



Annual Report on Public-Public Partnerships 2020



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Foreword

2019 and 2020 saw an intense effort to streamline the landscape of R&I partnerships and develop a new policy approach on European Partnerships for Horizon Europe. Emblematic for this new approach is the ambition to drive transformational change in society and achieve impacts for our citizens. Throughout 2021, and with the adoption and launch of Horizon Europe, the time has now come to put the new policy approach into practice.

Throughout 2020, ERA-LEARN has continued to be a great supporter of the partnership community. Its website has established itself as an invaluable resource and repository of information for policy makers, stakeholders and the interested public to learn about and get support in implementing European Partnerships.

The ERA-LEARN workshop "Supporting the preparation of future European Partnerships" in March 2020 provided valuable input to the community involved in the preparation of co-funded European Partnerships on common issues related to governance and coherence, developing Strategic Research and Innovation Agendas, implementation of joint calls, etc. The jointly developed report on 'Coherence and Synergies of candidate European partnerships under Horizon Europe' provided valuable input in defining the research and innovation agendas of the candidate Partnerships. Work has started on the proposals and project data integration from co-funded partnerships ('data pilot') and will be a major focus during 2021 to make sure that this data is accessible in the Commission common database (eCORDA). ERA-LEARN continues to provide important support on a number of topics that are common to all European partnerships, such as synergies with Cohesion policy funds, widening participation and international collaboration.

This annual report provides a comprehensive overview on the activities and achievement of Public-Public Partnerships that would not have been possible without the fantastic support and meticulous work of the ERA-LEARN consortium and in particular Hayley Welsh, Katrina Watson and Angus Hunter from Optimat. We also very much appreciate the continued support from the networks under Horizon 2020 that take the time to provide the data to ERA-LEARN and increasingly use its online system as the central point to display information on their activities and, in particular, their funded projects.

The ERA-LEARN team, led by Roland Brandenburg from FFG, will continue to be key in accompanying the transition to European Partnerships and their implementation under Horizon Europe and we very much look forward to continuing this close collaboration.

Minna Wilkki

Head of Unit DG Research & Innovation
G4 'Common Missions & Partnerships Service'

Executive Summary

This is the 6th Annual Report on Public-Public Partnerships (P2Ps) that has been prepared by the ERA-LEARN project team using data provided by the P2P networks. The report provides an updated picture of the evolving P2P landscape and some headline statistics. It also highlights examples of good practice and achievements from networks during 2020 as they seek to address specific challenges and create a wider impact within the community, in an increasingly collaborative manner.

ERA-LEARN has undertaken a range of strategic activities during 2020 that include the publication of a report in inclusiveness in R&I partnerships, preparation of a report on European Partnerships and Cohesion Policy Funds, in-depth interviews as part of a process to put a spotlight on globalisation activities of the European Partnerships, publication of a second policy brief on the impact of three bio-economy partnerships, production of two more report in the series of Country Reports on P2P Participation and production of a report, together with the GPC, about the impacts of the joint programming process (JPP) and the Joint Programming Initiatives (JPIs) at a national level. Furthermore, ERA-LEARN has relaunched its website to take account of the shift in focus to the new European Partnerships, through which it will provide continuous support to meet the needs of all stakeholders involved.

The current P2P landscape continues to evolve, with the leverage of the ERA-NET Cofund instrument evidenced by the ever increasing number of additional calls being implemented by the ERA-NET Cofund networks with no EU co-funding. There are also some clear examples of good practice from networks across the community as they work to address challenges related to widening, multilateral collaboration and globalisation, among others. Details on some of these have been provided in the report to demonstrate such activities and the wider achievement of long-standing programmes, for example:

- **Decision making that reflects the needs of society and the RTD community:** While normally, it is the research funding organisations that make decisions on the priorities for joint calls, through consensus building, M-ERA.NET3 is turning that on its head by using a Strategic Expert Group (SEG) to help define the annual work programmes following a model of continuous improvement based on the learnings from past programmes
- **Enabling more inclusiveness in transnational projects:** The subject of improving the participation of what is known as the ‘widening’ countries has been a subject of political concern for some time. Both the lower submission rate and lower success rate for such countries is increasingly being addressed in two-stage joint calls by introducing specific measures to encourage the participation of such countries. Examples from FLAG-ERA and ERA PerMed are introduced to demonstrate their approach to this challenge

- **JPIs reach their 10 year milestones:** As one of the three JPIs in the ‘first wave’, the JPI on Agriculture, Food Security and Climate Change (FACCE-JPI), celebrated its 10 year anniversary in 2020. It did so with a two-day celebration event that included a virtual conference on the European Food System, a scientific debate on the critical role of science and a policy debate on Science. In its ten years of transnational cooperation, FACCE-JPI members, in partnership with European Commission, have participated in a wide range of instruments for the implementation of joint actions, including over 18 joint research actions worth more than EUR 250 Million
- **Supporting the response to the COVID-19 pandemic:** In a short space of time, we have all had to adapt to the changes brought by this public health crisis to many aspects of our lives. As the extent of the crisis became clear, collaborative projects within EURAMET’s EMPIR programme were encouraged to find ways in which they could contribute to tackling the global challenge. The feedback was impressive, with projects producing best practice guides, case studies, new methodologies and more.

ERA-LEARN continues to provide updated statistical data in relation to networks, calls and funded projects. Detailed charts and statistics can be found on the ERA-LEARN website and much of this is summarised throughout this report. Some headlines include:

- 105 networks were active in January 2020, two of which were new in that month. 18 networks ended during 2020 (one was an Article 185, two were EJPs and 15 were ERA-NET Cofunds)
- 61 joint calls closed in 2020, 43% of which were ERA-NET Cofund calls
- Of the 27 ERA-NET Cofund calls that closed in 2020, seven were initial co-funded calls and 19 were additional calls (with no EU co-funding). Two networks implemented their 4th additional call, one implemented its 5th additional call, and one implemented its 6th additional call
- By the end of 2020, some 747 joint calls were implemented by P2P networks, with cumulative investment of some Euro 9 billion in more than 9,300 transnational projects

We could not provide the statistical data without the support of the P2P networks that take the time to provide this data on a regular basis and so we thank all of them for their continued support.

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1. Introduction

This 6th annual report on the P2P landscape, from the ERA-LEARN project, commences with a short overview of the work of ERA-LEARN during 2020 and some insight into the current situation on European Partnerships under Horizon Europe. It then provides an update regarding the evolving P2P landscape in relation to calls, committed budgets and transnational projects. This is followed by a description of some of the highlights from 2020 across all network types, an outlook on future planned activities, a summary of the evolving Country Reports series produced by ERA-LEARN, an overview of work produced, together with the GPC, about the impact of the Joint Programming Process at a national level, and the results of the survey on the impact of COVID-19 on the P2Ps.

Note that additional statistics are available on the ERA-LEARN [website](#).

In line with previous reporting, the networks are segmented into eight types:

- ERA-NET Cofund (the Horizon 2020 ERA-NET Cofund instrument)¹
- JPIs (Joint Programming Initiatives)
- EJP Cofund (European Joint Programme Cofund)
- Article 185 Initiatives
- ERA-NET FP6 (the FP6 Coordination and Support Actions)
- ERA-NET FP7 (the FP7 Coordination and Support Actions)
- ERA-NET+ (the FP7 ERA-NET Plus Instrument)
- Self-Sustained Network (P2P networks that continue implementing joint calls after the end of the EU funding)

¹ Analysis of Cofund networks is shown for both the EU co-funded joint calls and the additional calls (without EU co-funding)

Limitations

The majority of the information and statistical analysis contained in the report is based on factual data provided by the P2P networks but there are some limitations and gaps. In such cases, informed estimates have been made so that the scale and diversity of the joint calls are fully apparent.

The ERA-LEARN team and the Commission rely on the data that comes directly from the P2P networks in relation to calls and projects to ensure we can provide the community with the most accurate and up-to date information and analysis available. It is, therefore, important that we can count on the continuing support of network coordinators and call secretariats to provide the necessary data to help us to improve the overall quality of the aggregated data.

Acknowledgements

The ERA-LEARN team would like to sincerely thank the P2P networks that have provided the detailed datasets to support production of this report and the additional statistics available from the ERA-LEARN website. We very much appreciate this ongoing support.

We would also like to thank Andrei Lintu and his colleagues for providing access to European Commission data, helping to address data gaps and their valuable insight and guidance to support the descriptive analysis.

Feedback

Any comments on this report and/or suggestions for future reports may be addressed to hayley.welsh@optimat.co.uk.

2. ERA-LEARN in 2020

The ERA-LEARN Platform entered its next phase of development in the middle of 2018 and will continue to support the P2P community until the end of 2022. Its scope has been extended to build on the lessons from the previous phase, help address policy issues and support the transition from Horizon 2020 to Horizon Europe.

2020 has clearly been a year like no other, not only for the P2P community, but every person across the world. It has affected daily life for everyone and impacted the way we live and work. To help understand how the global COVID-19 pandemic has impacted the implementation of the P2Ps networks and their activities, a short survey was launched, with the P2P network coordinators invited to respond. An overview of the survey outputs is provided in section 9 and highlights the key difficulties faced at a network and project level.

A summary of various strategic activities from ERA-LEARN's work in 2020 is provided here.

For more than 12 years, ERA-LEARN has used its website to provide information and support to the R&I partnership community on various matters of their concern. In the past our services were more specifically focussed on public to public partnerships in previous European Framework Programmes. With the new Framework Programme “Horizon Europe”, the focus has shifted to include the upcoming new European Partnerships. With a relaunch of our website in 2020, we now include information on the new criteria for European Partnerships, provide background information on the European Partnership process and present an overview of the upcoming Partnerships. ERA-LEARN intends to provide continuous support for European Partnerships, with the website being a key tool to do this in a way that will meet the needs of all stakeholders involved. This includes a new section on governance and legal issues as well as more detailed information on the additional activities of European Partnerships. Furthermore, the accessibility of the website has been improved to ensure that the information we provide is available for as many users as possible.

In 2020 ERA-LEARN published a report on inclusiveness in R&I partnerships. The report was based on the results of a survey targeted at ERA-NET Cofund and EJP Cofund coordinators. The goal of the survey was to collect information on measures introduced by the programmes, in order to enhance the participation of the ‘widening countries’. According to the survey results, widening countries undertake secondary roles in the Programmes, whereas researchers from widening countries submit less applications and receive a smaller numbers of grants. This challenge has, however, been addressed by most programme coordinators that decided to use a bottom-up approach and introduce pro-widening activities in their initiatives. Nevertheless, there is a lack of a systematic approach towards enhancing participation of widening countries in the programmes. This report also lists and describes a portfolio of widening actions used in ERA-NET and EJP Cofunds at different stages of formulating a partnership programme and strives to tackle the question of how to assess and develop the impact of adopted measures. ERA-LEARN strongly recommends reading the report in view of Horizon Europe, which introduces the ‘Openness and Transparency principle’ and promotes an inclusive approach in the design and governance of the partnership.

A further key task within the current ERA-LEARN programme of activities is to help bring about the conditions for more synergistic use of Cohesion Policy Funds in order to support national participation in the European Partnerships by providing advice and tools for the drafting of future operational programmes. Following the findings reported in the “Policy brief on the potential coordination between European Structural and Investment Funds (ESIF) and transnational P2P” (available on the ERA-LEARN website), a second research phase has been undertaken to investigate how the past experience with synergies were taken into account for the preparation of the new European Partnership. The in-depth analysis was carried out for different target groups to identify, among the solutions implemented by funders and beneficiaries, good practices suitable for guiding R&I Partnership stakeholders in increasing the impact of the future joint programming. The analysis of best practice implemented in the 2014-2020 financial cycle has highlighted the main barriers and obstacles for the implementation of synergies among funds with different intervention logics. On the basis of the main findings of the in-depth research, along with the novelty introduced by the Horizon Europe Regulation, the report “European Partnership and Cohesion Policy Funds: Tools for synergies” tries to identify suitable paths to improve the implementation of synergies for the benefit of European Partnerships. The report will be available in the first quarter of 2021.

Globalisation has been another significant area of work for ERA-LEARN, both now and throughout 2020. Data suggests that European Partnerships have established global Research, Technology and Innovation collaborations with more than 60 non-EU countries. Indeed, by 2020, they had achieved more than 720 memberships or associations with global counterparts, 310 of them under Horizon 2020 alone. Today, European Partnerships are well-reputed and established coordination nodes around the globe; in particular, in research areas with common global challenges such as climate change, water or food. Single partnerships, such as in materials research, count more than 50 collaborating countries and regions. In health, partnerships collaborate with global organisations like the World Health Organisation (WHO) or United Nations organisations. With their coordination excellence and the implementation of important research activities, they lead on tackling joint global health challenges, in, for example, the area of antimicrobial resistance and neurodegenerative diseases. In 2020, therefore, ERA-LEARN put a spotlight on the globalisation activities of European Partnerships. A series of in-depths interviews was undertaken, not only with European Partnerships, but also with global counterparts participating in partnerships, and with experts from projects dedicated to enhancing Europe’s collaborative innovation with countries around the globe. A number of areas for improvement were identified, and the discussion with the community of practitioners and stakeholders is ongoing. Please check www.era-learn.eu for up to date information on events and publications related to this area of work.

