the uploading of the same position paper by multiple respondents, the analysis of the consultation results does not indicate any campaign affecting the overall results.[62]

13. Multivariate regression analysis

A multivariate regression analysis was run to identify the factors that influence the efficiency of project application and administration processes for Horizon Europe Pilar II's applicants and beneficiaries. It was based on a combination of data from eCORDA (extracted in June 2023, 151 199 applicants under Pillar II) and from the targeted survey.

The dependent variables were based on the survey data and expressed as follows. For the efficiency of application costs: a proposal effort composite, the number of person-days dedicated to proposal preparation, and the perceived proportionality of the proposal effort. For the efficiency of administration process: the perceived proportionality of the granting procedure effort, the perceived proportionality of the project reporting requirements, and the share of project resources dedicated to administrative tasks. The dependent variables were tested independently against a range of independent variables (size of consortium, budget, previous FP experience, role in the consortium, type of organisation, use of NCP, reliance on external support, separation of management tasks from research activities), combined with control variables (cluster, country).

The analysis used OLS regression and logit regression models depending on the nature of the dependent variable. In addition, a bootstrap method was applied to validate the results of the multiple regression models by assessing the stability and reliability of the estimated coefficients (5000 bootstrap replications).

[62] Overall, 24 campaigns were identified (coordinated responses to the survey by more than one respondent and up to 9). The campaigns include responses by 88 respondents, representing 5% of all responses.

14. Overall limitations of the Horizon Europe interim evaluation

Methodological and data limitations were identified (listed below). Thanks to thorough checks ensuring that data is robust, these limitations did not affect the overall reliability of the analysis and the findings. Nevertheless, the evaluation faced the following challenges and limitations:

- Limitations in the analysis are due to the **sizable share of projects that were still ongoing at the time of preparing this evaluation**: only 983 (6.5%) of the 15 148 signed projects have been closed as of 6 January 2025 (projects suspended and terminated are not included). This affects the mid- and long-term impact indicators, as the large majority of projects will not have reached their impact at this early stage.
- Moreover, a considerable share of monitoring and impact indicators – among which the Key Impact Pathways, are based on data collected through periodic reporting by Horizon Europe beneficiaries. As such, the indicators incur a lag in calculation. On 6 January 2025 – the cutoff date for most monitoring data presented in this evaluation, only 3 443 projects had submitted periodic reports. This amounts to 21% of the signed grants by that date.
- A more general limitation regarding monitoring and impact indicators stems from the use of self-reported information by project beneficiaries. This induces sources of possible error and bias, which the Commission mitigates through triangulation and validation of data explicitly included in calculation methods for all indicators, and in particular the Key Impact Pathways. However, in some cases, it can be assumed that some indicators are largely underestimated due to underreported data – such as IPR applications, scientific publications, etc. Moreover, confidentiality of some IPR applications can further reduce their visibility in the Commission's monitoring systems, thus further underreporting results and impact of the programme.
- Only partial data available to the evaluation on the financial support to **third parties ("cascading grants")** in Horizon Europe. These grants are not managed through standard Commission IT tools: basic information about participants is submitted in periodic reports by the "first-level" beneficiaries arranging the calls, but only with a significant delay. For European partnerships using a cascading model, such as EIT KICs and co-funded partnerships, integration in Commission monitoring systems takes place with a considerable time delay and did not happen at all until 2024. This is a serious data limitation, as the Commission does not know who is the end-receiver of parts of FP budget is (up to EUR 300 million in Horizon Europe Cluster 4 only). This considerably limited and possibly distorted some of the analysis, especially on the distribution of the funding over participants (type incl. SMEs, geography, newcomers, etc.).[63]
- **Lump sum** projects do not submit financial costs in reporting periods, including personnel costs as FTE. This means that data for some Key Impact Pathway (KIP) indicators that rely on cost declarations will never be available for these projects if no changes are made to the methodology (for the KIP 8 short-term indicator on Number of FTE jobs created, as well as

[63] Table 9 on "Monitoring and evaluation system - issues encountered" in the evaluation study on Digital and Industrial Transition, 2024.

the KIP 8 medium-term indicator on FTE jobs following the project funded).[64] For KIP 9 short-term indicator ("Amount of public and private investment mobilised with the initial investment for the programme"), which is the difference between total costs and EU contribution - the value available in CORDA is an ex-ante estimation based on co-funding rates defined at the level of each call. The actual value of beneficiary costs will never be reported. This is important for assessing whether the project leverages more funding than it is contractually required to, e.g. for joint undertakings (some of their grants use lump sums).

- Lagged availability, gaps and inconsistencies in the data on indirectly managed actions, which includes some European Partnerships. Different partnership analyses (i.e. in the partnerships' annual reports, the Biennial Monitoring Report and Corda) have different sources, thus causing inconsistencies even if the formula they use is aligned.
- Policy officers who prepare the text of the calls for proposals are requested to flag the calls if they believe they are relevant for certain predefined priorities, e.g. AI. These flags do not take into account what happens in the project during implementation. For this reason, they cannot be used reliably for analysis, as they only signal *potential* synergies, not actual synergies.
- For Cluster 4, Destination 5 Space, the analysis was limited to the topics implemented by HaDEA. It did not include the topics and actions delegated to the European Space Agency (ESA) and to the EU Space Programme Agency (EUSPA), which represent about half the budget.
- While the evaluation strives to use public data sources, some data on the EIT KICs and EU Missions was not published in a timely way to support the evaluation so internal Commission monitoring is cited as the data source.

[64] For the short-term KIP indicator, only an ex-ante estimate of the number of employees in lump sum grants is available, from "Part A" of the grant agreement. Analysis is still in progress on the medium-term indicator.

Annex 3 Evaluation matrix

1. Effectiveness

Evaluation questions	Judgement criteria: extent to which…	Indicators and where available – targets	Main data sources
1.1. To what extent was Horizon Europe successful?	Horizon Europe has advanced scientific excellence ***(scientific impacts)***	**KIP 1:** Creating high-quality new knowledge Number of publications in peer-reviewed journals Number of awards and prizes won % of peer reviewed scientific publications reported under the **KIP 1** that come from the European Research Council (ERC) grantees	CORDA dashboard frozen on 1 December 2024 Replies to stakeholders' consultation Programme Performance Statement, June 2024 Survey of Horizon Europe ERC beneficiaries
		KIP 2: Strengthening human capital in R&I Number of researchers benefitting from upskilling activities Number of researchers benefitting from mobility activities	Excellent Science evaluation study (links in Annex 2) CORDA dashboard frozen on 1 December 2024
		KIP 3: Fostering diffusion of knowledge and Open Science Number of open Access publications produced Number of open Access datasets produced Number of open Access software applications produced	Excellent Science evaluation study (links in Annex 2) Replies to stakeholders' consultation Resilient Europe evaluation study (links in Annex 2)
		Field-weighted citation impact (FWCI) of Joint Research Centre's (JRC) publications indexed by Scopus Proportion of JRC's publications indexed by Scopus in the top 1% and the top 10% of the most-cited journals ranked according to the SCImago Journal Rank	A bibliometric study of JRC's publications indexed by Scopus between 2018 and 2022 JRC assessment by a panel of independent experts (links in Annex 2)
	Horizon Europe has increased the R&I contribution to addressing global challenges ***(societal impacts)***	**KIP 4:** Addressing EU policy priorities and global challenges through R&I. % of Horizon Europe projects focused on SDGs Amount of own funds mobilised by beneficiaries to address SDGs Number of publications linked to SDGs	Innovative Europe evaluation study, Annex 6.3 (links in Annex 2) Horizon Europe Work Programme Resilient Europe evaluation study (link in Annex 2) Biennial Monitoring Report (BMR) 2024 on Partnerships in Horizon Europe Replies to stakeholders' consultation
		KIP 5: Delivering benefits and impact via R&I missions. Missions' progress towards their goal	Commission Expert Group supporting the monitoring of EU Missions (link in Annex 2)

Evaluation questions	Judgement criteria: extent to which…	Indicators and where available – targets	Main data sources
		% of public consultation respondents who responded that "EU Missions contributed "somewhat" or "to a great extent" to strengthening the impact of European research and innovation % of public consultation respondents who are (very) satisfied with the EU missions' progress towards objectives so far	External assessment reports of the EU Missions (links in Annex 2) Replies to stakeholders' consultation
		KIP 6: Strengthening the uptake of R&I in society % of projects with EU citizens or end-users contribution	Commission Expert Group supporting the monitoring of EU Missions (link in Annex 2) External assessment reports of the EU Missions (links in Annex 2)
		Partnership-specific evaluation criteria *International positioning and visibility*: number of partnerships with allocated budgets for collaborations with partners outside the EU *Transparency and openness*: number of new organisations involved in the partnerships, number of countries partnerships were extended to beyond European borders, Participating members from widening countries, number of partnerships with SMEs members *Phasing-out preparedness*: number of partnerships with a phasing-out plan, number of partnerships with measures to improve their financial sustainability and reduce reliance on public funding % of public consultation respondents who either "agreed" or "strongly agreed" that the rationalisation of European Partnerships led to delivering more solutions for the benefits of society, the environment, and the economy	Biennial Monitoring Report (BMR) 2024 on Partnerships in Horizon Europe, survey results Partnerships' individual evaluation reports (links in Annex 2) Digital & Industrial Transition evaluation study, Annex I (link in Annex 2) Resilient Europe evaluation study- Annexes-case study 15 Replies to stakeholders' consultation
		Social Sciences and Humanities (SSH): % of Horizon Europe projects that took into account SSH Number of dedicated calls for proposals for SSH related topics Extent to which SSH were incorporated into HE Clusters % of public consultation respondents who reported that SSH should be further elaborated for the Strategic Plan 2025-2027	Horizon Europe monitoring data Directorate-General for Research and Innovation. (2023). Synopsis report: Looking into the R&I future priorities 2025-2027, p.37 Digital & Industrial Transition evaluation study (link in Annex 2) Green transition evaluation study (link in Annex 2)

Evaluation questions	Judgement criteria: extent to which…	Indicators and where available – targets	Main data sources
		Promotion of Gender Equality Amount of Horizon Europe funding directly linked with gender equality-advancing efforts % of women expert evaluators % of women in Horizon 2020/Europe advisory groups and expert groups % of women project coordinators in FP projects % of women researchers in FP projects % of public consultation respondents who agreed or strongly agreed that strengthened gender equality provisions bear potential to promote gender equality across R&I organisations and activities	Horizon Europe Performance Statement, retrieved 07/10/24 from Horizon Europe - Performance - European Commission (europa.eu) Fostering gender equality: Key Figures from Horizon Europe (link in Annex 2).Replies to stakeholders' consultation Digital & Industrial Transition evaluation study (link in Annex 2)
		International cooperation Associated countries vs Other third countries: • % of participations in collaborative projects • % of EU contribution to non-EU participants • % of collaborations that countries are part of % of public consultation respondents who agreed that participating in Horizon Europe "improved cooperation with partners from other countries - within the EU and beyond"	Country Participation in R&I Framework programmes (link in Annex 2) Excellent Science evaluation study, annex on international cooperation (link in Annex 2) CORDA dashboard frozen on 1 July 2024 Replies to stakeholders' consultation
	Horizon Europe has fostered innovation-based growth, created jobs and leveraged investments in R&I ***(economic impacts)***	**KIP 7:** Generating innovation-based growth Number of IPR outputs, including patent applications, trademarks, and utility designs Number of innovative products, processes, or methods produced and reported by the projects	5 evaluation studies (links in Annex 2) ERC Proof of Concept List of PIs funded CORDA dashboard frozen on 1 December 2024
		KIP 8: Creating more and better jobs Number of jobs in Full Time Equivalent (FTE) created or maintained with the support of Horizon Europe Total employment creation resulting from Horizon Europe	Macro modelling analysis. Models: RHOMOLO, FIDELIO (by Joint Research Centre), NEMESIS (in the Innovative Europe study 2024, p. 60)

Evaluation questions	Judgement criteria: extent to which…	Indicators and where available – targets	Main data sources
		KIP 9: Leveraging investments in R&I % of Horizon Europe contribution to GDP in the EU-27: average annual GDP gain	Macro modelling analysis. Models: RHOMOLO, FIDELIO (by Joint Research Centre), NEMESIS (in the Innovative Europe study 2024, p. 60)
		European Innovation Council (EIC) Number of start-ups and SMEs supported by the EIC Accelerator	Innovative Europe evaluation study (link in Annex 2) CORDA dashboard frozen on 1 December 2024 EISMEA, Scaling Deep Tech in Europe – the European Innovation Council Impact Report 2025
		European Innovation Ecosystems (EIE) Number of beneficiaries % of women researchers involved in EIE funded projects Number of identified Regional Innovation Valleys (RIVs)	CORDA data extracted on 26 September 2024 Innovative Europe study (link in Annex 2)
		European Institute of Innovation and Technology (EIT) Number of people who graduated from the EIT-labelled master and doctoral programmes Number of start-ups were created by students from EIT programmes Number of start-ups as a result of EIT innovation projects Number of start-ups that received support from EIT KICs Number of innovative products or services were put on the market by the EIT KICs Participants in (non-degree) education and training	Innovative Europe evaluation study (link in Annex 2) EIT internal monitoring
	Horizon Europe has widened participation and strengthened the European Research Area	Widening MS: • % of participation in collaborative projects • % of EU contribution • Applications success rate • % of public consultation respondents who agreed or strongly agreed that Horizon Europe is on track to strengthen and increase the impact and attractiveness of the European Research Area	Country Participation in R&I Framework programmes (link in Annex 2) CORDA dashboard frozen on 1 December 2024 Replies to stakeholders' consultation

Evaluation questions	Judgement criteria: extent to which…	Indicators and where available – targets	Main data sources
	Exploitation and dissemination measures have made it possible to reach these outcomes and impacts	Number of visitors on Horizon Results Platform Number of beneficiaries and organisations that profited from the Horizon Results Booster % of beneficiaries who agreed to a very large or large extent that EC platforms and measures have positive impacts on facilitating the uptake of projects' research findings % of public consultation respondents who deemed Commission-related exploitation services helpful in view of dissemination, exploitation and access to research and innovation results	Digital and Industrial Transition evaluation study, section 6.2.4 Green Transition evaluation study, section 14.4.2 The beneficiaries' survey results (targeted evaluation survey, May-July 2023) Replies to stakeholders' consultation

2. Efficiency

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
2.1 To what extent do the costs of applicants and administrative costs of beneficiaries (including reporting cost) introduce inefficiencies into the framework programme?	**Costs of applicants** are proportionate to the chances of securing funding and size of grants	Magnitude of applicant's cost [person-days, EUR] % of Horizon Europe applicants who received (internal and external) support to prepare their proposals Median value of the consultancy fee, EUR Perception of proportionality of unsuccessful and successful applicants % of respondents who 'rather agreed' or 'strongly agreed' that proposal preparation and submission in Horizon Europe is simpler than those in Horizon 2020 (OPC)	Targeted survey responses of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023 Replies to public stakeholders' consultation Responses to open questions to targeted survey of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023 Responses to open questions to 2 targeted surveys of Horizon Europe lump sum grants beneficiaries and unsuccessful applicants, autumn 2023 and summer 2024.
	Administrative costs incurred by **beneficiaries** to fulfil grant agreement obligations are efficient	Magnitude of administrative expenditure of beneficiaries [person-days, EUR] Qualitative feedback on inefficiencies by beneficiaries	

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
2.2 How efficient has the performance of the Horizon Europe been against **administrative targets?**	EU administration was efficient	Time-to-inform Time-to-sign Time-to-grant Time-to-pay Administrative expenditure ratio of Horizon Europe	implementation data on administrative expenditure (ABAC, CORDA, DG BUDG)
2.3 How do expected benefits compare to the costs Horizon Europe gave rise to?	Horizon Europe delivered **value for money**	Committed and spent **operational expenditure** [EUR] of Horizon Europe Committed/spent **administrative expenditure** of the EU public sector of Horizon Europe [EUR] **Costs of applicants** to Horizon Europe [person-days, EUR] (benefits = **Wider-economic impact** of Horizon Europe) Comparison of expected macroeconomic impact relative to incurred total cost to society	- Macroeconomic impacts: modelling Rhomolo, Nemesis - Surveys of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023 - Financial implementation data (European Commission)
2.4 How efficient has been the performance of Horizon Europe's **simplification** measures?	European Partnership landscape was rationalised	% of public consultation respondents who 'agreed' or 'strongly agreed' that the rationalisation of European Partnerships had • allowed additional public and private investments in research and innovation to be leveraged • led to delivering more solutions for the benefits of society, the environment, and the economy Qualitative feedback on perceived change by stakeholders	Replies to public stakeholders' consultation Digital and Industrial Transition evaluation study Green Transition evaluation study Surveys of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023
	European Partnership administrative costs are efficient	- Administrative cost ratio, including benchmarking. - Comparison between administrative cost intensity and direct leverage factor	Partnerships' individual evaluation reports (links in Annex 2)
	Lump sum funding delivered simplification benefits	Reduction of financial reporting burden experienced by lump sum grant beneficiaries [person-days; EUR] change in proposal preparation costs for lump sum grant applicants (relative to actual cost grants) [person-days] qualitative feedback from applicants and beneficiaries of lump sum grants	Two targeted surveys of lump-sum grant applicants and beneficiaries, and matched actual cost grant applicants and beneficiaries (autumn 2023, summer 2024) Assessment of lump sum funding in Horizon 2020 and Horizon Europe, September 2024 CORDA data

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
			Surveys of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023
	Horizon Europe has **potential for further simplification**, with respect to application, proposal evaluation and grant implementation processes	-Total expected financial reporting reduction for lump sum grant beneficiaries [EUR] - Potential of the "Personnel unit costs" measure to reduce financial reporting cost of actual cost grant. [qualitative] - potential for simplification in implementation processes raised by applicants and beneficiaries	Two targeted surveys of lump-sum grant applicants and beneficiaries, and matched actual cost grant applicants and beneficiaries (autumn 2023, summer 2024) Surveys of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023 5 evaluation studies (links in Annex 2)

3. Coherence

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
3.1. How coherent has the R&I Framework Programme been between its programme parts and with other EU programmes serving similar objectives and with national, regional and international initiatives?	implementation of Horizon Europe was consistent *between programme parts*	% of beneficiaries that plan joint activities Number of collaborations planned with Pillar III	Targeted survey Innovative Europe evaluation study (link in Annex 2)
		Number of beneficiaries transiting from EIT and ERC to the EIC measures	EIC Work Programme 2023 Innovative Europe evaluation study (link in Annex 2)
		Balance between lower and higher TRLs	Horizon Dashboard, as of 20 September 2024 Digital and Industrial Transition evaluation study (link in Annex 2) Green Transition evaluation study (link in Annex 2) Resilient Europe evaluation study (link in Annex 2)
	Horizon Europe has worked in synergy *with other relevant EU programmes*	Degree to synergies with other EU programmes listed in Annex IV of the regulation establishing Horizon Europe have been implemented	5 evaluation studies (links in Annex 2) EISMEA internal monitoring data CINEA internal monitoring data
		% of Horizon Europe beneficiaries that have sought additional funding for their research projects from other EU programmes	Survey of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023
		Number of unsuccessful project proposals awarded a Seal of Excellence	Horizon Dashboard data, as of 6 January 2025

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
			EISMEA monitoring data DG RTD monitoring data DG EAC monitoring data
		% of joint European Partnership calls for research and / or innovation proposals (together with other Partnerships)	Partnerships Biennial Monitoring Report (link in Annex 2)
	Horizon Europe has worked in synergy *with national programmes*	Number of beneficiaries transitioning from national support measures to the EIC	EIC Work Programme 2023 Innovative Europe evaluation study (link in Annex 2)
		% of unsuccessful applicants responding that the Seal of Excellence was helpful for obtaining alternative funding	Survey of Horizon Europe beneficiaries and unsuccessful applicants, May-July, 2023
		Number of national and/or regional Seal of Excellence support schemes set up in the Member States	Excellent Science evaluation study (link in Annex 2)

4. EU added value

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
4.1. What was value resulting from the FP that is additional to the value that could result from interventions which would be carried out at regional or national level?	Horizon Europe leveraged additional resources for R&I	Leverage factor of partnerships	Partnerships Biennial Monitoring Report (link in Annex 2) CORDA dashboard, data as of 31/12/2023 eGrants dashboard, data as of 31/12/2023 Annual Activity Reports of partnerships European Court of Auditors 2022 Annual report on EU Joint Undertakings Figures provided by individual partnerships
	research and innovation activities would not have been possible without Horizon Europe	% of respondents who found that Horizon Europe funding provides funding for research topics or fields not covered in national or regional R&I funding programmes	Excellent Science evaluation study, Appendix F (link in Annex 2)
		Existence of grants equivalent to Horizon Europe in Widening countries	Excellent Science evaluation study, case study 6 (link in Annex 2)

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
	funding (i.e. through other national or regional support)	Existence of national programmes equivalent to Horizon Europe in the field of security research (Cluster 3)	Resilient Europe evaluation study
	International cooperation in R&I strengthened Europe's competitiveness and partnerships	Combined annual financial contribution of the Associated Countries	DG RTD internal calculations

5. Relevance

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
5.1. How relevant has the support to innovation by the Framework Programme (FP), including partnerships, been given the stakeholders' needs and considering the scientific, technological and/or socio-economic problems and issues identified at the time of its design and over time?	The FP (including partnerships) responded to the *needs* of beneficiaries	% of respondents who were satisfied with blended finance in Horizon Europe Support for coverage of low TRLs	Replies to stakeholders' consultation Horizon Europe monitoring data
	The FP strengthened Europe's competitiveness	EU research and development expenditure relative to GDP % of private R&D investment Number of companies with the status of unicorns Innovation index indicator	DG RTD, SRIP
	The FP demonstrated that it was *flexible* in responding to emergencies and changing priorities	Extent to which Horizon Europe responded to unforeseen and emergency circumstances, such as the COVID-19 pandemic and Russian invasion of Ukraine % of respondents who "strongly agreed" or "rather agreed" that Horizon Europe gives more flexibility to respond to changing socio-economic needs compared to national and/or regional research funding	5 impact area evaluation studies (links in Annex 2) Targeted evaluation survey of Horizon Europe beneficiaries
	New programme governance	Extent to which co-creation approach improved the coherence of Horizon Europe's programme. % of respondents who found that co-creation process with the relevant Commission services contributed either somewhat or	Digital and Industrial Transition evaluation study (link in Annex 2) Green Transition evaluation study (link in Annex 2)

Questions	Judgement criteria: extent to which…	Indicators	Main data sources
		to a great extent to strengthening the impact of European research and innovation	Strategic Plan Replies to stakeholders' consultation
	Monitoring and reporting	Extent to which the monitoring and reporting requirements outlined in the regulation establishing Horizon Europe are being met	Corda system
	EU Missions' design and governance	Extent to which the Missions' design is "bold and inspirational", with "wide, scientific, technological, societal, economic, environmental or policy relevance and impact"' as foreseen by the regulation establishing Horizon Europe	The Commission Communication on the assessment of EU Missions two years on (link in Annex 2) Missions' implementation plans
	Directionality of European Partnerships	Average % of partnership funding allocated to the strategic priorities	Partnerships Biennial Monitoring Report (links in Annex 2) Digital and Industrial Transition evaluation study (link in Annex 2)

Annex 4 Efficiency - underlying analysis and additional detail

This annex contains the underlying analysis and additional detail summarised in section 4.2 (efficiency) of the main evaluation report.

4.1 Costs of Horizon Europe's affected stakeholder groups

4.1.1 Beneficiaries' administrative costs

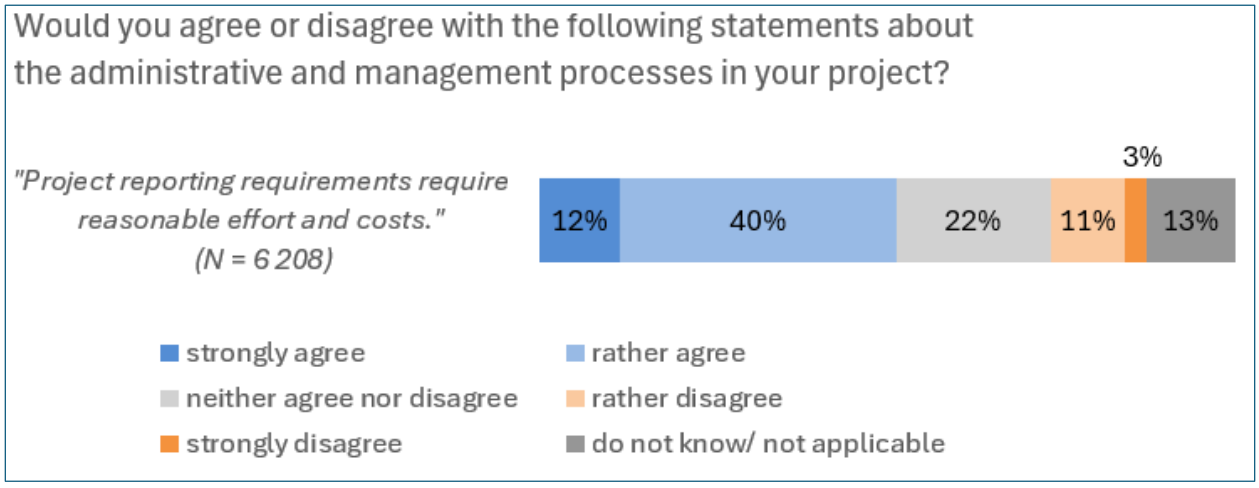
Beneficiaries incur **administrative costs** to fulfil specific obligations, set out in their grant agreement that would otherwise not have been incurred to manage the project. While beneficiaries are compensated for all administrative costs through grant payments, any avoidable part of this effort negatively affects the programme's overall efficiency.

i) Qualitative evidence on beneficiaries' administrative costs

While **around half of the beneficiaries agree to some extent that project reporting requires reasonable effort and costs**, for most these are **just about reasonable (i.e at the border to unreasonable).** In response to the statement '*Project reporting requirements require reasonable effort and costs'*, (Figure 8), 40% of Horizon Europe beneficiaries 'rather agree' (2455 respondents) and 22% (1378) 'neither agree nor disagree'. Explicit disagreement with the statement (14%, 855) but also strong agreement (12%, 727) are less frequent.

Beneficiaries' feedback in response to the open question of the targeted survey (see also Annex 4.5.2) illustrate their concerns. Twenty-one beneficiaries stated their administrative burden was far too high and negatively affected the work on their project. Topics that were raised as problematic by other respondents included, for instance: the number and formatting of required deliverables, a lack of sufficient user-friendly and tailored information on how to implement the own grant, and the cumbersome nature of updates emailed by the web portal.

Figure 8: Beneficiaries – extent of effort of project reporting ("reasonable")

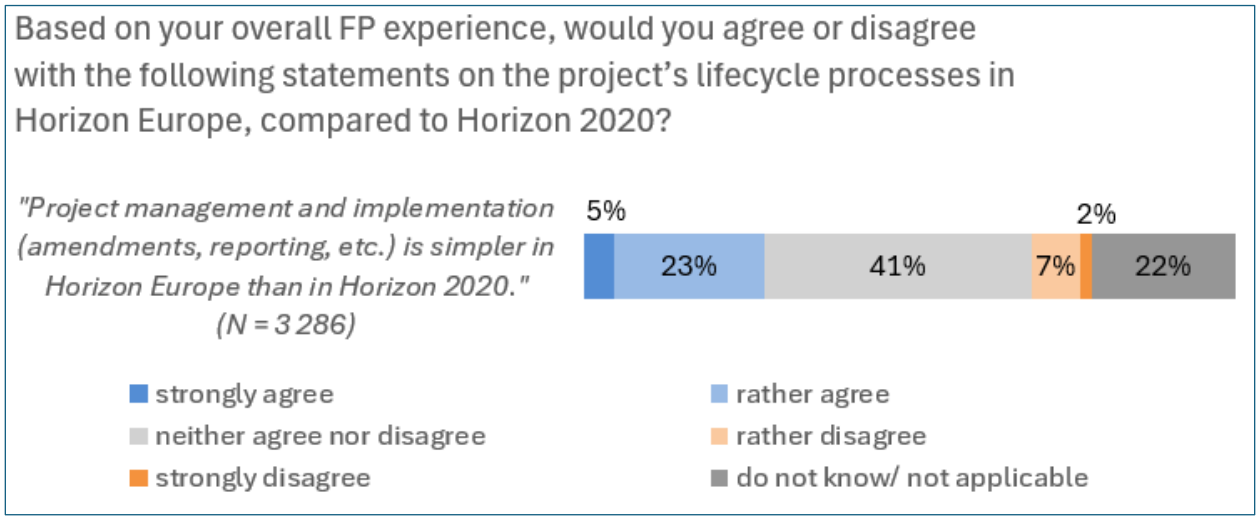


Source: Based on 6208 responses to question of targeted survey of Horizon Europe beneficiaries and applicants.

Beneficiaries have not experienced any substantial change in the effort involved in project management and implementation compared to Horizon 2020. 41% of Horizon Europe beneficiaries (1350 respondents) 'neither agree nor disagree' that processes have become simpler

and 23% (760) 'rather agree'. Explicit disagreement (9%, 304), but also strong agreement (5%, 150) that processes have become simpler are less frequent (Figure 9).

Figure 9: Beneficiaries - project management and implementation compared to Horizon 2020



Source: Based on 3286 responses to question of targeted survey of Horizon Europe beneficiaries and applicants.

ii) Quantitative evidence on beneficiaries' administrative costs

To better understand the size of the required administrative effort, the evaluation gathered **quantitative evidence on beneficiaries' administrative costs relative to the total project costs** from **5 161 Horizon Europe beneficiaries responding to the targeted survey question**. Respondents were asked "*What is the percentage share of your Horizon Europe project budget that is spent on administrative tasks (e.g. project reporting, project financial management, and similar)?*" and could choose from cost the ranges: Less than 1%, 1-3%, 4-5%, 6-10%, 11-15%, 16-20%, More than 20%.

The survey data does not make it possible to assess the administrative *burden* of Horizon Europe in a strict sense: It is **not possible to determine which share of the cost covers administrative tasks (e.g. reporting obligations) that are additional to those that would have been associated with the running of the projects in any case**.

Responses suggest that for the different programme parts, with a few exceptions, the median and the most frequent responses indicate that **6% to 10% of the project budget are allocated to administrative tasks**. Depending on programme part, this response was chosen by 23% to 38% of respondents. In contrast, **EIC Accelerator** respondents most frequently indicated costs of 4-5% (29% of responses), **Research Infrastructures** respondents 11-15% (29% of responses), and the median response for **WIDERA** was higher and fell into the 11%-15% bracket.

The median cost range of 6%-10% also applies when only considering consortium-run projects. While the **median coordinator of a consortium**, when assessed separately, **reported a higher range of 11% to 15%,** although even here the most frequently indicated administrative cost (mode) fell into the range of 6%-10% of the project budget.

Looking at the shares of respondents, who indicated **very high administrative costs** of 'more than 20%' of the project budget by type of organisation, **Research funding organisations/agencies (**16% chose 'more than 20%', 15 responses), **Civil society/NGOs** (12%, 34) and **Universities/Higher Education institutions** (11%, 196) are in the lead. For most of the other types of organisations (SMEs, Public research centre, Private research centre, Start-Ups, Large Enterprises, External experts) 7% of respondents reported this very high administrative costs bracket.[65]

Figure 10: Targeted survey responses to question: "In your estimation, what is the percentage share of your Horizon Europe project budget that is spent on administrative tasks (e.g. project reporting, project financial management, and similar)?"

Source: targeted survey of Horizon Europe beneficiaries and applicants, as reported in Evaluation Support study on Excellence Science, annex 7, Median value indicated by thicker line[66]

[65] Complemented by respondents, whose organisations fell under "Other" (11%, 46) and "Not in survey" (5%, 61). One respondent who were *Incubator* and *Spin-Off* respectively selected the highest cost bracket.
[66] Due to a clerical error, Excellence Science Annex 7, p.271 quotes an incorrect survey question in the figure.

Table 6: Administrative costs of Horizon Europe beneficiaries by programme part.

Horizon Europe Programme Part	No. of total survey responses	Beneficiaries' administrative costs [% of project cost] (median)	Beneficiaries' administrative costs [% of project cost] (mode)
ERC	**226**	6-10%	6-10%
MSCA	**879**	6-10%	6-10%
INFRASTRUCTURES	**169**	11-15%	11-15%
Cluster 1	**350**	11-15%	6-10%
Cluster 2	**324**	11-15%	6-10%
Cluster 3	**152**	6-10%	6-10%
Cluster 4	**678**	6-10%	6-10%
Cluster 5	**738**	6-10%	6-10%
Cluster 6	**710**	6-10%	6-10%
Missions	**319**	11-15%	6-10%
EIC Accelerator	**95**	6-10%	4-5%
EIC Pathfinder	**152**	11-15%	6-10%
EIC Transition	**24**	6-10%	6-10%
EIE	**66**	6-10%	6-10%
WIDERA	**279**	11-15%	6-10%
Horizon Europe overall	**5161**	**6-10%**	**6-10%**

Source: Responses to targeted survey of Horizon Europe beneficiaries and unsuccessful applicants.

A regression analysis of the factors that increase administrative costs of beneficiaries[67] shows that for Pillar II, the **thematic cluster** plays a role. In particular, the share of **resources dedicated to administrative tasks tends to be lower in the thematic clusters 3, 4 and 5,** while the reporting process is perceived as **less proportionate in clusters 1 and 2**. This could reflect slight differences in project reporting requirements and management practices between clusters and associated managing entities. On the other hand, **no significant differences in (perceived) administrative costs is observed for coordinators, for participants with previous FP experience or for participants who outsource the project management tasks** to a third party or department. **No differences are found either when focusing on administrative costs by consortium size**. As shown in Table 7 below, beneficiaries spend around 6% to 10% of its project costs in administrative tasks, with median and mode values showing similar results in all categories.

[67] Methodology described in Annex 2, section 15. See also: Interim evaluation support study: working paper: analysis of factors affecting applicants' and beneficiaries' costs of project application and administration processes in Horizon Europe's Pillar II (doi/10.2777/412609).

Table 7: Administrative costs by consortium size

Administrative costs by consortium size	Sample	Beneficiaries´ administrative costs [% of project costs] (median by number)	Beneficiaries´ administrative costs [% of project costs] (mode)
Mono beneficiaries	564	6-10%	6-10%
2-14 participants	2243	6-10%	6-10%
15-30 participants	1931	6-10%	6-10%
31+ participants	423	6-10%	6-10%

Source: Responses to targeted survey of Horizon Europe beneficiaries.

Estimate of total administrative cost of beneficiaries

In total, **all projects signed under Horizon Europe so far**, over their entire project lifetime, are expecting to spend **between EUR 4.7 billion and EUR 6.5 billion in administrative costs**. This corresponds to between 9% and over 12% of the total project cost so far. To estimate this total administrative cost of beneficiaries, the evaluation used monitoring data of the project costs, aggregated at the level of programme part. It then aggregated the survey responses at the level of programme parts and used the shares of respondents selecting each cost range as a weight, to be applied to the lower and upper bound (percentages) of each range, to then multiply them with the project cost total of the relevant programme part. Adding up over all cost segments generated the total range. As the answer 'more than 20%' does not express an upper limit, it was necessary to make an assumption. The estimate assumes that no beneficiary would engage in a project that allocated more than a quarter of the project costs to administrative tasks leads to an upper bound estimate of EUR 6.5 billion.

The Horizon Europe estimate of the total administrative cost is orders of magnitudes higher than that estimate of the Horizon 2020 final evaluation, which ranged between EUR 135 million to EUR 215 million over the entire framework programme. However, the **differences between the two estimates are likely driven by the change in the survey question design and the improvement in data quality, rather than actual underlying changes in beneficiaries' administrative costs.**

The Horizon 2020 estimate had used a median time cost of 4.5 - 7 person-days per month of project duration at programme level from the (not representative) **public consultation responses**. The **uncertainty around the Horizon 2020 estimates was very high**. The attribution to the framework programme requirements was similarly unclear at the time. The format of the previous question was not repeated in this evaluation, as it had been difficult to answer. The new question format may be easier to answer but, however, it is also much less granular (e.g. 0.1% of total project cost is equivalent to EUR 44 million) and may contribute to higher estimates.

4.1.2 Cost of applicants

Successful and unsuccessful applicants, the largest stakeholder group of Horizon Europe, incur **application costs** when preparing and submitting their proposals. Application costs are one of the framework programme's costs on EU Society and influence its value-for-money. They are partially unavoidable as quality proposals require effort up front to then allow for the most promising projects to be identified, which in turn maximises the chances of generating higher benefits for society. At the same time, they have the potential to introduce inefficiencies into the programme. **As the total number of applicants is very high and the vast share of applicants is unsuccessful, a small avoidable burden in the application process has the potential to introduce a sizeable inefficiency into the programme.**

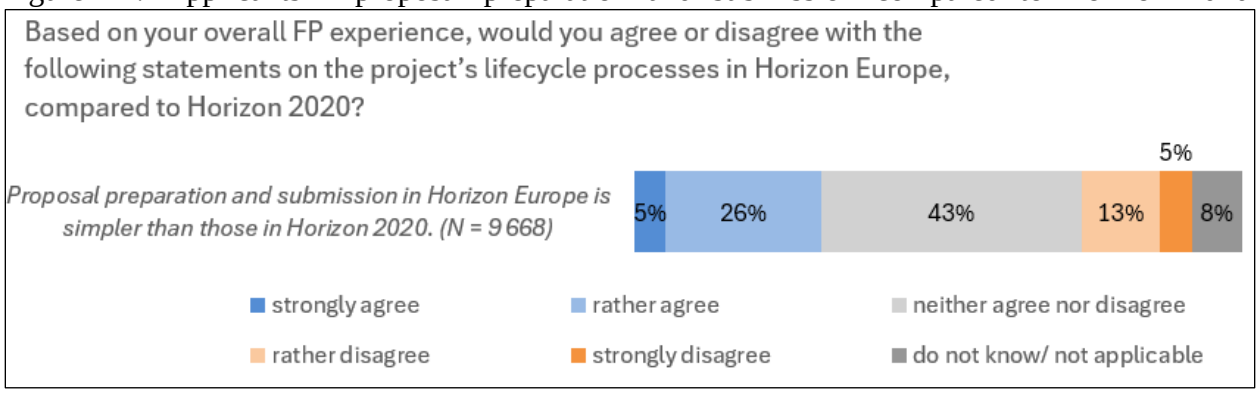
The evaluation's targeted survey of the population of applicants and beneficiaries collected a qualitative and quantitative evidence base from 17 254 respondents,[68]of which **64% (11 028)** were **unsuccessful applicants** and **36% (6 226) successful applicants**.

4.1.2.1 Costs of applicants – qualitative evidence

For 42% of respondents, the 'overall effort to prepare a proposal was acceptable' to a 'large extent' (32%, 5 443 respondents) or a 'very large extent' 10% (1733), while 32% were less supportive of the statement ('moderate extent') and **around a quarter of applicants effectively did not find the required effort acceptable**, of which 7% (1 264) 'not at all' and 17% (2990) 'to a small extent'.

Applicants have not experienced any substantial change in the effort involved in proposal preparation and submission compared to Horizon 2020, with 43% of Horizon Europe applicants (4143 respondents) neither agreeing nor disagreeing that proposal preparation and submission have become simpler. The share of respondents who experienced some simplification (31%) is larger than the share who disagree (18%) that application processes have become simpler (Figure 11). This corresponds with the feedback that had been received in the public consultation[69] (Annex 5, Figure 74), in which 74% (1037) of respondents observed a "similar" application burden, while 17% (246) reported a "greater" burden.

Figure 11: Applicants – proposal preparation and submission compared to Horizon 2020



Source: Based on 9 668 responses to question of targeted survey of Horizon Europe beneficiaries and applicants.

[68] Excluding 121 responses of 'cannot say'.
[69] Annex 5 Fig. 46 (%ages "cannot say" removed); Evaluation study on Innovative Europe, Annex 10.3.2.5, p.615.

Proportionality of the application costs

The targeted survey of the evaluation collected detailed feedback on questions about the proportionality of applicant costs, which makes it possible to a assess proportionality relatively, against different points of comparison[70].

Relative to the complexity of the proposed projects, almost two in three applicants find the overall effort proportionate[71] and few (13%) find it disproportionate[72]. (Figure 12, chart 3)

Over half of the applicants (58%[73]) see the application effort as **proportionate to the number of consortium partners involved**, with again few (12%[74]) finding it disproportionate. (Figure 12, chart 4).

Considering the size of the grant, around half of the applicants find their application cost to be proportionate[75], while only **one in six applicants** (17%) effectively disagree[76] that the total time and resources needed are in proportion with the financial support. (Figure 12, chart 2)

The pattern of the applicants' responses changes considerably, when the chances of success (securing Horizon Europe funding) are taken into account (Figure 12 chart 5). In this context, **only a third of applicants** (34%[77]) still rate their application effort as **proportionate**, whereas about as many (40%[78]) rate their application effort as no longer as proportionate.

Feedback from applicants to the **survey's open question** confirms and illustrates this finding. Around one quarter of the contributions[79] on the topic of application (45 out 189[80], 24%) **raise strong concerns that the total amount of effort spent on proposals is disproportionate to the chances of success**. The responses were sent by from applicants from a wide range of Horizon Europe programme parts.[81] For instance, two respondents report i) difficulties to motivate employees to spend time looking for consortia and participating in proposals due to the disproportionate effort and ii) their decision to not apply anymore to the programme. (Cluster 4[82])

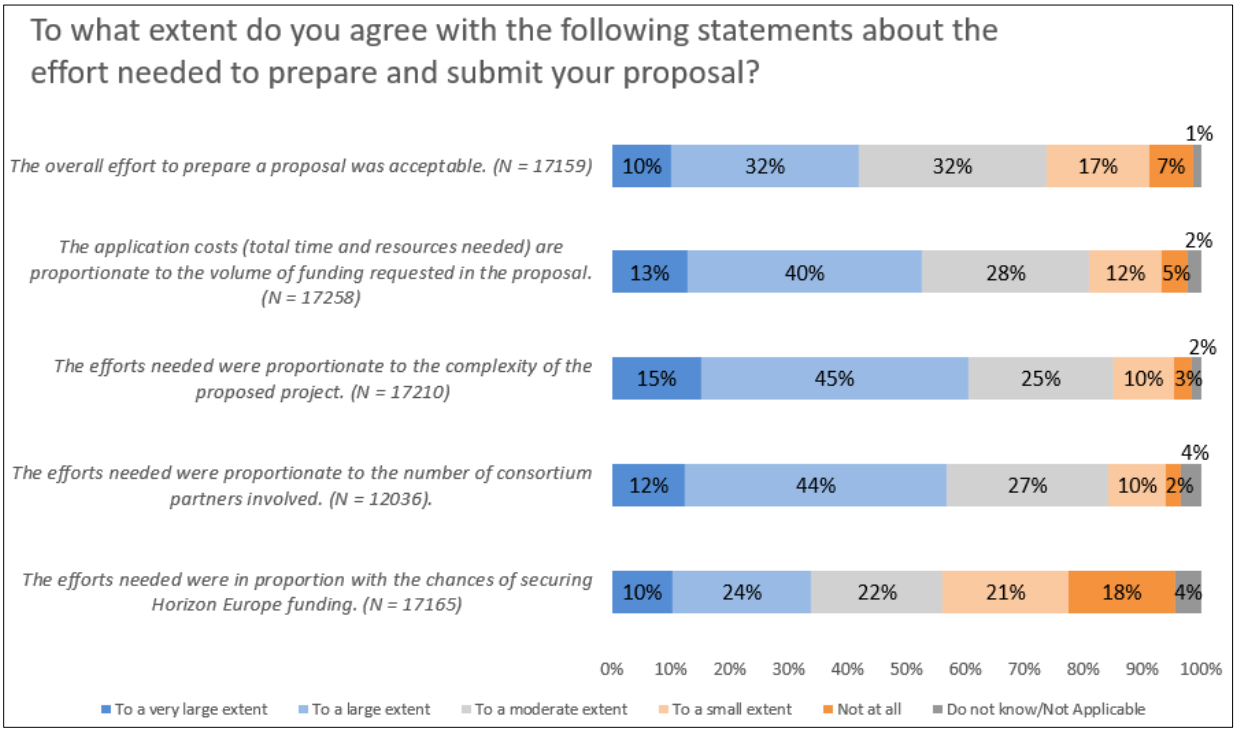
Taken together, the qualitative evidence on a lack of **proportionate application cost in light of the chances of success supports a strong finding, in particular given the increased success rates and budget of Horizon Europe.**

Some respondents to the survey's open question suggest measures to lower the effort involved in applications. For instance, at least 20 separate contributions, most of them from **ERC applicants**,

[70] The assessment treats and agreement "to small extent" as an expression of a disagreement to some extent, to account for potential bias introduced by the asymmetric answers.
[71] 45% 'to a large' (7 801 respondents) and 15% 'to a very large' (2 596 respondents)
[72] 10% 'to a small extent' (1 747 respondents) and 3% 'not at all' (536 respondents)
[73] 44% 'to a large' (5 337 respondents) and 12% 'to a very large' (1 495 respondents)
[74]10% 'to a small extent' (1 180 respondents) or 2% 'not at all' (299 respondents).
[75] 40% 'to a very large extent' (6 885 respondents) and 13% 'to a large extent' (2 200 respondents).
[76] 12% 'to a small extent' (2 094 respondents) and 5% 'not at all' (778 respondents).
[77] 24% 'to a large extent' (4 051 respondents) and 10% 'to a very large extent' (1759 respondents).
[78] 21% 'to a small extent' (3 652 respondents) and 18%'not at all' (3 109 respondents),
[79] The application phase is the topic that received most specific and informative responses to the targeted survey's open question, of which most discuss potential for further simplification and are reported in Annex 4.5.3.
[80] 4849 responses to open questions, of which 189 reported in evaluation as particularly informative/sufficiently specific. Topics: application process (84), proposal template (42), web portals, guidance (35), use of consultants (37). See annex 4.5
[81] MSCA PF: 2 MSCA DN:7, ERC: 6, INFRA: 1, C1: 4, CL2: 1, CL3: 1; CL4: 7, CL5: 8, CL6: 2, EIC Accelerator: 2, EIC Pathfinder: 2, WIDERA: 1, Mission: 1.
[82] Examples from (one unsuccessful and one successful) Cluster 4 applicants.

suggest that the use of **two-stages application process** - where the second part must only be submitted if the first part is successful- should be applied (more widely) to reducing.

Figure 12: Proposal preparation effort



Source: Targeted survey of Horizon Europe beneficiaries and applicants. (2023) The assessment counts agreement "to small extent" as an expression of a disagreement to some extent, to account for potential bias introduced by the asymmetric answers.

A further breakdown of the **responses by programme part** (Figure 13) reveals relevant variation. In particular, **EIC and ERC applicants flag with most clearly that their application costs are not proportionate to the chances of securing funding.** The most concerning responses came from the **EIC Accelerator**, where just over half (52%)[83] of the responding applicants pointed at disproportionate application costs in chances of success, of which a particularly high share (29%) were very negative responses. A similarly strong signal comes from **EIC Pathfinder** applicants (45%429 respondents, of which 23% very strongly negative).

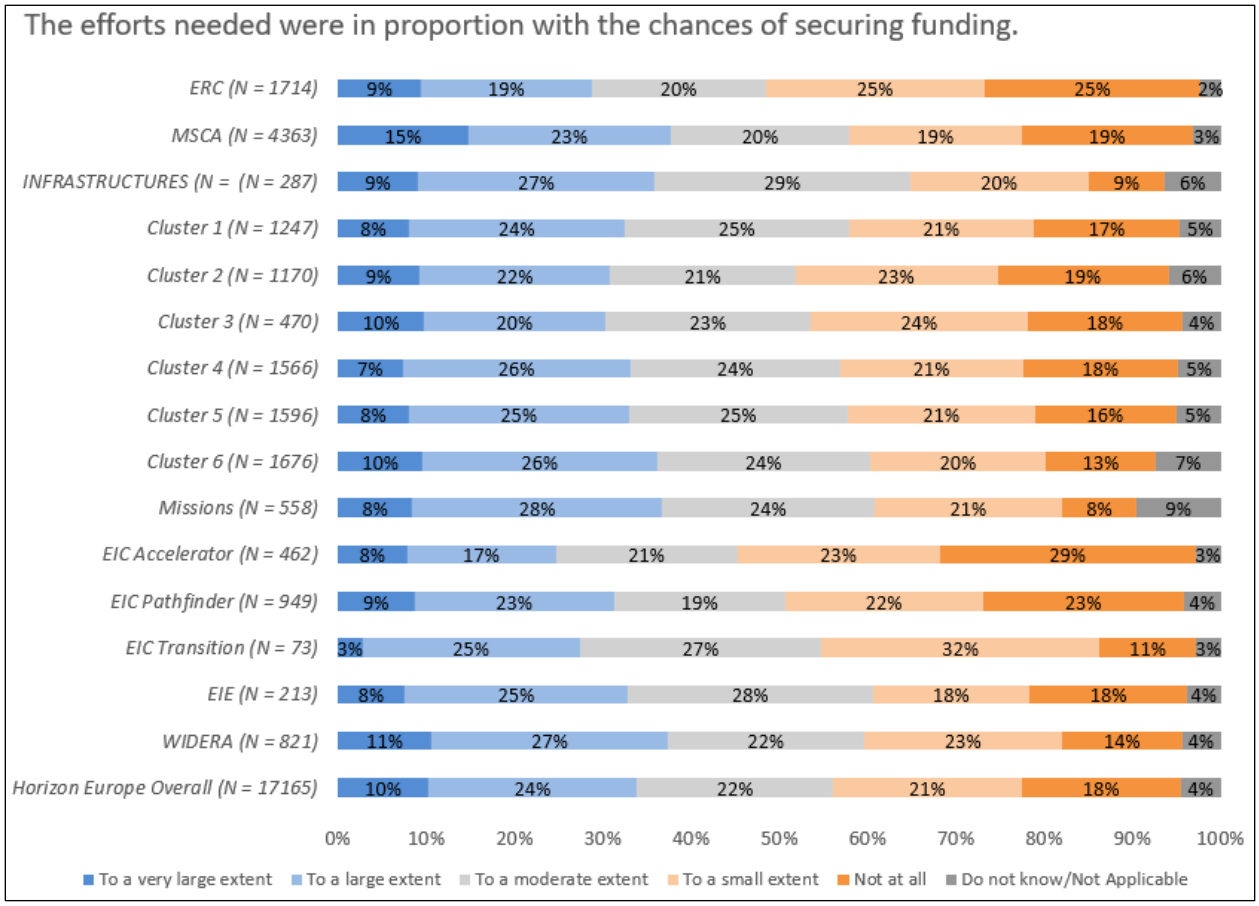
Some of this may be linked to the **EIC's former application platform** with integrated AI (no longer in use). Five detailed responses from EIC applicants to the survey's open question pointed to the platform adding to the applicants' burden. One EIC Accelerator applicants reported: '*This was an awful experience in which we had to waste the consultant support to understand the web platform, instead of focusing on business or other more important aspects.*' (See also Annex 4.5.3 on the potential for further simplification (application phase).

The concern about strongly disproportionate costs in light of success were further shared by **ERC** applicants (around 50%, 845 respondents, of which 25% strongly negative), and **EIC Transition** applicants (42%, 31 respondents). In the other programme parts, disproportionate application costs in chances of success were flagged by relatively large shares of applicants of **Cluster 2** (42%, 495

[83] i.e. either agreed 'to a small extent' (23%; 106 respondents) or 'not at all' (29%; 134 respondents)

respondents) and **Cluster 3** (42%, 198 respondents). Discontent among applicants on this topic correlates with proposal success rates, as programme parts showing the lowest success rates are exactly those showing the greatest discontent, namely Cluster 3 (13%), Cluster 2 (14%), EIC (14%) and ERC (14%).[84]

Figure 13: Proportionality of applicant costs relative to chances of success - by programme part



Source: Targeted survey of Horizon Europe beneficiaries and applicants. (2023) The assessment counts an agreement "to small extent" as an expression of a disagreement to some extent, to account for potential bias introduced by the asymmetric answers.

4.1.2.2 Costs of applicants – quantitative evidence and total cost estimation

To obtain robust evidence on costs of applicants the targeted survey asked respondents to **report their organisation's incurred application time costs under Horizon Europe**. The relevant question asked: '*In your estimation, how many person-days did your organisation spend in preparing your Horizon Europe proposal?*' Respondents were offered the following options to answer: 'Less than 5 person-days'; '6 to 15 person-days'; '16 to 25 person-days'; '26 to 35 person-days'; '36 to 45 person-days'; '46 to 55 person-days'; '56 to 65 person-days'; 'More than 65 person-days'. The question had been chosen as it was considered as easy as possible for

[84] Proposals frozen dashboard as of 2 January 2025.

respondents to estimate. The answer options (bins) were based on evidence from the Horizon 2020 public consultation, which had used a similar question.

In contrast to earlier evaluation evidence on the costs of applicants, such as those from the public consultation and studies with narrower focus used in the Horizon 2020 final evaluation, the **survey responses of this evaluation's targeted survey covered all applicants, all programme parts and were matched with data from the monitoring database (CORDA),** which allowed the evaluation to understand, for instance, to which programme part the respondents had applied, whether they had met the quality threshold, had been funded, as well as other characteristic of their proposed project (e.g. duration, grant size, consortium size). **For the first time it is thus possible to quantify the costs associated with the preparation of proposals under the R&I framework programme in a robust way.** In the remainder of the section the findings are presented.

Proposal preparation costs of consortia (multi-beneficiary grants) combine the costs of coordinators, shouldering most of the effort, and those of contributing partners. Overall, the **median consortium coordinator spends** between **36 to 45 person-days,** with a mode of **above 65 person-days**. The effort of **contributing consortium partners** is typically lower, with **16 to 25 person-days** per proposal (median and mode). The finding holds across most characteristics, but not for **consortia of > 30 partners**, where **contributing partners** spend on average less with **6 - 15 person-days per proposal** (median and mode).[85]

Table 8: Application Cost: distribution of responses of coordinators and partners

Application cost	Consortium Coordinators		Consortium Partners	
person-days	successful (% from total)	unsuccessful (% of total)	successful (% of total)	unsuccessful (% of total)
< 5	24 (3%)	78 (6%)	358 (11%)	571 (13%)
6 to 15	34 (5%)	87 (7%)	**991 (29%) mode**	**1 485 (33%) mode**
16 to 25	50 (7%)	150 (12%)	**847 (25%) median**	**1 089 (24%) median**
26 to 35	117 (17%)	205 (17%)	572 (17%)	633 (14%)
36 to 45	115 (16%)	**195 (16%) median**	328 (10%)	386 (8%)
46 to 55	**90 (13%) median**	113 (9%)	138 (4%)	157 (3%)
56 to 65	76 (11%)	139 (11%)	71 (2%)	91 (2%)
> 65	**197 (28%) mode**	**246 (20%) mode**	100 (3%)	148 (3%))
Total responses	703	1 213	3 405	4 560

Source: Excellent Science evaluation study Annex 1.7.3.2, Table 54, p.250. N=9 881

Mono-beneficiaries - The median proposal preparation effort of **Pillar I and Pillar III** mono-beneficiaries was comparable to that of coordinators with **36 and 45 person-day**. While mono-beneficiaries do not have to coordinate partners during the proposal preparation phase, they are

[85] Resilient Europe evaluation study, Annex 1.32 p.45

nevertheless required to fulfil most of the same steps as coordinators. The finding is relevant, as some mono-beneficiaries are **worse affected by the same level of cost due to constrained resources**. For instance, this can be assumed to be the case of applicants to **MSCA PF,** who share the same median (and mode) cost range. However, mono-beneficiaries are not homogenous, and costs differ between actions (table below) For the **EIC Accelerator**, it is important to note that proposals apply for substantial grants and equity budgets, through pitching decks and full business plans, which can be used for investment commercialisation purposes beyond the EIC. This is also reflected in the comparatively high share (30%) of EIC Accelerator applicants, particularly successful EIC Accelerator applicants (40%), who reported very high application **costs of over 65 person day**s, which is also the most commonly reported cost for this action.

Table 9: **Application costs of Pillar I and Pillar III mono - beneficiaries**

Application Costs Mono-beneficiaries	No. responses	Application costs - median [person-days]	Application costs - mode [person-days]
ERC STG	811	36 to 45 person-days	36 to 45 person-days
ERC COG	511	36 to 45 person-days	26 to 35 person-days
ERC ADG	324	36 to 45 person-days	More than 65 person-days
ERC POC	40	26 to 35 person-days	6 to 15 person-days
MSCA PF	2916	36 to 45 person-days	26 to 35 person-days
MSCA DN	1203	16 to 25 person-days	6 to 15 person-days
MSCA SE	189	16 to 25 person-days	6 to 15 person-days
MSCA COFUND	19	56 to 65 person-days	56 to 65 person-days; More than 65 person-days*
EIC Accelerator	335	36 to 45 person-days	More than 65 person-days

* MSCA COFUND application cost was bimodal for '56 to 65 person-days' and 'More than 65 person-days'. Source: Responses to targeted survey of Horizon Europe beneficiaries and unsuccessful applicants.

Consortium coordinator time costs vary by type of funding instrument.[86] While their median time cost for RIA, IA, PCP and COFUND actions is 46 to 55 person-days, those preparing CSA and MSCA(COFUND/DN/SE) proposals typically spend slightly less time, with 36 to 45 person-days, and even less on EIC[87] proposals, which take coordinators typically 26 to 35 person-days to prepare. The step down in costs is plausible, as the highest cost is associated with the group of instruments with the higher grant values (RIA, IA, etc;) suggesting that the higher expected return in case of success makes it worthwhile to spend more effort up front.

Proposals for longer projects take coordinators also longer to prepare. Projects lasting up to two years see coordinators typically investing 26 to 35 person-days in proposals, whereas those of two to four years typically take 36 to 45 person days. Coordinators of long projects, proposed to last four years or longer, typically incur even higher time costs of 46 to 55 person-days. For all but the shortest projects up to two years, coordinators most frequently chose the response of "more than 65 person-days". The share of respondents choosing this mode also increases with project duration, suggesting that a substantial share of longer projects may require proposal preparation times from coordinators of well above 65 days.[88]

Coordinators that prepared ultimately funded proposals typically spent more time than those of unsuccessful proposals.[89] The difference is particularly pronounced for projects with a duration of **at least three years**. This could be interpreted as an encouraging result, and a hint that the effort coordinators put into preparing their proposal matters, and that the proposal evaluation process rewards the effort. However, at the same time success is also correlated with the involvement of external contractors assisting with the proposal preparation, which in turn was also found to correlate with longer proposal preparation times.

Applicants who made use of, or were, consultancies took on average more time (about 10 person-days more for median respondents) to prepare a proposal, compared to the Horizon Europe average. **This difference was not observed for coordinators who were themselves consultants**, and who reported the same typical time costs as other coordinators. **Contributing consortium partners, who were themselves consultants, reported (about 10 person-days) lower than average application time costs.** The observed differences may be due to other characteristics of the type of projects for which consultancies are brought onboard, or be influenced by a combination of experience and coordination costs.

A regression **analysis of the factors driving the application effort**[90] shows that **consortium coordinators, as well as applicants with previous experience in the framework programme spend significantly more time (in terms of person-days) on the application process**. Coordinators typically lead the proposal, including aspects such as of establishing the consortium and determining the budget for each partner, which increases their application costs. Underlying

[86] Categories follow in parts those used in the Horizon 2020 Interim evaluation European Commission, Directorate-General for Research and Innovation, Interim evaluation of Horizon 2020 – Commission staff working document, Publications Office, 2017, Annex 1, p. 71 (doi/10.2777/220768)
[87] EIC Pathfinder and EIC Transitions. Based on 1916 responses over the three groups.
[88] Resilient Europe evaluation study, Annex 1.3.2, Figure16.
[89] Excellent Science evaluation study, section 4.1.2.
[90] Methodology described in Annex 2, section 15. See also: Interim evaluation support study: working paper - analysis of factors affecting applicants' and beneficiaries' costs of project application and administration processes in Horizon Europe's Pillar II (doi/10.2777/412609).

reasons for higher application costs of organisations with previous framework programme experience are less clear. It might reflect an increased involvement in the proposal phase, as consortia tend to rely strongly on participants with more experience to develop the proposal. An alternative and complementary factor could be that experienced applicants invest more time in the proposal, as their first-hand experience with the programme has led them to have better information on the level of competition for funding. Finally, another measure of the application effort – the perception of the effort by the applicant, including the perception of the feasibility and the clarity of the call – is significantly influenced by the size of the consortium. **A higher number of consortium partners leads to a higher proposal effort for the coordinator**, which is an expectable and intuitive result considering coordination costs.

C**onsortium size was more strongly correlated with a higher effort of proposal preparation for coordinators than grant size and project duration**.[91,92] Coordinators of consortia with only **one partner** typically spend **26 to 35 person-days**, consortia with **2-14 partners** see coordinators typically investing **36 to 45 person-days** in proposals, while those of **15-30 partners** typically take **46 to 55 person days**. **Above 30 partners** coordinators typically spend **56 to 65 person days** (median), with a higher mode suggesting a **large share** of coordinators[93] taking **well above 65 person-days.** Survey responses suggest that the required effort increases in steps, by **about ten person-days for every additional 15 partners**.

Estimation of the total application cost of Horizon Europe

The availability of detailed data on application efforts via the survey allows for a more robust quantification and monetisation of application costs at programme level. It is estimated that **the total cost of proposal preparation of all applications[94] to Horizon Europe so far ranges between EUR 1.9 billion and EUR 2.8 billion**. Divided by the total number of proposals submitted so far, this implies an average cost of proposal preparation in the range of EUR 21 000 to EUR 32 000. A previous estimate in the final evaluation of Horizon 2020 had arrived at an average proposal preparation cost of EUR 18 000 to EUR 37 000 for applicants. The difference between the two estimates is driven by a change in data source, with the newer estimate being the more robust one.

The estimate analysed the number of days dedicated to the application process and differentiated applicants based on their role and the size of their consortium. More specifically, applicants are grouped into five 'sizes', from mono-beneficiary applications, very small consortia with one additional partner, consortia with 2 to 14 partners, consortia with 15 to 30 partners, and consortia with over 30 partners. In addition, applicants from consortia are separated according to their role into coordinator or partner. Using these two stratification factors supports the robustness of the quantification exercise, as the analysis presented above points at their strong influence (consortium size and the role of the applicant as coordinator) on a proposal's preparation time. The estimated

[91] Resilient Europe evaluation study, Annex 1.3.2, Figure17, page 44 – 45.
[92] Further, the size also dominated when looking at the variation in effort of proposal preparation in combination with grant size and project duration. Consortium size, grant size and project duration are strongly correlated, and the evaluation did not attempt to isolate the effect of consortium size on time costs.
[93] 44% of responding coordinators from consortia with above 30 partners chose the answer "56 to 65 person-days", however, this share is only based on a total of 15 respondents.
[94] EIC Accelerator applications were excluded due to insufficient availability and quality of the data.

total application cost is then calculated by multiplying the number of days of each stratum (median response) - successively the lower and higher bound of the bracket - by the corresponding number of applicants to Horizon Europe so far, and then by the standard labour cost for administrative burden.[95]

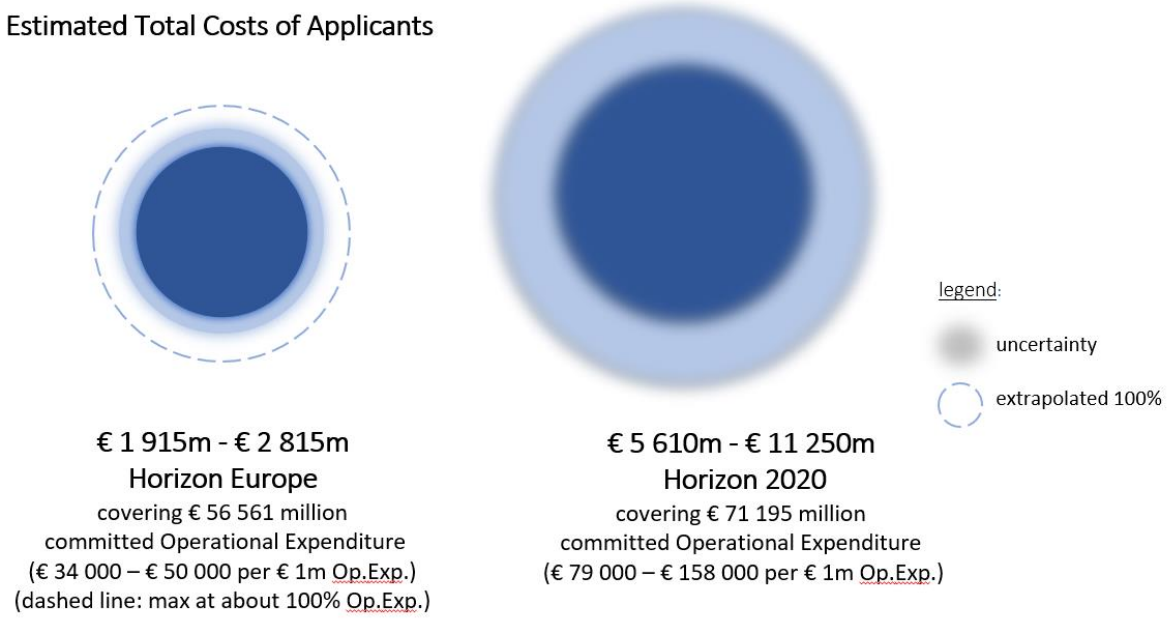
The above estimate represents the total cost of Horizon Europe's applicants up to now and does not cover all seven years. When scaled up to the entire framework programme period, using to relative sizes of the currently committed operational expenditure up to 2024 and the total operational expenditure available for Horizon Europe until 2027, the total application cost of Horizon Europe (2020-2027) is expected to range between **EUR 3.0 billion and EUR 4.4 billion, or EUR 34 000 to EUR 50 000 per EUR 1 committed million operational expenditure**.

In comparison, the **Horizon 2020** final evaluation estimated that the total application cost amounted to EUR 5.61 billion to EUR 11.25 billion over its entire programme period, which is **EUR 79 000 to EUR 158 000 per EUR 1 million of operational expenditure**. However, the confidence around Horizon 2020 estimate is very low due to its weak evidence base[96], which means that **the difference between the Horizon 2020 and Horizon Europe total application cost values is primarily the result of the improvement in data quality and the more granular estimation approach.** It is not possible to draw any conclusions on underlying change in the costs of applicants.

[95] Better Regulation tool #59 (One-In-One-Out calculator) Tariffs in EUR/hour. Eurostat Structure of earnings survey, Labour Force Survey data for Non-Wage Labour Costs. Calculations assume 8-hour working day.

[96] The Horizon 2020 estimate should be treated as a rough figure illustrating the order of magnitude of the total costs of proposals. See also discussion in, Final Evaluation of Horizon 2020 (2024), Annex 4, page 51.

Figure 14: Comparison of estimates of total costs of applicants (Horizon Europe and Horizon 2020)



Source: Internal analysis, Horizon Europe estimate based on survey to beneficiaries and applicants conducted May-June 2023 and CORDA data (6.1.2025). Horizon 2020 estimate: Horizon 2020 final evaluation (COM(2024) 49 final).

4.1.2.3 Applicants use of support for proposal preparation

Well over half of **Horizon Europe applicants received support to prepare their proposals** (possibly also with project implementation and dissemination) from a range of sources:

- **51%** (3688 respondents) indicated they received help from a **dedicated department** in their organisation.
- **29%** (2141) indicated that they had **not received any support**
- **19%** (1397) received support from a **National Contact Point (NCP)**; and
- **17%** (1252) commissioned support from a **consultancy firm/expert** (inside or outside the consortium).

Across the programme, different patterns in the uptake of support emerge: Comparatively high shares of applicants for **Pillar 3 (46%)**, in particular for the **EIC Accelerator (67%)**, and to some extent also for Pillar 2 Cluster 1 (28%; Pillar 2 average: 24%) made use of **consultancies.** Pillar 2 Cluster 3 stands out, in that a comparatively high share of respondents **(46%**; Pilar 2: average 29%) **did not use any sources of support** to prepare their application, presumably due to the sensitivity of the safety-related information in the applications[97]. Those applying for

[97] The remaining responses support this as only 31% of Cluster 3 respondents received application help from an internal department (Pillar 2: 38%, HE 50.5%), and a very low share (13%; Pilar 2: 24%, HE: 17%) used external consultancies.

Innovation Actions most frequently use external consultancies, with a range of shares between **24% and 36%.**[98]

There is considerable overlap between the users of consultancy services and those of NCPs. Above a quarter (27%) of all responding Horizon Europe applicants, who used consultancies or were consultancies themselves, also made use of the help offered by NCPs. Reversely, **26%** of NCPs-using applicants also employed/included consultancy services. In both cases the share is 8 or more percentage points higher than for Horizon Europe applicants in general. **The use of application support and the success of the application are correlated** for users of National Contact Points, as well as consultancies**.** However, the evaluation did not isolate the effect of receiving support (e.g. from consultancies) on the likelihood of success and the link is presumably driven by factors that influence both sides (e.g. financial resources).

The overwhelming majority (74% to 80%[99]) of Horizon Europe proposals reaching the quality threshold had been written without the involvement of external consultancies. 27% of quality proposals and 25% of proposals below the quality threshold were written with the help of consultancies. Also in these cases, a causal link may not exist.

The evaluation collected evidence on **fees paid to consultancies that assisted with proposal preparation**. The fees can be understood as a partial monetisation of application costs. **Successful applicants** reported on average a higher median **consultancy fee** (**EUR 10 000**) than **unsuccessful applicants (EUR 6 500)**.[100] The difference could be driven by success premium charged in case of the proposal is funded. 50 respondents to open questions shed light on the practices of hiring external consultancies and paying success fees. Some respondents stated that they paid a flat fee upfront and their agreement foresaw that a second fee would be paid if the proposal was successful. Information on the additional fee ranged from **3% to 7% of the project budget** and for fixed fees between **EUR 2 000 to EUR 5 000**.

The **median values of the consultancy fee**[101] **for proposals** prepared with the support of an external consultancy were **EUR 7 500** for consortia, **EUR 2 000** for **mono-beneficiaries** and **EUR 12 000** for **EIC Accelerator** proposals.

4.2 Time-to targets (TTG, TTI, TTS, TTP)

In addition to the time-to-grant target (TTG), which represents the maximum allowable time for the evaluation and grant award process together, further targets set out expectations for the **proposal evaluation phase** (TTI / time-to-inform), the **grant agreement preparation phase** (TTS / time-to-sign) and the **time-to-pay (TTP)** is expressed as the **time to pre-finance** (target: 30 days)[102]. Horizon Europe has so far achieved an acceptable average time for **TTI** of **130 days**

[98] Estimation in Resilient Europe study, Annex 1.3.3, p.63 CORDA data matched with survey evidence on median costs reported for three applicant groups: consortia, mono-beneficiary, and EIC Accelerator.
[99] Evaluation study on Resilient Europe, Annex 1.3.3p.58. (targeted survey responses, matched with CORDA).
[100] Result also holds for the mean.
[101] Reported by 658 survey respondents to the question, "What was the total amount that your organisation paid to the consultancy firm/expert for the above services in project application/proposal writing?"
[102] Payments are disbursed to beneficiaries in several instalments: pre-financing, interim payment(s), and final payment, with pre-financing paid within 30 days of the agreement's entry into force, and interim and final payments made within 90 days of the respective report submissions.

(target: 153 days, H2020: 112 days) and an average **TTS** of **95 days** (slightly above the target of 92 days; H2020: 76 days). As with Horizon 2020, this suggests that the grant agreement preparation phase remains the more challenging period of the two phases of the time-to-grant period. The achieved average **TTP** for prefinancing is 11 days, with 88% payments made on time, against a target of 30 days[103]. This highlights a certain level of efficiency in providing beneficiaries with the necessary cash flow at project start.

Table 10: Achieved average Time-to-Inform, Time-to-Sign, Time-to-Grant and Time-to-Pay

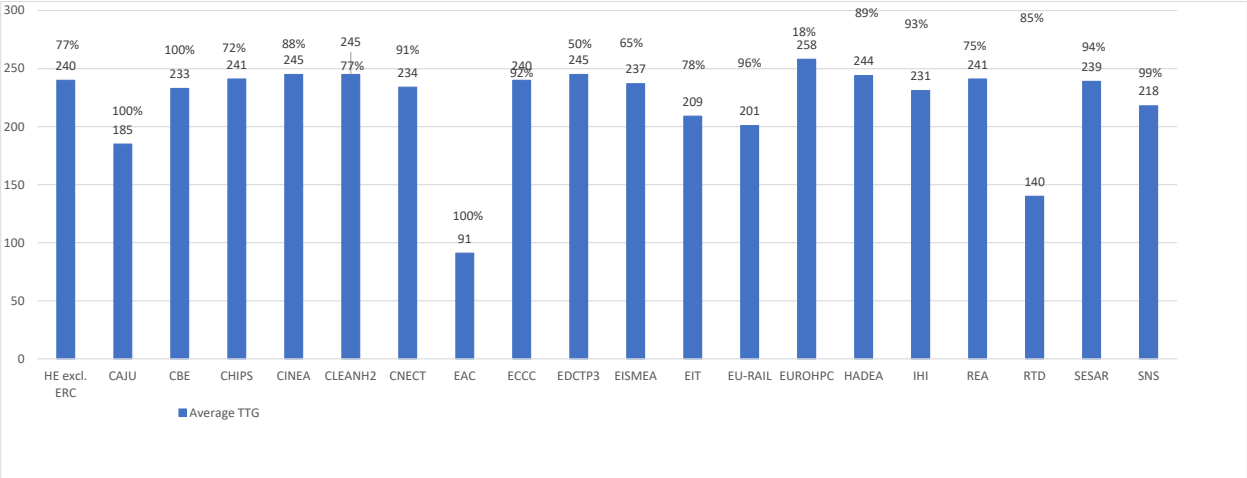
	HE TTI	HE TTS	HE TTG	HE TTP
Target [average days]	153 days	92 days	245days	30 days (prefinanced)
Horizon Europe	130[104]	95	240 (77%)	11 (88%)
Pillar I (excl. ERC)	147	70	239 (72%)	
Pillar I ERC			(See table below)	
Pillar I MSCA	149	68	239 (71%)	
Pillar II	108	125	244 (87%)	
Pillar III (excl. EIC)	148	86	240 (77%)	
Pillar III (EIC) -see explanation below	141	93	238 (67%)	
Widening and ERA	128	90	230 (88%)	

Sources: TTG, TTI, TTS, TTP Operational reporting, Time-to-Grant dashboard, 06.01.2025

The Horizon Europe monitoring system does not collect information on actual times-to-grant of grants the **EIT KICs** award under cascade funding to beneficiaries. The timing is only measured for the initial grants made to the KICs, which are processed by the EU Public Sector. The 17 KIC grants achieved the following averages: TTI of 69 days, TTS of 128 days and overall TTG of 197 days (82%). The achieved times-to-grant of cascading calls launched under the EIT KICs are not reported in the central database (CORDA). TTG values reported by EIT KICs can be found in the respective annexes 21 to 28.

[103] At the time of writing, the Time to Pay indicator based on the payments on target 90 days is not available in part due to ongoing transition between ABAC and SUMMA.
[104] Excluding ERC

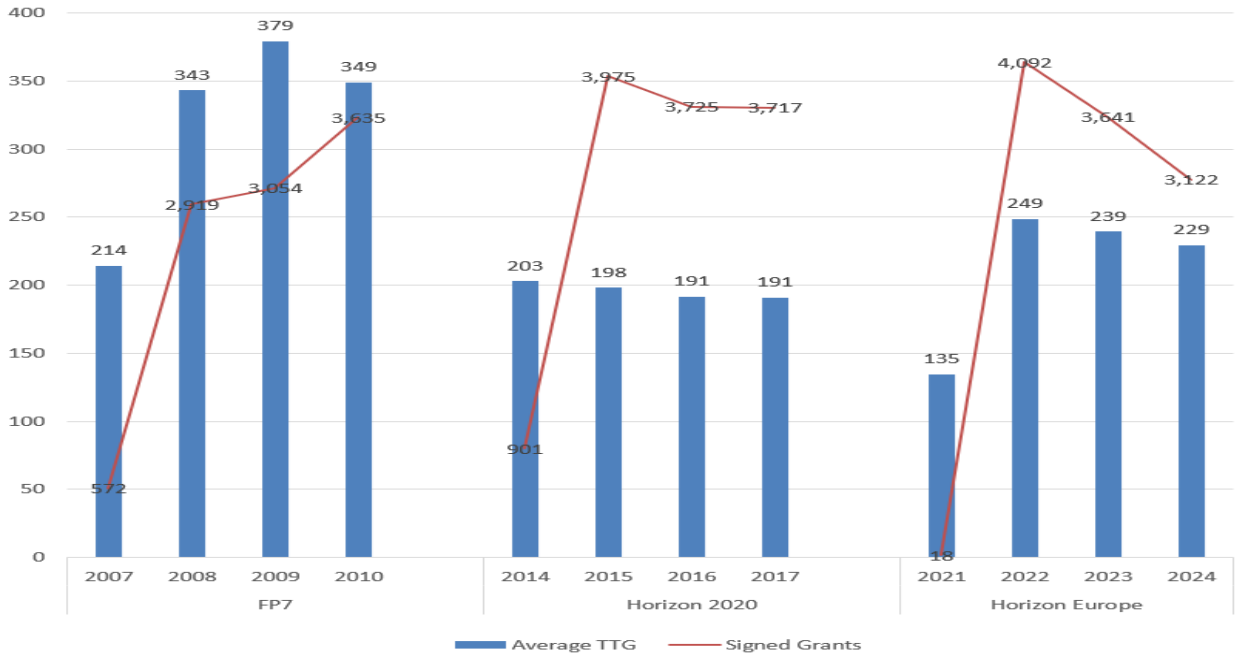
Figure 15: Horizon Europe average Time-to-Grant by organisational entity



Source: Operational reporting, Time-to-Grant dashboard, ERC excluded; as of 1 December 2024.

It must be kept in mind that the average periods reported above rise and fall throughout implementation. This is particularly true in the first few years where fluctuations tend to be higher. (see table below) The more limited the total number of grants the stronger the response to delays of any specific call. Values also capture set up or adaptation costs that will later average out once the adaptation phase has ended. The current time-to averages may therefore still provide limited information on performance trends of Horizon Europe as a whole.

Figure 16: Comparison of Horizon Europe, Horizon 2020, FP7 - Time-to-Grant of first 4 years



Source: Monitoring dashboard data of FP7, Horizon 20202 and Horizon Europe. Average TTG values (blue bars) and number of signed R&I support grants of FPs pooled, ERC excluded as of 2 January 2025

The **European Research Council** is exempt[105] from the eight-month time limit for finalising evaluations and grant decisions (TTG) as its evaluation process focuses on excellence and requires more time to ensure a rigorous peer-review process.[106] Instead, separate annual TTG targets, tailored to each ERC funding instrument, are annually defined in the ERC Work Programme. These thresholds account for the complexity and stages of evaluation specific to each instrument. The ERC reports its compliance with these thresholds in its Annual Activity Report (AAR).

Table 11: Average Time to Grant European Research Council by instrument for 2022-23[107]

Instrument	**2022** (completion rate[108] 100%)		**2023** (completion rate < 100%)	
	Targets	Results	Targets	Results
Starting Grants (StG)	450	387.8	424	356.9
Consolidator Grants (CoG)	441	404.4	429	312.4
Advanced Grants (AdG)	460	411.2	N/A	N/A
Synergy Grants (SyG)	503	468.5	511	391.9
Proof of Concept (PoC)	220	195	220	(1) 157

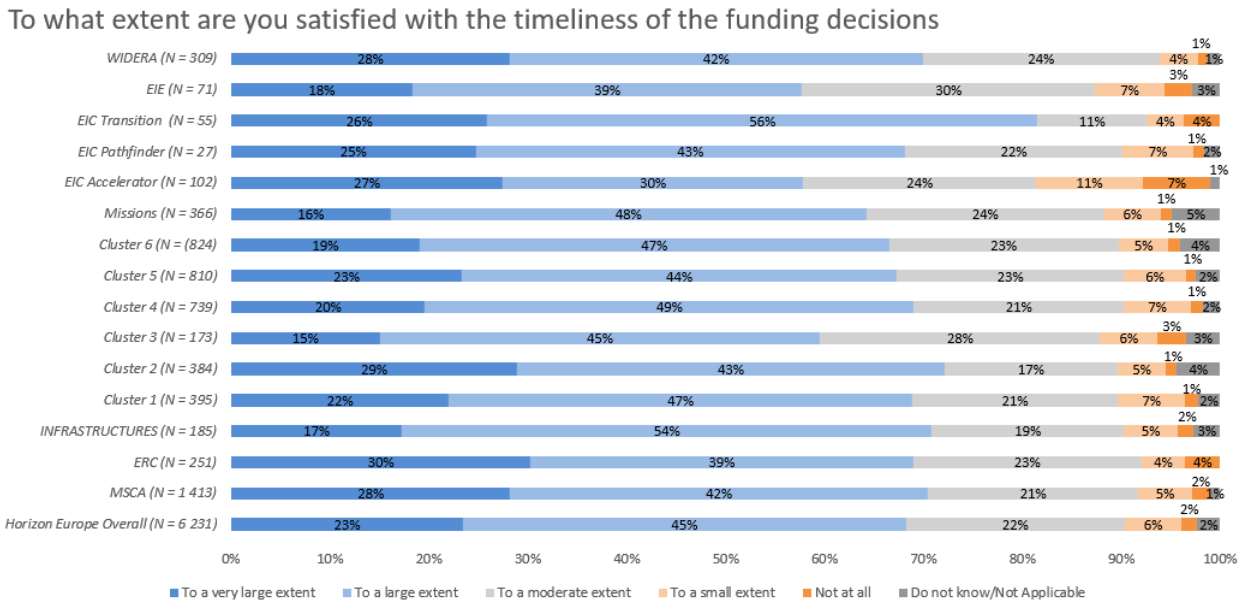
The evaluation looked into **international benchmarks** for administrative time performance measures, relevant to the context of processing proposals of funding programs for innovation funding, in particular for the EIC Accelerator, however, found that a comparison was difficult, due to the unique characteristics of the programme parts.

Qualitative feedback from Horizon Europe applicants on time-to targets

The targeted survey of Horizon Europe beneficiaries finds that beneficiaries are overall satisfied with the time-to targets of the programme. Concerning TTI, 68% of all Horizon Europe respondents indicated to be satisfied to a (very) large with the timeliness of the funding decisions. Lowest satisfaction is observed for EIC Accelerator and EIE, although satisfaction rates for both programmes are still at 58% and applicants are thus still overall positive.

[105] Article 31(3) of the Horizon Europe Regulation (EU) 2021/695.
[106] Commission Decision approving the Annual Work Programme 2024 of the European Research Council Executive Agency. C(2024) 4524 final, Brussels, 3 July 2024. ANNEX.
[107] European Research Council Executive Agency. Annual Activity Report 2023
[108] Completion rate refers to the processing of the call evaluation.

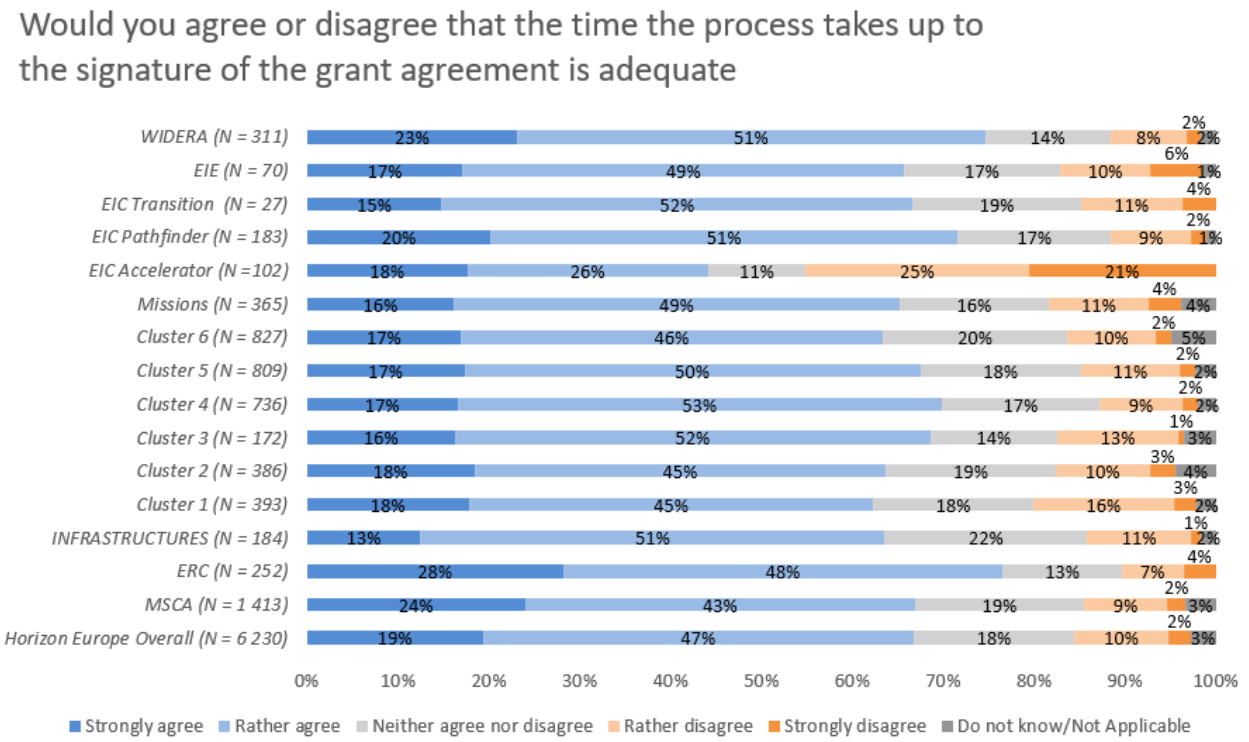
Figure 17: Horizon Europe applicant satisfaction of the proposal evaluation phase



Source: Targeted survey of Horizon Europe beneficiaries and applicants.

Horizon Europe beneficiaries are also positive about the TTS of the programme, with 67% agreeing that the time the process takes up to the signature of the grant agreement is adequate. For the EIC Accelerator programme however opinions are divided, with 44% agreeing and 45% disagreeing that the time the process takes up to the signature of the grant agreement is adequate. For all other programmes parts beneficiaries overall indicate to be satisfied.

Figure 18: Horizon Europe applicant satisfaction of the grant agreement preparation phase



Source: Targeted survey of Horizon Europe beneficiaries and applicants.