During 2020, ERA-LEARN also produced the second policy brief looking at the impact of three bio-economy partnerships: SUSFOOD, ICT-Agri, CORE ORGANIC II and their supported projects. It draws on the results of the on-line centralised impact assessment survey hosted by ERA-LEARN and complemented by thirty interviews with partnership members and project beneficiaries. The brief provides insight into the motivation of participants in the ERA-NETs, showing how respondents joined transnational projects in order to 1) internationalise their activities and build capacity to access EU-wide funding opportunities in the future, 2) develop new knowledge through access to overseas facilities, engage with foreign partners and learn international good practices and 3) build new and strengthen existing relationships with partners through accessing public funding. These are linked to the expected outcomes of improving the science base of their R&I activities by increasing research capacity, thus opening new avenues for new products and services, as well as new processes and organisational

arrangements, and extending their reach outside national borders. The brief also includes some observations on the pathway to impact of certain R&I outcomes and specific managerial factors highlighting how the relevance of research and innovation activities and their respective impact are not separated. Instead, they are complementary elements working towards the same objective. It concludes by providing an overview of the lessons learnt from this exercise and implications for policy. The full policy brief is available on the ERA-LEARN [website](#).

Further work has been carried out during 2020 on the series of Country Reports being developed by ERA-LEARN and a summary of these, to date, is provided in section 9. We also provide you, in section 10, with an overview of the finding of a report produced by ERA-LEARN, together with the GPC, about the impacts of the joint programming process (JPP) and the Joint Programming Initiatives (JPIs) at a national level.

Finally, we would like to remind P2P networks undertaking impact assessment work that the common framework questionnaire can be accessed at any time. This will support networks to better understand the wider impact of their funding on the beneficiaries of transnational projects.

3. European Partnerships under Horizon Europe

The year 2020 marked a major step towards the launch of the next generation of European Partnerships that brings their ambition to the next level. Furthermore, following the conclusion of trilogues in March 2021, both the Council (April 15) and EU Parliament (April 17) adopted the Horizon Europe regulation².

Preparation for the Launch of the New Generation European Partnerships

The preparation of European Partnerships started after the political agreement on the portfolio of partnerships with Member States (in the Shadow Strategic Configuration of the Horizon Europe Programme Committee). A new candidate partnership was included on Pandemic Preparedness.



Since the political agreement on Horizon Europe, intense work took place to prepare the **legal basis for eleven institutionalised European Partnerships**. The Commission has concluded the **Impact Assessment work** for the 13 candidates for institutionalised European Partnerships based on Articles 185 and 187. The focus was to identify the most effective policy intervention. It confirmed the Institutionalised form as the preferred option for eleven candidates.

2 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018PC0435>

For two initiatives, it concluded that another intervention form is more appropriate, that is: co-programmed form for Cooperative, connected and automated mobility; and co-funded form for Innovative SMEs.

The impact assessment and supporting studies³ have been published on the Commission website, including a 'Horizontal Analysis of Efficiency and Coherence in Implementation' that covered the whole portfolio of 49 partnerships⁴. The Commission adopted the legal proposal for EuroHPC in September 2020, and the proposals for the Single Basic Act and Metrology would be adopted on 23 February 2021⁵.

In parallel, **draft proposals have been elaborated for all European Partnerships** by the potential partners, in close collaboration with the Commission services responsible for the individual initiatives. This followed a coherent process guided by Unit G4 Common Missions & Partnerships Service of DG R&I to ensure compliance with the new ambition and criteria of Horizon Europe. The focus was on developing a clear strategic vision and targets by 2030, with a set of activities and actors needed to achieve these. These proposals will be **published** in June 2020 on the Europa website for transparency and to facilitate cross-partnership collaboration.

A key precondition for launching a partnership is the existence of a Strategic Research and Innovation Agenda (SRIA). The launch of a European Partnership is conditional on partners signing up to these objectives and committing the resources and investments needed from their side to achieve them. Partners are on track to finalise their Strategic Research and Innovation Agendas and have sent their commitment letters to the Commission. Member States have politically committed to co-invest €10.4 billion into Partnerships. Commitments from industry for Joint Undertakings amount to almost €13 billion. The Commitment letters and ambition of the partnerships was the basis for **deciding on EU budgets** for the whole portfolio of the Partnerships in the first Strategic Plan. The co-programmed and co-funded European Partnerships are identified in the Horizon Europe strategic plan published in February 2021⁶.

3 https://ec.europa.eu/info/publications/study-support-impact-assessment-potential-institutionalised-partnerships-under-horizon-europe_en

4 https://ec.europa.eu/info/sites/default/files/research_and_innovation/knowledge_publications_tools_and_data/documents/ec_rtd_ia-ip-horizontal-analysis-efficiency-coherence.pdf

5 https://ec.europa.eu/commission/presscorner/detail/en/ip_21_702

6 https://ec.europa.eu/info/sites/default/files/research_and_innovation/funding/documents/ec_rtd_horizon-europe-strategic-plan-2021-24.pdf

Coherence and Synergies and Monitoring of European Partnerships

All European Partnerships need to develop collaboration between each other and synergies with other relevant programmes and instruments at EU or national level, including with EU missions. DG RTD has done a mapping exercise on synergies and collaboration between Partnerships, and with other initiatives in order to facilitate *ex ante* agreement on the priorities for collaboration and synergies⁷. The idea is to ensure that the Partnerships commit upfront to set up and maintain a clear strategy for interfaces and joint activities with the other relevant European Partnerships. This agreement on the priorities for collaboration between European Partnerships (independent of their form) will be included in the Strategic Research and Innovation Agendas. Concrete activities will be defined in the context of preparing annual work programmes.

In 2021, the attention will turn to setting up the **strategic coordinating process**⁸ for Partnerships, including the **Partnership Knowledge Hub**. A key component of this process will be developing a robust and harmonised **monitoring framework for European Partnerships** that is in line with the requirements of Horizon Europe, and a **biennial monitoring report for European Partnerships**.

7 Report: https://ec.europa.eu/info/files/coherence-and-synergies-candidate-european-partnerships-under-horizon-europe_en Annex: https://ec.europa.eu/info/files/coherence-and-synergies-candidate-european-partnerships-under-horizon-europe-annex_en

8 https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/european-partnerships-horizon-europe_en#strategic-coordinating-process

4. Evolution and Diversification of P2Ps

This section provides an update on the evolution of the P2P landscape since the dawn of the ERA-NET scheme in 2003. It builds on data presented in the previous annual reports and includes all network types. Please visit the [facts and figures section of the ERA-LEARN website](#) for more detailed graphs and statistics.

4.1. P2P Networks

The analysis indicates that 105 networks were active at the beginning of 2020, two of which started in January 2020. During the year, 61 joint calls closed. It is clear, therefore, that not all networks continue to implement joint calls. It is worth noting that 18 networks ended during 2020, mainly the early ERA-NET Cofunds, and there are others that are in the monitoring phase of the work, and hence not implementing calls at this stage.

As mentioned in previous annual reports, some of the ERA-NET Cofund networks are directly linked to a JPI, FP7 ERA-NET or self-sustained network and so, while they appear to be less active than others, there continues to be ongoing joint activities within the thematic area (further details are provided in section 5).

4.2. Joint Calls

Since 2004, some 747 joint calls have been implemented, this excludes those that were launched, but not closed, before the end of 2020. A summary of calls that closed each year is shown in Figure 1. Note that additional data made available since the previous report has updated some historical figures.

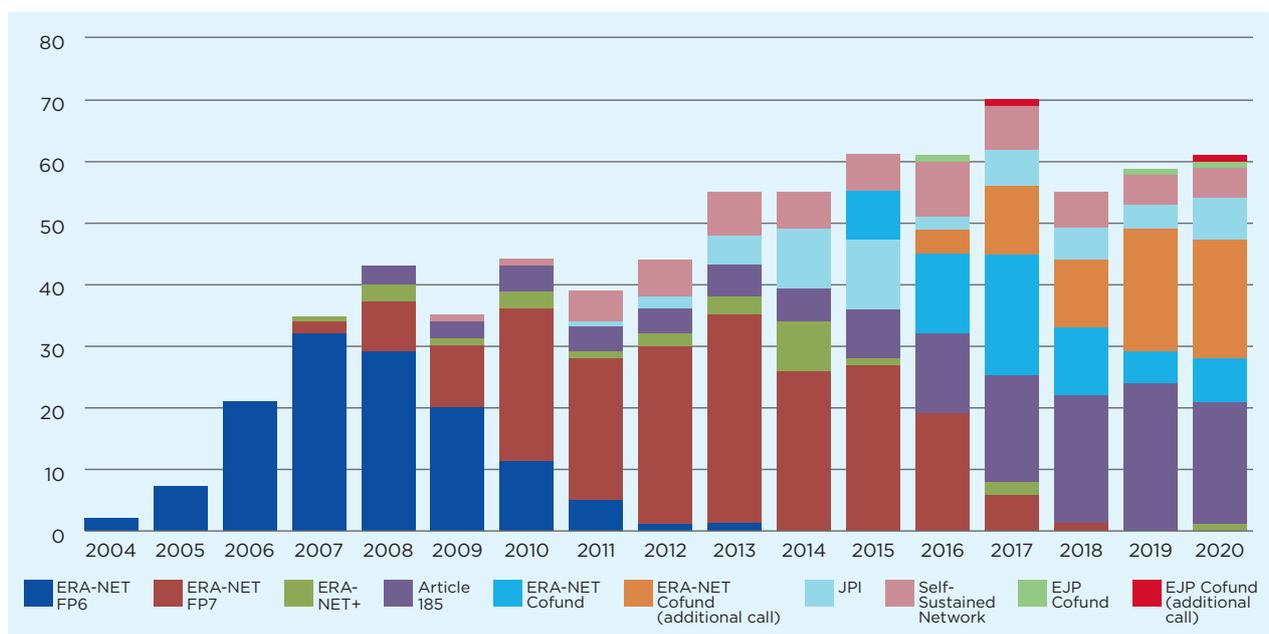


Figure 1: Number of Joint Calls (closed) between 2004 and 2020, by Network Type

Figure 1 presents a clear picture of the evolving landscape of P2Ps across the years. The changing pattern of calls from FP6 to FP7 is evident. One FP7 ERA-NET Plus call was launched in 2019 following an extension to its contract, allowing it to prepare a 3rd call independent of EU funding. This call closed in 2020 and, hence, is included in Figure 1. The only FP7 network that remains active under a grant agreement is BONUS. 2017 remains the peak of joint call activity with some 70 calls closing that year, around 44% of which were from ERA-NET Cofund networks. These networks represent around 43% of all calls in 2020, with Article 185 call numbers following closely behind at around 33%.

It is also interesting to note that:

- Once again, the number of additional ERA-NET Cofund calls (without EU co-funding) was significantly higher than the number of ERA-NET Cofund calls that received EU co-funding in 2020, demonstrating the leverage effect of the initial EU co-funding within this particular instrument. This trend has continued from the position in 2018
- More JPI calls were implemented in 2020 than in any year since 2015. This does not take account of the ERA-NET Cofunds being implemented by many of the JPI networks (both alone and collaboratively) to support their programmes and launch calls within specific topics
- In line with findings presented in the 2019 report, there continues to be a trend for networks to launch transnational joint calls together, with new calls being implemented by networks that have joined together to create new ERA-NET Cofund networks to address specific collective issues

A cumulative picture of the number of joint calls since 2014 is shown in Figure 2. Clearly the FP7 funding framework has spawned the largest number of joint calls since 2004, amounting to 211 over the years but the joint transnational calls within the Horizon 2020 framework follows closely behind. Since 2015, 132 ERA-NET Cofund calls have closed, 65 of which have been additional calls with no EU co-funding.

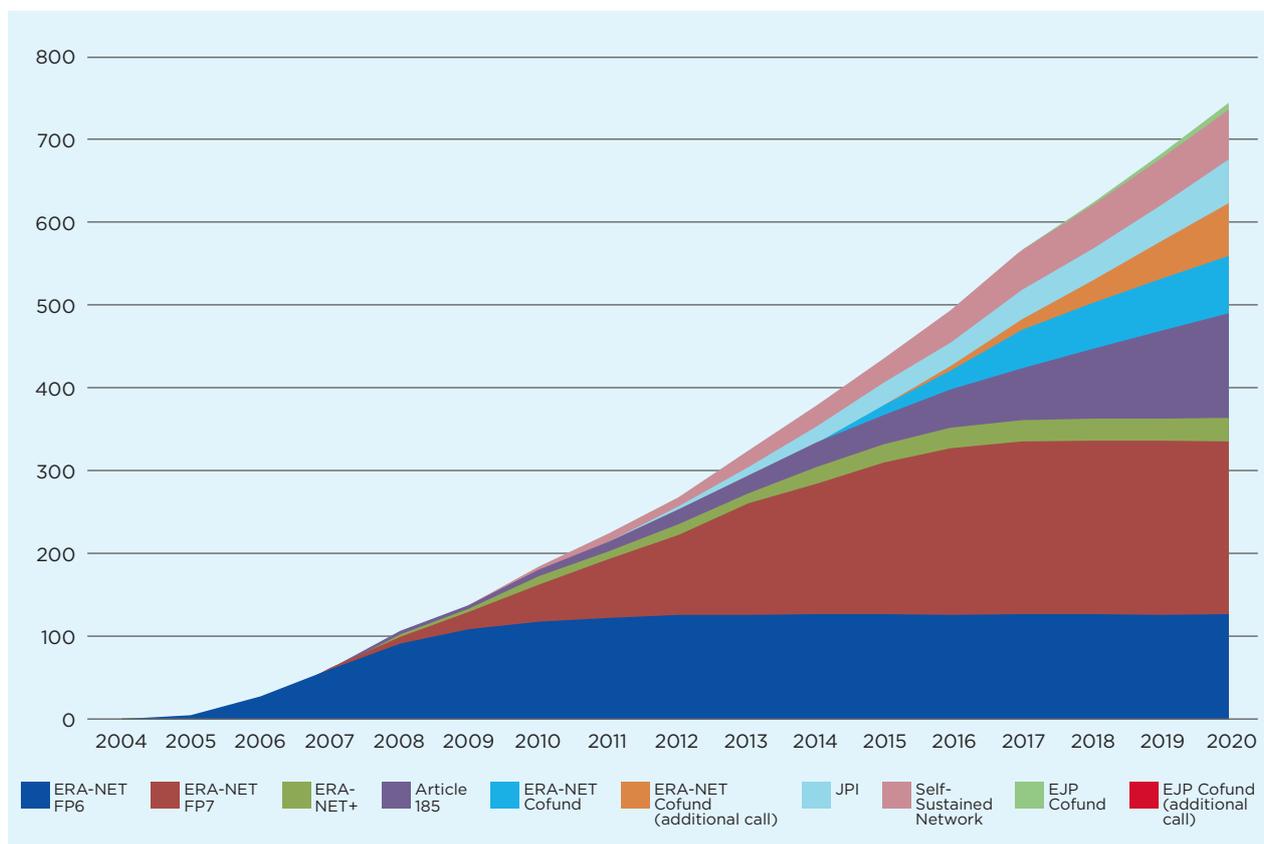


Figure 2: Cumulative Number of Joint Calls, Since 2004, by Network Type

The total national cumulative pre-call budget for all joint calls, since 2004, is almost Euro 8.9 billion (excluding EU contributions). The annual comparison, by network type, is shown in Figure 3, below. This demonstrates the intention and commitment of the funding agencies participating in the calls rather than the funds that were actually invested following evaluation of, and negotiation with, the selected transnational projects.