Seven respondents to the survey provided open-ended feedback on the evaluation and grant award process. These responses came from across Pillars I and II beneficiaries and were rather critical and contained suggestions for improvement. One Cluster 4 beneficiary suggests reducing time between convention of the evaluation panels (late January) and communication of the decision (middle of March). The same applicant mentions that, given that his proposal was submitted in November and the start date of the grant was October of the following year, the TTG is too long, as "*the context and even the technologies can change a lot in such a timeframe*". An ERC COG and Cluster 6 beneficiary mention that the grant agreement preparation phase is actually too short and troublesome. An MSCA PF beneficiary on the other hand mentions the grant agreement preparation phase to be too long, causing a 2-month delay in employment.

4.3 Value-for-money of Horizon Europe

This annex provides additional information on the calculation of the benefit cost ratio. Table 12 below shows the costs and benefit values used in the calculation. The evaluation calculates a benefit cost ratio over **25 years (2021-2045)**. This period was chosen to allow time for the emergence of wider benefits of R&I investments.

Total Benefits: The expected GDP impact is used as the closest available proxy of the overall welfare benefits for EU society. The calculation uses two macro-economic forecasts from mid-2023 (Nemesis) and mid-2024 (Rhomolo). As model inputs, the Nemesis model used monitoring data on grants signed before mid- 2023, whereas the Rhomolo model took account of grants signed up to mid-2024. In both case, forecasts of the cumulative GDP impact of Horizon Europe over 25

years, from 2021 until 2045, were used. The estimates are adjusted for inflation, to be comparable with the expenditure of the respective years.

Total Costs: The EU Public Sector's committed operational and administrative expenditure, as well as the estimated cost of all (successful and unsuccessful) Horizon Europe applicants up to now (see Annex 4.1.2) are included in the total costs. Two sets of expenditure values have been used to match the respective data cut-off points of the two model. The same estimate of the total cost of applicants is added in both case. While the estimate of applicant costs is more robust than before (e.g in the Horizon 2020 final evaluation) it is still much more uncertain than the public expenditure data.

Table 12: Benefit Cost Ratio calculation

Costs of Horizon Europe		
(1) **Operational Expenditure of EU Public Sector** For Nemesis, expenditure committed by **06/2023**: For Rhomolo, expenditure committed by **06/2024**:	EUR 35.346 billion EUR 46.137 billion	
(2) **Administrative Expenditure of EU Public Sector** For Nemesis, expenditure committed by **06/2023**: For Rhomolo, expenditure committed by **06/2024**:	EUR 2.383 billion EUR 2.942 billion	
(3) **Cost of applicants** (Note: estimated on basis of survey responses and monitoring data, see Annex 4.1.2.1 for detail; used both for Nemesis and Rhomolo)	low EUR 1.92 billion	high EUR 2.82 billion
Total Cost Compared with Nemesis output (assessment mid-**2023**): Compared with Rhomolo output (assessment mid-**2024**):	low **EUR 39.645 billion** **EUR 50.995 billion**	high **EUR 40.545 billion** **EUR 51.895 billion**

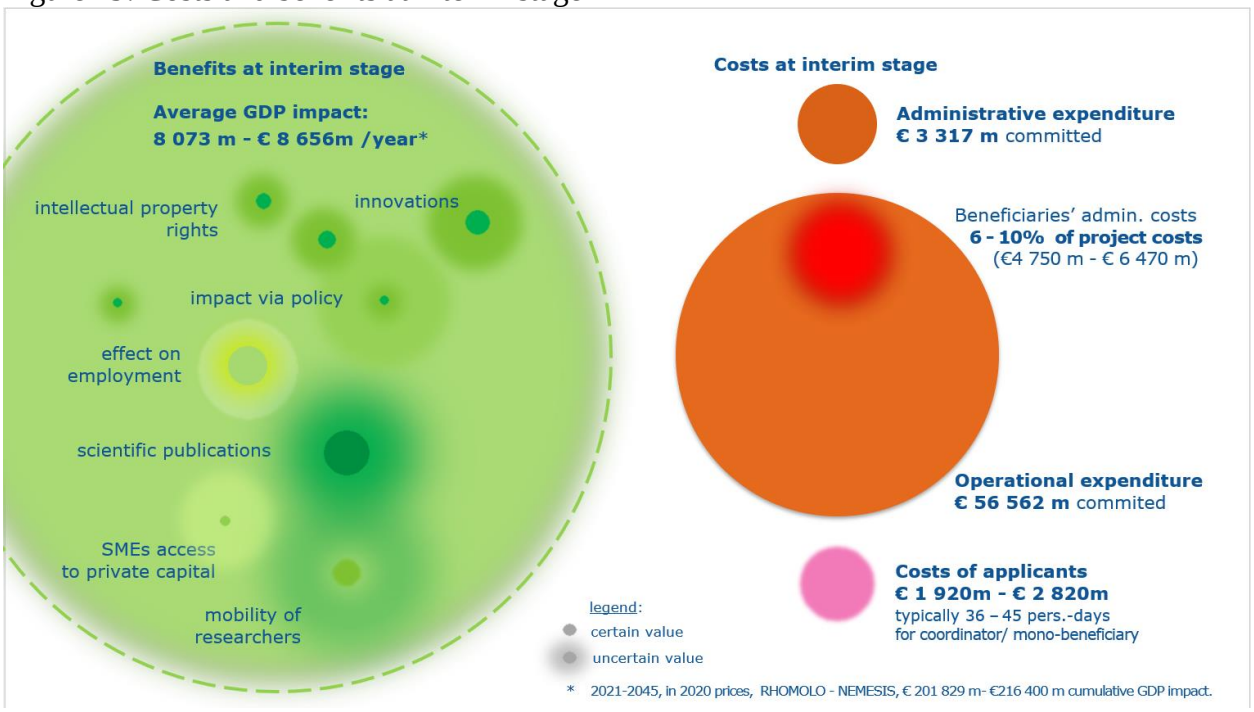
Benefits of Horizon Europe	
(1) **Total Benefits of Horizon Europe (25 years)** (Note: GDP impact 2021-2045, as proxy to welfare impact; Price base = year of assessment) Nemesis (assessment in mid-**2023**): Rhomolo (assessment in mid-**2024**):	 NEMESIS - **EUR 248.823 billion** RHOMOLO - **EUR 239.163 billion**

Benefit Cost Ratio (BCR) – 25 years (2021-2045)	**low**	**high**
NEMESIS	**6.1**	**6.3**
RHOMOLO	**4.6**	**4.7**

The results suggest that the **benefit cost ratio (BCR) of Horizon Europe is 5 to 6, for a 25-year period,** which means that **one euro of costs to society associated with the programme**

(programme costs and costs to applicants) is expected to bring about at least five euros of benefits for EU citizens (measured through GDP impact) in the period up to 2045.

Figure 19: Costs and benefits at interim stage



4.4 Performance of simplification measures of Horizon Europe

4.4.1 Partnerships' administrative costs and rationalisation of partnership landscape

To shed light on the relative order of magnitude of the **costs of institutionalised partnerships,** particularly their administrative costs (or running costs), the evaluation brought together operational data of Joint Undertakings (JUs), Article 185 partnerships and EIT-Knowledge and Innovation Communities (KICs) covering the last 10 years (2014-2023). This data, while available for close to all partnerships,[109] is typically not aggregated as the level of total cost bringing together all sources that contribute to operational and administrative costs. It is also typically presented for shorter time spans (most commonly annually), during which costs are strongly affected by the setting up or winding down of the partnership. **The 10-year period was chosen to have data on a sufficiently long time span, which averages out particularities of single years and even single partnerships, with the aim to introduce some transparency into the cost structure of partnership types.**

Due to the time period, the data thus covers **activities under three framework programmes.** It stems from 20 JUs/Art.185 partnerships, which have been aggregated into 10 thematic groups and from 8 KICs. The JUs/Art185 partnerships have been thematically grouped together with their predecessors of previous framework programme in the following way: Innovative Health Initiative + Innovative Medicine, Clean Aviation + Clean Sky 2, Circular Bio-based Europe + Bio-based Industries, Clean Hydrogen + Fuel Cells and Hydrogen, Global Health (EDCTP3) + EDCTP2,

[109] EuroHPC has been excluded as costs could not be verified.

EMPIR + EPM, Chips + Key Digital Technologies + ECSEL, Smart Networks and Services, Europe's Rail + Shift2Rail Single European Sky ATM + SESAR. KIC Health, KIC Manufacturing, KIC Raw Materials, KIC Digital, KIC Urban Mobility, KIC Climate, KIC Food, KIC InnoEnergy.

Operational costs of institutionalised partnerships

Table 13: Operational costs of institutionalised partnerships

Type of partnership	**Total Operational Costs** [EUR /year] including EU contributions; validated IKOP; financial contributions to operational activities by JU partners; eligible project costs funded by non-JU members to project activities; and contributions from Member States and international organisations to project activities. (Data: 2014-2023)		
	average annual cost (pooled)[110]	median of average annual cost[111]	range of average annual cost (lowest -highest)[112]
JUs/Art.185	223 300 000	190 300 000	28 300 000 - 651 300 000
EIT KICs	66 900 000	65 300 000	34 300 000 - 83 600 000

The operational cost of JUs/Art185 partnerships varies substantially, by an order of magnitude between the partnerships, with a range of **EUR 28.3 million to EUR 651.3 million annually on average**. For EIT KICs, the **average operational costs are lower** than those of the JUs and also lie closer together, from **on average EUR 34.3 million to EUR 83.6 million annually**. The lower operational cost may be explained by the type of activities of the EIT KICs and the differing objectives as compared to JUs activities and their objectives, with a substantial share of its activities reflected in administrative expenditure, as illustrated below.

Administrative costs/ running costs of institutionalised partnerships

Table 14: Administrative costs (Running Costs) of institutionalised partnerships

Type of partnership	**Total Administrative Costs (Running Costs)** [EUR /year] including contributions from the EU and from sources other than the EU. (Data: 2014-2023)[113]		
	average annual cost (pooled)	median of average annual costs	range of average annual costs (lowest -highest)
JUs/Art.185	5 200 000	4 300 000	1 300 000 - 9 700 000
EIT KICs	8 800 000	7 900 000	5 700 000 – 11 700 000

[110] Average annual cost pools the 88 (JU/Art185) and 52 (KICs) verifiable annual operational cost values of partnerships, from 10 JU/Art 185 thematical groups and 8 EIT KICs respectively; rounded to nearest 100 000.
[111] The median of the averages (i.e. median of the average annual costs calculated by partnerships/partnership-groups taking into account their years of activity). Rounded to nearest 100 000.
[112] The lowest and highest average annual costs across partnerships/partnership-groups (taking into account their years of activity). Rounded to nearest 100 000.
[113] The pooled average annual cost, median of the averages, and lowest to highest average annual costs in this table are calculated in parallel to those of the operational cost table. Values rounded to nearest 100 000.

The data suggests that, over the 10-year period **JUs spent on average 3.7%** (median 2.9%) **of their overall expenditure on running costs**. Pooling all administrative cost data of all JUs for the period of 2014-2023, the annual administrative cost (averaged over all years for which data was reported[114]) was around **EUR 5.2 million**, with the annual average cost of individual partnerships ranging between EUR 1.3 million and EUR 9.7 million.

KICs have higher running costs due to key features of their operational set up. KICs are pan-European networks with **numerous offices across Europe ('co-location centres')**. While the related overheads are spent on what could be considered an operational activity and underpin the KICs potential, they also render KICs more administrative cost intensive.

The shares of the KICs' running costs as a share of its overall costs (running costs + operational costs) are higher throughout, with no substantial differences observed between waves. **KICs spent around 12%** (average 11.9%, mode 12.2%) **of their overall costs on running costs.** Pooling the administrative cost data of all KICs for the period of 2014-2023, the **annual administrative cost** (averaged over all years for which data was reported[115]) was around **EUR 8.8 million**, with the annual average cost of individual KICs ranging between EUR 5.7 million and EUR 11.7 million.

Table 15: Administrative costs (Running Costs) compared to overall expenditure

Type of partnership	**Total Administrative Costs (Running Cost) as share of overall cost (Total Running Cost + Total Operational Cost)** (Data: 2014-2023) [116]			
	pooled administrative cost share	average of partnerships' administrative cost shares	median of partnerships' administrative cost shares	range (lowest - highest) of administrative cost shares
JUs/Art.185	2.3%	3.7%	2.9%	0.6%[117] - 9.6%
EIT KICs	11.6%	11.9%	12.2%	9.6% – 14.4%[118]

Due to their operational arrangement, **running costs of KICs and JUs cannot be directly compared.** A comparison of the running costs of the **KICs' headquarters** (HQ) with other partnerships would have been informative, however, KICs are free to take different approaches towards cost reporting and the data required for such a split is not available for all KICs.

Cost data available for 5 KICs for the years 2021 and 2022 (Table 16) illustrates the **effect of the network of offices (CLC) across Europe on administrative costs** and suggests that considering running costs of headquarters on their own lowers the **administrative cost share by about 30% percent on average**. Applied to the costs recorded for the period 2014-2023, this lowers the **average KIC's administrative cost share to around 8%** (instead of around 12%).

[114] Number of partnership-years for which data was reported at least for administrative or for operational costs.
[115] Number of partnership-years for which data was reported at least for administrative or for operational costs.
[116] Based on same data as tables 1 and 2.
[117] Minimum value stems from Smart Networks and Services (SNS) Partnership, which has just been set up. Administrative expenditure data on its predecessor 5G PPP is not available as the partnership was centrally managed by the European Commission. Excluding SNS results in a range of 0.8%-9.6%, median of 3.0% and average of 4.0%.
[118] Split by waves, ranges are: 1st wave: 12.3% (both), 2nd wave: 9.6%-12.2%, 3rd wave:11.2%, 4th wave:12.1%-14.4%.

Table 16: Administrative costs (5 KICs; 2021 & 2022) comparing to HQ and HQ+ CLC offices

European partnership	HE Average for HQ+CLC	HE Average for HQ only
KIC Manufacturing	7,57%	4,92%
KIC Raw Materials	6,64%	3,74%
KIC Digital	8,58%	4,95%
KIC Urban Mobility	12,58%	9,26%
KIC Food	9,01%	7,58%

*for the other three KICs (EIT Climate-KIC, EIT InnoEnergy, EIT Health), administrative costs for co-location centres cannot be identified.

Benchmark and targets

There are no directly applicable performance benchmarks, **targets, or explicit expressions of expectations around the partnerships' share of total administrative cost**. Some indirect benchmarks do exist, such as the 5% administrative expenditure benchmark of the framework programme as a whole. Art 185 bodies/JUs on average clearly stay below 5 %, which is only exceeded by 2 of the 10 partnership-groups individually during the period of 2013-2024, as well as by the EIT KICs' average (and individual) annual running costs. However, the 5% administrative expenditure level was never meant to apply to partnerships (individually or as a whole) and is not directly suited for a programme-level evaluation.

A second type of target for Horizon Europe's institutional partnerships is set out in legislation[119] in the form of the **maximum amounts the partnerships are allowed to spend on "administrative costs"** out of their **EU contributions**. In practice, running costs are also paid from contributions other than the EU. Within the legal limits[120] it is a strategic decision of each partnership to what extent to use EU contributions for operational or administrative expenditure, therefore the actually achieved share itself is not informative about a partnership's operational efficiency.

These legal, currently applicable **administrative expenditure ceilings for EU contributions** can be expressed as a percentage of the total EU contribution (see table below), even though these percentages are subject to change. For instance, the additional UK financial contributions from 2024 onwards will indirectly reduce the administrative cost share expressed in this way.

The evaluation observes that the currently imposed administrative expenditure ceilings on the different JUs are surprisingly varied, when expressed as a percentage and range from 1.5% to 7.5%.

If these limits had been set using a standardised approach, the **relative magnitude of the partnerships' administrative cost ceilings** could be interpreted as an indirect expectation on achievable *relative* administrative efficiency. However, the evaluation could not establish that this

[119] Single Basic Act Council Regulation 2021/2085 establishing the Joint Undertakings under Horizon Europe, Art.10.1 (*The Union financial contribution to the joint undertakings, (…), shall cover administrative and operational costs up to the maximum amounts specified in Part Two, provided that that amount is at least matched by the contribution of members other than the Union or their constituent or affiliated entities*.); Chips JU establishing Decision 2021/2084; as well as in legislation for EPM Art. 185 Partnership and EIT KICs..

[120] Council Regulation 2021/2085 Art.28 4(a) Partners are expected to match the administrative costs funded through EU contributions. For some partnerships derogations are in place. Calculated ceilings exclude UK financial contributions, which will reduce the administrative cost share.

was the case. Some values seem to reflect **previous ceilings of Horizon 2020 predecessors**[121], others are likely the **indirect effect of an increase in EU contributions**[122], others again may be the **outcome of negotiations** or and indirect expression of the expected ability of the partnership to obtain funds from sources other than from EU contributions.

Table 17: Administrative expenditure ceilings of Joint Undertakings /Art 185 partnerships

	Administrative expenditure ceiling of Horizon Europe JUs expressed as share of the JU's total EU contribution
EPM (EURAMET)	5%[123]
Chips JU	1.5%[124]
Smart Networks & Services	2.1%
Clean Aviation	2.3%
Circular Bio-Based Europe	2.4%
IHI	2.5%
Clean Hydrogen	3.0%
Europe's Rail	4.0%
SESAR	5.0%
GH-EDCTP 3	7.5%

In its Guidelines to KICs for their 2022 Business Plans, EIT has set out structured administrative cost ceilings that reflect each KIC's maturity in a given year given its launch date (wave). As of 2023, the **applicable administrative cost ceiling** of the **KIC** in scope of the evaluation is **currently 12%**.

Table 18: Administrative expenditure ceilings of EIT KICs (waves 1 to 4)

EIT KIC	**Administrative expenditure ceiling of Horizon Europe EIT KICs** expressed as share of the KIC's total EU contribution	
First wave KICS	EIT Digital, EIT InnoEnergy, EIT Climate-KIC	18% in 2016 15 % in 2017 **12 % in 2018 and onwards**
Second wave KICS (launched in 2014)	EIT Health, EIT Raw Materials	18% in 2017 15% in 2018 **12% in 2019 and onwards**
Third wave KICS (launched in 2016)	EIT Food	18% in 2019 15% in 2020 **12% in 2021 and onwards**
Fourth wave KICS (launched in 2018)	EIT Manufacturing EIT Urban Mobility	18% in 2021 15% in 2022 **12% in 2023 and onwards**

[121] For instance, under Horizon 2020, EDCTP2 (Art.185) was allowed up to 6% of the Union's financial contribution to cover administrative costs. (Decision No 556/2014/EU, Art 2.3.) EDCTP3 now has a ceiling of a similar size.
[122] E.g. Chips JU
[123] Running costs (paid for personnel, opening of calls, continuous monitoring of projects, etc) are not to be funded through EU contributions (Member State funding only), as per establishing Decision 2021/2084.
[124] Regulation 2021/2085, Art. 128 modified the EU contributions (EUR 4 175 million, of which EUR 2725 from Horizon Europe) and administrative cost ceiling (EUR 62 287 000).

4.4.2 Lump sum funding – removal of beneficiaries' financial reporting requirements

Lump sum funding, as a simplification measure, has the aim to **reduce a grant beneficiary's reporting costs**, and thus administrative costs, and to lower the elevated rates of **financial errors of R&I funding**. It also has the wider objective to shift the focus back onto a project's performance and content, away from financial controls, for grant beneficiaries and public administration alike.

Beneficiaries of standard (actual cost) grants have to prepare and submit detailed financial reports (in addition to other reporting requirements) each reporting period to unlock grant payments. In contrast, **lump sum grant beneficiaries are paid a previously agreed fixed sum (lump sum) for each delivered work package**. **Financial reporting requirements**, **which make up a substantial share of a beneficiary's reporting burden[125], fall away.**

In addition to the grants' beneficiaries, lump sum funding also has **effects on other stakeholder groups** involved in the programme:

- **Public administrators** no longer have to check financial reporting (simplification benefit, administrative cost of EU public sector) but have to adapt grant management practices to the shift of focus on the performance of the content (adjustment costs).
- **Applicants** for lump sum grants have to prepare and submit an additional budget table (application costs), **evaluators of the proposals** have to assess the additional budget table (administrative cost of EU public sector).

Under Horizon Europe, the use of lump sum grants has been gradually expanded, building on the previous, generally positive assessment of lump sum funding for R&I projects under Horizon 2020.[126,127]

The use of lump sum grant in Horizon Europe

As of 1 January 2025, a total of 1 582 lump sum grants have been signed under and Horizon Europe, for a total value of EUR 3.03 billion. These belong to two types of grants.

706 ERC Proof of Concept lump sum grants have been signed over a total value of **EUR 106 million**, each with one reporting period and a grant value of EUR 150 000. PoC grants have exclusively used lump sum funding since its pilot in 2018 under Horizon 2020. Although simplification benefits from PoC lump sum grants are strictly speaking not additional under Horizon Europe, they are included in the quantitative estimate of the total simplification effect from lump sum funding in this evaluation.

876 lump sum grants (excl. ERC PoCs) have been signed, with an average of 9 consortium members, a median of 2 reporting periods (1 to 4 periods), and over a total value of **EUR 2.93 billion**.

A detailed description of the state-of-play of lump sum funding, covering the entire lifecycle of grants as of early 2024 can be found in the new assessment on lump sum published in September 2024. [128] Implementation data suggest that the signed lump sum grants closely match the

[125] The evaluation has no evidence on what share of the beneficiary's overall reporting cost is spent on financial reporting. One assumption is 25%, as a plausible value. This value is yet to be tested and not used in the assessment.
[126] Assessment of the Lump Sum Pilot (2018-2020), October 2021.
[127] See also Section 4.2.3 and Annex 4 of the Final Evaluation of Horizon 2020 (2023)
[128] Assessment of lump sum funding in Horizon 2020 and Horizon Europe, September 2024

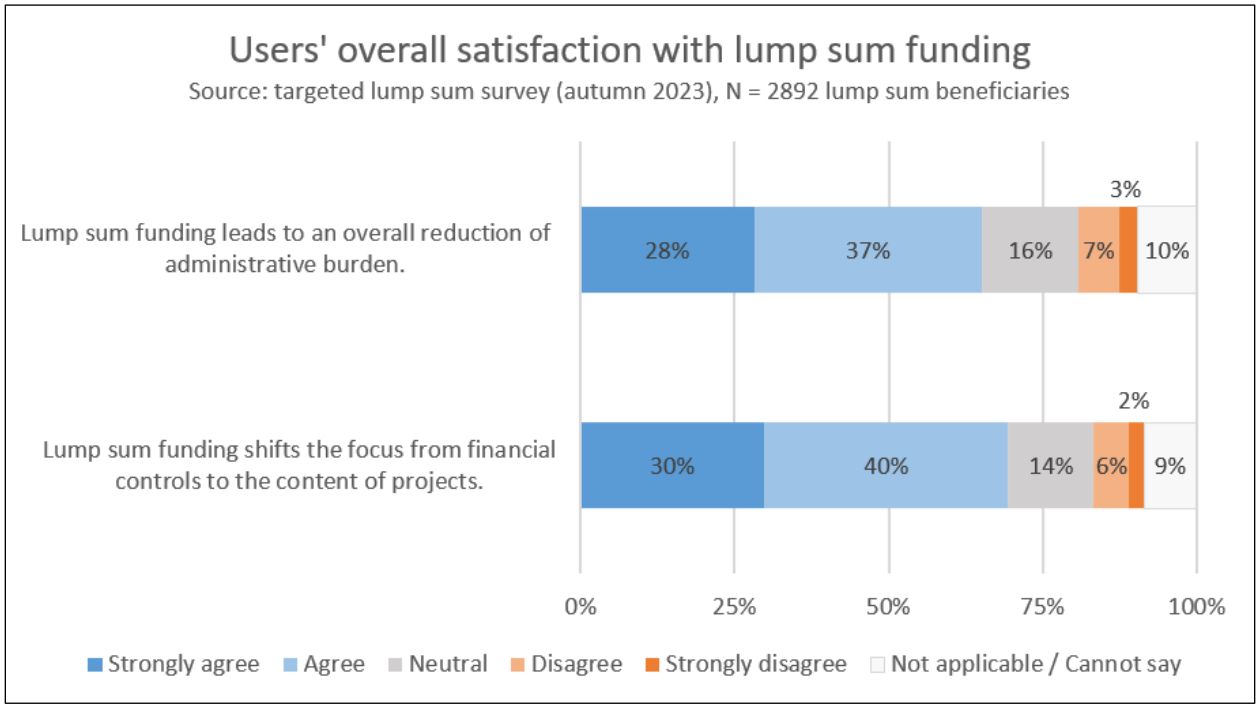
characteristics of Horizon Europe grants in general in terms of applying organisations,[129] average funding per participant,[130] participation rates of SMEs and newcomers[131], as well as the average number of amendments to grant agreements.[132]

Benefits of lump sum funding

Qualitative feedback on benefits

The 2024 internal assessment finds that lump sum funding continues to be **generally popular** with its users (see Figure 20), who, across all programme parts, **perceived an overall reduction in administrative burden** (65%, 1880 respondents), and an **improved focus on project content** (70%, 2024). Lump sum funding is not seen as interfering with the proper functioning of R&I projects.[133]

Figure 20: Overall satisfaction with lump sum funding



Source: Based on 2892 responses of lump sum applicants/beneficiaries to targeted lump sum survey (Sept.-Oct. 2023).

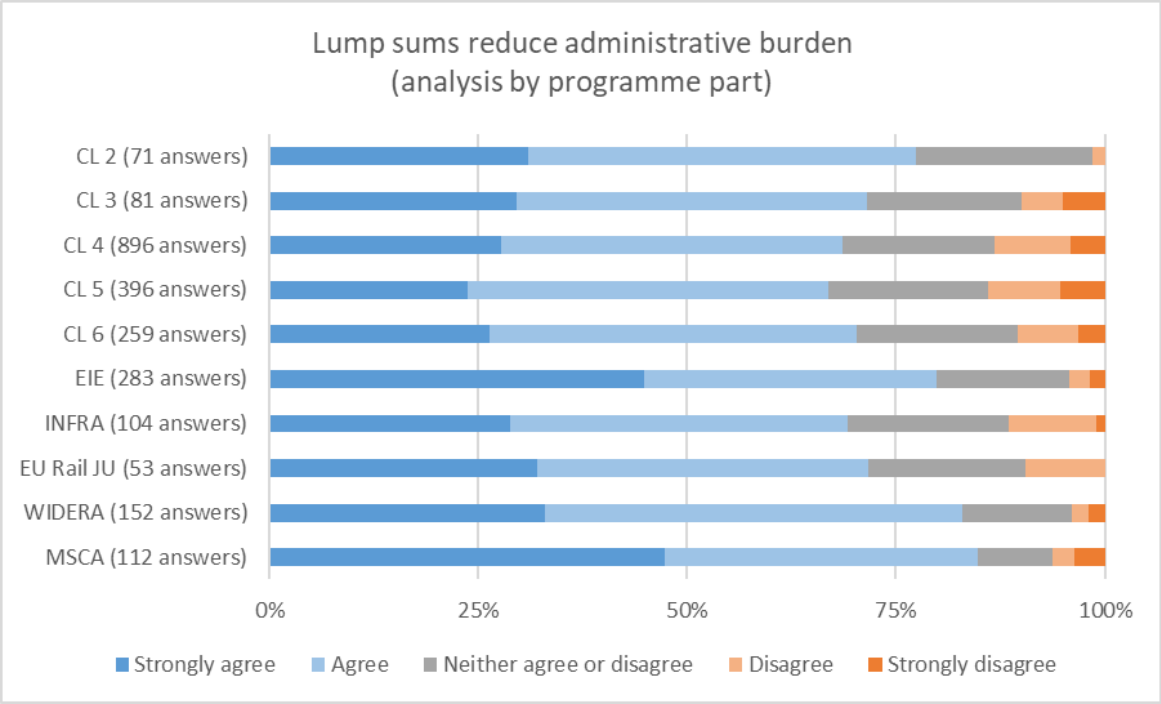
When considering consortium and project size, **lump sum grants are particularly welcomed by beneficiaries of grants of up to EUR 10 million, and those with a consortium size up to 20 participants.**[134] At the same time, survey results did not suggest that larger grants are unsuited for lump sum funding or were associated with a substantially higher risk.[135] Of the 116 responding

[129] Ibid. figure 3, page 12.
[130] Ibid. figure 8, page 18.
[131] Ibid. figure 10, page 20.
[132] Ibid. figure 12, page 23.
[133] Ibid., page 5.
[134] Ibid., page 6.
[135] Ibid., page 6.

beneficiaries of lump sum grants **above EUR 10 million**, 70% (81) agreed or strongly agreed that lump sum grants reduced administrative burden.[136]

Survey responses provided no indication that that lump sum funding could be unsuitable for any given **area of R&I**. Beneficiaries' responses on administrative burden savings from lump sum grants are relatively homogenous across programme part, with **MSCA** and **EIE** respondents showing particularly strong support. (Figure 21).

Figure 21: Lump sum participants' perception of administrative burden reduction



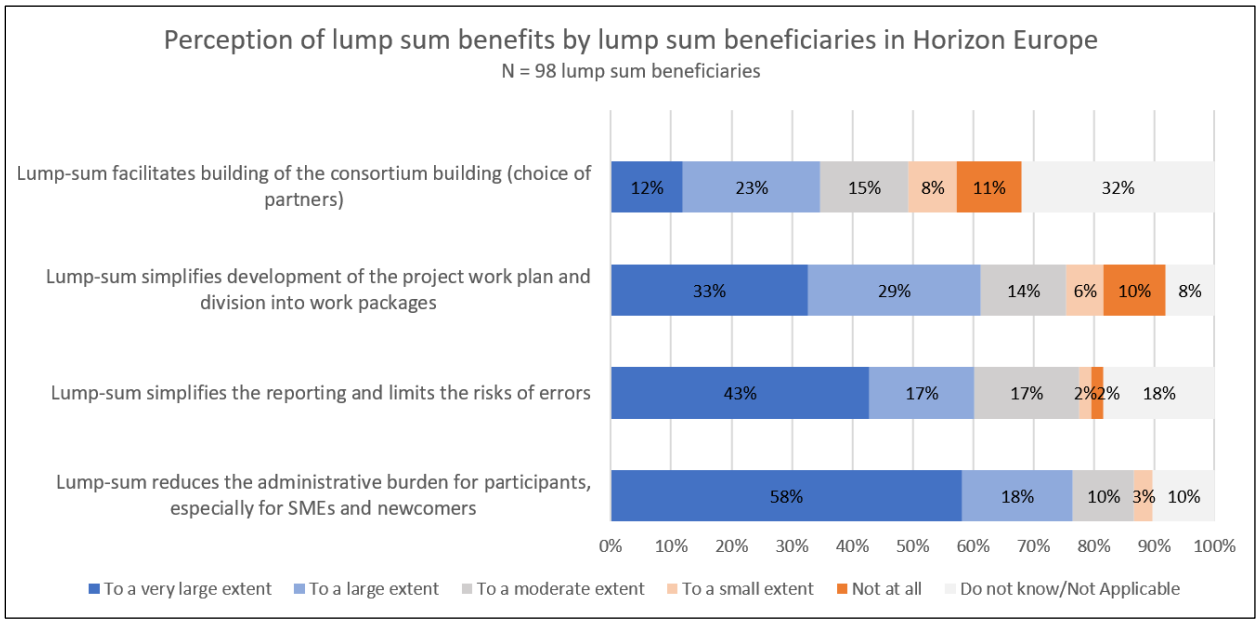
Source: 2407 responses (excl. 10% "Cannot Say") to survey of lump sum applicants / beneficiaries (Sept.-Oct. 2023)

The evaluation's targeted survey of Horizon Europe beneficiaries and applicants collected similar evidence, also in summer 2023 and from lump sum beneficiaries. The survey unsurprisingly confirms the general support for the rationale of lump sum grants, with high levels of strong agreement on the main benefits of lump sum funding.

Out of 98 responding lump sum beneficiaries, 74 (76%) agree to a large or very large extent with the statement that lump sum funding reduces the **administrative burden** for participants and 60% agree at least to a large extent that lump sum grants **simplify reporting and limits the risk of errors.** While 62% agree (at least to a large extent) that lump sum funding **simplifies the project work plan and the division into work packages**, beneficiaries' views are much less uniform, with a larger share who disagree (16% 'not at all' and 'to a small extent'). Views on the extent to which lump sum funding helps with consortium building are even more divergent, with only 35% perceiving the benefit at least a to a large extent but 18% not in support (Figure 22).

[136] Ibid. figure 25, page 37.

Figure 22: Perception of lump sum benefits by lump sum beneficiaries in Horizon Europe



Source: Survey to Horizon Europe beneficiaries and applicants (May-June 2023), 98 responses from lump sum beneficiaries.

The **private sector** in particular supports the main rationale for benefits from a reduced administrative burden thanks to lump sum grants (see Annex 5, Figure 51) - 65% of responding companies and business associations agree that the use of lump sum reduces the burden on beneficiaries. At the same, the support for existing accounting practices of participants in the context of lump sum funding is judged as comparatively weaker. (see Annex 5, Figure 65)

Quantitative assessment of lump sum benefits

Evidence from applicants and beneficiaries makes it possible, for the first time, to shed light on the **magnitude of simplification benefits from lump sum funding from removing financial reporting requirements**. It suggests that the **typical financial reporting cost saving of lump sum grant beneficiaries amounts to between 6 to 8 person-days per reporting period and consortium member**.

The underlying **evidence** stems from **2 short surveys** (both ran 30 July and 9 September 2024), which **focused on lump sum funding and financial reporting costs**. They invited beneficiaries of lump sum grants under Horizon 2020 and Horizon Europe, as well as beneficiaries of actual cost grants across Horizon Europe, who, by July 2024, had already reported at least once on their projects.[137] The overall response rates were 21% (300 lump sum grant respondents) and 19% (1533 actual cost grants respondents), respectively.

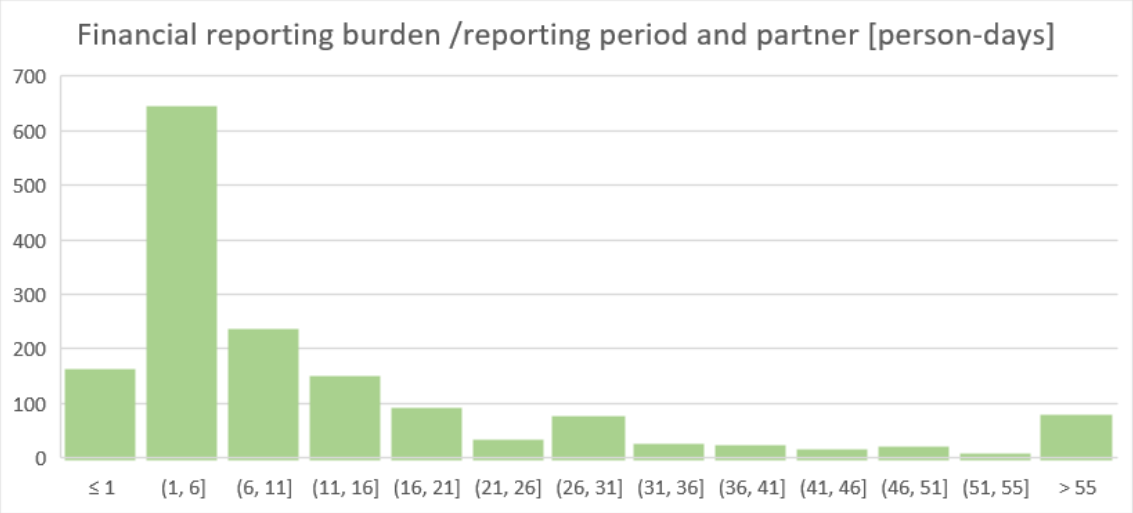
(1) A question on time savings in the first targeted survey asked 1451 beneficiaries of lump sum grants of Horizon 2020 and Horizon Europe (excl. ERC PoC). In response, **210 lump sum grant beneficiaries** with **past experience of actual cost grants** reported a median financial reporting

[137] The survey addressed to lump sum grant beneficiaries reused the list of beneficiaries of the related earlier targeted survey on lump sum funding from September - October 2023 as a starting point.

cost saving of **8 person-days per reporting period and consortium member**. 20 lump sum beneficiaries indicated they had experienced no savings,[138] the remainder reported savings between 0.1 and 150 person-days per consortium member per reporting period.[139]

(2) To test and validate the lump sum beneficiaries' responses, a parallel, second survey approached 8082 beneficiaries (project financial signatories) of actual cost grants across Horizon Europe (excluding ERC), who had at least once submitted periodic reporting by July 2024. A survey question asked **actual cost grant beneficiaries** to estimate their **incurred financial reporting costs under Horizon Europe**. As financial reporting falls away under lump sum funding, the responses provide an **indirect estimate of savings that could have been achieved** had these grants been lump sum grants. The **1 529 responses** suggest a slightly lower, but fairly similar, median financial reporting cost of **6 person-days per reporting period and consortium member**, with a mode of 5 person-days and a range of 0.1 to 116 person-days, after excluding outliers.[140] When limiting the survey sample further to respondents, whose answers to more specific sub-questions on reporting burden are internally consistent with their indicated total financial reporting cost, the second survey also returns a median benefit of 8 person-days per reporting period and consortium member. However, this approach does not account for the fact that some of the more specific questions may have been more difficult to answer[141] and it would exclude 35% of the respondents, which is why it has not been chosen as the central approach.

Figure 23: Distribution of responses - Actual Cost Grant beneficiaries: financial reporting costs



Source: 1529 responses, Horizon Europe actual cost grant beneficiaries, who had reported; X-axis shows the financial reporting costs in the unit of "person-days per reporting period and partner". Y-axis shows the number of responses received that fell into each specific bracket of person-days. E.g. "(1, 6]" = from above 1 to including 6 person-days.

[138] 1 response reported a related cost increase from coordination efforts to ensure performance across the consortium.
[139] Excluding 4 outliers (2%, 300 - 870). It is assumed that respondents may have reported the total cost saving for all consortium members together, all reporting periods together, or even both. Reduces median by 0.5 person-days.
[140] Excluding 23 outliers (1.5%; > 2 SD). Same reasoning as for lump sum survey.
[141] Many answers to the subsequent, more specific questions either repeat the response to the general one or return extreme values. This suggests that respondents may have had difficulties to answer the more specific questions, but it does not automatically devalue their response to the more general question on the overall financial reporting costs.

The evaluation used implementation data on lump sum grants (excluding ERC PoCs) signed until 1 January 2025, specifically the respective participants and reporting periods, to calculate the grants' time savings. This assessment suggests an estimated **median saving of financial reporting costs per grant for lump sum grant beneficiaries of between 96 and 128 person-days.** This median saving stems from a grant of just under EUR 2 million, a consortium of 8 participants and 2 reporting periods, which is reassuringly close to the median consortium size of 9 participants and median of 2 reporting periods that characterise non-POC lump sum grants signed so far. However, lump sum funding is going to be progressively rolled out in the remaining years of Horizon Europe and the composition of lump sum grants will change. As the share of lump sum grants with higher grant values is expected to rise, the typical time saving a (Type II) lump sum grant can achieve over its project lifetime is expected to increase in parallel. The final evaluation of Horizon Europe will be in a position to test this expectation.

At interim evaluation stage, only considering grants that have been signed up to 1 January 2025, **additional lump sum funding under Horizon Europe (excl. ERC PoCs) is estimated to have secured time savings of between around 129 000 and 172 000 person-days (financial reporting burden reduction) over their entire project lifetime.**

ERC Proof of Concept (Type I.) lump sum grant beneficiaries were not among the respondents of the surveys and some characteristics of PoC grants (mono-beneficiary, 1 reporting period, uniform grant value of EUR 150 000) substantially differ from those of the typical lump sum grants introduced under Horizon Europe. However, PoC grants do not differ substantially from the other lump sum grants in terms of the grant value per reporting period and participant (i.e. mono-beneficiary or consortium member).[142] Under the **assumption** that the estimated time cost savings per reporting period and consortium member are therefore equally applicable to PoC grants, the estimated typical lump sum benefit of a PoC grant is **6 to 8 person days**. PoC lump sum grants signed so far under Horizon Europe are thus estimated to realise savings of between **4200 to 5600 person-days** in reporting burden reduction over the entire project lifecycle. For the interim evaluation of Horizon Europe, ERC Proof of Concept lump sum grants do not lead to additional simplification savings, as **ERC PoCs have been exclusively using lump sum funding since the last years of Horizon 2020 and are thus part of the evaluation's baseline.** However, PoCs have not been evaluated before and are assessed to complete the overall effect of lump sum funding as a simplification measure.

Monetisation

To **monetise the time saving**s, the evaluation applies a **R&I sector-specific cost of labour** derived from a *median personnel cost* value from past grant applications. The sectoral value better **reflects the opportunity cost of the lump sum project team's time** than the EU average tariff associated with administrative costs (Better Regulation tool #59) otherwise used in the evaluation for monetisation. The median personnel cost, also in use in the 'lump sum dashboard', currently stands at EUR 5 500 per person-month and is updated at intervals. It includes wage costs, non-wage costs and overheads, reflects the geography of Europe's R&I sector and the mix of professional profiles of team members in R&I projects. The evaluation assumes that the

[142] The median normalised grant value by consortium member and reporting period of non POC lump sum grants signed until 1 Jan 2025 is around EUR135 000.

composition of profiles is adequate for financial reporting activities that aggregate information from across the entire project team.

Applying the sector-specific labour cost, the time saving of a **typical lump sum grant** (excl. POCs) corresponds to a simplification benefit of around **EUR 33 200 and EUR 44 200 per grant**, equivalent to around **1.4% to 1.8% of the grant value**, or **12% to 27% of the beneficiaries' administrative costs**.[143] Time savings for each of the ERC PC lump sum grants is estimated to correspond to around EUR 1 800 to EUR 2 500, 1.2% to 1.6% of the grant value, or 12% to 20% of the beneficiaries' median administrative cost.[144]

The **lump sum grants (non-PoC and ERC PoC) signed so far** are therefore estimated to experience savings of between around **133 000 and 177 300 person-days** in reporting burden reduction over their entire project lifetime. This is equivalent to EUR 40.8 million – EUR 54.4 million, or **1.3% - 1.8%** of the total grant value. **The time saving thus is expected to eliminate 12% to 26% of the beneficiaries' administrative costs**.

In addition to the time saved on financial reporting, some lump sum grant beneficiaries also **no longer have to submit a certificate on the financial statements (CFS)** for EU contributions above EUR 430 000.

Survey responses (634 responses)[145] suggest that a **CFS typically costs EUR 4 500**.[146] Lump sum grants are estimated to so far have saved beneficiaries around **EUR 9.0 million**[147] on CFS in total in addition, equivalent to around **0.3% of the total grant value.**

In summary, at interim evaluation stage, only considering the lump sum grants (including ERC PoCs) that have been signed to date, lump sum funding is estimated to already have secured a reporting burden reduction for beneficiaries of between EUR 49.8 million and EUR 63.4 million over their projects' lifetime, combining administrative cost savings and avoided CFS certificates. This is equivalent to between 1.6% and 2.1% of the grant value, or a saving of 14% to 30% of the beneficiaries' administrative costs.

The use of lump sum funding under Horizon Europe is scheduled to broaden and pick up speed in the coming years. The future potential under Horizon Europe is discussed in annex 4.5.1.

Adjustment process of lump sum grant beneficiaries to realise benefits

Survey respondents shed light on the adjustment process of lump sum grant beneficiaries to the removal of financial reporting requirements. The overwhelming majority[148] of the lump sum grant respondents had discontinued at least "some of" the tasks that were no longer required, with over

[143] based on evidence presented in as per Annex 4.1.1, using the range of 6%-10% of project costs.
[144] of EUR 9000 to EUR 15 000 (project cost and grant value are identical for PoCs).
[145] Excluding zero values and cannot say.
[146] (mode) EUR 5000. 20% (125) of respondents within range of EUR 4500 to EUR 5000.
[147] Based on 2001; (01.01.2025) consortium members involved in the lump sum grants above EUR 430 000 signed so far, who would have had to submit a CFS certificates under the actual cost grant. Around 22% of the lump sum grants signed to far had CFS requirements.
[148] Based on 267 of 300 (89%) of lump sum grant respondents to the corresponding survey question, of which 11% (33) discontinued all of the financial management and financial reporting tasks that are no longer required under lump sum grants, 37% (111) continue "some of" the tasks, and 32 % (97) "most of" the tasks. 20% (59) still carry out "all of" the financial management and financial reporting tasks that are no longer required. Some respondents explained the underlying reasons for retaining the tasks.

half abandoning "most" or "all of" the non-required tasks. About a tenth indicated they had not changed their practices at all, which is also reflected in zero savings reported above. Underlying reasons to continue (some of) the practices include internal requirements or the fact that an organisation's practice is dominated by their more numerous actual cost grants.

From the perspective of the assessment, the removal of financial reporting requirements already constitutes a reduction of beneficiaries' administrative costs (imposed by the framework programme) as such, independent of the actual changes to beneficiaries' financial management practices. This is because beneficiaries are free to organise themselves in the most efficient way, even if they choose not to (fully) adapt their financial practices, particularly in the short-term.

The **framework programme should ensure that no conflicting requirements are imposed on lump sum beneficiaries by other areas of the framework programme**, in order not to hinder the simplification effects to take effect. One respondent to the survey's open question pointed out that their **membership obligations as part of a Joint Undertaking** prevented them from realising the savings from a removal of financial reporting obligations. Their organisation still had to provide audits of the total costs (EC grant and IKOP) as assurances and checks to the Financial Signatory, who were still required to sign off their financial submission on the Funding &Tenders portal. Based on the information provided in the comment, the evaluation was not able to firmly establish whether the obligations could reasonably have been expected to disappear under lump sums funding. However, the comment highlights the **risk of clashing requirements** in some areas of the framework programme, which can stand in the way of an effective implementation on lump sum funding and will need to be monitored and addressed.

The uncertainty around the internal adjustment processes to the changed requirements has the potential to delay adaptation. **Beneficiaries may therefore benefit from an exchange of experience on how to tweak internal practices to maximise savings.**

Costs and side-effects of lump sum funding

The simplification measure introduces additional requirements for i) **applicants** and ii) **proposal evaluators**. It also changes the iii) processes of the programme's **implementing bodies** (EU public sector administration). In addition to the topic of application costs, stakeholder feedback, has raised concerns about iv) **potential side-effects on the financial risk of beneficiaries and on amendments to grant agreements**.

i) Lump sum applicants' costs - quantitative and qualitative evidence

All Horizon Europe applicants, regardless of funding model, must base their proposals on detailed budget estimates, which they are also required to keep on file.[149] **Applicants to lump sum calls have to submit an additional budget table together with their proposal, as supporting information on their proposed lump sum**. This requirement does not exist for ERC PoC lump sum grants, where the sum is predetermined. Aggregating the budget information for the table is not an additional task but included in the baseline cost of applicants. What changes for lump sum proposals is that **applicants must enter and submit their figures into a specific template**, **currently in the form of an excel spreadsheet, instead of keeping the information at hand in a format of their choice under actual cost grants.** Any additional time spent by applicants on reformatting the information is categorised as an administrative cost of the simplification measure, while any experienced nuisance in handling the document counted as 'hassle cost'.[150] The size of any additional cost to applicants strongly depends on the user friendliness and lay-out of the template itself. The cost may be reduced over time through adaptation and optimisation of the IT tools and template.

Survey responses of lump sum beneficiaries and unsuccessful applicants[151] (excluding ERC PoC) **suggest that, at least so far, for most applicants the additional application costs do not raise any concerns or are even negligible**. The median response indicates that lump sum beneficiaries spend 16 to 25 person-days preparing their proposal[152], less than applicants to other types of grants where the median is 26 to 35 person-days. The difference is particularly visible among European Innovation Ecosystems (EIE) participants, which is in line with the findings from the targeted survey on the beneficiaries' perception of a net-administrative burden reduction induced by lump-sum (see figure in section 4.4.2), which is the highest for EIE beneficiaries (and MSCA), and slightly lower among Pillar 2 participants. However, respondent numbers were low, due to the early date of the survey. As there is no reason why lump sum funding should lower the cost of applicants, **the observed below-average costs are likely driven by the composition** of the still low number of **lump sum grants that had been signed at the time of the survey**.

Table 19: Targeted survey of interim evaluation - Lump sum beneficiaries application costs.

	Lump sum beneficiaries		Non-lump sum beneficiaries		All lump sum beneficiaries	Horizon Europe minus lump-sum beneficiaries
	Cluster 2	EIE	Cluster 2	EIE		
Median	16 to 25 person-days	16 to 25 person-days	16 to 25 person-days	26 to 35 person-days	16 to 25 person-days	26 to 35 person-days
Mode	6 to 15 person-days	6 to 15 person-days	16 to 25 person-days	16 to 25 person-days	6 to 15 person-days	16 to 25 person-days
Total responses	31	202	1161	13	233	17103

Source: internal analysis, based on 17 336 responses to a targeted survey of Horizon Europe applicants (May-July 2023).

Qualitative evidence collected from lump sum beneficiaries confirm that the cost increase for applicants has been limited. The survey to Horizon Europe beneficiaries and applicants shows that

[149] Get prepared - Online Manual - Funding Tenders Opportunities, "The budgeted costs should be based on a detailed and accurate estimation of your estimated project costs (…) Keep your estimates on file - you may be required to produce them later on."

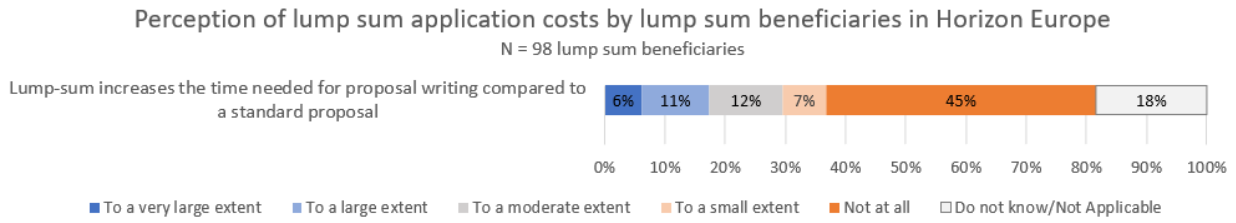
[150] European Commission, Better Regulation Toolbox (2021), Tool 56. Sec 2. Categories of Costs and Benefits. While they exist, hassle costs are typically not quantified in evaluations to keep the assessment proportionate.

[151] The evaluation's comprehensive targeted survey, summer 2023.

[152] 'In your estimation, how many person-days did your organisation spend in preparing your Horizon Europe proposal?'

the largest group of respondents among lump sum beneficiaries (45%) do not perceive at all an increase in the time needed for proposal writing (compared to a standard proposal), as shown in the figure below. In comparison, 17% agree to a large or very large extent that lump sum funding does increase the proposal writing time.

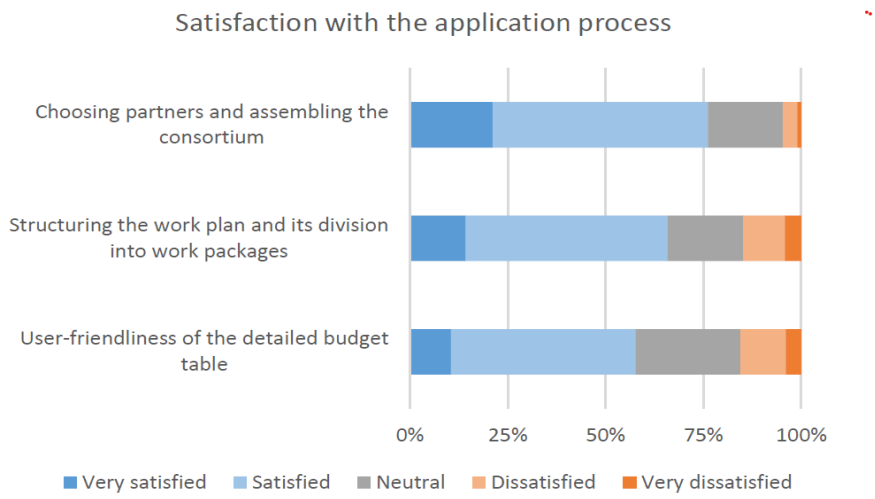
Figure 24: Perception of lump sum application costs by lump sum beneficiaries in Horizon Europe



Source: Survey to Horizon Europe beneficiaries and applicants, conducted in May-June 2023, 98 responses from lump sum beneficiaries

The targeted survey to lump sum beneficiaries (Sept. -Oct. 2023) also shows satisfaction from the participants in regard to the application process, with more than half satisfied or very satisfied with respectively the choice of partners and assembling of the consortium (76%), the structure of the work plan and division into work package (65%), and the user-friendliness of the detailed budget table (57%). In the follow-up survey of 2024, 3 respondents report in their open answers that while lump-sum grants require a slight extra effort at the proposal stage (compared to a standard proposal), it is compensated by the reduced administrative burden overall, or corresponds to the budget planning effort in standard grants.

Figure 25: Satisfaction of lump sum beneficiaries and applicants with the application process



Source: Targeted survey to lump sum beneficiaries and applications, conducted in September-October 2023, 2982 answers from lump sum beneficiaries and applicants[153].

[153] European Commission 2024. Assessment of Lump Sum Funding in Horizon 2020 and Horizon Europe.

In the **position papers** submitted as part of the open consultation on Horizon Europe mid-term evaluation, several stakeholders covered the topic of application costs of lump sum funding. At least 14 position papers (out of 216 position papers submitted) raised concerns of a **shifting workload from the project implementation stage to the proposal stage**, issued by a series of European (and one national) networks of research centres, four universities or universities associations, one RTO, one national research agency and one national research centre, and one large company.

While the currently available evidence on lump sum application costs provides no cause for concern and no indication of average additional costs borne by lump sum beneficiaries, costs may change in the future and should be monitored as a potential source of side-effects.

ii) EU Public Sector – Proposal evaluation costs

Evaluators of proposals for lump sum grants have to assess an **additional detailed budget table**, on which the lump sum calculations are based and which is submitted with the proposal.

The evaluators are external professionals with scientific and technical expertise in the specific field of the call or call topic. The implementation of lump sum funding uses the **assumption that evaluators have acquired all necessary skills for the assessment of the additional lump sum budget in the context of their regular professional experience**. At the time of the interim evaluation, insufficient evidence is available to test this assumption,[154] which is relevant to ensure a fair and high-quality evaluation of lump sum proposals.

Evaluators draw on **specific guidance**, in particular on guidance on **benchmark itemised costs** (maintained on the basis of past R&I framework programme project data).[155]

Evaluators are remunerated for the additional task of assessing the budget table. The **additional compensated workload per evaluator of a lump sum grant proposal is equivalent to 2 'points' of complexity** per lump sum grant.

In addition, **more experts are involved** in the evaluations of each lump sum proposal. Instructions foresee the involvement of **at least 3 experts per lump sum proposal.** In practice, the numbers vary, with some Executive Agencies involving **4 to 5 experts** per lump sum proposal, which may indicate an adjustment process during which services gather experience. The exact number of evaluators involved is decided by the implementing body on a case-by-case basis. **The evaluation could not establish the total number of additional evaluators involved in lump sum proposal evaluations under Horizon Europe**, relative to how many would have been involved if the

[154] Based on the distribution of roles, e.g. in academic institutions, not all who are qualified in terms of their scientific and technical expertise may also have sufficient experience in putting together budgets for projects. The assumption, however, only requires that those experts, who are chosen as evaluators using the key words such as 'project management', 'financial and budgetary analysis', and 'cost estimation analysis', are sufficiently skilled to assess the lump sum budget information with the help of the specific guidance and benchmark data, such as the Horizon dashboard for lump sum evaluations.

[155] See detail on Horizon dashboard for lump sum evaluations in footnote above (monetisation of lump sum benefits). Benchmark level costs act only as guidance. Proposals with costs that exceed these levels can also be funded, where they are justified. Responses to the evaluation's targeted survey open questions revealed a lack of awareness of this possibility.

proposals had been for actual cost grants. The total cost of evaluators is an additional administrative cost of the EU Public sector.

iii) EU Public Sector – administrative costs of Horizon Europe Implementing Bodies

The use of lump sum funding requires an adaptation of internal administrative processes in implementing bodies, such as Executive Agencies and Joint Undertakings. The changes alter Public Sector **administrative costs** and generate **adjustment costs** in the short run. **Financial reporting documents no longer have to be processed**, which generates cost savings from simplification. At the same time, a greater emphasis is placed on the content of the supported projects, **some workflows have to be adjusted, and staff have to become familiar with changes** to the implementation practices.

In autumn 2023, the management of six **European implementation bodie**s (five Executive Agencies and one Joint Undertaking) were asked for (qualitative) **feedback on their experience with lump sum funding** so far.

Their feedback was collected at a relatively early stage when services still had **limited experience with the funding model** under Horizon Europe. This may explain, why **not many EU Services had yet formed clear views on the measure's net-effect on public resource.** In response to the statement, 'The cumulative effort [of the service] for managing lump sum projects, over the entire project lifecycle, is lower than for actual cost projects.', three services indicated they 'neither agreed nor disagreed', two services 'agreed' and one 'disagreed'.

Overall, the feedback suggested that the pace of introduction was not seen as disruptive, lump sum funding was generally welcomed, and some concerns around implementation existed. Four of the six EU services 'agreed' or 'strongly agreed' with the statement that 'lump sum funding was introduced at a pace that allowed their organisation and staff to adapt without disruption', while two gave a neutral response. Four EU services 'agreed' or 'strongly agreed' that the introduction of lump sum funding in Horizon Europe is welcomed by the service, while one service 'disagreed', and one gave a neutral response. Three of the six EU services were 'satisfied' with how lump sum funding is implemented, two were 'dissatisfied', with again one neutral response.

The EU Services also submitted c**oncrete suggestions** for the implementation of lump sum funding, which **centred on the adjustment phase**. These included, for instance, to further clarify guidance and templates, and to review the IT workflows and tools with the specificities of lump sum funding in mind.

The introduction of lump sum funding is accompanied by a **responsive organisational setup** that has the potential to **minimise adjustment costs** and **reduce implementation costs.** The suggestions on implementation were discussed in the context of the **lump sum practitioners' group**, where all Executive Agencies and Joint Undertakings are represented. In early 2024, as a follow-up, the internal lump sum guidance for EU staff and the external guidance for applicants and beneficiaries were updated to provide additional information on how to design and describe the work packages. In addition, the Excel file template for the lump sum budget table was updated to clarify instructions and improve its compatibility with the IT environment for the submission of proposals. The group accompanies the further introduction of lump sum funding and continues to act as a forum for the exchange on best practices and lessons learned from managing lump sum topics and grants, and to discuss potential improvements.

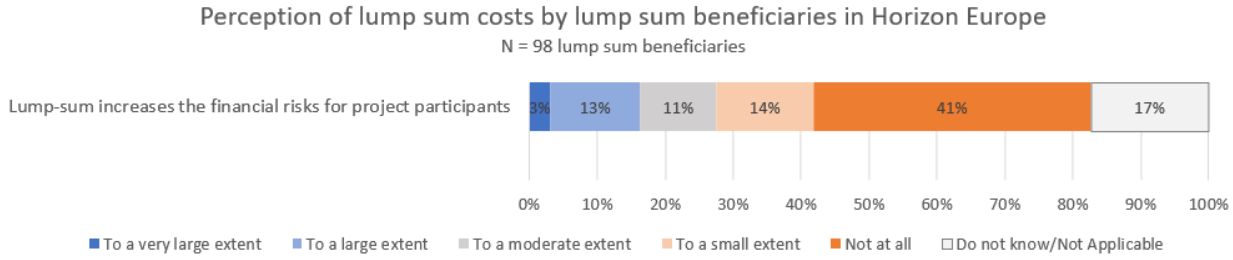
iv) Stakeholder concerns on unintended side-effects of lump sum funding

In addition to concerns around application costs, stakeholders also raised concerns on **higher financial risks and uncertainty** for lump sum beneficiaries compared to standard grants. Based on the open answers to the targeted survey to lump sum beneficiaries conducted in summer 2024, lump sum funding is perceived by five respondents (out of 301) as increasing the risk of incurring a reduction of budget due to partners' underperformance, or as creating costs to prevent such situation to happen. Position papers received in the context of the public consultation for the mid-term evaluation of Horizon Europe raise similar concerns: at least 8 large beneficiary organisations (including three (national) research centres or network of research centres, and five universities or networks of universities, and one large enterprise) are worried about the financial risk of lump sum funding in large consortia, where the liability is shared with many partners, and potential negative consequences on collaboration and mitigation costs. It should be noted that these concerns relate to the use of lump sum funding for large and complex (non-linear) projects, while the use of lump sum funding for small-scale projects, and for Coordination and support actions (CSA), is supported.

Horizon Europe implementation data does not support these concerns. The rate of grant reduction in closed lump sum grants so far[156] has stayed under 1%, irrespective of the budget size of the grant. This is an indication that beneficiaries' actual, realised risk of not completing a lump sum project remains low. Lump sum funding does not change the joint responsibility of consortia to deliver on the project milestones, and the pre-financing and payments are handled in the same way in lump sum and actual costs grants[157].

In addition, the survey to Horizon Europe applicants and beneficiaries shows that among lump sum beneficiaries, 45% report that lump sum funding does not increase at all the financial risks for participants, compared to 16% who agree to a large or very large extent that it does. The targeted survey to lump sum beneficiaries (2023) find similar results, with a large majority of respondents agreeing that the schedule of payments is adequate for the cash flow, and that the financial risk does not increase in lump sum projects (see figures below).

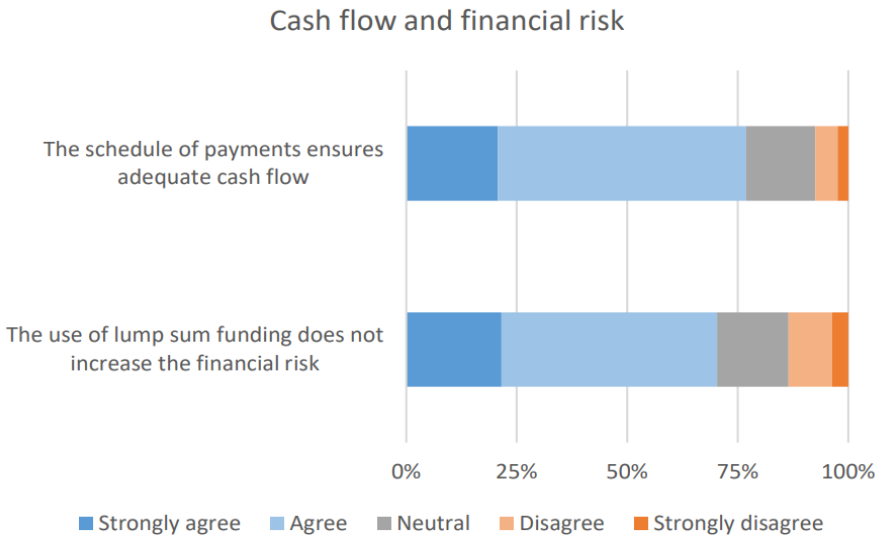
Figure 26: Perception of lump sum financial risk by lump sum beneficiaries in Horizon Europe



Source: Survey to Horizon Europe beneficiaries and applicants, conducted in May-June 2023, 98 responses from lump sum beneficiaries

[156] Commission internal assessment, based on implementation data (CORDA)
[157] European Commission 2024. Assessment of Lump Sum Funding in Horizon 2020 and Horizon Europe.

Figure 27: Opinion of lump sum beneficiaries on cash flow and financial risk



Source: Targeted survey to lump sum beneficiaries, conducted in September-October 2023, (cash flow n =1022; risk n= 1020 ; 'cannot say'/'not applicable' excluded)answers from lump sum beneficiaries[158]

Another concern raised in position papers (and by one respondent of the targeted survey to lump sum beneficiaries) is that the **multiplication of work packages** in lump sum grants leads to artificial work plans with isolated responsibilities and heavy amendments. This was mentioned in the position papers of two networks of research centres and RTOs, one national research centre, one RTO, and two universities. However, the targeted survey to lump sum beneficiaries shows that the majority of lump sum beneficiaries (65%) are satisfied or very satisfied with the structure of the work plan and its division into work packages (see Figure 27 in the section above). No significant difference was observed between the two funding models in terms of the **number of amendments**. At the same time, controls have been effective and lead to some reductions at evaluation and payment stage, which is reassuring with regard to safeguarding public finances.

Finally, some beneficiaries of lump sum still need to comply with more traditional cost-based rules under their national financing and/or as participant to other Horizon projects. According to the answers to the targeted survey's open question to lump sum beneficiaries (2024), **working under different funding schemes appears to create confusion and extra administrative burden** for some beneficiaries (2 respondents, out of 301), or at least to limit the benefits of lump sum grants for others (8 respondents out of 301). In one position paper (written by a network of research centres) and three open answers, beneficiaries suggest leaving the choice to applicants on whether to apply lump sums or not.

In view of these concerns, the costs and benefits of lump sum grants will continue to be assessed, including in the Horizon Europe final evaluation. **While lump sum funding is a key part of the simplification of the Framework Programme, it will not be generalised blindly, but be used when it is the most appropriate tool, based on thorough monitoring and assessment.**

[158] European Commission 2024. Assessment of Lump Sum Funding in Horizon 2020 and Horizon Europe. Page 32.

Monitoring of Horizon Europe

Lump sum funding has an effect on the way some monitoring indicators of the framework programme can be collected. Please see Annex 2 point 15 for details.

4.4.3 Blind Evaluation of Proposals Pilot

All two-stage calls in the Horizon Work Programme 2023-24 (with the exception of one call in Widening) participated in the pilot (16 calls) and all of its 2100 proposals were evaluated in a 'blind' fashion. For these calls, an additional '**admissibility criterion'** was introduced, stating that applicants submitting a proposal must n**ot disclose their organisation names, acronyms, logos nor names of personnel** in the technical description (part B) of their first-stage application template. The second-stage application was not part of the blind evaluation pilot and evaluated as usual.

For the blind evaluation to be effective, expert evaluators must not know the consortium structure nor the applicant(s) involved. **Applicants received additional guidance**, as part of the application template's part B, on how to anonymise the template, including practical examples.

Before the blind evaluation could be carried out by **evaluation experts**, all part B's of the submitted proposals had to be checked, not only for direct identification, but also indirect identification of the participants (e.g. through links to web pages or through references to their role and previous experience). This work was carried out by the **call coordinators** in Executive Agencies.

Outcome of pilot

The pilot's main aim was to test whether a **blind evaluation of proposals was feasible within the legal framework and the operational context of the R&I framework programme**, which was confirmed by the successful implementation of the two-stage calls. The pilot also collected **comprehensive feedback from internal and external stakeholders** involved and **monitored the distribution of the geographical coverage of participants and of the gender of project coordinators.**

The feedback collected through an online questionnaire from **applicants**, **evaluation experts and NCPs** was predominantly positive, particularly that from NCPs of widening and third countries. **Evaluators** signalled that the guidance they had been given was clear and that they experienced only an insignificant increase in workload as consequence of the measure.

Call coordinators raised concerns about the additional effort to perform 'admissibility checks' of the proposals, with feedback ranging from strong disapproval to moderate agreement. Comprehensive checks of whether an indirect identification was possible were particularly time consuming.

Looking at the **geographical coverage** of the proposals, it was observed that for all calls (blind and non-blind evaluations) the overall share of participants from widening countries was lower in the retained proposals than in the evaluated ones. While in non-blind evaluations the share between

submitted and retained proposals decreased by 9.4%[159] (from 19.1% to 17.3%), a smaller decrease was observed in the blind evaluation, by 3.3% (from 21.2% to 20.5%).

The pilot also monitored the **gender of project coordinators** (contact persons). For non-blind evaluations the share of female coordinators increased by 4.7 percentage points from evaluated to retained proposals, while it remained stable under the blind evaluation.

The observed differences in characteristics between blind and non-blind evaluations may be caused by factors other than the use of blind evaluations. Although the connection is plausible, it is not the only possible explanation[160].

The analysis of the pilot will be completed once the evaluation of the second stage proposals of all participating calls is finalised, which will allow for further insights in the funding decisions of calls that have been evaluated blindly.

4.4.4 Reformed Ethics Appraisal Process– reducing the burden for applicants and beneficiaries

The Ethics Appraisal Process of the framework programme was reformed under Horizon Europe. The simplification aims to limit the workload of ethics-related requirements of participants by focusing it on projects involving serious and/or complex questions of ethics. The overall level of compliance with fundamental ethics principles in Horizon Europe research projects is to be upheld.

Ethical research conduct entails the application of fundamental ethical principles to scientific research. Since Horizon 2020, projects have been required to undergo an ethics assessment as part of the Ethics Appraisal Scheme. The process includes a self-assessment at proposal stage, followed by an ethics review procedure, and ethics checks, reviews, and audits during implementation. The purpose of this procedure is to uphold ethics and integrity in research and innovation, which are seen as a prerequisite for achieving excellence.[161]

The step of ethics screening aims to identify proposals involving serious or complex ethics issues. If any such serious and/or complex issues are identified, the proposal is subject to a full ethics assessment, as a result of which ethics requirements are likely to be defined. Conversely, if a proposal does not appear to include serious or complex elements as regards ethics, it is cleared unconditionally.

In a shift towards a trust- and risk-based approach,[162] the new process relies as much as possible on the national frameworks for oversight of research, to avoid unnecessary burden for both beneficiaries and agencies. This is in line with Article 19,[163] which states that actions carried out

[159] A group of non-blind and predominantly first-stage evaluations was put together for comparison. As the blind evaluation had been applied to all but one two-stage calls in the Work Programme (WP) 2023-24, the control group was constructed from other, similar calls of WP2021-22 and WP 2023-24. To increase the chances that the relevant characteristics were as similar as possible, the cluster and area of research were given priority in the matching, over the number of stages of the calls (some single stage calls were included). Research area and cluster are assumed to have the stronger effect on the change in characteristics of applicants and evaluation experts.

[160] The pilot's design (non-random allocation of treatment, design of control group) means that observed effects may be due to correlation.

[161] COM(2021) 407 final. Proposal for a Council Recommendation on a Pact for Research and Innovation in Europe.

[162] Evaluation support study on Horizon Europe's contribution to a Resilient Europe, page 124.

[163] Regulation (EU) 2021/695.

under the Programme must comply with ethical principles and relevant Union, national and international law, as well as relevant Charters.[164]

The new approach to the ethics appraisal process contains new elements (listed below) that have the aim to streamline and clarify the application and implementation process, reducing the administrative burden for the parties involved, whilst preserving high ethics and integrity standards.

- Guidance documents include references to the European Code of Conduct for Research Integrity.[165] Similarly, references have also been introduced in the Model Grant Agreement. Applicants must formally declare that their activities are compliant with the Code.
- The Guide for proposal submission and evaluation provides guidance for (potential) applicants is more extensive compared to the 2015 version, and it includes, among other things, a reference document on the consistent use of GDPR in the processing of personal data for research purposes.
- The ethics self-assessment is now included in part A of the proposal as a form generated by the IT system. Supporting documents can be provided in part B only if the application contains considerable issues or risks. This is a major change compared to Horizon 2020, where this type of supporting information had to be provided regardless of the nature of the proposal.
- The screening process in Horizon Europe adopts a clearer approach to identifying projects with serious and/or complex issues, therefore limiting unnecessary administrative burden for applicants and agencies.
- Applicants are required to confirm at application stage that their research has an exclusive focus on civil applications, or that it meets relevant legal requirements if it falls under the 'dual use' domain. Research that could have implications for security is no longer covered under the Ethics Appraisal Scheme (instead, it is examined as part of a specific security review). Guidance has been developed to this extent.[166]

Beneficiaries, responding to the **targeted survey**, are overall satisfied with the new ethics self-assessment: 37% (239 respondents) reported that their experience with the ethics self-assessment was positive 'to a large extent' and without issues, 27% (173) said it was positive 'to a moderate extent', since they had encountered minor challenges, and 3% (20) having a rather negative or negative experience (with some issues or significant issues).[167] Additionally, ethics and integrity were considered important topics by Public Consultation respondents: more than half (54%, 1 037)

[164] European Commission (2024). Evaluation study of the European framework programmes for research and innovation for an innovative Europe – Report phase 2 (support study for the interim evaluation of Horizon Europe), page 660. Available at: https://op.europa.eu/en/publication-detail/-/publication/6aeb2414-64e8-11ef-a8ba-01aa75ed71a1/language-en.

[165] All European Academies (2023). The European Code of Conduct for Research Integrity Revised Edition 2023. Available at: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/european-code-of-conduct-for-research-integrity_horizon_en.pdf.

[166] For example: European Commission (2021). How to handle security-sensitive projects. Available at: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/how-to-handle-security-sensitive-projects_en.pdf .

[167] Evaluation support study on Digital & Industrial, page 531.

indicated that ethics and integrity should be 'essential' or 'high priority' themes to be elaborated further in the Strategic Plan 2025-2027, with 26% (497) considering them a 'medium' priority.[168]

In the targeted survey's **open question**,[169] some successful applicants' comments pointed to the fact that the ethics process is still resource-intensive (although it is not always clear whether this refers to the application phase, implementation phase, or both). For instance, a beneficiary noted that clinical trials are already subject to external ethics committees, and therefore appointed an ethics advisor may be redundant; another noted how ethics and gender planning could be integrated into a single document. More generally, other beneficiaries deemed the workload for ethics requirements throughout the implementation phase excessive.

4.4.5 'Feedback to Policy' - targeting EU public sector transaction costs

The delegation of the R&I framework programme implementation to executive agencies (and other implementation bodies) introduced an organisational separation into the EU Public Services working on the programme. This brought with it the risk of increased transaction costs when sharing information. In response, the **'Feedback to Policy' mechanism was introduced as an internal efficiency measure to manage transaction costs and facilitate the flow of information within the EU services**.

Feedback to Policy (F2P) within the Horizon Europe framework programme is a key tool to ensure that information stemming from R&I Research Projects is available for the programme cycle and policy development, this is, that the insights gained from research are effectively used in activities such as the preparation of work programmes, the creation and revision of new legislation and directives.

Based on internal information, the evaluation found that F2P can be a very effective channel for cooperation, particularly where the involved parties have had some **time to gather experience with the mechanism**. The process is at different levels of maturity, depending on the implementation history of each programme part. Challenges of the F2P mechanism include the **need for clearer communication between and consistent implementation across Commission services and agencies**, as well as the need to balance information needs originating from operational and from strategic objectives.

One specific hindering factor in the functioning of F2P is the **mismatch in the timing of the policy cycle and the research framework**, particularly where information is used in legislative contexts. A potential helping factor could be a more **user-friendly IT and data tools**, including the application of AI for data retrieval.

A more streamlined, strategic, and collaborative F2P process lowers the transaction costs of leveraging research findings, which improves the implementation of the framework programme as a whole, enables evidence-based policymaking, and increases the strategic impact of research initiatives.

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[168] European Commission (2024). Synopsis Report - Looking into the R&I future priorities 2025-2027, page 37.
[169] Surveys of applicants carried out as part of the supporting studies.

4.5 Potential for further simplification

This section contains additional background on an approximate **ex-ante assessment of the effects of lump sum funding** in the remainder of the programme.

It also brings together **responses to the open question of the evaluation's main targeted survey of applicants and beneficiaries** had relevant remarks on several topics. Responses have been thoroughly screened to focus on the most concrete and specific contributions, out of the large number received. Although the numbers are small in absolute terms, they do not have to be large or representative to count as a source of evidence in their own right. Contributions are collected in this Annex as a record of evidence for programme development.

4.5.1 Implementation phase - Lump Sum funding potential under Horizon Europe

Lump sum funding has additional simplification potential beyond what has been achieved so far. As Horizon Europe's primary measure to reduce beneficiaries' administrative burden, it is expected to contribute substantial savings in the remaining years of framework programme. Its use is scheduled to broaden and pick up speed, on a trajectory to cover **half of the annual call budget by 2027**. The evaluation uses current assumptions on this trajectory of: A total of EUR 2.7 billion of the Work Programme (WP) 2024[170] to be spent on lump sum calls; and further lump sum call budgets of EUR 4 640 million (40% assumed share in WP 2025), EUR 4 455 million (45% in WP 2026), EUR 5 000 million (50% in WP 2027).

The evaluation's estimate of achieved lump sum benefits so far (see annex 4.4.2) can be translated into a relationship between expected benefits to total grant value, of around EUR 16 700 to EUR 21 300 savings per EUR 1 million grant value.

Combining this relationship with the expected call budget of lump sum calls, suggests that **simplification from lump sum funding in the remaining years of Horizon Europe is expected to generate and additional EUR 276 million to EUR 351 million in reporting burden reduction**.

This estimate is not robust and should be read as an order-of magnitude figure. The estimate assumes a constant average ratio of lump sum benefits to grant value. It is sensitive to several assumptions on a) future roll out of lump sum funding under Horizon Europe, b) future uptake of lump sum call topics by applicants, c) the characteristics of the lump sum grants that will be signed, as well as the uncertainties around d) the survey evidence on reporting cost savings. In particular, the lump sum grants signed so far may not be representative of those that will be signed under Horizon Europe overall. The proportion of very small grants will likely decrease. This will change the composition of time savings and the share of grant participants who save on expenses for CFS certificates. **The final evaluation of Horizon Europe will be in a position to assess the achieved simplification ex-post.**

4.5.2 Implementation phase - Beneficiaries' feedback and suggestions

The following section collects relevant contributions from targeted survey responses to the open questions under the structured questions on cost. Out of the vast total number of responses, a number of respondents reported on their experience with the grant implementation process,

[170] Parts of the lump sum call budget for the work programme 2024 will be spent in 2025.

touching on issues relevant to questions of administrative burden. This smaller number of respondents has been selected for relevance to the topic.

21 contributions state that the **administrative burden is far too high** (e.g. '*exceedingly high*') **to the detriment of the scientific output of the project**[171]. For instance, five respondents complain about unclear and/or incomplete information on questions of grant implementation, which led them to loose time on administrative tasks to the detriment of the project itself.[172] ('*It is very difficult to know what I should do from the homepage. The manual is not helpful because it is a general manual and not optimized to the [call]*'. MSCA)

- A **concrete suggestion** was submitted that an **EU training session or recorded webinar** would be highly beneficial to on-board new grantees, as much time is lost to understanding the grant (at the same time as the beneficiary is supposed to be working, moving countries and institutions, etc.).

Other contributions gave feedback that the **number of deliverables** that have to be submitted is too high overall.[173]

- A Cluster 5 beneficiary **s**uggests that deliverables, such as **data management plan, ethics and gender planning should be integrated in one document**. Alternatively, a template could be used for these topics to reduce the project manager's time spent on this activity that 'tends to be a long document which is mostly "copy paste".'
- **Project manager rate calculation / single rate** should be simplified for **SMEs** as financial accounting is otherwise too burdensome.

A Cluster 5 beneficiary states that, from FP7 to Horizon 2020 and now to Horizon Europe, the administration **burden has increased**. In their view, it was now more difficult for new entrants and relatively small institutes to compete, not because of a lack of innovation skills or research capabilities, but because of a lack of experience with the proposal and grant agreement preparation and implementing such a project.

A Cluster 2 applicant perceives that a **separate ethics work package for every task** in the project is "*ridiculous*". A MSCA PF beneficiary states that, instead of researching and incorporating new skills, they spent '*almost all of the two years*' doing paperwork linked to '*CDP, DMP, ethics, ongoing report, open access, etc.*'.

- Two ERC Consolidator Grant beneficiaries ask for the requirement to fill out timesheets to be removed.
- A Cluster 5 applicant suggests for coordinators to have a **helpdesk or a help-line for the administrative procedures** ('*like updated action calendar, reporting actions, event organisation guidelines, etc*').

Further contributions on the topic of **Internet interfaces / web portals** are reported in Annex 4.5.3.

[171] Applicants from CL6 (5), followed by ERC (4), MSCA (4), CL5 (3), CL1 (3), and CL4 (2).
[172] MSCA PF (2), MSCA SE (1) and ERC STG (1)
[173] Specifically raised by 5 respondents from CL4, CL 5 and CL 6.

4.5.3 Application phase - Applicants' feedback and suggestions

Responses to the open question of the evaluation's main targeted survey of applicants and beneficiaries had relevant remarks on several topics that point at issues in the application process. This topic area attracted most comments.

Proposal template

40 respondents pointed out issues with the proposal template. 22 of these highlighted an **imbalance between the maximum permitted length of the proposal and the amount of information requested in the application**. 9 respondents commented that the number of pages in the template is too low compared to the amount of information requested in the application[174]. Respondents mention that **the lack of space compromises the scientific quality of the proposal**, and that the page limit is "counterproductive to expose complex disruptive projects". One Cluster 6 respondent in particular applauds reducing the number of pages from 70 to 45, but 'finds it strange that the same amount of questions and information is then asked'. 4 respondents state that the proposal template is too long[175]. Two contributions referred to **other funding agencies that required shorter proposals for similar support** (CZI mentioned by INFRA applicant; Danish funding system mentioned by MSCA DN applicant).

Respondents suggested **concrete improvements to the proposal templates**:

- The tables in the **proposal template** take up too much space, f**orcing repetition of information in text and tables**, that fonts are not correct in several sections and suggests r**educing size of headings in some tables to** allow more space in the scientific explanations. (EIC Pathfinder respondent)
- The t**hree separate tables in the application template should be joined into a single table with 3 columns** and be **available in word format** and not just rtf with the correct heading formatting. (Cluster 6 respondent)
- Where AI is used by Horizon's submission platform it should be limited to a role as a guiding tool and support, while the **actual submitted document** should be in the form of a **rich text document that can be edited by the applicant**. (EIC Pathfinder respondent)

Application guidance

A total of 35 respondents provided feedback on the guidance for the proposal writing process. Applicants mentioned that they **would have appreciated more support throughout the application process** from both Horizon Europe, NCP's and the applicants' own institutes.

Two concrete suggestions on how to improve the guidance material were received:

- An **anonymous repository of previous evaluations/comments for MSCA PF applicants would be helpful** to have an overview of what applicants tend to miss. (MSCA PF applicants)
- It would greatly help to **split the application guidance by call, as the 100+ page guide is daunting** (MSCA PF applicant)

[174] Close to half of these applicants being MSCA PF applicants, but also CL 3, CL4- 6 and EIC pathfinder applicants.
[175] 1 INFRA, 1 Cluster 1, 1 Cluster 6 and 1 MSCA Doctoral Networks applicant.

Internet interfaces / web portal

Complaints focused particularly on the **web portal via which proposals and reports are submitted**. (examples in italic)

- Users criticise the **portal's design** and characterise it as confusing to navigate, not user friendly, too complicated/complex and point out that this substantially adds to their **stress and costs.** The design is also perceived as **slow** and **outdated** ('*so many windows opening all the tim*e').
- Several contributions highlight the portal's **lack of reliability/stability**. The Funding and Tenders portal regularly **loses information** that has been entered, in particular, '*in Form A*' and '*when two or more people are editing the "forms"*, and that it is **unclear whether content was saved** and at what point '*when switching between different parts (budget-personal data)*.' The **unreliability hinders collaboration** between applicants contributing to a proposal. *('If the commission wants to encourage consortia with a large number of partners, it should make it so that we are not dependent on only being one partner on the portal at the time.')*
- Users report the portal being **frequently under maintenance** and it being **not fit for purpose**. ('*The system had lots of bugs and kept crashing, and the submission deadline was eventually extended. The system did not allow the correct input of all the required information, which we were eventually told to ignore. Communication was poor throughout.*'; ERC STG)*'*
- The web **portal's language** is experienced as **unclear**. ('*The website was (...) verbose, (...) it was hard to learn and keep track of the various different terms to know I was following the correct links, in the proper section, etc.';* MSCA PF*)*
- 5 detailed responses raise complaints with the **EIC**'s (former and now redundant) application platform and highlight a **lack of coherence** of the **documents generated via the platform's Artificial Intelligence**. ('*When you finally produce the Business plan it is not clear and much of the inputs are repeated in multiple parts.*', EIC Accelerator; '*does not enable systematic and coherent information to be presented,*', EIC Pathfinder; '*makes it really difficult to present the project in a coherent way'*.)
- "My project management" sends out **inefficient** and **indirect communication about updates** via generic, insufficiently targeted emails that then required logging into the portal to find out whether the update is relevant for the receiver of the email.
- Funding and tender opportunities portal (**SEDIA**) is experienced as **lacking flexibility** 'compared to its previous version' It also poses technical challenges during the submission process. (INFRA applicant)
- The user experience of the online **grant agreement preparation platform** is flagged as negative, due to **user-unfriendly, overly complicated** design and a lack of integration of relevant **guidance**. ('*a PAIN'*, '*at least some design review should be mandatory, because it is astonishing how much time is wasted in understanding how to navigate and use such a platform.'*, both Cluster 4)

Apart from a **general review and redesign** of the inefficient and ineffective parts of the portals, concrete **suggestions for improvements** included:

- When **errors** occur during the validation of a form (in particular researcher information form), the **error message should indicate which partner causes the error**, to enable a follow up.
- There should be an **option to indicate that a consortium partner does not have any researchers in the project** (e.g. industry partners), so that the coordinator is not unnecessarily warned about this fact when the application is validated.
- Information on the applicant's department, etc. should be **stored for later use in the system**, so the information does not have to be entered again each time.

Use of consultants (for consultant fees, see Annex 4.1.2.3 to application cost)

A total of 35 applicants commented on the use of consultants during the application process, 25 of which mention that the **high complexity** and '**excessive bureaucracy**' **of the application is creating a market for consultants**. Respondents came from across the programme parts, with **EIC applicants** being the most numerous (10 of 25).[176] Applicants are concerned the use of consultants creates an **unfair advantage** for applicants that can afford hiring consultants, compared to applicants that don't have the funds to do so.

One unsuccessful EIC Accelerator applicant comments the process's complexity has created an **industry of consultants and grant writing agencies**, which might not always serve the EIC's best interest, as these agencies try to work in the system and **please the evaluators rather than create solid businesses**. The applicant suggests simplifying the process to a more **accessible**, using a **industry-standard approach**, and so making it more manageable for a broader range of startups.

Another unsuccessful EIC Accelerator applicant comments that for a small **SME** applying takes a substantial investment (EUR 20 000 in addition to time). In the applicant's view it was **impossible to compete without experienced experts/consultants on board**. The applicant mentions not being able to afford to spend more money on re-submitting a second time.

A Cluster 4 applicant stressed that the proposal preparation process is too complex and expensive for an **SME**, particularly of "**peripheral countries**", with "the **real beneficiaries of Horizon Europe**" being "the **consultants**".