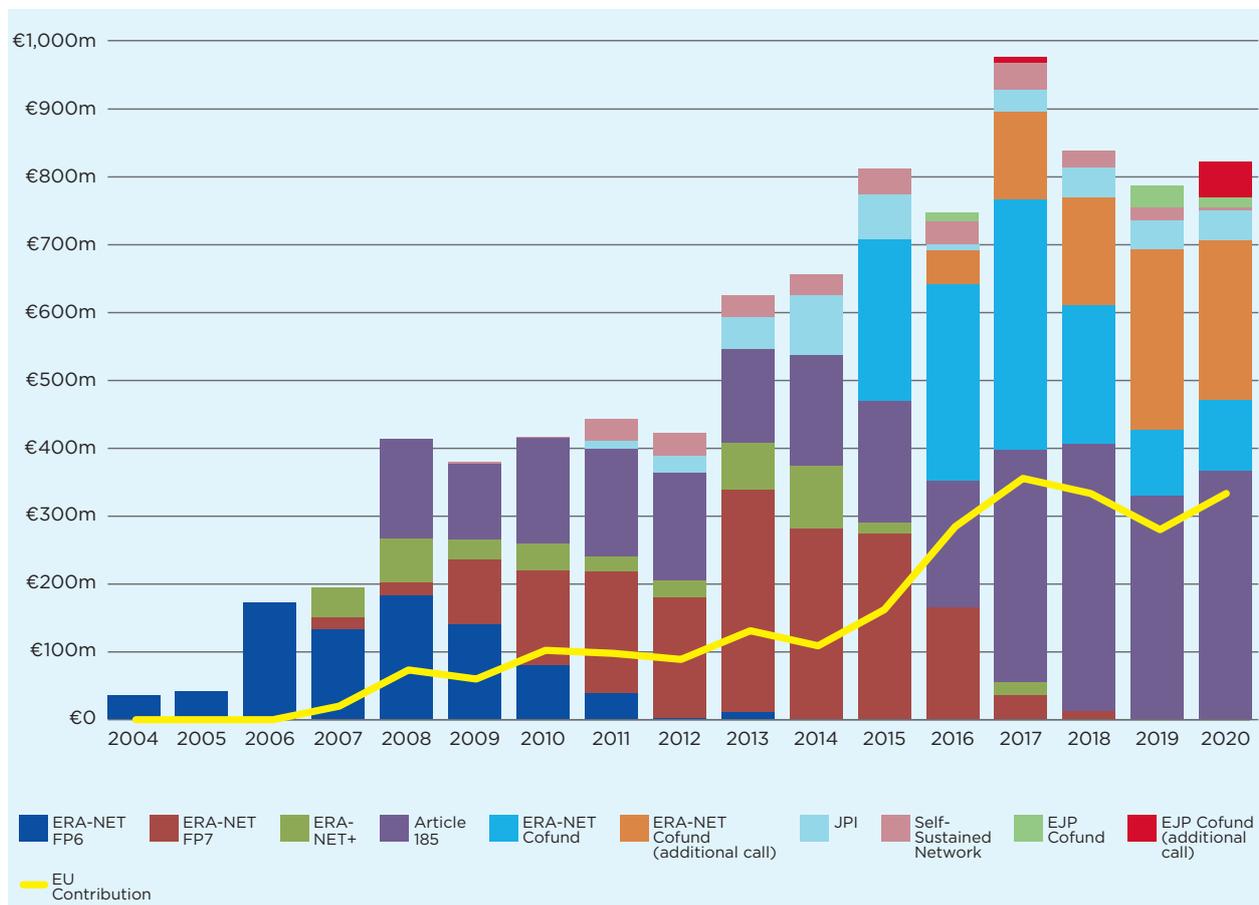


Figure 3: National Joint Call Commitment (with EU Contribution for co-funding of calls overlaid) for all Calls closed 2004-2020, by Network Type

The additional EU contribution to joint calls is highlighted by the yellow line on the graph, equating to almost Euro 2.5 billion of additional committed investment in joint calls since 2004.

Figure 3 indicates that the national financial commitment to calls in 2020 was higher than in 2019, which will relate to the higher number of calls implemented and possibly a final push as we move towards the new framework programme. Overall, the ERA-NET Cofunds have produced the largest national commitment to joint calls since 2016 (around 38%), with committed funds from Article 185 networks following closely behind (32%). Both EU co-funded and additional calls together accounted for 41% of total committed call budgets in 2020 but the Article 185 calls accounted for a higher total budget commitment, almost 45%, in the same year. Total national commitment to joint calls implemented by ERA-NET Cofunds since their inception has been more than Euro 2.1 billion. It is worth noting again, that funding organisations linked to the JPis and self-sustained networks will have had an impact on the financial commitment to ERA-NET Cofund calls and so the picture presented in Figure 3 should be considered with this in mind.

Figure 4 looks at the source of funding for all joint calls in more recent years (since 2014), based on initial committed budgets. It includes the EU contribution and demonstrates how this has increased from 15% of the total budget in 2014 to 42% in 2020. EU funding peaked in 2020, with a significant proportion of this attributed to the Article 185 networks. The proportion of funding from Associated and Third countries has remained relatively steady over the years but with some decreases since 2017.⁹

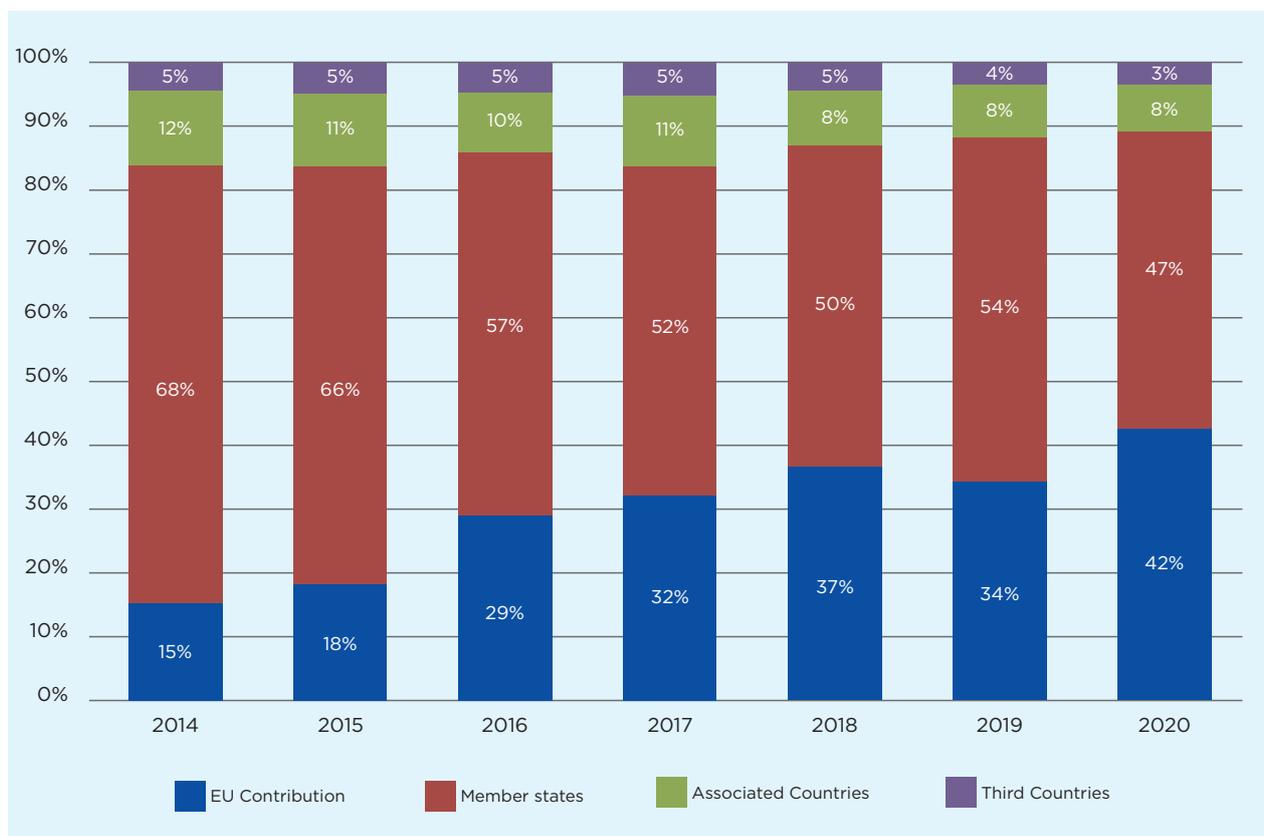


Figure 4: Comparison of the Distribution of Call Budgets for all Calls Since 2014, by Main Funding Source

As has been the case since the beginning of the ERA-NET scheme, the total national pre-call committed budget is not always fully utilised and so the actual investment in projects can be lower than planned. Figure 5, below, indicates the cumulative actual investment in projects.

This also includes the EU contribution. Note that data in relation to actual national investment in calls is not available for all networks and all calls. ERA-LEARN analysis indicates that, on average, the national investment in joint calls is some 90% of the pre-call committed budget and so where actual investment data is not available or has not been provided, the average realisation of budget has been used to produce estimates for the missing population and allow the scale of investment to be approximated.

Without the EU contribution, the estimated actual investment in calls, as expected, is lower than the figures budgeted by the networks. When the EU contribution is added, however, total investment still reaches some Euro 9 billion.

⁹ Note that the UK remains as a Member State within the analysis for 2020 as the transition period ended on 31 December 2020.

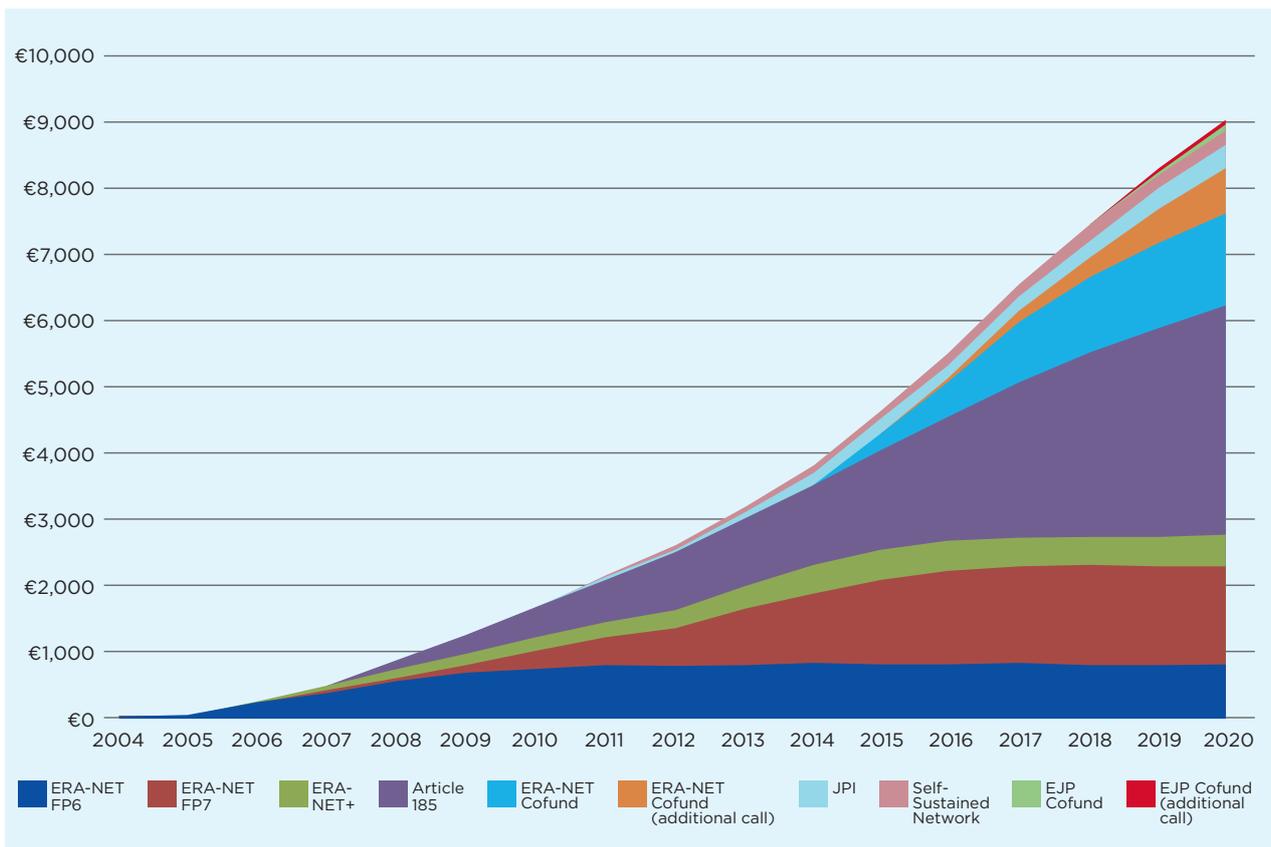


Figure 5: Cumulative Investment in Joint Calls, including EU Contribution, 2004-2020

Note that neither budget nor actual figures include any in-kind contribution to projects (apart from the Metrology Article 185). Complementary investment of institutional funding in Joint Actions, particularly from the JPIs, is also not included.

4.3. Portfolio of Funded Projects

More than 9,300 projects have been funded by the joint calls since 2004. Figure 6 shows the annual volume by network type (based on the year the call closed).

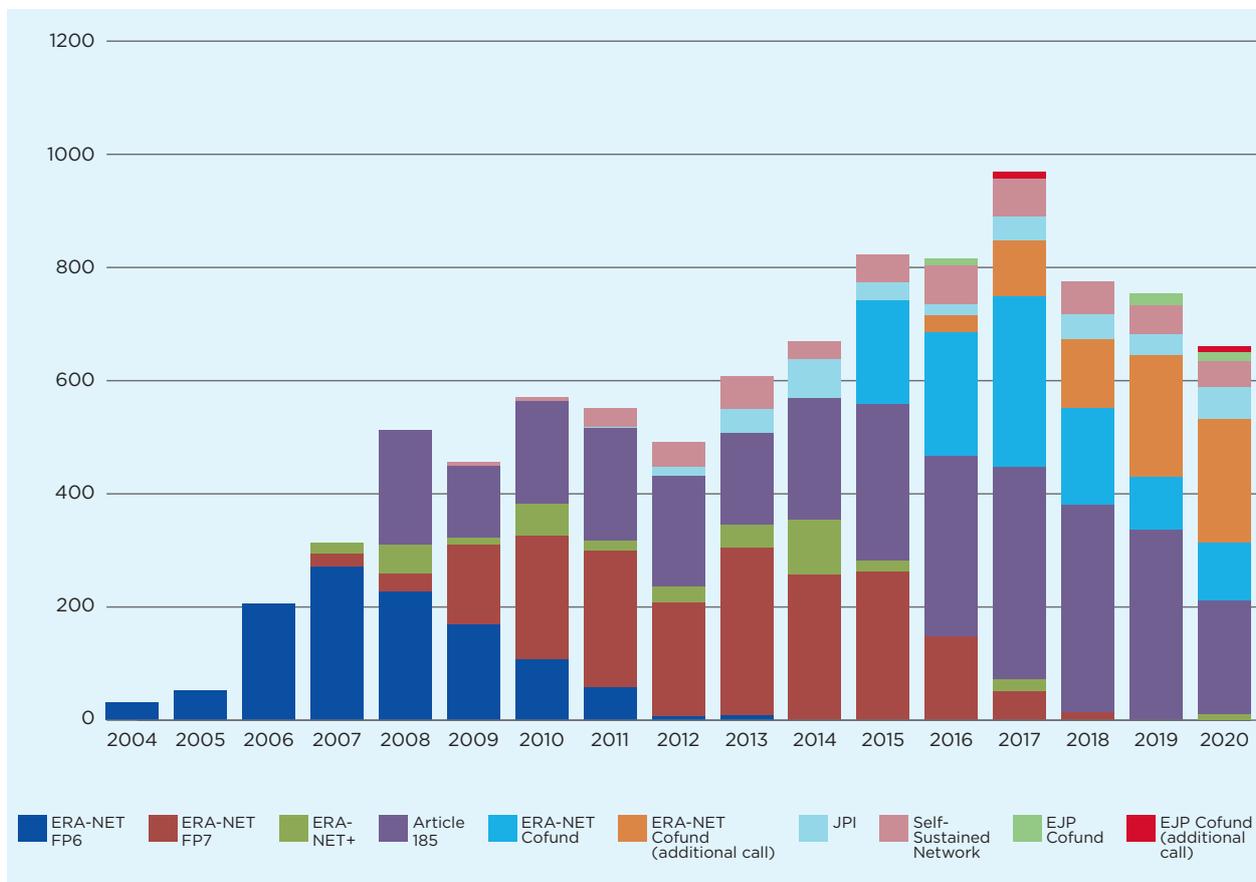


Figure 6: Number of Transnational Projects, by Year and by Network type

The figures for 2020 are assumed to be lower than the actual number of funded projects due to the time lag between the joint call being closed and the transnational projects being evaluated and started, which can often be many months. Some networks have not yet been able to provide project specific data in relation to their 2020 calls and the data collection process is ongoing.

Note that where no project level data has been provided by the networks, an average figure has been applied to the call to allow reasonable assumptions to be made regarding the overall number of projects that have been funded. Historically the figure for the latest year has increased when accurate data has been provided by the networks. Figure 6 will be updated on the ERA-LEARN website during 2021 as more information becomes available.

The cumulative picture of transnational funded projects is shown in Figure 7.

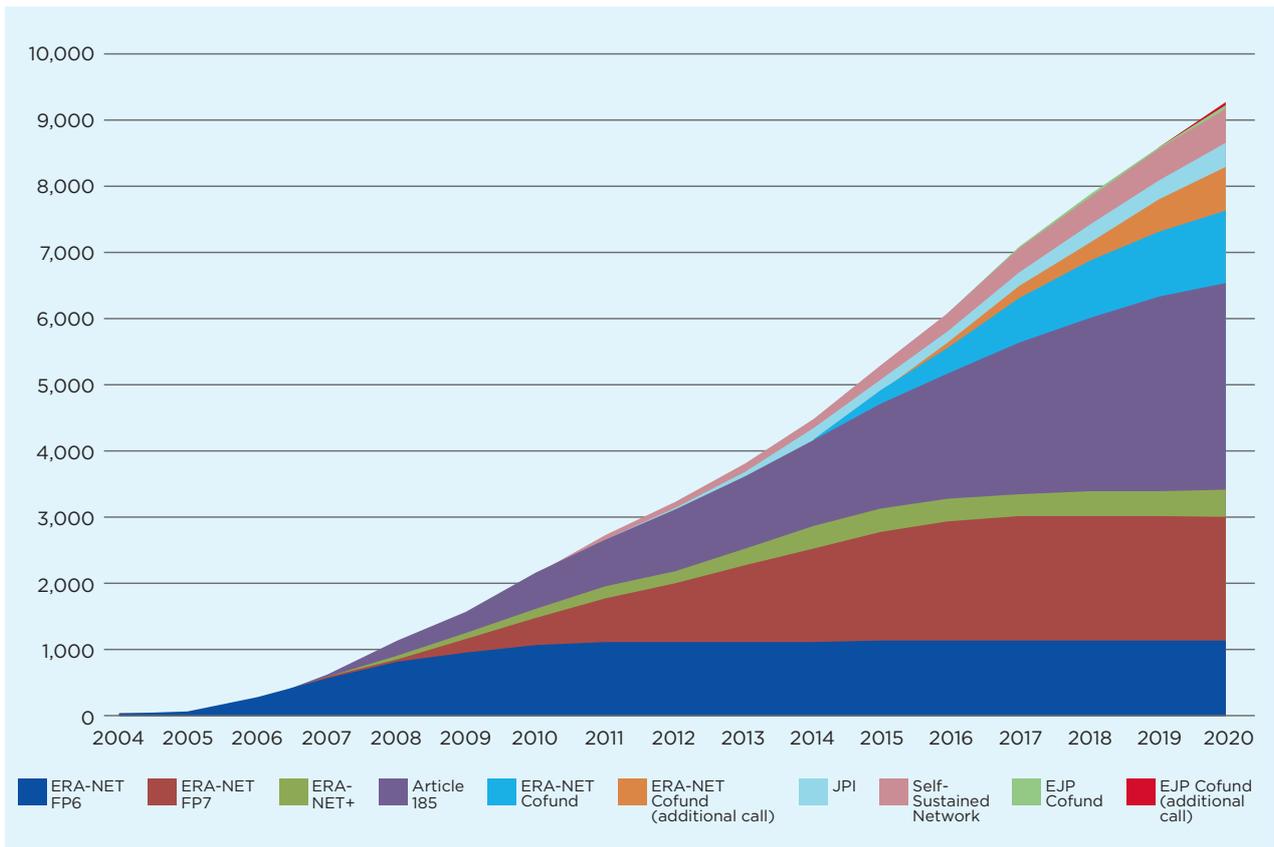


Figure 7: Cumulative Number of Transnational Projects Funded

ERA-NET Cofund networks have funded almost 1,800 transnational projects since 2015, with around 39% of these resulting from additional ERA-NET Cofund calls (without any EU co-funding).

5. P2P Highlights from 2020

This section of the report provides a number of highlights from 2020 to demonstrate the breadth of activities being undertaken across the P2P community. This includes good practice examples in relation to widening, knowledge transfer, collaboration and impact as well as the accumulation of long-term achievements.

2020 Joint Calls

In 2020, 61 joint calls closed, across all networks. A breakdown of these is presented in Figure 8 below. ERA-NET Cofund and Article 185 networks continue to be most prominent in terms of the number of calls being implemented. Note, however, that one specific network, EDCTP, accounts for half of the Article 185 calls closing in 2020, the same trend as in previous years. As mentioned previously, no FP7 ERA-NET joint calls were implemented in 2020 but one ERA-NET Plus call closed during 2020, which was launched in late 2019, just before the network ended. The call is now being implemented in a self-sustained way by the network.

As in previous reports, the ERA-NET Cofunds that are specifically related to a JPI have been highlighted separately within the overall ERA-NET Cofund totals to demonstrate the additional work of the JPIs beyond their own joint calls. In 2020, seven JPI related ERA-NET Cofund calls closed, five of which were additional ERA-NET Cofund calls (without EU co-funding).

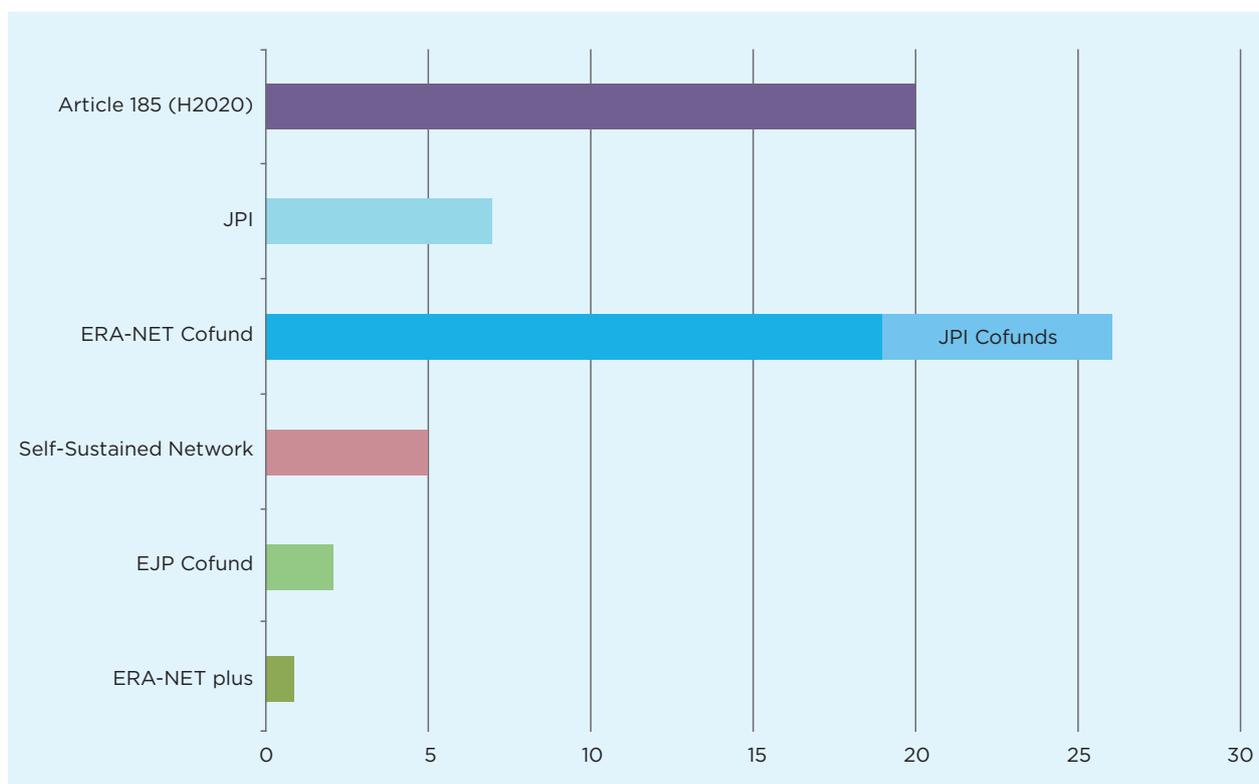


Figure 8: Number of Joint Calls closing in 2020, by Network Type

ERA-NET Cofunds

In relation to the whole population of ERA-NET Cofunds, seven EU co-funded calls closed during 2020, alongside 19 additional calls. Of the additional calls, seven were 2nd calls, five were 3rd calls, four were 4th calls, two were fifth calls, one was a 6th call and one was a seventh call (6th additional call). In 2021, the number of additional calls planned already stands at 13, with three networks planning their 5th calls.