4.5.4 Proposal evaluation phase - Applicants' feedback and suggestions

Responses to the open question about the proposal evaluation process raised relevant points on the **quality of the evaluation and of evaluators (21 responses)**.

i) A perceived inconsistent quality of evaluations (final ranking points): **Proposals, which had been amended according to previous evaluation comments and resubmitted, received (much) lower scores when resubmitted.** This was raised in 14 comments, of which 10 came from MSCA PF applicants[177]. For instance, one 2021 MSCA PF applicant reported they obtained a score of 75% for a resubmitted, improved proposal, down from 92.4% for the previous submission. For context, **15 400 proposals** were submitted to the **2021 and 2022 MSCA PF calls**, which were almost all evaluated, and out of which 2994 responded to the survey. Seen in this light, 10 MSCA PF proposals are not many. However, open questions intend to collect **anecdotal evidence**, which

[176] 6 EIC Accelerator; 4 EIC Pathfinder; 3 Cluster 4; 3 Cluster 6; 2 Cluster 5; 1 Cluster 1; 3 MSCA DN; 2 EIE; 1 ERC COG.
[177] as well as 1 MSCA DN, 2ERC COG and 1 ERC STG.

does not need to be representative **(**across the population of applicants) to be useful. It is a **starting point for follow up actions** to establish whether a more general problem exists or not.

ii) Perceived inadequate quality of evaluation expert: Several comments centred on a perceived insufficient scientific expertise of the evaluator and the bias of the evaluators. (5 responses)

Partial randomisation (lottery) in evaluation process

Ten respondents suggest that **lotteries/ partial randomisation** should be introduced in the Horizon Europe evaluation process. Responding applicants came from across the programme[178]. The reasoning of all respondents is similar and revolves around the following rationale: The evaluation process is vulnerable to/ subject to the bias of evaluators, because it is difficult to objectively differentiate between proposals of (very) high quality. A partial randomisation might help overcome this bias by, for instance, introducing lotteries, as currently also tested by other funding programs.

Concrete suggestions included two ways of applying lotteries:

- Lotteries could be used for **all highest ranked proposals above a certain percentage threshold**. One MSCA DN applicant suggested that "*It would be better, as other funders are beginning to introduce, if every proposal above a certain threshold (e.g, 85% or 90%) was entered into a lottery for funding*", as "*there simply is no objective way to differentiate between highly ranked proposals*."
- Lotteries could be used for **proposals ranked just below the score of actually funded proposals** (e.g. proposals awarded with the Seal of Excellence).

Communication about award

Five applicants commented that the **communication of the outcome of their application was either too slow or unclear**. In an extreme case, one MSCA PF applicant reports spending nearly one day to understand that the project had been selected for funding.

Another MSCA PF applicant mentions that the **grant invitation letter** was addressed to the supervisor of the project and not the researcher, which **prevented the researcher to obtain a visa** based on research excellence.

Interview process

19 applicants raised issues concerning the interviewing process, seven (all of them ERC applicants) mentioning underperformance of the online format due to technical issues. Two applicants specifically mentioned that technical glitches and failure of Webex contributed to stress and inability to appropriately answer questions. Another applicant mentions that a fully online format would be a better interview format.

[178] 1 MSCA PF, 1 MSCA DN, 1 ERC COG, 1 ERC STG, 1 ERC ADG, 2 CL2, 2 EIC Pathfinder and 1 EIC Transition.

4.6 Annex 4 - Summary Tables

Table 1. Overview of costs and benefits identified in the evaluation									
		Citizens/ EU Society		**EU Public Administration**		**Horizon Europe Beneficiaries**		**Horizon Europe Applicants**	
		Quantitative	Comment	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
I. BENEFITS									
1. Indirect long-term welfare benefits for EU society from **scientific impact** & related benefits to participants	one off	**Direct scientific output with EU society** **48.68%** of the projects with EU citizens' or end-users' contribution **KIP 3: 86.8%** of publications are **Open Access** **KIP 3: 72.8%** of datasets are **Open Access** **KIP 3: 54.1%** of software applications are **Open Access**	**Horizon Europe creates knowledge, strengthens EU human capital in R&I, fosters diffusion of knowledge in the public sphere (open science), and addresses global challenges through R&I.** In the long run, the supported activities are expected to lead to **sizable and wide-ranging welfare benefits to EU society** (economic, social, and environmental benefits)			**KIP 1: 6 922 peer reviewed scientific publications** (**H2020***: 2827 peer reviewed publications) **KIP 4: 9 463 publications** linked to SDGs **KIP 2: 95 156 researchers** benefitting from upskilling activities **KIP 2: 8 307 MSCA researchers** benefited from mobility grants (dashboard) **KIP 2: 1 662 ERC researchers** benefited from	**Direct scientific output** of Horizon Europe **(benefit to researcher)** linked to expected long-term welfare benefits from scientific impact (Number as of 6 January 2025) *) Note: all figures referred to as "H2020:" provide baseline figures of the first 3 years and 3 months of the programme, unless indicated otherwise. If no metric is stated for H2020, no comparable		

			Data as of 6 January 2025			mobility grants (dashboard)	metric was available.		
2. Indirect wider economic benefits for the EU economy from **diffusion of innovation** & related benefits to participants	one off	**KIP 9:** total expected GDP impact **€14 billion** (2021-2033) (H2020* final evaluation: €287 billion to €420 billion over 17 years (2014 -2030) **KIP 8: 39 543 FTEs** created or maintained in organisations **H2020: 17 365** FTE **Total FTEs** created or maintained: **63 000 (**2021-2034)	**Horizon Europe fosters innovation-based growth, created jobs and leveraged investments in R&I.** (NEMESIS model, 'medium' scenario) *Note: H2020 final evaluation range/sensitivity using QUEST, NEMESIS **Indirect impact on employment** (Kip 8: monitoring data, as of6 January 2025) (forecast NEMESIS model)			**KIP 7: 124 IPR outputs**, including patent applications, trademarks, and utility designs (**H2020: 5** IPR applications) **KIP 4: 3 570 innovative outputs** linked to SDGs **KIP 7: 3 703 innovative products, processes, or methods** produced and reported by the projects **550** deep tech start-ups and SMEs supported by EIC Accelerator (01 December 2024) **90** start-ups created by students from EIT programmes (end of 2023)	Number as of 6 January 2025, unless indicated otherwise		

						346 start-ups as a result of EIT innovation projects (end of 2023) **5 806** start-ups received support from EIT KICs (end of 2023)			
II. COSTS									
		Citizens/ EU Society		**EU Public Administration**		**Horizon Europe Beneficiaries**		**Horizon Europe Applicants**	
		Quantitative	Comment	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
1. Direct economic cost of R&I funding to EU society	one off	Paid: **€ 30 883million** (35%) Committed: **€ 56 561million** (64%) Op. exp. budget: € 88 322 million **(H2020: 38%** of the total Horizon 2020 budget (incl. admin. exp.) had been committed in first 3 years)	**Operational Expenditure** as of 31/12/2024 (Percentage share of op. exp. budget) (Percentage share of op. exp. budget) (2021-2027. as of 31/12/2024) (No direct comparison with % of operational expenditure budget possible)						

2. Administrative costs of implementing the R&I framework programme **to EU Public Sector**	one off		Costs of administrating Horizon Europe are incurred by the public sector at European level but are ultimately a cost on EU Society.	Paid: **€ 3 174 million** (56%) Committed: **€ 3 317 million** (59%) Adm. exp. budget: € 5 623 million **4.01%** Target: 5 %	**<u>Administrative Expenditure</u>** as of 31/12/2024 (Percentage share of admin. exp. budget) (Percentage share of admin. exp. budget. No point for comparison with H2020) **Administrative Expenditure as percentage of overall expenditure** (as of 21/11/2024) (as per definition: only budget in legal basis, only indirect research, i.e. excl. JRC)				
3. Beneficiaries' administrative costs of participation	one off					**€ 4.75 billion** to **€6.47 billion** (1/1/2025) (H2020*: € 135 million to € 215 million over entire FP) Level of confidence in Horizon Europe estimate is medium/high.	**Total beneficiaries' administrative costs over project lifetime** of all projects signed under Horizon Europe so far, as of 1/1/2025) *H2020 final evaluation; estimate not robust)		

						(Difference between HE and H2020 estimate likely driven by data quality and survey question.) **€ 7.41 billion** to **€10.10 billion** **6% to 10%** of the project budget	**Total expected administrative costs of beneficiaries** over entire HE programme **Administrative cost of project** (median respondents) (5 161 survey responses of beneficiaries)		
4. Application costs of successful and unsuccessful applicants	one off							**€ 1.92 billion** to **€ 2.82 billion** (1/1/2025) H2020 (total) *: € 5.61 billion to € 11.25 billion **€ 21 000 to € 32 000** (1/1/2025) H2020*: €18 000 to €37 000	**Total cost of applicants** (robust) *H2020 final evaluation; estimates not robust) **Average cost / proposal**

								No substantial change of application cost between HE and H2020 **36 to 45 person-days** **16 to 25 person-days** **36 to 45 person-days**	**Qualitative evidence:** (4051 survey responses successful & unsuccessful applicants) **Time cost** (median respondent) **coordinator** **consortium partner** **mono-beneficiary**

TABLE 2: Simplification achieved and further potential

PART I: *Simplification and burden reduction (savings already achieved)*

*Simplification, burden reduction and cost savings **achieved already** by Horizon Europe, including points of comparison where available.*

	Citizens/ EU Society		**EU Public Administration**		**Horizon Europe Beneficiaries**		**Horizon Europe Applicants**	
	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
Administrative cost savings for beneficiaries through removing all financial reporting requirements (due to **lump sum funding)**, thus reducing a beneficiary's reporting burden (administrative costs). Lump sum grants also help to avoid financial errors and contribute to a shift of focus during the grant implementation stage, away from financial controls, back to a project's content. The measure changes the administrative costs of the EU public sector (implementing bodies) and a potentially negative effect on applicant costs (current evidence suggests insignificant).								
One-off (change from Horizon 2020 to Horizon Europe)			**n/a**	**Cost savings** from no longer having to process financial reporting documents [qualitative feedback] **Additional costs*** per evaluator of a lump sum grant proposal due to increased complexity (e.g. assessing a budget table) [qualitative feedback] **Transition costs*** due to adjustment of workflows, familiarising with changed implementation practices [qualitative feedback on experience	**6 to 8 person-days per reporting period and consortium membe**r **96 to 128 person-days** per (non-ERC PoC) lump sum grant, or **€ 33 200 - € 44 200** per (non-ERC PoC) lump sum grant	**median financial reporting cost savings** of lump sum grant beneficiaries median reduction in time spent on financial reporting per grant, over the project's lifecycle, excluding ERC proof-of-concept grants (POCs)	**Low** (no cause for concern so far. Will have to be monitore)	**Cost of applicants** of lump sum calls (including **hassle cost**) from having to submit budget information in an additional **'budget table'** format, instead of keeping it on file [qualitative evidence from 2 surveys 2023; see Annex 4.4.2 - Costs and side-effects of lump sum funding)

				with lump sum funding so far] *Costs and side-effects of lump sum funding	**6 to 8 person-days,** or **€1 800 to € 2 500** **€ 4 500** per certificate **€ 49.8 million to € 63.4 million**	burden reduction per ERC PoC mono-beneficiary, over the project's lifecycle savings on certificate of the financial statements (CFS) for EU contributions above € 430 000 **Total savings over a lump sum project lifecycle,** including savings on CFS, for grants that have been signed by Jan 2025 (including ERC POCs)		
Type of cost savings? Blind evaluation of proposals to **improve evaluation process** through safeguarding it against possible biases of the evaluating expert. Costs of implementation, mainly for public administration. Benefits for applicants								
Recurrent (change from Horizon 2020 to Horizon Europe)			**Non-negligible** increase in some cases (Some call	**Implementation Bodies:** more time* spent on '**admissibility checks'** by call coordinators to make sure that applicants			Some extra effort but measure viewed as a general	**Benefit of fair treatment** **&** **Extra effort* anonymising**

			co-ordinator: "roughly three times longer")	could not be identified in the proposals, additional workload [qualitative feedback] *Costs and side-effects of blind evaluation			improvement; Observed: more 'widening' country applicants that passed first stage (cor-relation only)	**proposals**, [qualitative feedback] *Costs and side-effects of blind evaluation
Administrative cost savings for applicants and beneficiaries due to reformed **ethics appraisal** process								
One-off (change from Horizon 2020 to Horizon Europe)							n/a	Reduced workload for proposals that involve neither serious nor complex ethics questions [qualitative feedback] 91% of the Horizon Europe proposals so far cleared without any further conditions or requirements linked to ethics, 9% given specific ethics conditions H2020: 44% and 55% of

								proposals respectively

PART II: <u>Potential</u> simplification and burden reduction (savings)

*Identified further potential simplification and savings **that could be achieved** with a view to make the initiative more effective and efficient without prejudice to its policy objectives[179].*

	Citizens/ EU Society		**EU Public Administration**		**Horizon Europe Beneficiaries**		**Horizon Europe Applicants**	
	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
Application of unsuccessful applicants are an area with a potential for efficiency savings for the framework programme. The evidence base of the evaluation does not allow to specify any new simplification measures to the extent, that they could be assessed in terms of their expected costs savings'. Potential existing measures that could be extended include: a targeted, carefully tested and designed use of the **two-stage evaluation processes**; and any measures that prevent the loss of the value inherent in successful-unfunded proposals (proposals above the quality threshold but that remained unfunded due to the budget constraint) and allow it to be captured for alternative funding applications at EU or national level. This may include the Seal of Excellence measure, after a detailed *ex ante* assessment.								
One-off			n/a	Public sector administrative expenditure related to proposal evaluation costs are an area with a potential for efficiency savings, to the extent that a duplication of an evaluation can be avoided.			n/a	Application costs of unfunded proposals are an area with a potential for efficiency savings for the framework programme overall.

Lump sum funding involves the paying out of pre-agreed lump sums (that were specified in the proposal by the grant beneficiary) after the completion of a work package. It renders obsolete the financial reporting (by beneficiary) and the checking of financial reports, as well as the reimbursement of detailed eligible costs by the EU public administration). The evaluation of the lump sum pilot suggests that a wider use of lump sum funding likely has some simplification potential to reduce <u>beneficiaries' administrative costs</u> and address the persistence of frequent <u>financial errors</u>, highlighted by the European Court of Auditors. The net effect on costs depends on details of implementation.

One-off	n/a	The use of lump sums has the potential to reduce financial errors by removing financial reporting and the reimbursement on the basis of eligible costs (both sources of financial errors in R&I funding). The extent to which a reduction of errors can be achieved, and a reduction of the error rate can be observed, depends on details of implementation, including that of *ex post* project reviews and any changes to the audit strategy. While the rationale of lump sum funding supports the assumption that financial errors will overall be reduced, the piloted projects have not yet generated any *ex post* evidence to allow for a validation of this assumption and an *ex ante* estimation of	n/a	Public sector administrative expenditure is expected to change due to multiple factors. The direction of the net effect on public sector costs depends on implementation details that determine the additional workload of proposal evaluators and possible adjustment costs for project officers. The net effect will also be affected by beneficiaries' strategic behaviour (unintended effects) in response to the measure over the medium-term. The currently available evidence base is insufficient to assess the	**€ 276 million** to **€ 351 million**	Potential simplification from lump sum funding under Horizon Europe during 2025-2027, based on the ratio of benefits-to-grant-value and current assumptions about future roll out (based on data as of: 1 January 2025)	n/a	Application costs may increase, as proposals have to submit an additional budget table for the project, to justify the lump sums. The cost of generating the budget information is not fully additional but to a large extent part of the baseline: Project management best practice and existing requirements of the programme mean that applicants are assumed to calculate the project budget at proposal stage already. However, adapting the budget to the format, structure and level of detail requested in the proposal template and filling in the template gives rise to additional costs. Any change will be affected by details of implementation, including the

[179] This assessment is without prejudice to a possible future Impact Assessment.

		future simplification effects.		direction or magnitude of the net effect on public sector administrative costs.				availability and user friendliness of guidance for applicants. The currently available evidence base is qualitative and does not allow a quantification of the expected effect on applicants.
Potential of the **"Personnel unit costs"** measure to reduce financial reporting burden on beneficiaries of actual cost grant. This optional method allows participants to calculate and report personnel costs using a single daily rate that applies to all staff that is agreed upfront for all future grants of the beneficiary.								
One-off						The use of personnel unit costs has the potential to remove the burden of calculating personnel costs per staff member, which typically takes about **2 person-days** per consortium member and per reporting period		

Annex 5 Stakeholder consultation

In support of this evaluation, a broad range of consultation activities were conducted: the call for evidence, the public consultation, interviews, surveys of participants and beneficiaries as well as targeted consultations and a dedicated workshop meant to complement the findings of the public consultation held on 29 June 2023.

To ensure that all possible views are well reflected and to ensure transparency and accountability, consultations with various categories have been held in the frame of the interim evaluation of Horizon Europe. The consultation process did not start from zero, as the Commission based its work on the consultations that took place in 2016 for the interim evaluation of Horizon 2020[180] which provided useful information on the mapping, priorities and views of all major interested parties.

Stakeholder mapping

Stakeholder groups that are concerned by Horizon Europe can be broken down into the following categories: academia, businesses (including small and medium-sized enterprises), National Contact Points[181] and public authorities as well as non-governmental, research and umbrella organisations.[182]

Beyond that, the following Institutions have in the past contributed to the evaluation of the Framework Programme:

- the Council conclusions[183] on the Interim Evaluation of Horizon 2020, adopted on 01/12/2017,
- the European Parliament, which reported on the assessment of Horizon 2020[184] and the implementation in line with the interim evaluation,[185]
- the European Economic and Social Committee that provided recommendations for the interim evaluation of Horizon 2020[186], the ex post evaluation of Horizon 2020[187] as well as an exploratory opinion on results and experiences of efforts to close the innovation gap in the EU in the light of Horizon 2020 and Horizon Europe[188],

[180] Results of the Horizon 2020 Stakeholder Consultation, 2018, https://op.europa.eu/s/yXBt

[181] National Contact Points (NCPs) are independent organisations of different nature (e.g. Ministries, Academies of Science, Research agencies) that act as information providers to applicants in their native language. They are based in all EU countries and Associated States as well as in some non-European countries.

[182] So-called 'umbrella organisations' are industry-specific associations of EU public interest.

[183] Council conclusions 15320/17 https://www.consilium.europa.eu/media/31888/st15320en17.pdf

[184] Briefing: Interim evaluation of Horizon 2020 https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/614771/EPRS_BRI(2018)614771_EN.pdf

[185] European Parliament Report on the assessment of Horizon 2020 implementation (A8-0209/2017) https://www.europarl.europa.eu/doceo/document/A-8-2017-0209_EN.pdf

[186] European Economic and Social Committee recommendations: interim evaluation of Horizon 2020 https://www.eesc.europa.eu/en/our-work/opinions-information-reports/information-reports/interim-evaluation-horizon-2020

[187] European Economic and Social Committee Information report: ex post evaluation of Horizon 2020 https://www.eesc.europa.eu/en/our-work/opinions-information-reports/information-reports/ex-post-evaluation-horizon-2020

[188] European Economic and Social Committee exploratory opinion: results and experiences of efforts to close the innovation gap in the EU in the light of Horizon 2020 and Horizon Europe https://www.eesc.europa.eu/sl/our-work/opinions-information-reports/opinions/results-and-experiences-efforts-close-innovation-gap-eu-light-horizon-2020-and-horizon-europe-programme

- the Committee of the Regions and the European Research Area and Innovation Committee which is a policy advisory body whose main mission is to provide strategic input on any research and innovation issue relevant to the development of the European Research Area.[189]

Next to the consultation activities that were accessible via the 'Have your say' portal, targeted consultations in the forms of workshops, interviews and a joint survey were conducted under the remit of the various external evaluation studies, specifically addressing applicants, participants national and regional authorities as well as business representatives.

Interviews

The main objective of conducting interviews was to gather evidence from different actors concerned by the Framework programme, offering the possibility to give an objective assessment by taking into account the different views. Interviews were particularly used in case studies as well as international benchmarks. Beyond that, interviews were conducted to confirm and complement data collection to support the drafting of findings and conclusions.

In total, 1 049 interviews[190] were conducted in support of this evaluation – these interviews do include same actors on different topics by gathering large amounts of qualitative data among Member States' and associated countries' representatives, EU officials (in the Commission, in Executive Agencies and European Partnerships) as well as various other stakeholders (such as Programme committee members, expert group members and industry representatives (e.g.), along with other relevant stakeholder groups explored in the stakeholder mapping section.

Surveys

A joint targeted survey was conducted in support of the five evaluation studies which explored the views of beneficiaries and unsuccessful participants in Horizon Europe which was conducted between May and July 2023.

Contractors developed and administered nine online questionnaires to gather evidence on the needs and motives for engaging with Horizon Europe, perceptions of expected project outcomes and impact as well as obstacles encountered throughout application and project implementations. The survey programme encompassed all three pillars of Horizon Europe.

For beneficiaries, it included five different questionnaires to account for different programme parts, namely:

1) MSCA Postdoctoral Fellowships beneficiary researchers,
2) ERC beneficiary Principal Investigators,
3) Beneficiary organisations under collaborative actions (Pillar I, II and III as well as WIDERA),
4) the EIC Pathfinder and Transition grants, and
5) the EIC Accelerator grants.

For unsuccessful applicants, it included three questionnaires:

1) MSCA Postdoctoral fellowships & ERC,
2) Horizon Europe's collaborative actions and

[189] European Research Area and Innovation Committee, https://www.eumonitor.eu/9353000/1/j9vvik7m1c3gyxp/vh7ej5swwyyh

[190] This included 210 interviews in the frame of the Resilient Europe study, 140 in view of Digital and Industrial Transition, 208 on Excellent Science, 217 on Innovative Europe and 274 in view of the Green transition study.

3) EIC accelerator grants.

Policy workshops

In the frame of the five evaluation studies, each of them held two policy workshops with the exception of the Digital & Industrial Transition study which held five workshops in total.

Call for evidence

The 'call for evidence' opened on 1 July, 2022 and closed on 29 July 2022. The overall number of responses submitted was 54. This number includes two identical contributions from organisations from the same stakeholder group, which is likely to be an organised campaign. Moreover, four organisations and one individual submitted the same response to the call for evidence on the final evaluation of Horizon 2020 and the interim evaluation of Horizon Europe. Finally, five responses to the call of evidence referred to the position paper attached. 16 position papers were received. However, three of them concerned the evaluation of Horizon 2020 and were considered out of scope. The findings from the feedback received during call for evidence were taken into consideration in the survey design for the public consultation. In view of content moderation, no feedback had to be unpublished as all contributions were in line with the content moderation rules.

Who contributed?

The stakeholder groups which contributed the most to the call for evidence were academic or research institutions and non-governmental organisations. Each of them accounted for around a quarter of the responses received. Six responses were received from individuals, five from business associations, companies or business organisations and other groups. Four responses were received from public authorities, three of which came from the same national authority. The other response from a public authority came from a local authority. The national authority provided three reports analysing some implementation aspects of Horizon 2020 – notably on participation, proposals and evaluation of proposals. The local authority's feedback focused on a specific initiative: the mission for 100 climate-neutral and smart cities.

Figure 28: Type of respondents (N= 54)

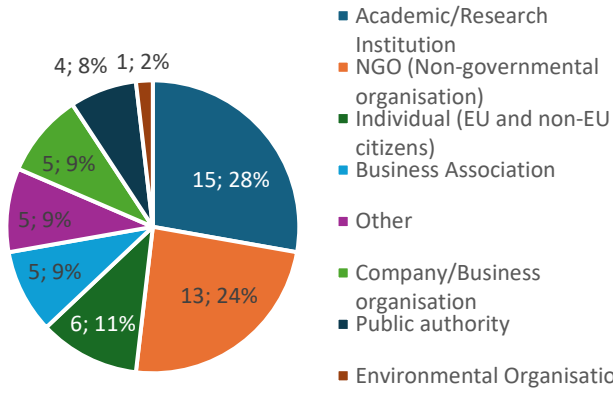
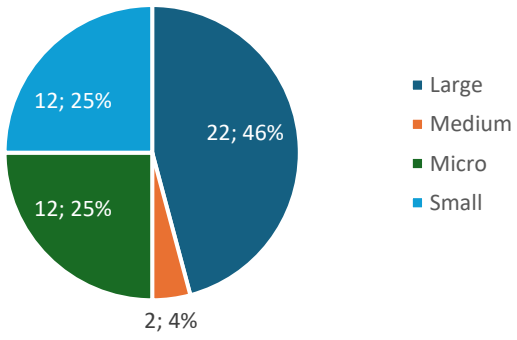
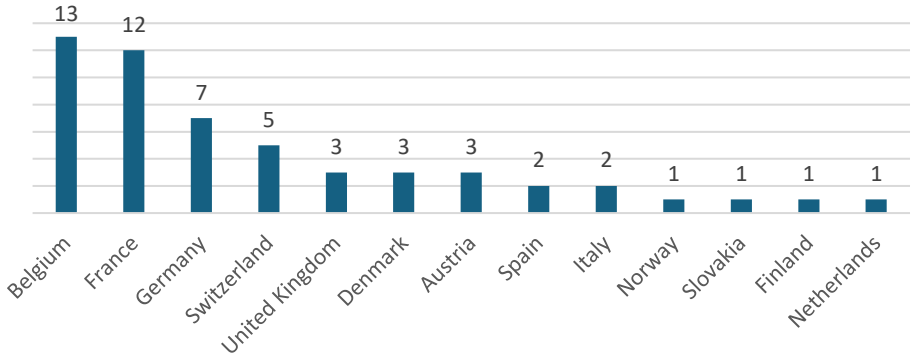


Figure 29: Organisation size (N= 48)



As for the geographical distribution of the responses received, around a quarter were from organisations – mainly business associations and NGOs based in Belgium and active at the European level. 12 responses came from France, half of which are from academic or research institutions, 7 from Germany and 5 from Switzerland.

Figure 30: Country of origin (N= 54)



What aspects are addressed and what are the views and concerns?

The following section summarises the views and comments received. Contributions encompassed several aspects and topics on the Programme's design, its implementation, participation, alignment with the EU priorities and complementarity with other initiatives. Suggestions on aspects that should be considered by the evaluation were also provided.

Horizon Europe design

General comments: Respondents addressed Horizon Europe as an ambitious programme, which has brought novelties and simplifications compared to Horizon 2020. The Framework Programme is seen by stakeholders as a crucial source of funding in the European R&I landscape, for individual and collaborative projects. However, some stakeholders expressed concerns about the complexity of the Programme' structure, with calls from multiple sources such as clusters, partnerships, and missions. In their view, it is essential to ensure good coordination and complementarity of funding within the framework of the various initiatives or programmes, to avoid scattering resources and to maximise the impact.

Horizon Europe Missions. Respondents welcomed the new approach but underlined some issues in the implementation (e.g., delays, the complexity of the calls, and the need to diversify the stakeholders involved in the governance processes). Some stakeholders remarked on the need to include actors such as regions, local authorities and civil society to tackle such public policy challenges.

Horizon Europe Partnerships. Partnerships were seen as an effective means to increase coherence in the R&D activities of private and public actors. The new approach to partnerships was considered a major simplification of Horizon Europe. However, there are concerns about their implementation, due to the delays and the inadequate timing of initiatives designed to support the implementation of the partnerships. There is still unclarity about the role of research organisations and industrial partners – whereby the calls are open to anyone. Two respondents addressing specifically the Partnership on Clean Aviation reported that the process of setting it up was cumbersome and complex. The focus on large projects has implied that the number of participants has decreased compared to the previous Clean Sky 2 Programme.

Technology Readiness Levels (TRL) coverage. Respondents from academia and research institutions expressed the need to balance the TRL coverage to ensure that the Framework Programme continues supporting basic research below TRL 4 as well as applied research at medium TRL. A shift from Research and Innovation Actions to Innovation Actions with high TRL was pointed out. The need to fund replication in the industry and society in addition to technology development was mentioned by a company.

Work programmes. The feedback received concerns several aspects: from the process of co-creation (e.g., extending the time allowed for national representatives to consult national stakeholders) to the duration of the work programme (e.g., increasing it from two to three years) to the structure of the work programmes (e.g., including more information in the main body of the document instead of the Annex). It was also requested that the Commission publishes the draft of the work programmes to avoid the circulation of unofficial drafts among some interested parties.

As for the content of the work programmes, it was observed that often the topics are proposed in a single call rather than being repeated in different years, with implications on the breadth and sustainability of the impact. Some stakeholders asked to introduce calls dedicated to specific research topics (e.g., paediatric cancer, infertility and Medically Assisted Reproduction, Lyme disease, venous thromboembolism, AI-powered speech technology, heating and cooling technologies, assistive technologies, and others).

According to some stakeholders, the fragmentation of the budget into several topics means that often each call provides funding for only one or two projects. In this way, it is not possible to have cross-fertilisation between projects of the same call. Furthermore, the multiplication of instruments and work programmes, with various timeframes and deadlines and overlap on the covered topics, has been detrimental to adequate participation as it created competition between calls.

Approach for topics/calls for proposal. There are contrasting views on the opportunity to adopt a bottom-up (i.e., open to any idea or research topic as in the ERC or MSCA) or a top-down approach (i.e., allocating budget to predefined research topics). In the case of a top-down approach, it was observed that when the topic is too broad, the calls are heavily oversubscribed, and the quality of the proposals is lower. In addition, it was suggested to focus top-down efforts on key areas for the strategic autonomy of Europe.

One respondent questioned the choice of adopting a "portfolio approach", selecting the proposals to be funded considering how they fit within the portfolio of the specific programme – specifically for the European Innovation Council.

Horizon Europe Implementation

Timing and communication on the calls for proposals. Several stakeholders expressed their concerns about the short time frame between the publication of the call for proposals in the EC portal and the submission deadline, which creates difficulties for potential applicants. According to some contributions, communication about the calls' opening should be improved to increase their visibility.

Template for proposals and IT tool. While the new template for proposals is considered more comprehensive than the one of Horizon 2020, the reduced maximum length of the proposals and the lack of flexibility among different parts are considered problematic, especially for big projects. The guides, documents and webinars to support proposal preparation are appreciated but, according to some contributions, they are published too late in the process and the webinars are often scheduled within a short time. Clarifications on specific aspects such as the "Do not significant harm" principle, the gender and open science aspects under the Excellence criterion are needed. Respondents reported frequent technical problems with the Funding and Tenders portal (e.g., difficulties in adding affiliated entities in the proposal, impossibility to change the order of partners in the list of participants).

Using lump sums to fund collaborative research projects. While simpler rules for financial reporting are appreciated, stakeholders from academia and research institutions nevertheless

raised concerns about this funding model since it has some drawbacks to collaboration within the consortia. In particular, it was mentioned that i) it creates risk-averse approaches in both the choice of partners and the envisaged deliverables and results, ii) it limits flexibility during the project implementation, iii) it creates a tendency for smaller work packages with as few involved partners as possible endangering collaboration and knowledge transfer; iv) it shifts significant administrative and financial planning effort from the project implementation phase to the proposal phase, with a possible deterrent effect on potential applicants, especially newcomers.

Evaluation process. According to some stakeholders, the evaluation process could be improved by asking the applicant to select keywords in order of priority, to ensure that the relevant expertise is included in the review panel. The quality of the Evaluation Summary Reports (ESRs) was criticised by some respondents, pointing to the need to adapt the evaluation assessment to the new proposal template (e.g., the reduced length implies that fewer details can be provided in the proposal). The implementation of the "Right to react" tool needs to be improved.

Widening participation

Participation from EU-13 countries. The issue of lower participation from EU-13 countries was underlined. Mentioned barriers to their involvement include factors such as understaffed support offices, insufficient support in the project preparation phase, the need for experienced support staff and additional well-tailored funding, slow decision-making processes compared to the flexibility and short reaction time often required in projects, and the Programme's focus on a few big actors instead of the wider ecosystem. The strengthened support from the NCPs for widening participation was appreciated.

Lack of association agreement with the UK and Switzerland. Several stakeholders, especially those based in Switzerland, pointed out the negative repercussions of excluding Switzerland and the UK from the Associated countries on the implementation of Horizon Europe.

International collaboration. Openness to international collaboration is seen as an important element of the Programme. The Africa initiative of Horizon Europe was mentioned as a good example that should also be replicated in other regions (e.g., Latin America, ASEAN).

Alignment with the EU priorities and complementarity with other initiatives

According to several respondents, the choice of the research topics in Horizon Europe is well aligned with the EU priorities and it contributes to the digital and green transition. Some suggestions on how to further increase the contribution of Horizon Europe to the twin transition were provided by stakeholders specialised in relevant fields (e.g., distinguishing between Carbon Capture and Storage (CCS) and Carbon Dioxide Removal (CDR) and tracking the support for the two fields).

Further synergies with the Euratom programme were encouraged by some respondents working on nuclear energy. As for the other EU programmes, some contributions suggested using the funding from other programmes (e.g., the European Regional Development Fund) to support the Missions, since they tackle broad societal challenges.

Suggestions for the evaluation

It was suggested that the interim evaluation of Horizon Europe should explore the following areas:

- the effects of changing the Programme' structure (merging KETs and societal challenges)
- the distribution of single beneficiary instruments and multi-beneficiaries (i.e., collaborative projects)
- the coverage of different TRLs and the balance between funding of basic science and innovation
- the impact of the new instruments such as missions and the new widening measures
- the impact of the new capping of budgets on partnerships
- the effects of using lump-sums
- the access, participation, contribution and added value of associated countries and non-associated third countries to the various parts of Horizon Europe
- the consequences of changing the list of associated and non-associated countries compared to Horizon 2020, particularly in terms of opportunities and collaborations
- the efforts towards simplification and streamlining of instruments
- the impact of the funded thematic research, considering the introduction of missions in addition to challenges
- first effects and impact of the introduction of Gender Equality Plans.

Public consultation: scope and objectives

In line with the Better Regulation guidelines and toolbox[191], the public consultation on Horizon Europe forms part of a combined consultation and evaluation exercise.[192] It aimed to explore stakeholders' views regarding the key aspects of the past and the present as well as the future of the EU Framework Programme for Research and Innovation, notably for the ex-post evaluation of Horizon 2020 (2014-2020), the interim evaluation of Horizon Europe (2021-2023) as well as to receive inputs from stakeholders to be used for the definition of strategic orientations for the Horizon Europe Strategic Plan (2025-2027).

The reason for conducting a joint consultation is the relatively short time span between the legal obligation for the Horizon 2020 ex-post evaluation (published on 29/01/2024) and the legal obligation for the Horizon Europe interim evaluation. Additionally, another reason for conducting a joint consultation instead of reaching out to the broad public on three separate instances was to counter stakeholder fatigue, also bearing in mind that all three dimensions concern the same group of stakeholders. Nevertheless, it is important to note that this public consultation was geared towards anyone with an interest in the EU R&I Framework programmes, not only towards beneficiaries and the main stakeholder groups delineated in the section above but also unsuccessful applicants as well as independent experts.

[191] Better Regulation Toolbox, notably Tool #52.
[192] Better Regulation Toolbox, Tool #50, p. 434.

The combined public consultation was accessible in English, French and German on the Have Your Say web portal from 01/12/23 until 23/03/23. Respondents had the possibility to submit their replies in any official EU language resulting in in 2 788 responses and 265 position papers in total. For the section on Horizon Europe, 1 663 responses were submitted along with 136 position papers. The factual summary report, along with all contributions to the three dimensions covered in this public consultation as well as position papers are accessible on the Have your Say portal. Findings in this consultation did not only feed into the analysis presented on the following pages as well as highlighted in the respective sections in the main Staff Working Document but also form basis for the development of the 10th Framework Programme for Research and Innovation.

Methodology used for the analysis of the responses received through the public consultation

Quantitative analysis

Quantitative analysis was conducted by means of descriptive statistics, differentiating and comparing responses of different groups of respondents. Correct representation and interpretation of results are fundamental to drawing coherent conclusions which is why the number of respondents has been shown along with percentages. Linkages between answers and respondents' characteristics such as participation in the programme, country affiliation and type of respondent (e.g. Member State and business organisation representatives, researchers). When evident, correlations between answers given in closed questions have been explored. The summary statistics were bundled in .xml format which allowed for swift cross-comparison among the various dimensions covered in the public consultation survey.

Qualitative analysis

Key messages were extracted from qualitative contributions, primarily position papers and open questions present in the public consultation survey. Same holds true for the analysis of the feedback contributions received for the call for evidence. Contributions were clustered by topics and specific aspects raised in both position papers and open questions by means of using Excel, presenting findings in a contribution matrix.

Content moderation according to Better Regulation Tool #54[193]

In view of content moderation, only three contributions were unpublished: all three were taken into consideration content-wise, however in two cases GDPR-related concerns led to unpublishing on the Have your say portal. Another respondent reached out to the support team of the public consultation via the indicated functional mailbox asking to unpublish the contribution as a wrong attachment was uploaded as a position paper – for the analysis, the newer position paper was taken into account.

Identification of campaigns[194]

Responses have been reviewed manually to identify campaigns and potential duplicates among submitted position papers as well as open questions. Overall, 24 campaigns were identified

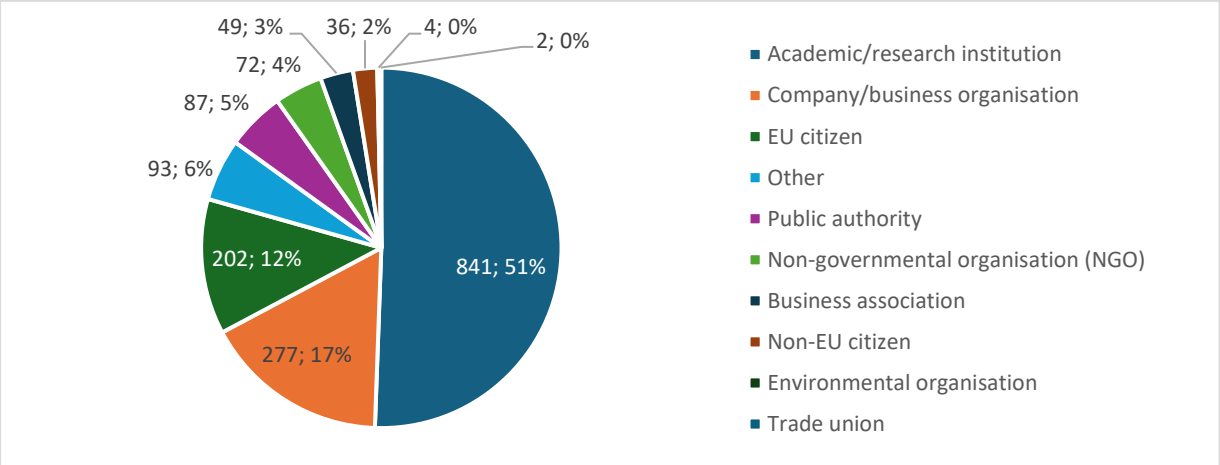
[193] Better Regulation Tool #54, p. 478.
[194] Better Regulation Tool #54, p. 476.

which contained between 2 and 9 identical contributions each. The campaigns account for 88 (or 5% of) responses.[195]

Public consultation & Horizon Europe Public Event: Participants

In total, **1 663** respondents chose to complete the section of the consultation on Horizon Europe programme. **Contributions were received from a wide range of actors**. 51% (841) of the respondents were part of academic or research institutions, 17% (277) were companies or business organisations, and 14% (238) were citizens (EU and not EU). The remaining respondents (18%; 307) included different types of stakeholders: 87 were **public authorities**, 72 were **NGOs**, 49 were **business associations**, 4 were **environmental organisations** and 2 were **trade unions**. 93 respondents selected the category "other"[196]. Among the 87 (5%) public authorities that contributed to the section on Horizon Europe, 35 worked at the national level, 28 at the international level, 15 at the regional level and 9 at the local level[197].

Figure 31: I am giving my contribution as… (N=1 663)



59% (988) of respondents provided personal views, while 38% (633) contributed as a member of an institution or organisation and 3% (42) did not provide this information.[198] More than half (61%; 872) of the organisations that contributed were large, whereas 16% (226) were medium size, 12% (173) were micro and 11% (154) were small[199].

[195] For additional information, please consult the factual summary report for the interim evaluation of Horizon Europe on https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13460-Horizon-Europe-interim-evaluation/public-consultation_en

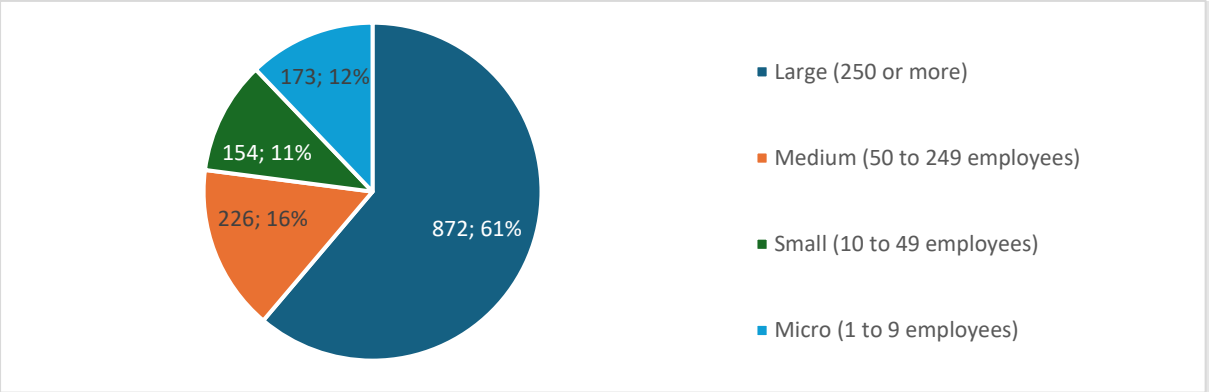
[196] Question: "I am giving my contribution as…"

[197] Question: "Scope".

[198] Question: "Are you providing your personal views or the views of an institution/organisation?" – not obligatory to be answered

[199] Question: "Organisation size".

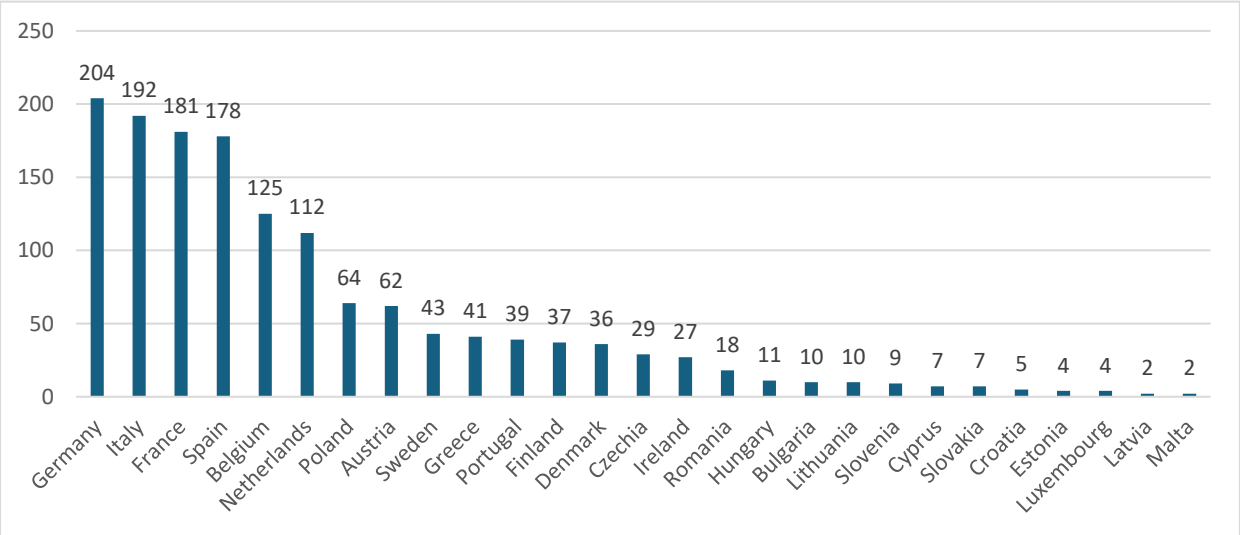
Figure 32: What is the size of your organisation? (N=1 425)



Geographical coverage

The consultation gathered responses from **61 countries, including all 27 EU Member States**. 88% (1 459) came from EU27 countries, 5% (87) from the Horizon Europe Associated Countries [200], and 7% (117) from Third Countries[201]. The countries with the largest number of respondents were Germany (204), Italy (192), France (181) and Spain (178). Looking at non-EU countries, the largest number of contributions came from the United Kingdom (43), Switzerland (42), Norway (37) and Türkiye (26).

Figure 33: What is your country of origin? – EU 27 Member States (N=1 459)



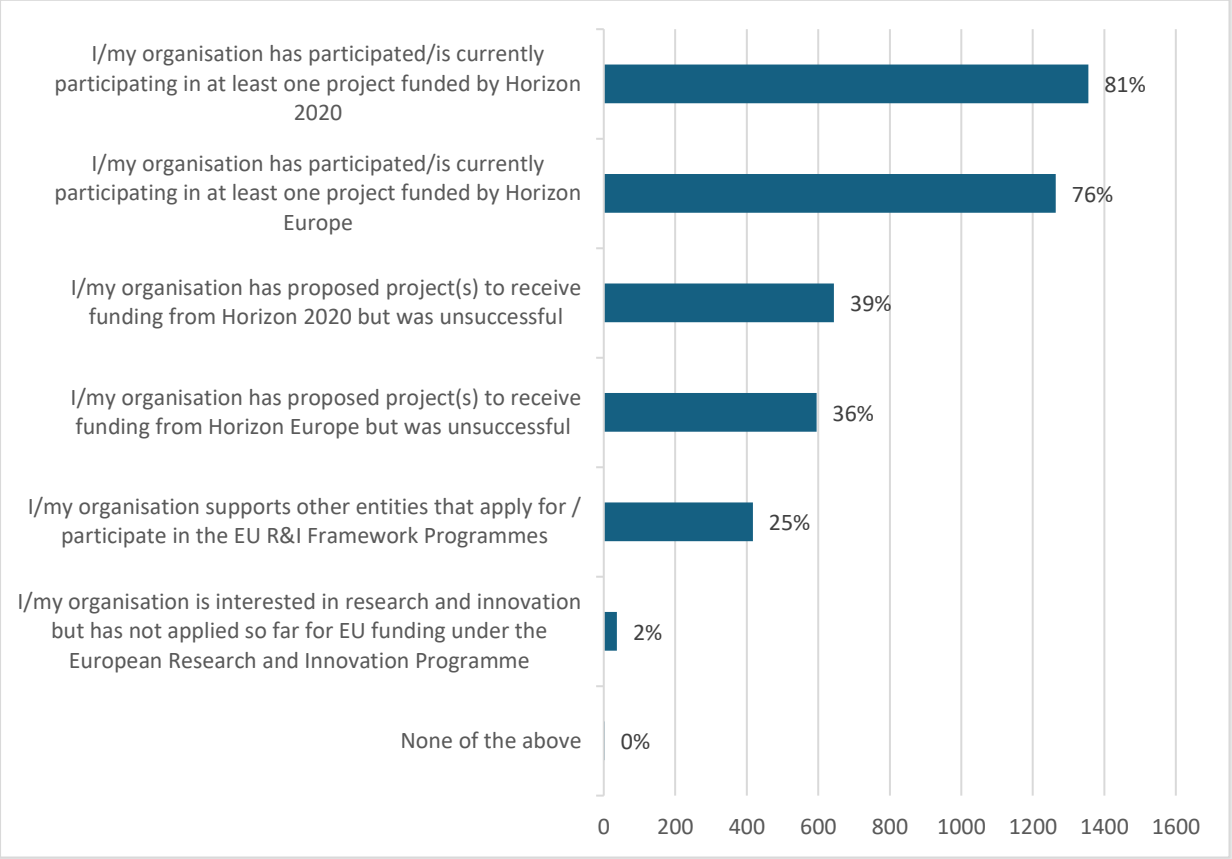
Experience with the framework programmes

[200] Horizon Europe Associated Countries include Norway (37), Türkiye (26), Israel (6), Ukraine (6), Bosnia and Herzegovina (2), Georgia (2), North Macedonia (2), Albania (1), Serbia (1), Iceland (1), Moldova (1), Faroe Islands (1), and Tunisia (1). No responses were received from Armenia, Kosovo and Montenegro. List of Horizon Europe Associated Countries and countries with provisional arrangements: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf

[201] United Kingdom (43), Switzerland (42), United States (5), Brazil (3), China (3), Colombia (3), India (2), Canada (2), Venezuela (2), Argentina (1), El Salvador (1), Philippines (1), New Zealand (1), Mexico (1), Ethiopia (1), Australia (1), Azerbaijan (1), Bangladesh (1), Japan (1), Jordan (1), Uruguay (1), South Africa (1).

The respondents were asked to select one or more options describing their experience with Horizon 2020 and Horizon Europe.[202] 81% (1 355) of all the respondents that contributed to the part of the consultation on the evaluation of Horizon Europe had **participated in Horizon 2020**[203] and 76% (1 264) of them were Horizon **Europe beneficiaries**[204]. 36% (595) of respondents stated that they "proposed project(s) to receive funding from Horizon Europe but were **unsuccessful**". However, considering that the same respondent could select multiple options, 7% (109) of respondents applied for Horizon Europe funding and were never successful[205]. Respondents also included **organisations supporting other entities** that apply for or participate in the EU R&I framework programmes (25%; 417) and **organisations that have never applied** for funding but are interested in R&I (2%; 37).

Figure 34: Please select the option(s) that best describe(s) your experience with the European Research and Innovation programmes (N=1 663; multiple answers possible)



[202] "Please select the option(s) that best describe(s) your experience with the European Research and Innovation programmes)". The question allowed multiple answers. Therefore, the same organisation could be, for instance, a beneficiary of both Horizon 2020 and Horizon Europe, or an unsuccessful applicant of Horizon 2020 but a beneficiary of Horizon Europe, or both an unsuccessful applicant and a beneficiary of Horizon 2020, if it submitted multiple proposals with different outcomes.

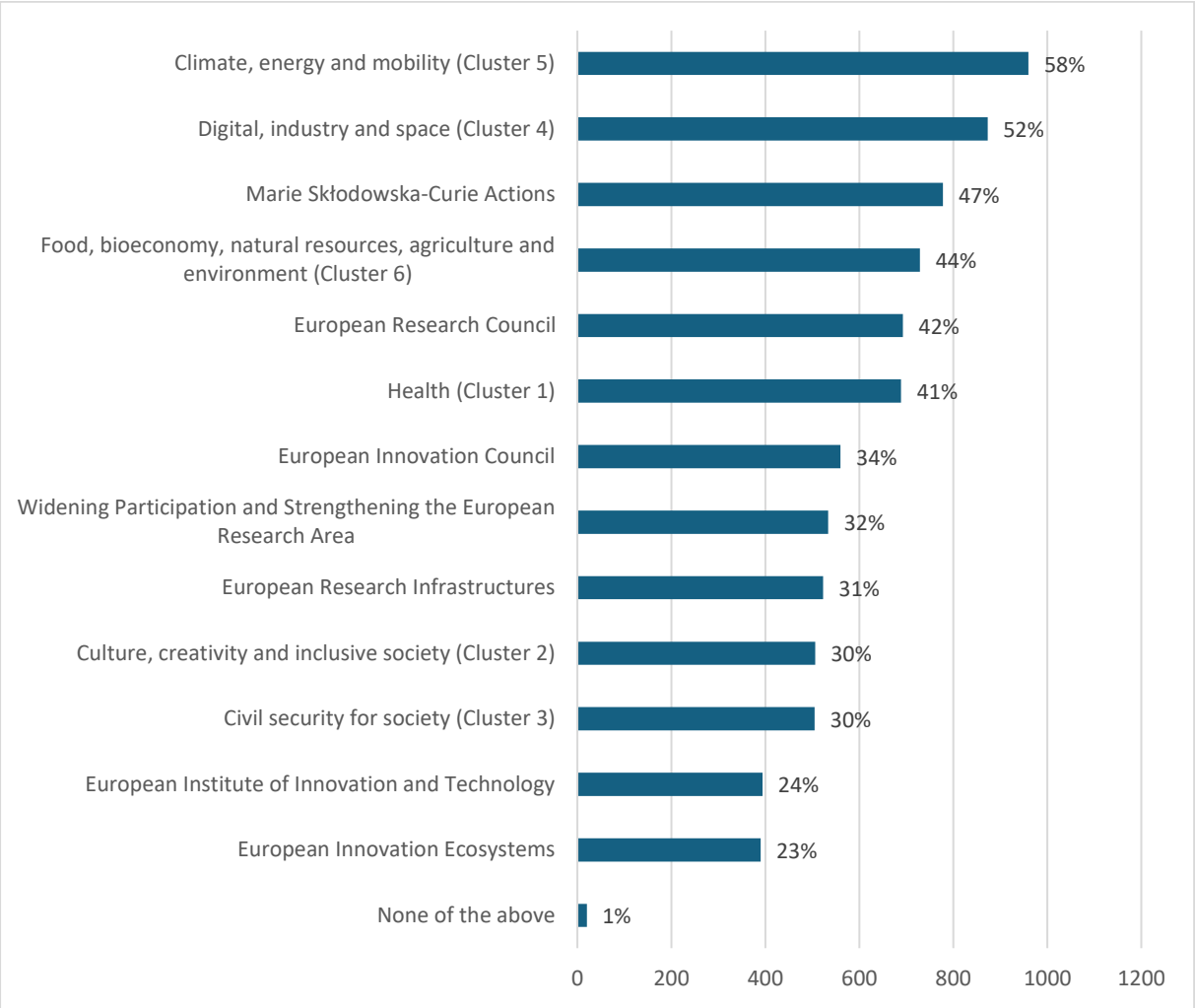
[203] They selected the response option "I/my organisation has participated/is currently participating in at least one project funded by Horizon 2020 (2014 – 2020)".

[204] They selected the response option "I/my organisation has participated/is currently participating in at least one project funded by Horizon Europe (2021 – 2027)".

[205] They selected the response option "I/my organisation has proposed project(s) to receive funding from Horizon Europe but was unsuccessful" alone or with other response options, but they did not select "I/my organisation has participated/is currently participating in at least one project funded by Europe".

The respondents were active or interested in all the parts of Horizon Europe[206]. The highest number of respondents were interested in **cluster 5** "Climate, energy and mobility" (58%; 960), **cluster 4** "Digital, industry and space" (52%; 873), **Marie Skłodowska-Curie Actions** (47%; 778), **cluster 6** "Food, bioeconomy, natural resources, agriculture and environment" (44%; 729), and the **European Research Council** (42%; 693)

Figure 35: In which of the following areas of Horizon Europe are you or your organisation mainly active / interested in? (N=1 663; multiple answers possible)



Overview of position papers

136 position papers uploaded in response to this consultation included content relevant for the evaluation of Horizon Europe. Among the 136 position papers, 59 had been sent in by academic or research institutions, 16 by non-governmental organisations, 16 by public authorities, 15 by business associations, 5 by companies or business organisations, one by a trade union, one by an EU citizen and 23 by respondents who did not identify with any of the previous categories of stakeholders. The largest number of position papers came from Belgium (31), France (19), The Netherlands (15) and Germany (11). The high number of position papers from Belgium is due to the presence of many organizations with pan-European or EU scope that maintain an office in Brussels.

[206] Question: In which of the following areas of Horizon Europe are you or your organisation mainly active / interested in? Please select all that apply.

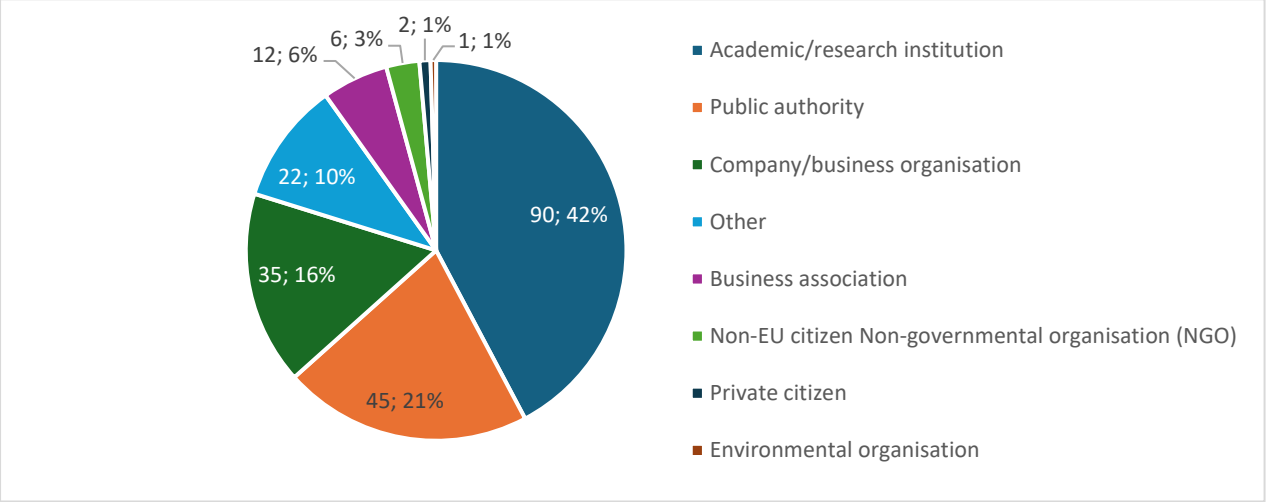
Public Event on Horizon Europe

An **online public event** was held on 29 June 2023 to complement the public consultation process and gather more comprehensive feedback on specific topics of Horizon Europe. The event focused on key themes that emerged prominently in the survey results, namely:

- Proposal preparation and project implementation in Horizon Europe
- The balance between low and high TRLs across Horizon Europe
- The novelties of Horizon Europe (i.e., the three-pillar structure, the European Innovation Council, the new approach to European Partnerships, the EU Missions).

In total, **217 stakeholders** from **206 different organisations** participated in the event[207]. Participants encompassed different stakeholder categories, with 42% of them representing academic or research organisations, 21% public authorities and 16% companies or business organisations.

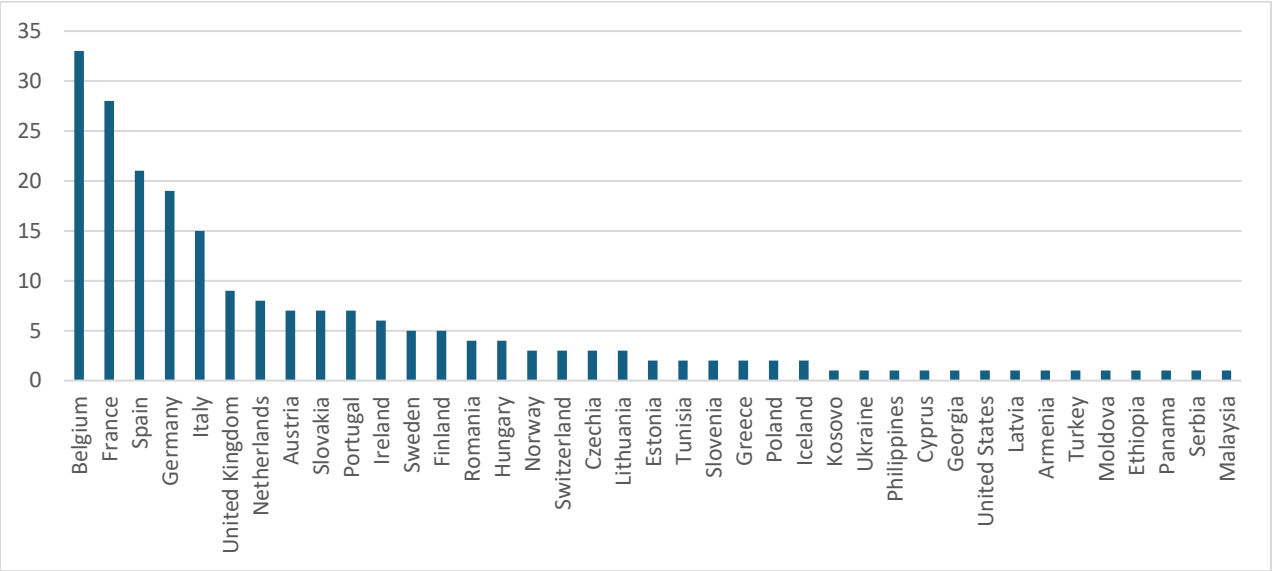
Figure 36: Types of stakeholders participating in the public event (Number of participants for which the information is available: 213)



Participants came from **39 different countries**. The highest share (15%) came from Belgium, as many pan-European organisations are registered there, followed by France (13%) and Spain (19%).

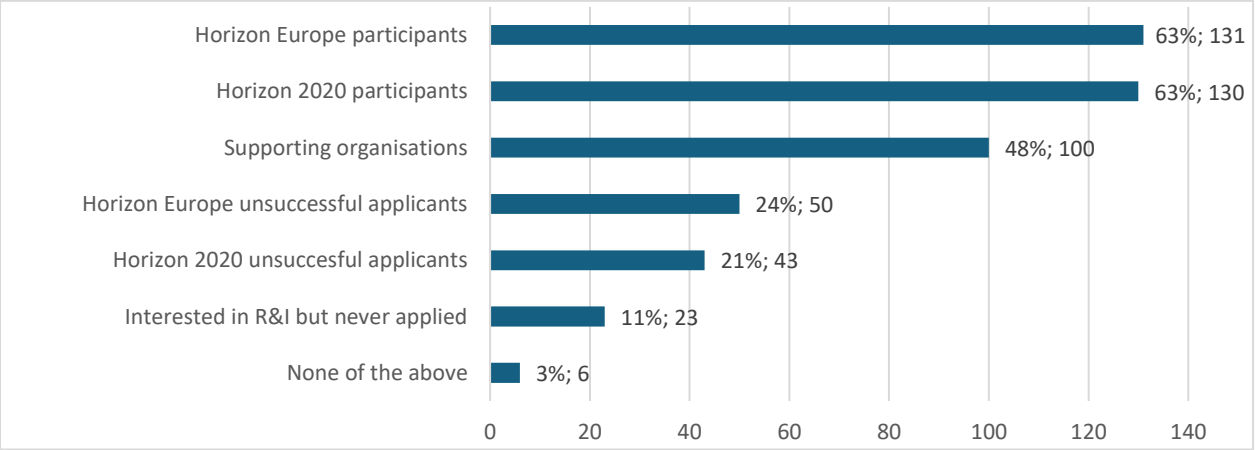
[207] In addition, there were 9 people from the European Commission and 9 contractors present. The total of participants connected to the event was 235. The event was broadly promoted, and registrations were accepted for 297 participants.

Figure 37: Country of origin of stakeholders participating in the public event (Number of participants for which the information is available: 216)



More than **60% of the stakeholders participating in the event were either Horizon 2020 or Horizon Europe participants** (or both), whereas 49% of them were organisations supporting other entities that apply for / participate in the EU Framework Programmes.

Figure 38: Experience with the EU Framework Programmes of stakeholders participating in the public event (Number of participants for which the information is available: 208. Multiple options possible)



The benefits of participating in Horizon Europe

The majority of respondents (74%; 1 184) agreed that participating in Horizon Europe "improved cooperation with partners from other countries (within the EU and beyond)", 39% (618) agreed that Horizon Europe "improved excellence in research and innovation" compared to other programmes available in EU Member States or Associated Countries, and 34% (544) agreed that Horizon Europe brought the "possibility to finance projects which otherwise could not be supported at national and/or regional level". Less than 1% (0.6%; 9) of respondents stated that there was "no additional benefit" in participating in Horizon Europe compared to other national and/or regional R&I programmes.

The analysis by country group shows that, although the ranking of response options is aligned, certain benefits are considered particularly relevant for some country groups:

- 76.8% of respondents from Third Countries and 78.1% of respondents from EU13 selected "improved cooperation with partners from other countries" compared to 73.4% of respondents from EU14 and 73.2% from Associated Countries.
- 50% of respondents from Third Countries, 49.6% of respondents from Associated Countries and 49.4% of respondents from EU13 selected "improved excellence in research and innovation" compared to 35.4% of respondents from EU14.
- 35.2% of respondents from EU14 and 35% from Associated Countries selected "possibility to finance projects which otherwise could not be supported at national and/or regional level" compared to 28.1% of respondents from EU13 and 27.8% from Third Countries.
- 37.5% of respondents from Third Countries and 35.4% from EU13 selected "improved international visibility" compared to 31.9% of respondents from EU14 and 28.5% from Associated Countries.
- 28.5% of respondents from EU14 selected "strengthened critical mass to address pan-European challenges" compared to 22.8% of respondents from Associated Countries, 19.4% from Third Countries and 14.6% from EU13.

Table 20: According to you, what are the main benefits of participating in Horizon Europe compared to national and/or regional R&I programmes in EU Member States or Associated countries? Select maximum 3 answers (EU14 N= 1 223; EU13 N= 178; EU Associated Countries N=83; Third countries N=112)

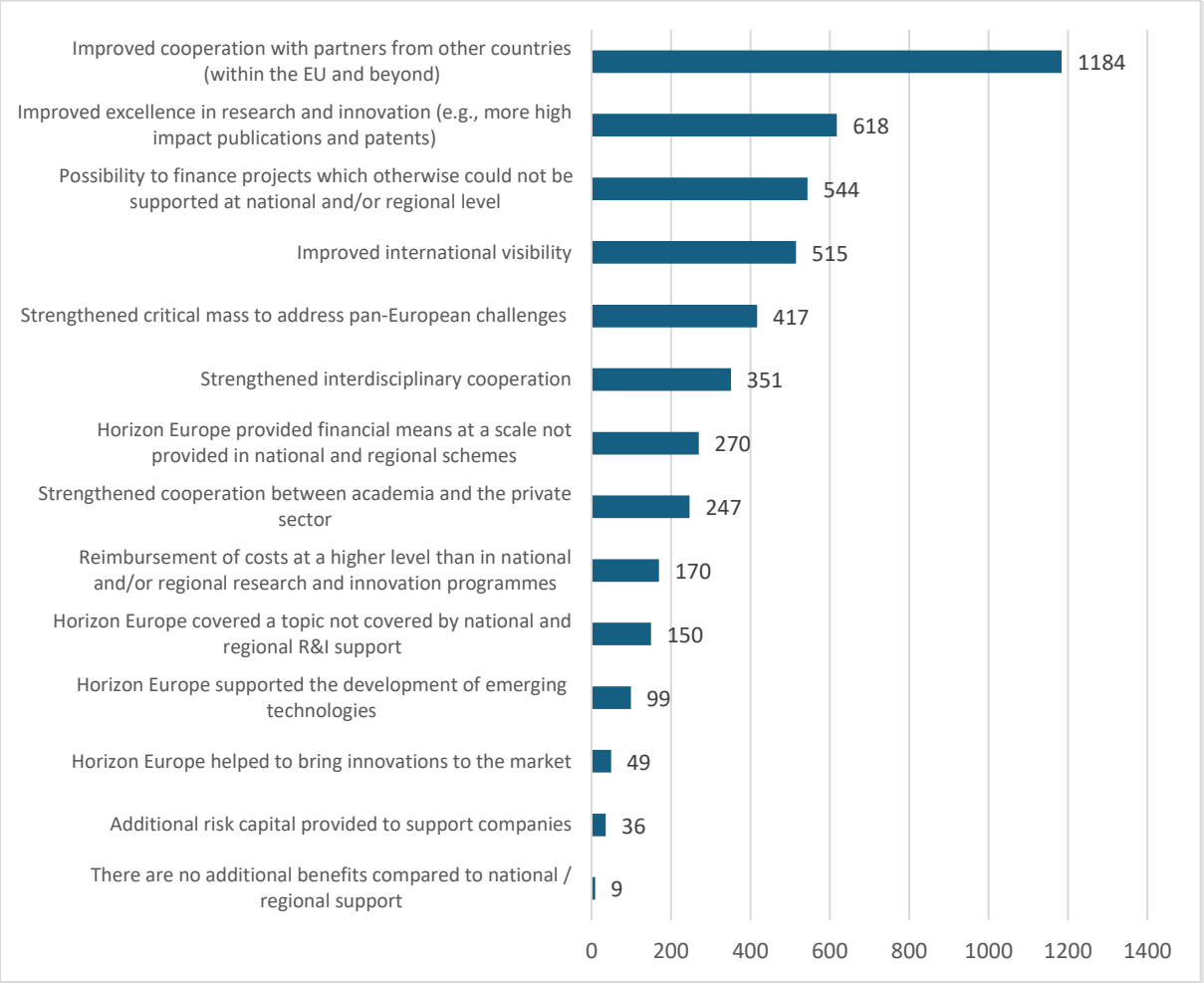
RESPONSE OPTION	EU14	EU13	EU ASSOCIATED COUNTRIES	THIRD COUNTRIES
Improved cooperation with partners from other countries (within the EU and beyond)	73.4%	78.1%	73.5%	76.8%
Improved excellence in research and innovation (e.g., more high impact publications and patents)	35.4%	49.4%	47.0%	46.4%
Possibility to finance projects which otherwise could not be supported at national and/or regional level	35.2%	28.1%	33.7%	26.8%
Improved international visibility	31.9%	35.4%	21.7%	15.2%
Strengthened critical mass to address pan-European challenges	28.5%	14.6%	13.3%	12.5%
Strengthened interdisciplinary cooperation	21.8%	20.8%	18.1%	22.3%
Horizon Europe provided financial means at a scale not provided in national and regional schemes	17.7%	15.2%	3.6%	3.6%
Strengthened cooperation between academia and the private sector	15.5%	15.2%	31.3%	24.1%
Reimbursement of costs at a higher level than in national and/or regional research and innovation programmes	11.8%	11.2%	4.8%	0.9%
Horizon Europe covered a topic not covered by national and regional R&I support	8.8%	11.8%	12.0%	7.1%
Horizon Europe supported the development of emerging technologies	5.9%	5.6%	20.5%	6.3%
Horizon Europe helped to bring innovations to the market	2.9%	2.8%	9.6%	7.1%
Additional risk capital provided to support companies	1.8%	3.9%	4.8%	3.6%
There are no additional benefits compared to national / regional support	0.7%	0.0%	0.0%	0.0%

The position papers highlighted similar benefits[208]. The most recurrent benefit mentioned in the position papers by different stakeholders (from academia, research organisations, companies and business associations) was the possibility to collaborate with partners across different sectors and involving different actors such as researchers, non-academic stakeholders and policy makers. Another aspect underlined by some position papers submitted by

[208] 18 position papers included comments on the benefits of Horizon Europe.

respondents from industry was that Horizon Europe allowed RDI actors to undertake projects to address global challenges such as climate change and energy security, which require long-lasting and coordinated efforts. One business association mentioned the increased visibility of projects funded by Horizon Europe compared to those nationally funded, and one academic actor remarked that Horizon Europe funding helped to attract international talent.

Figure 39: According to you, what are the main benefits of participating in Horizon Europe compared to national and/or regional R&I programmes in EU Member States or Associated countries? Select maximum 3 answers (N=1 596)



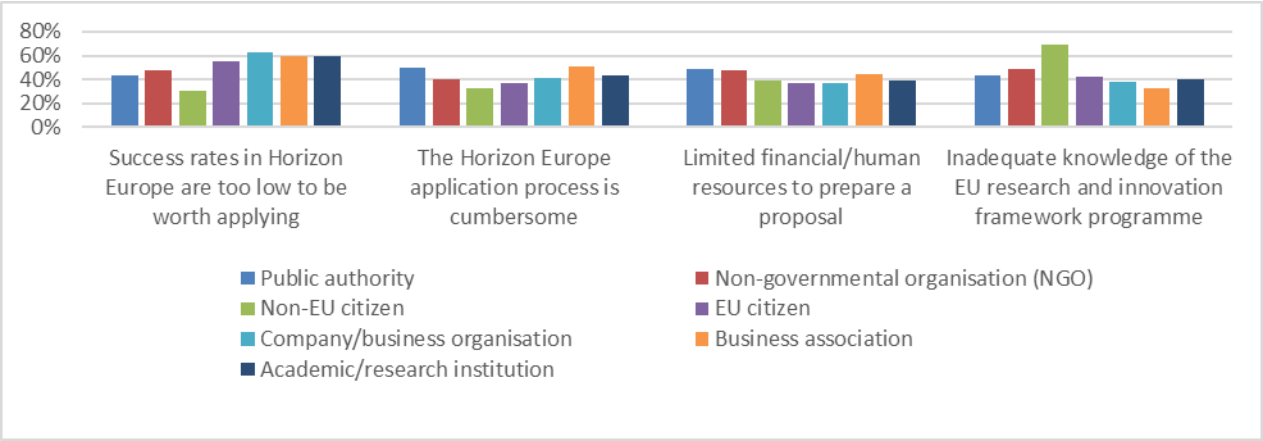
The reasons preventing participation in Horizon Europe

The main reported "reasons that may have prevented potential beneficiaries from participating in Horizon Europe" are the programme's low success rates (for 58% of respondents; 916), an application process perceived as cumbersome (for 42% of respondents; 665), the inadequate knowledge of potential applicants of the EU research and innovation framework programme (for 41% of respondents; 644) and the limited financial and human resources available to prepare a proposal (for 40% of respondents; 630)[209].

[209] The first two reasons are relatively more important for unsuccessful than for successful applicants, whereas the third and fourth reasons are more important for successful than for unsuccessful applicants.

Figure 40: In your view, what are the main reasons that may have prevented potential beneficiaries from participating in Horizon Europe? Select maximum 3 answers. (N=1 585)

Figure 41: Stakeholder breakdown – top four main reasons preventing participation in Horizon Europe (up to three responses allowed, environmental organisations and trade unions not represented due to low response rate (2 or fewer)



The low success rates, the "limited financial / human resources to prepare a proposal" and the "difficulties in finding project partners" are relatively more important reasons for respondents from EU13 countries than for those from EU14 countries. By contrast, the cumbersome application process and project implementation rules are relatively more important for respondents from EU14 countries.

Table 21: In your view, what are the main reasons that may have prevented potential beneficiaries from participating in Horizon Europe? Select maximum 3 answers. (Successful applicants N= 1 225; Unsuccessful applicants N= 106)

RESPONSE OPTION	HORIZON EUROPE SUCCESSFUL APPLICANTS	HORIZON EUROPE UNSUCCESSFUL APPLICANTS
Success rates in Horizon Europe are too low to be worth applying	58.7%	68.9%
Limited financial/human resources to prepare a proposal	40.7%	36.8%
Inadequate knowledge of the EU research and innovation framework programme	40.5%	32.1%
The Horizon Europe application process is cumbersome	40.2%	48.1%
Difficulties in finding project partners	23.8%	17.9%
The Horizon Europe project implementation rules are cumbersome	21.0%	17.0%
Other	18.0%	17.0%
Lack of a relevant area/topic for my research and innovation interests	16.7%	23.6%
Limited attractiveness compared to other national or regional programmes	11.5%	7.5%
Lack of expertise	10.8%	9.4%
Concerns about sharing valuable knowledge with partners	5.6%	3.8%
Limited attractiveness compared to other European or international programmes	2.1%	2.8%

Table 22: In your view, what are the main reasons that may have prevented potential beneficiaries from participating in Horizon Europe? Select maximum 3 answers. (EU14 N= 1 213; EU13 N= 178; EU Associated Countries N= 83; Third Countries N= 111)

RESPONSE OPTION	EU14	EU13	EU ASSOCIATED COUNTRIES	THIRD COUNTRIES
Success rates in Horizon Europe are too low to be worth applying	60.0%	62.9%	33.7%	29.7%
The Horizon Europe application process is cumbersome	43.9%	28.7%	42.2%	24.3%
Limited financial/human resources to prepare a proposal	39.9%	46.6%	36.1%	26.1%

Inadequate knowledge of the EU research and innovation framework programme	39.4%	34.8%	55.4%	52.3%
The Horizon Europe project implementation rules are cumbersome	22.6%	10.1%	26.5%	6.3%
Difficulties in finding project partners	20.8%	34.3%	36.1%	18.9%
Other	17.9%	19.1%	14.5%	19.8%
Lack of a relevant area/topic for my research and innovation interests	17.1%	16.9%	13.3%	10.8%
Limited attractiveness compared to other national or regional programmes	10.6%	13.5%	9.6%	9.0%
Lack of expertise	10.1%	15.2%	14.5%	5.4%
Concerns about sharing valuable knowledge with partners	5.7%	3.9%	6.0%	4.5%
Limited attractiveness compared to other European or international programmes	2.2%	3.4%	1.2%	2.7%

The deterring reasons mentioned by respondents in the position papers[210] are:

- The low success rates compared to the effort needed to prepare the proposal – this issue was underlined by academic actors, research organisations, but also companies and business associations.
- The requirement to create large consortia, which creates administrative burden, especially for the project coordinator, and difficulties in project management (e.g., for projects on research infrastructures).
- The administrative procedures for application, the language used in the calls for proposals and the documents for the application process are considered too complex for newcomers and SMEs and require expert help (e.g., from consultants).
- According to a business association at European level, SMEs encounter difficulties in finding partners.
- Some universities and associations of universities maintained that the programme was too complex, with different actions and instruments addressing the same objectives. It is difficult for small organisations with limited experience and resources and for newcomers to navigate the landscape of opportunities available and to identify the relevant ones for them. Against this background, the EU Missions and the European Partnerships are said to create additional layers of complexity.

Some academic stakeholders participating in the event claimed that joining consortia and partnerships is not always easy, since sometimes they are perceived as "closed clubs". This barrier is stronger for newcomers or small local/regional organizations with low experience in Horizon Europe. In addition, some research organisations maintained that the Work Programmes' structure has become more complex over time, and it is difficult for researchers to navigate the different opportunities, especially for those not familiar with EU funding. According to them, this aspect may prevent participation from actors without the necessary administrative support (typically SMEs).

Novelties in Horizon Europe

More than half of respondents maintained that the following "changes, introduced in Horizon Europe, contribute **somewhat or to a great extent** to strengthening the impact of European research and innovation":

- Definition of the future R&I priorities through a co-creation process with stakeholders (76%; 1 200)
- Implementation of an open science policy (73%; 1 147)
- Development of several multi-annual Strategic Plans (71%; 1 106)[211]
- Creation of a pillar dedicated to innovation, including the European Innovation Council (64%; 997)
- Introduction of the impact logic in the formulation of topics (61%; 958)
- Creation of a pillar grouping societal and industrial issues (54%; 849)
- New approach to Partnerships (co-programmed, co-funded and institutionalised) (53%; 825)
- Creation of "EU Missions" (52%; 813)

[210] 17 position papers included comments on the barriers to participation.

[211] Associations of research and academic actors at EU and national level observed in their position papers that the Strategic Plans improve the long-term planning process and the predictability for applicants, and (improve and?) demonstrate the alignment of Horizon Europe with key global challenges.

Some position papers from research institutions addressed the three-pillar structure of Horizon Europe positively, as it was seen in continuation with Horizon 2020. Likewise, according to the participants in the event the three Pillars' structure is working well. However, stakeholders from academia, research organisations as well as business support organisations, observed a gap between the research funded in Pillar I and Pillar II and the actions funded in Pillar III, since the first two Pillars fund collaborative research whereas Pillar III focuses on actions carried out by single beneficiaries. Therefore, the research projects funded under Pillar II often achieve a medium (5-6) Technology Readiness Level but struggle to scale up. In this view, some participants from research organisations regretted the lack of support for small collaborative projects under Pillar III since the Fast Track to Innovation had been discontinued. They called for enlarging the Transition grant scheme (which currently bridges ERC to EIC) to also cover Pillar II. A participant from a company supporting researchers and universities participating in Horizon Europe expressed appreciation for the fact that the Pillar II has brought together industrial and societal challenges as the two are interlinked.

The event participants assessed positively the creation of Pillar III, dedicated to innovation, but according to some stakeholders (both from universities and business support organisations) it is unclear what the medium and long-term objectives of the European Innovation Ecosystems (EIE) programme are. This lack of clarity makes the participation more difficult for stakeholders.

Figure 42: In your view, to what extent do the following changes, introduced in Horizon Europe, contribute to strengthening the impact of European research and innovation?

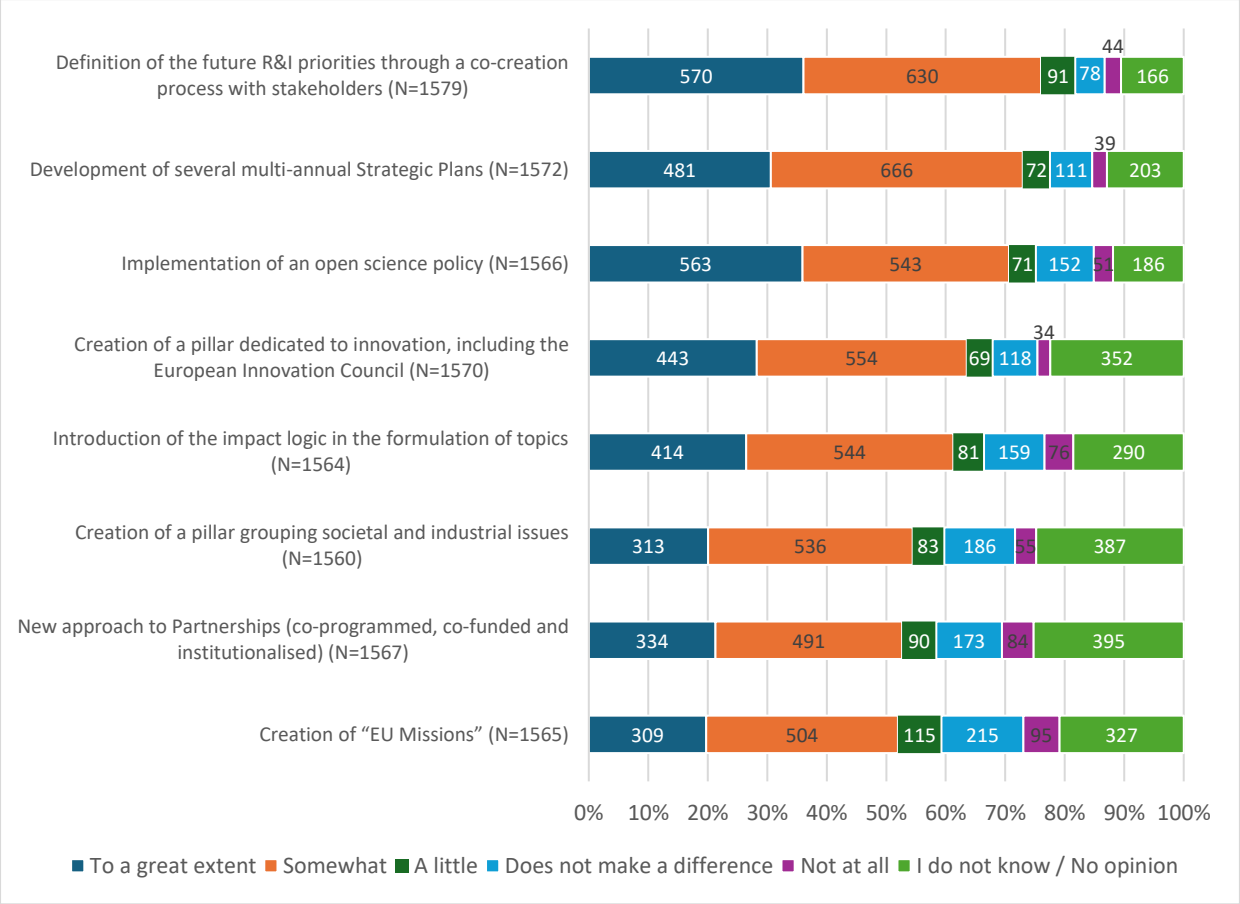


Figure 43: Stakeholder breakdown – definition of future R&I priorities through a co-creation process with stakeholders (N = 1579)

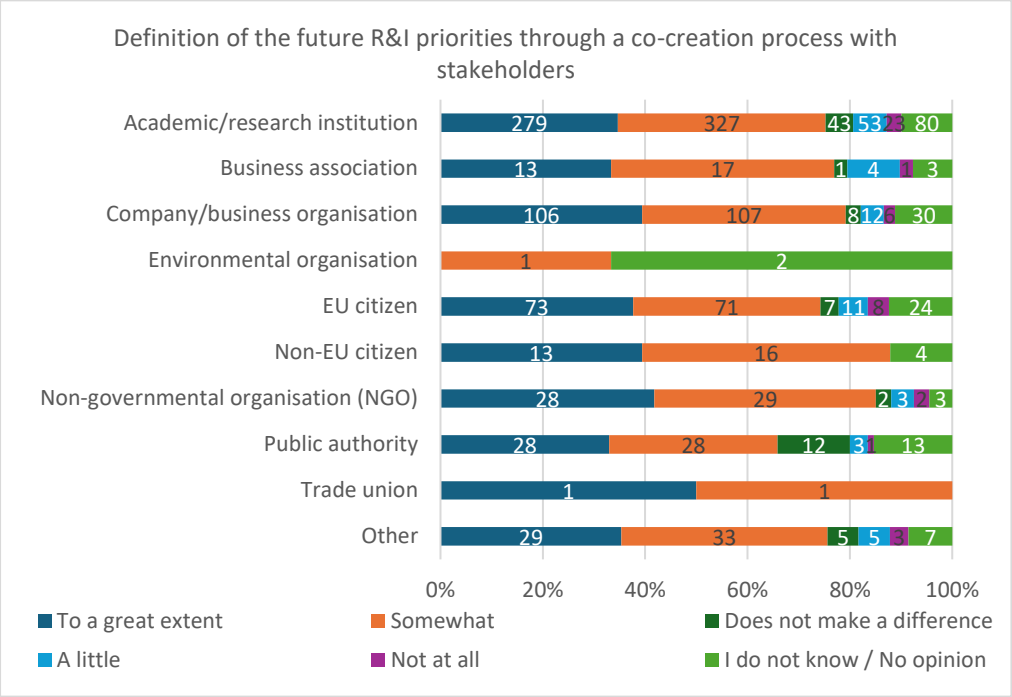


Figure 44: Stakeholder breakdown – Development of several multi-annual Strategic Plans (N=1572)

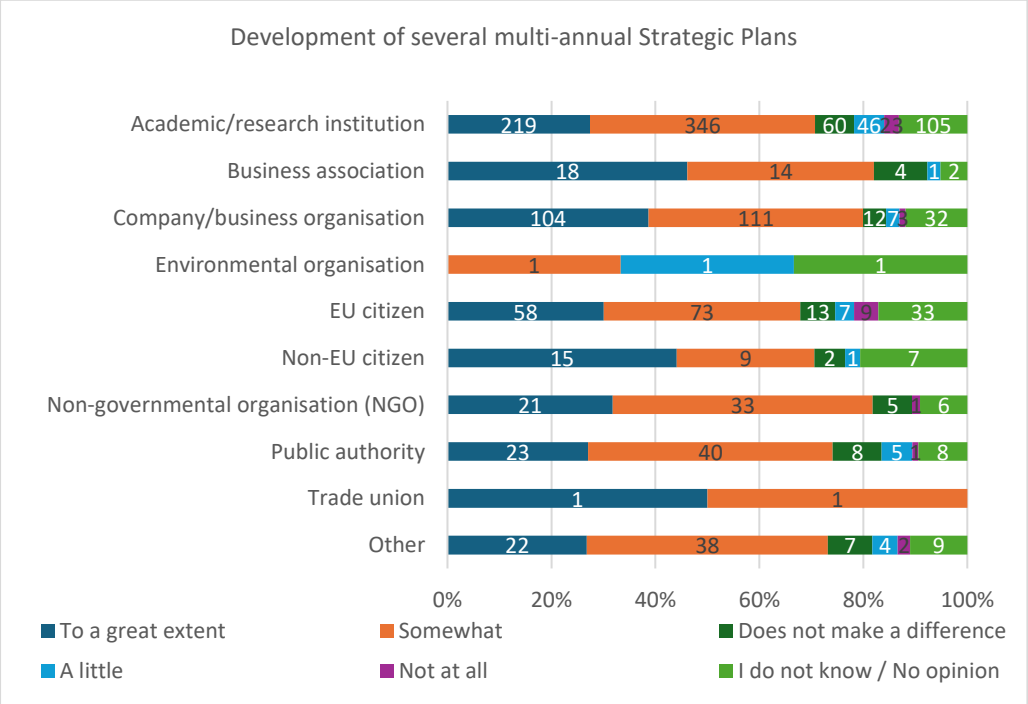
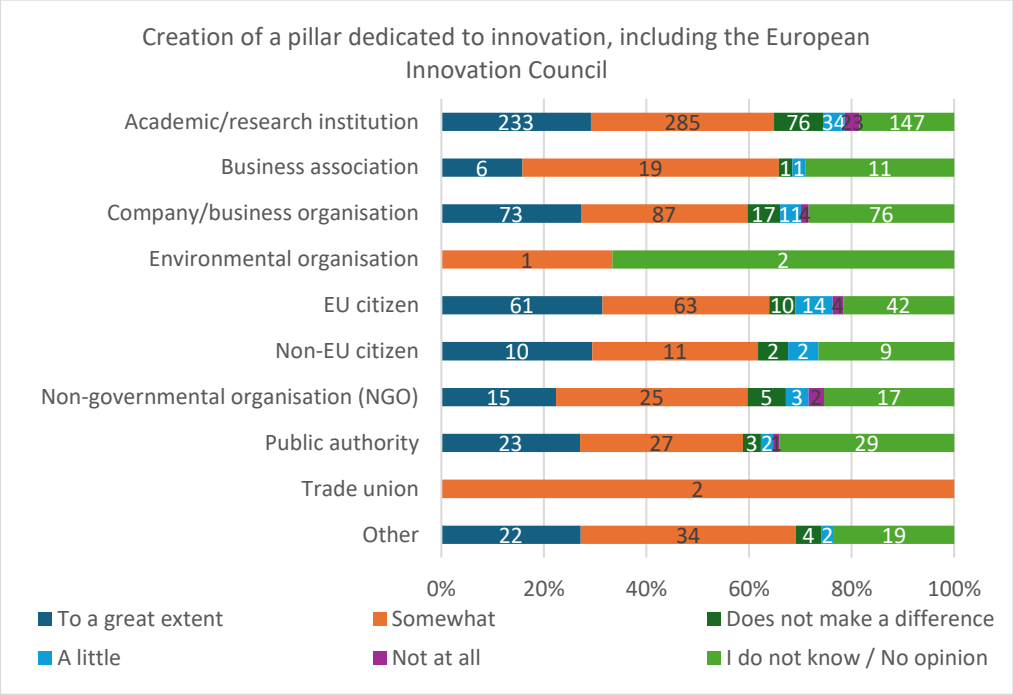


Figure 45: Stakeholder breakdown – Creation of a pillar dedicated to innovation, including the European innovation Council (N=1570)



Box 4: Overview of the comments on the European Innovation Council

27 position papers included comments on the European Innovation Council. Whilst several stakeholders appreciate the creation of the European Innovation Council, they pointed out some implementation issues, concerning:

- The insufficient flexibility of the administrative processes.
- The limited scope of the EIC Transition (accepting proposals only from the ERC PoC Pathfinder and FET).
- The application and evaluation process.
- The low success rates.
- The harmonisation of the IP provisions with the rest of Horizon Europe and with the Commission Recommendation on intellectual property.[212]
- Similarly, the event participants deemed the EIC as a valuable tool that addresses all stages of innovation. The specific procedures for proposals selection under the different EIC components and its general structure were considered appropriate. However, it was observed that during the first years of Horizon Europe the EIC had major governance issues, particularly in the Accelerator component, since the work of the newly established EIC Fund was not smooth enough and there were delays in the selection of beneficiaries. In addition:
- For several participants, the Accelerator component excessively focused on deep-tech instead of on disruptive and breakthrough innovation in general, missing the opportunity

[212] 2008/416/EC, Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations.

of funding disruptive social innovation. The focus on deep-tech innovation contradicts the attention to interdisciplinarity given in the rest of Horizon Europe.

- According to a participant representing an association for technology research, the requirement for co-investors was not communicated well, it is quite challenging for start-ups to meet and this in turn can hinder their participation.
- A National Contact Point highlighted the need to improve communication on the EIC calls, the participation rules and the administrative procedures. Due to the peculiarities of the programme compared to the rest of Horizon Europe, these aspects differ from the rest of the FP. For this reason, additional communication and training is needed to explain them to potential applicants and participants.
- It is difficult for applicants and participants to understand how the EIC portfolio has been built and works, as it appears completely different from other EU initiatives.
- Some concerns were expressed regarding the rejection process as a participant representing a network of universities reported difficulties in communicating with evaluators.
- The budget for the Pathfinder and Transition components was considered insufficient from academic stakeholders.

Figure 46: Stakeholder breakdown – Creation of EU Missions (N= 1565)

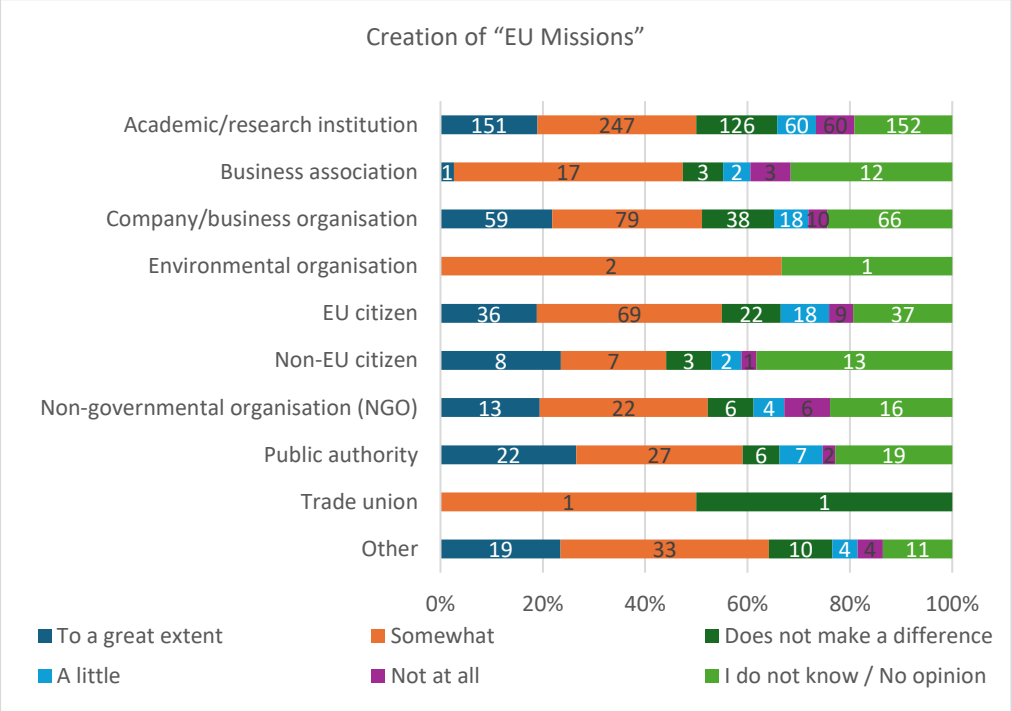


Figure 47: Stakeholder breakdown – Creation of a pillar grouping societal and industrial issues (N= 1560)

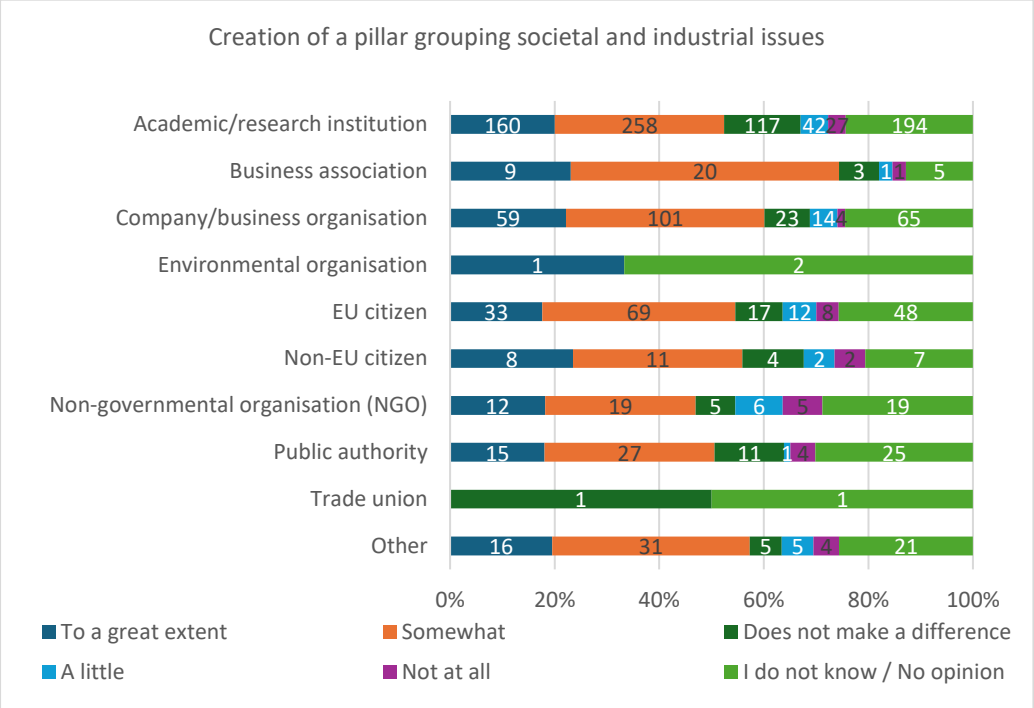


Figure 48: Stakeholder breakdown – New approach to Partnerships (N= 1567)

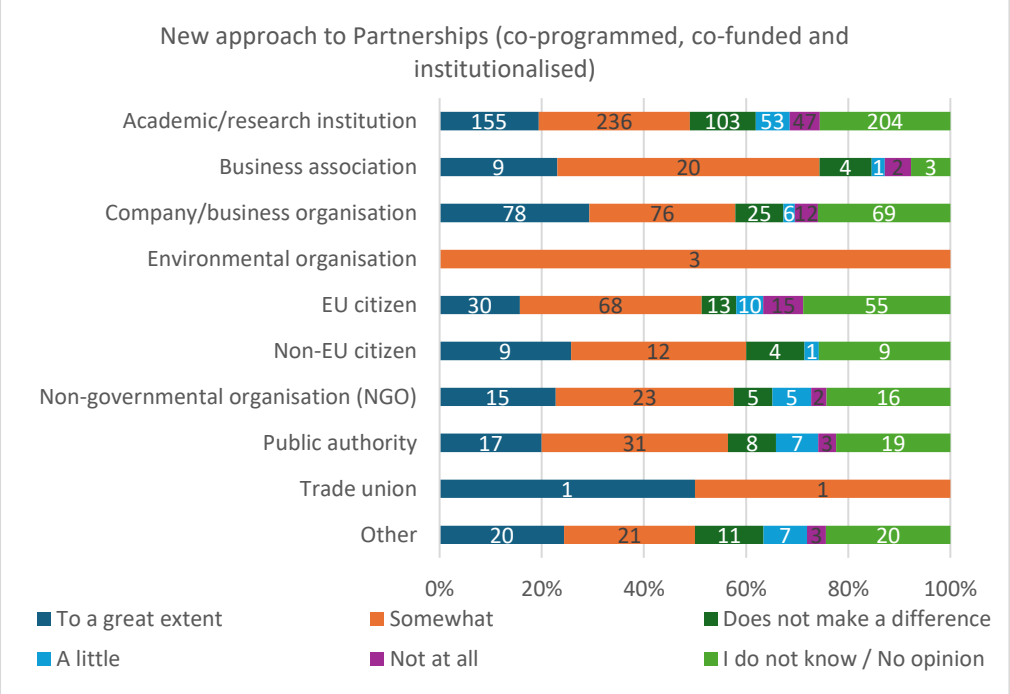
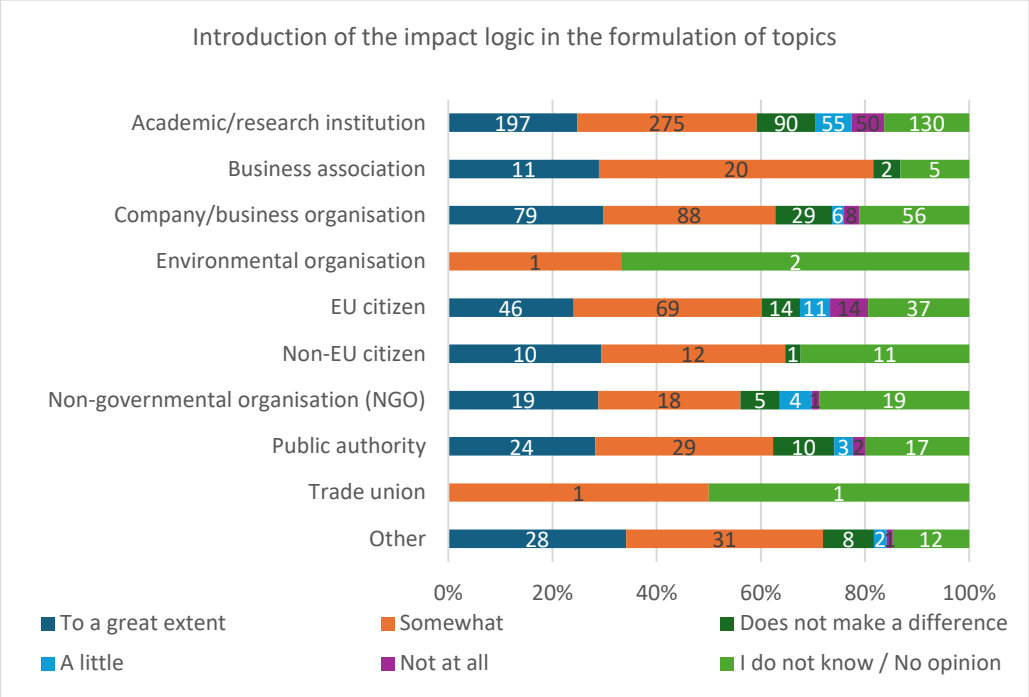


Figure 49: Stakeholder breakdown – Introduction of the impact logic in the formulation of topics (N= 1564)



Implementation and administrative procedures

Design and implementation of the calls for proposals

Most respondents agreed with the following statements: "the rules of participation [are] clear" (77%; 1 218), that "the standard application form [facilitates] the application" (67%; 1 053) and that "the descriptions of the calls for proposals [are] clear" (64%; 1 110) and "frequent enough" (58%; 905). However, 29% (457) of respondents maintained that finding the right call for proposals was difficult and 31% (485) of respondents did not think that "there [is] an adequate mix of calls for proposals addressing specific topics (top-down) and calls for proposals without a pre-defined topic (bottom-up)"[213].

51 position papers discussed aspects of the calls for proposals. Several of these topics were discussed more in depth during the public event. The main messages concern:

- The scope of the calls for proposals. Several research organisations and universities deemed the description of the calls for proposal in Horizon Europe as too vague and "multidimensional". As a result, only large consortia can address every aspect of the call and it is difficult to understand how researchers in different disciplines should contribute to the projects. Moreover, according to some respondents, vague calls for proposals worsen the risk of oversubscription.
- The template for the proposal. There were different views on whether or not the page limit of the template simplifies the application. Some position papers highlighted the challenges experienced in filling in specific parts of the template due to its alleged rigid structure and its page limit. The new page limits set in the Horizon Europe application forms (part B)

[213] This opinion is shared especially among academic and research organisations. The results of the analysis broken down by type of respondent are reported in Table 23 and Table 24- additional statistics.

was generally seen as positive by the event participants, since proposals are now shorter, more concise and to the point. However, some applicants claim that the page reduction has posed a new challenge to proposal writing, as sometimes there is not adequate space to address exhaustively all the aspects requested by the calls for proposals. This issue is particularly relevant for large consortia, since part of the proposal is dedicated to the partners' description.

- Using the two-stage application procedure. Whilst some actors thought that the current balance between two-stage and single-stage application procedure is appropriate (e.g., an association representing universities), other actors (e.g., some research organisations, a business association, a public authority) would like to expand the use of the two-stage procedure.
- The challenging submission deadlines. Some respondents considered that finding and responding to calls for proposals within a restricted time frame and with sometimes overlapping deadlines was difficult. Likewise, during the event, some applicants expressed the need to review the frequency of the calls for proposals, asking for more flexibility. According to them, the calendar of the deadlines for submission doesn't always consider public holidays or celebrations.
- The balance between top-down and bottom-up calls. In their position papers and during the event, some universities and research organisations, but also some public authorities, pointed out the need for more bottom-up calls for proposals, especially in Pillar II. In their opinion, the bottom-up approach would facilitate the deployment of Social Sciences and Humanities within the Framework Programme.
- According to the event participants applicants are generally satisfied with the quality and availability of information provided to fulfil a proposal application. However, some stakeholders reported a few cases where mixed and non-consistent information was found between call documents, F&T portal and the info-days organized by NCPs. In this respect, stakeholders called for better use of the FAQ section on the F&T Portal.
- Some position papers appreciated the existence of an updated Funding and Tenders Portal, although some technical improvements are suggested. Similarly, some event participants expressed their concern over the technical flaws of the F&T portal, especially close to the deadlines, when the system is often perceived as unstable. Moreover, the imposed "two-factor" authentication method may slow down the administrative procedures.

Figure 50. To what extent do you agree with the following statements concerning the calls for proposals under Horizon Europe?

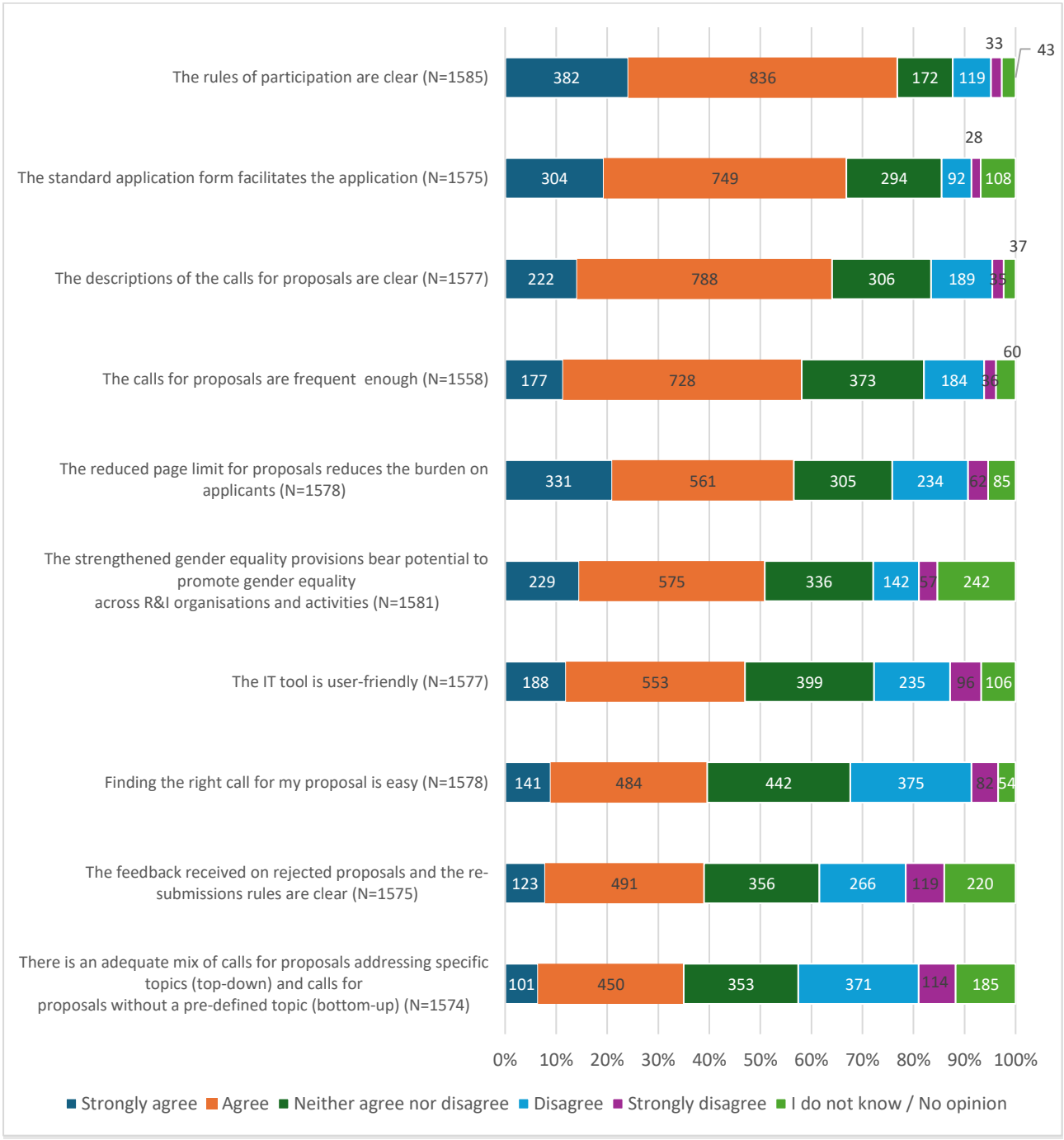


Figure 51: Stakeholder breakdown – Rules of participation are clear (N= 1585)

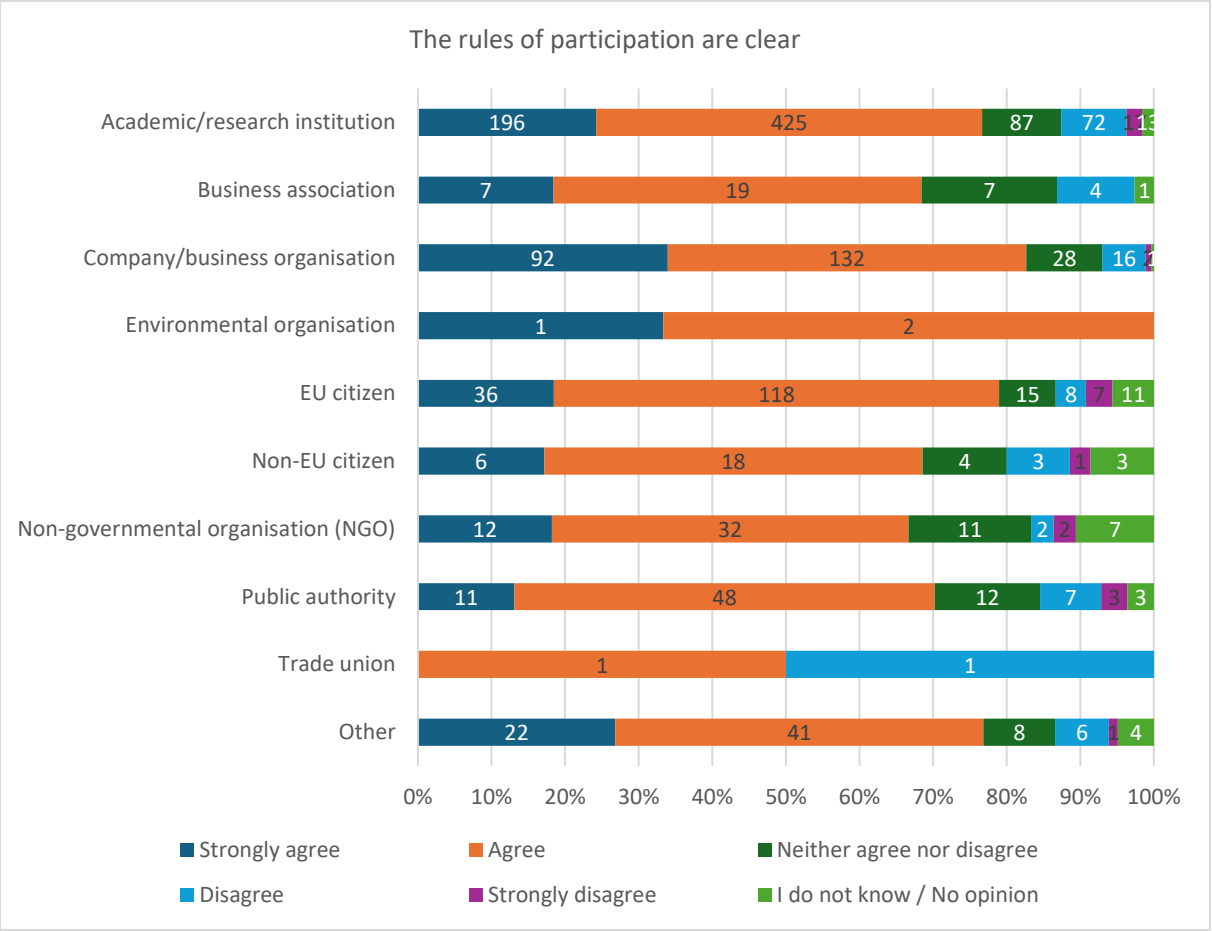


Figure 52: Stakeholder breakdown – The standard application form facilitates the application (N= 1575)

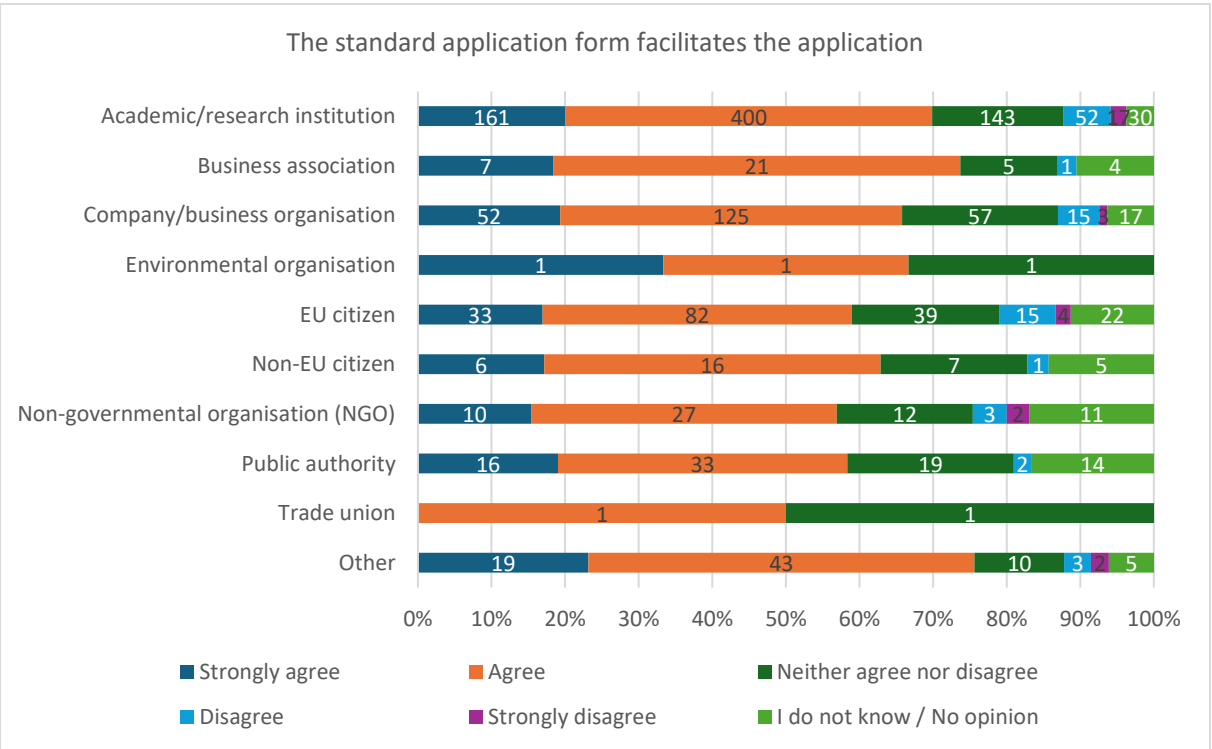
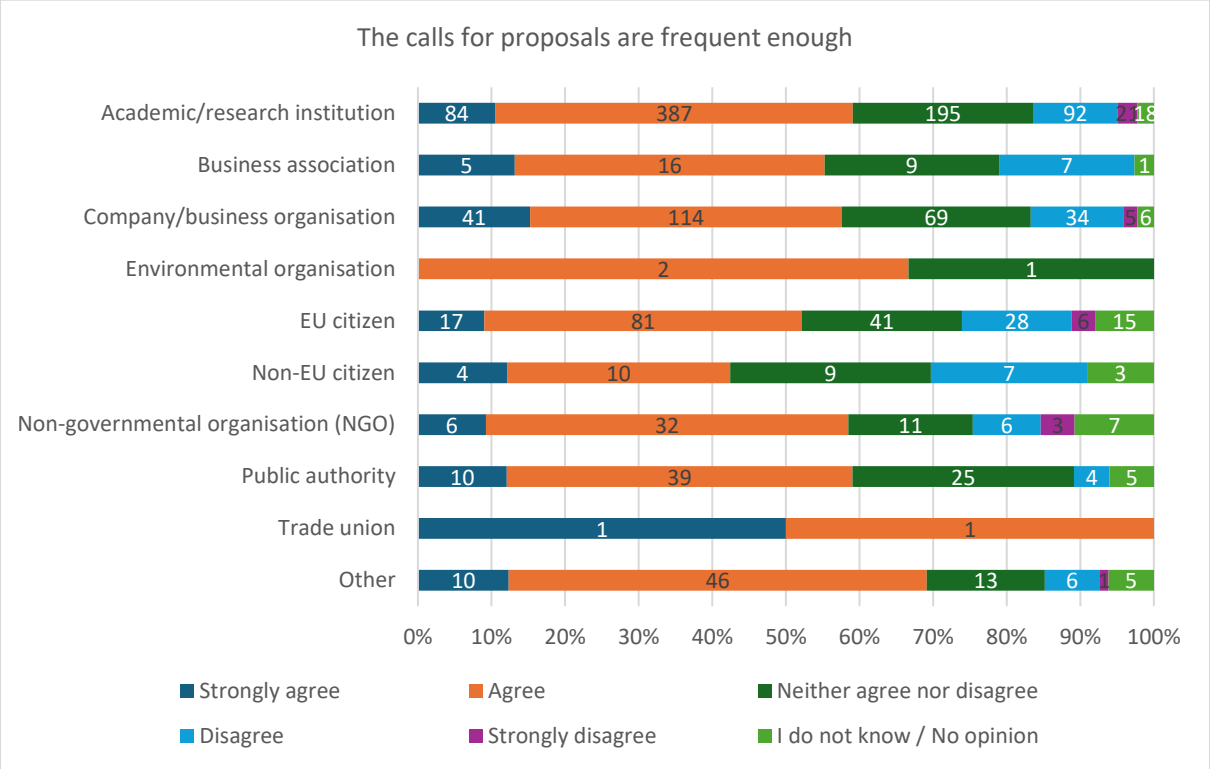


Figure 53: Stakeholder breakdown – The calls for proposals are frequent enough (N= 1558)



Evaluation of proposals

Most respondents agreed or strongly agreed that the "time to sign the grant agreement" (65%; 1 028) and the "time to evaluate the proposals" (63%;1 002) was "adequate". Whilst 44% (698) of respondents thought that the feedback received from the evaluation was "clear and informative", 24% (383) of respondents disagreed or strongly disagreed with this statement. Likewise, whilst some position papers highly valued the evaluation system of Horizon Europe and observed improvements over time, others underlined the need for more consistent and detailed feedback in the evaluation reports.[214] Some research organisations and associations thereof welcomed the "right to react" mechanism, but a national agency supporting applicants put into question the effectiveness of the procedure.

Six papers referred to the "blind evaluation process" that has been piloted, stating that stakeholders were interested in the results of the pilot and in the possibility of expanding its use.

Although stakeholders recognised that efforts have already been made to reduce the time to grant, the actual time between proposal submission and evaluation was still considered too long by different stakeholders (e.g., respondents from universities, from business associations).

Box 5: Main messages on the evaluation of proposals from the public event

- Applicants are generally satisfied with the timing for proposal evaluation and the signature of the Grant Agreement, seen as mostly "adequate".

[214] 51 position papers discussed aspects of the evaluation of proposals.

- However, they have raised several concerns related to the quality and clarity of the evaluations provided through the ESRs. Comments of the evaluators are sometimes reported as too generic, contradictory and not really helpful for a reworking the proposal for a new submission.
- Although the Horizon Europe programme is highly impact-oriented, an academic stakeholder has highlighted that some evaluators are lacking adequate preparation or guidance on how to adequately assess impact. Differences between the scopes of the different Clusters should also be taken into account.
- Likewise, higher competences in evaluating integrated SSH aspects would be welcome, given the increasing space and importance that these disciplines are receiving in many topics.
- According to a participant representing a business company, the evaluators specific field of expertise should be in line with the scientific field of the proposal. Otherwise, the risk is to receive misplaced or inconsistent evaluation, especially in the case of disruptive technology.
- It was suggested by academic stakeholders that the guidelines for evaluators provided by the programme's officers should be public, thus ensuring more transparency in the evaluation process.

Figure 54. To what extent do you agree with the following statements concerning proposal evaluation under Horizon Europe?

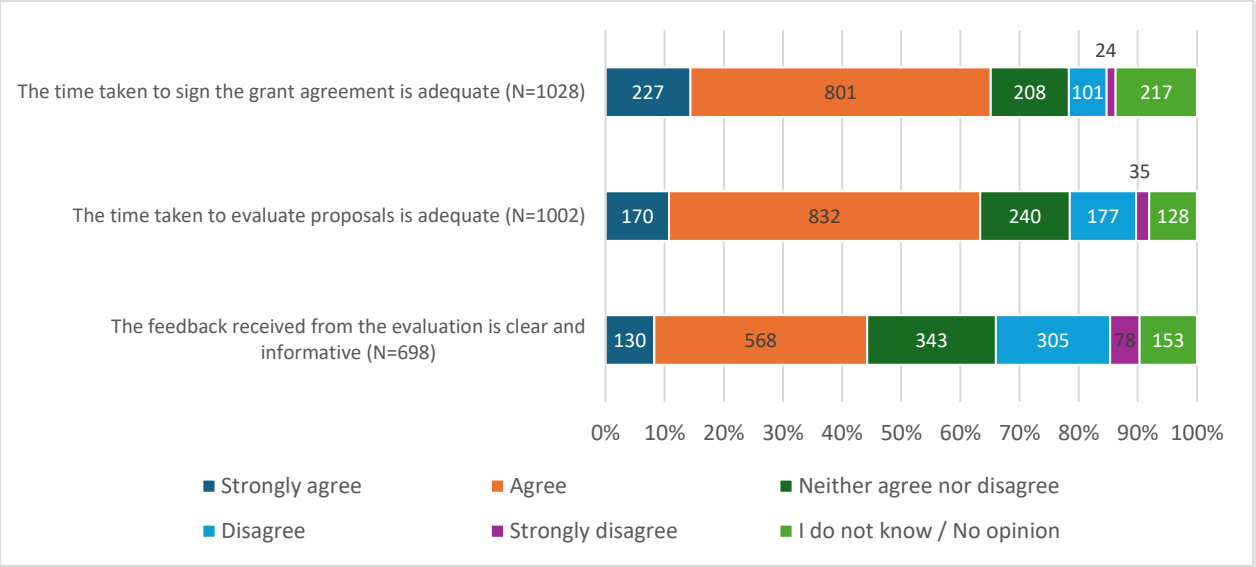


Figure 55: Stakeholder breakdown – The time taken to sign the grant agreement is adequate (N= 1028)

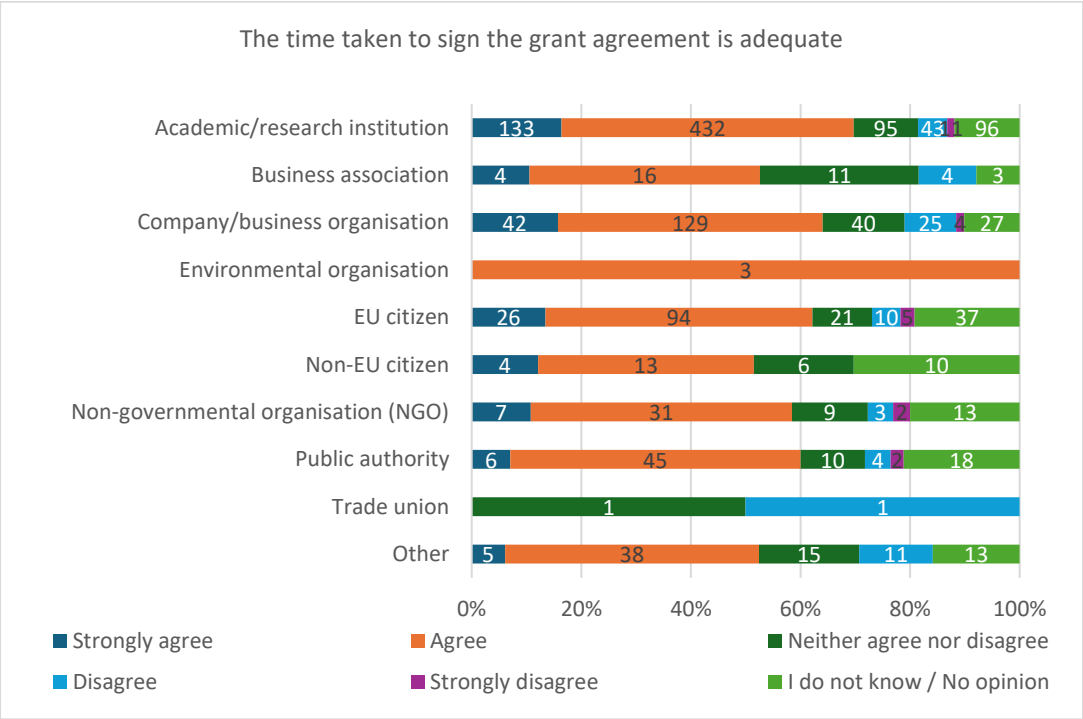


Figure 56: Stakeholder breakdown – The time taken to evaluate proposals is adequate (N= 1002)

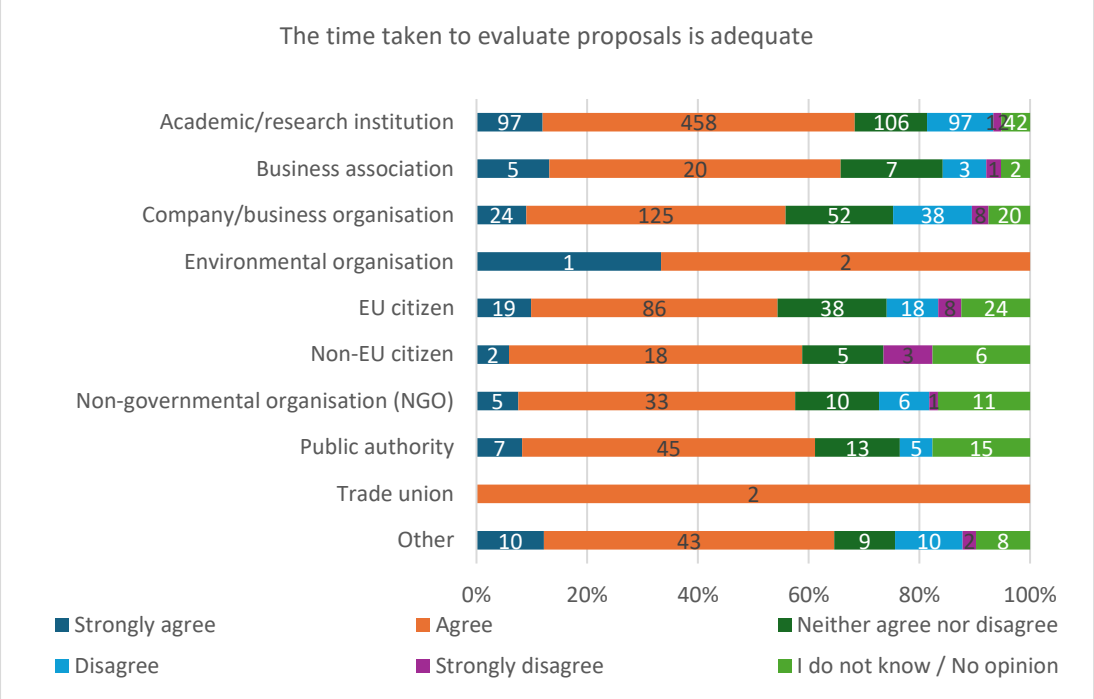
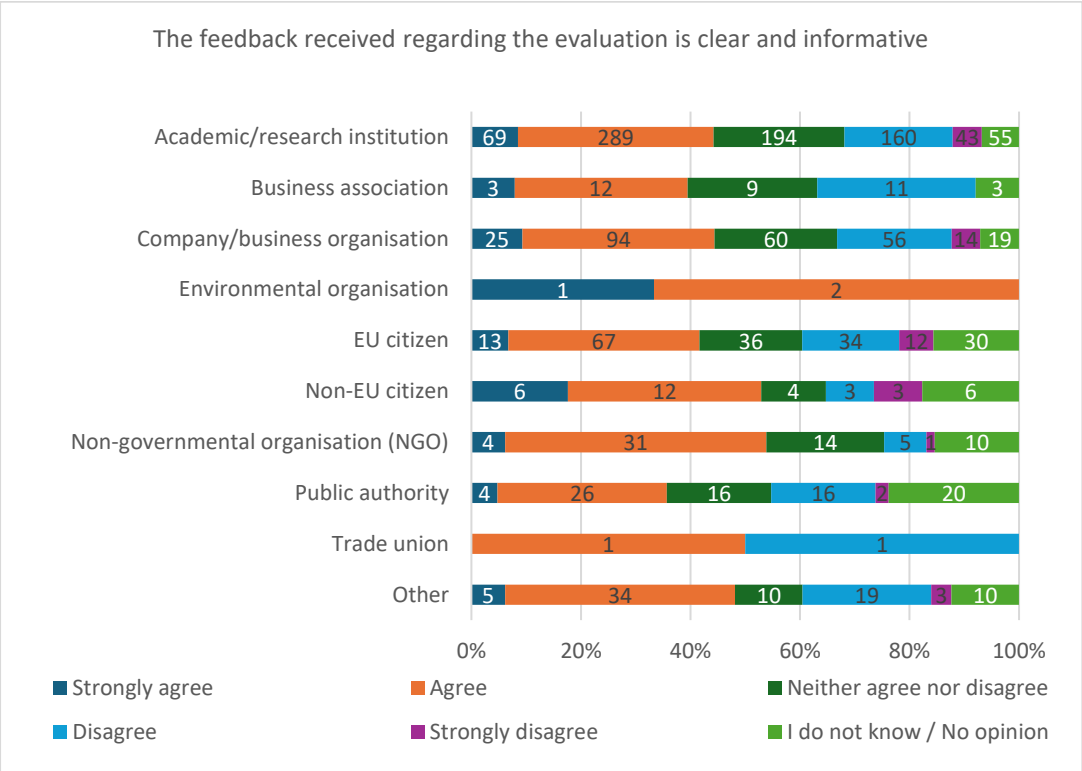


Figure 57: Stakeholder breakdown – The feedback received regarding the evaluation is clear and informative (N= 698)



Project implementation

Most respondents agreed or strongly agreed that "the standard templates facilitate project reporting" (62%; 978), that "the mechanisms for project monitoring and reporting were adequate" (61%; 955), that their "organisation's usual accounting practices were accepted" (59%: 1 933), that "the cost calculation rules were clear" (59%; 925). The majority of respondents were "satisfied with the support received by the EC services (including agencies) during grant preparation and implementation" (52%; 813) and agreed or strongly agreed that "the extension of the single audit principle reduces the burden on beneficiaries (51%; 790). Conversely, only 39% (616) of respondents agreed or strongly agreed that "the use of lump sum funding reduces the burden on beneficiaries" and 15% (233) maintained the opposite. 63 position papers commented on aspects of project implementation. Several of these topics were discussed more in depth during the public event. The main messages concerned:

- **The lack of the Annotated Model Grant Agreement** and the delays for a final Annotated Model Grant Agreement - this issue was raised also during the public event. The event participants also urged the publication of an Indicative Audit Programme to receive detailed rules on auditing.
- **The lump sum funding**. The position papers expressed different views on whether the lump sum funding reduces the burden on beneficiaries, depending also on the project size. Many stakeholders, including universities, national research centres and a large company, recommended a thorough evaluation of the funding scheme before expanding its use, especially for large collaborative applied research projects. While the simplification brought by lump sum schemes has been generally appreciated, concerns were raised by different stakeholders, in particular by a series of European associations of research centres, on the intensification of the workload in the proposal stage. Moreover, research and

technologies organisations (RTOs) report experiencing a lack of genuine collaboration among partners in large projects working with lump sums, as a result of different approaches aiming to minimise financial risks. On the other hand, representatives from the R&I community from Italy, Czech Republic, Lithuania, and Poland observed the simplified reporting, the reduced financial errors, and the decreased administrative burden induced by lump sum funding and have explicitly called for its extension.[215]

- **The increasing difficulties in managing projects due to large consortia**. A participant in the event acting as NCP reported that it is becoming increasingly difficult to manage big consortia, especially in relation to the budget and administration. This aspect affects the expected level of participation of SMEs, since only experienced project managers have the experience and resources to deal with large consortia.
- **The tools for reporting and monitoring**. Most event participants are satisfied with the standard tools for reporting and monitoring and find very useful the assistance received by the EC services (including agencies) during grant preparation and implementation.
- **The new cost calculation rules**. According to some respondents, the new rules have not simplified the reporting and may have shifted costs towards the preparation phase. During the event, contrasting views were expressed on the measures to simplify the calculation of personnel costs. Whereas some participants consider the 215-day-a-year rule as a positive simplification, other academic actors see it as a rigid scheme that does not allow for the calculations to be adapted to the specificities of each country or entity.
- **The decentralisation of project management to the executive agencies**. The collaboration between the EC Project Officers and the beneficiaries is broadly positive. However, some participants have experienced high turnover and frequent changes in the people acting as Project Officer, which is reported as not beneficial for the project execution. In addition, an academic participant expressed concerns about the efficiency of the communication channels with the Commission, since he/she experienced fragmentation in communication between the Project Officer and the Commission.
- **The integration of gender aspects into project implementation**. The increasing importance of Gender Equality Plans (GEP) has been widely welcomed by the event participants. However, while the adoption of GEPs is often quite simple and straightforward for universities, it may not be the same for other types of organizations. More guidance and support on how to design the GEPs and how to effectively integrate gender aspects into project implementation would be welcome to avoid turning GEPs into a "just-tick-the-box" exercise.
- 18 position papers provided comments on the EC **communication and information activities**. These stakeholders expressed appreciation for the effort made by the Commission, such as organisation of Infodays, and webinars. They point to areas in which communication and guidance can be improved: Synergies with other EU programmes and the Model Grant Agreement.

[215] For further information on lump sums, please refer to Annex 4, Section 4.4.2.

Figure 58. To what extent do you agree with the following statements concerning the project implementation under Horizon Europe?

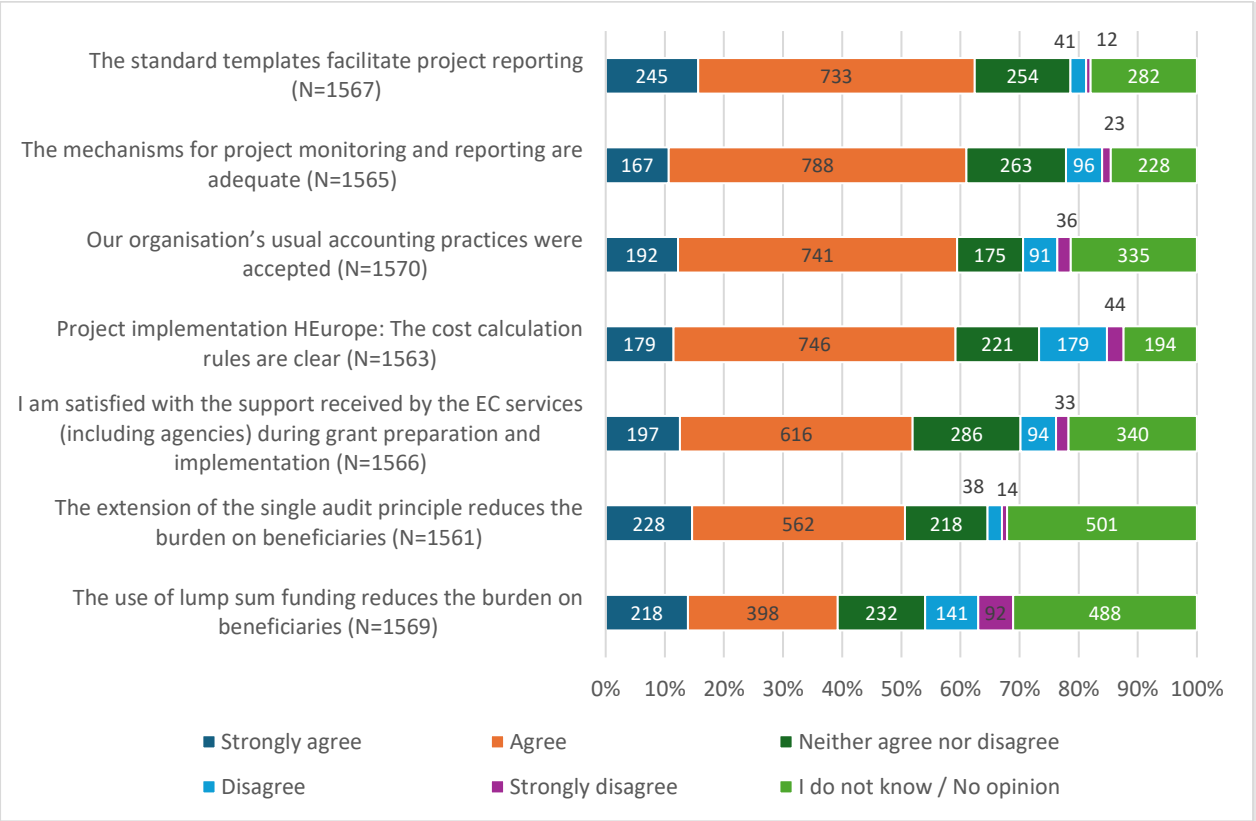


Figure 59: Stakeholder breakdown – I am satisfied with the support received from the EC services (N= 1566)

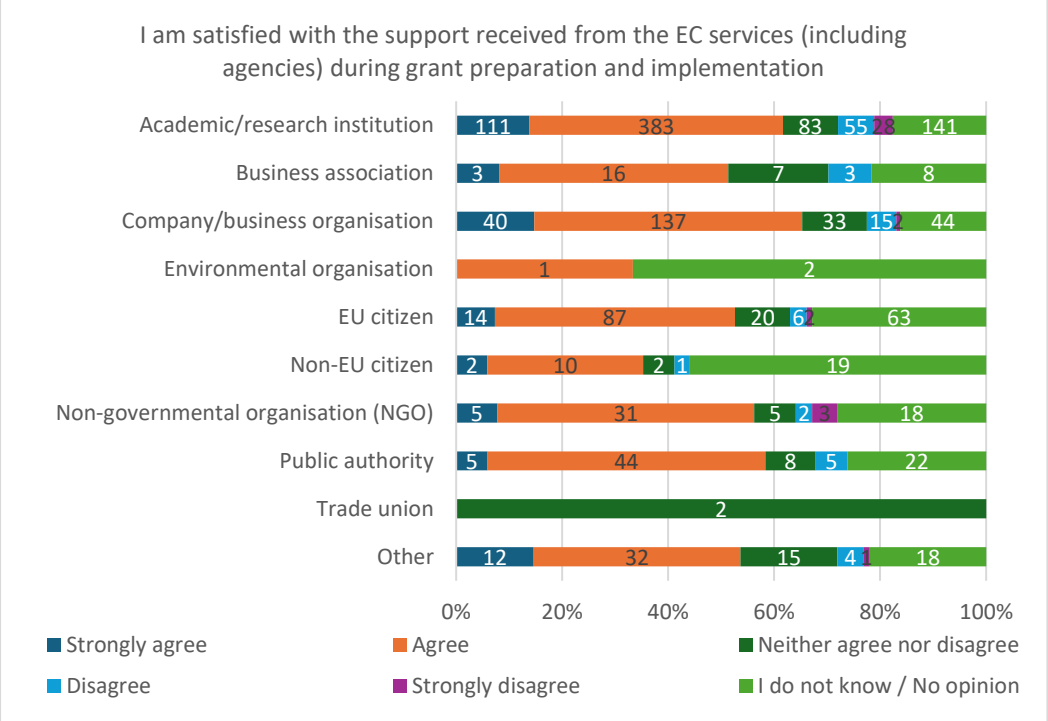


Figure 60: Stakeholder breakdown – The cost calculation rules are clear (N= 1563)

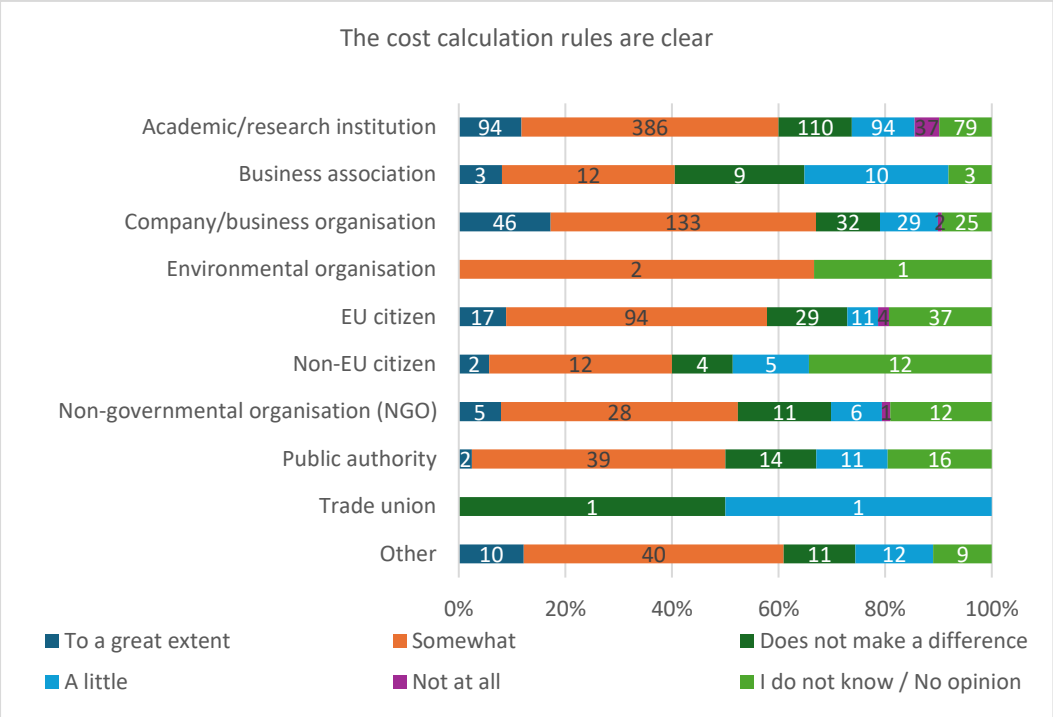


Figure 61: Stakeholder breakdown – Our organisation's usual accounting practices were accepted (N= 1570)

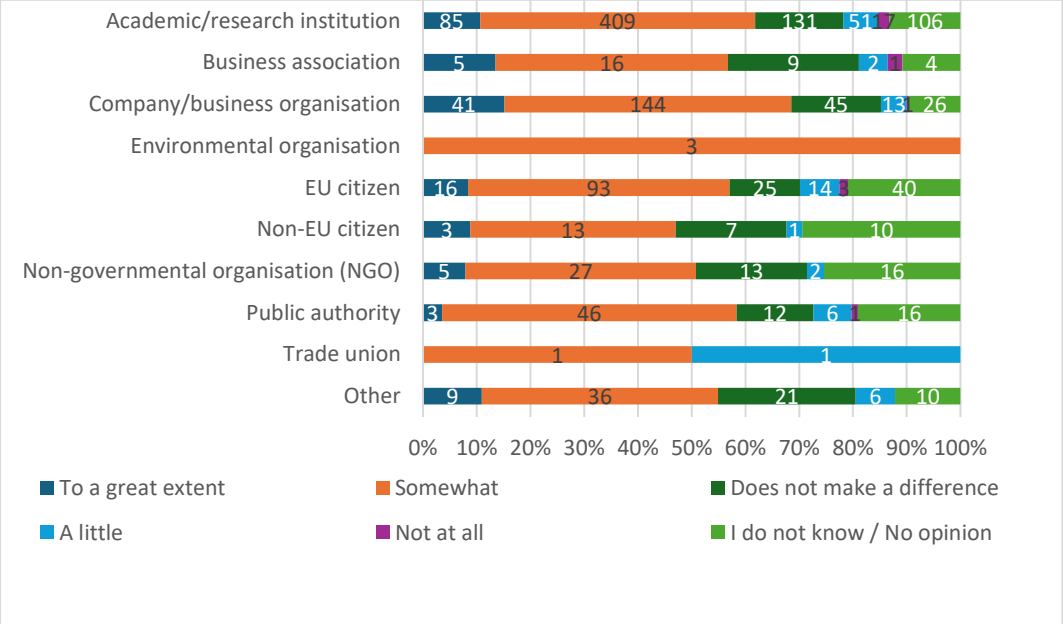


Figure 62: Stakeholder breakdown – The mechanisms for project monitoring and reporting are adequate (N= 1565)

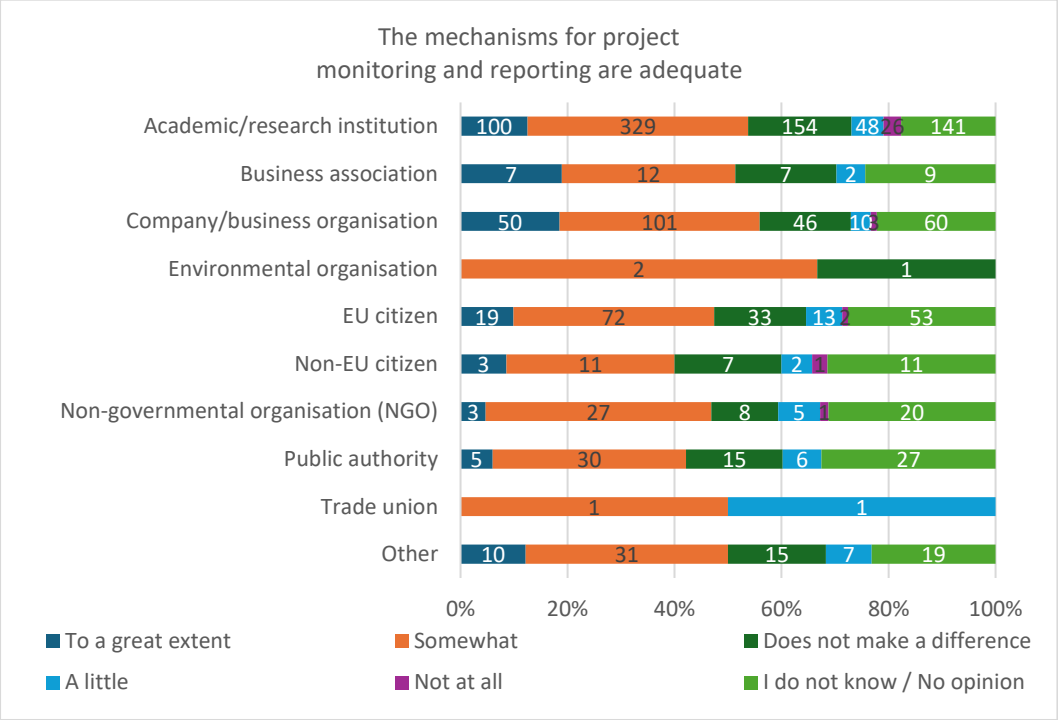


Figure 63: Stakeholder breakdown – The standard templates facilitate project reporting (N= 1567)

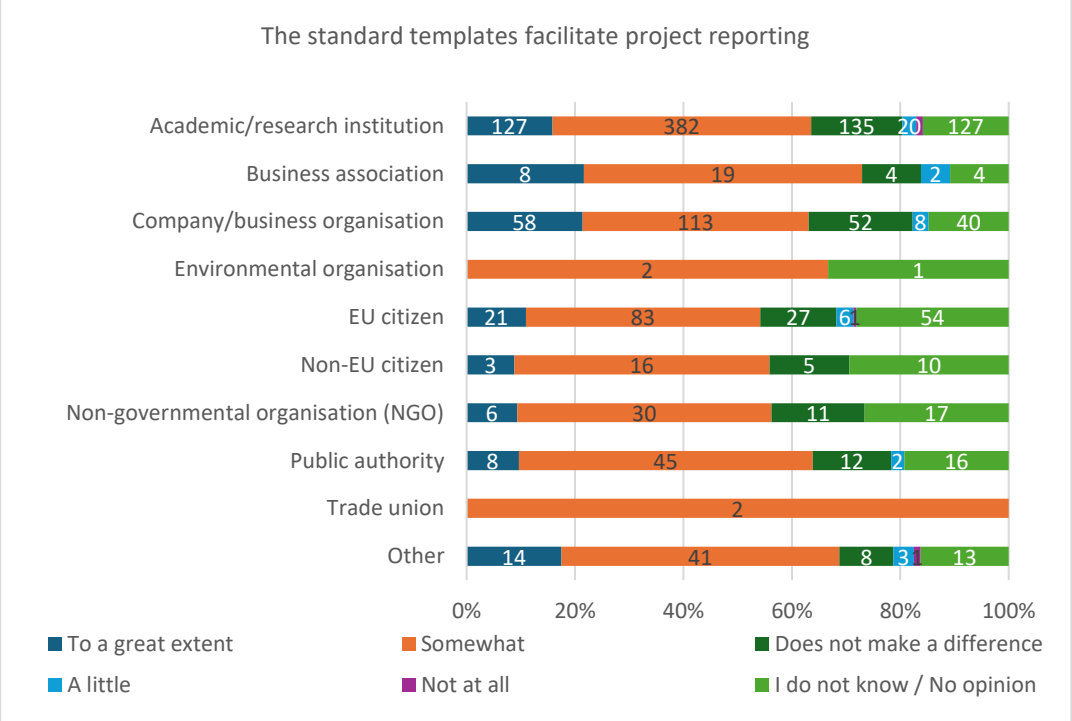


Figure 64: Stakeholder breakdown – The extension of the single audit principle reduces the burden on beneficiaries (N= 1561)

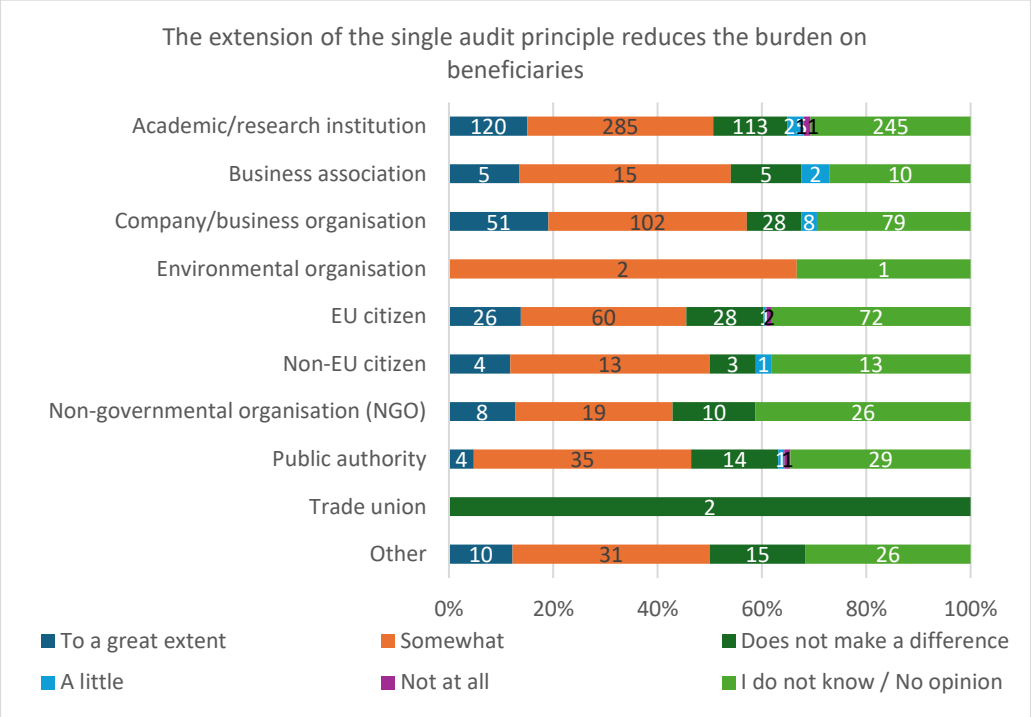
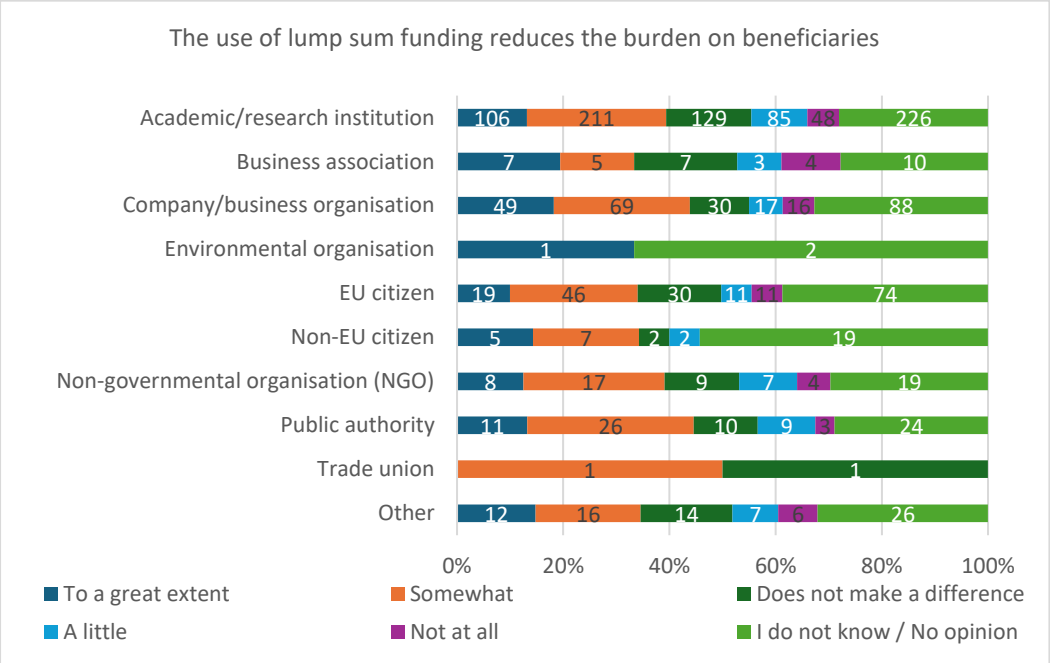


Figure 65: Stakeholder breakdown – The use of lump sum funding reduces the burden on beneficiaries (N= 1569)



Satisfaction with the types of support

Considering only the responses of those who expressed an opinion or used the specific type of support, the share of respondents who were "satisfied" or "very satisfied" is above 50% for the following types of support:

- Grants for collaborative projects (80%; 1099)

- Grants for single beneficiary projects (65%; 592)
- Support for networking (57%; 551)
- Technical assistance (54%; 447)
- Training and expert advice (52%; 450).

Conversely, the types of support with the lowest share of respondents who were "satisfied" or "very satisfied" are:

- Prizes (36%; 169)
- Blended finance (grants and equity support) (35%; 151)
- Public procurement (34%; 156)

Nonetheless, the types of support with the highest share of respondents who are "dissatisfied" or "very dissatisfied" are European Partnerships (22%; 204) and EU Missions (24%; 196). Nevertheless, it is important to acknowledge that for both European Partnerships and EU Missions, positive responses ("satisfied" or "very satisfied") outweigh negative ones ("dissatisfied" or "very dissatisfied"). For European Partnerships, 446 and for EU Missions 325 respondents indicated that they are either satisfied or very satisfied (out of 1 564 and 1 546 total replies respectively). For the European Partnerships the share of "dissatisfied" or "very dissatisfied" respondents was higher among public authorities (31.6%), NGOs (28.9%) and academic and research organisations (24.1%) than among companies and business organisations (9%) or business associations (12%)[216]. Likewise, for the EU Missions the share of respondents who were "dissatisfied" or "very dissatisfied" was higher among NGOs (38.2%), academic and research organisations (25%) and public authorities (24.6%) than among companies and business organisations (13.3%)[217].

During the event, a participant representing a European industrial association claimed that the increased size of funding and partnerships, as well as the higher complexity of projects, has not led to higher efficiency from Horizon 2020 to Horizon Europe. A better balance between large projects with a broad value-chain prospective and small projects with a narrower technology development angle should be found.

[216] The results of the analysis broken down by type of respondent are reported in the additional statistics section further below.

[217] The results of the analysis broken down by type of respondent are reported in the additional statistics section further below.

Figure 66. What is your level of satisfaction with the way the European Commission implements the following types of support under Horizon Europe?

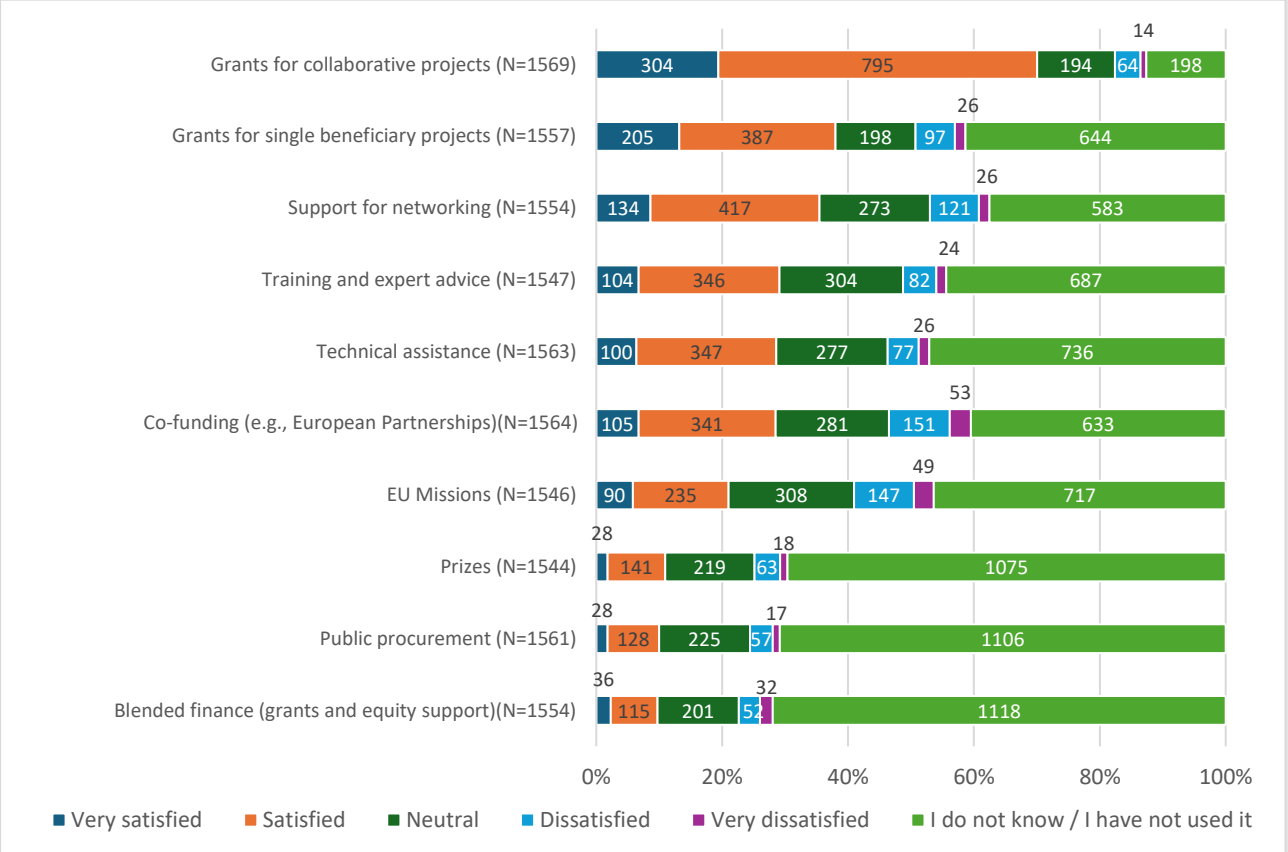


Figure 67: Stakeholder breakdown – Grants for collaborative projects (N= 1569)

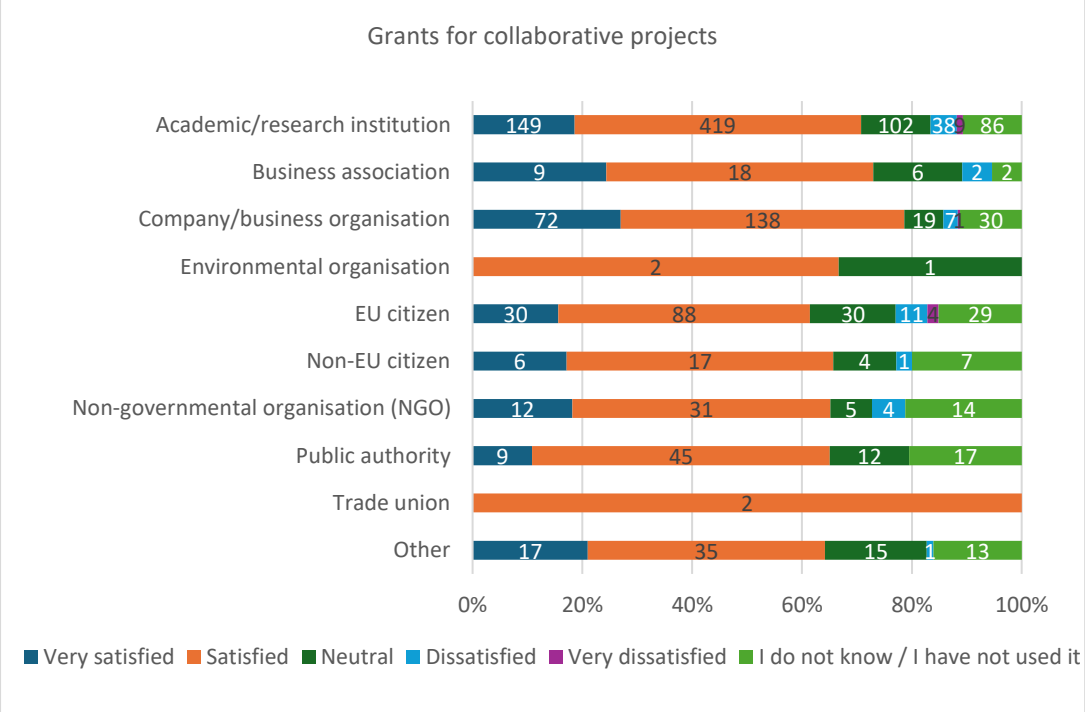


Figure 68: Stakeholder breakdown – Grants for single beneficiary projects (N= 1663)

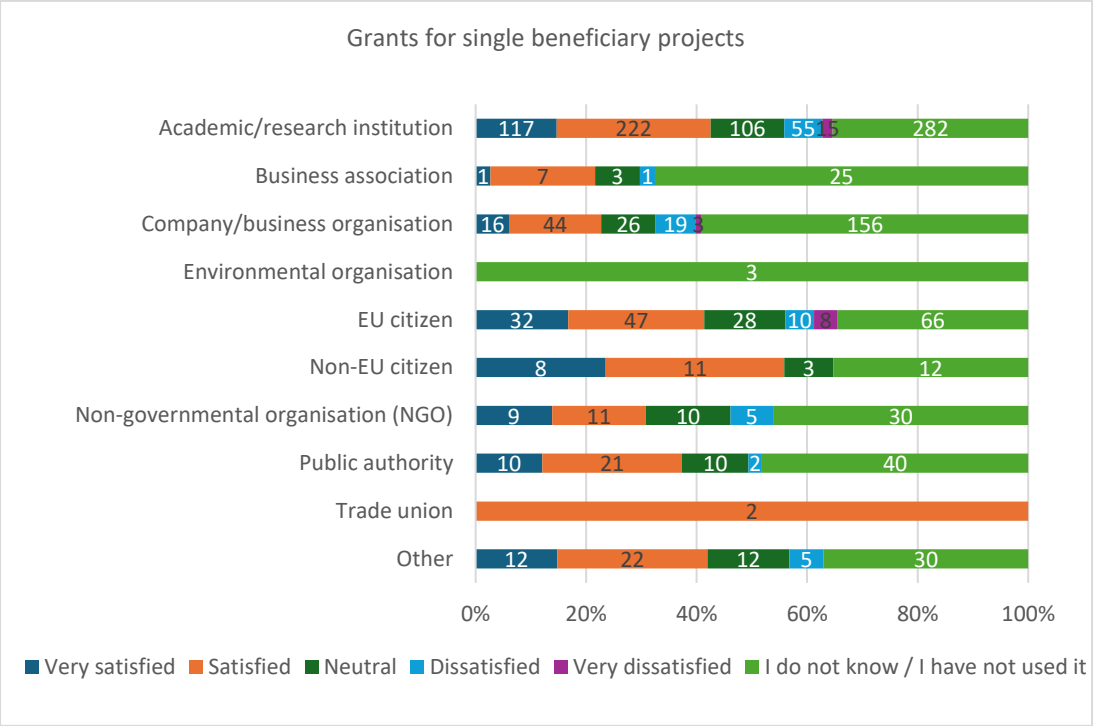


Figure 69: Stakeholder breakdown – Blended finance (N= 1554)

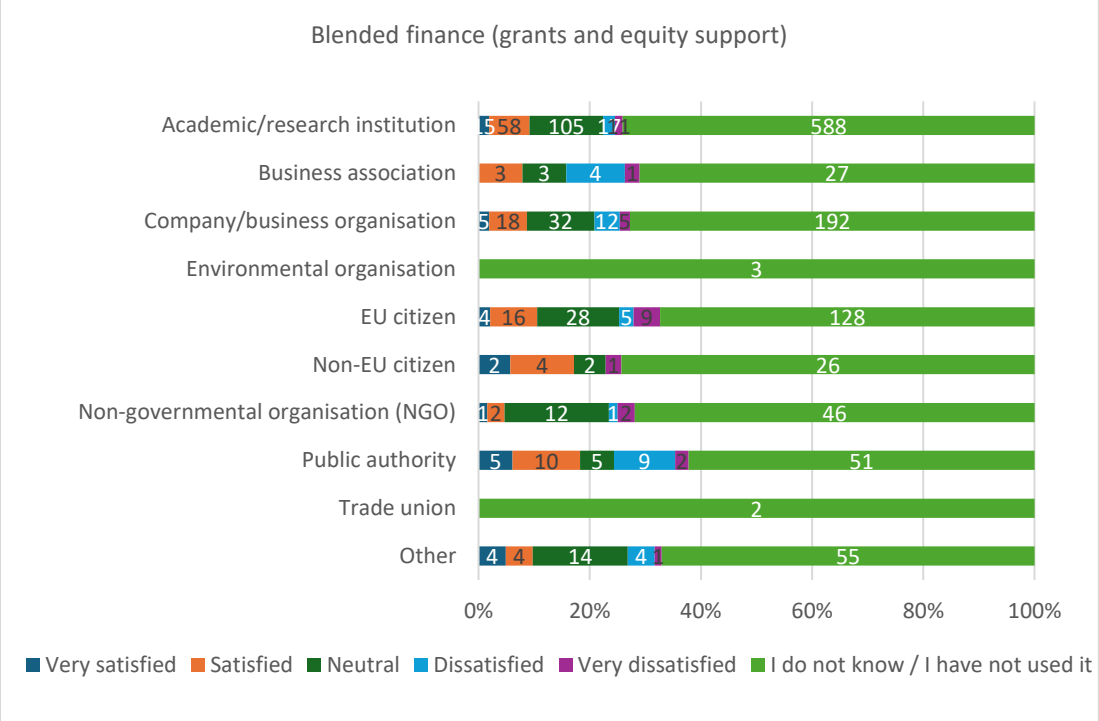


Figure 70: Stakeholder breakdown – Public procurement (N= 1561)

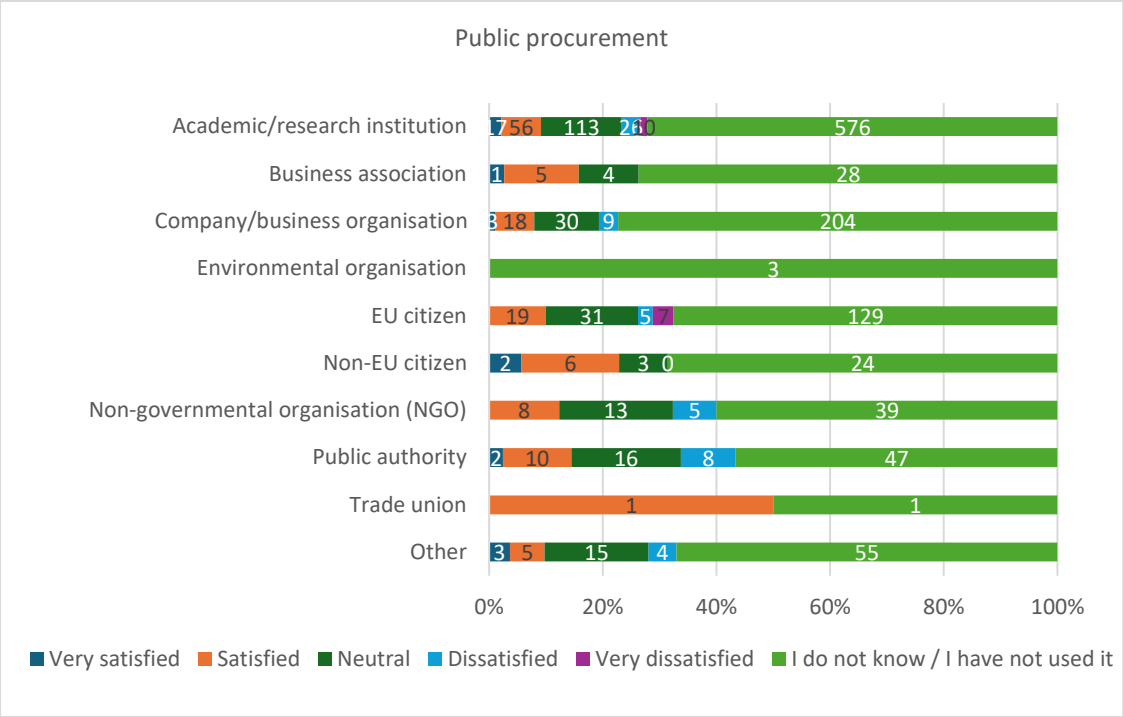


Figure 71: Stakeholder breakdown – Prizes (N= 1544)

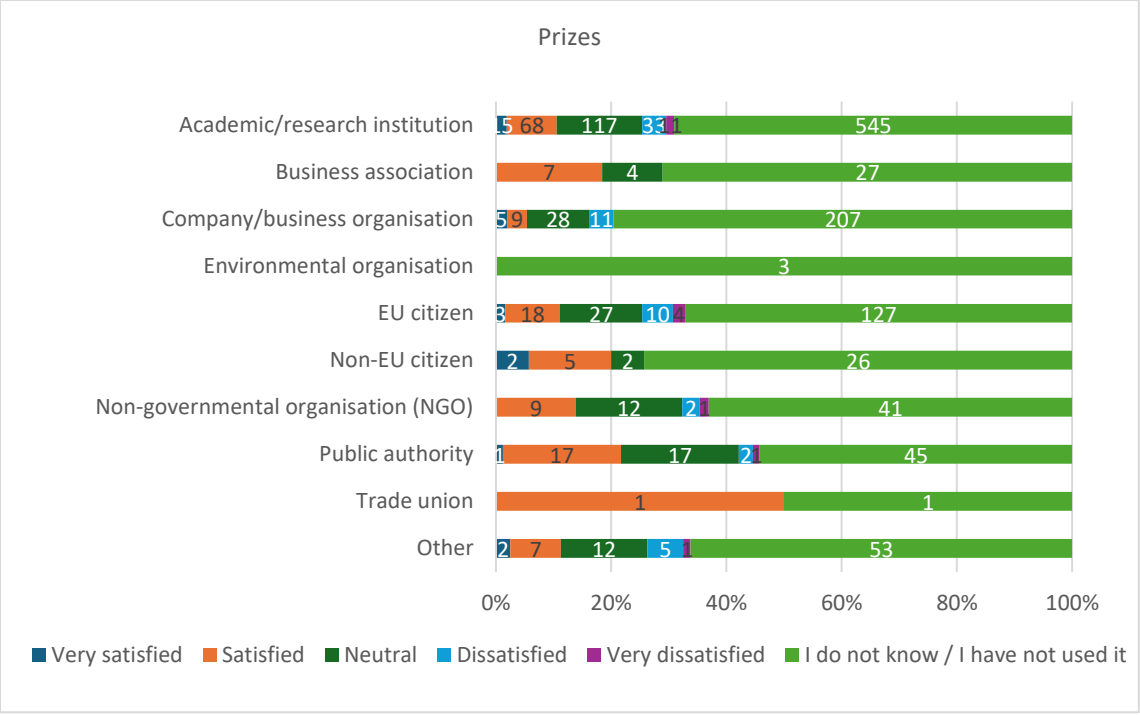


Figure 72: Stakeholder breakdown – Co-funding (N= 1565)

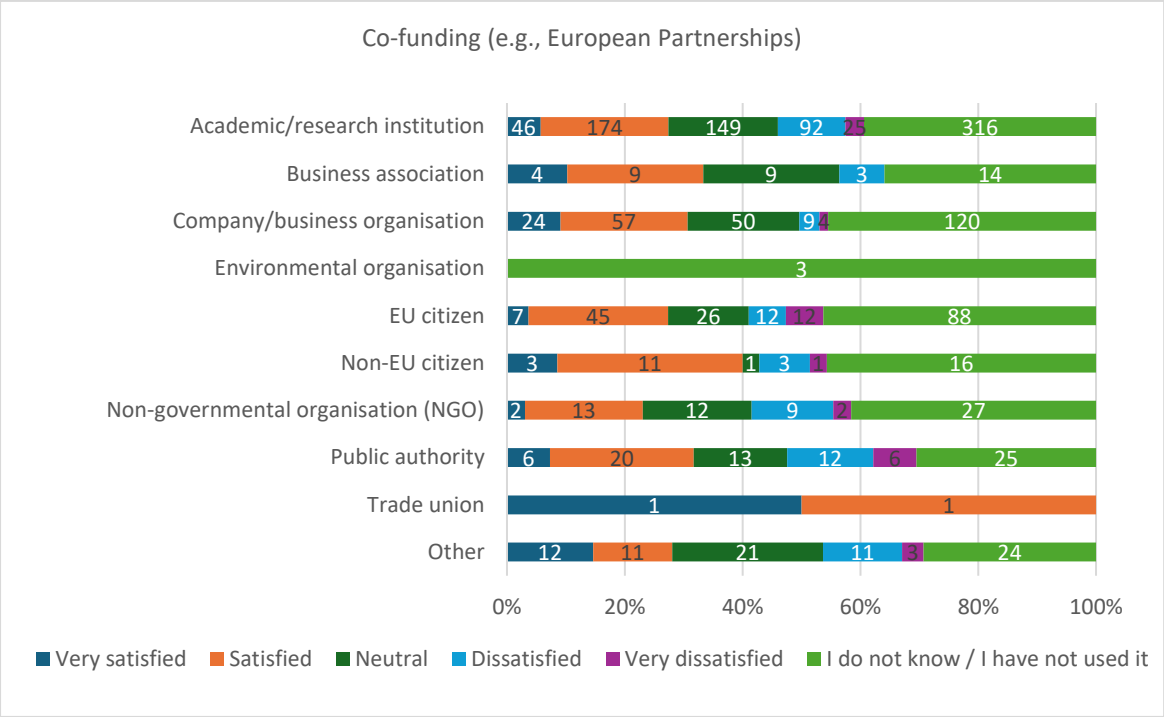
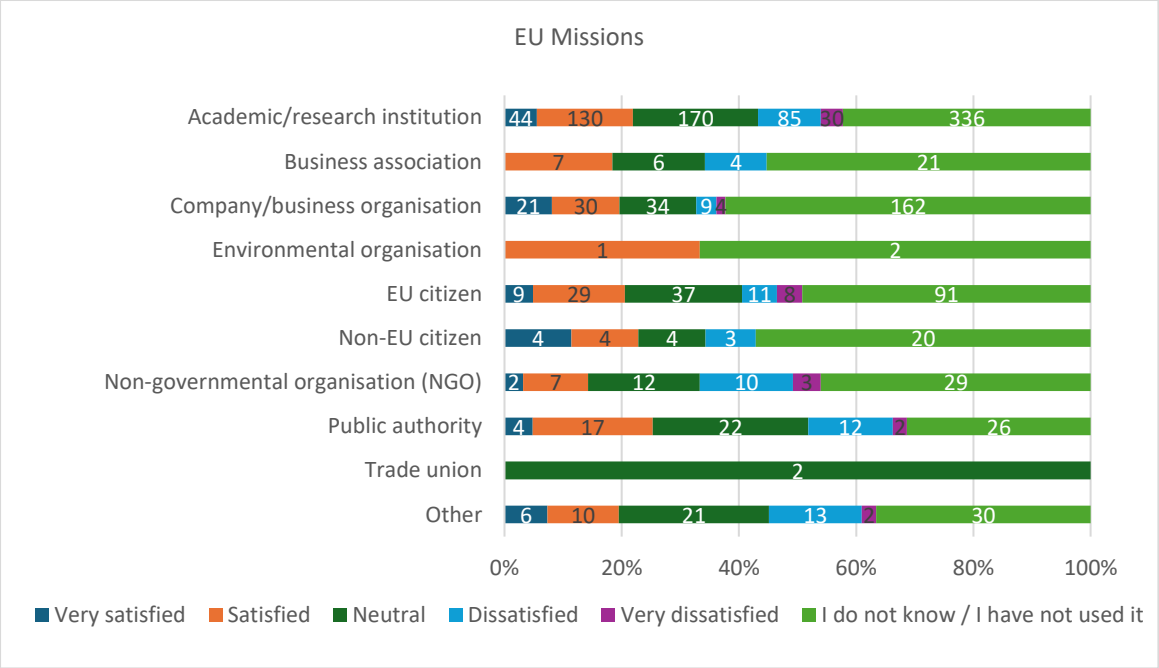


Figure 73: Stakeholder breakdown – EU Missions (N= 1546)



TRLs

In the position papers, the comments on the types of support mainly concerned the technology readiness levels (TRLs) targeted by the calls for proposals. Several universities and research organisations noticed a tendency in Horizon Europe to fund projects at higher TRLs under Pillar II. This tendency was seen negatively by most of the respondents, as there is a perceived gap between the fundamental research funded by the ERC and the very applied and innovation-oriented calls within Pillar II. In this regard, different research organisations, universities, but

also some public authorities recommended combining the thematic calls targeting high TRL under Pillar II with some calls targeting lower TRL research.