Figure 9 highlights the changing picture of ERA-NET Cofund calls, both EU co-funded and additional calls, since 2015. There are many ERA-NET Cofunds that will only ever implement one joint call, but others are using the instrument to launch multiple calls and leveraging the effects and the momentum gained from the initial EU co-funding.

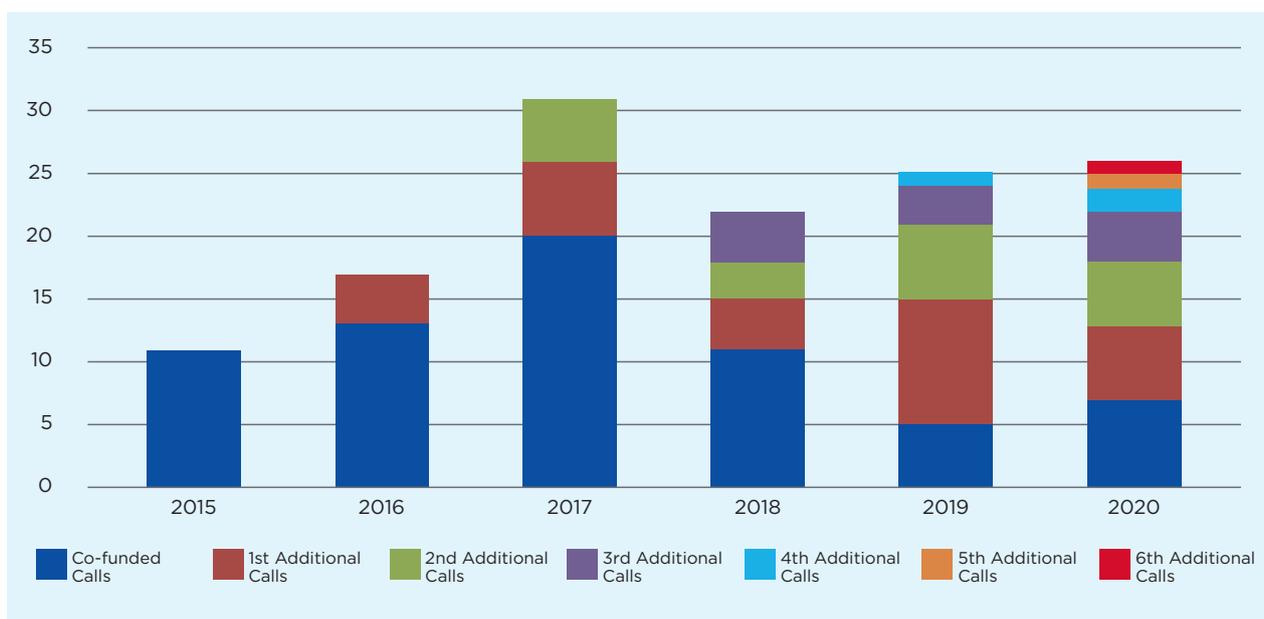


Figure 9: ERA-NET Cofund Calls by Year Call Ended

The trend in recent years for ERA-NET Cofund networks to launch joint calls together has continued in 2020, an example of which is the transnational joint call implemented by CORE Organic Cofund and SUSFOOD2 that brought together 21 funding bodies from 18 countries, with around EURO 9.4 million committed for transnational research.

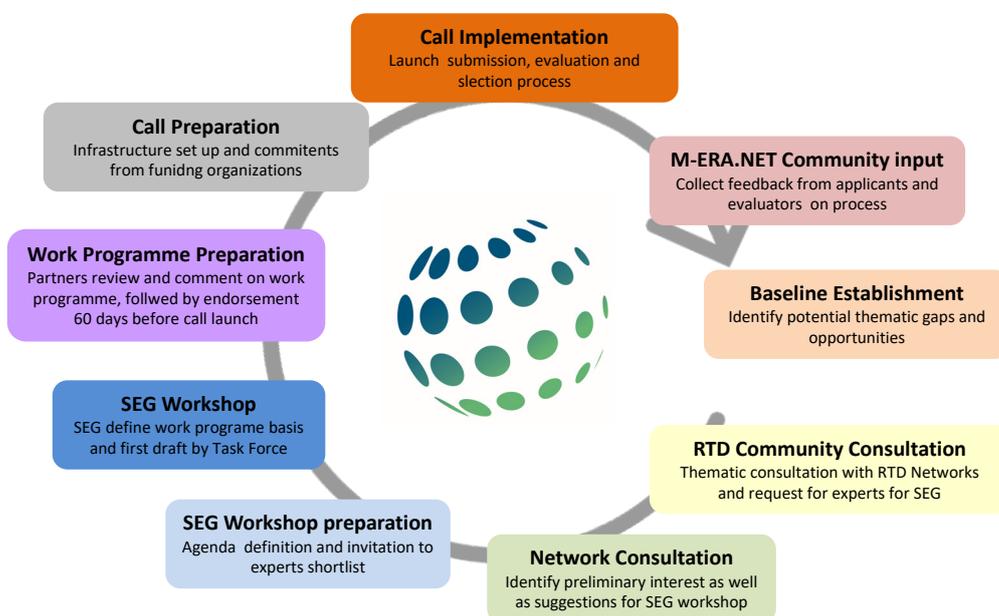
Some other selected examples of good practice being undertaken within the ERA-NET Cofund networks is provided here to demonstrate the breadth of work being done to address specific challenges and implement positive change.

Expert stakeholders enable decision making on call priorities (M-ERA.NET3)

Normally, it is the research funding organisations that make decisions on the priorities for joint calls, through consensus building, but M-ERA.NET3 is turning that on its head by using a Strategic Expert Group (SEG) to help define the annual work programmes.

M-ERA.NET3 is an ERA-NET Cofund Action (2021-2026) that will continue the activities started under its predecessors but focus particularly on research and innovation related to materials and battery technologies to support the European Green Deal. It will develop annual work programmes following a model of continuous improvement based on the learnings from past programmes.

Building on the vision and policy of the network, this approach takes input from stakeholders in a way that results in annual work programmes that reflect the needs of society and the RTD community. A schematic illustration of the cycle is presented below.



The process starts with the **Baseline Establishment** by gathering input from M-ERA.NET members to identify potential thematic gaps and opportunities. This is followed by **RTD Community Consultations** with relevant networks and initiatives and then **Network Consultations** via online surveys to identify preliminary interest as well as suggestions for the **Strategic Expert Group Workshop**. The outputs of the two-day workshop are then used to draft topics, schedules and procedures for comment and endorsement by M-ERA.NET members prior to the launch of the annual Call.

The role of the **Strategic Expert Group (SEG)**, which represents the RTD community (including relevant initiatives, industry networks and scientific committees such as the European Technology Platform for Advanced Materials and Technologies (EuMaT), the European Materials Modelling Council (EMMC), the Energy Materials Industrial Research Initiative (EMIRI), and Batteries 2030+), is at the cornerstone of the whole process. Its goal is to identify gaps and opportunities for transregional, transnational and international cooperation and to support the selection and definition of the work programmes for joint calls and joint activities. SEG members provide a comprehensive overview on needs, possibilities and trends at European and international levels in order to help M-ERA.NET identify gaps and opportunities.

BiodivERsA Highlights from 2020 – Promoting research on biodiversity, ecosystem services and nature-based solutions

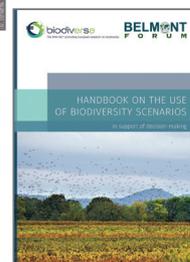
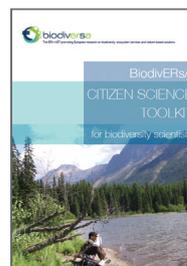


In 2020, BiodivERsA, the network of organisations programming and funding research on biodiversity, ecosystem services and nature-based solutions, continued its effort to support research that can demonstrate academic excellence and that has a potential high impact on society and policy. Most notably, through the BiodivClim Cofund action, **twenty-one transnational projects were funded** through the [2019-2020 BiodivERsA Call](#) on biodiversity and change.

In addition, through the BiodivRestore Cofund action, BiodivERsA and Water JPI launched a **new call on Conservation and restoration of degraded ecosystems and their biodiversity**, including a focus on aquatic systems. 31 funding organisations from 27 countries are participating in this call and have reserved – together with the European Commission – a total amount over 24Mio €. This call is already a huge success in terms of number of applications submitted. The results will be known later in 2021.

BiodivERsA also implemented major activities for capacity building and promoting uptake of research outcomes, including:

- i. Publication of a **Citizen Science toolkit**. This toolkit is aimed at researchers and scientists working in the fields of biodiversity or environmental sciences who are involved or have an interest in involving citizens in their research projects. The guide informs about the potential benefits of citizen science, and highlights rationales for doing citizen science, current best practices, and useful resources in the field;
- ii. Publication of a **Handbook on the use of biodiversity scenarios in support of decision-making**. BiodivERsA and the Belmont Forum, in the framework of their Joint Action on Scenarios of biodiversity and ecosystem services produced this Handbook on the use of biodiversity scenarios, providing tools and good practices for using biodiversity scenarios in decision-making contexts;
- iii. The implementation of the **4th edition of the BiodivERsA prize for excellence and impact**, which aims to showcase, through animated videos, the achievements of BiodivERsA-funded projects that have produced excellent science with concrete impacts for policy and/or society. For its 4th edition, the [TALE project](#) was awarded the opportunity to present its work in an [animated video](#);
- iv. The production of a **policy brief** on “**How natural forest expansion in Europe can offer cost-effective benefits to people**”, based on the [SPONFOREST](#) research projects funded under the BiodivERsA 2015-2016 Joint Call. This brief presents information on how natural forest expansion can offer a cost-effective nature-based solution and climate mitigation measure



Lastly, largely building on its achievements, BiodivERsA is co-developing a proposal for a **European co-funded partnership on biodiversity** as part of Horizon Europe, in close link with the European Commission (DG RTD and DG ENV) and a range of stakeholders. An open consultation to review the draft Strategic Research and Innovation Agenda of the Horizon Europe candidate Partnership on Biodiversity was launched in January 2021 to ensure the views of a broad range of stakeholders would be accounted for. The Partnership should be launched in September / October 2021.

Mapping of public policies in Europe (QuantERA)

The growing complexity and rapid developments of the quantum research and policy landscape has made it highly important to view Quantum Technologies (QT) in a comprehensive European perspective. The QuantERA network decided to provide researchers, policy makers and all stakeholders with structured information on public policies in QT in Europe, as well as funding instruments and priorities within the relevant countries.

Mapping of public policies in the field of QT began under the first QuantERA project (ERA-NET Cofund), when the consortium set out to describe the existing national public policies in Quantum Technologies. The key indicators selected for the Research Funding Organisations (RFOs) were:

- the funding instruments offered by the RFOs;
- research priority areas in QT;
- QT funding granted by the RFOs;
- QT funding at the national level;
- and the national QT research community.

The efforts in QT research and funding at both the organisation and national level were then summarised in the form of factsheets. As the final collaborative output of the mapping process, the Consortium developed a report entitled **‘Quantum Technologies. Public Policies in Europe 2020’**.



The impact of the report is threefold - it raises researchers' awareness of public policies in Quantum Technologies in Europe, it showcases the funding instruments and priorities within the relevant RFOs, and it provides a useful tool in developing support for the coordination of those public policies between the RFOs, within the QuantERA programme via future transnational calls and towards the further development of the European Quantum Technology Flagship.

In mid-2020, the QuantERA Consortium pooled national and regional resources and submitted a successful proposal to the European Commission to launch a new ERA-NET Cofund in Quantum Technologies (QuantERA II). This will continue mapping the development of public policies in QT in Europe, in particular through the analysis of the strategic documents and funding instruments in 38 RFOs from 30 countries. Together with information collected and analysed in the earlier report, QuantERA will thus provide a substantial body of data to directly support the EU in the design of Research and Innovation initiatives at the transnational level. It will strive to ensure complementarity between QuantERA II, the QT Flagship and relevant EU strategy in this area, reinforcing Europe's position at the forefront of the global QT research and development field and helping to firmly establish Europe in a leading agenda-setting role to which the QuantERA Programme has already made a significant contribution.

Examples of enabling more inclusiveness in Joint Calls

The subject of improving the participation of what is known as the ‘widening’ countries has been a subject of political concern for some time, both for the EU Framework Programme on research & innovation and also the P2P partnerships. Such countries tend to have both a lower submission rate and also a lower success rate. This is increasingly being addressed in two-stage joint calls by introducing specific measures to encourage the participation of such countries.

For example, **FLAG-ERA** has been launching joint calls since 2013 in support of the FET Flagship programme and currently has 19 participating countries (including nine widening countries) in its latest ERA-NET Cofund Action (FLAG-ERA3). This relatively high proportion of widening countries has led to an increasing level of communication to promote inclusivity in research consortia. In the 2019 Joint Call, the feedback email to those applicants that were invited to submit a stage 2 proposal included some information about possible budget underspending by some particular widening countries. The email also indicated that involvement of an additional partner from one of these countries is welcome if it increases the value of the project and strengthens the consortium. This led to several consortia including an additional partner for the second stage. The message on inclusiveness is being emphasised further for the next Joint Call in 2021 with the communication that “Consortium including a partner from a participating widening country will be highly appreciated and will be taken into account during funding discussion”. This means that such inclusion could be used as a criterion to discriminate between two equally ranked projects.