Box 6: Summary of the discussion held in the public event on the balance between low and high Technology Readiness Levels across Horizon Europe

- The discussion reaffirmed the findings of the public consultation and focused primarily on issues identified in Pillar II.
- First of all, participants appreciated the programme's emphasis on addressing the full TRL spectrum from basic research to market implementation with adequate instruments and resources.
- However, participants from business, academia and research organisations voiced concerns that the prevalence of calls for high TRL projects, including Research and Innovation Actions (RIA), acted as a barrier for researchers. This issue was observed across all clusters and Missions, hampering the ability to build a portfolio of basic research projects that would nurture future innovation.
- Participants emphasized the importance of covering the entire innovation cycle, including a better coverage of low TRL projects, and the need for structured synergies with other EU programs to facilitate funding and resource utilization for market uptake and commercialisation.
- Additionally, participants pointed to the importance of maintaining a balance between low, medium, and high TRL levels, supporting the full range of TRLs, and ensuring smooth transitions between different programs and pillars. It was noted that TRLs were often addressed in silos, leading to gaps within the program. Concerns were expressed because of the gaps between the European Research Council (ERC) and Marie Skłodowska-Curie Actions and calls for projects in Pillar II. A research organisation noted that the Pathfinder was considered a good example for integrating in a continuum the TRL spectrum, but its positioning within Pillar III was questioned.
- Concerns were expressed by research organisations about overly prescriptive project calls in Pillar II, lack of diversity in funding opportunities, and the potential negative impact on researchers' flexibility and participation.
- Another participant, taking into account EU policy that emphasize European competitiveness and strategy autonomy, highlighted the importance of focusing on mid-level TRLs to facilitate the deployment of pilots, testing, demonstrators, and scale-ups.
- At the same time, stakeholders acknowledged the significant progress made by Horizon Europe in integrating transdisciplinary approaches within clusters, which was positively received.
- Finally, some stakeholders from research organisations emphasised the limitations of the TRL concept for SSH advocating for more consideration of societal readiness in addition to technical aspects.

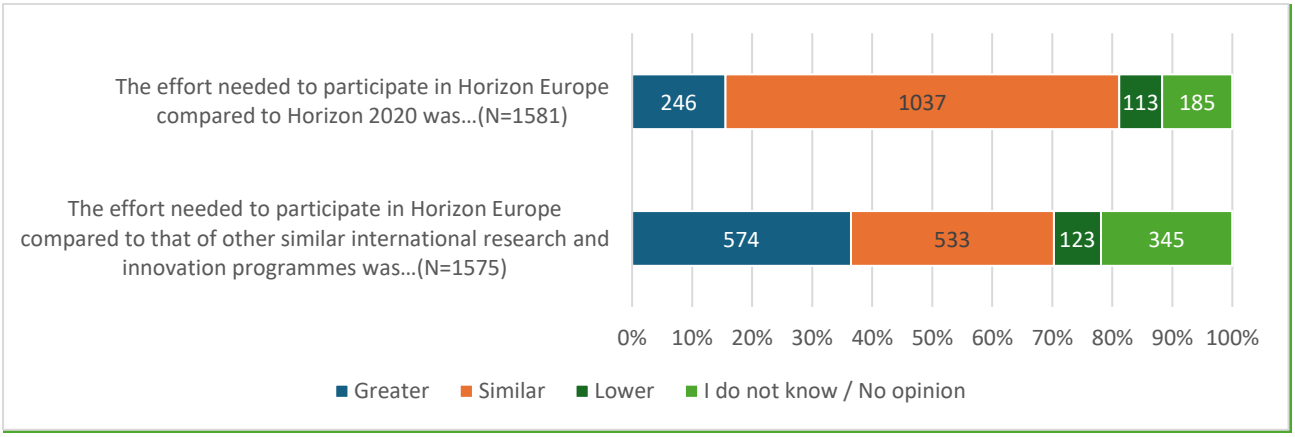
In their position papers, the respondents explained their concerns about the implementation of the EU Missions and the European Partnerships, summarised respectively in Box 5 and Box 6.

Effort to participate in Horizon Europe

66% (1 037) of respondents maintained that "the effort to participate in Horizon Europe compared to Horizon 2020" was "similar". According to 16% (246) of respondents it was greater and for 7% (113) it was lower. A relatively larger share of respondents from Associated Countries and Third Countries indicated that the effort was "greater" than from EU14 or EU13. Among the different types of respondents, the effort needed to participate in Horizon Europe was perceived as "greater" both compared to Horizon 2020 and to other programmes especially by academic and research institutions.[218] The effort to participate in Horizon Europe was usually deemed greater (36%; 574) or similar (34%; 533) to other research and innovation programmes. Only 8% (123) of respondents thought it was lower.

Although many respondents acknowledged the simplification efforts put in Horizon Europe[219], the participation in Horizon Europe was still considered too burdensome and the position papers pointed out some room for improvement[220]. A few papers have highlighted the additional requirements linked to the cross-cutting issues (e.g., the Gender Equality Plan), which have further increased the costs of proposal preparation.

Figure 74: The effort needed to participate in Horizon Europe compared to Horizon 2020 and other similar international programmes was:



[218] The results of the analysis differentiating by type of respondent and by geographical area are reported in Table 27, Table 28, Table 29 and Table 30 - additional statistics.

[219] For example through the Funding & Tender portal, the standard template for proposal preparation, the introduction of simplified financing (e.g., lump sum), simplified procedures for Grant Agreement preparation and reporting.

[220] 50 position papers discussed issues related to the costs of participation, simplification efforts and administrative burden. The main messages are in line with the ones presented in the previous sections on proposal preparation and project implementation.

Figure 75: Breakdown by country – Effort to participate compared to Horizon 2020 (N= 1581)

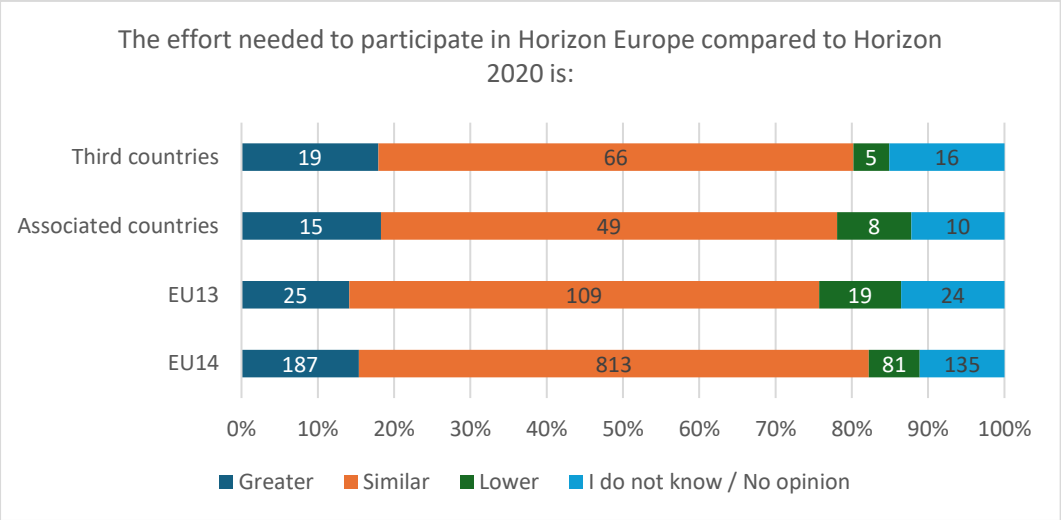


Figure 76: Stakeholder breakdown – Effort to participate compared to Horizon 2020 (N= 1581)

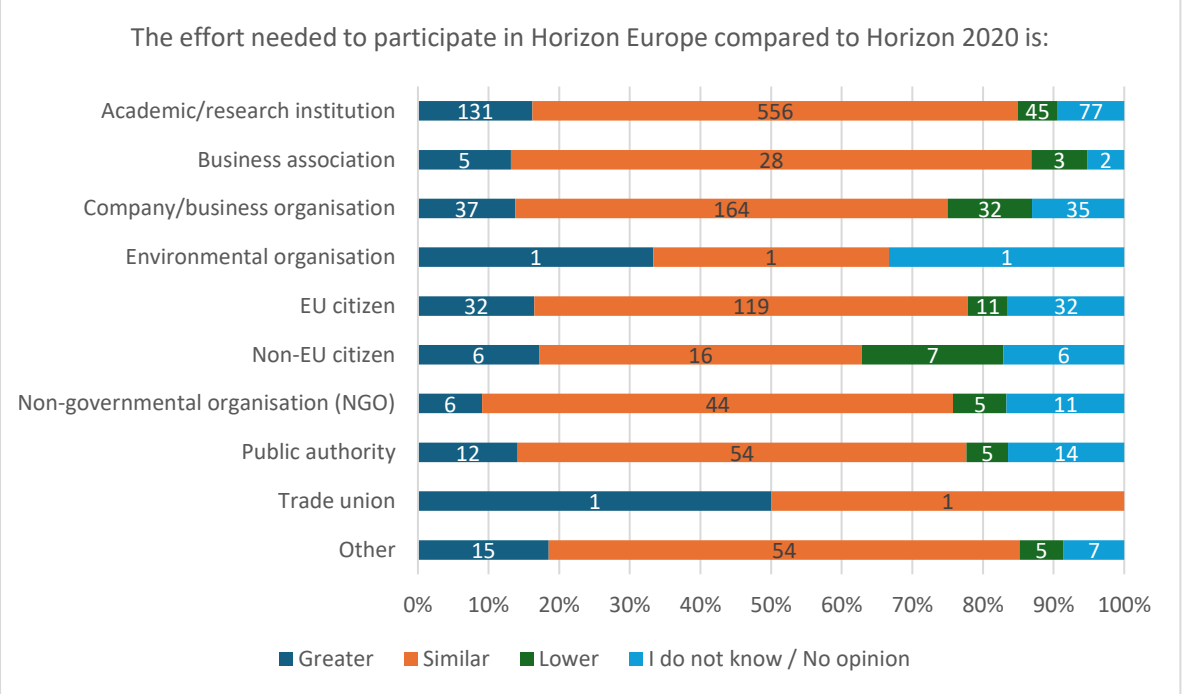


Figure 77: Breakdown by country – Effort to participate compared to other programmes (N= 1575)

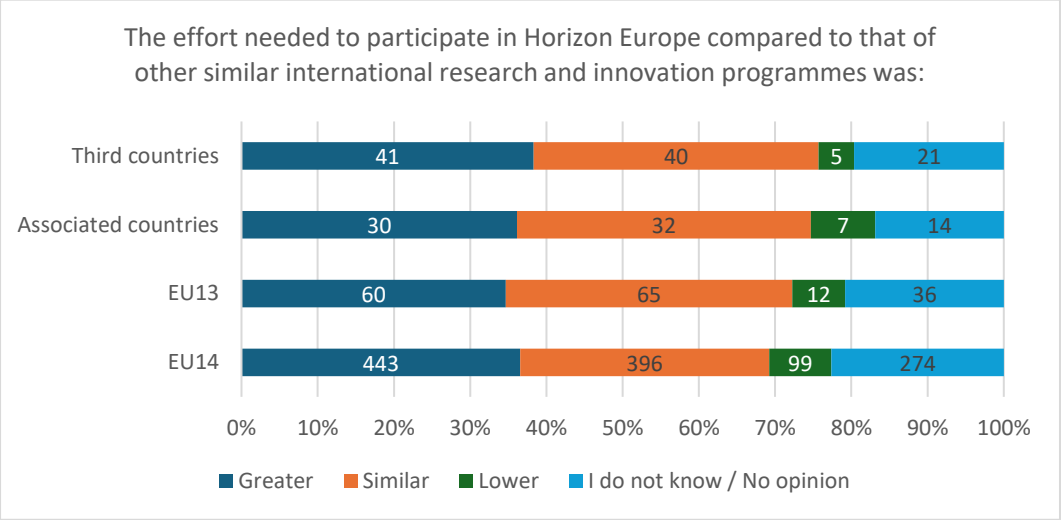
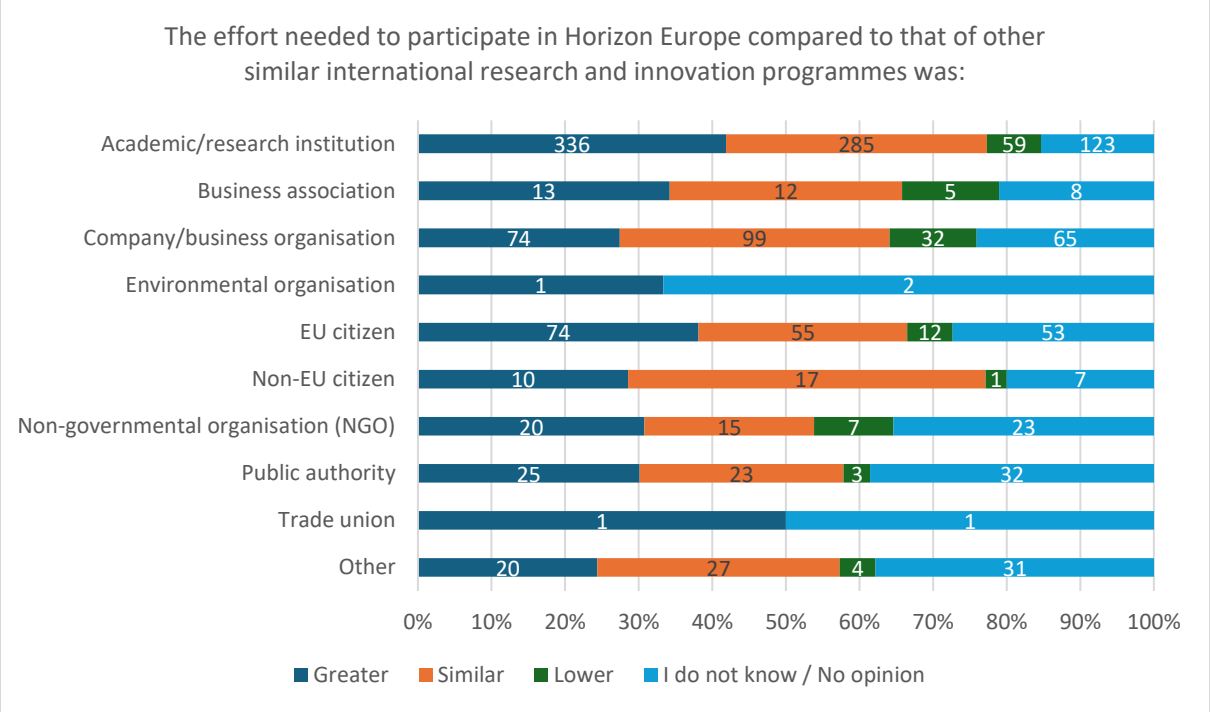


Figure 78: Stakeholder breakdown – Effort to participate compared to other programmes (N= 1575)



Costs of proposal preparation

A majority (52%; 744) of the respondents declared that their "proposal preparation for Horizon Europe" took overall less than 50 days, 34% (483) more than 50 but less than 100 days and 15% (213) more than 100 days.[221]

Figure 79: Approximately, how much time did the proposal preparation for Horizon Europe take overall? Please indicate the total number of person-days. (N= 1 663)

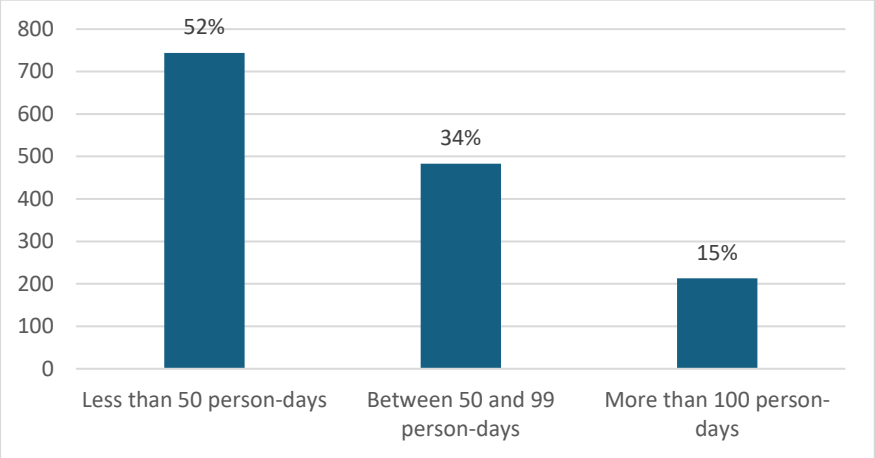
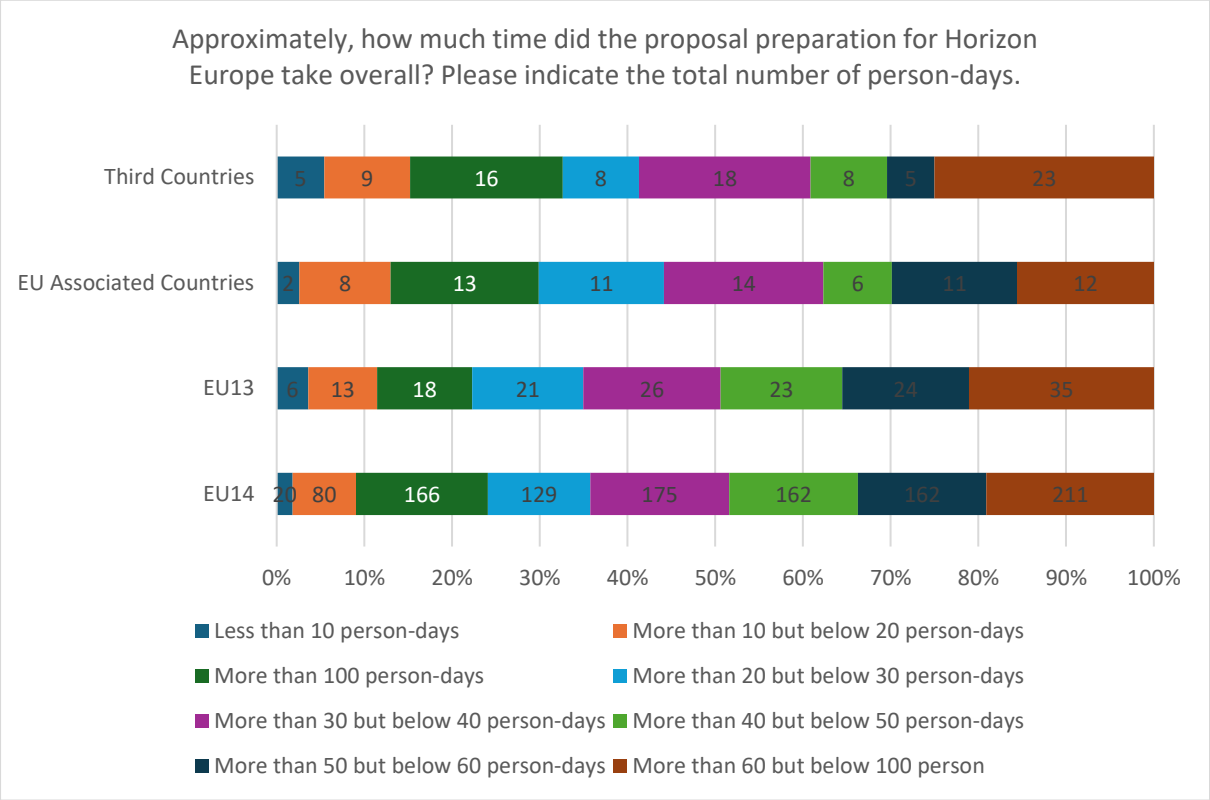
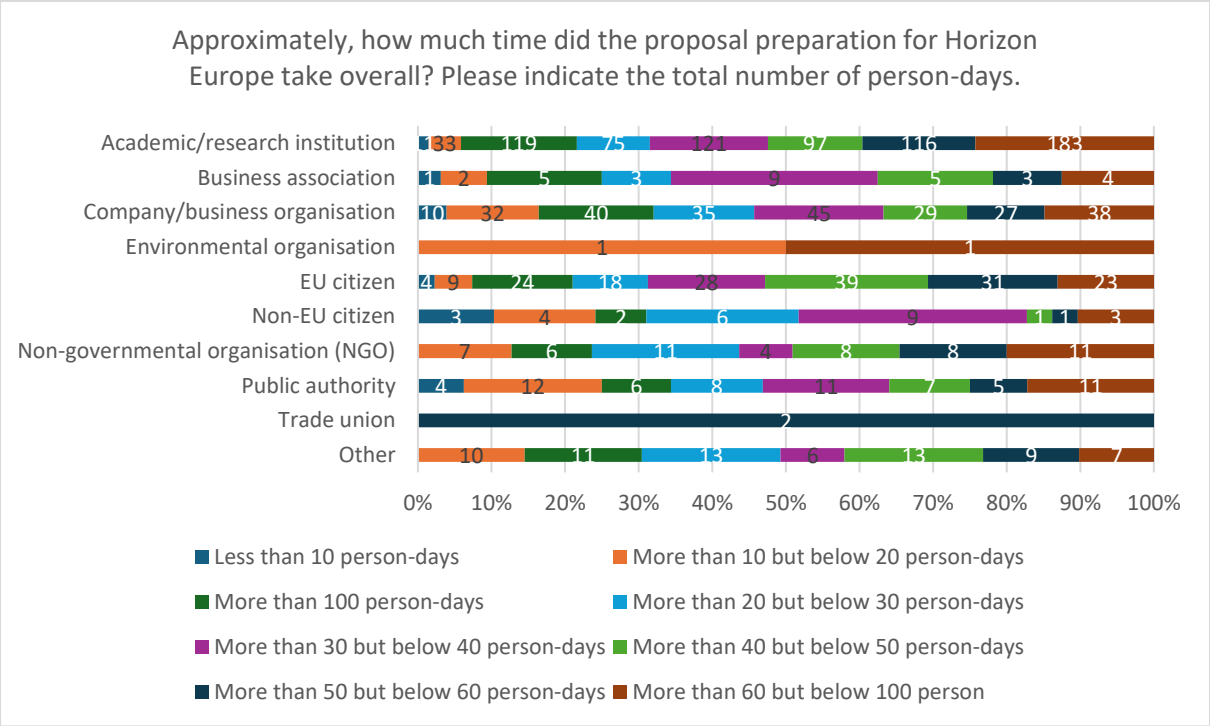


Figure 80: Breakdown by country group – Total number of person-days (N= 1663)



[221] The results of the analysis differentiating by country group and type of respondent and by geographical area are reported in Table 31 and Table 32 - additional statistics.

Figure 81: Stakeholder breakdown – Number of person-days (N= 1663)



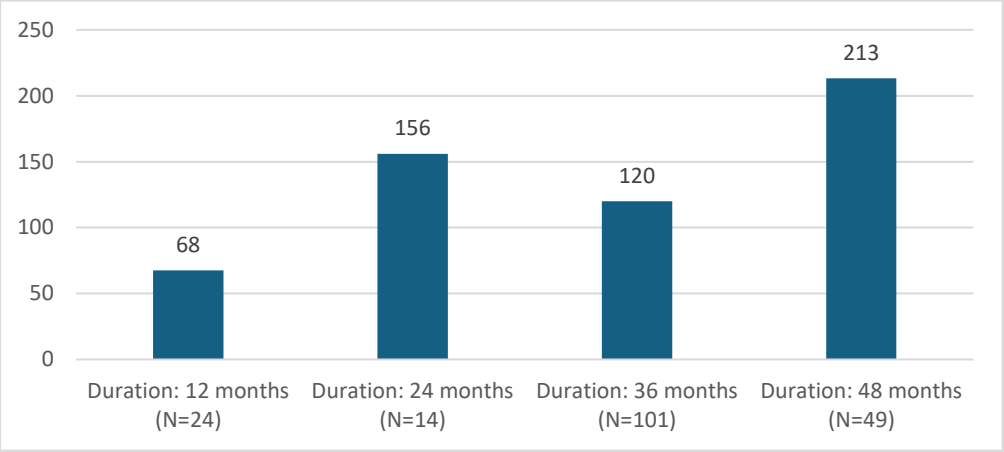
Managing participation in Horizon Europe

The consultation also asked participants about the "time spent managing participation". The analysis of responses cannot be conclusive because there is great variability in the responses in terms of who provided information or not, which programme parts the respondents were linked to and their specific role in the projects.[222]

The chart below shows the information provided on "average number of person-days spent during the entire project", by project duration.

[222] For example, among projects with a duration of 36 months, the estimates range from 5 person-days to 750 person-days.

Figure 82: Approximately, how much time does your project spend on managing participation in Horizon Europe? Total number of person-days spent overall on managing participation. Average estimate of person-days by project duration (N= 188)



The answers to the open question "Approximately, how much time does your project spend on managing participation in Horizon Europe?" can only be interpreted with caution because of the following:

- 342 responses could not be processed because respondents did not provide the required information: they could not provide an estimate or when they did it was not in the required format.
- Comparability is difficult because respondents interpreted the question in different ways (e.g., some respondents included in the estimate the time spent for the internal project coordination, others provided an estimate of the time that it took for the whole project activities).
- The resources spent on managing participation largely depended on the type of action (i.e., Research & Innovation Action or Coordination and Support Action) or the role of the respondent in the project (i.e., coordinator or partner), and the project size.

Suggestions on how administrative burden for applicants and participants can be further reduced are related to simplifying the application and submission process (including the process to amend the proposal), reducing the reporting requirements, increasing flexibility in accepting different time management measurements as well as accounting practices, creating a simplified contractual framework and reduced models for calculating costs and accounting, implementing two-staged application processes to reduce the burden of the application, and eliminating the repeating parts in the project proposal templates.[223]

Progress towards achieving Horizon Europe objectives

Assessing the achievement of Horizon Europe objectives

The majority of respondents "agreed" or "strongly agreed" that "Horizon Europe was on track to deliver" its objectives.

[223] 830 respondents answered the open question "How can the administrative burden for applicants and participants be further reduced (regarding application process, reporting requirements, cost calculation etc.)?"

Figure 83: To what extent do you agree that Horizon Europe is on track to deliver on the following objectives

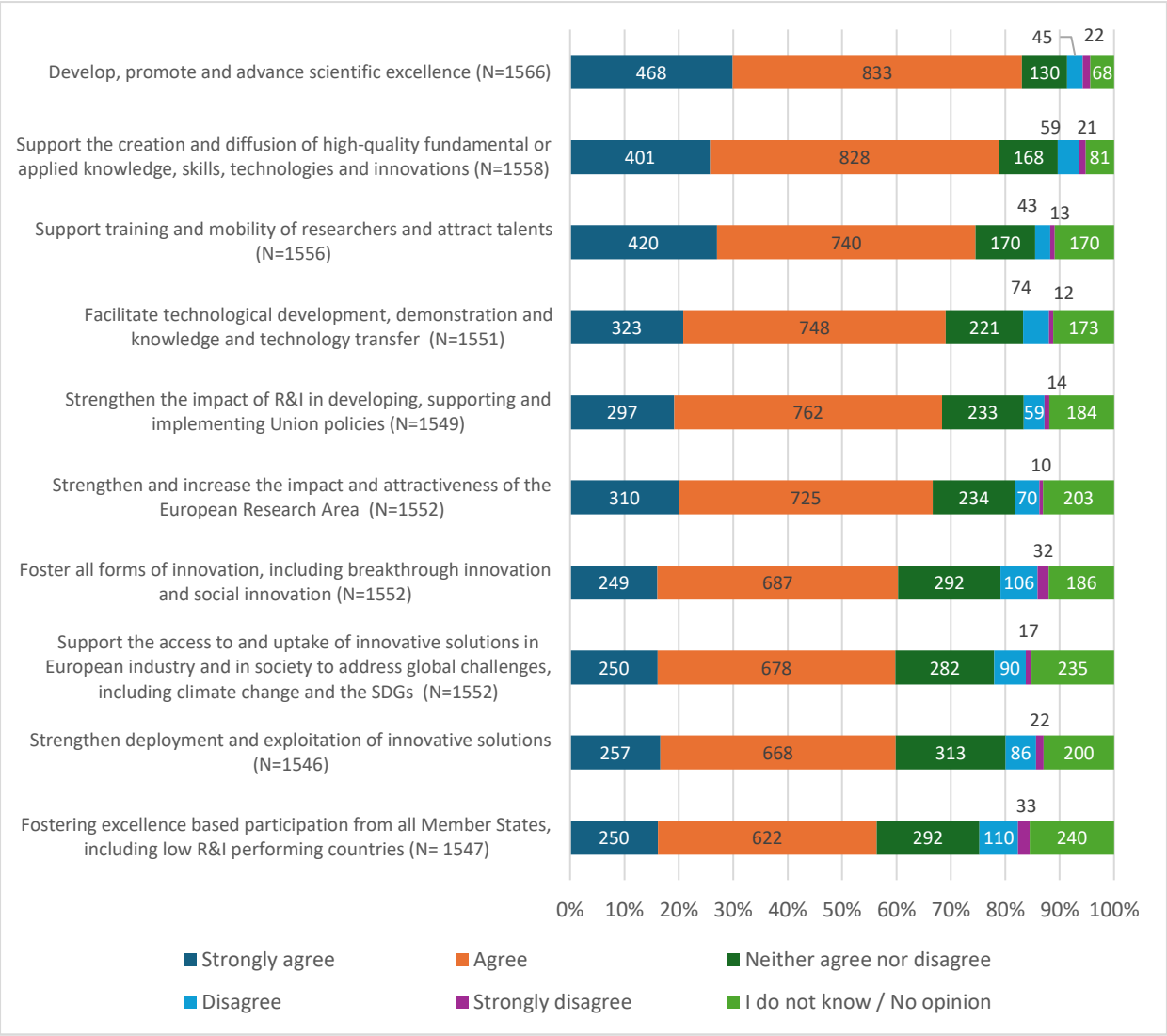


Figure 84: Stakeholder breakdown – Develop, promote and advance scientific excellence (N= 1566)

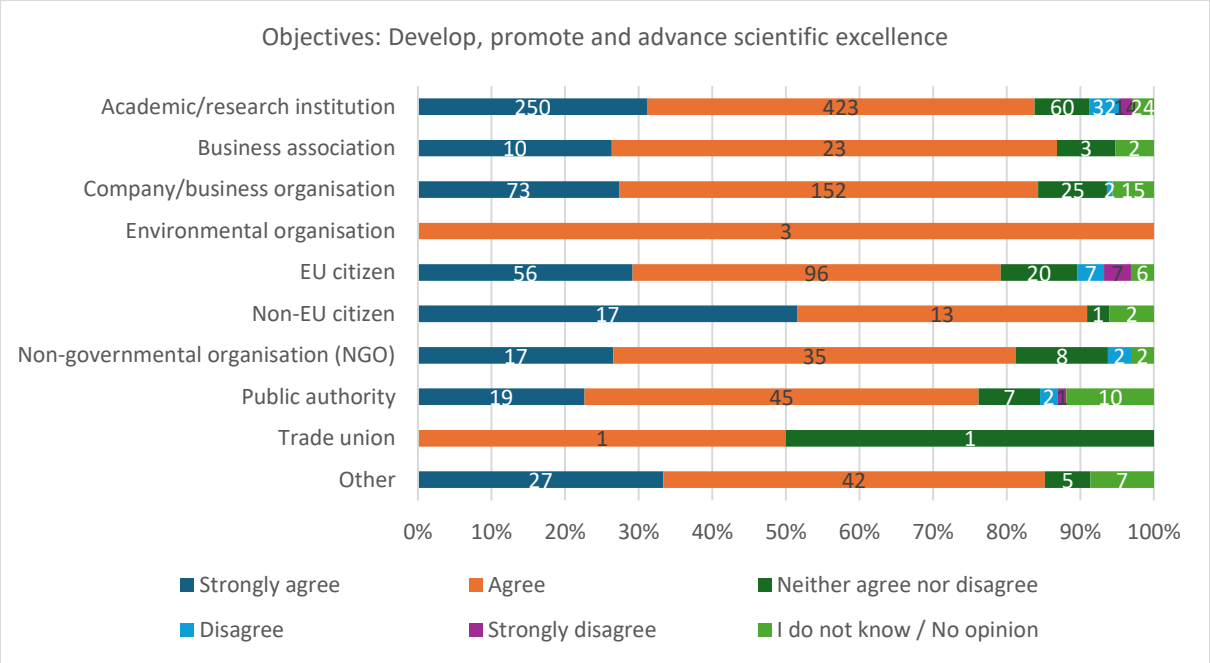


Figure 85: Stakeholder breakdown – Support the creation and diffusion of high-quality fundamental or applied knowledge, skills, technologies and innovations (N= 1558)

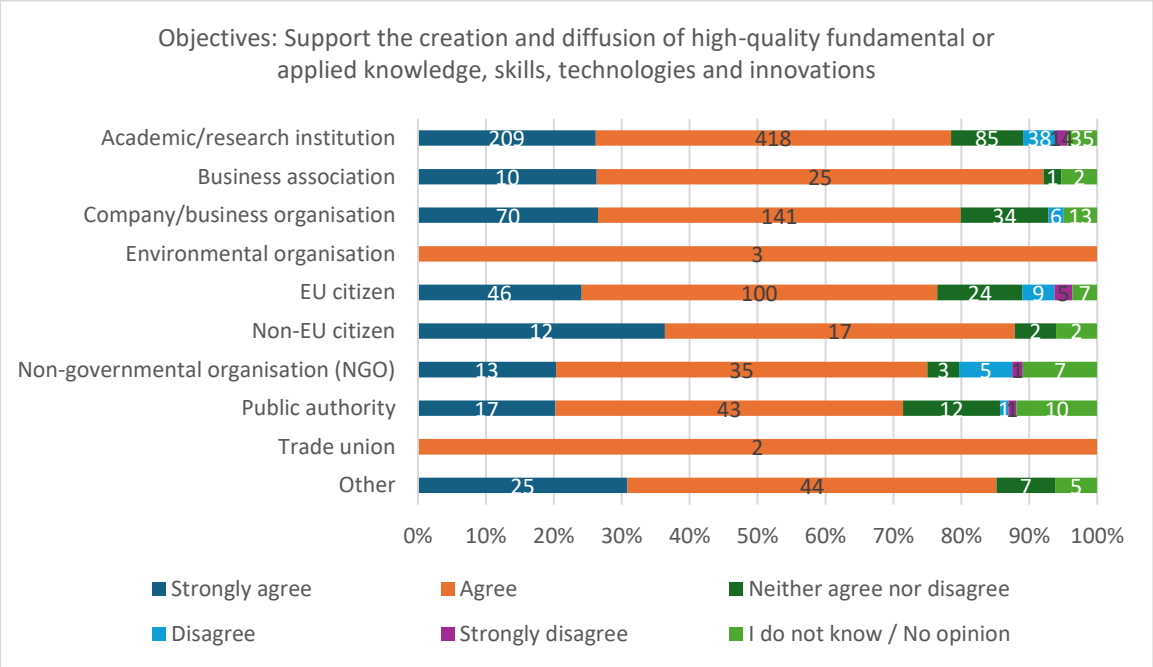


Figure 86: Stakeholder breakdown – Support training and mobility of researchers and attract talents (N= 1556)

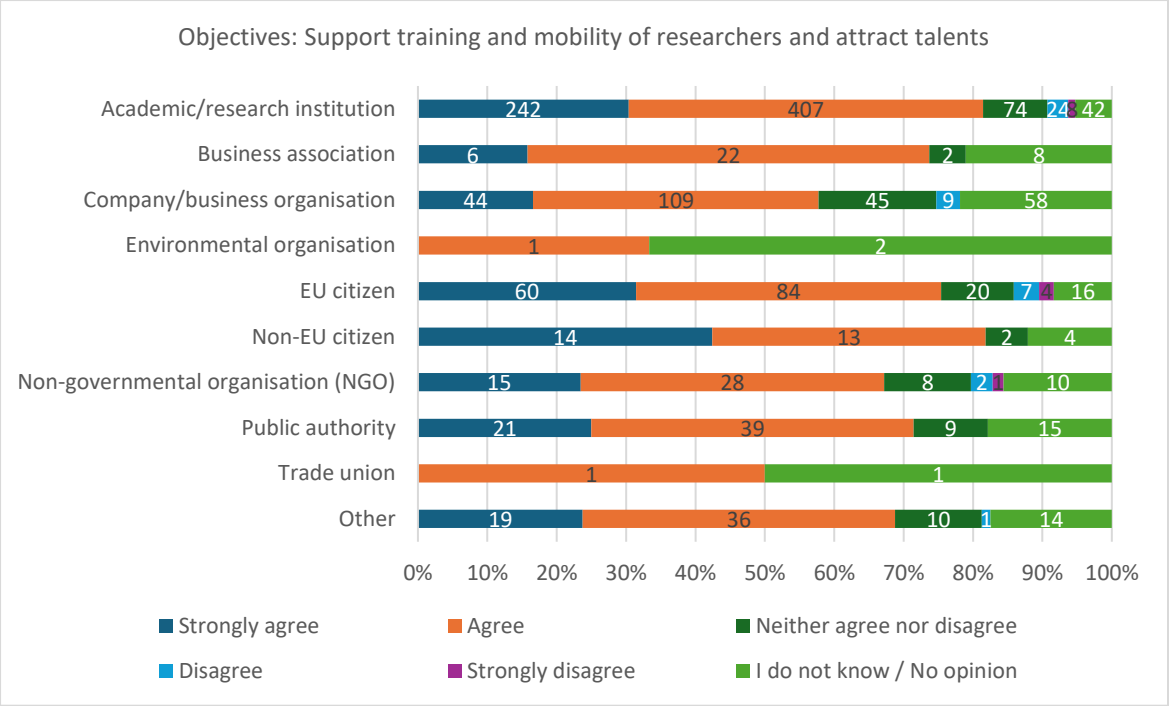


Figure 87: Stakeholder breakdown – Strengthen the impact of R&I in developing, supporting and implementing Union policies (N=1549)

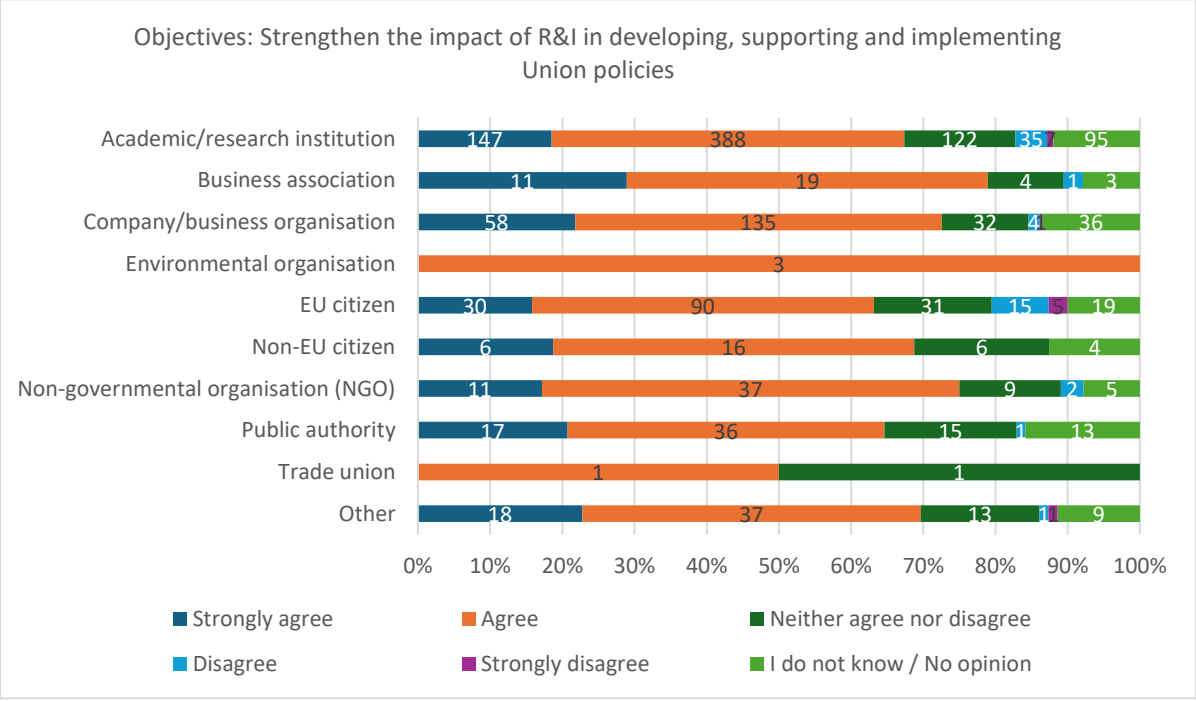


Figure 88: Stakeholder breakdown – Support access to and uptake of innovative solutions in European industry and in society to address global challenges including climate change and the SDGs (N= 1552)

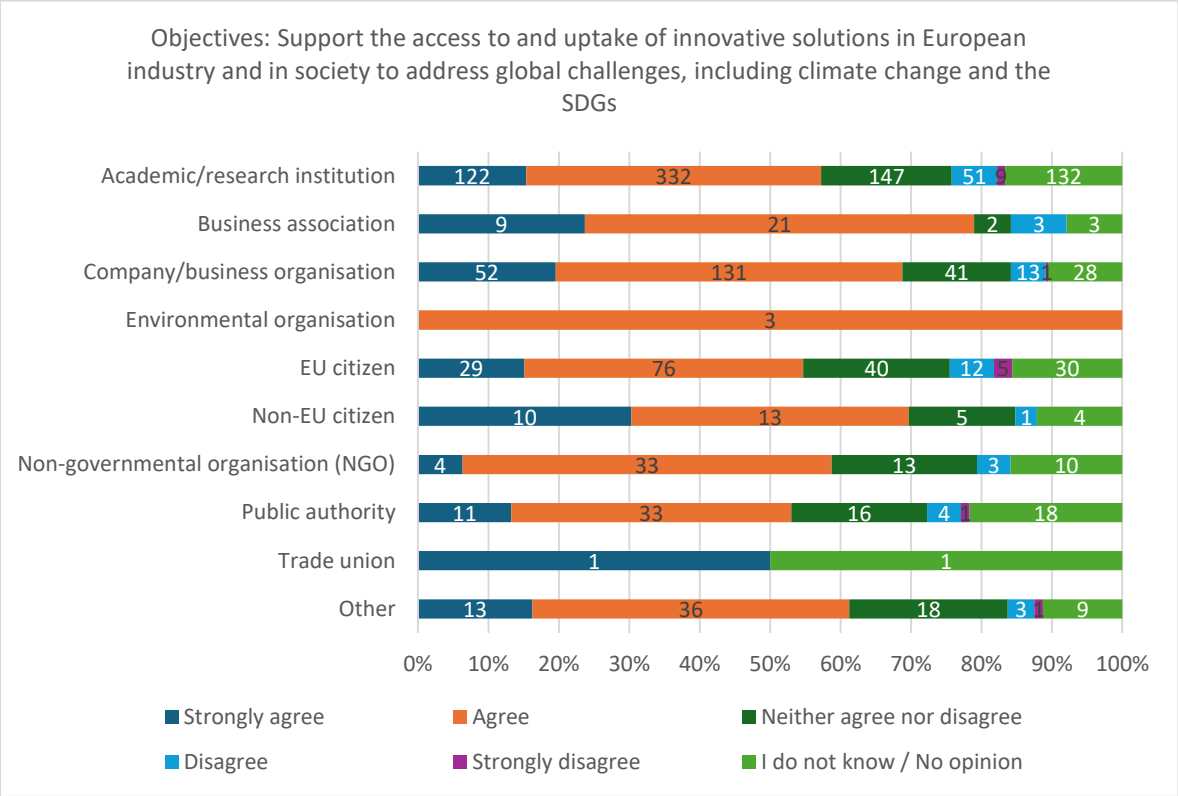


Figure 89: Stakeholder breakdown – Foster all forms of innovation including breakthrough innovation and social innovation (N= 1552)

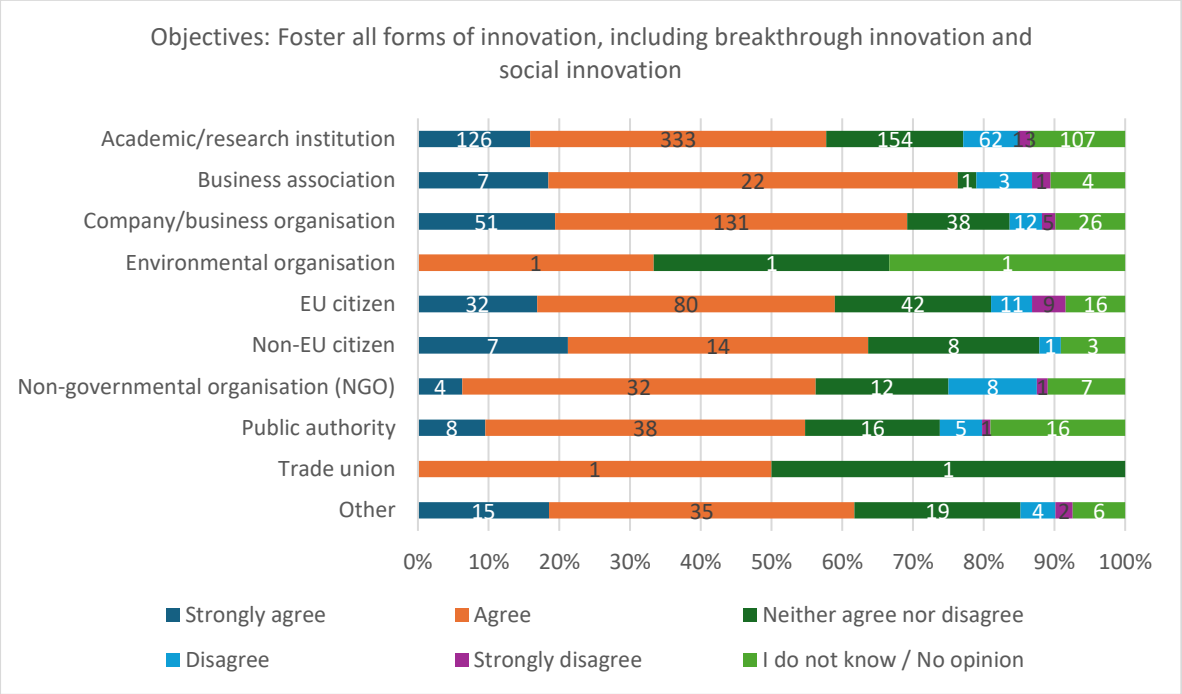


Figure 90: Stakeholder breakdown – Facilitate technological development, demonstration and knowledge and technology transfer (N= 1551)

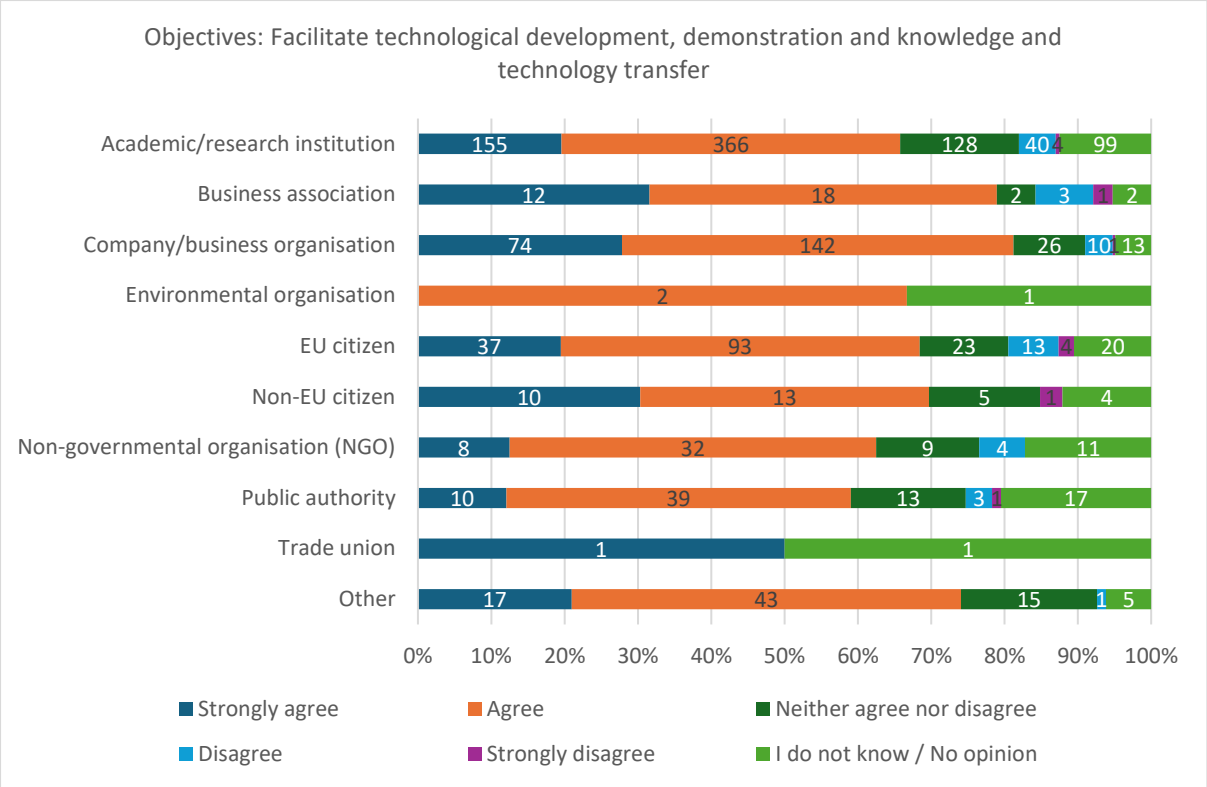


Figure 91: Stakeholder breakdown – Strengthen deployment and exploitation of innovative solutions (N= 1546)

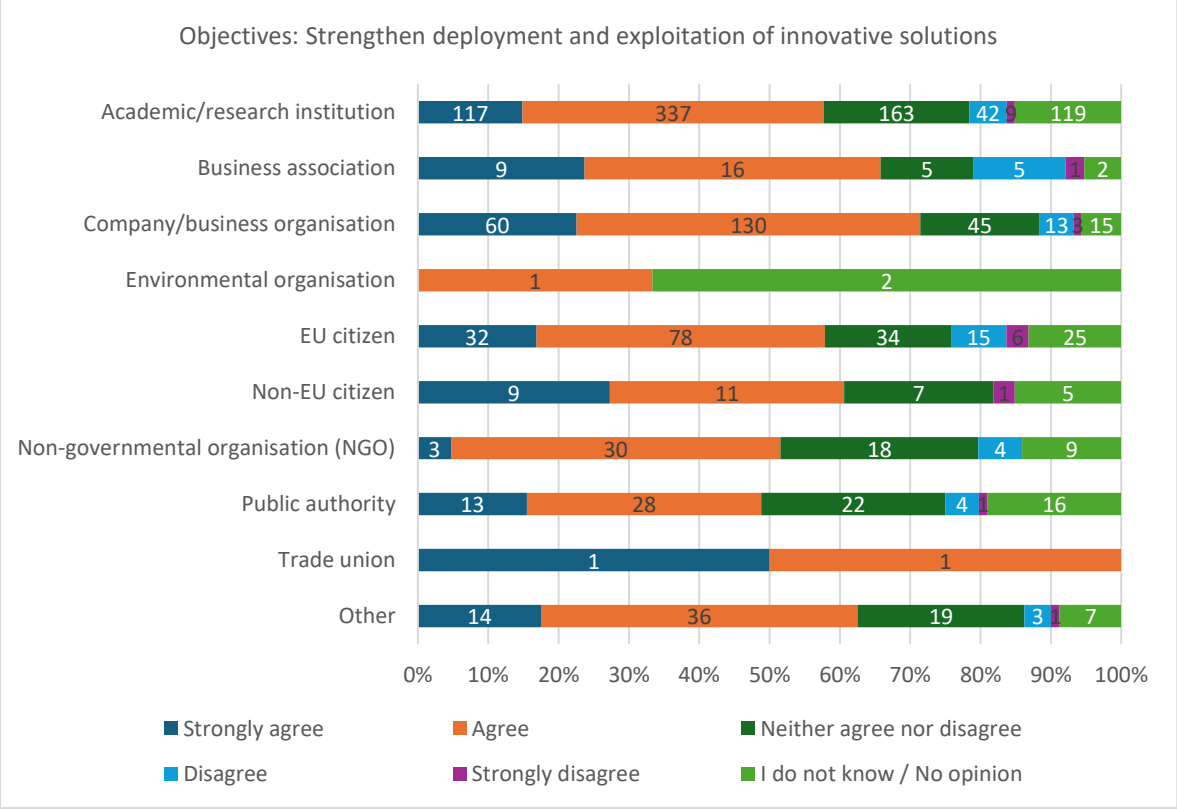


Figure 92: Stakeholder breakdown – Strengthen and increase impact and attractiveness of the European Research Area (N= 1552)

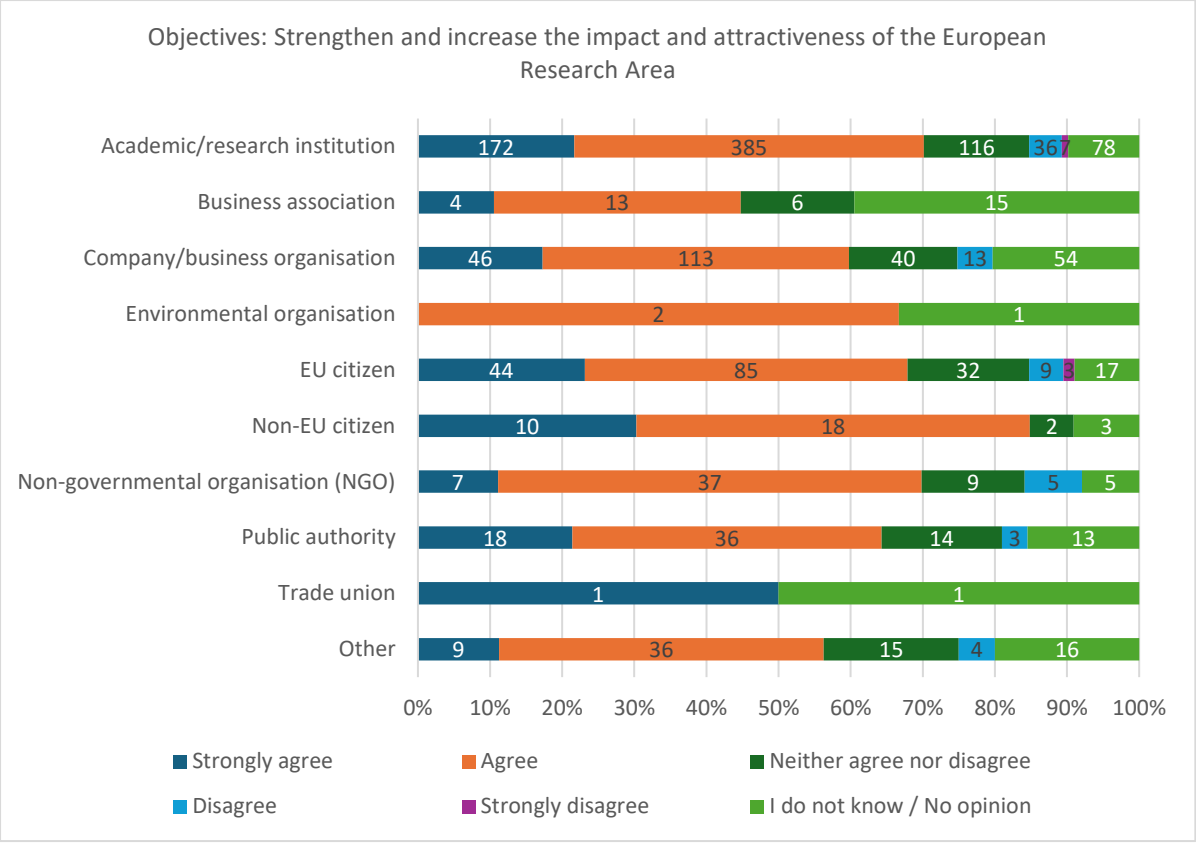
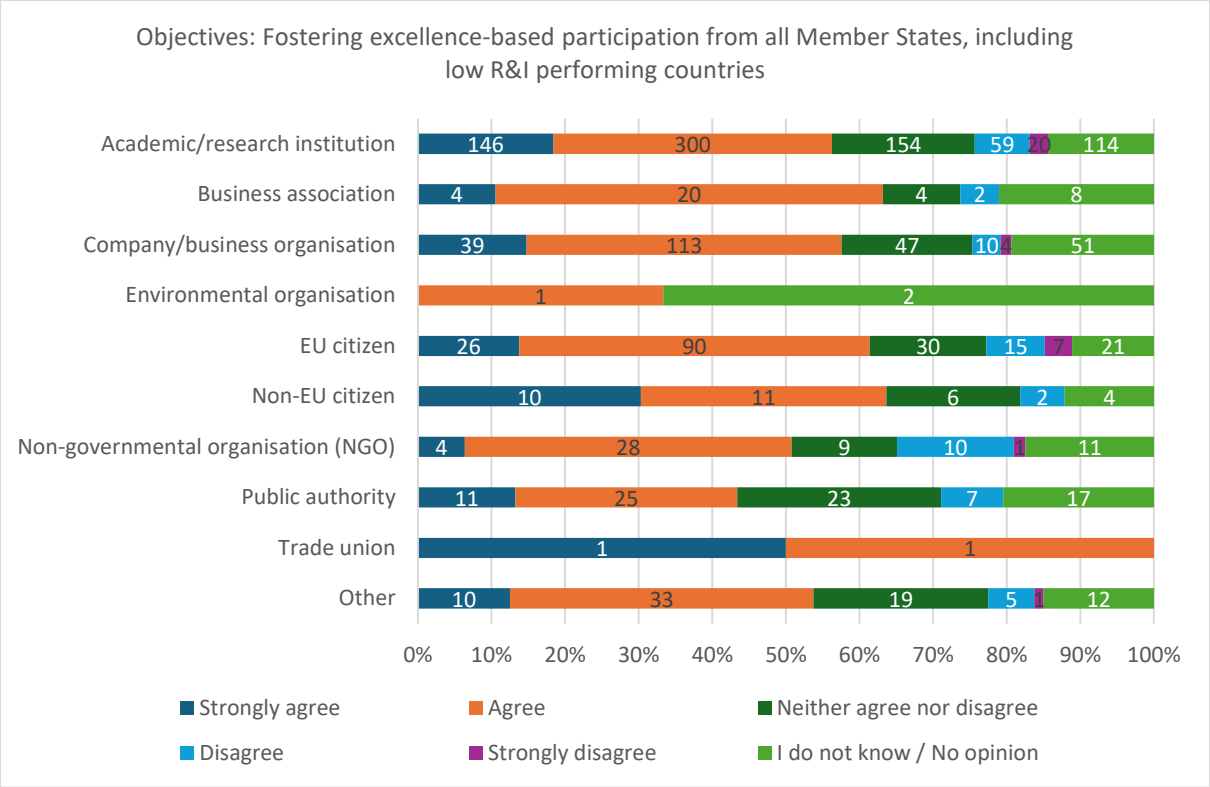


Figure 93: Stakeholder breakdown – Fostering excellence-based participation from all Member States, including low R&I performing countries (N= 1547)



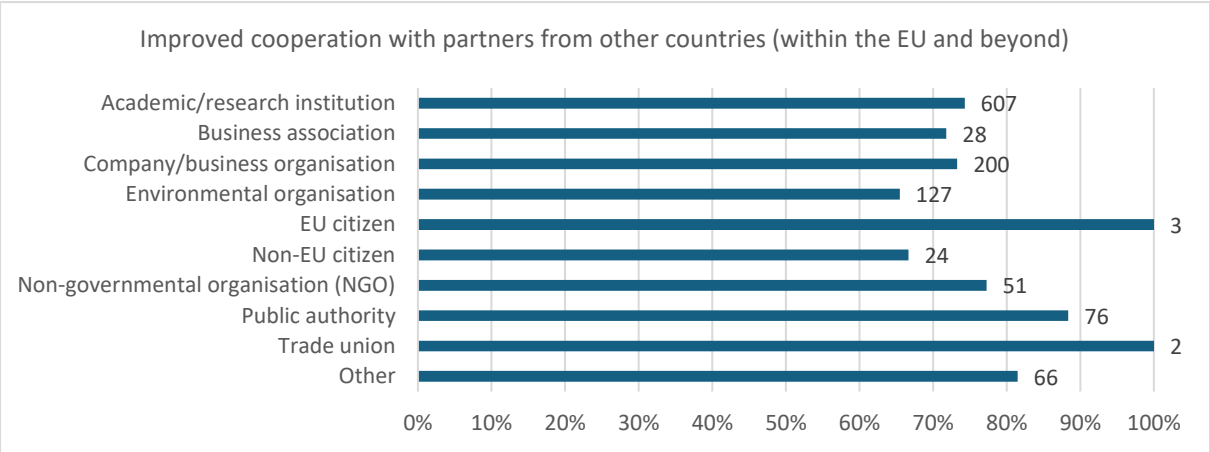
Cross-cutting issues

Please find below additional breakdowns regarding the cross-cutting objectives of Horizon Europe, along with aspects highlighted in the position papers.

International cooperation

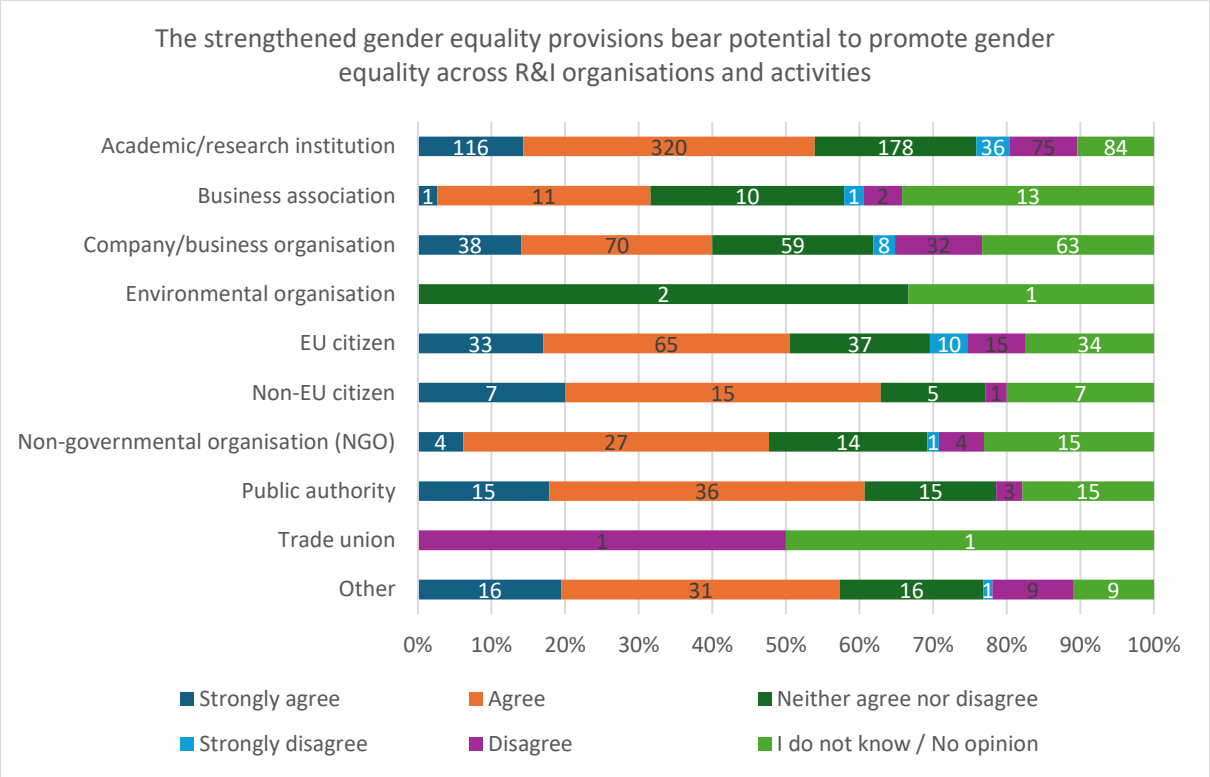
35 position papers discussed international cooperation. They pointed to the benefits of international collaboration for EU research and innovation because it allows access to more talents, resources and knowledge. Stakeholders also considered that the non-association of Switzerland and the UK, and uncertainty about the status of non-EU countries, has thus far limited the ability of consortia to work with international partners.

Figure 94: Stakeholder breakdown – Improved cooperation with partners from other countries within the EU and beyond (N= 1597)



Gender equality

Figure 95: Stakeholder breakdown – Gender equality provisions bear potential to promote gender equality across R&I organisations and activities (N= 1581)



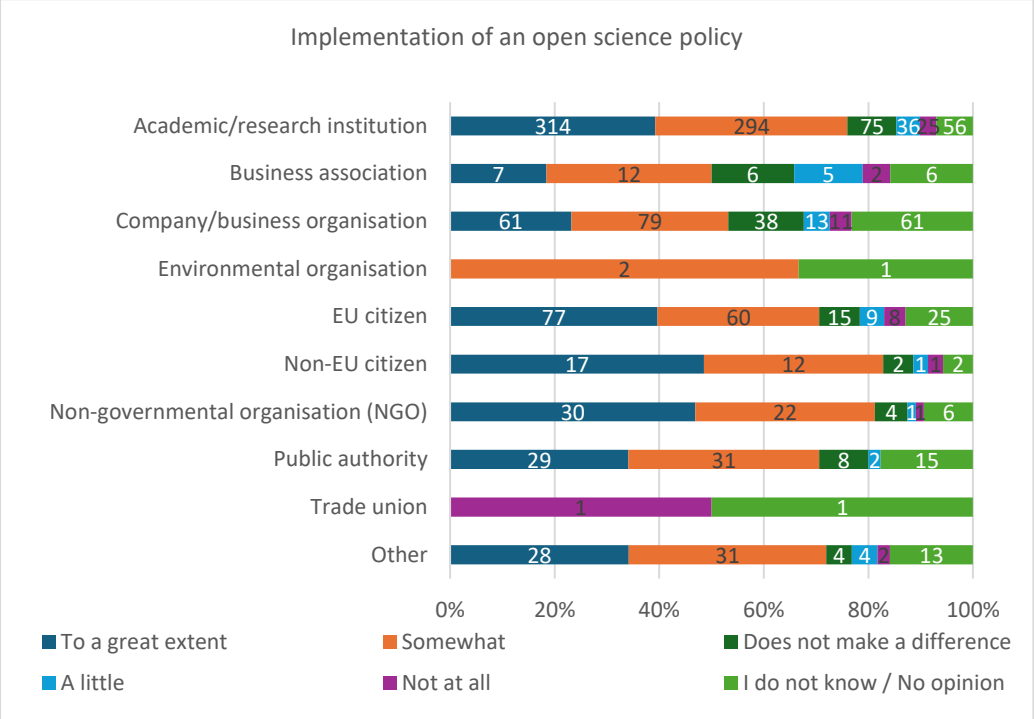
16 position papers discussed the gender cross-cutting issue. Stakeholders welcomed the introduction of the Gender Equality Plan (GEP) as an important step for addressing gender inequalities, whereas they remained more sceptical about the requirement to complete the Researcher Table. Stakeholders also considered that without post-award monitoring, there is no guarantee that the GEP and the Researcher Table translate in concrete actions.

Open science

21 position papers discussed open science. Open science received strong support from research organisations. However, they also considered that to fully achieve the objectives of Open

Science, more guidance and dedicated resources are needed, along with progress within national policy frameworks.

Figure 96: Stakeholder breakdown – Implementation of an open science policy (N= 1566)



Social Sciences and Humanities

36 position papers discussed social sciences and humanities (SSH) in Horizon Europe. Stakeholders acknowledged the progress made in integrating SSH expertise into Horizon Europe, in particular through a dedicated cluster in Pillar II, but they also raised concerns about the lack of systematic involvement of SSH researchers upstream in work programme and call preparation across all clusters. Stakeholders considered that SSH research involvement was an important, yet not fully exploited, driver of interdisciplinarity across the various intervention areas of Horizon Europe. A number of position papers by research organisations also emphasised that SSH researchers found it challenging to identify funding opportunities and blamed what they considered the overly prescriptive nature of the work programmes, the application of the TRL scale, and the insufficient SSH expertise in evaluators and evaluation panels.

Widening

19 position papers (all from academia and public authorities) discussed widening issues. Stakeholders emphasised the significance of continued support for widening actions in Horizon Europe. They highlighted the success of instruments such as Teaming for Excellence, ERA Chair, and Twinning, while they pointed to some issues in the new Hop-On scheme (implementation and partner selection). Stakeholders also considered that the reasons for low engagement from widening countries appeared to be largely systemic. They advocated to leverage budget from other EU programmes like the European Regional Development Fund (ERDF) and NextGeneration EU to structurally invest in R&I and reduce territorial unbalances.

According to the stakeholders participating in the public event, the integration of cross-cutting and horizontal aspects (e.g., SSH disciplines, gender issues, multi-actor approach) is highly positive and beneficial for the research projects, in line with the Responsible Research &

Innovation (RRI) principles, which are fundamental for the value of scientific results. However, some applicants claim that the call for proposals' text is not always clear on how those cross-cutting aspects should be integrated in the research activities. This may lead to increased time for the preparation of the proposal and a "just-tick-the-box" effect.

Effectiveness of the EU Missions and European Partnerships

Participants in the public event considered the long-term objectives and possible synergies under the EU Missions as very positive aspects that boost innovation possibilities. Missions are particularly appreciated by public authorities for providing them with scientific inputs to address local challenges. However, participants from different stakeholder categories (from business support organisations, National Contact Points and public authorities) recognised that often targeted stakeholders do not have a clear understanding of the EU Missions. For example, local authorities (typically regions) have little information about the Missions' calls and implementation. In general, the involvement of stakeholders from different fields of activities and levels of governance was considered a key aspect to be improved.

After excluding the responses of those who selected "I do not know", respectively 52% (461) and 50% (485) of respondents "agreed" or "strongly agreed" that "the implementation so far of EU Missions is on track to deliver on their objectives" for the EU Missions on "Climate-neutral and smart cities" and "Adaptation to climate change". For the other EU Missions this percentage was between 40% (A Soil Deal for Europe; 257) and 45% (Prevention, cure and solutions for cancer; 312). The share of respondents who "disagreed" or "strongly disagreed" ranged between 18% (Prevention, cure and solutions for cancer; 122) and 25% (Restoring healthy oceans, seas, coastal and inland waters; 190).

Figure 97: To what extent do you agree that the implementation so far of EU Missions is on track to deliver on their objectives?

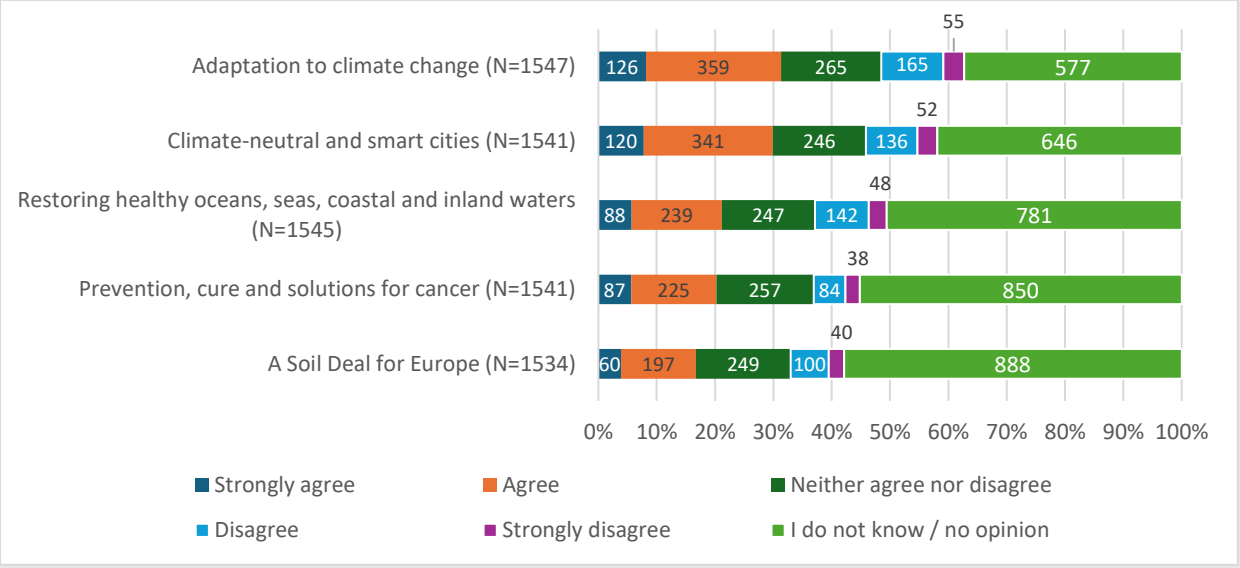


Figure 98: Stakeholder breakdown - Adaptation to climate change (N= 1547)

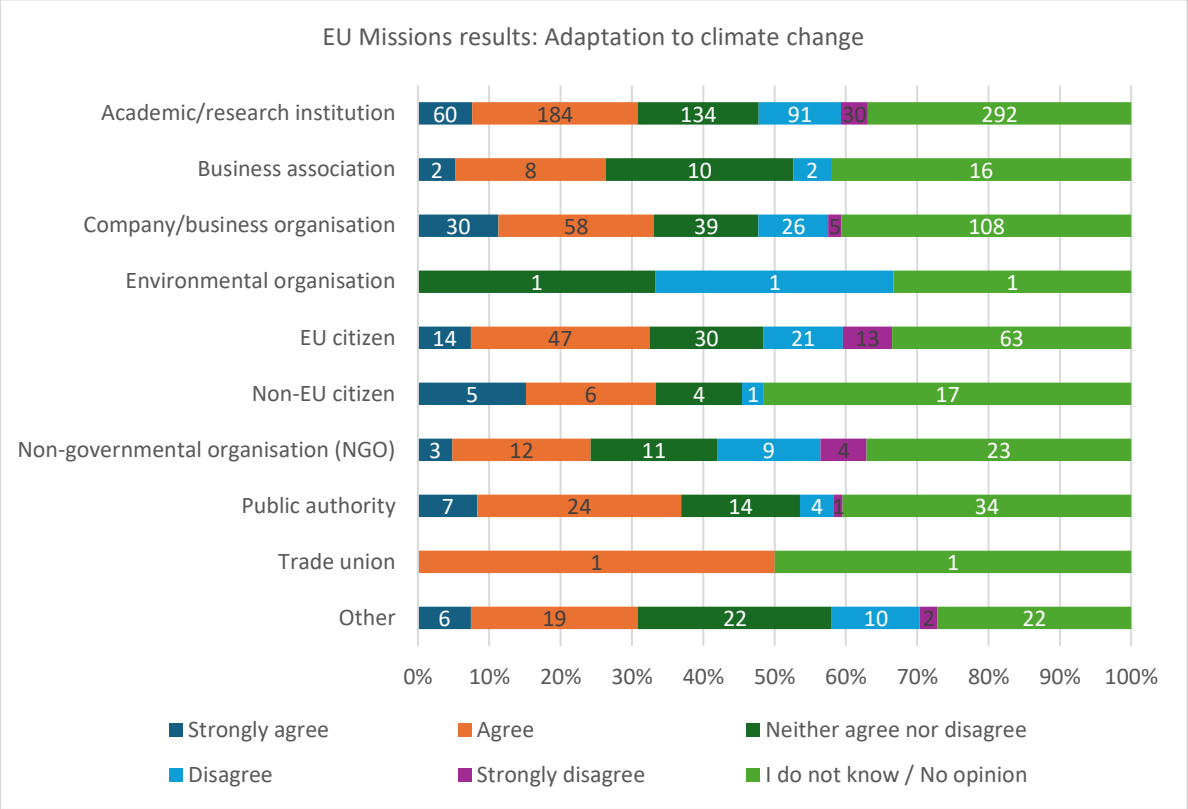


Figure 99: Stakeholder breakdown - Mission Cancer (N= 1541)

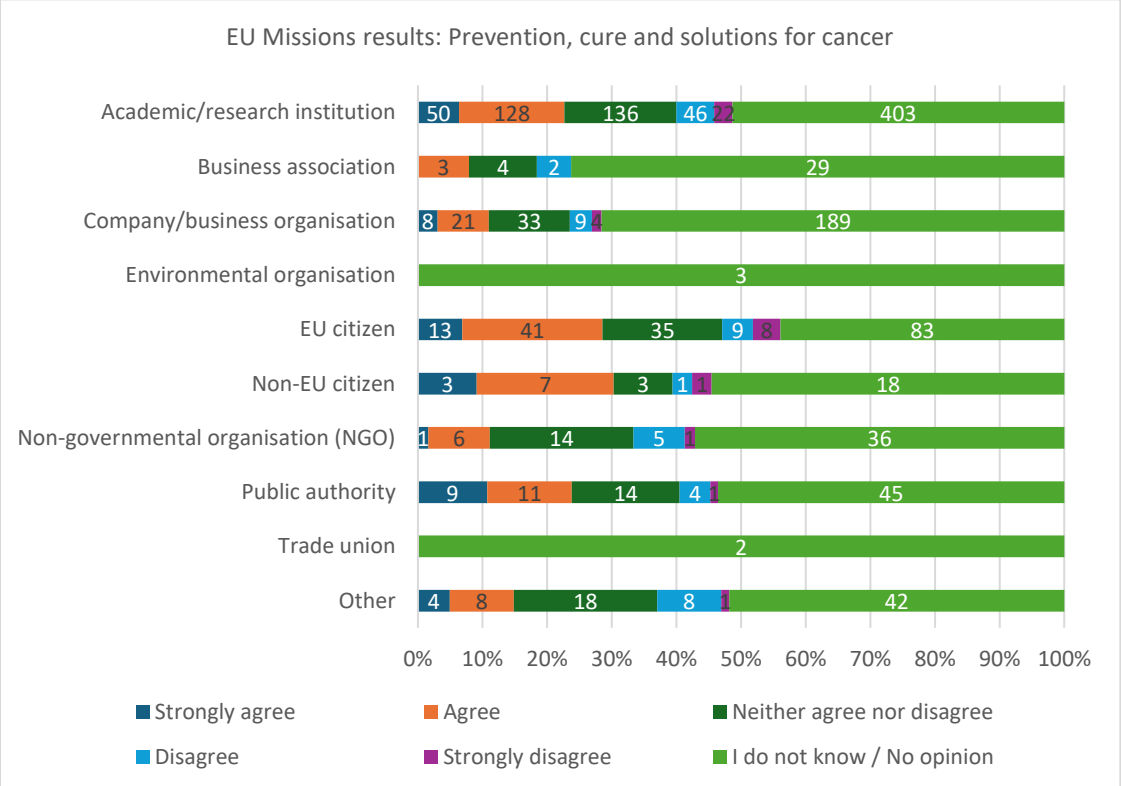


Figure 100: Stakeholder breakdown – Mission Oceans (N= 1541)

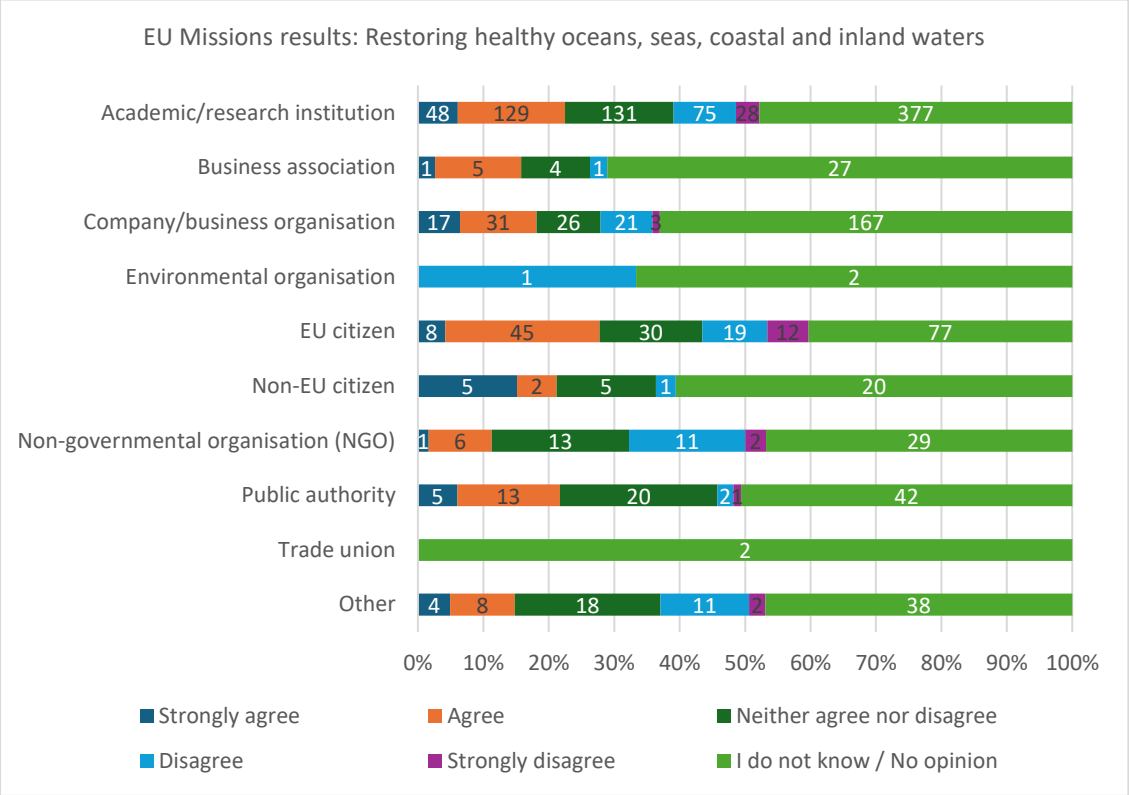


Figure 101: Stakeholder breakdown – Mission cities (N= 1541)

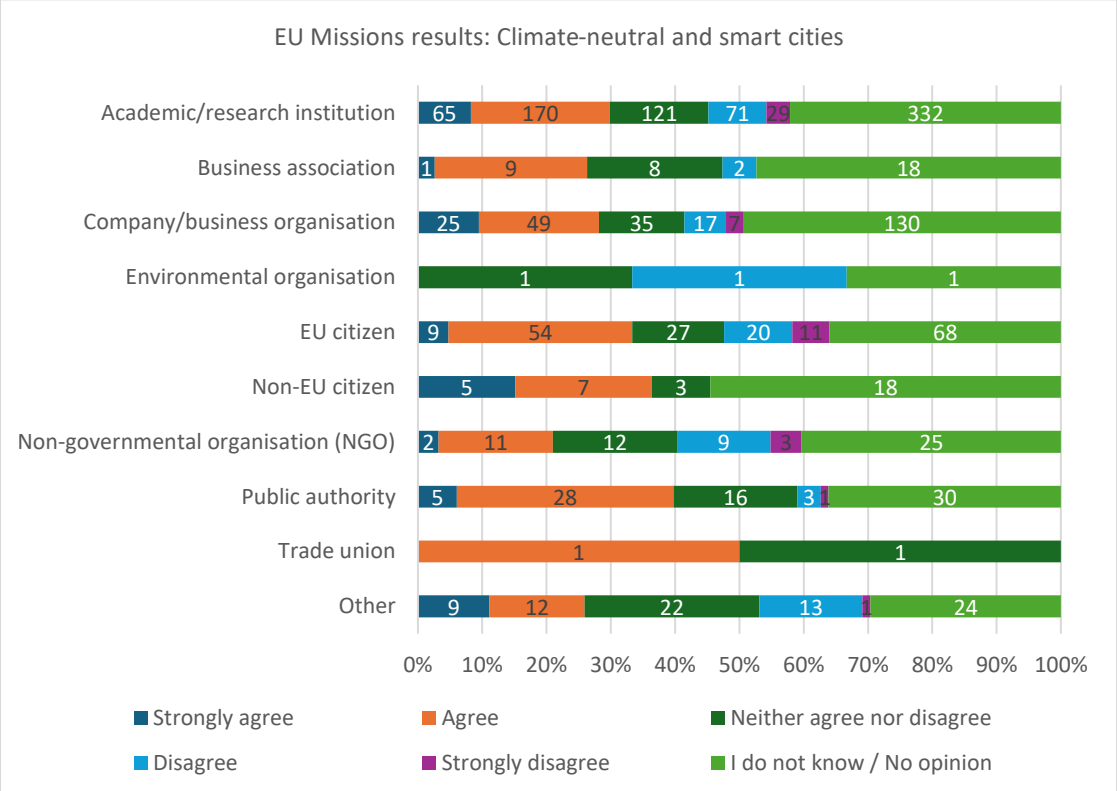
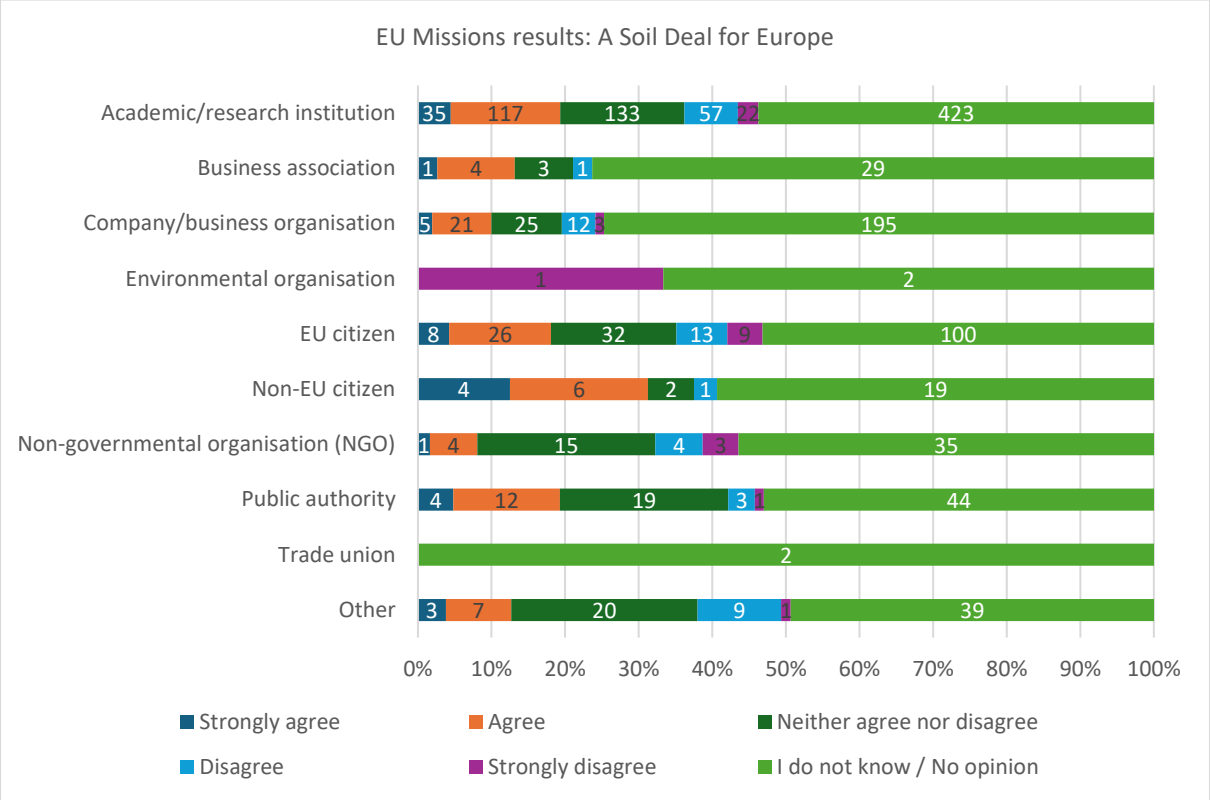


Figure 102: Stakeholder breakdown – Mission Soil (N= 1534)



Box 7: Specific comments on the EU Missions

43 position papers included comments on the EU Missions.