Another example is the ERA-NET Cofund on ‘personalised medicine’ known as **ERA PerMed**. Widening countries are well represented in this initiative, since several widening countries are included in the Consortium. Furthermore, in the annual Joint Transnational Calls launched by ERA PerMed since 2018, widening participation has been encouraged. At the full-proposal stage, the consortium might be increased to up to seven partners in total by inclusion of a partner coming from an underrepresented country. The Call text states that a “list of underrepresented countries will be provided to all coordinators invited for full-proposal submission.” This action aims to enhance the participation of researchers from widening countries in ERA PerMed calls and increase their possibilities for being selected for funding.

More strategic approaches to internationalisation

The involvement of research funding organisations from outside Europe in Joint Calls has been an evolving process, particularly during Horizon 2020. What is now more apparent is the level of leadership on integrating a truly global dimension in joint calls by involving key countries from outside Europe.

For example, **ERA-MIN** has been launching joint calls related to non-fuel, non-food mineral raw materials since 2011 and has been gradually increasing the number of both European and international partnerships since then with the involvement of Argentina, Brazil, Chile, Québec and South Africa. ERA-MIN3 on ‘Raw materials for the Sustainable Development and the Circular Economy’ represents the next stage of this network, which was launched in December 2020. It involves 18 EU countries and three third countries; Brazil, Canada (Québec) and South Africa. The involvement of these other countries with important mineral reserves in the world is of strategic relevance for the sustainable and responsible supply of EU industry under a circular economy and is also supportive of the ‘EU Raw Materials Diplomacy’.

Another network that has become more proactive about engagement with third countries is the **Water JPI**, which published a dual language paper in early 2020 on '[Cooperation in research and innovation programming with Brazil: topics, success stories and future opportunities](#)'. Brazil was one of seven third countries targeted by the Water JPI to strengthen the international dimension and develop durable partnerships for Water RDI in the world. The first mapping highlighted water-related challenges, major funding organisations, existing RDI programming with the EU, etc. Several Brazilian funding organisations joined the Water JPI activities in 2017 via the CONFAP (Conselho Nacional das Fundações Estaduais de Amparo à Pesquisa) and participated in three of the Joint Transnational calls (2017, 2018 and 2020). This also led to an EU-Brazil Sector Dialogue focussed on water challenges in 2018 culminating in a cycle of events in [Brasilia in March 2020](#). Discussions have also taken place on how Brazil can participate in the forthcoming Horizon Europe Partnership Water4All.

CHANSE - Collaboration of Humanities and Social Sciences in Europe

In 2020 a new ERA-NET Cofund programme CHANSE (Collaboration of Humanities and Social Sciences in Europe) supporting innovative, excellent research in Humanities and Social Science was launched. CHANSE is a collaboration of research funding partners from 27 research funding organisations from 24 European countries. The programme builds on the experience of two existing networks: HERA (Humanities in the European Research Area) and NORFACE (New Opportunities for Research Funding Agency Cooperation in Europe) financing and promoting research in humanities and social sciences respectively. Learning from the experience of the previous achievements of both networks, the CHANSE Programme will create new knowledge around the social and cultural dynamics of digitalisation processes, and establish partnerships across research and societal partners

In 2020 CHANSE pre-announced a co-funded call for transnational research proposals: *Transformations: Social and Cultural Dynamics in the Digital Age*. The call is open for consortia composed of at least four research teams from a minimum of four countries and it welcomes new and innovative research into the workings, meaning and consequences of transformations and innovations in the present digital age, viewed through the lens of the social and cultural dynamics. CHANSE attaches high importance to knowledge exchange between academia and a wide group of stakeholders, such as policy makers, cultural and creative industry, educational institutions, NGOs, business and media, etc. It expects projects to demonstrate potential for delivering research of significance at a policy, economic and wider societal level. CHANSE also aims at promoting diversity in research and encourages applicants to take into consideration gender, academic age and geographical balance. The results of the call will be published by June 2022.

With a budget of EUR 36 M, including EUR 10 M of EU co-funding, this 5-year programme strives to produce a lasting effect on the research landscape by cultivating durable research collaboration across multiple national and regional borders, disciplinary boundaries, and stakeholders, thus supporting the sharing of excellence and promoting widening participation in the European Research Area.

JPIs

In 2020, a total of 14 JPI related calls closed. Seven of these were specific to the JPIs, two were initial ERA-NET Cofund calls (i.e. EU co-funded) and five were additional ERA-NET Cofund calls with no EU co-funding. The pattern of JPI related calls since 2015 is shown in figure 10.

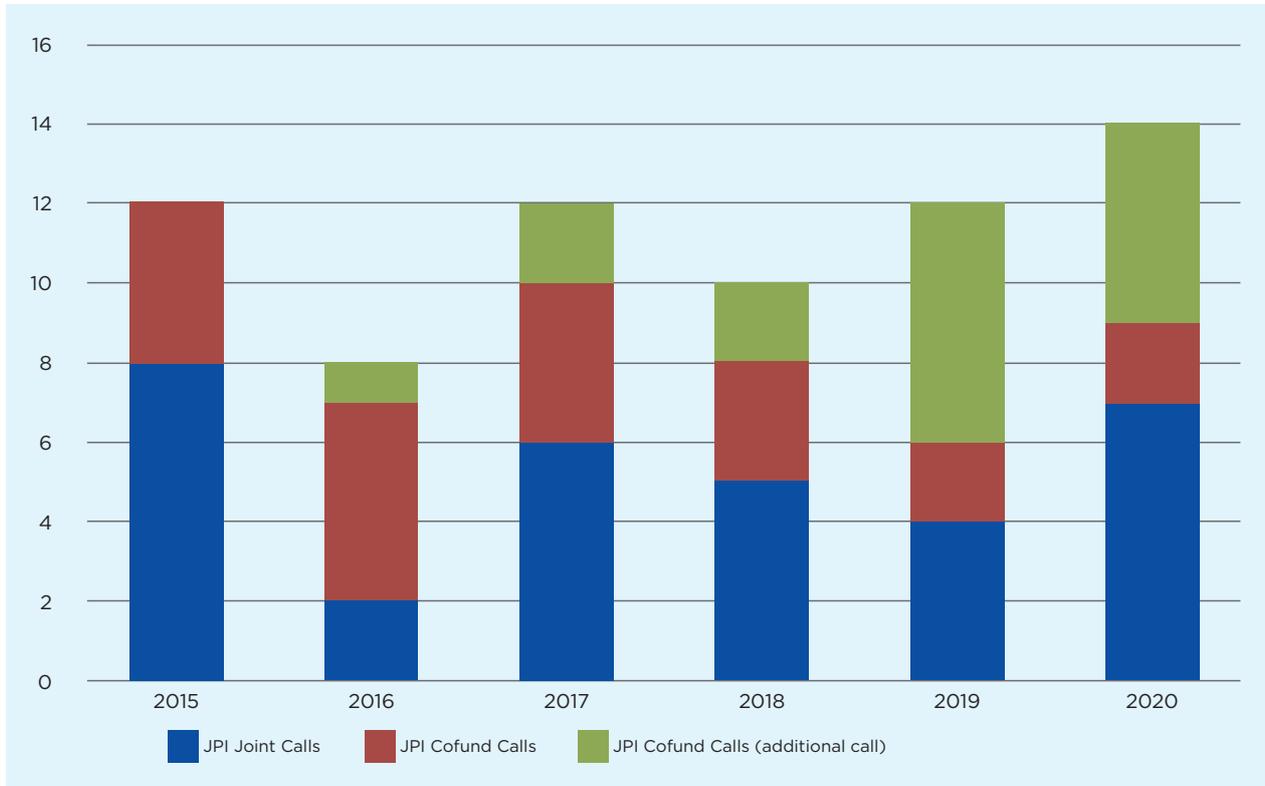


Figure 10: JPI Calls by Year Call Ended

This demonstrates an increase in call activity within the JPI networks, with 2020 seeing more JPI specific calls than any year since 2015 and a continued effort to launch additional ERA-NET Cofund calls through its networks.

The implementation of joint calls continues to be an important element in the work undertaken by the JPIs, with cooperation and collaboration between them increasingly evident. An update on the progress and success of one such tri-lateral collaboration is described below. The JPIs are also looking at how partnerships can take the wider research, policy and environmental ecosystem into account as they look to the future, as most of them now reach their 10 year milestones.

Update on the Trilateral JPI collaboration on AquaticPollutants

The unprecedented and interdisciplinary collaboration of the three Joint Programming Initiatives (JPIs) on Water, Oceans and Antimicrobial Resistance (AMR) was highlighted in the 2019 Annual Report. This was realised through an ERA-NET Cofund on AquaticPollutants that was launched at the beginning of 2020 and involved 32 funding partners. A total of 184 pre-proposals were submitted in the first step of the Joint Transnational Call and the 2nd step closed in November 2020 with 53 full proposals. From these, 18 projects were recommended for funding with a combined budget of around Euro 20 million and are due to commence in September 2021. Besides these research projects, a Networking and Transfer Project will be funded under the umbrella of AquaticPollutants to support networking of the scientific projects, to strengthen the European Research Area in the field of clean and healthy aquatic ecosystems and to leverage untapped potential in the collaboration between the freshwater, marine and health research areas. In the first year of the ERA-NET Cofund a Joint Strategy of the three participating JPIs was developed, which is valid for the lifetime of the project. This strategy is based on the JPIs objectives and incorporates the AquaticPollutants calls and Additional Activities. Thus, a real impact of the ERA-NET Cofund will be generated and the visibility of the JPIs increased.

JPIs reaching their 10 year milestones

The Joint Programming Initiatives (JPIs) were launched in the 2009-2011 period and so have either reached or are approaching their 10 year milestones. As one of the three JPIs in the ‘first wave’, the JPI on Agriculture, Food Security and Climate Change (FACCE-JPI), celebrated its 10 year anniversary in 2020. At present, FACCE-JPI brings together 24 countries committed to building an integrated European Research Area, to jointly promote the integration and alignment of national research resources in Europe under a common research strategy, and to address the diverse challenges in agriculture, food security and climate change.

To celebrate its long-term successful cooperation, FACCE-JPI organised a two-day celebration event on 26 and 27 November 2020. This included a virtual conference on the European Food System, a scientific debate on the critical role of science and a policy debate on Science. Participants included representatives from FACCE-JPI member states, representatives from different directorates of the European Commission, researchers from projects funded by the FACCE-JPI partners, as well as representatives from international organisations such as FAO, UN, OECD and CABI.

In its ten years of transnational cooperation, FACCE-JPI members, in partnership with the European Commission, have participated in a wide range of instruments for the implementation of joint actions, including over 18 joint research actions worth more than EUR 250 million. During the 10 Year Event, a small selection of the vast range of projects was presented, with the impact of the research results discussed with participants. An important goal of FACCE-JPI’s joint actions is to generate research results that can inform policies and so a significant part of the 10 year event focused on this aspect, both on the role of the members states more generally, and the specific role of FACCE-JPI’s members in the coming years. According to participants in the 10 Year Event, FACCE, in its remit, can definitely contribute to future developments such as the proposed Partnerships under Horizon Europe, and to further stimulate global cooperation. With the recently renewed [Strategic Research Agenda](#), the JPI is well-prepared for the coming years.

You can find out more about FACCE-JPI, watch [the presentations](#) delivered during the 10 Year Event, or [read up](#) on it at the [FACCE-JPI website](#).

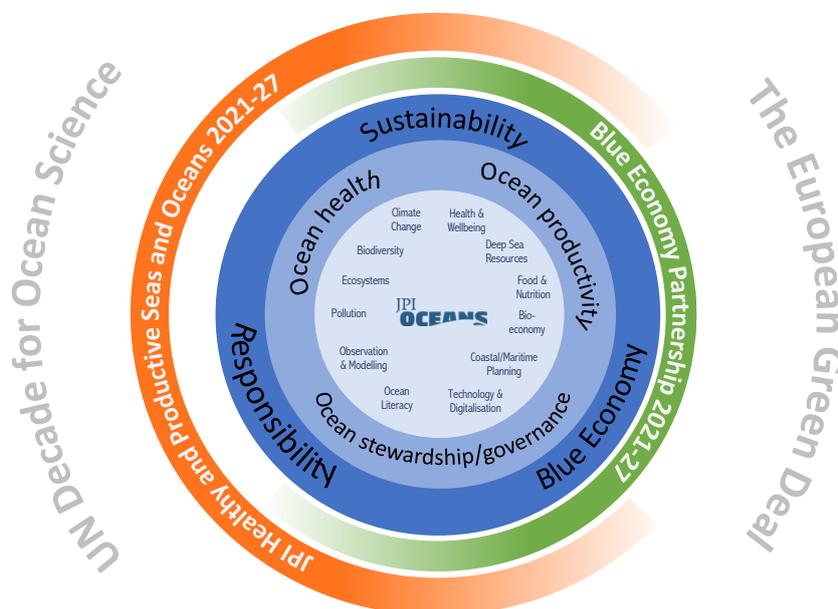
JPI Oceans linking arms with Horizon Europe on the Sustainable Blue Economy Partnership

In 2020, the Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) coordinated two thematically overlapping pan-European strategy development processes in the area of marine and maritime research and innovation: (1) The revision of JPI Oceans' own strategic agenda into a new strategy framework for 2021-25, formally launched in March 2021 and (2) the co-design processes among interested countries and the European Commission for the Horizon Europe candidate cofunded partnership 'A climate neutral, sustainable and productive Blue Economy', resulting in publication of a draft proposal and a draft Strategic Research and Innovation Agenda.