Whilst several stakeholders embraced the concept of the EU Missions, they pointed out some implementation issues, which may jeopardise the achievement of their objectives. In addition, some have noticed that the EU Missions were at an early stage and their added value could hardly be evaluated yet. The key messages from the position papers and the discussion during the public event are the following:

- The governance of the EU Missions is unclear to several stakeholders and is not considered suitable to ensure that the funded projects deliver on the strategic objectives. This was concern was raised also during the event. Different stakeholders (from academia, National Contact Points, business support organisations, public research promotion agencies) perceived the overall functioning of Missions as unclear, and recommendations were made to communicate more effectively on that. The EC should develop specific communication channels for stakeholders and provide better communication on the entire Missions' portfolio.
- There is a risk of dispersion of resources as every Mission has multiple priorities and expected outcomes are very broad. To be fully efficient, some stakeholders participating in the event suggested a better portfolio management by the EC to ensure more ambitious impacts and avoid overlaps between Missions.
- There is little coordination with national initiatives. In this regard, some event participants questioned the fact that Missions are exclusively funded through Horizon Europe, not through other funds. They called for more synergies with both other EU funding sources, such as ERDF funds, and national funding sources.

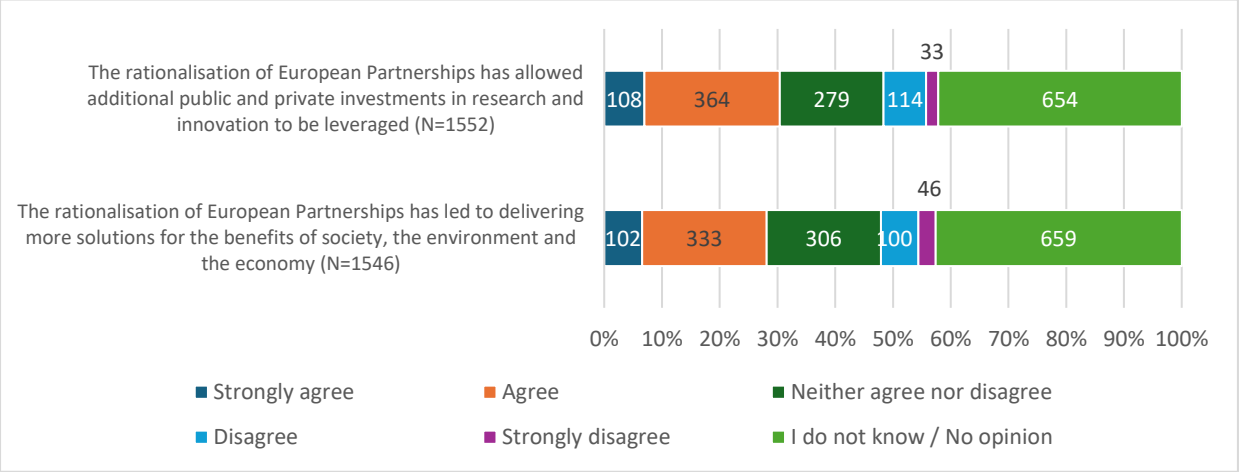
- National and local stakeholders struggle to find an entry point to contribute to the Missions. During the event, different stakeholders called for the simplification of participation and implementation rules, as Missions are currently perceived as complex, making it difficult to attract a variety of actors.
- According to stakeholders from industry, the EU Mission calls have a too narrow scope and do not focus enough on technology development. These aspects limit the possibility for the industry to participate.
- According to research organisations and academia, the EU Missions should focus more on research and development activities. In their opinion, these are currently too focused on piloting and deployment of solutions.
- Participation from research actors was perceived as low due to the lack of opportunities for collaborative research within the EU Missions. Participants from academia confirmed this opinion in the event.
- The link between the EU Missions' calls and the calls published in the Pillar II clusters is unclear. There is a risk of duplication with other parts of Horizon Europe (e.g., European Partnerships). This issue was raised also during the public event by stakeholders from academia. At the same time, synergies between the Missions and Pillar II are limited due to different timeline and topics. A participant working in the airspace industry recommended to align the topics of the Missions and those in Pillar II to boost synergies.
- There are concerns over the introduction of new EU Missions at this stage.

The consultation asked the respondents their opinion about the rationalisation of the European Partnerships from Horizon 2020 to Horizon Europe. After excluding the responses of those who selected "I do not know", 53% (472) of respondents "agreed" or "strongly agreed" that "the rationalisation of European Partnerships had allowed additional public and private investments in research and innovation to be leveraged". In comparison, 31% "neither agreed or disagreed", and 17% "disagreed" or "strongly disagreed". In addition, 49% (435) "agreed" or "strongly agreed" that "the rationalisation of European Partnerships [has] led to delivering more solutions for the benefits of society, the environment and the economy", while 16% "disagreed" or "strongly disagreed" and around a third of respondents (34%) "neither agreed or disagreed".

Similarly, event participants agreed that partnerships are effective instruments for combining national and EU funds for research and innovation (R&I) and enhance research and dissemination in Europe. Industrial partners, particularly a participant from the aerospace and defence sector, strongly appreciated the fact that partnerships provide a long-term perspective for industry and enable reaching high TRLs.

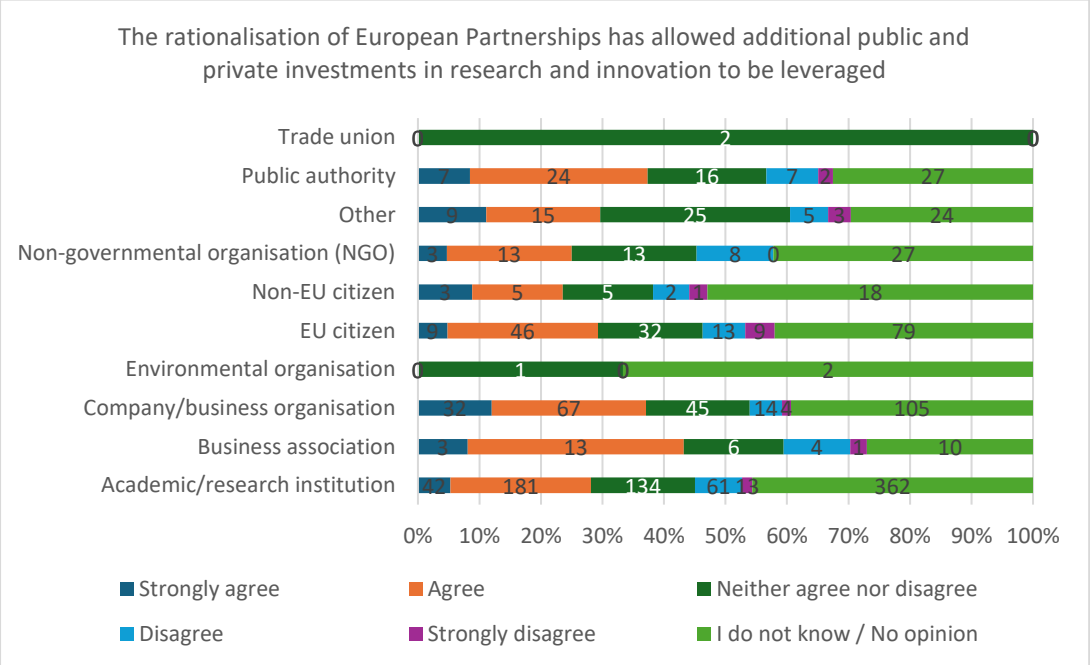
While the simplification process from Horizon 2020 to Horizon Europe was generally appreciated by stakeholders, some event participants called for further simplification, harmonization and greater synergies between the different types of Partnerships. Conversely, representatives from the industry underlined the importance of flexibility and of leaving room for each partnership to decide its own procedures (considering that a Single Act is already in force).

Figure 103. To what extent do you agree with the following statements?



After excluding the responses of those who selected "I do not know", respectively 57% (491) and 71% (694) of respondents maintained that EU Missions and European Partnerships were "somewhat" or "to a great extent" "more effective compared to regular collaborative research". Respondents from businesses and business associations valued the partnership approach more than those from other groups.[224] As a matter of fact, some research organisations participating in the event stated that collaborative research should remain the bulk of the programme.

Figure 104: The rationalisation of European Partnerships has allowed additional public and private investments in research and innovation to be leveraged (N= 1552)



[224] The results of the analysis differentiating by type of respondent are reported in Table 33 and Table 34 – additional statistics..

Figure 105: The rationalisation of European Partnerships has led to delivering more solutions for the benefits of society, the environment and the economy (N= 1546)

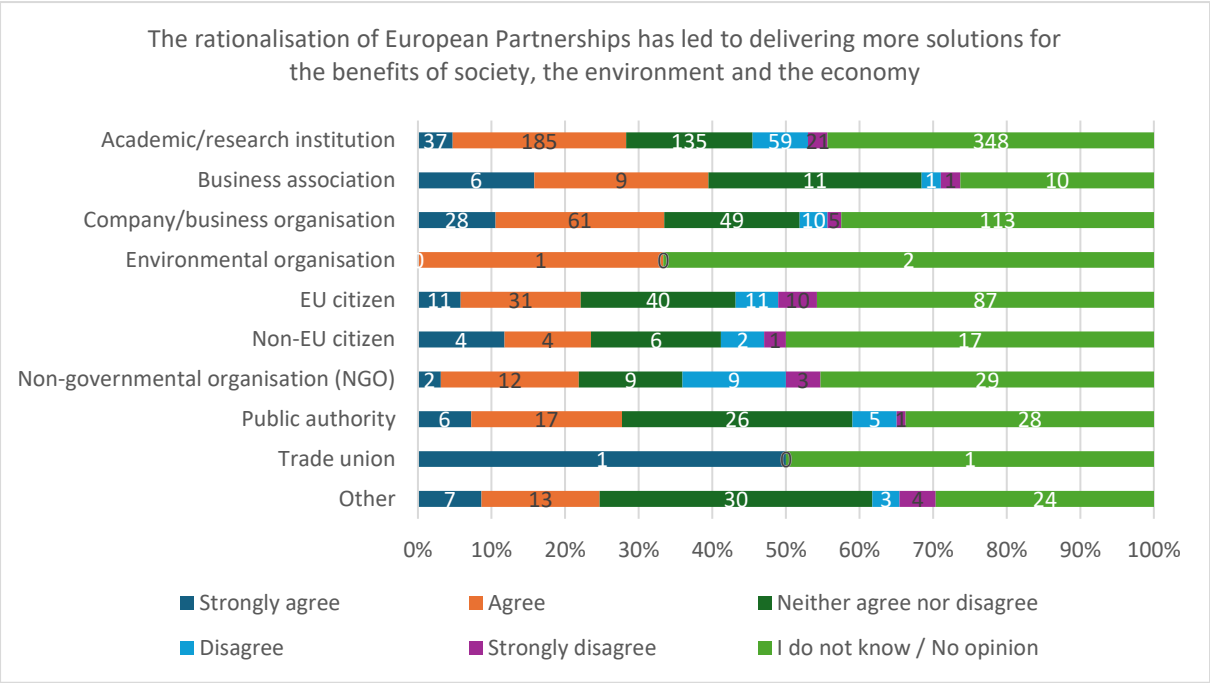


Figure 106: In your opinion, to what extent are European Partnerships and EU Missions supported by Horizon Europe effective compared to regular collaborative research projects in achieving Horizon Europe's objectives?

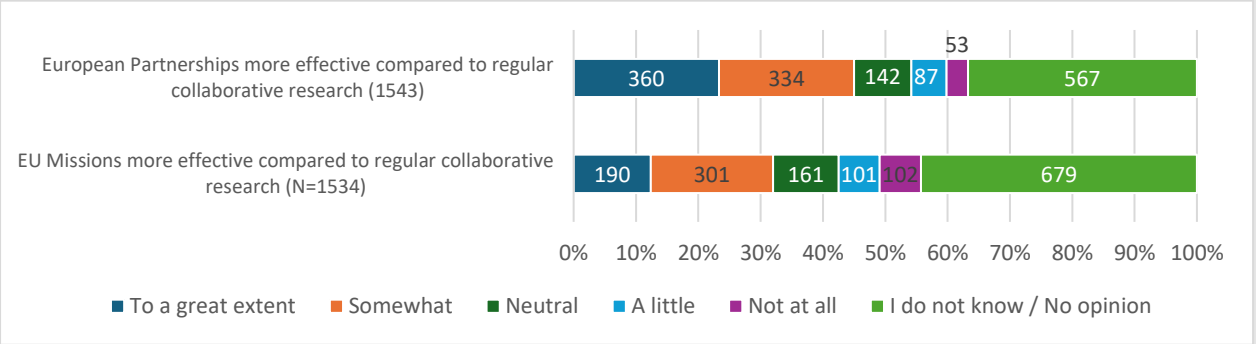


Figure 107: Additional breakdown - European Partnerships (N=1543)

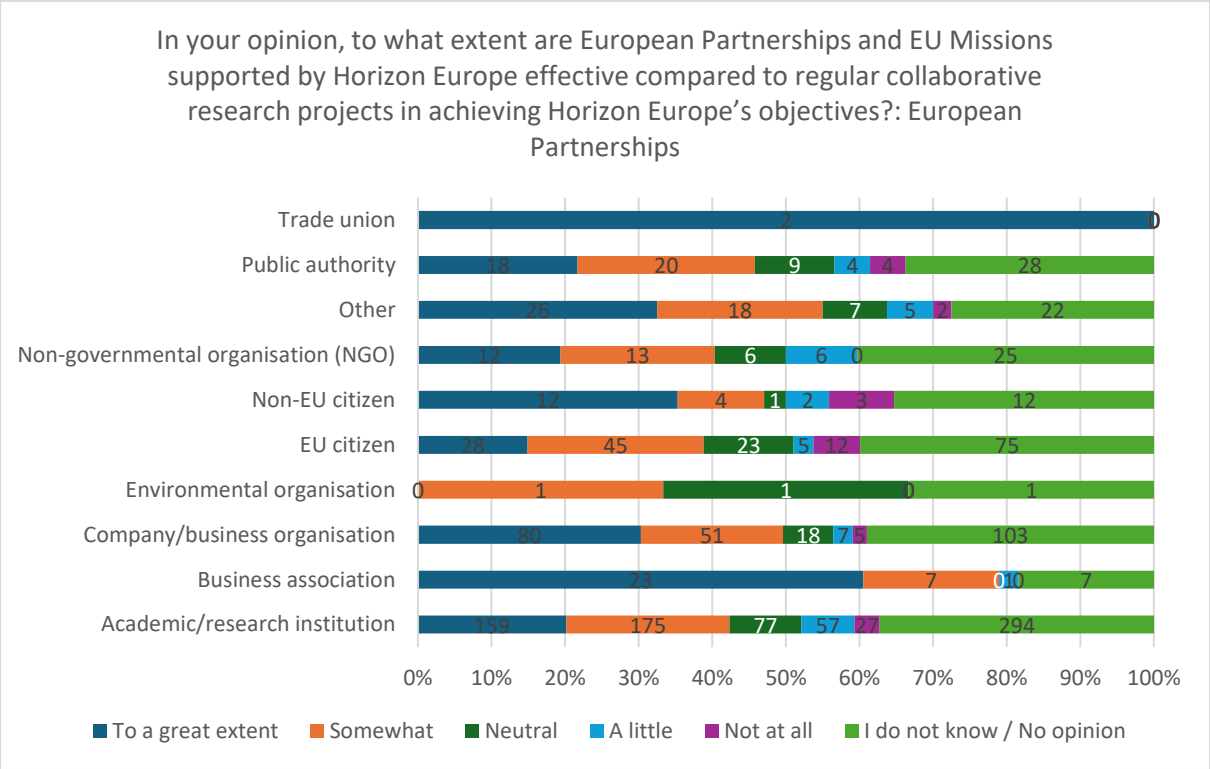
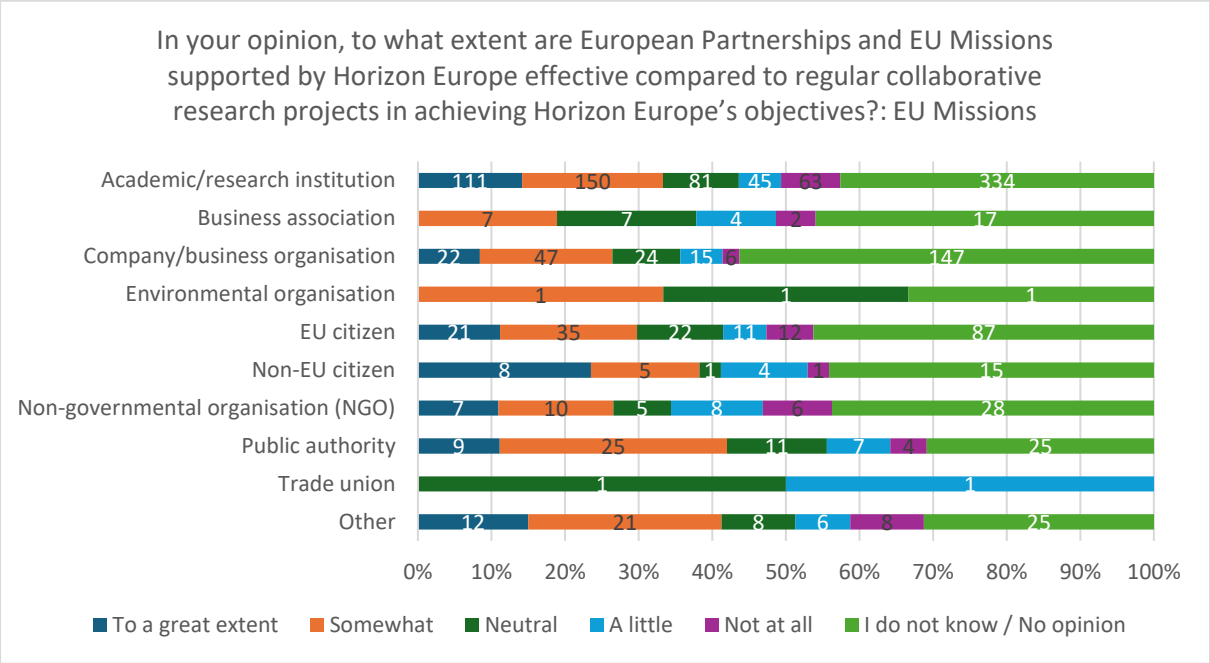


Figure 108: Additional breakdown - EU Missions (N= 1534)



Box 8: Specific comments on the European Partnerships

49 position papers included comments on the European Partnerships. The key messages from the position papers and the discussion during the public event are the following:

- Partnerships were considered by different types of actors (academia, research and technology organisations, businesses, public authorities) a key instrument to ensure a quick transfer from knowledge into application and innovation. Businesses highly appreciated partnerships as a means to support the European industrial policy.
- Whilst in general the streamlining of partnerships under Horizon Europe was seen positively, some respondents (especially research organisations) maintained that the partnerships have remained fragmented and overly complicated, discouraging newcomers from joining. Concerns on the difficulty in accessing relevant information on the opportunities available, the applicable rules and the reporting requirements were raised also by some event participants from different stakeholder categories (i.e., industry, National Contact Point, research organisation).
- There have been implementation issues and delays at the start of the activities.
- There seems to be a lack of clarity on the governance structures and on the synergies and complementarities with other European and national instruments (including EU Missions). Representatives from regional public administrations and academia participating in the event underlined the difficulties in being involved in the institutionalised partnerships' activities while not being involved in its governance. This contradiction makes it difficult to create synergies between the Partnerships' activities and other R&I actions funded at local / regional / national level. Similarly, some stakeholders from national research promotion agencies observed that there should be better coordination efforts to ensure availability of matching funds from national sources.
- According to some academic and research actors, the conditions of participation of some partnerships have not been transparent. In particular, the rules for participation of research performing organisations raised concerns since organisations that participate in the governing structure of the partnership have been excluded from the calls for proposals.

Other points discussed during the event with stakeholders were the following:

- Deterring factors to participation: the applicable rules for private partners and public bodies, as well as the cost reporting requirements, have been identified as a deterring factor to participation, especially from academic stakeholders. According to an industry stakeholder, the request to commit on a certain funding level from the beginning as a pre-requisite to participation can disincentivize companies from joining.
- Centralised / decentralised management of the Partnerships: some participants from research organisations suggested to centralize the Partnerships management, either by the EC or by an Executive Agency to ensure better a more consistent management and to avoid duplicating governing structures. Conversely, industry stakeholders urged to avoid an excessive involvement of the EC and allow flexibility, considering the amount of funding committed by the private sector.
- Level of knowledge and experience of policy officers managing the partnerships: participants from different stakeholder categories (i.e., National Contact Point, research organisations, academia) pointed out the need for training for all the actors involved in managing and implementing partnerships (especially co-funded), including policy officers.

Impact of exceptional limitations

After excluding the responses of those who selected "I do not know", the majority (56%; 650) of respondents stated that their project was not "impacted by the exceptional limitations on participation in Horizon Europe by non-EU legal entities" or was impacted a little. Only 13% (151) of respondents indicated that their project was impacted "to a great extent".

Figure 109. According to you, to what extent is your research or innovation project impacted by the exceptional limitations on participation in Horizon Europe by non-EU legal entities?

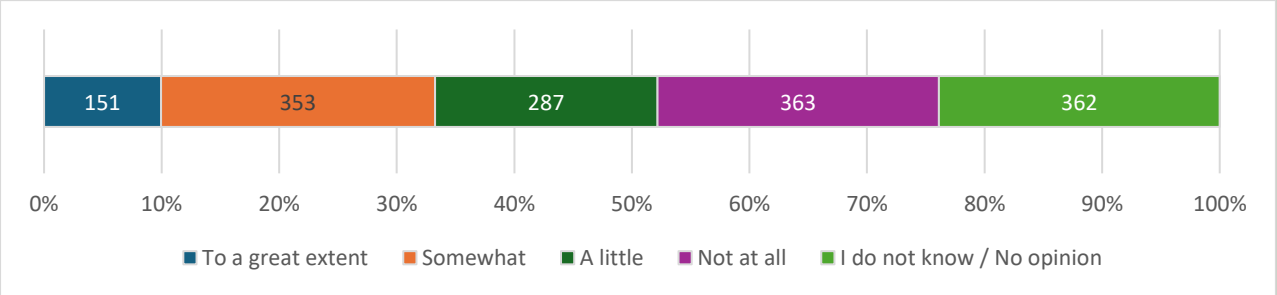
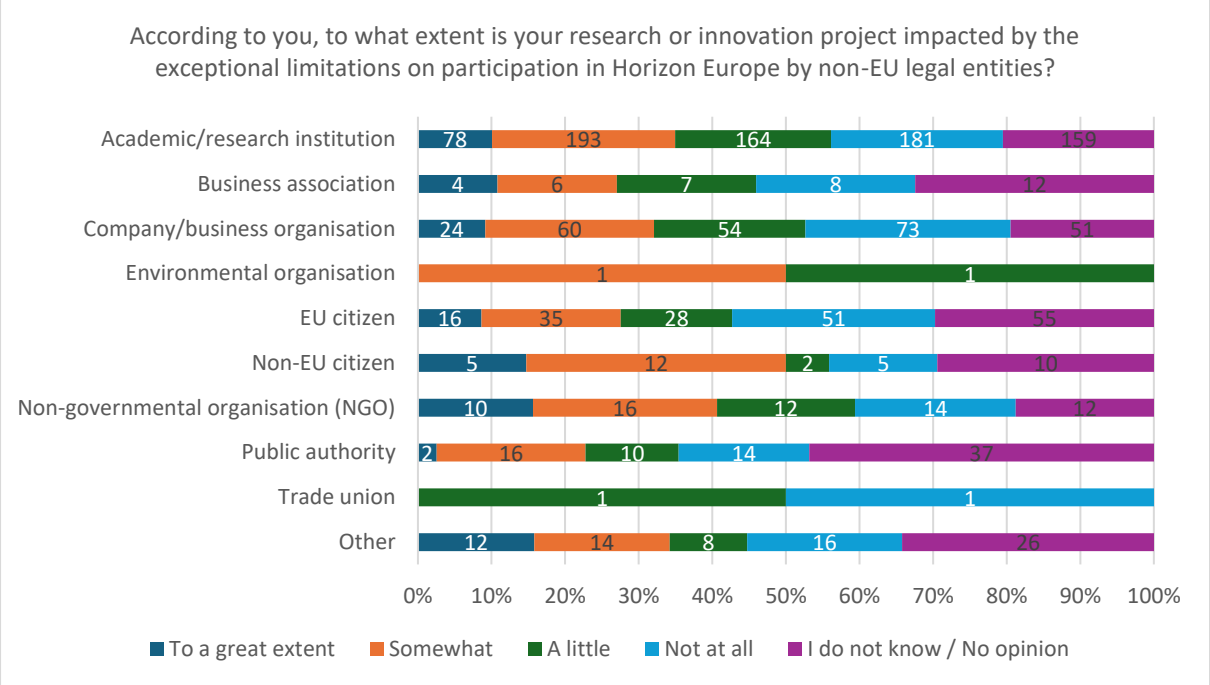


Figure 110: Additional breakdown - impact of exceptional limitations on participation (N= 1516)



Synergies with other EU programmes

55% (823) of respondents expressed an opinion on the synergies between Horizon Europe and Erasmus+. Between 13% and 41% of all the respondents expressed an opinion on the synergies between Horizon Europe and other EU programmes[225]. After removing the responses of those

[225] Common Agricultural Policy (CAP), LIFE - Programme for Environment and Climate Action, European Maritime, Fisheries and Aquaculture Fund (EMFAF), Creative Europe Programme, European Social Fund Plus (ESF+), European Regional Development Fund (ERDF), Just Transition Mechanism, Recovery and Resilience

who selected "I do not know / no opinion", the majority of respondents selected that "synergies were exploited" or "fully exploited" with Erasmus+ (63%; 518), Digital Europe Programme (62%; 838), Euratom Research and Training Programme (62%; 225), EU4Health Programme (57%; 275), Connecting Europe Facility (CEF) (56%; 237), Programme for Environment and Climate Action (LIFE) (55%; 339), European Regional Development Fund (ERDF) (52%; 299).

45 position papers provided comments on the synergies between Horizon Europe and other EU programmes. Most contributions, from academia, business and public actors, focused on synergies with structural funds (ERDF). They concluded that it was too early to assess to what extent these synergies will be possible, as the operational programmes are not fully approved. However, they also pointed out that synergies with the ERDF had proved difficult to harness in the past because financing modalities were different or incompatible. Stakeholders also believe that the creation of various new EU programmes in the current MFF period is positive because they create more opportunities for applying research discoveries (e.g., Innovation fund). However, at the same time, beneficiaries face a complex EU financing landscape with a multitude of programmes, each with its own rules for participation. Stakeholders asked for clearer rules, guidance, and more clarity about the possible pathways between programmes.

Facility, EU4Health Programme, Connecting Europe Facility (CEF), Digital Europe Programme (DEP), Single Market Programme, InvestEU, Innovation Fund under the Emission Trading Scheme, Union Space Programme, Neighbourhood, Development and International Cooperation Instrument (NDICI) and the Instrument for Pre-accession, Assistance (IPA III), Internal Security Fund (ISF), Border Management and Visa Instrument (BMVI), European Defence Fund, Euratom Research and Training Programme.

Figure 111. How do the following EU programmes work in synergy (complement and reinforce) with Horizon Europe?

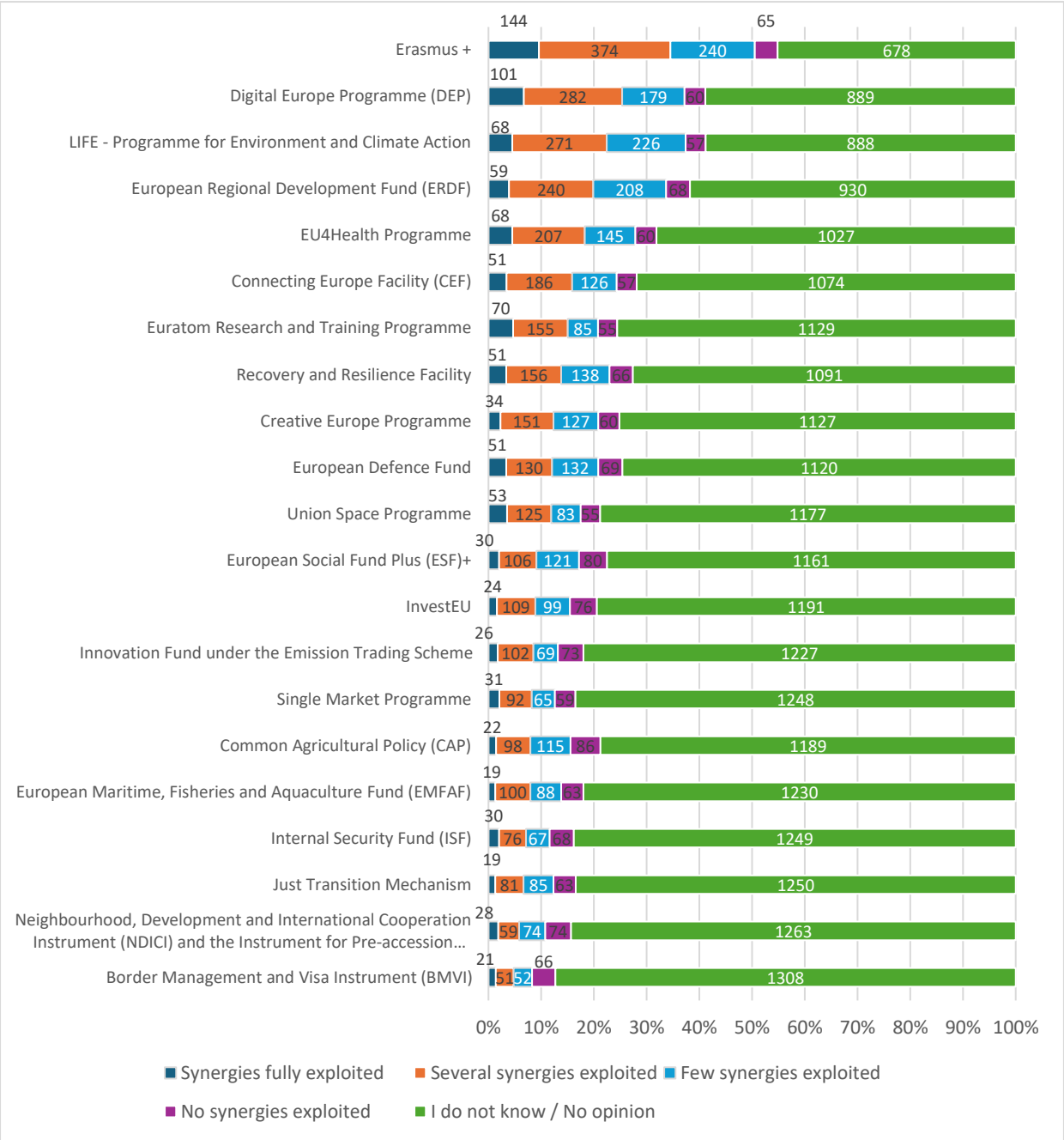


Figure 112: Additional breakdown - LIFE (N= 1510)

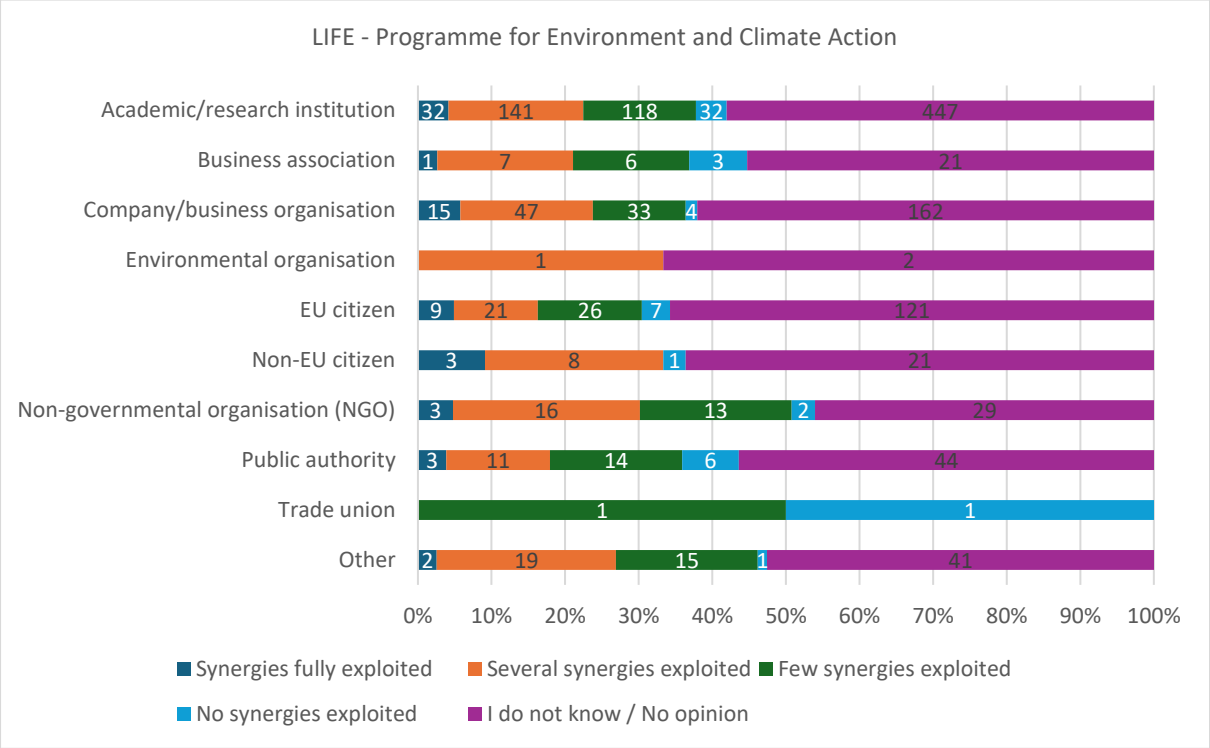


Figure 113: Additional breakdown - Erasmus+ (N= 1511)

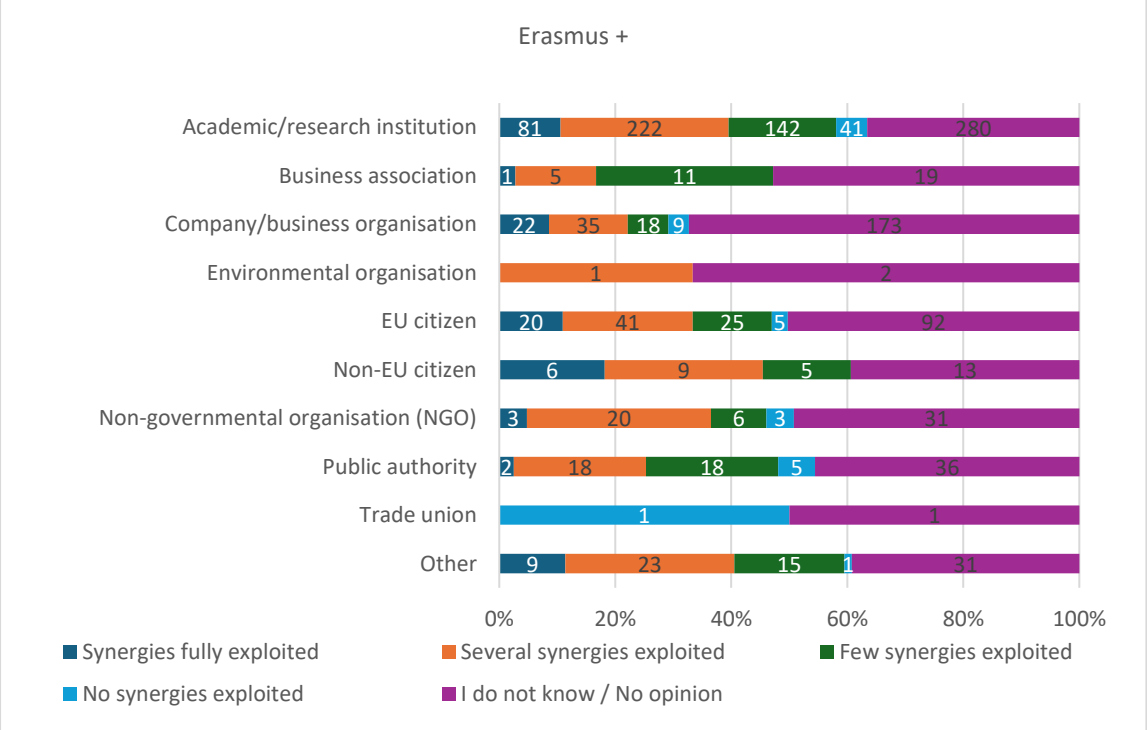
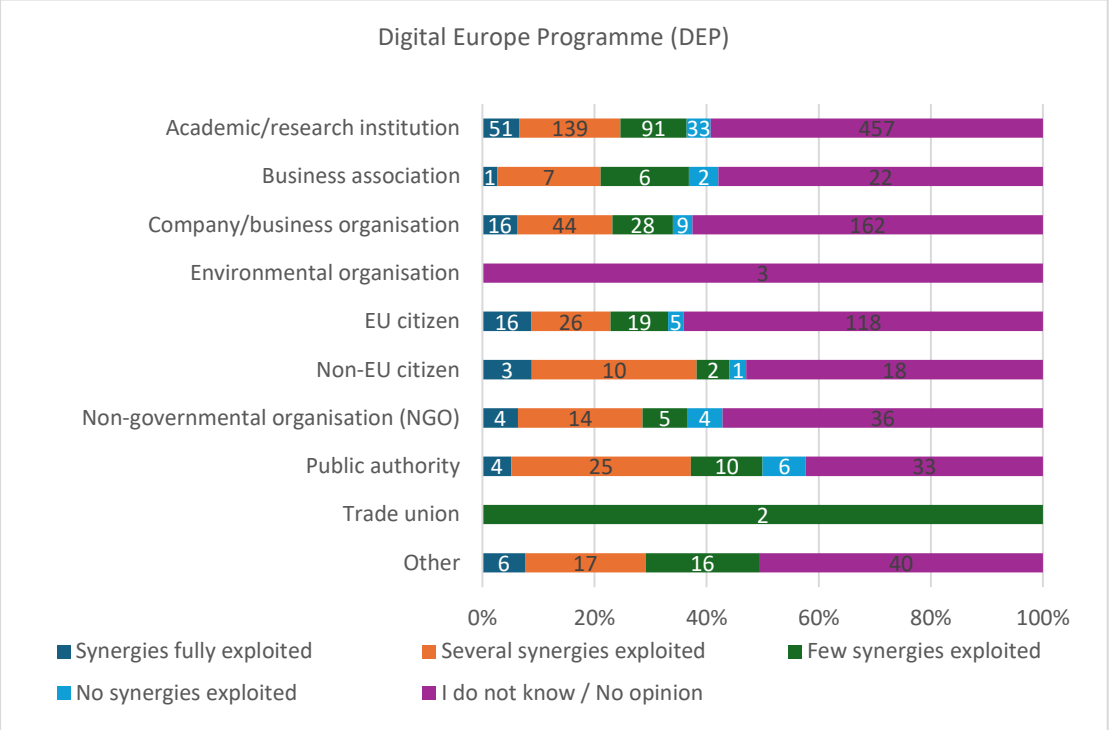


Figure 114: Additional breakdown - DEP (N= 1511)

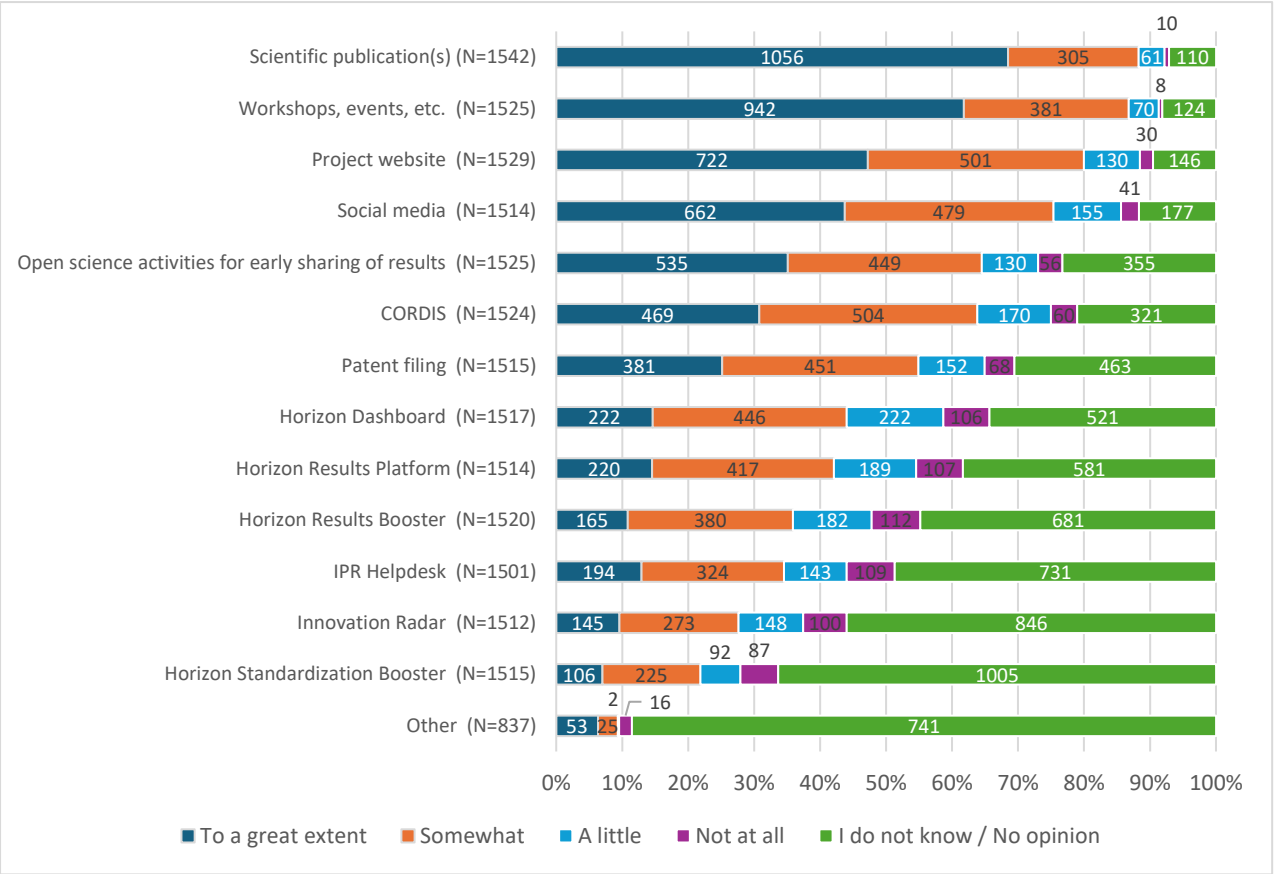


Exploitation and dissemination of results

Respondents indicated scientific publication(s), workshops or other events, project website and social media (especially LinkedIn) as the initiatives that mostly helped dissemination, exploitation and access to research and innovation results. In particular, 68% (1 056) and 62% (942) of respondents respectively stated that scientific publication(s) and workshops or other events "helped disseminate, exploit and access research and innovation results" "to a great extent".

13 position papers provided comments on Horizon Europe dissemination and exploitation initiatives. Stakeholders agreed that increased efforts in knowledge valorisation were key to ensure greater impacts. They advocated for continued investment, better monitoring and further awareness raising of dissemination and exploitation activities.

Figure 115: To what extent do the following initiatives help disseminate, exploit and access research and innovation results?



EC support services for dissemination and exploitation:

Figure 116: Additional breakdown - Horizon Dashboard (N= 1517)

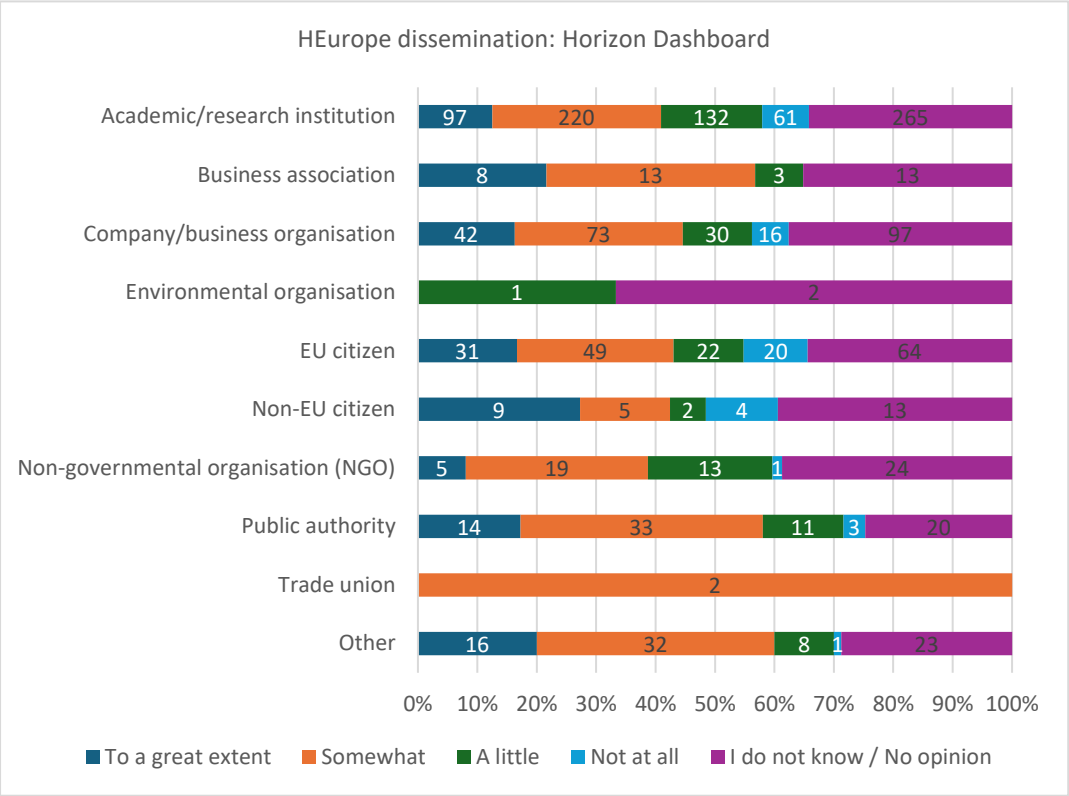


Figure 117: Additional breakdown - Horizon Results Booster (N= 1520)

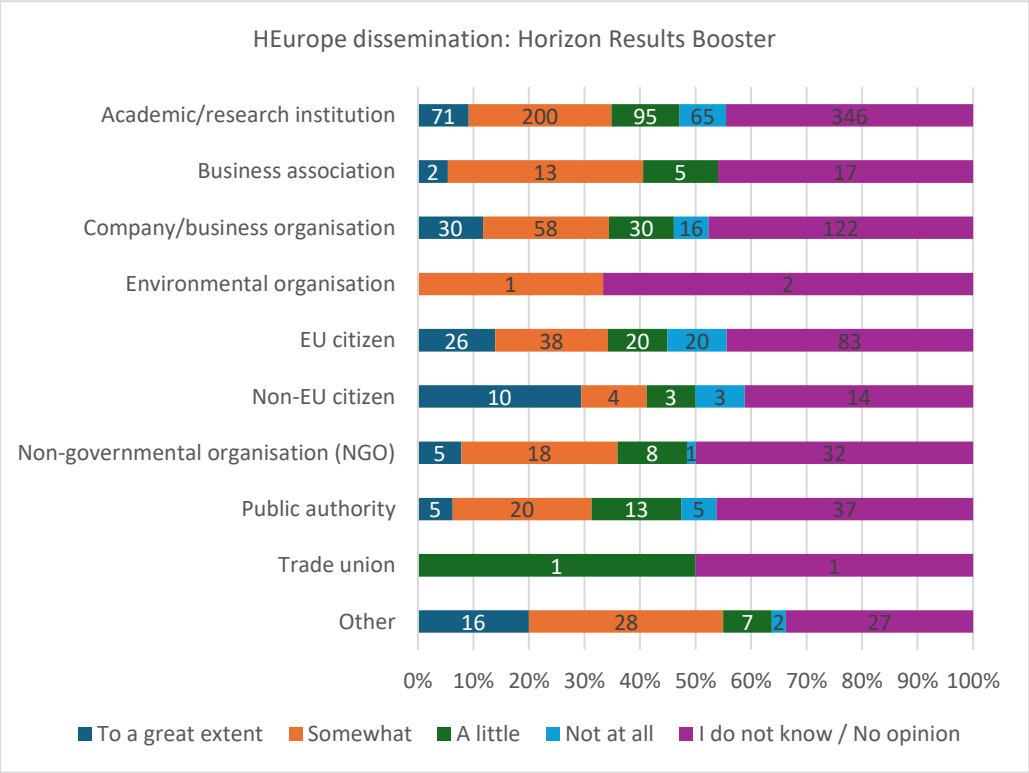


Figure 118: Additional breakdown - Horizon Results Platform (N= 1514)

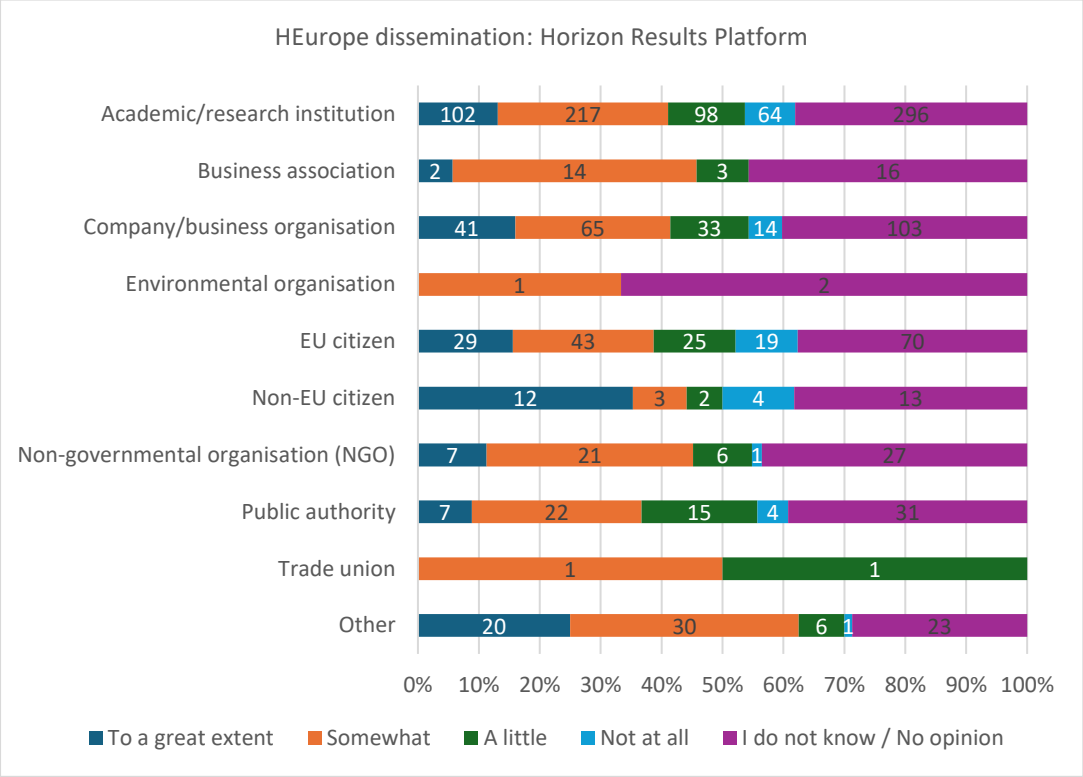


Figure 119: Additional breakdown - CORDIS (N= 1524)

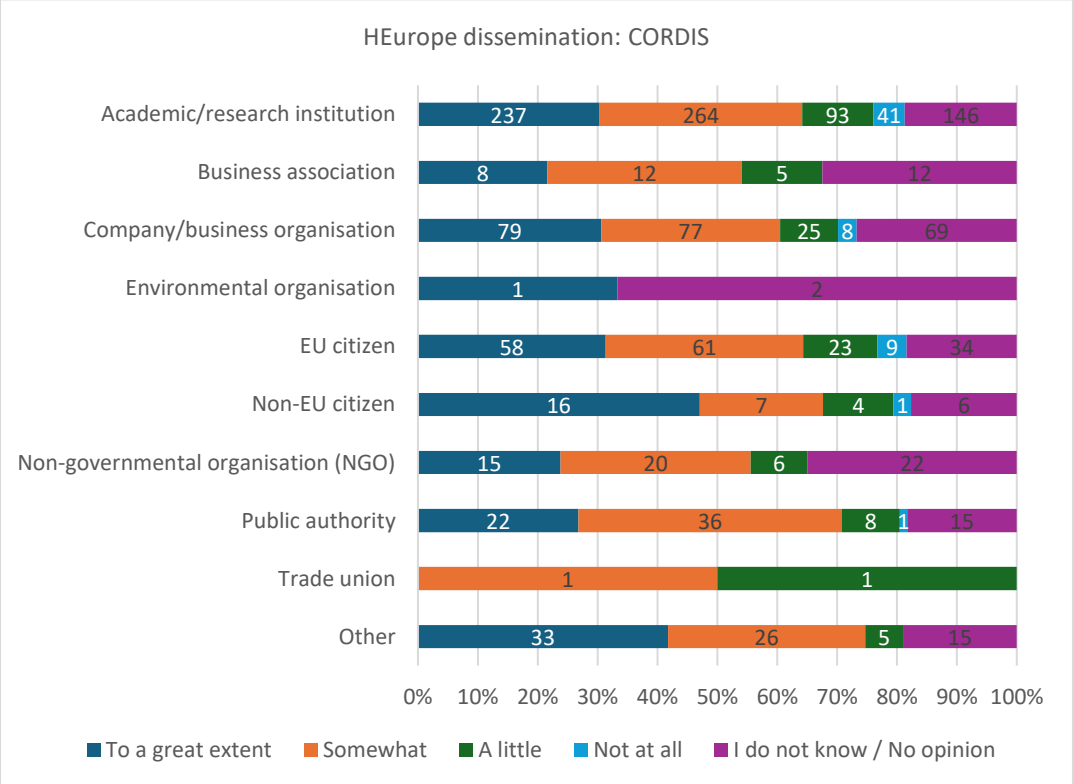


Figure 120: Additional breakdown - Innovation Radar (N= 1512)

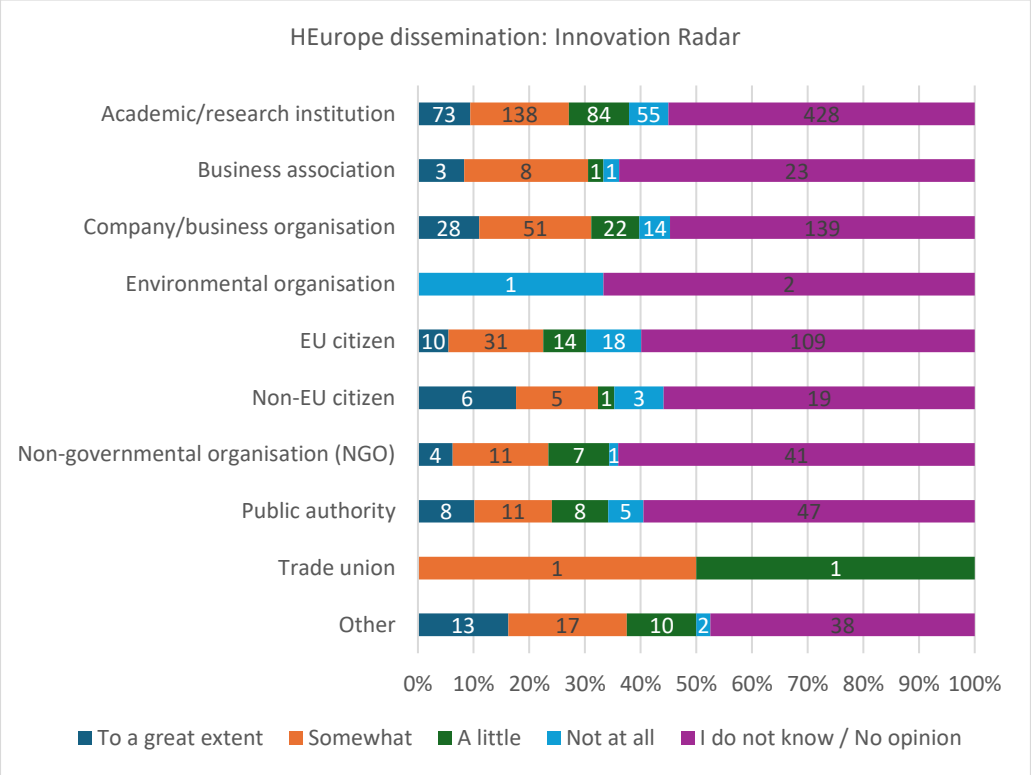


Figure 121: Additional breakdown - IPR Helpdesk (N= 1501)

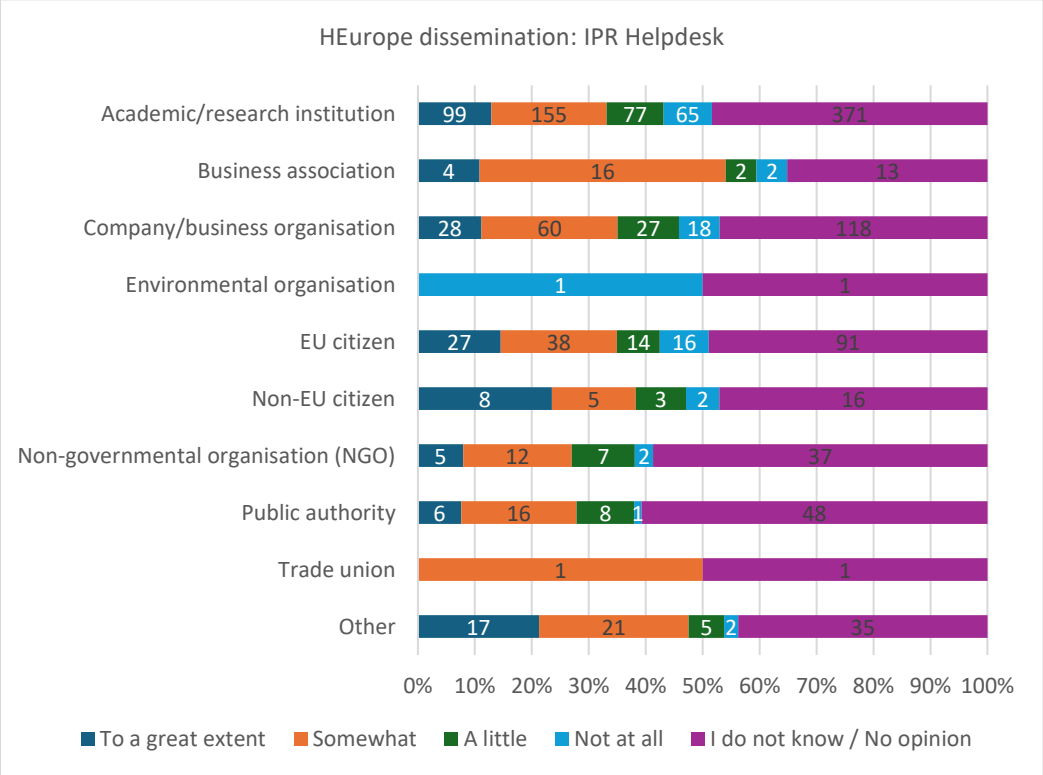
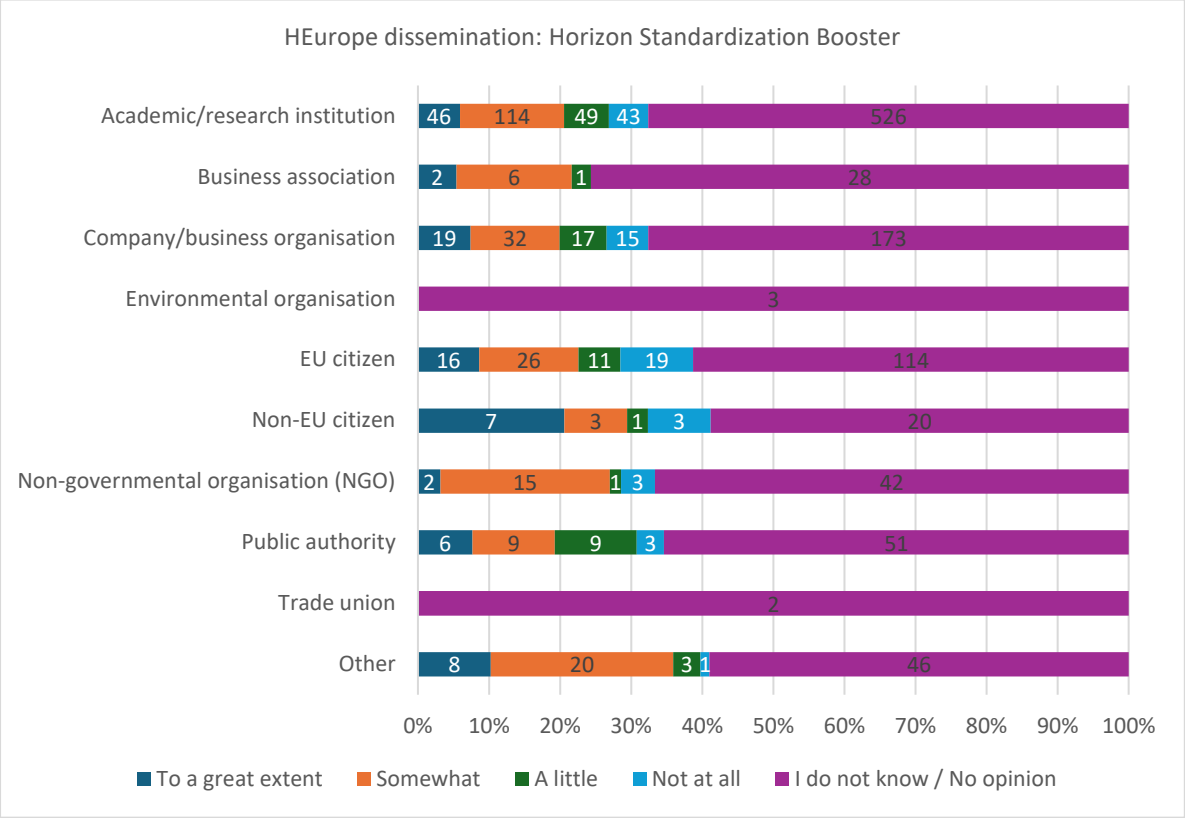


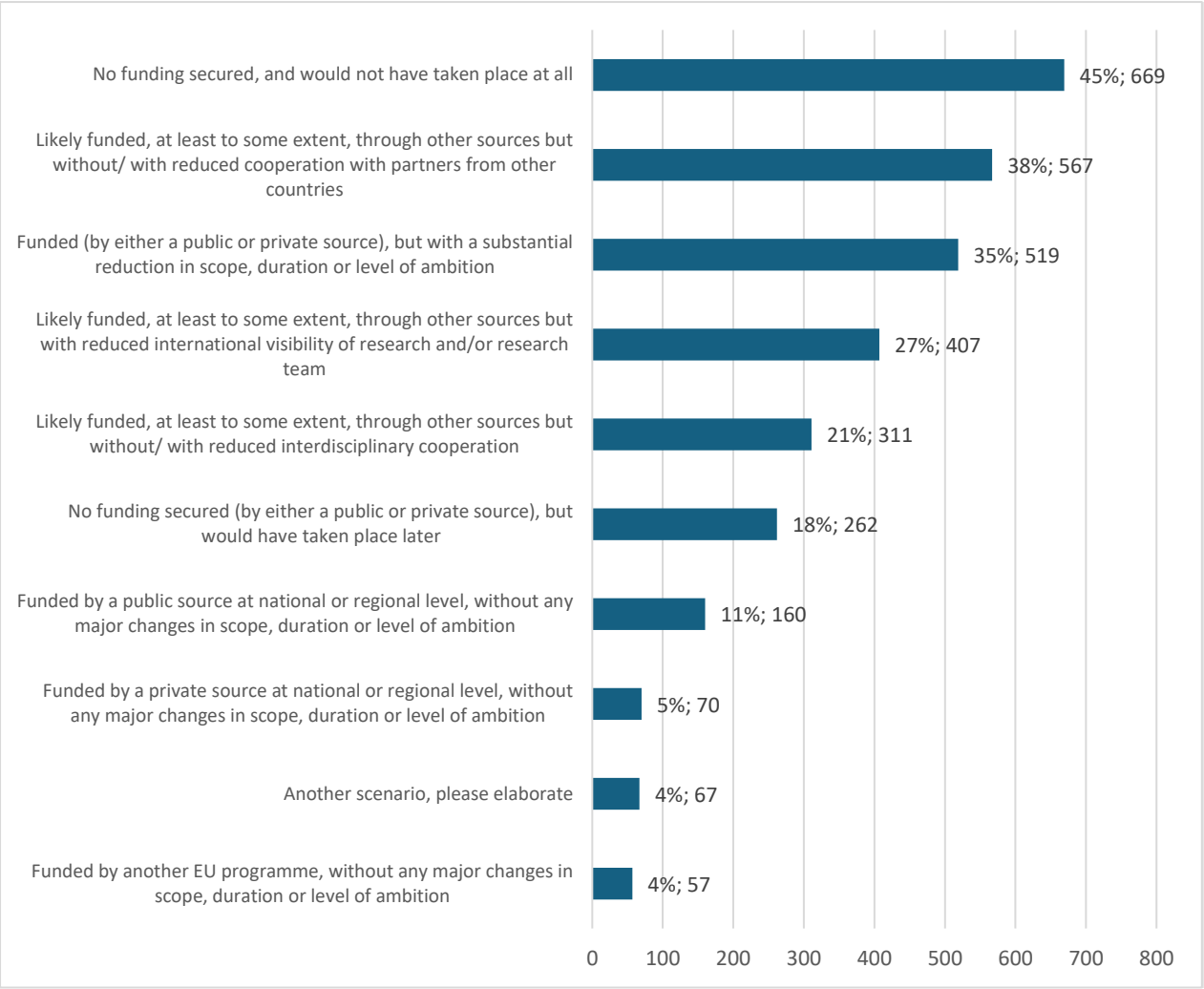
Figure 122: Horizon Standardization Booster (N= 1515)



Horizon Europe added value

Asked about what would happen to their "research and innovation project(s) without European-level funding through Horizon Europe", 45% (669) of respondents maintained that their project "would not have taken place", 38% (567) that, likely, it "would have been funded but with reduced cooperation with partners from other countries" and 35% (519) that it would have been "funded but with substantial reduction in scope, duration or level of ambition".

Figure 123: What would happen to your research and innovation project(s), without European-level funding through Horizon Europe? Multiple answers possible. (N=1490)



No major differences were observed among the various stakeholder groups.

Key lessons learned and messages for the future

On budgeting for the future and work programmes

- Consider budget increases for the next Framework Programme, especially for those parts of the Framework Programme in which many excellent proposals could not be funded.
- A long-term, stable budget is key for R&I stakeholders. Therefore, avoid reallocating the Framework Programme budget to other EU priorities.
- Consult more extensively and timely when drafting the work programmes.
- Improve coordination among EC services when preparing the Work Programmes to ensure coherence among topics of different Work Programmes.
- Improve the integration of social sciences and humanities in the Work Programmes.

On intervention modes and types of action

- Ensure to cover the entire TRL spectrum, addressing the gap between fundamental research in Pillar I and Innovation Actions in Pillar II - e.g., by introducing more Research and Innovation Actions targeting medium TRLs in Pillar II.
- Ensure a balance between bottom-up and top-down calls for proposals combining different types of calls in all the Pillars.
- Ensure a balance between large and small projects in the different calls for proposals.
- Enhance the synergy between clusters in Pillar II by introducing cross-cluster calls of proposals.

On the identification of funding priorities

- The co-design approach was appreciated and should be continued. Improve the transparency of the process and streamline consultation practices.
- To identify funding priorities, define the goals but leave more room for stakeholders to define the pathways to achieve those goals.
- Ensure that excellent, fundamental and frontier research remain at the centre of Horizon Europe (especially according to academic actors) and reinforce the support for research infrastructures.
- Ensure that the budget of single Innovation Actions is sufficient to carry out pilot and demonstration activities.
- Introduce new measures to bring research into the market and increase participation from SMEs via targeted actions.
- Continue to support international cooperation by promoting collaborations of national and European research infrastructures with research infrastructures outside the EU.

On the implementation of the programme/projects and procedures

- Publish the Annotated Model Grant Agreement.
- Ensure continuity and stability in the rules of participation.
- Further simplify the administrative procedures (e.g., rules to reimburse personnel costs).
- Publish clear guidelines to support administrative processes during project implementation.
- Monitor the effects of using the lump-sum model and consider for which projects it could be extended. Provide more guidance on this type of instrument.

- Consolidate and streamline the EU funding programmes and instruments.
- Enhance the possibility of exploiting synergies with other EU programmes by clarifying the mechanisms to access the different programmes and further harmonising the rules and procedures.

Additional statistics

Calls for proposals – Breakdown by type of respondents

Table 23: To what extent do you agree with the following statements concerning the calls for proposals under Horizon Europe? Finding the right call for my proposal was easy.

TYPE OF RESPONDENT	N	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	I DO NOT KNOW / NO OPINION
Academic/research institution	807	8.4%	30.0%	29.6%	24.8%	5.5%	1.7%
Company/business organisation	269	10.8%	34.6%	28.3%	23.4%	2.2%	0.7%
EU citizen	194	2.9%	37.1%	25.7%	17.1%	5.7%	11.4%
Public authority	83	8.4%	31.3%	27.7%	18.1%	4.8%	9.6%
Other	82	11.0%	28.0%	25.6%	26.8%	3.7%	4.9%
Non-governmental organisation (NGO)	65	10.8%	29.2%	18.5%	21.5%	4.6%	15.4%
Business association	38	7.9%	42.1%	13.2%	26.3%	7.9%	2.6%
Non-EU citizen	35	2.9%	37.1%	25.7%	17.1%	5.7%	11.4%
Environmental organisation	3	0.0%	33.3%	33.3%	33.3%	0.0%	0.0%
Trade union	2	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%

Table 24: To what extent do you agree with the following statements concerning the calls for proposals under Horizon Europe? There is an adequate mix of calls for proposals addressing specific topics (top-down) and calls for proposals without a pre-defined topic (bottom-up).

TYPE OF RESPONDENT	N	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	I DO NOT KNOW / NO OPINION
Academic/research institution	841	6.0%	28.2%	23.7%	24.8%	8.4%	8.9%
Company/business organisation	277	9.7%	29.6%	19.1%	22.1%	5.2%	14.2%
EU citizen	202	3.1%	29.7%	24.5%	22.4%	5.7%	14.6%
Public authority	87	7.1%	28.6%	22.6%	16.7%	7.1%	17.9%
Other	93	8.5%	29.3%	19.5%	23.2%	7.3%	12.2%
Non-governmental organisation (NGO)	72	1.5%	23.1%	29.2%	21.5%	7.7%	16.9%
Business association	49	5.3%	28.9%	10.5%	39.5%	7.9%	7.9%
Non-EU citizen	36	14.3%	34.3%	17.1%	14.3%	2.9%	17.1%
Environmental organisation	4	0	0	0	33.3%	0	66.7%
Trade union	2	0	50.0%	0	50.0%	0	0

Types of support – breakdown by type of respondents

Table 25: What is your level of satisfaction with the way the European Commission implements the following types of support under Horizon Europe? Co-funding (e.g., European Partnerships). The number of respondents (N) and the calculation of % exclude the respondents who selected "I do not know / I have not used it".

TYPE OF RESPONDENT	N	VERY SATISFIED	SATISFIED	NEUTRAL	DISSATISFIED	VERY DISSATISFIED
Academic/research institution	486	9.5%	35.8%	30.7%	18.9%	5.1%
Business association	25	16.0%	36.0%	36.0%	12.0%	0
Company/business organisation	144	16.7%	39.6%	34.7%	6.3%	2.8%
EU citizen	102	6.9%	44.1%	25.5%	11.8%	11.8%
Non-EU citizen	19	15.8%	57.9%	5.3%	15.8%	5.3%
Non-governmental organisation (NGO)	38	5.3%	34.2%	31.6%	23.7%	5.3%
Other	58	20.7%	19.0%	36.2%	19.0%	5.2%
Public authority	57	10.5%	35.1%	22.8%	21.1%	10.5%
Trade union	2	50.0%	50.0%	0	0	0

Table 26: What is your level of satisfaction with the way the European Commission implements the following types of support under Horizon Europe? EU Missions. The number of respondents (N) and the calculation of % exclude the respondents who selected “I do not know / I have not used it”.

TYPE OF RESPONDENT	N	VERY SATISFIED	SATISFIED	NEUTRAL	DISSATISFIED	VERY DISSATISFIED
Academic/research institution	459	9.6%	28.3%	37.0%	18.5%	6.5%
Business association	17	0%	41.2%	35.3%	23.5%	0%
Company/business organisation	98	21.4%	30.6%	34.7%	0%	4.1%
EU citizen	94	9.6%	30.9%	39.4%	11.7%	8.5%
Non-EU citizen	15	26.7%	26.7%	26.7%	20.0%	0%
Non-governmental organisation (NGO)	34	5.9%	20.6%	35.3%	29.4%	8.8%
Other	52	11.5%	19.2%	40.4%	25.0%	3.8%
Public authority	57	7.0%	29.8%	38.6%	21.1%	3.5%
Trade union	2	0%	0%	100.0%	0%	0%
Environmental organisation	1	0	100%	0	0	0

The efforts to participate in Horizon Europe compared to Horizon 2020 – breakdown by country group

Table 27: The effort needed to participate in Horizon Europe compared to Horizon 2020 is: (EU14 N= 1 216; EU13 N= 177; EU Associated Countries N= 82; Third Countries N= 106)

	GREATER	SIMILAR	LOWER	I DON'T KNOW
EU14	15.4%	66.9%	6.7%	11.1%
EU13	14.1%	61.6%	10.7%	13.6%
EU Associated Countries	18.3%	59.8%	9.8%	12.2%
Third Countries	17.9%	62.3%	4.7%	15.1%

The efforts to participate in Horizon Europe compared to Horizon 2020 – breakdown by type of respondents

Table 28: The effort needed to participate in Horizon Europe compared to Horizon 2020 is:

TYPE OF RESPONDENT	N	GREATER	SIMILAR	LOWER	I DON'T KNOW
Academic/research institution	809	16.2%	68.7%	5.6%	9.5%
Company/business organisation	268	13.8%	61.2%	11.9%	13.1%
EU citizen	194	16.5%	61.3%	5.7%	16.5%
Public authority	85	14.1%	63.5%	5.9%	16.5%
Other	81	18.5%	66.7%	6.2%	8.6%
Non-governmental organisation (NGO)	66	9.1%	66.7%	7.6%	16.7%
Business association	38	13.2%	73.7%	7.9%	5.3%
Non-EU citizen	35	17.1%	45.7%	20.0%	17.1%
Environmental organisation	3	33.3%	33.3%	0.0%	33.3%
Trade union	2	50.0%	50.0%	0.0%	0.0%

The efforts to participate in Horizon Europe compared to other research and innovation programmes – breakdown by country group

Table 29: The effort needed to participate in Horizon Europe compared to that of other research and innovation programmes was: (EU14 N= 1 212; EU13 N= 173; EU Associated Countries N= 83; Third Countries N= 107)

	GREATER	SIMILAR	LOWER	I DON'T KNOW
EU14	36.6%	32.7%	8.2%	22.6%
EU13	34.7%	37.6%	6.9%	20.8%
EU Associated Countries	36.1%	38.6%	8.4%	16.9%
Third Countries	38.3%	37.4%	4.7%	19.6%

The efforts to participate in Horizon Europe compared to other research and innovation programmes – breakdown by type of respondents

Table 30: The effort needed to participate in Horizon Europe compared to that of other research and innovation programmes was:

TYPE OF RESPONDENT	N	GREATER	SIMILAR	LOWER	I DON'T KNOW
Academic/research institution	803	41.8%	35.5%	7.3%	15.3%
Company/business organisation	38	34.2%	31.6%	13.2%	21.1%
EU citizen	270	27.4%	36.7%	11.9%	24.1%
Public authority	3	33.3%	0.0%	0.0%	66.7%
Other	194	38.1%	28.4%	6.2%	27.3%
Non-governmental organisation (NGO)	35	28.6%	48.6%	2.9%	20.0%
Business association	65	30.8%	23.1%	10.8%	35.4%
Non-EU citizen	82	24.4%	32.9%	4.9%	37.8%
Environmental organisation	83	30.1%	27.7%	3.6%	38.6%
Trade union	2	50.0%	0.0%	0.0%	50.0%

Costs of proposal preparation – breakdown by country group

Table 31: Approximately, how much time did the proposal preparation for Horizon Europe take overall? Please indicate the total number of person-days. (EU14 N= 1 105; EU13 N= 166; EU Associated Countries N= 77; Third Countries N= 92)

RESPONSE OPTIONS	EU14	EU13	EU ASSOCIATED COUNTRIES	THIRD COUNTRIES
Less than 10 person-days	1.8%	3.6%	2.6%	5.4%
More than 10 but below 20 person-days	7.2%	7.8%	10.4%	9.8%
More than 20 but below 30 person-days	15.0%	10.8%	16.9%	17.4%
More than 30 but below 40 person-days	11.7%	12.7%	14.3%	8.7%
More than 40 but below 50 person-days	15.8%	15.7%	18.2%	19.6%
More than 50 but below 60 person-days	14.7%	13.9%	7.8%	8.7%
More than 60 but below 100 person-days	14.7%	14.5%	14.3%	5.4%
More than 100 person-days	19.1%	21.1%	15.6%	25.0%

Costs of proposal preparation – breakdown by type of respondents

Table 32: Approximately, how much time did the proposal preparation for Horizon Europe take overall? Please indicate the total number of person-days.

TYPE OF RESPONDENT	<10 M/DAYS	10 - 20 M/DAYS	20 - 30 M/DAYS	30 - 40 M/DAYS	40 - 50 M/DAYS	50 - 60 M/DAYS	60 - 100 M/DAYS	>100 M/DAYS
Academic/research institution (N=755)	1.5%	4.4%	9.9%	16.0%	12.8%	15.4%	24.2%	15.8%
Company/business organisation (N=256)	3.9%	12.5%	13.7%	17.6%	11.3%	10.5%	14.8%	15.6%
EU citizen (N=176)	2.3%	5.1%	10.2%	15.9%	22.2%	17.6%	13.1%	13.6%
Other (N=69)	0.0%	14.5%	18.8%	8.7%	18.8%	13.0%	10.1%	15.9%
Public authority (N=64)	6.3%	18.8%	12.5%	17.2%	10.9%	7.8%	17.2%	9.4%
Non-governmental organisation (NGO) (N=55)	0.0%	12.7%	20.0%	7.3%	14.5%	14.5%	20.0%	10.9%
Business association (N=32)	3.1%	6.3%	9.4%	28.1%	15.6%	9.4%	12.5%	15.6%
Non-EU citizen (N=29)	10.3%	13.8%	20.7%	31.0%	3.4%	3.4%	10.3%	6.9%
Environmental organisation (N=2)	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Trade union (N=2)	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%

Effectiveness of the European partnerships and EU Missions supported by Horizon Europe compared to regular collaborative research – breakdown by type of respondent

Table 33: In your opinion, to what extent are European Partnerships supported by Horizon Europe effective compared to regular collaborative research projects in achieving Horizon Europe's objectives? Breakdown by type of respondent.