Commonalities between the two partnership initiatives are significant. Both have a European marine and maritime remit, both build on the idea of aligning national and regional R&I priorities and investments, and both rely on the investments and facilitation capacities of national ministries and funding organisations. This offers opportunities for complementarity and synergies but, if uncoordinated, could also lead to redundancies.

Accordingly, the member countries of JPI Oceans, most of which will also join the partnership consortium, deliberated on an efficient and resilient constellation to best advance on the common strategic goals for the marine environment and the maritime economy. Countries are converging on a hybrid model where JPI Oceans offers its established structures, capacities and networks to the development and implementation of the partnership. Meanwhile, JPI Oceans continues its operation throughout and beyond Horizon Europe with activities that lie beyond the scope of the partnership.

This model is suitable to avoid duplications but instead maximise synergies from complementarity in four areas: (1) Thematically the partnership's focus on the transition to a sustainable blue economy is complemented by the wider perspective of JPI Oceans inclusive of ocean health. (2) The longevity of JPI Oceans beyond the 7-year time-boundedness of Horizon Europe offers a mechanism for building on the achievements of the partnership beyond its lifetime. (3) JPI Oceans' potential to leverage trans-national and stakeholder engagement complements Horizon Europe's leverage to amplified funding levels and policy impact. Finally, (4) during implementation, the agile approach of JPI Oceans adds to the mobilisation potential of Horizon Europe. The architecture, like the entire partnership, still require formalisation, but the win-win potential for a transformation to Sustainable Blue Economy seems high.



Depiction of the overall strategic scope of JPI Oceans 2021-25 (blue), the coverage by the Sustainable Blue Economy partnership (green), and the complementary perspective of JPI Oceans during the Horizon Europe period

Article 185s

In 2020, 20 Article 185 calls closed, with 50% of these being implemented by one network, EDCTP. This is due to the nature of the work carried out by this network and the types of grants being awarded for clinical research. The broader pattern of call activity since 2015 is shown in figure 11, demonstrating a relative consistency in the number of calls implemented each year by each network.

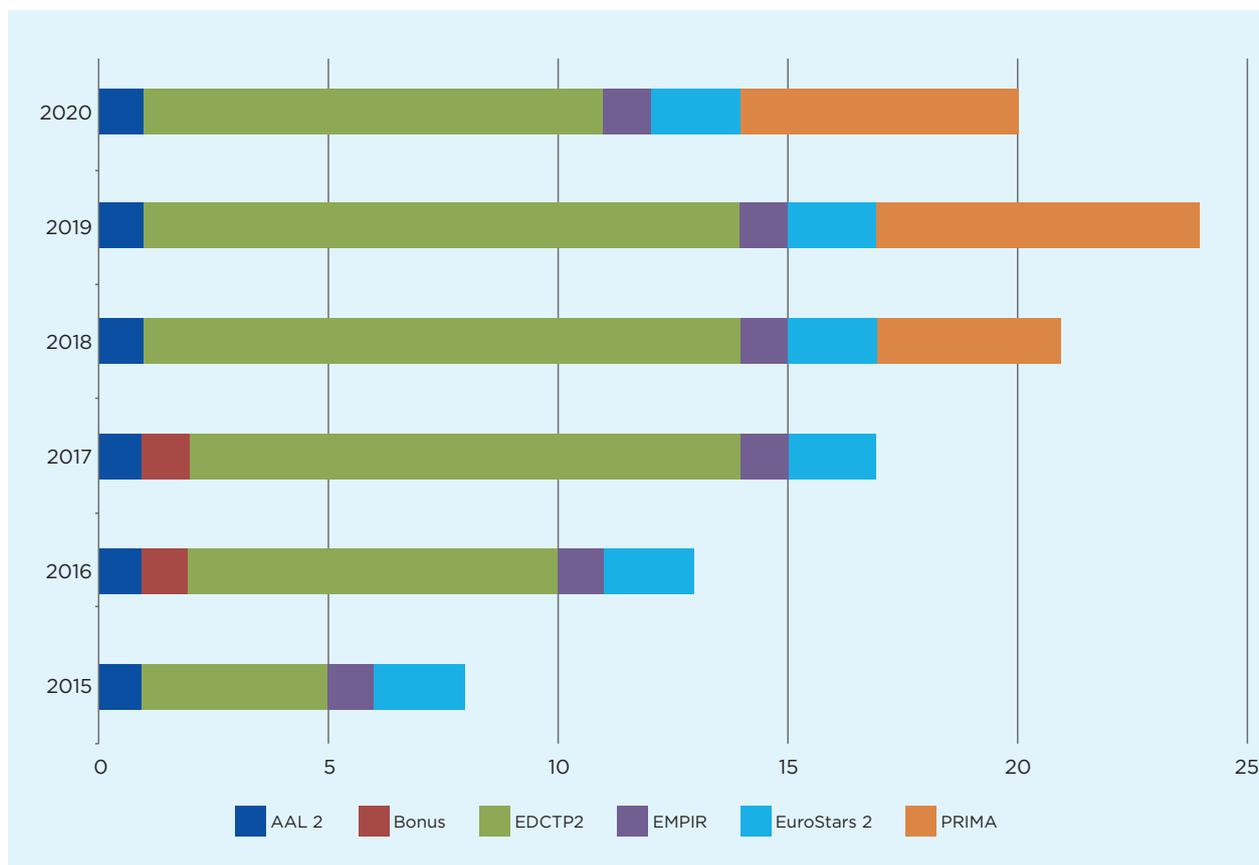


Figure 11: Article 185 Calls by Year Call Ended

Two examples are provided below that demonstrate the work being undertaken by some of the Article 185 networks. One highlights the response to the global COVID-19 pandemic taken by EMPIR as it sought to understand how its joint research projects could help address new challenges and support Europe's recovery plan. The other highlights the achievements of the Eurostars programme, which is part of the wider Eureka network that recently celebrated 35 years of supporting innovation across borders.

EMPIR projects supporting the response to COVID-19

During the last year, the world was witness to the global COVID-19 pandemic. In a short space of time, we have all had to adapt to the changes brought by this public health crisis to many aspects of our lives.

The collaborative research projects within EURAMET's European Metrology Programme for Innovation and Research (EMPIR) cover measurement science in a wide range of technical areas; from healthcare and sustainable energy to innovation for the factories of the future.

As the extent of the COVID-19 pandemic became clear early in 2020, EURAMET sought to assess and demonstrate the ways in which joint research projects and the metrology community together were helping to address new challenges, contribute to the pandemic response, and support Europe's recovery plan.

Coordinators from all potentially relevant projects were contacted and encouraged to find ways to contribute to tackling this global challenge, and to report their outcomes. The feedback was very positive and impressive, with projects producing best practice guides, case studies, new methodologies and more. EURAMET focused on communicating these examples to their audience via various channels; including 11 news stories, the website, themed web pages and social media to disseminate information to a range of stakeholders. Here are some examples of the articles available to view on the website that describe how EMPIR research is supporting the response to the COVID-19 pandemic:

EMPIR research enables measurement community response to COVID-19 diagnostics

This article recounts the way in which a number of projects have informed best practice for infectious disease management in the clinic, supported accreditation requirements and developed cutting edge methodology to improve international standardisation.

EMPIR research contributes to hospitals' response to COVID-19

This article relates how EMPIR research has played an important role in advancing clinicians' understanding of how drug delivery devices operate, as well as identifying the issues related to new drug infusion practices that are being implemented at this time.

The full list of the COVID-19 related news stories is available at <https://www.euramet.org/coronavirus-response>.

The Eureka network – 35 years of innovation beyond borders

In 1985, visionary politicians and policymakers came together with a seemingly simple idea: to mobilise the huge innovative potential of European businesses and academia through public support and promotion of cross border collaboration in applied R&D.

Thirty-five years and 7,500 R&D projects later, their brainchild live on – and is more relevant than ever.

In 2020, Eureka celebrated those great visionaries, and the international collaborative projects and 48 billion euro of public-private investment that their vision has so far spawned.

But Eureka also took the opportunity to look to the future, to a new Eureka – and to the crucial role it has to play in the emerging European Innovation Area.

Eureka's Eurostars programme is a unique joint programme between Eureka and the European Commission, funding SME-driven international R&D projects.

2020 saw 1,019 applications from 3,084 collaborating organisations and each successive Eurostars call for projects received the highest number of applications ever.

Eurostars in the future: On the strength of the excellent results of Eurostars-2 (and its notable place within the R&D funding landscape), all Eureka countries unanimously support the continuation of the programme beyond Horizon 2020. This opinion is shared by the European Commission Scrutiny Board, which, in 2020, recommended that the Innovative SMEs Partnership run with a co-fund status within Horizon Europe. Discussions to conclude final details of the programme are still underway with the European Commission, as it prepares a memorandum of understanding that builds on its existing relationship. So far, over one billion euro (a value that is continuously increasing) has been allocated at national level to funding Eurostars-3 projects, which already far exceeds the total national allocated funding for Eurostars-2.

The ability to collaborate with organisations from any Eureka country is a core value of the network, and it strives to offer equal levels of support for all countries participating in Eurostars. Within the Horizon Europe framework, Eurostars-3 will provide a unique opportunity for European companies to collaborate with non-EU or Horizon Europe Associated Countries that are also supported by their NFB and the programme. Eurostars has expanded European cooperation to include global partners: of the 36 participating countries, nine are non-EU countries and three of those are non-Horizon Europe Associated Countries. There is global interest in the programme, and an expectation that it will attract further participation from other countries.

The new Eurostars model will expand the target group from R&D-performing SMEs to innovative SMEs, supporting companies that do not necessarily have a previous R&D track record, but prove to independent evaluators in their application that their methodology will achieve excellent technical, commercial and societal results. This will nurture high-potential SMEs and widen the scope of R&D and innovation ecosystems in the participating countries.

Eureka is also investigating possible accompanying measures to help project participants commercialise their project results in international markets. As a part of this process, it is building synergies with similar organisations; Eurostars has been accepted as a fast-track accelerator service within the European Innovation Council (EIC) and is exploring activities that promote the internationalisation of European SMEs and help them realise global ambitions.

Other Networks

In addition to the main types of networks that the annual report has historically focussed on, we highlight good practice examples of work being carried out within the European Joint Programmes. EJP RD, which focusses on rare diseases has undertaken a number of activities to increase patient engagement in research projects.

Patient partnerships in rare diseases research projects – EJP RD

In 2020, the European Joint Programme on Rare Diseases (EJP RD) put in place several activities with the shared objective to increase the engagement of patients in rare diseases research activities.

Patient involvement in research projects was, for the first time, strongly encouraged with the possibility for patient organisations to request a budget already within the Joint Transnational Call 2019 of the EJP RD. This, however, resulted in only 32% of funded projects that included patient organisations. Therefore, in 2020, a working group, led by EURORDIS, comprising patient representatives and research funders, developed a short guide on patient partnerships in rare diseases (RD) research projects aimed at supporting and encouraging fruitful and meaningful partnerships between researchers and rare disease patient representatives, co-leading the way for systematic patient-centered research. Providing definitions, examples, testimonials of patient partnerships, describing its benefits, preventing common pitfalls, and accompanying applicants, this guide will support applicants to better describe the role and added value of patient partnerships in research proposals.

Furthermore, EJP RD accompanies the patients on this road towards partnerships in Rare Diseases research projects by offering training (free of charge) for patients to provide: an understanding of therapeutic development and regulatory processes for medicinal products in the field of rare diseases; the knowledge and skills required for patients to become legitimate collaborators in scientific & translational research; and to empower patient representatives in their roles as equal, valued, and efficient partners in research and scientific project/European Reference Networks governance bodies. In 2020, two trainings sessions were organised and 55 patients were trained (Information on all EJP RD trainings is available on the EJP RD website).

One crucial step involved in Patient Partnerships is the establishment of a strong relationship between patients and researchers, establishing a solid network around them. EJP RD is, therefore, offering Networking Support Scheme funding, aimed at encouraging the sharing of knowledge on rare diseases and rare cancers of health care professionals, researchers and patients/patient representatives. In 2020, 11 applications were selected for funding of a Networking event. Seven of the selected applications involved 12 patient advocacy organisations (PAOs); three out of those seven applications were coordinated by a PAO.

Finally, in the 2020 EJP RD Joint Transnational Call, patient involvement was strongly encouraged, as in 2019, and PAOs were still able to request a budget based on their respective roles and responsibilities within the proposed research projects. The participation and request for funding from PAO increased from 32% in 2019 to 78% in 2020 in funded projects. A final budget of almost 508 000 Euro has been dedicated to the funding of PAOs in the research projects with a maximum limit of 50 000 Euro per project.

The experience of the EJP RD research funders has been that funding the participation of PAOs could be organised very easily when financed from the dedicated common pot of EU contribution with a budget limitation per PAO. However, adequate and consistent financing of national PAO involvement in transnational research projects by the national/regional research funders remains a major challenge due to the different national rules for PAO funding. EJP RD is planning to address this in future calls and provide a more adapted framework for PAO funding and engagement in research.

6. Outlook

This section provides a brief overview of planned joint calls during 2021.

Planned Calls for 2021

There are currently 27 transnational joint calls that have been launched and will close during 2021 (13 of these are ERA-NET Cofund additional calls). Clearly other calls are currently in preparation and these will be detailed on the ERA-LEARN call calendar as soon as the details are made available.