TYPE OF RESPONDENT	N	TO A GREAT EXTENT	SOMEWHAT	NEUTRAL	A LITTLE	NOT AT ALL	I DON'T KNOW
Academic/research institution	789	20.2%	22.2%	9.8%	7.2%	3.4%	37.3%
Company/business organisation	264	30.3%	19.3%	6.8%	2.7%	1.9%	39.0%
EU citizen	188	14.9%	23.9%	12.2%	2.7%	6.4%	39.9%
Public authority	83	21.7%	24.1%	10.8%	4.8%	4.8%	33.7%
Other	80	32.5%	22.5%	8.8%	6.3%	2.5%	27.5%
Non-governmental organisation (NGO)	62	19.4%	21.0%	9.7%	9.7%	0.0%	40.3%
Business association	38	60.5%	18.4%	0.0%	2.6%	0.0%	18.4%
Non-EU citizen	34	35.3%	11.8%	2.9%	5.9%	8.8%	35.3%
Environmental organisation	3	0.0%	33.3%	33.3%	0.0%	0.0%	33.3%
Trade union	2	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 34: In your opinion, to what extent are EU Missions supported by Horizon Europe effective compared to regular collaborative research projects in achieving Horizon Europe's objectives?

TYPE OF RESPONDENT	N	TO A GREAT EXTENT	SOMEWHAT	NEUTRAL	A LITTLE	NOT AT ALL	I DON'T KNOW
Academic/research institution	784	14.2%	19.1%	10.3%	5.7%	8.0%	42.6%
EU citizen	261	8.4%	18.0%	9.2%	5.7%	2.3%	56.3%
Other	188	11.2%	18.6%	11.7%	5.9%	6.4%	46.3%
Environmental organisation	81	11.1%	30.9%	13.6%	8.6%	4.9%	30.9%
Non-EU citizen	80	15.0%	26.3%	10.0%	7.5%	10.0%	31.3%
Business association	64	10.9%	15.6%	7.8%	12.5%	9.4%	43.8%
Company/business organisation	37	0.0%	18.9%	18.9%	10.8%	5.4%	45.9%
Non-governmental organisation (NGO)	34	23.5%	14.7%	2.9%	11.8%	2.9%	44.1%
Public authority	3	0.0%	33.3%	33.3%	0.0%	0.0%	33.3%
Trade union	2	0.0%	0.0%	50.0%	50.0%	0.0%	0.0%

Table 35: To what extent do you agree with the following statement: the rationalisation of European Partnerships has allowed additional public and private investments in research and innovation to be leveraged. Breakdown by cluster of interest of the respondent.[226]

	CLUSTER 1 (N=640)	CLUSTER 2 (N=469)	CLUSTER 3 (N=472)	CLUSTER 4 (N=820)	CLUSTER 5 (N=900)	CLUSTER 6 (N=677)
Strongly agree	6%	5%	7%	9%	9%	6%
Agree	24%	25%	23%	26%	24%	24%
Neither agree nor disagree	19%	19%	20%	20%	21%	19%
Disagree	9%	8%	10%	9%	9%	10%
Strongly disagree	2%	2%	2%	2%	2%	2%

[226] The same respondent could select one or more clusters.

I do not know / No opinion	40%	41%	38%	34%	35%	39%

Table 36: To what extent do you agree with the following statement: the rationalisation of European Partnerships has led to delivering more solutions for the benefits of society, the environment and the economy. Breakdown by cluster of interest of the respondent.[227]

	CLUSTER 1 (N=640)	CLUSTER 2 (N=470)	CLUSTER 3 (N=472)	CLUSTER 4 (N=817)	CLUSTER 5 (N=897)	CLUSTER 6 (N=674)
Strongly agree	6%	6%	6%	8%	8%	6%
Agree	19%	21%	20%	22%	23%	23%
Neither agree nor disagree	23%	21%	23%	24%	23%	22%
Disagree	8%	6%	8%	7%	7%	8%
Strongly disagree	4%	4%	4%	4%	3%	3%
I do not know / No opinion	41%	42%	38%	36%	36%	38%

Table 37: In your opinion, to what extent are European Partnerships supported by Horizon Europe effective compared to regular collaborative research projects in achieving Horizon Europe's objectives? Breakdown by cluster of interest of the respondent.[228]

	CLUSTER 1 (N=635)	CLUSTER 2 (N=466)	CLUSTER 3 (N=471)	CLUSTER 4 (N=822)	CLUSTER 5 (N=899)	CLUSTER 6 (N=675)
To a great extent	18%	18%	21%	27%	26%	21%
Somewhat	25%	27%	26%	24%	25%	24%
Neutral	11%	9%	9%	10%	10%	12%
A little	7%	8%	8%	6%	7%	8%
Not at all	5%	5%	4%	4%	4%	5%
I do not know / No opinion	34%	33%	32%	30%	29%	31%

[227] The same respondent could select one or more clusters.
[228] The same respondent could select one or more clusters.

Table 38: In your opinion, to what extent are EU Missions supported by Horizon Europe effective compared to regular collaborative research projects in achieving Horizon Europe's objectives? Breakdown by cluster of interest of the respondent.[229]

	CLUSTER 1 (N=631)	CLUSTER 2 (N=462)	CLUSTER 3 (N=467)	CLUSTER 4 (N=813)	CLUSTER 5 (N=892)	CLUSTER 6 (N=671)
To a great extent	12%	12%	11%	11%	12%	14%
Somewhat	20%	23%	19%	21%	24%	20%
Neutral	13%	11%	12%	11%	12%	14%
A little	9%	9%	9%	8%	7%	8%
Not at all	9%	10%	12%	9%	8%	9%
I do not know / No opinion	37%	36%	38%	39%	37%	35%

[229] The same respondent could select one or more clusters.

Synergies with other EU programmes

Table 39: How do the following EU programmes work in synergy (complement and reinforce) Horizon Europe? **ERASMUS +**. Breakdown by part of Horizon Europe in which the respondent is interested / active.[230]

	N	SEVERAL SYNERGIES EXPLOITED	SYNERGIES FULLY EXPLOITED
European Research Council	615	29%	11%
Marie Skłodowska-Curie Actions	707	31%	12%
European Research Infrastructures	469	29%	10%
CLUSTER 1	614	29%	11%
CLUSTER 2	452	31%	12%
CLUSTER 3	459	27%	8%
CLUSTER 4	795	27%	9%
CLUSTER 5	879	25%	9%
CLUSTER 6	657	28%	9%
European Innovation Council	510	25%	8%
European Innovation Ecosystems	343	30%	11%
European Institute of Innovation and Technology	357	33%	10%
Widening and ERA	480	32%	10%

[230] The respondents could select one or more programme parts.

Table 40: How do the following EU programmes work in synergy (complement and reinforce) Horizon Europe? **DIGITAL EUROPE PROGRAMME**. Breakdown by part of Horizon Europe in which the respondent is interested / active. [231]

	N	SEVERAL SYNERGIES EXPLOITED	SYNERGIES FULLY EXPLOITED
European Research Council	616	21%	6%
Marie Skłodowska-Curie Actions	708	20%	7%
European Research Infrastructures	469	27%	7%
CLUSTER 1	619	25%	7%
CLUSTER 2	454	26%	9%
CLUSTER 3	462	28%	9%
CLUSTER 4	806	26%	9%
CLUSTER 5	884	20%	8%
CLUSTER 6	663	23%	8%
European Innovation Council	515	26%	7%
European Innovation Ecosystems	345	28%	11%
European Institute of Innovation and Technology	360	29%	12%
Widening and ERA	481	25%	9%

[231] The respondents could select one or more programme parts.

Table 41: How do the following EU programmes work in synergy (complement and reinforce) Horizon Europe? **LIFE**. Breakdown by part of Horizon Europe in which the respondent is interested / active. [232]

	N	SEVERAL SYNERGIES EXPLOITED	SYNERGIES FULLY EXPLOITED
European Research Council	617	15%	3%
Marie Skłodowska-Curie Actions	708	15%	5%
European Research Infrastructures	471	17%	5%
CLUSTER 1	619	16%	4%
CLUSTER 2	454	19%	5%
CLUSTER 3	462	18%	4%
CLUSTER 4	802	18%	6%
CLUSTER 5	883	21%	6%
CLUSTER 6	664	24%	6%
European Innovation Council	514	20%	4%
European Innovation Ecosystems	344	23%	6%
European Institute of Innovation and Technology	359	21%	6%
Widening and ERA	477	18%	5%

[232] The respondents could select one or more programme parts.

Table 42: How do the following EU programmes work in synergy (complement and reinforce) Horizon Europe? **European Regional Development Fund**. Breakdown by part of Horizon Europe in which the respondent is interested / active. [233]

	N	SEVERAL SYNERGIES EXPLOITED	SYNERGIES FULLY EXPLOITED
European Research Council	614	18%	5%
Marie Skłodowska-Curie Actions	705	17%	5%
European Research Infrastructures	470	20%	6%
CLUSTER 1	616	18%	4%
CLUSTER 2	453	19%	5%
CLUSTER 3	460	18%	4%
CLUSTER 4	797	19%	5%
CLUSTER 5	880	18%	5%
CLUSTER 6	661	19%	4%
European Innovation Council	511	18%	4%
European Innovation Ecosystems	344	22%	6%
European Institute of Innovation and Technology	357	23%	5%
Widening and ERA	478	21%	5%

[233] The respondents could select one or more programme parts.

Annex 6 Description of synergies, by programme

The following text provides a summary of synergies found by the evaluation between Horizon Europe and other EU programmes identified in annex IV of the legal base. It is based on data collected through 5 impact area evaluation support studies[234] and a meta-analysis[235].

Among programmes in shared management, **the ERDF** presents a clear case for synergies as one of its investment priorities focuses on innovation and support to SMEs, as well as digitisation and digital connectivity", with the overall objective of fostering regional development and closing regional disparities.[236] In the *ex post* evaluation of Horizon Europe, findings on synergies with the ERDF were mixed: this fund's programmes build human and infrastructural capacities needed to compete in Horizon 2020 but "measures to create synergies allowing the ERDF to deploy results of Horizon 2020 projects were hardly implemented".[237] In the current MFF, synergies with the ERDF focused on:

- the Seal of Excellence (see separate section in the SWD),
- combined funding: Teaming, a type of Widening action, has been implemented with EUR 383 million of total EU contribution, and mobilised EUR 217 million from ERDF programmes for complementary funding,

Table 43: Combined funding through Teaming (ERDF)

Country	Overall budget (EUR)	ERDF (EUR)	ERDF %
PT	87,760,000	56,900,000	64.8%
PL	79,976,317	21,600,000	27.0%
CZ	50,035,742	32,390,068	64.7%
CY	50,000,000	0	0.0%
EL	35,303,140	22,500,000	63.7%
SK	31,935,000	18,103,500	56.7%
EE	30,000,000	0	0.0%
ES70 Canary Islands (Outermost region)	30,000,000	0	0.0%
LT	25,032,000	24,552,000	98.1%
LV	20,000,000	0	0.0%
SI	15,000,000	15,000,000	100.0%
BG	15,000,000	12,750,000	85.0%
HR	15,000,000	12,750,000	85.0%
TR	10,000,000	0	0.0%
TOTAL	**495,042,199**	**216,545,568**	**43.7%**

[234] All published in 2024, on Excellent Science: https://data.europa.eu/doi/10.2777/2295765, Resilient Europe: https://data.europa.eu/doi/10.2777/797281, Digital & Industrial Transition: https://data.europa.eu/doi/10.2777/845650, Green Transition: https://data.europa.eu/doi/10.2777/67934, Innovative Europe: https://data.europa.eu/doi/10.2777/499132

[235] Catalano G., Consiglio, G. and Delponte L. *Horizon Europe Internal and External Coherence (Synergies): Supporting the Interim Evaluation of Horizon Europe.* Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2777/5616419

[236] Funding priorities presented at https://ec.europa.eu/regional_policy/funding/erdf_en

[237] SWD on the ex post evaluation of Horizon Europe, SWD(2024) 29 final, pp. 77-78.

Source: REA monitoring as of 6 December 2024

- transfers from ERDF to Horizon Europe - this is a new modality for creating synergies with the ERDF. As of May 2024, two Member States – Lithuania and Malta – transferred ERDF funds to Horizon Europe activities, under pillars 1 and 3. Lithuania has requested a transfer of EUR 18.5 million from EDRF to ERC, MSCA PF and WIDERA (ERA) for 2024 and 2025. In particular, out of a total of EUR 18.5 million, EUR 12.5 million was directed to the EIC and EUR 6 million to the Excellent Science and WIDERA pillars. Similarly, Malta has requested a transfer of EUR 5 million to Horizon Europe for the period 2023-2027, mainly for mono-beneficiary projects under Excellent Science, Innovative Europe and WIDERA.
- cumulative funding (e.g. ERDF as national contribution to European Partnerships – see separate section on Partnerships as a synergy mechanism in the main SWD),
- cooperation on the Regional Innovation Valleys (RIVs): The RIVs are supported by the European Innovation Ecosystems (EIE) and the ERDF's Interregional Innovation Investments (I3) instrument. Early findings showed that this synergy – not foreseen by design – was labour-intensive to implement.[238] More recently, 13 EIE regions declared that they will use the ERDF to co-fund 50% their activities.[239]

ERASMUS+ is the programme where stakeholders responding to the public consultation perceived the most synergies with Horizon Europe: 35% reported that several synergies were being exploited or that they were fully exploited (518 respondents). The Erasmus+ Mobility Projects, facilitate the incorporation of participants into MSCA research teams via traineeships and staff exchanges, and the participation of MSCA researchers in Erasmus+-funded blended intensive programmes. The Erasmus+ European Universities Initiative and Horizon Europe have also demonstrated synergies, particularly through the MSCA. European University Alliances have participated in MSCA COFUND actions, linking projects to these alliances and fostering partnerships between European Universities and WIDERA projects. Moreover, Horizon Europe calls on the European Excellence Initiative foresee competitive calls for cooperation on the R&I dimension related to the ERA Policy Agenda. These calls are open to all types of alliances, including the European Universities alliances. European University alliances are also eligible to compete for other opportunities under Horizon Europe to fund transformative aspects (under the WIDERA (ERA) component) and collaborative research and innovation activities.[240]

With **InvestEU**, the *potential* for synergies was confirmed but evidence of its realization in practice has been challenging to obtain. The rationale for this synergy focuses on the EIC which bridges the funding gap for high-risk innovations until they are suitable for InvestEU co-financing. Up to 10% of EIC Accelerator calls (from 2021) can be allocated for blending with InvestEU instruments to support EIC Accelerator-selected companies, follow-on investments, or Seal of Excellence companies.[241] The Commission has found anecdotal evidence of the same companies being supported by the EIC and InvestEU, by comparing names of companies (but

[238] Naujokaitytė, R., Cakić, M., Didžiulytė, M., Zharkalliu-Roussou, K. et al., Evaluation study of the European framework programmes for research and innovation for an innovative Europe, Publications Office of the EU, 2024, p. 92, https://data.europa.eu/doi/10.2777/499132
[239] EISMEA internal monitoring data, September 2024.
[240] Evaluation study on Excellent Science, 2024, p. 49.
[241] Innovative Europe evaluation study, 2024, p. 90, https://data.europa.eu/doi/10.2777/499132

lacking individual identifiers and other details). Limited reporting on the beneficiaries of indirectly managed programmes prevents more in-depth analysis of this synergy.[242]

With **EU4Health**, development of synergies focused on **coordination of work programmes and cross-referencing** to raise the applicants' awareness of complimentary interventions is underway between several programmes. The EU4Health Work Programmes invite applicants to build upon the results of Horizon Europe programme, especially EU Mission Cancer.[243] In turn, the WPs of Horizon Europe also make references to EU4Health initiatives, for example the networks of young cancer survivors established under EU4Health.[244] An examination of e-grants data (covering 50% of the EU4Health budget) shows a significant extent of cross-participation of entities, benefitting from both programmes (see Figure 124 below).

Evidence of synergies is similar with the **Connecting Europe Facility**: the main activities comprised cross-referencing of calls and knowledge exchange activities.[245] The CEF is also funding the EuroHPC JU. The Regulation establishing Horizon Europe foresaw that the synergy with CEF would consist in "large-scale roll-out and deployment of innovative new technologies and solutions in the fields of transport, energy and digital physical infrastructures".

Horizon Europe's synergy with the **LIFE programme** focuses on the uptake of R&I results and their deployment at national, interregional and regional scale to help address environmental, climate or clean energy transition issues.[246] For Standard Action Projects, which represent the main type of grants, the LIFE programme awards bonus points to project proposals that are substantially building or scaling up the results of other EU programmes. In 2021-2023 calls, the bonus was granted to 184 projects for substantially building on or up-scaling the results of other European programmes – indicating mainly Horizon Europe.[247] Some activities supported by the LIFE programmes (focusing on demonstration of innovative solutions) are similar to activities implemented by the EU Missions in Horizon Europe.[248]

The Horizon Europe Regulation refers to potential synergies with the **European Defence Fund** (EDF), and the EDF Regulation states that 'positive spill-over effects to the civilian sector can also be expected, where applicable'[249] and that 'the Commission will take into account other

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[242] No individual identifiers of benefitting companies. No start and end dates of InvestEU support provided by, inter alia, the EIB, EIF (equity), CDP equity and the EIF (guarantees). See https://www.eib.org/attachments/general/lists/investeu-final-recipients-beneficiaries-en.pdf, https://www.eif.org/InvestEU/guarantee_products/ieu-debt-visibility-report-final-recipients.pdf, https://www.eib.org/attachments/general/lists/investeu-final-recipients-beneficiaries-en.pdf and https://www.cdp.it/sitointernet/en/accordo_investeufund_cdpequity.page#:~:text=Please%20find%20in%20the%20table%20below%20the%20list.

[243] The study supporting the interim evaluation of EU4Health is forthcoming in 2025 and includes the list of relevant Work Programmes in an annex.

244 For example, references to the EU-CAYAS-NET network or the ERN-Padcan initiatives, both supported by the EU4Health programme are included in the topic " HORIZON-MISS-2024-CANCER-01-05: Improving the understanding and management of late-effects in adolescents and young adults (AYA) with cancer", Horizon Europe work programme 2023-2025, 12. Missions and Cross-cutting Activities (European Commission Decision C(2024) 2371 of 17 April 2024), pp. 94-96

[245] Green Transition evaluation support study, 2024, https://data.europa.eu/doi/10.2777/67934, p. 60.

[246] Annex IV of the regulation establishing Horizon Europe, point 9.

[247] CINEA internal monitoring of 2021-2023 calls as of October 2024. NB: the LIFE Clean Energy Transition sub-programme mainly uses Coordination and Support Actions, which do not use bonus points in project evaluation.

[248] Study supporting the interim evaluation of LIFE, forthcoming in 2025.

[249] Recital 35 of Regulation (EU) 2021/697 of the European Parliament and of the Council of 29 April 2021 establishing the European Defence Fund and repealing Regulation (EU) 2018/1092.

activities financed under Horizon Europe […] in order to avoid unnecessary duplication and ensure cross-fertilisation and synergies between civil and defence research'.[250] The White Paper on options for enhancing support for research and development involving technologies with dual-use potential[251] reviews the existing R&D support framework which is characterised by a strict separation in EU funding for civil and defence R&D activities. This has implications for the exploitation and market uptake of results of technologies with dual-use potential. The White Paper found that the EU institutions continuously need to explore possible options to strengthen this cross-fertilisation in the context of R&D support involving technologies with a dual-use potential, while taking into account the fundamental differences between civil and military spheres. For this purpose, the Commission launched a public consultation on options for strategic support to technologies with a dual-use potential, whose results indicate an overall tendency mostly favourable to keeping civil and defence R&D separate, in particular among research institutions, NGOs and citizens.[252] Some public authorities, business associations and private companies showed more openness to removing the exclusive focus on civil applications subject to further discussion on the details of implementation.

When it comes to security resilience and EU preparedness, synergies are exploited between Horizon Europe (in particular Cluster 3) and **the Internal Security Fund (ISF), the Integrated Border Management Fund (IBMF), the European Maritime and Fisheries Fund (EMFF) and the civil protection mechanism**. These synergies aim to further the uptake of innovations and solutions developed by security research funded under Horizon Europe. A study on civil security research[253] reports that, to bridge the 'Valley of Death', stakeholders highlighted the potential to use security-related funding schemes, such as the ISF and IBMF, for funding targeted follow-up projects promoting market uptake.

While these options exist, beneficiaries may not always be aware of them and how to leverage them in combination with known funding sources.[254] Nevertheless, there are some examples of synergies such as the European Union's Internal Security Fund Police project on drone detection, tracking and identification CORAGEOUS[255] which was based on the results of three Horizon 2020 projects: SafeShore[256], ALFA[257] and ALADDIN.[258]

Security capabilities addressed by Cluster 3 are focussing on civil end-users, which have different needs from defence/military users, thus limiting potential synergies. While certain technologies have a dual use potential (e.g. cybersecurity or drones), especially at low-TRL level, the technological requirements will differ depending on the intended final use (civil or military), which means that higher TRL projects are by nature rarely dual use. While synergies between civil and defence research can be exploited, innovators also want to ensure that both civil and defence capabilities are supported.[259] To facilitate this, the ISF and IBMF published

[250] Recital 33 of Regulation (EU) 2021/697 of the European Parliament and of the Council of 29 April 2021 establishing the European Defence Fund and repealing Regulation (EU) 2018/1092.
[251] COM (2024) 27 of 24.01.2024
[252] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14060-RD-on-dual-use-technologies-options-for-support_en
[253] "2024 Study on Strengthening EU-Funded Security Research and Innovation - 20 Years of EU-Funded Civil Security Research and Innovation", p.105 (forthcoming).
[254] Ibid, p. 110.
[255] https://courageous-isf.eu/
[256] https://cordis.europa.eu/project/id/700643
[257] https://cordis.europa.eu/project/id/700002
[258] https://cordis.europa.eu/project/id/740859
[259] European Commission, DG HOME, Study on Strengthening EU-Funded Security Research and Innovation - 20 Years of EU-Funded Civil Security Research and Innovation, forthcoming in 2025, p. 41.

dedicated calls supporting the testing, validation or deployment of new methods and technologies resulting from Horizon Europe projects.[260]

With the **Digital Europe Programme**, as shown in Figure 124 further below, there is a noteworthy level of cross-participation: 1 512 common participants (representing 50% of DEP beneficiaries in the 70% of its budget that is visible in e-grants). The public consultation on Horizon Europe also shows that "synergies were (fully) exploited" with the DEP (62%; 838 respondents). Collaboration between the responsible Commission services (e.g., joint design of calls, evaluation of proposals and workshops) fosters synergies between Cluster 3 and DEP and more specifically enabling digital actions to capitalize on outputs from Cluster 3 and its predecessors.[261]

Synergies with the **Recovery and Resilience Facility (RRF)** were foreseen in the Horizon Europe's legal base through the take-up and deployment of innovative solutions, making Member States economies and society more resilient and better prepared for the future. As of December 2023, five Member States (BG, CZ, EL, ES, SK) have leveraged synergies between Horizon Europe and the RRF by supporting projects with the EIC Seal of Excellence[262]. The Work programme of MSCA under Horizon Europe also encourages synergies with the Cohesion policy funds and the RRF, notably in COFUND and the Seal of Excellence.

In addition, a new instrument, Pathways to Synergies, has been established to stimulate synergies between Horizon Europe and the RRF: focusing on human resource development and internationalization (so-called upstream synergies) and the valorization and upscaling of research results into marketable solutions (downstream from Horizon Europe). A call for proposals was launched in March 2023, with projects starting in June 2024. This is a rather complex instrument requiring significant effort from the National Contact Points.[263]

With the **Common Agricultural Policy (CAP)**, synergies have been identified only with Cluster 6, as the CAP Network[264] (established in 2023) raises awareness about Horizon Europe Cluster 6 projects and Mission Soil[265]. The Horizon Europe regulation foresaw a broader synergy with "the CAP making the best use of R&I results and promoting the use, implementation and deployment of innovative solutions".

For the **Single Market Programme (SMP)**, the Regulation establishing Horizon Europe foresaw a synergy through the Enterprise Europe Network (EEN) and this was confirmed by the evaluation (an improvement to the Horizon 2020 period when no synergies were found[266]). The EEN provides information on various types of EU funding and alternative sources of finance tailored to the specific needs of SMEs. In addition, there is a collaboration between the EIT and SMP, where the EIT has received a budget of EUR 4 million from the SMP to establish the European Solar Academy.[267] This initiative facilitates the upskilling and reskilling of the

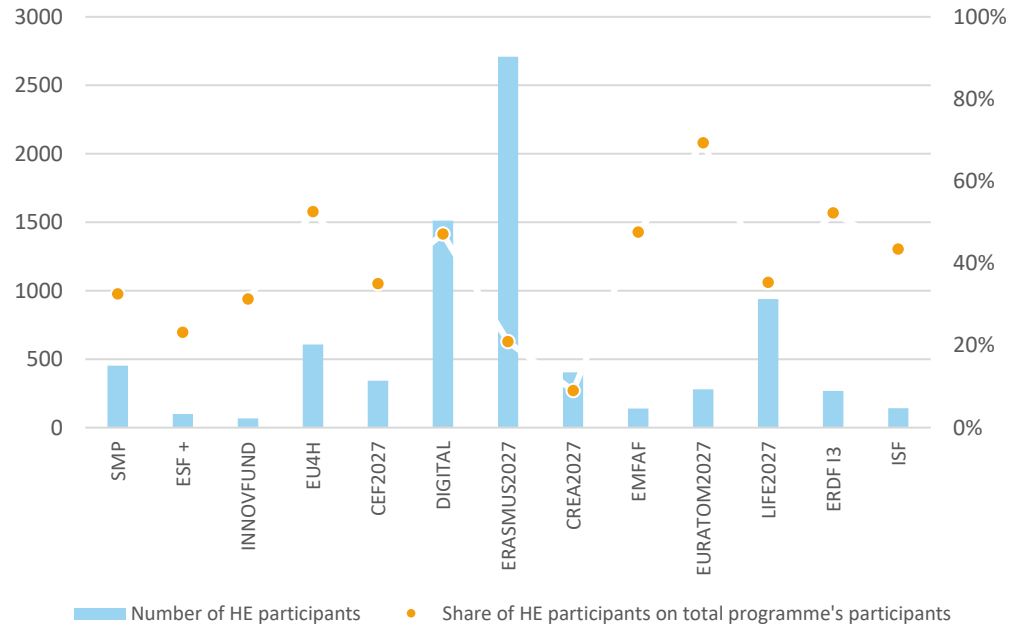
[260] Five dedicated calls in 2021-2024: ISF/2022/SA/3.4.1, BMVI/2021-2022/SA/1.2.1, BMVI/2024/SA/1.1.5, ISF/2024/SA/3.4.2, ISF/2024/SA/3.4.1.
[261] Resilient Europe evaluation study, 2024, https://data.europa.eu/doi/10.2777/797281, p. 71.
[262] Innovative Europe evaluation study, 2024, https://data.europa.eu/doi/10.2777/499132, p. 91.
[263] Evaluation study on Excellent Science, 2024, p. 225, https://data.europa.eu/doi/10.2777/2295765.
[264] The EU CAP Network is a forum through which the National CAP Networks, organisations, administrations, researchers, entrepreneurs and practitioners can share knowledge and information (e.g. via peer-to-peer learning and good practices) about agriculture and rural policy. https://eu-cap-network.ec.europa.eu/index_en
[265] Green Transition evaluation study, 2024, p. 59-61.
[266] Study on the external coherence and synergies of Horizon 2020, 2023, p. 81.
[267] Call SMP-COSME-2024-EIT-EUSOLARACADEMY.

solar photovoltaic technologies workforce, with a specific focus on SMEs, through education and training providers in EU Member States.[268]

With the **Union Space Programme (USP)**, the synergy revolves around bolstering innovation among SMEs in the space sector. The EIC integrates regular space challenges into its work programmes and its beneficiaries have expedited access to key Horizon Europe Cluster 4 activities, including the CASSINI business accelerator.[269] While it is not possible for both frameworks to procure together, cooperation is organised around activities of both initiatives such as hackathons or matchmaking.[270] Within Cluster 4, synergies have developed with the European Space Agency (ESA) – the Technology Mapping Exercise plays a role in avoiding overlap and duplication between the EU and ESA activities.[271] The approach adopted for Cluster 4 includes the Cassini accelerator, an EU initiative aimed at supporting startups and SMEs in the space sector. It provides tailored business development services, mentoring, and access to funding opportunities to help these companies grow and scale their innovations.[272]

For grants directly managed by the Commission services, data is available on participants who engage in both Horizon Europe and other EU programmes[273] (see figure below). This data indicates of the strongest *potential* synergies between Horizon Europe and Erasmus+, Digital Europe Programme and LIFE.

Figure 124: Cross-participants between Horizon Europe and other programmes managed in e-grants



Source: e-grants data extracted on 28 February 2024

Note: only 10-20% of ISF and ERASMUS+ projects is managed in e-grants. EU4Health data in e-grants is limited to around 50% of the budget, while for DEP this share is 70%.

[268] Innovative Europe evaluation study, 2024, https://data.europa.eu/doi/10.2777/499132, pages 88-89.
[269] The accelerator is part of the broader CASSINI Space Entrepreneurship Initiative, which seeks to foster innovation and competitiveness in the European space industry by leveraging EU space assets and data.
[270] Digital and Industrial Transition evaluation study, 2024, p. 114.
[271] Ibid, Annex V - Stakeholders' consultations results and synopsis report, p. 65.
[272] Innovative Europe evaluation study, 2024, https://data.europa.eu/doi/10.2777/499132, p. 91.
[273] Data are available only for 13 programmes, including Horizon Europe.

There are 67 entities benefitting both from the **Innovation Fund under the Emission Trading Scheme** and Horizon Europe (31% of total Innovation Fund's participants as of 28 February 2024). This is not necessarily indicative of the degree of synergies between the two programmes, but shows the interest of entities in applying to different EU funding programmes. They received a relatively high amount of resources, € 3 billion amounting to 46.6% of total Innovation Fund budget as of the reference date. Horizon Europe work programmes encourage applicants to include in their proposals a business case strategy and feasibility study with a view towards possible future applications for the Innovation Fund. In this context, five coordination and support actions (CSA) have been launched, with consortia consisting of participants from mature Horizon 2020 projects, to promote the dissemination of best practices and produce sound Innovation Fund applications. According to CINEA, out of the 34 Horizon 2020 projects considered potentially mature/relevant for an Innovation Fund application and involved as beneficiaries in the CSAs, five are in the process of preparing an application for the call closing in April 2025.

In order to further explore these potential synergies and cross-participation in EU programmes, text analysis of project abstracts offers additional insights.[274] Projects identified as highly similar to Horizon Europe's were more frequently funded by Euratom and ERDF I3 – 85% of all these project pairs were rated as highly similar. This level of similarity was less frequently found with projects funded by Creative Europe, ESF+, ERASMUS+ and the SMP. Almost all (94%) of the identified project pairs were concurrent rather than sequential – not surprising considering the relatively early stage of programme implementation. With Creative Europe, ESF+, Euratom – the evaluation found relatively limited evidence of synergies.

The **Creative Europe** programme is complimentary to Cluster 2 (Destination culture and, to a lower extent, democracy). For instance, Creative Europe introduced a mobility scheme for artists and professionals, offering residencies and location-based cultural initiatives in line with the New European Bauhaus.[275] However, the remainder of Creative Europe programme (66% of its budget), covers subsectors such as the audiovisual industry, video games and news media – in these sectors, evidence of synergies was not found.

For the **Neighbourhood, Development and International Cooperation Instrument (NDICI)**, the synergies relate to the close interaction of the Global Health EDCTP3 Joint Undertaking (EUR 1.86 billion of which up to EUR 910 million from Horizon Europe) and the Team Europe Initiative on local manufacturing of vaccine and other medical products in Africa (MAV+, EUR 1 billion from NDICI).[276] These initiatives are proposed in the EU Global Health Strategy that the Commission adopted in November 2022. This collaboration supports the process of bringing innovative products to citizens in Africa from end-to-end: research and development of innovative products, regulatory capacity for clinical trials and product approval, local production, and procurement and delivery to the population. Additionally, the DeSIRA initiative, which seeks to enhance an inclusive, sustainable and climate-relevant transformation of agrifood systems in low and medium income countries through R&I based

[274] Between a Horizon Europe project and a project funded by one of the other EU programmes analysed (based on e-grants data availability). Catalano G., Consiglio, G. and Delponte L. *Horizon Europe Internal and External Coherence (Synergies): Supporting the Interim Evaluation of Horizon Europe*. Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2777/5616419

[275] Resilient Europe evaluation study, 2024, https://data.europa.eu/doi/10.2777/797281, page 68.
[276] Resilient Europe evaluation study, 2024, https://data.europa.eu/doi/10.2777/797281, pages 66, 126

on multistakeholder approaches, is complementary to actions for food systems transformation supported by Horizon Europe**.**

The evaluation did not find evidence of synergies with the **Instrument for Pre-Accession Assistance (IPA III) and Just Transition Mechanism**.

Several **networks** facilitate the development of synergies: the R&I and Cohesion Management Authorities (RIMA) network of MS representatives[277], the Seal of Excellence Community of Practice (management bodies implementing the Seal, with DG REGIO) and an interservice group of Commission DGs focusing on synergies (coordinated by DG RTD).

[277] More information is available at https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=103692

Annex 7 European Partnerships: Leverage analysis

Glossary

Term	Meaning or definition
Co-investment (or 'direct call leverage')	In R&I projects, the difference between the project's total eligible costs and the EU contribution to the project. This is equal to Key Impact Pathway 9, short-term indicator ('co-investment').
Total direct leverage	For European partnerships only: co-investment plus additional activities linked to the goal of the partnership, where applicable. It therefore represents the difference between the total costs of the partnership's R&I activities (operational project costs, and additional activities) and the EU's contribution to such activities. Contributions to the partnership's administrative costs are not included. For non-partnerships, or partnerships without additional activities, this indicator is identical to co-investment.
Leverage factor	The ratio (expressed as a number or a value in euro) between the total costs borne by partners other than the EU for R&I activities and the EU contribution to R&I activities. It is calculated for all measures of leverage set out above. For co-investment, the formula is: $\mathbf{CA_{Part} / CA_{EU}}$ And for total direct leverage (including additional activities): $\mathbf{(CA_{Part} + AA_{Part})/ (CA_{EU} + AA_{EU})}$. No financial data is available for this evaluation on additional activities funded by the EU ($\mathbf{AA_{EU}}$) which therefore equals to zero: this means other funding sources with their origin in the EU budget, such as cohesion policy funds, are not accounted for in additional activities.
Funding rate	The EU contribution to a project as a percentage of a project's total eligible costs. Also 'reimbursement rate'.
Co-funding rate	The partners' contribution to a project (see 'co-investment') as a percentage of the total eligible costs of that project. It is the opposite of the funding rate. It differs from the leverage factor, as the denominator is the total project costs, not the EU contribution to the project.

Is Horizon Europe leveraging additional resources for R&I?

The simplest measure of financial leverage of Horizon Europe is the **co-investment** (also 'co-funding') by participants in R&I projects. This is the proportion of project costs that, while eligible for reimbursement, are not covered by the grant provided by the EU – the measure that the EU Financial Regulation calls '**leverage effect**'[278]. This measure is monitored as the short-term indicator of Key Impact Pathway 9 ('Co-investment – Amount of public & private investment mobilised with the initial investment from the Programme').

As of 6 January 2025, project participants invested a total of EUR 10.17 billion of their own resources in Horizon Europe projects. This is equivalent to a leverage factor of 0.236: in other words, each euro the EU is investing in Horizon Europe R&I projects directly attracts additional R&I investment of about EUR 0.24. To date, the programme-wide leverage factor for Horizon Europe is identical to the ratio observed in Horizon 2020 projects (0.236).

Direct leverage factor of Horizon Europe programme parts based on project co-investment vary widely. In several programme parts, particularly in Pillar 1 and in WIDERA actions, but also in Cluster 2 under Pillar II, EU contribution covers essentially all project costs (leverage factor of zero). Some programme parts instead have much higher leverage factors than the average for Horizon Europe. These are broadly the ones where there is higher industry participation (e.g. Cluster 4 and Cluster 5 under Pillar II, as well as the EIC), or where all or a prominent part of the budget is allocated to European Partnerships (EIT, EIE).

Table 44: Co-investment rates of Horizon Europe programme parts

Programme part	**Leverage factor**
European Research Council (ERC)	0.001
Marie Skłodowska-Curie Actions (MSCA)	0.04
Research infrastructures	0.09
Total Pillar 1	**0.02**
CL1 - Health	0.29
CL2 - Culture, creativity and inclusive society	0.01
CL3 - Civil Security for Society	0.10
CL4 - Digital, Industry and Space	0.36
CL5 - Climate, Energy and Mobility	0.35
CL6 - Food, Bioeconomy Natural Resources, Agriculture and Environment	0.22
Total Pillar 2	**0.30**
The European Innovation Council (EIC) (grants only)	0.38
European innovation ecosystems	1.57
The European Institute of Innovation and Technology (EIT)	0.39
Total Pillar 3	**0.45**
Widening participation and spreading excellence	0.003
Reforming and enhancing the European R&I System	0.02
Total Pillar 4 (WIDERA)	**0.004**
Total Horizon Europe	**0.24**

Source: CORDA, data as of 6 January 2025.
For partnerships with cascading grant (EIT KICs, co-funded partnerships), the leverage factor is calculated based on the grant initiating the partnership (*ex ante* value) rather than on actual activities.

[278] EU Financial Regulation, art. 2(40) ("Definitions").

Wherever available – particularly for EIT KICs – the rest of this annex uses data based on implemented activities of the partnership.

The co-investment rate is primarily a function of the funding rate for each action, which is defined by the Commission in advance[279]. However, even within the same type of action or the same consortium, participants may be reimbursed differently: in general, costs from private for-profit entities are covered to a lesser extent than those of universities or non-profit organisations[280].

Table 45: Co-investment rates of main Horizon Europe types of action

Type of action	Leverage factor (co-investment to Horizon Europe projects)
Coordination and support actions (CSA)	0.03
European Innovation Council (grants only)	0.39
European Research Council	0.001
Innovation actions (IA)	0.22
Joint undertakings (JU)	0.8
Marie Sklodowska-Curie Actions (MSCA)	0.04
Research and innovation actions (RIA)	0.02

Source: CORDA, data as of 6 January 2025.

For each euro of EU contribution, Horizon Europe leveraged EUR 0.49 in co-investment from private for-profit entities (EUR 5.8 billion), roughly the same ratio observed in Horizon 2020. SMEs contributed EUR 2.6 billion in own funding to support project costs, equivalent to a co-investment ratio of 0.36 (an increase from 0.33 at the end of Horizon 2020). For comparison, co-investment from higher education institutions is EUR 0.03 per euro invested by the EU.

[279] In fundamental research actions (such as research and innovation actions or European Research Council grants), the EU contribution covers in principle all project costs (100% reimbursement rate). For applied research actions, such as innovation actions and most European Innovation Council grants, the reimbursement rates are lower.

[280] There is also the case of non-associated third-country participants from high-income countries, which in most cases are not eligible for funding. However, since they do not submit eligible costs declarations, this analysis cannot take into account the co-investment leveraged from these participants.

Among the main types of actions, **joint undertakings (JUs)** have, the highest leverage factor (0.8 as of January 2025), mainly due to their design. In the average JU project, 55% of total eligible costs are covered by the EU, and the remaining 45% by project participants. Co-investment ratios in JUs are higher for participants classified as for-profit companies: they brought in additional resources for projects in the amount of EUR 2.83 billion, a direct leverage factor of EUR 1.23 per each euro in EU contribution the projects received. Out of this, at least EUR 2.17 billion comes specifically from privately-owned enterprises, and at least EUR 313 million from state-controlled enterprises[281]. These have a comparatively high leverage factor of 2.25 (against 1.15 for companies without public ownership).

However, the leverage potential of JUs – and, more generally, of European partnerships – goes beyond co-investment in projects. The rest of this section will present the available evidence on resources leveraged by European partnerships and highlight existing information and analysis gaps.

A distinction is made between institutionalised partnerships – which include JUs, public-public Article 185 (TFEU) initiatives, and EIT Knowledge and Innovation Communities (KICs) – and non-institutionalised co-programmed and co-funded partnerships. In general, data availability on leverage is better for institutionalised partnerships. This is the effect of stricter reporting requirements on these types of partnerships.

Leverage of European Partnerships: an overview

Achieving a 'strong leverage effect on a sufficient scale' is a legal requirement for European Partnerships[282]. The legal base of the programme also requires partnerships to provide 'information on quantitative and qualitative leverage effects, including on committed and actually provided financial and in-kind contributions'.[283]

Examining co-investment alone shows that partnerships do indeed leverage higher resources than

Box 9: What are additional activities of partnerships?

For European Partnerships, **additional activities** are activities arranged by the partnership and implemented under the responsibility of the partners. They do not receive EU funding, but that are linked and support the general objective of the partnership. They may include support to additional R&I projects, promotion of technologies and standards, training, communication activities, and others.

In Joint Undertakings, these activities are called "in-kind contributions to additional activities" (**IKAA**): private members often have to provide IKAA to match their legal contribution commitments. Most European Partnerships arrange, however, some forms of additional activities that are not funded by the Horizon Europe budget.

[281] Source on state ownership of Horizon Europe companies: LexisNexis World Compliance (through Orbis database). For around EUR 200 million in co-investment, no status in terms of state ownership can be determined.
[282] Regulation establishing Horizon Europe, art. 10(2), point (a).
[283] For all European Partnerships, Annex III of the Regulation establishing Horizon Europe, point 3 "Monitoring", letter (b), and for JUs specifically, SBA Art. 171(2), letter f). The provision is identical in both sources.

the rest of the Framework Programme[284]. When all partnerships are removed, the leverage ratio for the 'mainstream' FP is around 0.09, equivalent to EUR 2.96 billion in co-investment. For partnerships the co-investment ratio is 0.62 (EUR 7.22 billion).

All types of partnerships also arrange **additional activities** (see Box 9). The monetised value of the members' additional activities counts towards the partnership's leverage objectives. For some partnerships, in particular the co-programmed ones, these activities represent the main source of leverage. However, availability and quality of data on additional activities varies – as does the level of oversight from the Commission on their content.

[284] This indicator is called "direct call leverage" in the Biennial Monitoring Report on partnerships, with identical definition and calculation method.

Key figures as of 31 December 2023

The following sections offer a state of play in terms of current[285] monetised contributions to R&I activities, by type of partnership and for each partnership. Administrative expenditure supporting the running costs of the partnership is not taken into account[286].

The reference date for all sources (EU funding[287], project co-investment, and additional activities) is 31 December 2023, the last date for which data on both co-investment in projects and additional activities are available for most partnerships. Only grants signed before this date are included in the analysis.

As intended by the design of different partnerships, the highest co-investment ratios are achieved by grants initiating co-funded European Partnerships (approximately 2:1) followed by other institutionalised partnerships (including joint undertakings and Article 185 public-to-public initiatives) and EIT KICs, while co-programmed partnerships have a lower leverage ratio of 0.15.

Once additional activities are included, leverage ratios for institutionalised partnerships increase significantly, with partners already contributing more to R&I activities than the EU contribution received to date (leverage factor higher than 1). The increase is particularly remarkable for co-programmed partnerships: the total amount of additional activities declared up to the end of 2023 is over three times as high as the EU contribution allocated to call activities, and considerably higher than the amounts declared by JUs.

Some institutionalised partnerships have a long track-record by now, having existed in a similar organisational setup for at least two programming periods (i.e. since before the start of Horizon 2020). In Horizon Europe, these 'older' partnerships have a substantially higher leverage factor than those that have been created more recently. In particular, the three older EIT KICs have a leverage factor including additional activities close to 3:1, but a gap between 'older' and 'newer' partnerships is also visible for the JUs.

[285] This report uses contributions to projects that are stated in grant agreements, as they appear in the Commission's monitoring systems (in most cases, the CORDA database). This is done even if the activities to be reimbursed by the Commission, and associated payments by beneficiaries, have not yet taken place. The main exception is the EIT, for which data from the EIT's own monitoring system is used: this allows to keep track of the actual stage of implementation of the activities of the EIT KICs. For additional activities, only "incurred" costs are considered (regardless of whether they have been already certified by external auditors, which is a requirement for Joint Undertakings).

[286] For partnerships that manage their own call activities (such as Joint Undertakings), contributions to administrative costs form a steady revenue stream for and reflect a legal commitment by members. However, these costs in itself provide no indications on the capacity of the JU to stimulate additional funding for R&I activities.

[287] It is to be noted that some partnerships bring together several sources of EU funding. For instance, the EuroHPC Joint Undertaking is largely supported by resources from the Digital Europe programme; the Clean Steel co-programmed partnership also arranges calls supported by the Research Fund from Coal and Steel. This section takes into account all EU contribution (and co-investment) in activities from directly managed programmes.

Table 46: Contribution and leverage of European partnerships in Horizon Europe, by type, as of 31 December 2023

Type of partnership	Horizon Europe contribution (a) (EUR)	Other EU contribution (b) (EUR)	Participants co-investment in EU R&I projects (c) (EUR)	Additional activities of JU members, costs incurred (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)
JUs/Art.185	2 986 133 799	187 108 681	2 869 777 262	1 753 655 258	0.90	1.46
Older partnerships	*2 108 863 823*	*0*	*2 445 045 874*	*1 259 902 814*	*1.16*	*1.76*
Newer partnerships	*877 269 976*	*187 108 681*	*424 731 388*	*493 752 444*	*0.40*	*0.86*
Co-programmed	3 126 851 284	24 710 696	472 755 667	10 113 314 067	0.15	3.36
Co-funded	750 858 915	unknown	1 482 259 292	not disclosed	1.97	not disclosed
EIT KICs	1 014 095 224	unknown	512 462 324	510 380 000	0.51	1.01
Older KICs	*256 905 842*		*269 356 882*	*458 630 000*	*1.05*	*2.83*
Newer KICs	*757 189 382*		*243 105 443*	*51 750 000*	*0.32*	*0.39*
Total	7 877 939 223	211 819 377	5 337 254 545	12 377 349 325	0.66	2.19 *

Sources: CORDA (Horizon Europe contribution and costs, for all excluding KICs and Art. 185), eGrants dashboard (other EU contribution and costs, for all excluding KICs and Art. 185), Annual Activity Reports of JUs (for additional activities), EIT monitoring system (for EIT KICs), additional activity reporting of co-programmed partnerships, partnership secretariat (for Art. 185 and procurement actions under EuroHPC JU). For lump sum projects, co-investment amounts are estimated based on ex-ante assumptions.

'Older' partnerships are initiatives that were launched before the start of Horizon 2020 under the same or similar legal form. 'Newer' partnerships were launched during Horizon 2020 or at the start of Horizon Europe. All partnerships that changed their form in Horizon Europe (e.g. GH-EDCTP3 and SNS JU) are considered 'newer'.

* When additional activities are not disclosed, the values for call-level co-investment (column c) are used for this calculation. For some JUs and co-programmed partnerships, data on additional activities is not yet available (see dedicated sections).

Institutionalised partnerships

Joint undertakings

Main statistics about co-investment in JU Horizon Europe projects, as well as additional activities from JU members as of 31 December 2023, are available in Table 47.

Co-investment is defined here as the difference between total eligible project costs and EU contribution to project activities. This definition is consistent with the approach used in the entire Horizon Europe programme to estimate the same indicator.
The only partial exception is Europe's Rail JU, as it is the only JU where all projects have been supported through lump sum grants. The value presented in the table is an *ex-ante* estimate; JU administrative figures reported by the European Court of Auditors suggest that this may become an underestimate once all contributions from partners are validated [288].

There is large variation across the JUs in leverage factors, whether additional activities are included or not. A finding common to almost all JUs is that equal contributions by EU and partners (leverage factor of 1) is not normally achieved through call activities alone. There are

[288] Since lump sum projects do not report costs, it is not possible to know directly from administrative sources the total co-investment. This analysis presents both estimated figures (based on expected funding rates) and the values of members' contributions presented in the 2023 Report on Joint Undertakings by the European Court of Auditors.

nonetheless two exceptions: the Clean Hydrogen JU and the Key Digital Technologies JU ('KDT', the current Chips JU), where co-investment from participants in projects significantly exceeds EU contribution.

In the case of KDT, the high co-investment ratio is linked to the 'tripartite' structure of the partnership, involving Member States alongside private partners. Part of the co-investment in projects consists of Member State contributions at the level of project beneficiaries. The Commission monitoring systems do not directly capture the extent of such contributions.[289] This would be particularly significant for assessing the amount of private co-investment in the EuroHPC JU, the other tripartite JU, where the majority of participants are universities and research organisations rather than private for-profit companies.

The nominal value of costs for additional activities varies between zero (KDT, EuroHPC[290]) and over EUR 900 million. For some partnerships, reporting on additional activities started only in 2023 (Circular Bio-based Enterprises JU, Innovative Health Initiative JU) or is incomplete at the reference date[291], and therefore the figure may not be representative of future trends[292]. Nevertheless, it is already apparent that some JUs rely more on additional activities to leverage resources from partners. Two partnerships, Global Health-EDCTP3 (successor of an Article 185 partnership in Horizon 2020) and Smart Networks and Services (whose predecessor was a 'contractual public-private partnership', the equivalent of Horizon Europe's co-programmed partnerships) have fairly low leverage at call level, with most project participation covered by the EU. Even at this early stage of implementation, the vast majority of the funding they leveraged comes from expenditures on additional activities.

Table 47: Contribution and leverage of Joint Undertakings in Horizon Europe

JU name	Horizon Europe contribution (a) (EUR)	Other EU contribution (b) (EUR)	Participants' co-investment in EU R&I projects (c) (EUR)	Additional activities of JU members, costs incurred (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)
CBE	116 257 141	0	29 591 423	61 539 083	0.25	0.78
CAJU	805 807 009	0	267 948 600	65 617 750[293]	0.33	0.41*
CLEANH2	498 985 785	0	873 864 986	930 463 076	1.75	3.62
EuroHPC	45 905 466	187 108 681	223 022 492	0	0.96	0.96
EURAIL	243 907 308	0	123 455 961 (146 100 000 ***)	69 944 330	0.51 (0.60 ***)	0.79 (0.89 ***)
GH-EDCTP3	103 090 624	0	18 520 603	152 821 896	0.18	1.66

[289] The Commission monitoring systems also cannot capture whether the resources brought in by Member States actually originate from the EU budget through shared management funds, such as cohesion funds and the ERRF.
[290] For EuroHPC: "As the EuroHPC Joint Undertaking's Council Regulation (EU) 2021/1173 does not provide for a legal base to collect IKAA from its private members, the Private members of the Joint Undertaking do not provide contributions in the form of IKAA" (EuroHPC annual accounts 2023, p. 50). For KDT: the Private members of the Chips Joint Undertaking do not provide contributions in the form of IKAA" (Annual accounts 2023, p. 23), even if there is the legal option to do so. Plausibly the members do not account for IKAA as the partnership achieves already high leverage through call-based activities.
[291] Clean Aviation JU, for which 2023 additional activities are missing.
[292] Partnership-specific annexes within this evaluation may include estimates of total additional activities planned by partners, as well as estimates of the expected leverage ratio over the entire partnership duration. This section only focuses on incurred costs reported at the end of 2023.
[293] Figures are for 2021 and 2022: incurred costs of in-kind additional activities for 2023 are not available in the 2023 Annual Report. The direct leverage factor is therefore underestimated compared to other JUs.

JU name	Horizon Europe contribution (a) (EUR)	Other EU contribution (b) (EUR)	Participants' co-investment in EU R&I projects (c) (EUR)	Additional activities of JU members, costs incurred (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)
IHI	183 837 301	0	168 183 428	3 419 717	0.91	0.93
KDT (now Chips JU)	349 454 010	0**	878 293 945	0	2.51	2.51
SESAR	203 081 665	0	168 449 916	193 300 000	0.83	1.78
SNS	368 109 437	0	30 140 908	209 447 135	0.08	0.65

Source: CORDA (Horizon Europe contribution and costs), eGrants dashboard (other EU contribution and costs), Annual Activity Reports of JUs (for additional activities). For lump sum projects in EURAIL, the co-investment value is estimated based on *ex ante* coefficients.

* For CAJU, additional activities for 2023 are not included, as they are not reported in the 2023 AAR.
** No funding from Digital Europe was awarded at the reference date.
*** Value for 'Members' contributions' as of 31 December 2023, reported by Europe's Rail JU to the European Court of Auditors, and published in the annual report on EU Joint Undertakings for the financial year 2023. Both validated contributions (EUR 75.8 million) and contributions undergoing validation (EUR 70.3 million) are accounted for. The figure does not include contribution by non-JU members.

Most JUs operating under Horizon Europe have a predecessor in Horizon 2020, with some projects funded under the previous programme still being implemented by the successor partnership.

Table 48 presents data on main leverage indicators for these partnerships in the Horizon 2020.

For co-investment based on eligible project costs, the data is collected and calculated in the same process used for Horizon Europe – except for contributions from other EU spending programmes, which are not available to this evaluation.

For leverage measures including non-project activities, the methodology has been slightly adapted to reflect the different taxonomy used in Horizon 2020 on reporting of non-eligible costs borne by partners. Under the predecessor FP, some co-investment from JU members that today would be reported as 'additional activities' was reported and validated under the same umbrella as contribution to project activities. This means that, for some JUs, it is not possible to determine exactly the direct leverage factor including additional activities in the same way between the two programmes.

Despite some differences in methodology, the closest replacement is the data on JU members' contribution released in the 2023 annual report on JUs by the European Court of Auditors, which includes the full extent of contributions from JU members (both to projects and as additional activities) [294].

[294] European Court of Auditors, Annual Report on EU Joint Undertakings for the financial year 2023 (https://www.eca.europa.eu/ECAPublications/SAR-JUS-2023/SAR-JUS-2023_EN.pdf). The main difference in methodology is that the reports from the Court of Auditors do not distinguish between contributions to project activities and contributions for administrative costs, and do not include contributions from participants that are not member of the JU.

Several JUs in Horizon 2020 did not match EU contributions with co-investment in project activities only. Four JUs (fewer than in Horizon Europe) also reported additional activities, which constitute the majority of the funding they leverage from partners.

CORDA data and ECA data, even if taken at the same reference date, sometimes differ in ways that cannot be explained by differences in methodology. Compared with data published by ECA, CORDA shows:

- a higher amount for partners' contribution in ECSEL (predecessor of the current Chips JU), which cannot be explained by the role of Member States contribution (both sources include them as part of co-investment).
- lower EU contribution for EuroHPC, which significantly affects its leverage factor. While this is partly explained by EUR 100 million from the CEF programme not appearing in the CORDA-based analysis, there are more than EUR 100 million in EU contribution still not accounted for.

Table 48: Contribution and leverage of JUs in Horizon 2020

		Project co-investment (source: CORDA)		Leverage including additional activities (source: European Court of Auditors, JU AARs)		
JU name	Horizon Europe contribution (a) (EUR)	Participants co-investment in EU R&I projects (c) (EUR)	Direct 'call' leverage factor (c) / (a)	JU members contributions to project activities (ECA 2023) (x)	Additional activities of JU members, costs incurred (y) (EUR)	Direct leverage factor including additional activities (x + y) / (a)
BBI-CBE	820 647 794	391 606 355	0.48	172 700 000	2 150 572 377	2.83
CS2-CAJU	1 646 763 050	324 042 268	0.20	1 104 100 000	1 407 000 000	1.52
ECSEL-Chips	1 153 801 145	3 480 250 749	3.02	2 676 100 000	0	2.32
EuroHPC*	142 404 897	138 767 919	0.97	199 900 000	0	1.40
FCH-CLEANH2	638 885 191	548 788 058	0.86	134 700 000	1 039 000 000	1.84
IMI2-IHI	1 463 289 940	1 547 184 225	1.06	1 298 300 000	0	0.89
S2R-EURAIL	372 397 665	63 891 076	0.17	373 100 000	266 794 243	1.72
SESAR	545 246 497	534 783 461	0.98	644 000 000	0	1.18

Source: CORDA (Horizon 2020 contribution and costs), Annual Activity Reports of JUs (for additional activities), European Court of Auditors 2023 report on JUs, table 2.1.

Note: figures on the right-hand side of the table cover only JU members. Figures on the left-hand side may include co-investment from any participant in JU projects.

* For EuroHPC, no data on in eGrants funding from CEF (EUR 100 million according to ECA).annual progress report 2023 of EDCTP2.

For the Horizon 2020 implementation period, this evaluation also covers the EDCTP2 Article 185 initiative, whose successor is a JU. The concepts of co-investment and additional activities also apply to this partnership, although no data sources are available beyond the partnership's own progress reports. Figures for the Horizon 2020 period are presented in the table below.

Partnership name	Horizon Europe contribution (a) (EUR)	Participants co-investment in EU R&I projects (c) (EUR)	Additional activities of JU members, costs incurred (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)
EDCTP2 (Art. 185)	604 334 900	168 830 000	666 779 018	0.28	1.38

Source: annual progress report 2023 of EDCTP2.

In-cash vs. in-kind contributions

In Horizon Europe, JUs are required to report periodically on committed and actually provided financial and in-kind contributions. Due to the complex legal obligations associated with the amount of contributions required from JU members, the definition of 'financial' and 'in-kind' take a specific meaning in this context.

'Financial contribution' (sometimes called 'cash' contribution[295]) encompasses:

- expenditure to cover the administrative costs of the partnership, from any partner (the EU, Member States or international organisation, and other partners);
- contributions to operational (project) activities from Member States and international organisations, where applicable;
- contributions from JU members other than the EU to project beneficiaries eligible to receive funding, if these are provided for.

This multiple usage can create confusion, as the phrase 'cash contributions' may describe both revenue contributing to the to the JUs' running costs and project-specific investments[296].

For this analysis, it is important to make a distinction between these types of financial contributions. Financial contributions for project activities are an integral part of co-investment as defined here, while contributions to administrative costs are not included in the calculations.

In-kind contributions come specifically from members of the JU, and are of two types:

- **In-kind contributions to operational activities (IKOP).** These are defined in the legal basis ('Single Basic Act') for JUs as 'the eligible costs incurred by [members of the partnership[297]] in implementing indirect actions less the contribution of that joint undertaking and of the participating states of that joint undertaking to those costs'.[298]

[295] Some sources – especially, annual reports on EU Joint Undertakings by the European Court of Auditors – call these financial contributions "*cash* contributions". Under this definition, the highest cash contribution will always be in partnerships where project participants receive substantial financial support from EU Member States.

[296] See for instance ECA Report on Joint Undertakings (2022), p. 26. Link: https://www.eca.europa.eu/ECAPublications/SAR-JUS-2022/RAS-Jus-FY2022_EN.pdf

[297] "private members, constituent entities or the affiliated entities of either, by international organisations and by contributing partners"

[298] In principle, the sum of IKOP and financial contributions to operational activities (including from Member States) is identical to the co-investment as measured elsewhere in this section. IKOP however also undergo a certification process whose outcome cannot be pre-empted. For most leverage measures, the report intentionally refers only to "co-investment" as captured in CORDA, rather than to IKOP.

- **In-kind contributions to additional activities (IKAA)**, which are the costs incurred by members of the partnership to implement additional activities as defined in Box 9, excluding any contribution from the EU and from participating states.

At the current stage of reporting, it is unclear for most JUs whether any financial contributions *to operational activities* beyond IKOP are provided for, or even monitored. From the latest Activity Reports, a distinction is apparent for only two partnerships.

- Innovative Health Initiative, which distinguishes between IKOP and financial contributions (defined as 'contribution from IHI private members and contributing partners to IHI project beneficiaries eligible to receive funding') for all grant agreements signed before 31 December 2023. Financial contributions account for approximately 12.4% of all project co-investment.[299]
- Global Health – EDCTP3, for which the legal basis does not provide for any IKOP obligations (Single Basic Act of JUs, Article 103(2)). Some project costs that are not covered by EU contributions are classified as 'financial contribution'[300].

Even though private members of JUs may always make cash contributions to project activities[301], the Horizon Europe regulation states that financial contributions from partners and Member States 'should be aimed primarily at covering administrative costs as well as coordination and support of other non-competitive activities'[302]. While this suggests that JU members other than the EU are not expected to provide *financial* contributions to R&I activities, Member States in tripartite JUs do in fact provide substantial contributions to R&I projects, even when selected competitively.

To sum up, for most JUs under Horizon Europe, the entire co-investment from private partners to date in signed grant agreements consists of in-kind contributions. This is also true for additional activities, which are by definition 'in kind' for JUs.

It is to be noted that, in the EU Financial Regulation, 'in-kind contribution' means 'non-financial resources made available free of charge by third parties to a beneficiary'[303]. However, in the legal basis for JUs, IKOP are defined more broadly, as *any* eligible project cost not covered by the EU or by other partners. From this definition, it is unclear whether in-kind contributions in the form of IKOP show any meaningful difference with co-investment from beneficiaries in non-partnership R&I projects – which are normally not referred to as 'in-kind' contributions.

Article 185 initiatives

Only one 'Article 185' initiative is covered by this interim evaluation, the European Partnership on Metrology (EPM) with its Horizon 2020 predecessor, the European Metrology Programme for Innovation and Research (EMPIR)[304].

Data availability on the activities of this partnership is limited: its grants are not managed with Commission corporate tools, implementation data for Horizon Europe is not yet integrated in

[299] IHI JU Consolidated Annual Activity report, pp. 102-103
[300] GH-EDCTP3 annual activity report 2023, section 2.4, p. 53.
[301] JU SBA art. 11
[302] Annex III HE Regulation, point 1 "Selection", last paragraph.
[303] EU financial regulation, article 2(38) ("Definitions").
[304] The other Article 185 partnership funded under Horizon Europe, PRIMA (Partnership for Research and Innovation in the Mediterranean Area), has separate evaluation provisions and is not covered in this Staff Working Document.

CORDA, and no annual activity report is made public. The information found here has been communicated directly by the partnership secretariat. Unlike other partnerships, total costs can only be estimated based on the EU contribution provided rather than calculated precisely.

Figures suggest that, if the same estimation methodology is applied, the European Partnership on Metrology in Horizon Europe has higher leverage than its predecessor in Horizon 2020, EMPIR. This is due in particular, but not exclusively, to the inclusion of additional activities from Member States in EPM – whereas these were not reported in EMPIR.

Table 49: Contribution and leverage of Art. 185 initiatives

Partnership name	Horizon Europe contribution (a) (€)	Other EU contribution (b) (€)	Participants' contribution to EU R&I projects (c) (€)	Additional activities of partners, costs incurred (d) (€)	Direct 'call' leverage factor (c) / (a + b) (€)	Direct leverage factor including additional activities (c + d) / (a + b) (€)
European Partnership on Metrology (Horizon Europe)	67 698 053	0	88 305 000 (estimate)	67 102 272	1.30	2.30
EMPIR (H2020)	299 629 630		261 847 645 (estimate)	NA	0.87	NA

Source: Figures provided by EURAMET as of 31/12/2023.
Note: Co-funding estimated.

EIT Knowledge and Innovation Communities

Implementation data on EIT Knowledge and Innovation Communities (EIT KICs) is not fully available in Commission monitoring systems. These capture the grants initiating the KIC and any Horizon Europe grant which the KICs – which are bodies with an independent legal personality – may have received in other FP calls. Due to long-standing data integration difficulties, they do not yet fully capture the activities arranged by the KICs. Nor do they capture revenues of the KIC and non-EU funded KIC activities, which are the equivalent of additional activities for other European partnerships.

A monitoring system for KIC activities arranged by EIT distinguishes between the following:

- EIT contribution to the KIC
- partners' co-funding (co-investment)
- The KICs' revenues,[305] which may include participation fees or a share of the profits from the products launched by partners
- Additional activities, called 'non-EU funded activities' (NEFA). These may include other sources of EU funding, such as grants received in other parts of Horizon Europe. The amount of EU resources supporting additional activities is not known to this evaluation.

This data makes it possible to get an approximation of the amounts leveraged by KICs beyond the EU grants supporting it. Nevertheless, an exact estimate of the funding leveraged in

[305] This metric and corresponding leverage factors is shown for EIT KICs only, and not used for comparisons with other types of partnerships.

Horizon Europe is still not possible, because data is disaggregated only by year, and not by source of funding.

For the Horizon Europe implementation period, there is a clear distinction between EIT Climate-KIC, EIT Digital and EIT InnoEnergy – the KICs that were launched in 2009, during the FP7 programming period – and the others. These 'first-wave' KICs all have leverage factors close to or above 1, indicating that resources from partners exceed the EU contribution. For the KICs launched under Horizon 2020, leverage factors are well below 1, indicating that most activities of these KICs are directly funded by the Horizon Europe budget. This is in line with the KIC funding model as defined in the EIT Strategic Innovation agenda[306], based on a gradual decreasing of the EIT funding rate during the KIC's life cycle and gradual increase of the level of private and public investment from partners (excluding revenues).

The three first-wave KICs have reached the 15-year term by which they are expected to become financially sustainable without the financial contribution of the EIT. Figures show that these KICs have increased their capacity to leverage resources through co-investment and additional activities beyond the EIT grant, which is part of the definition of financial sustainability used for KICs[307]. There has been a change compared to Horizon 2020: during the previous programming period, the leverage factor of these 'older' KICs was generally similar to that seen for the newer ones. This is also in line with the KIC funding model, where the highest amount of external funding for KICs is intended to materialise over the last 4 years (exit from EIT grant phase) of the KIC's 15-year life cycle.

EIT KICs' leverage effect in Horizon 2020 included the concept of 'KIC Complementary Activities (KCA)', i.e. non-EIT-funded additional activities of EIT KICs triggered by the EIT intervention. The concept was however abandoned in Horizon Europe, based on the recommendation in the ECA special report, No. 4 / 2016[308]; accordingly, it is not included in the leverage factors in Table 51. Owing to the change in methodology, the amount of additional activities declared as NEFA is significantly lower than the amounts accounted under KCAs in the previous programme. In line with the KIC model, the amounts of NEFAs are expected to increase towards the end of each KIC's life cycle.

The EIT also reports the investment collected by companies supported by EIT KICs[309], and includes as part of leverage in its own reporting. This source of *indirect* leverage is not included in our calculations for consistency with other partnerships. Figures are however presented later in this annex ("Are Horizon Europe participants collecting additional investments?" subsection) and in partnership specific annexes, as they are particularly important to capture the leverage potential of the KICs and their progress towards financial sustainability. For the most mature EIT KICs, the ratio between these additional investments and EU contribution ranges between 3:1 (EIT Climate-KIC) to 32:1 (EIT InnoEnergy).

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[306] Decision (EU) 2021/820 of the European Parliament and of the Council of 20 May 2021 on the Strategic Innovation Agenda of the European Institute of Innovation and Technology (EIT) 2021-2027; chapter 3.6.2. "KIC funding model".

[307] Decision 13/2021 of the Governing Board of the European Institute of Innovation and Technology: https://eit.europa.eu/sites/default/files/2021-13_20210317-gb66-13_new_eit_fs_principles.pdf

[308] European Court of Auditors, Special report no 04/2016: The European Institute of Innovation and Technology must modify its delivery mechanisms and elements of its design to achieve the expected impact. Luxembourg: Publications Office of the European Union, 2016.
Link: https://www.eca.europa.eu/Lists/ECADocuments/SR16_04/SR_EIT_EN.pdf

[309] This indicator captures a similar measure as one of the indicators under Key Impact Pathway #9 medium-term ("Scaling-up - Amount of public & private investment mobilised to exploit or scale-up results from the Programme")

Table 51: Contribution and leverage of EIT KICs, Horizon Europe period

Partnership name	Horizon Europe contribution (a) (EUR)	Participants' contribution to EU R&I projects (c) (EUR)	Additional activities of partners, costs incurred (NEFA) (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)	KIC revenues (e) (EUR)	Direct leverage factor including additional activities and revenues (c + d + e) / (a + b) (EUR)
EIT-Climate	65 980 000	47 820 000	15 450 000	0.72	0.96	30 780 518	1.43
EIT-Digital	79 574 358	49 144 817	335 650 000	0.62	4.84	24 996 942	5.15
EIT InnoEnergy	111 351 484	172 392 066	107 530 000	1.55	2.51	108 881 000	3.49
EIT Food	174 870 085	39 016 977	2 010 000	0.22	0.23	18 614 854	0.34
EIT Health	168 614 546	49 987 028	14 020 000	0.30	0.38	27 122 643	0.54
EIT Manufacturing	116 940 356	42 029 568	14 200 000	0.36	0.48	18 421 215	0.64
EIT RawMaterials	169 078 233	91 995 523	1 510 000	0.54	0.55	29 906 809	0.73
EIT Urban Mobility	127 686 161	20 076 344	20 010 000	0.16	0.31	12 693 752	0.41

Source: Figures provided by EIT as of 31/12/2023. 'Other EU contribution' omitted as not known. KIC revenues not included in the calculation for consistency with other partnerships.

Table 52: Contribution and leverage of EIT Knowledge and Innovation Communities, Horizon 2020 period

Partnership name	Horizon Europe contribution (a) (EUR)	Participants' contribution to EU R&I projects (c) (EUR)	Additional activities of partners (KCA) (d) (EUR)	KIC revenues (e) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including revenues (c + e) / (a + b) (EUR)
EIT-Climate	554 145 243	98 674 162	1 657 120 000	17 197 636	0.18	0.21
EIT-Digital	464 239 920	130 542 884	1 380 120 000	18 227 714	0.28	0.32
EIT-InnoEnergy	526 143 929	86 098 276	1 511 040 000	62 851 641	0.16	0.28
EIT-Food	129 670 630	31 832 416	284 410 000	14 271 010	0.25	0.36
EIT-Health	283 219 403	69 004 172	797 440 000	36 623 641	0.24	0.37
EIT-Manufacturing	32 658 504	5 719 037	68 870 000	4 639 228	0.18	0.32
EIT-RawMaterials	273 328 932	64 673 354	783 760 000	41 656 653	0.24	0.39
EIT-UrbanMobility	31 322 415	5 761 949	48 120 000	2 783 022	0.18	0.27

Source: Figures provided by EIT as of 31 December 2023. 'Other EU contribution' (column (b) in other tables) omitted as not known. KIC revenues not included in the calculation of leverage factors for consistency with other partnerships.

Non-institutionalised partnerships

Co-programmed partnerships

Research activities under co-programmed partnerships are defined within a Strategic Research and Innovation Agenda (SRIA), co-designed with partners, and implemented through standard

Pillar II calls. Each partnership operates according to the requirements set by a specific memorandum of understanding (MoU). Funding rates are not significantly different from those in the rest of Pillar II and, accordingly, co-investment ratios are lower than for other types of European partnerships (Table 53). The only exception is the Clean Steel partnership, which has a high call leverage factor of EUR 0.68 per euro invested by the EU.

The added value of these partnerships in terms of leverage is supposed to come primarily from *in-kind* additional activities. Similarly to the JUs[310], these are defined as additional activities that are within the scope of the SRIA and the objectives of the partnerships but are not covered by EU funding. Co-programmed partnerships are required to monitor and regularly report on agreed and provided contributions alongside with additional activities from private members[311] [312]. Contrary to JUs, however, these activities are not subject to any formal certification process.

To date, information on additional activities under the scope of the partnership is reported primarily by its members to the Commission through confidential IT channels, on a periodic basis (every year or every two years, according to the MoU). While the exact scope of the activities remains confidential, all MoUs of co-programmed partnerships provide that the outcome of periodic reporting from partners should feed into the Horizon Europe evaluation process[313].

Compared to the EU contribution they receive, the value of additional activities reported by partners is very high: even with some data gaps (see Table 53), the total investments declared amount to over EUR 10 billion for all partnerships combined. However, due to the way this data is reported and constraints relating to confidentiality and competitiveness, very little is known about the actual extent of these activities – for instance, on whether the same activities are declared by multiple partners, or whether EU funding from other sources is used.

Table 53: Contribution and leverage of Co-programmed partnerships

Partnership name	Horizon Europe contribution (a) (EUR)	Other EU contribution (b) (EUR)	Participants' contribution to EU R&I projects (c) (EUR)	Additional activities of partners, costs incurred (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)
2ZERO	305 398 972	0	60 476 390	673 506 087	0.20	2.40
AI, Data and Robotics	606 528 909	0	54 004 190	144 581 063 **	0.09	0.33 **
Built4People	175 969 111	0	34 480 935	not disclosed	0.20	not disclosed
CCAM	208 302 018	0	36 592 313	519 897 048	0.18	2.67
Clean Steel	64 294 037	24 710 696 *	60 861 599	162 995 000	0.68	2.52
EOSC	162 604 303	0	2 234 950	614 007 650	0.01	3.79
Batt4EU	308 590 260	0	14 192 116	1 141 660 899	0.05	3.75

[310] One of the differences between additional activities in co-programmed partnerships and in Joint Undertakings is the absence of any certification mechanisms on these additional activities.
[311] Co-programmed Partnership MoU, Section 6, "Monitoring"
[312] In-kind additional activities are addressed in the Annual Activities Plan (AAP) of each Partnership and (as for JUs) should be planned and reported via a dedicated IT tool, in such a way as to ensure future integration in the EC corporate systems. Additional activities require close monitoring, since if contributions from non-EU partners fall significantly below the agreed estimations in the AAP, EC contributions must be adjusted. Co-programmed Partnership MoU, Section 5.5. "Fulfilment of Commitments"
[313] Section 6 of MoUs of all co-programmed partnerships.

Partnership name	Horizon Europe contribution (a) (EUR)	Other EU contribution (b) (EUR)	Participants' contribution to EU R&I projects (c) (EUR)	Additional activities of partners, costs incurred (d) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)	Direct leverage factor including additional activities (c + d) / (a + b) (EUR)
Made in Europe	462 613 569	0	58 235 406	2 734 830 000 **	0.13	6.04 **
Photonics	259 183 714	0	21 878 617	1 257 792 356	0.08	4.94
Processes4Planet	506 463 819	0	102 653 959	1 218 131 688	0.20	2.61
ZEWT	239 757 594	0	58 200 225	1 645 912 276	0.24	7.11

Source: CORDA and eGrants dashboard, grant agreements signed at 31 December 2023, and additional activity reports of co-programmed partnerships (2021-2022, 2023). Only incurred expenditures are taken into account.

* Funding from the Research Fund for Coal and Steel (RFCS)

** Additional activity reports available for 2021 and 2022 only.

Co-funded partnerships

Co-funded partnerships are implemented through a grant agreement, established following a call for proposals[314]. Typically, the co-funding rate is either 30% or 50% of the total project cost, leading to a substantial level of co-investment from partners. These are in most cases public organisations, namely funding bodies at national or regional level.

All data presented in the analysis is related to the grant agreement and therefore *ex-ante*. There is no guarantee that the partnerships' partners will actualise their political commitments and estimated contributions. This uncertainty makes it difficult to accurately assess whether the estimated leverage set out above will materialise as planned.

All grants initiating co-funded partnerships have leverage factors above 1: partners are expected to bring in at least as many resources as the EU. Agroecology, and Assessment of risks from chemicals (PARC), exhibit the lowest leverage factor of 1.00, indicating that for every euro contributed by Horizon Europe, consortia members also contribute EUR 1 to the partnerships' total costs. Several other partnerships have a leverage ratio of 2.33, which is equivalent to a 30%-70% split in resources between the EU and partners. Sustainable Blue Economy and Driving Urban Transitions reported much higher leverage factors, at 3.86 and 3.79 respectively.

It is to be noted that co-funded partnerships may receive the EU contribution throughout multiple work programmes, via 'top-up calls' that result in amendments to grant agreements. These amendments increase the EU contribution, typically within the constraints of the resources available in the work programme they are funded under. Leverage factors may therefore vary in the future as the resources committed with the first grant are 'topped-up' in following years. This is especially likely for partnerships with leverage factors above 2.33. Due to their implementation through different phases, partners may have included activities and anticipated costs on their initial proposals that will only be 'matched' by an increased EU contribution in future work programmes.

However, the high leverage factor for co-funded partnerships does not show the source of the funds committed by national authorities. In the context of the 2024 Biennial Monitoring Report on partnerships, at least four Member States reported having financially supported their participation in co-funded partnerships through the use of ESIF and ERDF funds[315], as well as the Recovery and Resilience Fund[316]. While these examples are ideal cases of synergies between different types of EU funds, they do not technically represent additional spending in R&I compared to the EU budget. Despite these reporting exercises, no granular monitoring on the amounts committed by Member States from other EU funds is available for this evaluation.

Another major limitation to the analysis of leverage for co-funded partnerships is that the amounts shown in Table 54 only account for the grants signed between the consortia and the EU. Most co-funded partnerships[317] arrange their own funding schemes for third-party beneficiaries, a form of 'cascade granting'[318]. They may also arrange non-EU funded activities, such as funding schemes aimed at beneficiaries beyond EU Member States and Horizon Europe associated countries.

[314] Horizon Europe Work Programme 2023-2025, General Annexes
[315] BMR 2024, p. 77.
[316] BMR 2024, p. 196. The case of Italy is specifically mentioned.
[317] The exception is PARC, where partners are the only beneficiaries of EU funding.
[318] Cascading schemes might include various financial mechanisms, such as grants, prizes, procurement, and Horizon Europe blended finance.

Each partnership implements its own work programme, disbursing funds to end-point beneficiaries. Rules of participation may vary, and there may be additional co-funding from beneficiaries (or non-EU funded participation, such as from third country entities that are supported by other parties), as well as other additional non-EU-funded activities.

This layered financing structure could allow for a more comprehensive assessment of leverage, since it would make it possible to estimate additional contributions and activities, beyond the EU contribution to the specific partnership grant agreement. However, the impact of cascade granting, specifically the additional contributions of beneficiaries and end-point beneficiaries, cannot be quantified as reporting data on the cascading component are not currently available in Commission monitoring systems in a manner that allows for appropriate aggregation. Moreover, beside contributions to R&I projects (in-kind and other), there are also membership contributions in some cases. Details on such contributions are not reported.

In essence, as of today, it is not possible through Commission monitoring systems to capture and consolidate all the data necessary to quantify additional contributions to co-funded partnerships from members and end-point beneficiaries.

Table 54: Contribution and leverage of co-funded partnerships

Partnership name	Horizon Europe contribution (a) (EUR)	Partners contribution to EU R&I projects (c) (EUR)	Direct 'call' leverage factor (c) / (a + b) (EUR)
Agroecology	60 000 000	60 000 000	1.00
Assessment of risks from chemicals (PARC)	200 000 000	200 000 000	1.00
Biodiversa+	40 000 000	96 144 162	2.40
Clean Energy Transition	70 000 000	208 350 377	2.98
Driving Urban Transitions	37 000 000	140 266 254	3.79
ERA4Health	33 045 067	77 105 156	2.33
Innovative SMEs	69 644 027	162 502 734	2.33
Personalised Medicine	100 575 465	234 676 086	2.33
Sustainable Blue Economy	23 000 000	88 827 683	3.86
Transforming health and care systems	91 574 573	213 674 014	2.33
Water4All	26 019 783	60 712 827	2.33

Source: CORDA, 31 December 2023.
Note: All figures are *ex-ante*. Implementation figures on cascade grants and additional activities not yet available.
Top-up EU grants supplementing the resources of the partnership are not included, as none was signed at 31/12/2023.

Are Horizon Europe participants collecting additional investments?

The concept of leverage may also be used to encompass funding received by beneficiaries after project participation (a form of 'indirect' leverage). For example, the Horizon 2020 ex post evaluation reports that SMEs participating in the LEIT parts of the programme (largely equivalent to Cluster 4 in Horizon Europe) collected at least EUR 9.4 billion in investment after project signature.[319]

Information on additional investment collected by participants is available only in a fragmented way, also in Horizon Europe. Suitable data is currently not available to this evaluation for most

[319] Horizon 2020 ex post evaluation Staff Working Document, p. 83.

programme parts: the first programme-wide data – as captured under the Key Impact Pathway 9 medium-term indicator[320] – will become available from 2025 onwards.

The only programme part for which structured figures about additional investments are already available is the EIT. The EIT collects data on investment collected by *start-ups* participating in KICs on an annual basis: these constitute a prominent component of the EIT's own leverage framework.

The data shared by EIT indicates that the value of these investments is considerably larger than the amount of the EIT grant in most KICs. While the values cannot be aggregated across KICs to give a single leverage factor for all EIT KICs – as the same company may be involved in multiple KICs – there are visible differences between them, with some KIC participants attracting much more investments than others. In the InnoEnergy KIC, the amount of investment collected by supported startups is over 30 times higher than the EIT grant, which leads to a very high implied leverage factor. Most of the amount invested is reported for 2023. This KIC has the peculiarity of acting itself as a venture capital fund, managing a portfolio of over 200 investments in the energy and transportation sectors[321].

Table 55: Additional investments collected by start-ups participating in EIT KICs, 2021-2023

Partnership name	EIT contribution (EUR) (a)	Additional investments to start-ups (EUR) (b)	Ratio between additional investments and EIT grant (b / a)
EIT-Climate	65 980 000	179 420 000	2.7
EIT-Digital	79 574 358	340 620 000	4.3
EIT-InnoEnergy	111 351 484	3 593 970 000	32.3
EIT-Food	174 870 085	840 060 000	4.8
EIT-Health	168 614 546	1 175 440 000	7.0
EIT-Manufacturing	116 940 356	113 930 000	1.0
EIT-RawMaterials	169 078 233	395 120 000	2.3
EIT-Urban Mobility	127 686 161	92 230 000	0.7

Source: Figures provided by EIT as of 31 December 2023. Figures for additional investments are rounded to the closest 10 000. EIT contribution refers specifically to the grant the KICs received from the EIT between 2021 and 2023 – other sources of funding from the EU are not included as not structurally collected in EIT reporting.

[320] 'Scaling-up - Amount of public & private investment mobilised to exploit or scale-up results from the Programme (including foreign direct investments)'
[321] See European Partnership Annex on EIT InnoEnergy, p. 8.

Annex 8 Additional data on state-of-play, including for the European Partnerships and EU Missions

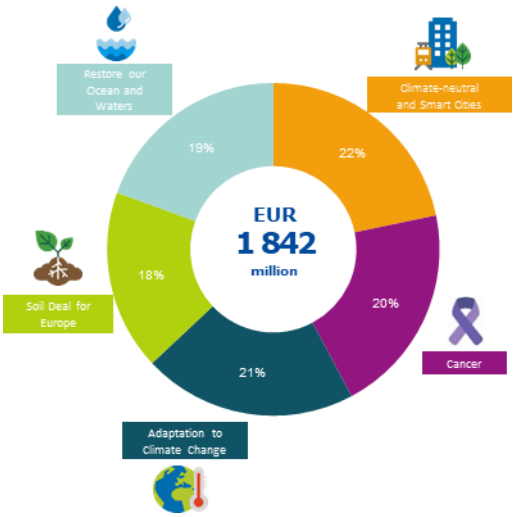
Five EU Missions aim to provide concrete solutions to some among the greatest challenges and to directly support EU priorities.

Horizon Europe work programmes allocate up to EUR 2.55 billion exclusively for Mission-specific calls for the first four years of the programme (2021-2024). By the end of December 2024, **236** grants had been signed for a total of **EUR 1.84 billion**[322].

The **average grant size** for Missions is **EUR 7.8 million**, higher than for Horizon Europe (EUR 288 million) but closer to the average of Pillar II (EUR 6.4 million).

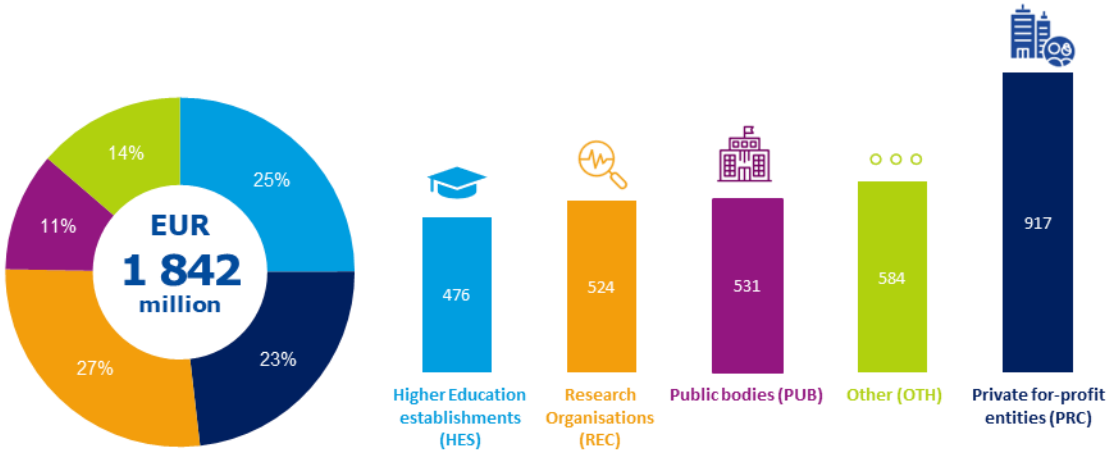
Of the **3 302 beneficiaries**, 87% are from Member States, 34% of which from Widening countries. **902** participants in Missions projects are SMEs, collectively receiving **EUR 303 million**.

Figure 125: Horizon Europe funding allocated to EU Missions



Missions have been designed to facilitate participation from a diverse array of beneficiaries. Research organisations lead in the funding received (27%, EUR 499.4M), followed by higher education (25%, EUR 459.3M) and private for-profit entities (23%, EUR 428.1M). Private for-profit entities have the most distinct participants (917) and highest participation rate (30%), followed by "Other" entities, which are often civil society organisations (584 beneficiaries, 19%).

Figure 126: Horizon Europe Mission beneficiaries by type of organisation



As of January 2025, 50 European partnerships were identified (three are still under preparation), and another ten are announced in the Strategic Plan for 2025-2027. The JUs have awarded **530 grants** as of 6 January 2025, which include **4 281 participants** (engaged in 9 186

[322] There are two types of mission calls in Horizon Europe: calls that are 100% dedicated to one specific mission and horizontal calls that benefit to all 5 missions or joint calls that benefit to two or three missions. Funding for these calls is split between missions according to a weighting defined by the EC, while Participants and Participations are counted for each mission separately.

participations). The total EU funding allocated to this has been **EUR 4.8 billion** (towards total project costs of EUR 7 billion).

Table 56: Key figures for Joint Undertakings

JU name	Grants	Participants	Participation	EU funding (EUR)	Total Cost (EUR)
Circular Bio-based Europe JU	52	588	788	330,864,460	430,584,418
Clean Aviation JU	28	282	627	805,855,802	1,066,919,085
Clean Hydrogen JU	102	840	1,294	642,578,756	1,533,550,982
EuroHPC JU	17	119	209	82,291,527	171,866,473
Europe's Rail JU	23	363	747	278,279,609	366,579,075
Global Health EDCTP3 JU	74	305	563	233,973,983	253,828,364
Innovative Health Initiative JU	30	633	967	352,319,886	677,241,398
Key Digital Technologies JU (now Chips JU)	58	1,120	1,979	1,345,275,223	3,221,782,121
Single European Sky ATM Research 3 JU	68	292	809	228,694,245	399,221,417
Smart Networks and Services JU	78	494	1,203	495,989,812	537,171,119
Total	530	4,281	9,186	4,796,123,303	8,658,744,451

Source: CORDA, data as of 6 January 2025. Only Horizon Europe funding included.

More information on the funding provided by EU programmes other than Horizon Europe to the JUs is available in the section on external coherence and synergies below.

The EU contribution to SMEs in institutionalised partnerships is:

- For the JUs: 14.5%, while the share of unique participants that are SMEs is 32.5%.
- For the EIT KICs: 21.9% of total EIT funding.[323] 726 SMEs participated in the activities of EIT KICs out of 1971 active partners, constituting 36.8% of SME participation.[324]

The **11 co-programmed partnerships**[325] have had 589 grants as of 6 January 2025, awarding EUR 4.0 billion of EU funding to 4 753 participants (with 9 650 participations), towards a total project cost of EUR 4.6 billion.

The **14 co-funded partnerships** have had 14 grants (one per partnership), awarding EUR 1.17 billion of EU funding to 673 participants (with 1 228 participations), towards a total grants budget of EUR 3.7 billion.

[323] The EIT KICs have been awarded EUR 1 740 million of EIT funding in 2021-2024. The EIT contribution to SMEs in EIT KICs over the same period was EUR 381 million.
[324] Participations of active partners under the EIT KICs Grant Agreements 2023-2025 as of January 2025.
[325] See lists of partnerships in the SWD glossary.

Country Tables

Applications

Table 57: Horizon Europe applications by country

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	% of total	Horizon Europe applications in eligible proposals per year	Horizon Europe applications in high quality proposals	% of high quality applications	Retained Applications	Success rate of application in Horizon Europe	'000 of scientists and engineers per country *	Share of scientists and engineers in EU-27	Applications per '000 of scientists and engineers in the population
Austria	AT	Non widening	13,139	2.8%	3,285	9,034	68.8%	2,733	20.8%	459.4	2.5%	29
Belgium	BE	Non widening	21,707	4.7%	5,427	15,514	71.5%	5,241	24.1%	548.8	2.9%	40
Bulgaria	BG	Widening	3,148	0.7%	787	1,854	58.9%	577	18.3%	232.3	1.2%	14
Croatia	HR	Widening	2,882	0.6%	721	1,767	61.3%	487	16.9%	120	0.6%	24
Cyprus	CY	Widening	5,261	1.1%	1,315	3,334	63.4%	841	16.0%	49.5	0.3%	106
Czechia	CZ	Widening	6,264	1.3%	1,566	3,986	63.6%	1,230	19.6%	424.7	2.3%	15
Denmark	DK	Non widening	10,373	2.2%	2,593	7,385	71.2%	2,272	21.9%	345.8	1.8%	30
Estonia	EE	Widening	3,300	0.7%	825	2,133	64.6%	626	19.0%	71.5	0.4%	46
Finland	FI	Non widening	10,632	2.3%	2,658	7,242	68.1%	2,292	21.6%	318.3	1.7%	33

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	% of total	Horizon Europe applications in eligible proposals per year	Horizon Europe applications in high quality proposals	% of high quality applications	Retained Applications	Success rate of application in Horizon Europe	'000 of scientists and engineers per country *	Share of scientists and engineers in EU-27	Applications per '000 of scientists and engineers in the population
France	FR	Non widening	35,620	7.6%	8,905	25,502	71.6%	8,210	23.0%	2876.9	15.4%	12
Germany	DE	Non widening	47,656	10.2%	11,914	33,308	69.9%	10,431	21.9%	3958	21.1%	12
Greece	EL	Widening	23,970	5.1%	5,993	15,972	66.6%	4,282	17.9%	372.9	2.0%	64
Hungary	HU	Widening	3,966	0.9%	992	2,500	63.0%	753	19.0%	340.5	1.8%	12
Ireland	IE	Non widening	8,790	1.9%	2,198	5,980	68.0%	1,741	19.8%	343.4	1.8%	26
Italy	IT	Non widening	48,391	10.4%	12,098	31,425	64.9%	8,788	18.2%	1224	6.5%	40
Latvia	LV	Widening	1,920	0.4%	480	1,149	59.8%	356	18.5%	73.6	0.4%	26
Lithuania	LT	Widening	2,659	0.6%	665	1,574	59.2%	497	18.7%	149.5	0.8%	18
Luxembourg	LU	Non widening	2,291	0.5%	573	1,584	69.1%	436	19.0%	39.9	0.2%	57
Malta	MT	Widening	1,026	0.2%	257	625	60.9%	194	18.9%	26.5	0.1%	39
Netherlands	NL	Non widening	24,916	5.4%	6,229	17,546	70.4%	5,753	23.1%	1228.7	6.6%	20
Poland	PL	Widening	9,329	2.0%	2,332	5,648	60.5%	1,691	18.1%	1630.1	8.7%	6

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	% of total	Horizon Europe applications in eligible proposals per year	Horizon Europe applications in high quality proposals	% of high quality applications	Retained Applications	Success rate of application in Horizon Europe	'000 of scientists and engineers per country *	Share of scientists and engineers in EU-27	Applications per '000 of scientists and engineers in the population
Portugal	PT	Widening	15,329	3.3%	3,832	9,752	63.6%	2,627	17.1%	519.8	2.8%	29
Romania	RO	Widening	6,248	1.3%	1,562	3,506	56.1%	1,039	16.6%	582	3.1%	11
Slovakia	SK	Widening	2,102	0.5%	526	1,251	59.5%	415	19.7%	160.3	0.9%	13
Slovenia	SI	Widening	4,899	1.1%	1,225	3,250	66.3%	1,004	20.5%	96.4	0.5%	51
Spain	ES	Non widening	52,030	11.2%	13,008	35,751	68.7%	10,299	19.8%	1762.9	9.4%	30
Sweden	SE	Non widening	12,968	2.8%	3,242	8,692	67.0%	2,521	19.4%	767.3	4.1%	17
		Total EU-27	**380,816**	81.8%	**95,204**	**257,264**	**67.6%**	**77,336**	**20.3%**	**18723**	**100%**	**20**
		Widening	*92,303*	*19.8%*	*23,076*	*58,301*	*63.2%*	*16,619*	*18.0%*	*4,850*	*25.9%*	*19*
		Non-Widening	*288,513*	*62.0%*	*72,128*	*198,963*	*69.0%*	*60,717*	*21.0%*	*13,873*	*74.1%*	*21*
		Associated countries	**58,817**	**12.6%**	**14,356**	**37,656**	**64.0%**	**10,759**	**18.9%**			

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	% of total	Horizon Europe applications in eligible proposals per year	Horizon Europe applications in high quality proposals	% of high quality applications	Retained Applications	Success rate of application in Horizon Europe	'000 of scientists and engineers per country *	Share of scientists and engineers in EU-27	Applications per '000 of scientists and engineers in the population
		Third countries	**25,990**	**5.6%**	**6,434**	**18,292**	**70.4%**	**5,598**	**22.0%**			
		Total Horizon Europe	**465,623**	**100.0 %**	**115,993**	**313,212**	**67.3%**	**93,693**	**20.12%**			

Table 58: Horizon Europe number of applications by type of organization

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	HES	PRC	PUB	REC	OTH
				Number of applications				
Austria	AT	Non widening	13,139	4,824	4,000	258	3,295	762
Belgium	BE	Non widening	21,707	6,772	5,482	560	3,564	5,329
Bulgaria	BG	Widening	3,148	592	1,270	263	520	503
Croatia	HR	Widening	2,882	1,035	782	364	469	232
Cyprus	CY	Widening	5,261	1,277	2,881	320	442	341
Czechia	CZ	Widening	6,264	2,928	1,469	328	1,117	422
Denmark	DK	Non widening	10,373	5,972	2,500	751	655	495
Estonia	EE	Widening	3,300	1,338	1,069	263	176	454
Finland	FI	Non widening	10,632	5,114	2,555	487	1,938	538
France	FR	Non widening	35,620	9,031	12,227	1,147	10,898	2,317
Germany	DE	Non widening	47,656	17,696	14,636	1,038	12,164	2,122
Greece	EL	Widening	23,970	6,514	8,855	1,288	5,821	1,492
Hungary	HU	Widening	3,966	1,218	1,260	280	706	502
Ireland	IE	Non widening	8,790	4,483	3,164	286	319	538

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	HES	PRC	PUB	REC	OTH
Italy	IT	Non widening	48,391	18,699	15,902	1,869	8,865	3,056
Latvia	LV	Widening	1,920	644	453	228	378	217
Lithuania	LT	Widening	2,659	837	770	397	279	376
Luxembourg	LU	Non widening	2,291	434	1,215	78	464	100
Malta	MT	Widening	1,026	380	331	166	89	60
Netherlands	NL	Non widening	24,916	11,974	7,364	638	3,304	1,636
Poland	PL	Widening	9,329	3,756	2,364	641	1,950	618
Portugal	PT	Widening	15,329	4,422	4,735	992	4,222	958
Romania	RO	Widening	6,248	1,565	2,109	669	1,101	804
Slovakia	SK	Widening	2,102	627	692	228	302	253
Slovenia	SI	Widening	4,899	1,201	1,389	344	1,610	355
Spain	ES	Non widening	52,030	13,675	16,262	2,541	16,341	3,211
Sweden	SE	Non widening	12,968	7,351	3,258	795	1,151	413
		Total EU-27	**380,816**	**134,359**	**118,994**	**17,219**	**82,140**	**28,104**
		Widening	*92,303*	*28,334*	*30,429*	*6,771*	*19,182*	*7,587*

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	HES	PRC	PUB	REC	OTH
		Non-Widening	*288,513*	*106,025*	*88,565*	*10,448*	*62,958*	*20,517*
		Associated countries	**58,817**	**31,646**	**14,639**	**3,165**	**6,702**	**2,665**
		Third countries	**25,990**	**12,231**	**5,765**	**2,014**	**4,061**	**1,919**
		Total Horizon Europe	**465,623**	**178,236**	**139,398**	**22,398**	**92,903**	**32,688**

Legend:

HES - Higher Education Institutions

REC- Research Organisations

PRC - Private-for-profit entities

PUB - Public bodies

OTH - Other

Table 59: Horizon Europe % of all applications per country by type of organization

EU-27 Member State	Country code	Country group	HES	PRC	PUB	REC	OTH
			% of all applications per country				
Austria	AT	Non widening	37%	30%	2%	25%	6%
Belgium	BE	Non widening	31%	25%	3%	16%	25%
Bulgaria	BG	Widening	19%	40%	8%	17%	16%
Croatia	HR	Widening	36%	27%	13%	16%	8%
Cyprus	CY	Widening	24%	55%	6%	8%	6%
Czechia	CZ	Widening	47%	23%	5%	18%	7%
Denmark	DK	Non widening	58%	24%	7%	6%	5%
Estonia	EE	Widening	41%	32%	8%	5%	14%
Finland	FI	Non widening	48%	24%	5%	18%	5%
France	FR	Non widening	25%	34%	3%	31%	7%
Germany	DE	Non widening	37%	31%	2%	26%	4%
Greece	EL	Widening	27%	37%	5%	24%	6%
Hungary	HU	Widening	31%	32%	7%	18%	13%
Ireland	IE	Non widening	51%	36%	3%	4%	6%

EU-27 Member State	**Country code**	**Country group**	**HES**	**PRC**	**PUB**	**REC**	**OTH**
Italy	IT	Non widening	39%	33%	4%	18%	6%
Latvia	LV	Widening	34%	24%	12%	20%	11%
Lithuania	LT	Widening	31%	29%	15%	10%	14%
Luxembourg	LU	Non widening	19%	53%	3%	20%	4%
Malta	MT	Widening	37%	32%	16%	9%	6%
Netherlands	NL	Non widening	48%	30%	3%	13%	7%
Poland	PL	Widening	40%	25%	7%	21%	7%
Portugal	PT	Widening	29%	31%	6%	28%	6%
Romania	RO	Widening	25%	34%	11%	18%	13%
Slovakia	SK	Widening	30%	33%	11%	14%	12%
Slovenia	SI	Widening	25%	28%	7%	33%	7%
Spain	ES	Non widening	26%	31%	5%	31%	6%
Sweden	SE	Non widening	57%	25%	6%	9%	3%
		Total EU-27	**35.3%**	**31.2%**	**4.5%**	**21.6%**	**7.4%**
		Widening	*15.9%*	*21.8%*	*30.2%*	*20.6%*	*23.2%*

EU-27 Member State	Country code	Country group	HES	PRC	PUB	REC	OTH
		Non-Widening	*59.5%*	*63.5%*	*46.6%*	*67.8%*	*62.8%*
		Associated countries	**17.8%**	**10.5%**	**14.1%**	**7.2%**	**8.2%**
		Third countries	**6.9%**	**4.1%**	**9.0%**	**4.4%**	**5.9%**
		Total Horizon Europe	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 60: Horizon Europe % of all applications per organization type

EU-27 Member State	Country code	Country group	HES	PRC	PUB	REC	OTH
			% of all applications per organisation type				
Austria	AT	Non widening	3%	3%	1%	4%	2%
Belgium	BE	Non widening	4%	4%	3%	4%	16%
Bulgaria	BG	Widening	0%	1%	1%	1%	2%
Croatia	HR	Widening	1%	1%	2%	1%	1%
Cyprus	CY	Widening	1%	2%	1%	0%	1%
Czechia	CZ	Widening	2%	1%	1%	1%	1%
Denmark	DK	Non widening	3%	2%	3%	1%	2%
Estonia	EE	Widening	1%	1%	1%	0%	1%
Finland	FI	Non widening	3%	2%	2%	2%	2%
France	FR	Non widening	5%	9%	5%	12%	7%
Germany	DE	Non widening	10%	10%	5%	13%	6%
Greece	EL	Widening	4%	6%	6%	6%	5%
Hungary	HU	Widening	1%	1%	1%	1%	2%
Ireland	IE	Non widening	3%	2%	1%	0%	2%
Italy	IT	Non widening	10%	11%	8%	10%	9%

Latvia	LV	Widening	0%	0%	1%	0%	1%
Lithuania	LT	Widening	0%	1%	2%	0%	1%
Luxembourg	LU	Non widening	0%	1%	0%	0%	0%
Malta	MT	Widening	0%	0%	1%	0%	0%
Netherlands	NL	Non widening	7%	5%	3%	4%	5%
Poland	PL	Widening	2%	2%	3%	2%	2%
Portugal	PT	Widening	2%	3%	4%	5%	3%
Romania	RO	Widening	1%	2%	3%	1%	2%
Slovakia	SK	Widening	0%	0%	1%	0%	1%
Slovenia	SI	Widening	1%	1%	2%	2%	1%
Spain	ES	Non widening	8%	12%	11%	18%	10%
Sweden	SE	Non widening	4%	2%	4%	1%	1%
		Total EU-27	**75%**	**85%**	**77%**	**88%**	**86%**
		Widening	*16%*	*22%*	*30%*	*21%*	*23%*
		Non-Widening	*59%*	*64%*	*47%*	*68%*	*63%*
		Associated countries	**18%**	**11%**	**14%**	**7%**	**8%**
		Third countries	**7%**	**4%**	**9%**	**4%**	**6%**
		Total Horizon Europe	**100%**	**100%**	**100%**	**100%**	**100%**

Table 61: Horizon Europe number of applications by pillar

EU-27 Member State	Country code	Country group	Horizon Europe applications in eligible proposals over 2021-2024	Pillar I	Pillar II	Pillar III	Widening & ERA
				Number of applications			
Austria	AT	Non widening	13,139	3,371	8,355	1,044	369
Belgium	BE	Non widening	21,707	5,274	14,462	1,507	464
Bulgaria	BG	Widening	3,148	276	2,210	253	409
Croatia	HR	Widening	2,882	515	1,774	217	376
Cyprus	CY	Widening	5,261	588	3,946	227	500
Czechia	CZ	Widening	6,264	1,967	3,257	437	603
Denmark	DK	Non widening	10,373	4,009	5,297	843	224
Estonia	EE	Widening	3,300	579	2,079	251	391
Finland	FI	Non widening	10,632	3,091	6,573	746	222
France	FR	Non widening	35,620	12,344	19,134	3,480	662
Germany	DE	Non widening	47,656	15,532	26,540	4,492	1,092
Greece	EL	Non widening	23,970	2,311	18,886	1,286	1,487
Hungary	HU	Widening	3,966	807	2,465	371	323
Ireland	IE	Non widening	8,790	2,543	5,216	779	252
Italy	IT	Non widening	48,391	13,153	29,734	4,562	942

Latvia	LV	Widening	1,920	285	1,214	161	260
Lithuania	LT	Widening	2,659	317	1,726	302	314
Luxembourg	LU	Non widening	2,291	449	1,658	154	30
Malta	MT	Non widening	1,026	181	568	84	193
Netherlands	NL	Non widening	24,916	8,355	13,704	2,305	552
Poland	PL	Widening	9,329	2,257	5,565	809	698
Portugal	PT	Widening	15,329	3,486	9,206	1,440	1,197
Romania	RO	Widening	6,248	663	4,513	481	591
Slovakia	SK	Widening	2,102	304	1,406	165	227
Slovenia	SI	Widening	4,899	992	3,202	361	344
Spain	ES	Non widening	52,030	13,094	33,371	4,602	963
Sweden	SE	Non widening	12,968	4,487	6,939	1,258	284
		Total EU-27	**380,816**	**101,230**	**233,000**	**32,617**	**13,969**
		Widening	*92,303*	*15,528*	*62,017*	*6,845*	*7,913*
		Non-Widening	*288,513*	*85,702*	*170,983*	*25,772*	*6,056*
		Associated countries	**58,817**	**20,808**	**31,015**	**4,110**	**2,884**
		Third countries	**25,990**	**9,295**	**15,111**	**1,330**	**254**
		Total Horizon 2020	**465,623**	**131,333**	**279,126**	**38,057**	**17,107**

Table 62: Horizon Europe % of applications of the country by pillar

EU-27 Member State	Country code	Country group	Pillar I	Pillar II	Pillar III	Widening & ERA
			% of applications of the country by pillar			
Austria	AT	Non widening	26%	64%	8%	3%
Belgium	BE	Non widening	24%	67%	7%	2%
Bulgaria	BG	Widening	9%	70%	8%	13%
Croatia	HR	Widening	18%	62%	8%	13%
Cyprus	CY	Widening	11%	75%	4%	10%
Czechia	CZ	Widening	31%	52%	7%	10%
Denmark	DK	Non widening	39%	51%	8%	2%
Estonia	EE	Widening	18%	63%	8%	12%
Finland	FI	Non widening	29%	62%	7%	2%
France	FR	Non widening	35%	54%	10%	2%
Germany	DE	Non widening	33%	56%	9%	2%
Greece	EL	Non widening	10%	79%	5%	6%
Hungary	HU	Widening	20%	62%	9%	8%
Ireland	IE	Non widening	29%	59%	9%	3%
Italy	IT	Non widening	27%	61%	9%	2%
Latvia	LV	Widening	15%	63%	8%	14%
Lithuania	LT	Widening	12%	65%	11%	12%

EU-27 Member State	Country code	Country group	Pillar I	Pillar II	Pillar III	Widening & ERA
Luxembourg	LU	Non widening	20%	72%	7%	1%
Malta	MT	Non widening	18%	55%	8%	19%
Netherlands	NL	Non widening	34%	55%	9%	2%
Poland	PL	Widening	24%	60%	9%	7%
Portugal	PT	Widening	23%	60%	9%	8%
Romania	RO	Widening	11%	72%	8%	9%
Slovakia	SK	Widening	14%	67%	8%	11%
Slovenia	SI	Widening	20%	65%	7%	7%
Spain	ES	Non widening	25%	64%	9%	2%
Sweden	SE	Non widening	35%	54%	10%	2%
		Total EU-27	**27%**	**61%**	**9%**	**4%**
		Widening	17%	67%	7%	9%
		Non-Widening	30%	59%	9%	2%
		Associated countries	**35%**	**53%**	**7%**	**5%**
		Third countries	**36%**	**58%**	**5%**	**1%**
		Total Horizon 2020	**28%**	**60%**	**8%**	**4%**

Table 63: Horizon Europe % of all applications per pillar

EU-27 Member State	Country code	Country group	Pillar I	Pillar II	Pillar III	Widening & ERA
			% of all applications per pillar			
Austria	AT	Non widening	3%	3%	3%	2%
Belgium	BE	Non widening	4%	5%	4%	3%
Bulgaria	BG	Widening	0%	1%	1%	2%
Croatia	HR	Widening	0%	1%	1%	2%
Cyprus	CY	Widening	0%	1%	1%	3%
Czechia	CZ	Widening	1%	1%	1%	4%
Denmark	DK	Non widening	3%	2%	2%	1%
Estonia	EE	Widening	0%	1%	1%	2%
Finland	FI	Non widening	2%	2%	2%	1%
France	FR	Non widening	9%	7%	9%	4%
Germany	DE	Non widening	12%	10%	12%	6%
Greece	EL	Non widening	2%	7%	3%	9%
Hungary	HU	Widening	1%	1%	1%	2%
Ireland	IE	Non widening	2%	2%	2%	1%
Italy	IT	Non widening	10%	11%	12%	6%

Latvia	LV	Widening	0%	0%	0%	2%
Lithuania	LT	Widening	0%	1%	1%	2%
Luxembourg	LU	Non widening	0%	1%	0%	0%
Malta	MT	Non widening	0%	0%	0%	1%
Netherlands	NL	Non widening	6%	5%	6%	3%
Poland	PL	Widening	2%	2%	2%	4%
Portugal	PT	Widening	3%	3%	4%	7%
Romania	RO	Widening	1%	2%	1%	3%
Slovakia	SK	Widening	0%	1%	0%	1%
Slovenia	SI	Widening	1%	1%	1%	2%
Spain	ES	Non widening	10%	12%	12%	6%
Sweden	SE	Non widening	3%	2%	3%	2%
		Total EU-27	**77%**	**83%**	**86%**	**82%**
		Widening	12%	22%	18%	46%
		Non-Widening	65%	61%	68%	35%
		Associated countries	**16%**	**11%**	**11%**	**17%**
		Third countries	**7%**	**5%**	**3%**	**1%**
		Total Horizon 2020	**100%**	**100%**	**100%**	**100%**

Table 64: Participation in Horizon Europe by country (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	Horizon Europe participations in signed grants over 2021-2024	% of total	Horizon Europe participations in signed grants per year**	'000 scientists and engineers*	Share of scientists and engineers in EU27	Participations per '000 scientists and engineers in the population	Number of Horizon Europe signed grants with at least 1 participant from the country	% of total Horizon Europe signed grants with at least 1 participant from the country
Austria	AT	Non-widening MS	2,956	3.5%	806	432	2.5%	6.8	1,872	13.0%
Belgium	BE	Non-widening MS	5,590	6.5%	1,525	556	3.2%	10.1	3,260	22.6%
Bulgaria	BG	Widening MS	634	0.7%	173	211	1.2%	3.0	414	2.9%
Cyprus	CY	Widening MS	888	1.0%	242	39	0.2%	22.7	628	4.4%
Czechia	CZ	Widening MS	1,366	1.6%	373	406	2.3%	3.4	958	6.7%
Germany	DE	Non-widening MS	11,468	13.4%	3,128	3,765	21.5%	3.0	5,720	39.7%
Denmark	DK	Non-widening MS	2,533	3.0%	691	329	1.9%	7.7	1,747	12.1%
Estonia	EE	Widening MS	678	0.8%	185	65	0.4%	10.5	516	3.6%
Greece	EL	Widening MS	4,553	5.3%	1,242	335	1.9%	13.6	2,085	14.5%
Spain	ES	Non-widening MS	11,473	13.4%	3,129	1,599	9.1%	7.2	4,813	33.4%
Finland	FI	Non-widening MS	2,468	2.9%	673	313	1.8%	7.9	1,450	10.1%
France	FR	Non-widening MS	9,380	11.0%	2,558	2,599	14.8%	3.6	4,355	30.3%
Croatia	HR	Widening MS	562	0.7%	153	110	0.6%	5.1	354	2.5%
Hungary	HU	Widening MS	792	0.9%	216	351	2.0%	2.3	576	4.0%
Ireland	IE	Non-widening MS	1,952	2.3%	532	306	1.7%	6.4	1,346	9.4%
Italy	IT	Non-widening MS	9,843	11.5%	2,684	1,136	6.5%	8.7	4,556	31.6%
Lithuania	LT	Widening MS	537	0.6%	146	132	0.8%	4.1	400	2.8%
Luxembourg	LU	Non-widening MS	461	0.5%	126	38	0.2%	12.1	367	2.5%
Latvia	LV	Widening MS	368	0.4%	100	65	0.4%	5.6	284	2.0%
Malta	MT	Widening MS	202	0.2%	55	24	0.1%	8.3	151	1.0%
Netherlands	NL	Non-widening MS	6,425	7.5%	1,752	1,177	6.7%	5.5	3,630	25.2%

EU-27 Member State	Country code	Country group	Horizon Europe participations in signed grants over 2021-2024	% of total	Horizon Europe participations in signed grants per year**	'000 scientists and engineers*	Share of scientists and engineers in EU27	Participations per '000 scientists and engineers in the population	Number of Horizon Europe signed grants with at least 1 participant from the country	% of total Horizon Europe signed grants with at least 1 participant from the country
Poland	PL	Widening MS	1,821	2.1%	497	1,462	8.3%	1.2	1,254	8.7%
Portugal	PT	Widening MS	2,876	3.4%	784	468	2.7%	6.1	1,700	11.8%
Romania	RO	Widening MS	1,098	1.3%	299	614	3.5%	1.8	702	4.9%
Sweden	SE	Non-widening MS	2,892	3.4%	789	744	4.2%	3.9	1,890	13.1%
Slovenia	SI	Widening MS	1,110	1.3%	303	114	0.7%	9.7	727	5.1%
Slovakia	SK	Widening MS	425	0.5%	116	143	0.8%	3.0	321	2.2%

Total EU-27	**85 351**	**100.0%**	**85,351**	**100.0%**	**23,278**	**17,533**	**100.0%**	**4.9**
Widening MS	17 910	21.0%	17,910	21.0%	4,885	4,539	25.9%	3.9
Non-widening MS	67 441	79.0%	67,441	79.0%	18,393	12,994	74.1%	5.2
Associated countries	10 200	10.0%	10,200	10.0%	2,782			
Third countries	6 045	6.0%	6,045	6.0%	1,649			
Total Horizon Europe	**101 596**	**100.0%**	**101,596**	**100.0%**	**27,708**			

Table 65: Participation in Horizon Europe by country and organisation type (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	Horizon Europe investments in signed grants (EUR million) over 2021-2024	% of total Horizon Europe investment	% of Horizon Europe investment in EU-27	Horizon Europe investments in signed grants (EUR million) per year	Yearly GERD (in EUR million)*	Horizon Europe investment in EUR per EUR million of GERD
Austria	AT	Non-widening MS	1 393	3.2%	3.5%	380	14908.47	9 347
Belgium	BE	Non-widening MS	3 354	7.8%	8.5%	915	19185.6965	17 480
Bulgaria	BG	Widening MS	165	0.4%	0.4%	45	698.7235	23 630
Cyprus	CY	Widening MS	300	0.7%	0.8%	82	210.2575	142 880
Czechia	CZ	Widening MS	481	1.1%	1.2%	131	5623.1335	8 560
Germany	DE	Non-widening MS	6 832	15.8%	17.3%	1 863	125696.629	5 435
Denmark	DK	Non-widening MS	1 239	2.9%	3.1%	338	11100.3205	11 163
Estonia	EE	Widening MS	259	0.6%	0.7%	71	671.9625	38 586
Greece	EL	Widening MS	1 689	3.9%	4.3%	461	3216.493	52 501
Spain	ES	Non-widening MS	4 563	10.6%	11.6%	1 244	20851.9545	21 882
Finland	FI	Non-widening MS	1 228	2.8%	3.1%	335	8187.77	14 994
France	FR	Non-widening MS	4 897	11.3%	12.4%	1 336	60329.777	8 117
Croatia	HR	Widening MS	136	0.3%	0.3%	37	1021.205	13 270
Hungary	HU	Widening MS	199	0.5%	0.5%	54	2538.434	7 833
Ireland	IE	Non-widening MS	902	2.1%	2.3%	246	4559.7465	19 792
Italy	IT	Non-widening MS	3 655	8.5%	9.3%	997	27612.643	13 238
Lithuania	LT	Widening MS	157	0.4%	0.4%	43	741.1585	21 150
Luxembourg	LU	Non-widening MS	197	0.5%	0.5%	54	819.0275	24 043
Latvia	LV	Widening MS	99	0.2%	0.3%	27	308.3535	32 160
Malta	MT	Widening MS	46	0.1%	0.1%	12	115.758	39 416
Netherlands	NL	Non-widening MS	3 793	8.8%	9.6%	1 034	21923.168	17 302

EU-27 Member State	Country code	Country group	Horizon Europe investments in signed grants (EUR million) over 2021-2024	% of total Horizon Europe investment	% of Horizon Europe investment in EU-27	Horizon Europe investments in signed grants (EUR million) per year	Yearly GERD (in EUR million)*	Horizon Europe investment in EUR per EUR million of GERD
Poland	PL	Widening MS	670	1.5%	1.7%	183	10616.877	6 308
Portugal	PT	Widening MS	998	2.3%	2.5%	272	4323.392	23 075
Romania	RO	Widening MS	288	0.7%	0.7%	78	1489.6915	19 313
Sweden	SE	Non-widening MS	1 445	3.3%	3.7%	394	19240.1825	7 508
Slovenia	SI	Widening MS	358	0.8%	0.9%	98	1279.8545	27 976
Slovakia	SK	Widening MS	109	0.3%	0.3%	30	1177.459	9 234

Total EU-27	**39 451**	**91.3%**	**10 759**		**368 448**	**10 707**
Widening MS	5 952	13.8%	10 379		34 033	17 490
Non-widening MS	33 498	77.5%	20 224		334 415	10 017
Associated countries	3 238	7.5%	30 558			
Third countries	526	1.2%	50 700			
Total Horizon Europe	**43 215**	**100.0%**	**81 127**			

Table 66: Participation in Horizon Europe by type of organisation (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	Horizon Europe participations in signed grants	HES	PRC	PUB	REC	OTH
				Participation				
Austria	AT	Non-widening MS	2 956	994	954	81	733	194
Belgium	BE	Non-widening MS	5 590	1 483	1 357	174	1,054	1,522
Bulgaria	BG	Widening MS	634	134	229	75	94	102
Cyprus	CY	Widening MS	888	234	470	54	61	69
Czechia	CZ	Widening MS	1 366	575	333	83	253	122
Germany	DE	Non-widening MS	11 468	3 829	3 694	234	3,110	601
Denmark	DK	Non-widening MS	2 533	1 359	603	234	158	179
Estonia	EE	Widening MS	678	261	204	64	33	116
Greece	EL	Widening MS	4 553	1 100	1 788	218	1,146	301
Spain	ES	Non-widening MS	11 473	2 547	3 721	620	3,784	801
Finland	FI	Non-widening MS	2 468	957	657	149	548	157
France	FR	Non-widening MS	9 380	2 181	3 297	337	2,924	641
Croatia	HR	Widening MS	562	181	162	72	84	63
Hungary	HU	Widening MS	792	209	223	71	162	127
Ireland	IE	Non-widening MS	1 952	893	735	85	87	152
Italy	IT	Non-widening MS	9 843	3 397	3 439	388	1,930	689
Lithuania	LT	Widening MS	537	166	142	93	56	80
Luxembourg	LU	Non-widening MS	461	76	238	22	104	21
Latvia	LV	Widening MS	368	107	87	48	84	42
Malta	MT	Widening MS	202	75	56	52	10	9
Netherlands	NL	Non-widening MS	6 425	2 630	1 979	183	1,096	537
Poland	PL	Widening MS	1 821	647	459	146	399	170

EU-27 Member State	Country code	Country group	Horizon Europe participations in signed grants	HES	PRC	PUB	REC	OTH
				Participation				
Portugal	PT	Widening MS	2 876	758	875	239	812	192
Romania	RO	Widening MS	1 098	260	308	150	238	142
Sweden	SE	Non-widening MS	2 892	1 495	794	207	283	113
Slovenia	SI	Widening MS	1 110	254	344	85	344	83
Slovakia	SK	Widening MS	425	113	117	62	71	62

Total EU-27	**85,351**	**26,915**	**27 265**	**4 226**	**19 658**	**7 287**
Widening MS	17,910	5,074	5 797	1 512	3 847	1 680
Non-widening MS	67,441	21,841	21 468	2 714	15 811	5 607
Associated countries	10,200	4,709	2 662	595	1 600	634
Third countries	6,045	2,903	1 268	432	968	474
Total Horizon Europe	**101,596**	**34,527**	**31 195**	**5 253**	**22 226**	**8 395**

Table 67: Participation in Horizon Europe by type of organisation (continued) (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	HES	PRC	PUB	REC	OTH	HES	PRC	PUB	REC	OTH
			% of all projects of specific organisation types					% of all projects of the country				
Austria	AT	Non-widening MS	2.9%	3.1%	1.5%	3.3%	2.3%	33.6%	32.3%	2.7%	24.8%	6.6%
Belgium	BE	Non-widening MS	4.3%	4.4%	3.3%	4.7%	18.1%	26.5%	24.3%	3.1%	18.9%	27.2%
Bulgaria	BG	Widening MS	0.4%	0.7%	1.4%	0.4%	1.2%	21.1%	36.1%	11.8%	14.8%	16.1%
Cyprus	CY	Widening MS	0.7%	1.5%	1.0%	0.3%	0.8%	26.4%	52.9%	6.1%	6.9%	7.8%
Czechia	CZ	Widening MS	1.7%	1.1%	1.6%	1.1%	1.5%	42.1%	24.4%	6.1%	18.5%	8.9%
Germany	DE	Non-widening MS	11.1%	11.8%	4.5%	14.0%	7.2%	33.4%	32.2%	2.0%	27.1%	5.2%
Denmark	DK	Non-widening MS	3.9%	1.9%	4.5%	0.7%	2.1%	53.7%	23.8%	9.2%	6.2%	7.1%
Estonia	EE	Widening MS	0.8%	0.7%	1.2%	0.1%	1.4%	38.5%	30.1%	9.4%	4.9%	17.1%
Greece	EL	Widening MS	3.2%	5.7%	4.2%	5.2%	3.6%	24.2%	39.3%	4.8%	25.2%	6.6%
Spain	ES	Non-widening MS	7.4%	11.9%	11.8%	17.0%	9.5%	22.2%	32.4%	5.4%	33.0%	7.0%
Finland	FI	Non-widening MS	2.8%	2.1%	2.8%	2.5%	1.9%	38.8%	26.6%	6.0%	22.2%	6.4%
France	FR	Non-widening MS	6.3%	10.6%	6.4%	13.2%	7.6%	23.3%	35.1%	3.6%	31.2%	6.8%
Croatia	HR	Widening MS	0.5%	0.5%	1.4%	0.4%	0.8%	32.2%	28.8%	12.8%	14.9%	11.2%
Hungary	HU	Widening MS	0.6%	0.7%	1.4%	0.7%	1.5%	26.4%	28.2%	9.0%	20.5%	16.0%
Ireland	IE	Non-widening MS	2.6%	2.4%	1.6%	0.4%	1.8%	45.7%	37.7%	4.4%	4.5%	7.8%
Italy	IT	Non-widening MS	9.8%	11.0%	7.4%	8.7%	8.2%	34.5%	34.9%	3.9%	19.6%	7.0%
Lithuania	LT	Widening MS	0.5%	0.5%	1.8%	0.3%	1.0%	30.9%	26.4%	17.3%	10.4%	14.9%
Luxembourg	LU	Non-widening MS	0.2%	0.8%	0.4%	0.5%	0.3%	16.5%	51.6%	4.8%	22.6%	4.6%
Latvia	LV	Widening MS	0.3%	0.3%	0.9%	0.4%	0.5%	29.1%	23.6%	13.0%	22.8%	11.4%
Malta	MT	Widening MS	0.2%	0.2%	1.0%	0.0%	0.1%	37.1%	27.7%	25.7%	5.0%	4.5%
Netherlands	NL	Non-widening MS	7.6%	6.3%	3.5%	4.9%	6.4%	40.9%	30.8%	2.8%	17.1%	8.4%
Poland	PL	Widening MS	1.9%	1.5%	2.8%	1.8%	2.0%	35.5%	25.2%	8.0%	21.9%	9.3%
Portugal	PT	Widening MS	2.2%	2.8%	4.5%	3.7%	2.3%	26.4%	30.4%	8.3%	28.2%	6.7%
Romania	RO	Widening MS	0.8%	1.0%	2.9%	1.1%	1.7%	23.7%	28.1%	13.7%	21.7%	12.9%

Sweden	SE	Non-widening MS	4.3%	2.5%	3.9%	1.3%	1.3%	51.7%	27.5%	7.2%	9.8%	3.9%
Slovenia	SI	Widening MS	0.7%	1.1%	1.6%	1.5%	1.0%	22.9%	31.0%	7.7%	31.0%	7.5%
Slovakia	SK	Widening MS	0.3%	0.4%	1.2%	0.3%	0.7%	26.6%	27.5%	14.6%	16.7%	14.6%

Total EU-27	**78.0%**	**87.4%**	**80.4%**	**88.4%**	**86.8%**	**31.5%**	**31.9%**	**5.0%**	**23.0%**	**8.5%**
Widening MS	14.7%	18.6%	28.8%	17.3%	20.0%	28.3%	32.4%	8.4%	21.5%	9.4%
Non-widening MS	63.3%	68.8%	51.7%	71.1%	66.8%	32.4%	31.8%	4.0%	23.4%	8.3%
Associated countries	13.6%	8.5%	11.3%	7.2%	7.6%	46.2%	26.1%	5.8%	15.7%	6.2%
Third countries	8.4%	4.1%	8.2%	4.4%	5.6%	48.0%	21.0%	7.1%	16.0%	7.8%
Total Horizon Europe	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0 %**	**34.0%**	**30.7%**	**5.2%**	**21.9%**	**8.3%**

Table 68: Investment in Horizon Europe by type of organisation (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	**Country code**	**Country group**	**Horizon Europe investments in signed grants (EUR million) over 2021-2024**	**HES**	**PRC**	**PUB**	**REC**	**OTH**
			Investment by type of organisation					
Austria	AT	Non-widening MS	1 393	575	356	25	359	78
Belgium	BE	Non-widening MS	3 354	887	493	62	976	936
Bulgaria	BG	Widening MS	165	47	70	13	22	13
Cyprus	CY	Widening MS	300	100	146	7	29	18
Czechia	CZ	Widening MS	481	248	109	15	77	32
Germany	DE	Non-widening MS	6 832	2 326	1 963	142	2 159	242
Denmark	DK	Non-widening MS	1 239	789	221	107	70	51
Estonia	EE	Widening MS	259	128	91	8	11	22
Greece	EL	Widening MS	1 689	465	558	43	543	79

Spain	ES	Non-widening MS	4 563	993	1 479	163	1 740	187
Finland	FI	Non-widening MS	1 228	534	273	47	330	43
France	FR	Non-widening MS	4 897	761	1 632	155	2 049	300
Croatia	HR	Widening MS	136	42	50	11	26	7
Hungary	HU	Widening MS	199	46	63	22	44	24
Ireland	IE	Non-widening MS	902	509	278	24	35	57
Italy	IT	Non-widening MS	3 655	1 393	1 188	194	741	140
Lithuania	LT	Widening MS	157	58	45	23	13	17
Luxembourg	LU	Non-widening MS	197	29	102	9	54	3
Latvia	LV	Widening MS	99	33	28	7	25	7
Malta	MT	Widening MS	46	19	15	8	3	1
Netherlands	NL	Non-widening MS	3 793	1 729	997	86	757	225
Poland	PL	Widening MS	670	229	162	41	163	75
Portugal	PT	Widening MS	998	296	258	41	369	34
Romania	RO	Widening MS	288	77	90	24	74	23
Sweden	SE	Non-widening MS	1 445	851	331	99	138	25
Slovenia	SI	Widening MS	358	82	108	16	138	14
Slovakia	SK	Widening MS	109	31	35	7	25	11

Total EU-27	**39 451**	**13 276**	**11 139**	**1 401**	**10 970**	**2 664**
Widening MS	5 952	1 900	1 827	287	1 561	378
Non-widening MS	33 498	11 376	9 313	1 114	9 409	2 287
Associated countries	3 238	1 512	708	141	781	96
Third countries	526	211	49	38	179	49
Total Horizon Europe	**43 215**	**14 999**	**11 896**	**1 580**	**11 930**	**2 810**

Table 69: Investment in Horizon Europe by type of organisation (continued) (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	HES	PRC	PUB	REC	OTH	HES	PRC	PUB	REC	OTH
			% investments in countries by organisation type					% investment in organisation type				
Austria	AT	Non-widening MS	41.3%	25.5%	1.8%	25.8%	5.6%	3.8%	3.0%	1.6%	3.0%	2.8%
Belgium	BE	Non-widening MS	26.4%	14.7%	1.8%	29.1%	27.9%	5.9%	4.1%	3.9%	8.2%	33.3%
Bulgaria	BG	Widening MS	28.2%	42.3%	8.0%	13.6%	7.9%	0.3%	0.6%	0.8%	0.2%	0.5%
Cyprus	CY	Widening MS	33.2%	48.7%	2.4%	9.7%	6.0%	0.7%	1.2%	0.5%	0.2%	0.6%
Czechia	CZ	Widening MS	51.4%	22.7%	3.2%	16.1%	6.6%	1.7%	0.9%	1.0%	0.6%	1.1%
Germany	DE	Non-widening MS	34.0%	28.7%	2.1%	31.6%	3.5%	15.5%	16.5%	9.0%	18.1%	8.6%
Denmark	DK	Non-widening MS	63.7%	17.9%	8.7%	5.7%	4.1%	5.3%	1.9%	6.8%	0.6%	1.8%
Estonia	EE	Widening MS	49.4%	34.9%	3.0%	4.1%	8.6%	0.9%	0.8%	0.5%	0.1%	0.8%
Greece	EL	Widening MS	27.5%	33.0%	2.5%	32.2%	4.7%	3.1%	4.7%	2.7%	4.6%	2.8%
Spain	ES	Non-widening MS	21.8%	32.4%	3.6%	38.1%	4.1%	6.6%	12.4%	10.3%	14.6%	6.7%
Finland	FI	Non-widening MS	43.5%	22.2%	3.8%	26.9%	3.5%	3.6%	2.3%	3.0%	2.8%	1.5%
France	FR	Non-widening MS	15.5%	33.3%	3.2%	41.8%	6.1%	5.1%	13.7%	9.8%	17.2%	10.7%
Croatia	HR	Widening MS	30.8%	36.8%	8.0%	18.9%	5.5%	0.3%	0.4%	0.7%	0.2%	0.3%
Hungary	HU	Widening MS	23.1%	31.7%	11.2%	22.0%	12.0%	0.3%	0.5%	1.4%	0.4%	0.8%
Ireland	IE	Non-widening MS	56.4%	30.8%	2.7%	3.9%	6.3%	3.4%	2.3%	1.5%	0.3%	2.0%
Italy	IT	Non-widening MS	38.1%	32.5%	5.3%	20.3%	3.8%	9.3%	10.0%	12.3%	6.2%	5.0%
Lithuania	LT	Widening MS	37.0%	28.8%	14.6%	8.5%	11.1%	0.4%	0.4%	1.4%	0.1%	0.6%
Luxembourg	LU	Non-widening MS	14.6%	51.8%	4.4%	27.6%	1.6%	0.2%	0.9%	0.6%	0.5%	0.1%
Latvia	LV	Widening MS	33.4%	27.8%	7.4%	24.8%	6.7%	0.2%	0.2%	0.5%	0.2%	0.2%
Malta	MT	Widening MS	41.3%	32.2%	18.2%	7.0%	1.3%	0.1%	0.1%	0.5%	0.0%	0.0%
Netherlands	NL	Non-widening MS	45.6%	26.3%	2.3%	19.9%	5.9%	11.5%	8.4%	5.5%	6.3%	8.0%
Poland	PL	Widening MS	34.1%	24.2%	6.1%	24.3%	11.3%	1.5%	1.4%	2.6%	1.4%	2.7%
Portugal	PT	Widening MS	29.7%	25.8%	4.1%	36.9%	3.4%	2.0%	2.2%	2.6%	3.1%	1.2%

Romania	RO	Widening MS	26.8%	31.1%	8.4%	25.6%	8.1%	0.5%	0.8%	1.5%	0.6%	0.8%
Sweden	SE	Non-widening MS	58.9%	22.9%	6.9%	9.5%	1.8%	5.7%	2.8%	6.3%	1.2%	0.9%
Slovenia	SI	Widening MS	22.8%	30.2%	4.5%	38.6%	3.9%	0.5%	0.9%	1.0%	1.2%	0.5%
Slovakia	SK	Widening MS	28.9%	32.1%	6.2%	23.0%	9.8%	0.2%	0.3%	0.4%	0.2%	0.4%

Total EU-27	**33.7%**	**28.2%**	**3.6%**	**27.8%**	**6.8%**	**88.5%**	**93.6%**	**88.7%**	**92.0%**	**94.8%**
Widening MS	31.9%	30.7%	4.8%	26.2%	6.3%	12.7%	15.4%	18.2%	13.1%	13.4%
Non-widening MS	34.0%	27.8%	3.3%	28.1%	6.8%	75.8%	78.3%	70.5%	78.9%	81.4%
Associated countries	46.7%	21.9%	4.4%	24.1%	3.0%	10.1%	6.0%	8.9%	6.5%	3.4%
Third countries	40.1%	9.4%	7.2%	34.0%	9.3%	1.4%	0.4%	2.4%	1.5%	1.8%
Total Horizon Europe	**34.7%**	**27.5%**	**3.7%**	**27.6%**	**6.5%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 70: Participation in Horizon Europe by Pillar (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	**Country code**	**Country group**	**Horizon Europe participations in signed grants**	**Excellent Science**	**Global Challenges and European Industrial Competitiveness**	**Innovative Europe**	**Widening Participation and Strengthening the European Research Area**
				Participation			
Austria	AT	Non-widening MS	2 956	756	1 957	164	79
Belgium	BE	Non-widening MS	5 590	1 205	3 917	317	151
Bulgaria	BG	Widening MS	634	95	417	72	50
Cyprus	CY	Widening MS	888	135	631	27	95
Czechia	CZ	Widening MS	1 366	424	718	76	148
Germany	DE	Non-widening MS	11 468	3 581	6 797	839	251
Denmark	DK	Non-widening MS	2 533	911	1 411	154	57
Estonia	EE	Widening MS	678	89	442	74	73
Greece	EL	Widening MS	4 553	516	3 649	151	237
Spain	ES	Non-widening MS	11 473	2 960	7 445	858	210

EU-27 Member State	Country code	Country group	Horizon Europe participations in signed grants	Excellent Science	Global Challenges and European Industrial Competitiveness	Innovative Europe	Widening Participation and Strengthening the European Research Area
				Participation			
Finland	FI	Non-widening MS	2 468	599	1 626	191	52
France	FR	Non-widening MS	9 380	3 090	5 345	767	178
Croatia	HR	Widening MS	562	84	345	39	94
Hungary	HU	Widening MS	792	164	517	66	45
Ireland	IE	Non-widening MS	1 952	553	1 176	163	60
Italy	IT	Non-widening MS	9 843	2 730	6 244	677	192
Lithuania	LT	Widening MS	537	55	368	57	57
Luxembourg	LU	Non-widening MS	461	84	348	19	10
Latvia	LV	Widening MS	368	42	241	40	45
Malta	MT	Widening MS	202	42	92	25	43
Netherlands	NL	Non-widening MS	6 425	2 006	3 743	534	142
Poland	PL	Widening MS	1 821	437	1 126	168	90
Portugal	PT	Widening MS	2 876	659	1 800	217	200
Romania	RO	Widening MS	1 098	138	816	66	78
Sweden	SE	Non-widening MS	2 892	920	1 623	295	54
Slovenia	SI	Widening MS	1 110	200	753	73	84
Slovakia	SK	Widening MS	425	70	258	49	48
		Total EU-27	**85 351**	**22 545**	**53 805**	**6 178**	**2 823**
		Widening MS	17 910	3 150	12 173	1 200	1 387
		Non-widening MS	67 441	19 395	41 632	4 978	1 436
		Associated countries	10 200	3 030	6 060	584	526
		Third countries	6 045	2 389	3 387	178	91
		Total Horizon Europe	**101 596**	**27 964**	**63 252**	**6 940**	**3 440**

Table 71: Participation in Horizon Europe by Pillar (continued) (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	Excellent Science	Global Challenges and European Industrial Competitiveness	Innovative Europe	Widening Participation and Strengthening the European Research Area	Excellent Science	Global Challenges and European Industrial Competitiveness	Innovative Europe	Widening Participation and Strengthening the European Research Area
			% participation in each Pillar, by country				% participation in each Pillar, by country			
Austria	AT	Non-widening MS	2.7%	3.1%	2.4%	2.3%	25.6%	66.2%	5.5%	2.7%
Belgium	BE	Non-widening MS	4.3%	6.2%	4.6%	4.4%	21.6%	70.1%	5.7%	2.7%
Bulgaria	BG	Widening MS	0.3%	0.7%	1.0%	1.5%	15.0%	65.8%	11.4%	7.9%
Cyprus	CY	Widening MS	0.5%	1.0%	0.4%	2.8%	15.2%	71.1%	3.0%	10.7%
Czechia	CZ	Widening MS	1.5%	1.1%	1.1%	4.3%	31.0%	52.6%	5.6%	10.8%
Germany	DE	Non-widening MS	12.8%	10.7%	12.1%	7.3%	31.2%	59.3%	7.3%	2.2%
Denmark	DK	Non-widening MS	3.3%	2.2%	2.2%	1.7%	36.0%	55.7%	6.1%	2.3%
Estonia	EE	Widening MS	0.3%	0.7%	1.1%	2.1%	13.1%	65.2%	10.9%	10.8%
Greece	EL	Widening MS	1.8%	5.8%	2.2%	6.9%	11.3%	80.1%	3.3%	5.2%
Spain	ES	Non-widening MS	10.6%	11.8%	12.4%	6.1%	25.8%	64.9%	7.5%	1.8%
Finland	FI	Non-widening MS	2.1%	2.6%	2.8%	1.5%	24.3%	65.9%	7.7%	2.1%
France	FR	Non-widening MS	11.0%	8.5%	11.1%	5.2%	32.9%	57.0%	8.2%	1.9%
Croatia	HR	Widening MS	0.3%	0.5%	0.6%	2.7%	14.9%	61.4%	6.9%	16.7%
Hungary	HU	Widening MS	0.6%	0.8%	1.0%	1.3%	20.7%	65.3%	8.3%	5.7%
Ireland	IE	Non-widening MS	2.0%	1.9%	2.3%	1.7%	28.3%	60.2%	8.4%	3.1%
Italy	IT	Non-widening MS	9.8%	9.9%	9.8%	5.6%	27.7%	63.4%	6.9%	2.0%

EU-27 Member State	Country code	Country group	Excellent Science	Global Challenges and European Industrial Competitiveness	Innovative Europe	Widening Participation and Strengthening the European Research Area	Excellent Science	Global Challenges and European Industrial Competitiveness	Innovative Europe	Widening Participation and Strengthening the European Research Area
			% participation in each Pillar, by country				% participation in each Pillar, by country			
Lithuania	LT	Widening MS	0.2%	0.6%	0.8%	1.7%	10.2%	68.5%	10.6%	10.6%
Luxembourg	LU	Non-widening MS	0.3%	0.6%	0.3%	0.3%	18.2%	75.5%	4.1%	2.2%
Latvia	LV	Widening MS	0.2%	0.4%	0.6%	1.3%	11.4%	65.5%	10.9%	12.2%
Malta	MT	Widening MS	0.2%	0.1%	0.4%	1.3%	20.8%	45.5%	12.4%	21.3%
Netherlands	NL	Non-widening MS	7.2%	5.9%	7.7%	4.1%	31.2%	58.3%	8.3%	2.2%
Poland	PL	Widening MS	1.6%	1.8%	2.4%	2.6%	24.0%	61.8%	9.2%	4.9%
Portugal	PT	Widening MS	2.4%	2.8%	3.1%	5.8%	22.9%	62.6%	7.5%	7.0%
Romania	RO	Widening MS	0.5%	1.3%	1.0%	2.3%	12.6%	74.3%	6.0%	7.1%
Sweden	SE	Non-widening MS	3.3%	2.6%	4.3%	1.6%	31.8%	56.1%	10.2%	1.9%
Slovenia	SI	Widening MS	0.7%	1.2%	1.1%	2.4%	18.0%	67.8%	6.6%	7.6%
Slovakia	SK	Widening MS	0.3%	0.4%	0.7%	1.4%	16.5%	60.7%	11.5%	11.3%

Total EU-27	**80.6%**	**85.1%**	**89.0%**	**82.1%**	**26.4%**	**63.0%**	**7.2%**	**3.3%**
Widening MS	11.3%	19.2%	17.3%	40.3%	17.6%	68.0%	6.7%	7.7%
Non-widening MS	69.4%	65.8%	71.7%	41.7%	28.8%	61.7%	7.4%	2.1%
Associated countries	10.8%	9.6%	8.4%	15.3%	29.7%	59.4%	5.7%	5.2%
Third countries	8.5%	5.4%	2.6%	2.6%	39.5%	56.0%	2.9%	1.5%
Total Horizon Europe	**100%**	**100%**	**100%**	**100%**	**27.5%**	**62.3%**	**6.8%**	**3.4%**

Table 72: Investment in Horizon Europe by Pillar (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	Country code	Country group	Horizon Europe investments in signed grants (EUR million)	Excellent Science	Global Challenges and European Industrial Competitiveness	Innovative Europe	Widening Participation and Strengthening the European Research Area
				Investment by Pillar			
Austria	AT	Non-widening MS	1 393	413	857	102	21
Belgium	BE	Non-widening MS	3 354	551	2 055	436	312
Bulgaria	BG	Widening MS	165	6	101	25	33
Cyprus	CY	Widening MS	300	39	208	7	47
Czechia	CZ	Widening MS	481	118	239	35	90
Germany	DE	Non-widening MS	6 832	2 209	3 575	971	77
Denmark	DK	Non-widening MS	1 239	422	678	121	18
Estonia	EE	Widening MS	259	31	141	33	55
Greece	EL	Widening MS	1 689	140	1 375	53	121
Spain	ES	Non-widening MS	4 563	943	2 908	637	75
Finland	FI	Non-widening MS	1 228	272	802	137	17
France	FR	Non-widening MS	4 897	1 417	2 798	635	47
Croatia	HR	Widening MS	136	11	80	9	34
Hungary	HU	Widening MS	199	42	125	22	10
Ireland	IE	Non-widening MS	902	253	517	120	13
Italy	IT	Non-widening MS	3 655	912	2 387	307	49
Lithuania	LT	Widening MS	157	13	91	25	27
Luxembourg	LU	Non-widening MS	197	22	161	13	1
Latvia	LV	Widening MS	99	5	58	8	28
Malta	MT	Widening MS	46	4	23	8	11
Netherlands	NL	Non-widening MS	3 793	1 258	1 976	511	48
Poland	PL	Widening MS	670	132	353	104	81

Portugal	PT	Widening MS	998	186	587	93	131
Romania	RO	Widening MS	288	23	217	19	29
Sweden	SE	Non-widening MS	1 445	465	756	209	15
Slovenia	SI	Widening MS	358	65	227	26	41
Slovakia	SK	Widening MS	109	10	57	15	27

Total EU-27	**39 451**	**9 963**	**23 352**	**4 679**	**1 457**
Widening MS	5 952	824	3 883	480	765
Non-widening MS	33 498	9 139	19 469	4 199	692
Associated countries	3 238	1 096	1 739	274	130
Third countries	526	115	398	10	4
Total Horizon Europe	**43 215**	**11 173**	**25 488**	**4 963**	**1 591**

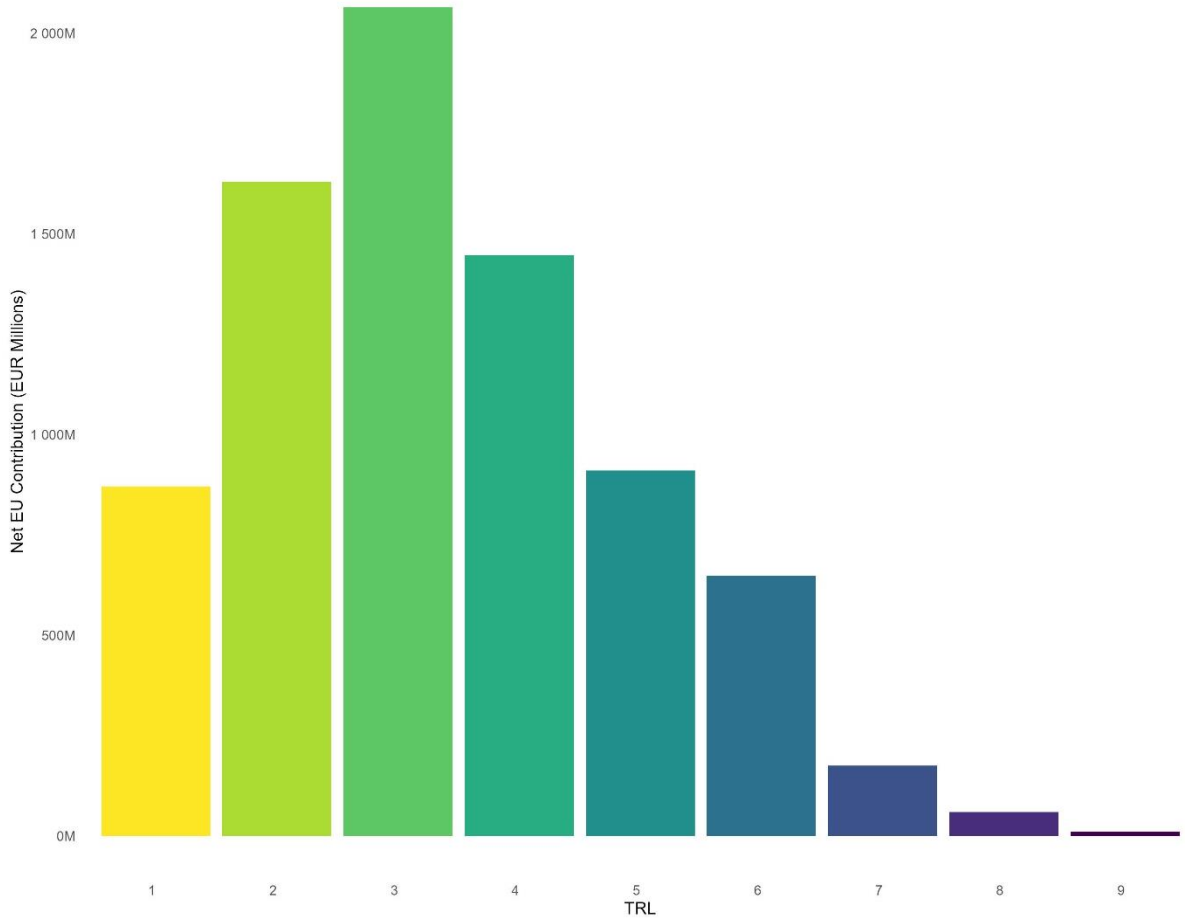
Table 73: Investment in Horizon Europe by Pillar (continued) (Source: CORDA data – cut-off date 6 January 2025).

EU-27 Member State	**Country code**	**Country group**	**Excellent Science**	**Global Challenges and European Industrial Competitiveness**	**Innovative Europe**	**Widening Participation and Strengthening the European Research Area**	**Excellent Science**	**Global Challenges and European Industrial Competitiveness**	**Innovative Europe**	**Widening Participation and Strengthening the European Research Area**
			% investment in each Pillar, by country				**% investment in each Pillar, by country**			
Austria	AT	Non-widening MS	29.7%	61.5%	7.3%	1.5%	3.7%	3.4%	2.1%	1.3%
Belgium	BE	Non-widening MS	16.4%	61.3%	13.0%	9.3%	4.9%	8.1%	8.8%	19.6%
Bulgaria	BG	Widening MS	3.7%	61.1%	15.0%	20.1%	0.1%	0.4%	0.5%	2.1%
Cyprus	CY	Widening MS	12.8%	69.3%	2.2%	15.7%	0.3%	0.8%	0.1%	3.0%
Czechia	CZ	Widening MS	24.5%	49.6%	7.2%	18.6%	1.1%	0.9%	0.7%	5.6%
Germany	DE	Non-widening MS	32.3%	52.3%	14.2%	1.1%	19.8%	14.0%	19.6%	4.8%
Denmark	DK	Non-widening MS	34.1%	54.7%	9.7%	1.4%	3.8%	2.7%	2.4%	1.1%
Estonia	EE	Widening MS	11.9%	54.3%	12.8%	21.0%	0.3%	0.6%	0.7%	3.4%

Greece	EL	Widening MS	8.3%	81.4%	3.1%	7.2%	1.3%	5.4%	1.1%	7.6%
Spain	ES	Non-widening MS	20.7%	63.7%	14.0%	1.6%	8.4%	11.4%	12.8%	4.7%
Finland	FI	Non-widening MS	22.2%	65.3%	11.1%	1.4%	2.4%	3.1%	2.8%	1.0%
France	FR	Non-widening MS	28.9%	57.1%	13.0%	1.0%	12.7%	11.0%	12.8%	2.9%
Croatia	HR	Widening MS	8.5%	59.2%	7.0%	25.3%	0.1%	0.3%	0.2%	2.2%
Hungary	HU	Widening MS	21.1%	62.9%	11.0%	5.0%	0.4%	0.5%	0.4%	0.6%
Ireland	IE	Non-widening MS	28.0%	57.2%	13.3%	1.4%	2.3%	2.0%	2.4%	0.8%
Italy	IT	Non-widening MS	24.9%	65.3%	8.4%	1.3%	8.2%	9.4%	6.2%	3.1%
Lithuania	LT	Widening MS	8.6%	58.3%	15.8%	17.4%	0.1%	0.4%	0.5%	1.7%
Luxembourg	LU	Non-widening MS	11.1%	81.6%	6.6%	0.6%	0.2%	0.6%	0.3%	0.1%
Latvia	LV	Widening MS	5.1%	58.3%	7.9%	28.7%	0.0%	0.2%	0.2%	1.8%
Malta	MT	Widening MS	7.7%	50.1%	18.6%	23.6%	0.0%	0.1%	0.2%	0.7%
Netherlands	NL	Non-widening MS	33.2%	52.1%	13.5%	1.3%	11.3%	7.8%	10.3%	3.0%
Poland	PL	Widening MS	19.7%	52.8%	15.5%	12.1%	1.2%	1.4%	2.1%	5.1%
Portugal	PT	Widening MS	18.7%	58.9%	9.3%	13.1%	1.7%	2.3%	1.9%	8.2%
Romania	RO	Widening MS	7.9%	75.6%	6.5%	10.1%	0.2%	0.9%	0.4%	1.8%
Sweden	SE	Non-widening MS	32.2%	52.3%	14.5%	1.0%	4.2%	3.0%	4.2%	0.9%
Slovenia	SI	Widening MS	18.1%	63.4%	7.1%	11.4%	0.6%	0.9%	0.5%	2.6%
Slovakia	SK	Widening MS	8.8%	52.4%	13.7%	25.2%	0.1%	0.2%	0.3%	1.7%

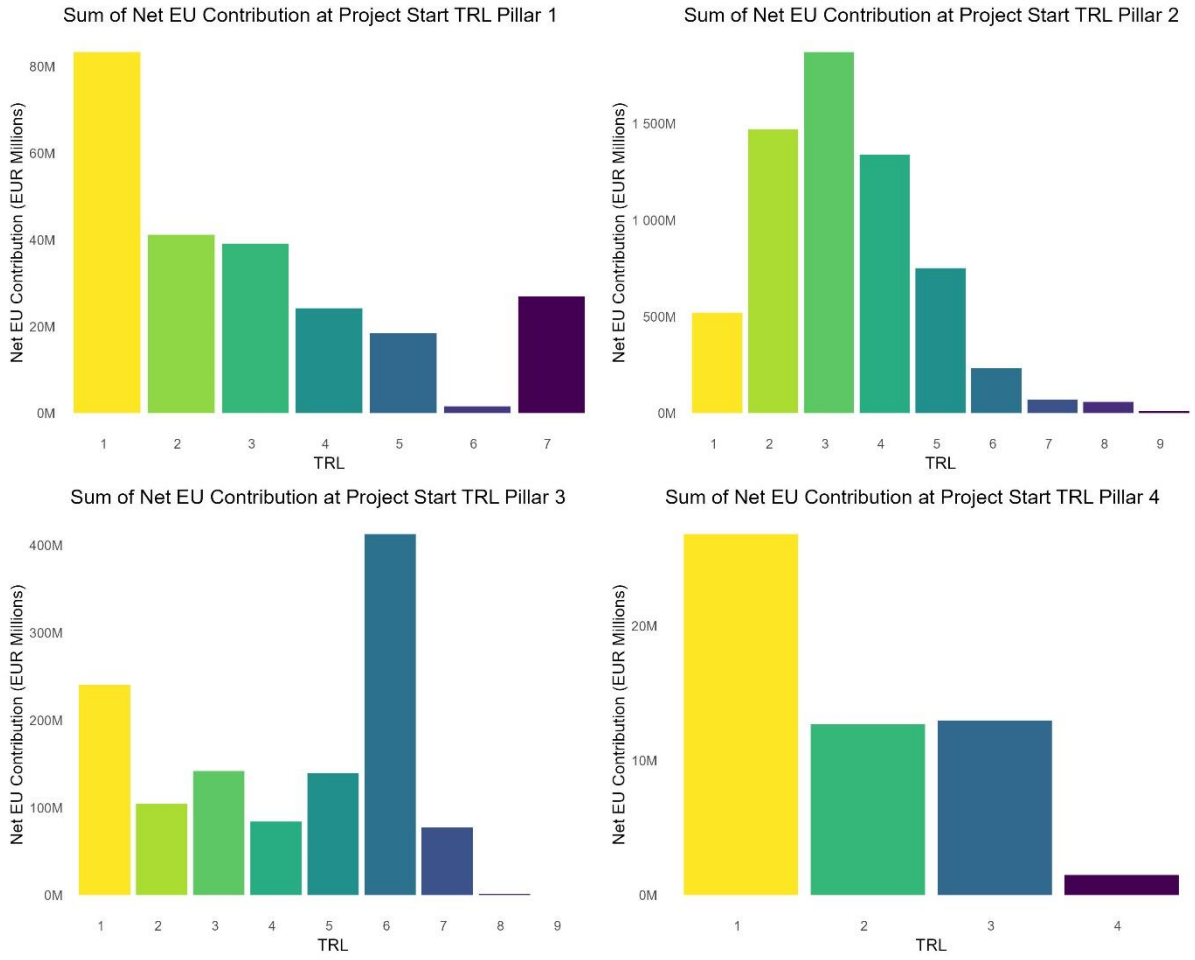
Total EU-27	**25.3%**	**59.2%**	**11.9%**	**3.7%**	**89.2%**	**91.6%**	**94.3%**	**91.6%**
Widening MS	13.8%	65.2%	8.1%	12.9%	7.4%	15.2%	9.7%	48.1%
Non-widening MS	27.3%	58.1%	12.5%	2.1%	81.8%	76.4%	84.6%	43.5%
Associated countries	33.8%	53.7%	8.5%	4.0%	9.8%	6.8%	5.5%	8.2%
Third countries	21.8%	75.6%	1.8%	0.7%	1.0%	1.6%	0.2%	0.2%
Total Horizon Europe	**25.9%**	**59.0%**	**11.5%**	**3.7%**	**100%**	**100%**	**100%**	**100%**

Figure 127: Technology Readiness Level (TRL): status at project start, as indicated in the latest Periodic Reporting



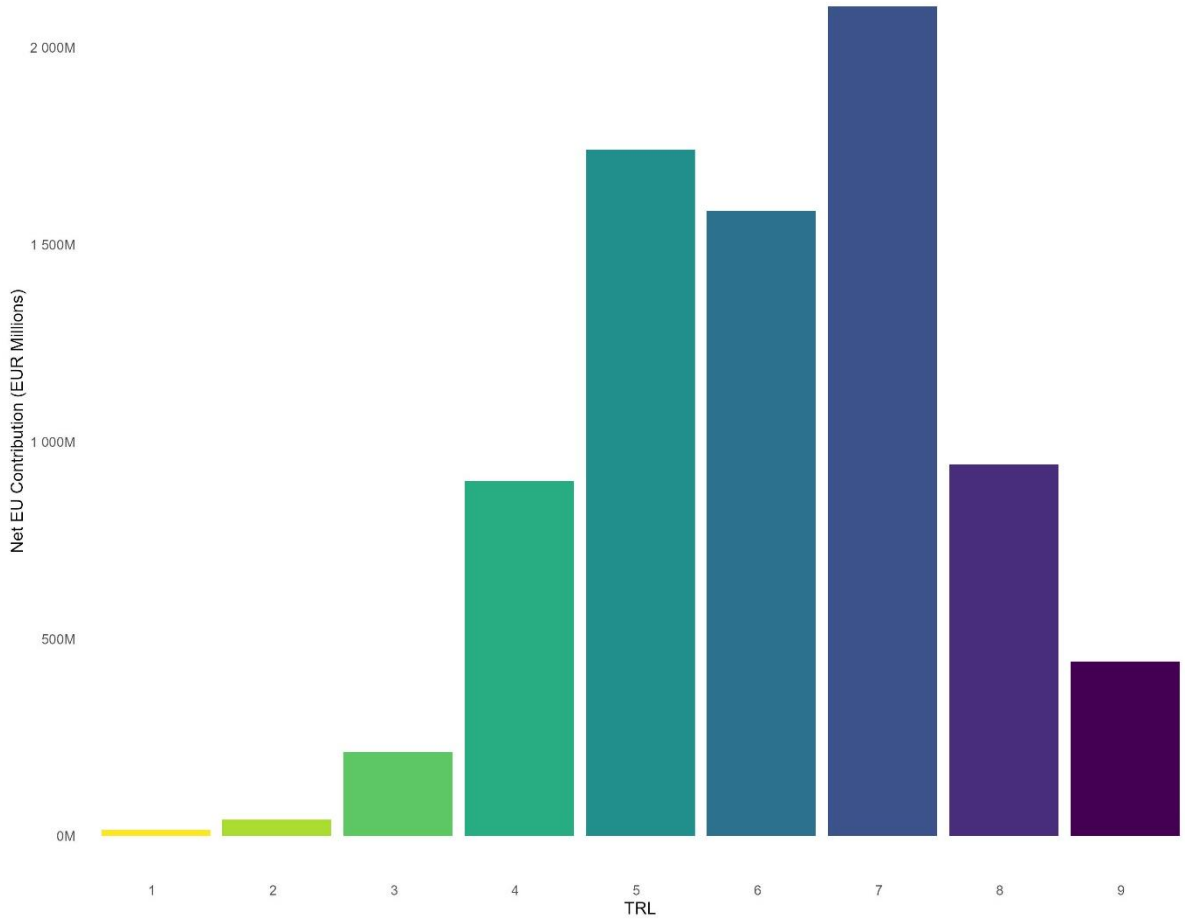
Source: Elaboration based on Dashboard and CORDA extractions, January 2025.

Figure 128: Technology Readiness Level (TRL): status at project start, by Pillar, as indicated in the latest Periodic Reporting



Source: Elaboration based on Dashboard and CORDA extractions, January 2025.

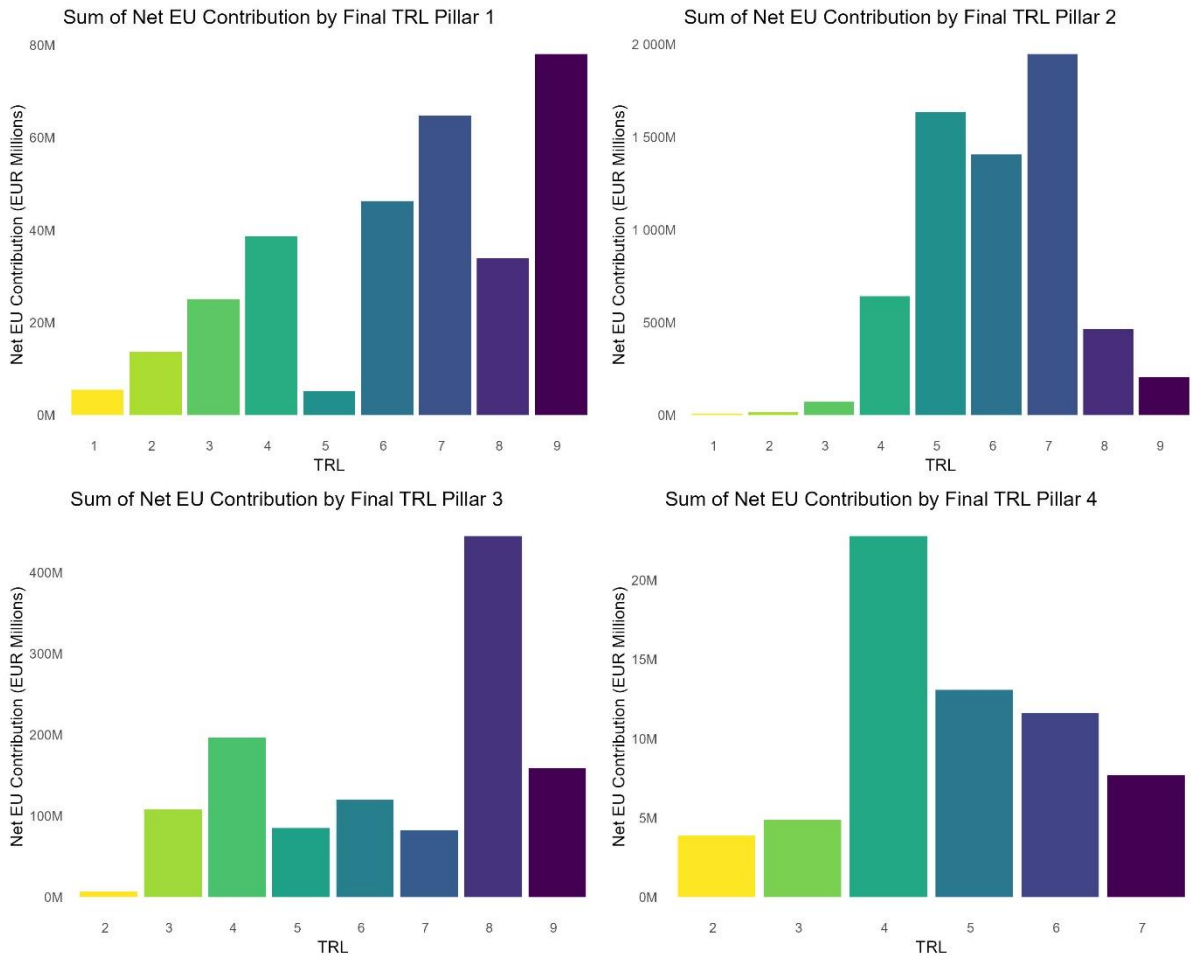
Figure 129: Technology Readiness Level (TRL): status at project end, as indicated in the latest Periodic Reporting[326]



Source: Elaboration based on Dashboard and CORDA extractions, January 2025.

[326] This can either be the achieved or expected TRL at project end. Ongoing projects might report the TRL that they aim to achieve by the end of the project.

Figure 130: Technology Readiness Level (TRL): status at project end, by Pillar, as indicated in the latest Periodic Reporting



Source: Elaboration based on Dashboard and CORDA extractions, January 2025.

Annex 9 Activities conducted to increase citizen and user engagement

The evaluation found different activities conducted to increase citizen and user engagement:

- Cluster 1 engages end-users and SMEs in the health industry – but it has suboptimal synergies with Cluster 2 on social dimension (i.e. insufficient community engagement in health-related activities).
- Cluster 2 expanded its participant base by including more CSOs, practitioner groups (non-academic participants) and end users. A third of stakeholder consultation respondents also expressed that Cluster 2 has unexploited potential for complementarities with the other Clusters.
- Cluster 3 mandates the involvement of public bodies and security practitioners as a key eligibility criterion. The compulsory association of end-users to the project is considered to have had beneficial effect on the added-value of the programme and is a measure that contributes to dissemination of research results.
- Cluster 4 emphasizes the importance of involving local stakeholders with the aim to foster scalability and replicability.
- Cluster 5 projects in areas of energy supply, transport and mobility tend to prioritise collaborations across industries and value chains. As for citizen engagement, Destination 4 ('Efficient, sustainable and inclusive energy use') aims to make participatory urban planning a norm with a focus on awareness raising and uptake of technological solutions rather than their co-design or co-creation. Project results are not yet available.
- Cluster 6 is applying the Multi Actor Approach (MAA) to foster stakeholder participation: its WP 2021-2022 had 74 MAA topics (37%) and the WP 2023-2024 had 85 MAA topics (39%). Moreover, living labs and lighthouses are deployed through some Cluster 6 actions to ensure that end-users are involved in developing, experimenting and demonstrating innovations to address users' needs on the ground.
- According to the results of the Horizon Europe beneficiaries' survey, nearly half of the responding projects (47.7%; 2 537) plan to engage citizens in their R&I activities. For Cluster 5 and 6 Partnership projects, this proportion falls to one-third (N=190)[327].
- As a contribution to Horizon Europe Strategic Plan 2025–2027, a citizen engagement event took place on 1 December 2022, in the context of the Conference on the Future of Europe. Citizens provided feedback under three topical areas: 'Digital and technological transition', 'Green transition' and 'Resilience'[328].
- The feedback opportunity for 'main' Horizon Europe work programme 2025 took place between 15 April and 6 May 2024. It was based on strategic orientations for the work programme of all Horizon Europe clusters, Research Infrastructures, European Innovation Ecosystems, EU Missions and the NEB Facility. 2222 contributions from 1052 individual respondents were received[329].
- EIC and EIT KICs promote citizen engagement through competitions and awards.

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[327] Engaging stakeholders in R&I for the Green Transition - Comparative analysis of Horizon Europe Cluster 5&6, Partnerships and Missions, section 3.4, https://data.europa.eu/doi/10.2777/6499313

[328] Results from the citizens' engagement event on Horizon Europe Strategic Plan 2025-2027, 2023, https://research-and-innovation.ec.europa.eu/document/download/3455df69-b2f4-4f2f-9699-7afc6ed7d68b_en?filename=ec_rtd_citizen-engagement-event-summary.pdf

[329] https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/horizon-europe-work-programmes_en#feedback-opportunity-for-the-2025-work-programme

- The EIC's Business Acceleration Services connect portfolio companies and researchers with corporates, investors, buyers, accelerators and venture builders amongst many others with a view to increasing the likelihood of market entry and scaling of EIC funded innovations.
- The EIT KICs disseminate R&I results in their community networks effectively, including among venture capital investors. In Horizon Europe, the EIT KICs report annually on dissemination activities and uptake of services.

Annex 10 Horizon Europe response to emergencies

As stated in section 4.5.3 of the SWD, Programme parts across all Horizon Europe pillars responded to Covid, mpox and Ukraine emergencies:

- **Cluster 1 is the only cluster with an 'emergency action fund'**, whose release can be triggered by a policy announcement (WHO's global pandemic).[330] It mobilised resources and enhanced preparedness for health emergencies (e.g. COVID-19, Mpox, and previously Zika).
- **The first emergency call under Horizon Europe[331] provided EUR 123 million to tackle the virus and its variants.**[332] This support advanced our understanding of the virus by developing diagnostics, treatments, and vaccines, and informed public health policies. For instance, the project VERDI provided scientific evidence of vaccine effectiveness in children[333], and CoVICIS helped to better understand the protective effect of vaccination in immunocompromised patients[334]. In addition, the project EuCARE provided insights into the severity of the different variants of SARS-CoV-2[335]. EuCARE also assessed the impact of prevention measures in schools showing that school opening did not increase transmission in Italy, Germany, and Portugal.[336]
- Horizon Europe contributes EUR 35 million on an annual basis to the cooperation between HERA and **Coalition for Epidemic Preparedness Innovations (CEPI)** to support the development of next generation vaccines for several diseases, including for COVID-19.[337]
- The **European COVID-19 Data Platform**, hosted by the European Open Science Cloud (EOSC), is a free-to-use, open digital space for researchers to share and upload data sets (for more details on EOSC, see also KIP3 in section 4.1.1 of this document). Since its launch on 20 April 2021, it has seen more than 114 000 users and 3.6 million web requests from over 170 countries. The platform offers access to 9 million records of sequences provided by 129 countries, as well as of biomolecular data and publications (contributing to over 1 million publications), viral sequences, sequences from patients, and other microbiological data.[338]
- In response to the **mpox outbreak in 2022, the EU mobilised EUR 17 million of emergency funding under Horizon Europe to support European clinical research**. These projects address research gaps in the current 2024 mpox outbreak and capitalise on the networks established during the COVID-19 pandemic to enhance Europe's

[330] The possibility for the mobilisation of emergency research funds is expressed as an "other action" integrated in the Horizon WP for Health since 2018: Horizon Europe 2021-2022 WP (p. 173): https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-4-health_horizon-2021-2022_en.pdf; and Horizon Europe 2023-2024 (p. 222): https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2023-2024/wp-4-health_horizon-2023-2024_en.pdf

[331] Cluster 1 – funded under the 'label' of 'HERA incubator'.

[332] https://ec.europa.eu/commission/presscorner/detail/en/ip_21_1548

[333] https://www.nejm.org/doi/10.1056/NEJMoa2205011?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed

[334] https://jamanetwork.com/journals/jamaoncology/fullarticle/2790203

[335] https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(24)00021-8/fulltext

[336] https://www.sciencedirect.com/science/article/pii/S1201971223007634?via%3Dihub

[337] Speech by the President: Grand Challenges Annual Meeting

[338] https://www.covid19dataportal.org/

preparedness and response.[339] For instance, the project MPX-RESPONSE is evaluating the safety and efficacy of therapies against mpox.[340]

- A benchmark study of the United States medical research agency (National Institutes of Health) response to COVID-19 reported that **Horizon Europe demonstrated flexibility in coping with changing circumstances in the world, such as COVID-19**, as the FP continues its funding efforts and directs initiatives towards COVID-19 and coronavirus research, including the preparations for the emerging variant. [341]
- **ERC identified 183 projects in COVID-19 related fields** such as diagnostics and treatments (including vaccines), medical devices, digital tools, AI, immunity, infection and pathology, and social and economic behaviour, wellbeing and crisis management. [342] Furthermore, 48% (109) of ERC beneficiaries, who responded to the evaluation survey in May-July 2023, 'strongly agreed' or 'rather agreed' that, compared with the research funding available at national and/or regional level, Horizon Europe provided greater flexibility to respond to pressing socio-economic needs.[343]
- With **'ERC for Ukraine'**, the ERC appealed to its grantees to provide temporary employment to researchers and support staff from Ukraine and seeking refuge in the EU, under the initiative 'ERC for Ukraine'.
- The **MSCA** supported affected doctoral candidates and post-doctoral researchers from Ukraine by establishing in 2022 the EUR 25 million MSCA4Ukraine scheme.[344] The scheme enables displaced researchers from Ukraine to continue their work at academic and non-academic organisations in EU Member States and Horizon Europe associated countries, while maintaining their connections to research and innovation communities in Ukraine.[345] A EUR 10 million top-up was subsequently awarded in April 2024 to allow 50 additional researchers to continue their work safely in academia, businesses, research centres and public institutions based in the EU and countries associated to Horizon Europe. In total, 175 researchers from Ukraine had received a fellowship.
- In addition, **the EIC and EIT published dedicated calls to address COVID-19**.[346] The EIC also organised events to enable EIC companies to pitch to investors, corporates and public healthcare authorities looking for innovative solutions to COVID challenges.[347]
- At the end of 2023, the **EIT established an EIT Community Hub[348] in Kyiv**, working to bridge the Ukrainian and EU's innovation ecosystem and boost ideas and businesses emerging from Ukraine.[349] Under Horizon Europe, the **EIT Jumpstarter** added a new activity[350] in 2023, entitled "rebuild Ukraine" – only for Ukrainian citizens and teams, allowing Ukrainian innovators to bring their ideas to the market. In 2024, 20% of total

[339] https://research-and-innovation.ec.europa.eu/research-area/health/mpox-research-and-innovation_en
[340] https://www.nature.com/articles/s41591-023-02393-6
[341] Resilient Europe evaluation study, Annex 5, benchmark study 1, p. 21, https://data.europa.eu/doi/10.2777/22355
[342] European Research Council, COVID-19 Frontier research in the spotlight, 2022, https://erc.europa.eu/sites/default/files/2022-08/COVID19-Frontier_research_in_the-spotlight.pdf
[343] Excellent Science evaluation study, 2024, Annex 4, p. 843, https://data.europa.eu/doi/10.2777/9552959
[344] Ibid, pp. 843-844, https://data.europa.eu/doi/10.2777/9552959
[345] Excellent Science evaluation study, 2024, p. 72, https://data.europa.eu/doi/10.2777/2295765
[346] Innovative Europe evaluation study, 2024, chapter 9.1, p. 98, https://data.europa.eu/doi/10.2777/499132
[347] Deep Tech Europe. EIC Impact Report, 2021, p. 50, https://data.europa.eu/doi/10.2826/005280
[348] Innovative Europe evaluation study, 2024, chapter 4.1, pp. 40-41, https://data.europa.eu/doi/10.2777/499132
[349] https://eit-ris.eu/ukraine/
[350] Innovative Europe evaluation study, 2024, Annex 10, p. 544, https://data.europa.eu/doi/10.2777/726675

applications within the EIT Jumpstarter came from Ukraine. The overall EIT support has so far channelled to Ukraine more than EUR 2 million between 2022 and 2023.

- In 2023, 41 Ukrainian partners (of which 29 higher education institutions) are participating in the EIT HEI initiative for strengthening their innovation capacity and establishing connections with European counterparts.
- Close to 900 Ukrainian girls in secondary school were trained on digital and entrepreneurial skills related to circular economy through the Girls Go Circular initiative.[351]
- **Human capital strengthening:** the ***'Scientists Help Scientists'*** **initiative** allocated additional funds to aid displaced Ukrainian researchers under the Human Frontier Science Program (HFPSO).[352]

[351] DG EAC monitoring data, https://eit-ris.eu/ukraine/
[352] HFSP Scientists for Scientists (S4S) Initiative | Human Frontier Science Program