New ERA-NET Cofund Networks

A number of new Cofund proposals were successfully submitted during 2020 and these will implement EU co-funded calls during 2021. A summary of these new networks is provided here:

Network		Call Closure
BiodivRestore	Promoting & implementing joint programming to reinforce transnational research for the conservation and restoration of degraded ecosystems and their biodiversity, including a focus on aquatic systems	Apr-21
CHANSE	Collaboration of Humanities And Social Sciences in Europe	Dec-21
JPIAMR-ACTION	Antimicrobial Transmission Interventions	Jul-21
M-ERA.NET 3	ERA-NET for research and innovation on materials and battery technologies, supporting the European Green Deal	Nov-21
NEURON Co-fund2	Network of European funding for neuroscience research	Jun-21
QuantERA II	QuantERA II ERA-NET Cofund in Quantum Technologies	Sep-21
TRANSCAN-3	ERA-NET: Sustained collaboration of national and regional programmes in cancer research	Dec-21

Table 1: New ERA-NET Cofund networks launching calls in 2021

Details of all ERA-NET, JPI and Article 185 networks and calls can be found on the ERA-LEARN website.

7. Country Reports

In recent years, ERA-LEARN has prepared country reports looking at the performance of specific countries in public-to-public European R&I partnerships. Until now five country reports have been published covering Poland, Austria, Belgium, Spain and Finland. Three more are in the pipeline for Norway, Germany and Estonia. The selection of these countries is based on a combination of variables: interest expressed by the country, number of partnership participations and partnership coordination, and national investments made to date, based on the data provided by the partnerships to the ERA-LEARN database.

These country reports are drafted in close collaboration with the national authorities and are based on the ERA-LEARN data, reports and data provided by the involved Ministries and funding agencies, other data and reports on the national/regional R&I systems (EUROSTAT, OECD, European Innovation Scoreboard, etc.) as well as structured interviews with the key actors (ministries and funding agencies) and researchers that participated in partnership-supported projects. They provide an analysis of participation and try to explain the 'performance' of a country, in comparison with certain peer countries and the EU average, within the context of the overall situation in the national and regional research and innovation system.

Summarising the situation in each of the countries covered until now, the following conclusions can be drawn. Poland shows a dynamic performance and the participation in European/international research collaboration is high on the policy agenda. Yet, the partnerships still enjoy rather low visibility, which calls for increased attention in raising awareness in the research community that seem to prefer simpler national and other collaboration schemes such as bilateral agreements. Providing incentives for international collaboration to the national research community would also be another area of improvement while streamlining the partnership landscape and simplifying participation.

Unsurprisingly, the overpopulated partnership landscape and the lack of harmonised rules for participation across the different partnerships was noted in all country reports. To this end, the new EU strategy for Partnerships under Horizon Europe has been welcomed and in several cases is inspiring a more coordinated national approach.

Austria has presented one of the best records in public R&I partnerships in Horizon 2020. International collaboration in research and innovation is very high on the national agenda and is backed up by a dedicated strategy. Significant investments are made in public as well as public-private R&I partnerships and programmes allowing collaboration with various countries beyond Europe.

It is not uncommon that participation in partnership-supported projects, that are generally smaller in terms of the size of consortium, is seen as a preparatory step for researchers before they try to apply to larger and more competitive programmes like Horizon 2020. This belief was shared across all countries studied.

The Spanish report showed the leading position of Spain in participating in public R&I partnerships, investing significantly but also benefiting relatively more than other countries. Spain is determined to retain a strong engagement, although certain rigidities at national level and complexities from the diverse administration of partnerships make it difficult to fully exploit their potential.

The same stands for Belgium, which is among the most engaged countries, investing significantly and benefiting considerably in comparison with other peer countries. Albeit there are differences in the local R&I systems across the different Belgian regions, overall, Belgium retains a solid position that European R&I Partnerships are beneficial to the local research communities.

European public R&I Partnerships are also much appreciated by Finnish Ministries, funding agencies as well as local researchers. However, Finland exploits these initiatives to a rather moderate extent, albeit to different degrees from one partnership to another. The efforts of the Commission in streamlining the implementation processes and clearing up the landscape are expected to help an increased Finnish engagement in the future.

Some overall conclusions: the performance of a country does not necessarily reflect the level of the country's leadership in research and innovation. Although, strong support in international collaboration may be evidenced in the policy discourse, this may not be reflected in the budgets made available. In some cases there is need to raise awareness and provide incentives to collaborate. However, it is also true that the rate of return (i.e. number of proposals approved with national participation divided by the number of proposals submitted) can also be affected by other than scientific merit criteria such as the small budget made available by certain countries that may jeopardise approval of additional proposals although of high quality. This is rather discouraging for the affected countries. At the same time, national rigidities and incompatibilities may hinder full exploitation of the potential that partnerships offer. Notwithstanding, partnerships are indeed acknowledged as useful vehicles for internationalising the profile of the local research communities and benefiting from increased collaboration in research and innovation within Europe and beyond.

All country reports can be accessed [here](#) (insert 'country report' in the search phrase).

8. Impact of Joint Programming at a National Level

ERA-LEARN has produced a report, together with the GPC, about the impacts of the Joint Programming Process (JPP) and the Joint Programming Initiatives (JPIs) at a national level. This was based on a survey that the GPC ran in 2020 that attracted responses from GPC delegates from 21 countries and the Belgian region of Flanders, as well as relevant findings from other ERA-LEARN reports. The task addressed the macro-level, considering the impact of engaging in the Joint Programming Process overall without restricting the focus on the individual impact of the ten JPIs, although the views naturally differ from one JPI to another.

Based on the findings, most countries share similar expectations from participation in the JPP and JPIs. Joining national resources at a European level to create the critical mass necessary to tackle global challenges is the most relevant expectation / motivation, along with creating common agendas for research and innovation and ensuring that national perspectives are also considered.

The above initial expectations were fulfilled at varied degrees across the countries. While the majority state that they were moderately or even significantly fulfilled, there is another set of countries that are more critical. This is due to several reasons. JPIs are considered to fall short in translating research results into usable inputs for policy-making and other stakeholders. The lack of adequate human resources to manage participation is always an issue that is exacerbated in the quite populous partnership landscape. This can partly account for the inability of some countries to secure adequate financial contributions, along with incompatibilities of the national programme's procedures and timing with those of the JPIs. At the same time, initial ambitions and expectations might have been very high for some countries, while alignment of national policies seems to have been achieved only to a moderate or limited extent.

Positive impacts mainly have to do with the opportunities offered for cooperation with other European countries on a bilateral basis, possibly as spin-offs from the partnerships, and with non-EU countries within the partnerships. Yet, the impact of participation extends beyond supporting research projects and influencing policies and/or coordination structures at national level. It also relates to policy learning and increasing the capacity of the research funding organisations to manage transnational programmes. Complementing the peer learning experience, JPI members were able to join several groups at European level that promoted good practice related to joint programming. This has clearly proven to be a positive experience for all.

The full report will soon be available on the [ERA-LEARN website](#).

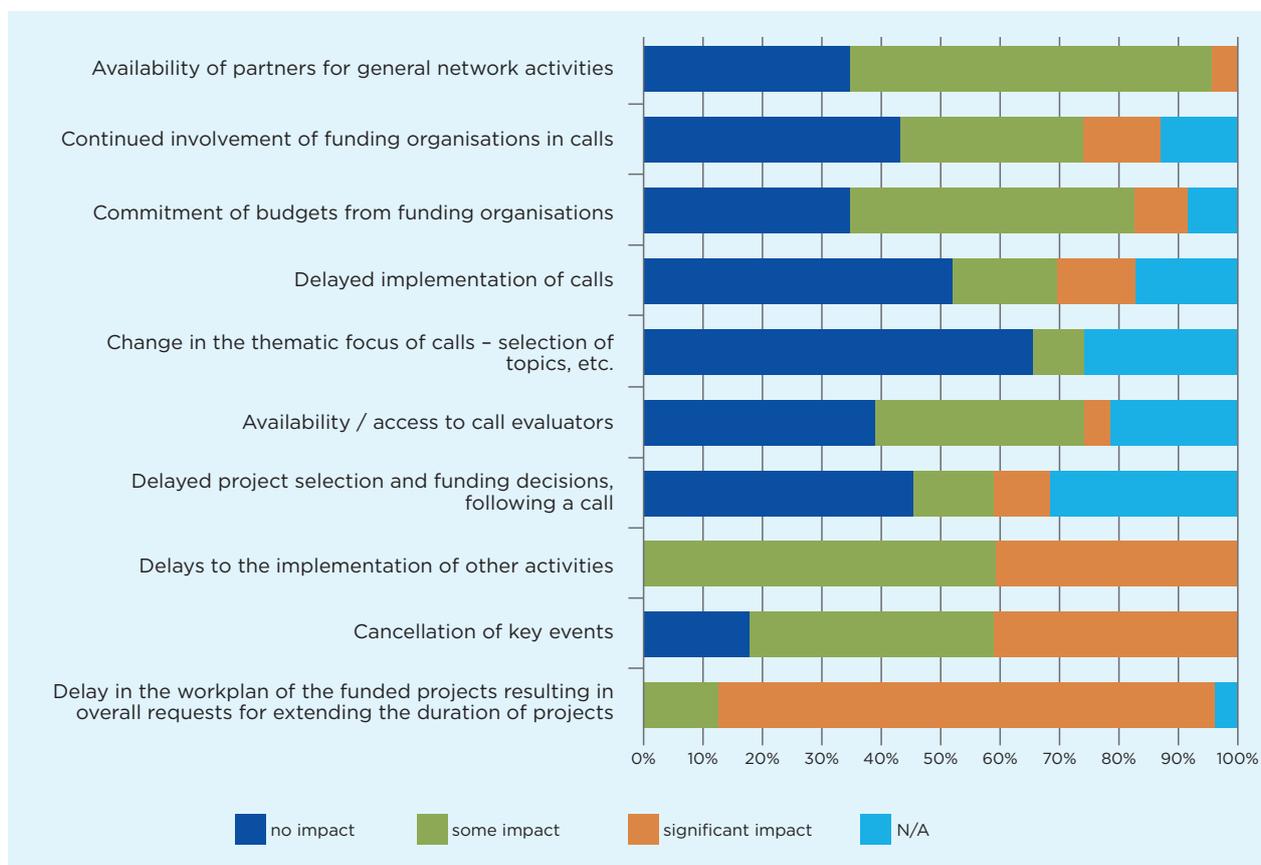
9. Survey Results: Impact of COVID-19 on P2Ps

2020 has been a year like no other and people across the globe have had to live and work in ways that no-one could have predicted. The crisis continues to impact on all aspects of our lives, and we continue to adapt as best we can.

Given the significance of this public health crisis, ERA-LEARN sought to understand the impact that the COVID-19 pandemic has had on the implementation of P2P networks, their calls and other strategic activities. To this end, a short survey was prepared and sent to all P2P network coordinators. It was designed to provide a high-level awareness of the problems and challenges that the networks might have faced and how they have sought to overcome them. 26 networks responded to the survey and so the views presented here are from a relatively small group.

The aggregated responses demonstrates that the most significant impacts for the ongoing implementation of the P2P networks relate to the delays in both network activities and that of the funded projects. It does, however, also demonstrate the resilience of networks to adapt to the challenges and find new ways of working.

We asked respondents to describe the extent to which a number of issues had negatively impacted the implementation of activities since the beginning of the pandemic and an overview of the feedback is below.



Clearly, delays in the workplan of the funded projects was a significant issue, alongside the implementation of other activities and the cancellation of key events. To a lesser extent, the availability of partners and the commitment of budgets from funding organisations have also proven to be problematic as a result of the pandemic and a shift in focus and priorities (sometimes to COVID specific activities) within some organisations. It was noted by several respondents that the lack of availability of lab space, particularly at the height of the pandemic, was particularly difficult causing both delays and a loss of experiments, which then have a knock-on effect to the delivery of the funded projects.

As might be expected, a relatively high percentage of funded projects requested extensions to their individual contracts due to the problems they have faced. The delays to the workplans have, therefore, meant that many P2P networks have also requested extensions to the end date of their grant agreements in order to allow the transnational funded projects to complete their activities and their financial reporting within the period of the contract.

We asked the P2P networks how they have sought to overcome the different issues that they have faced during the pandemic, with most responses common across the networks that responded to the survey. The most significant adaptation within the networks was the use of online tools for meetings, workshops and webinars. This seemed to work well for most, with some respondent indicating that it actually allowed for more flexibility in the way they worked, encouraged more frequent meetings and resulted in higher attendance at some events that would have been expected from a physical meeting. For field studies and lab work, however, there has been no easy alternative.

When asked if there were any activities or changes that have been implemented that might continue when life begins to return to normal, it was clear that respondents were able to find some positives from the difficult situation in which they find themselves. It seems that most networks plan to use a hybrid model of working with some meetings being held virtually but with others (larger, more important meetings) being held in person. The benefits of this are attributed to a number of things including reduced carbon emissions from less travel, cost and time savings, and the ability to reach a larger audience from a virtual platform. Respondents did, however, note that the lack of physical meetings is not as productive in the longer term and many are keen to see them return when possible, and safe to do so.

Overall, networks have adapted well to the ongoing global pandemic and the restrictions that have been imposed across all nations. As the restrictions continue, however, there are significant concerns related to further lockdowns and restrictions that could lead to ongoing delays to projects. This will cause severe difficulties, particularly for researchers and scientists that cannot perform lab and field work to achieve their defined objectives but may also result in projects that cannot be completed before the end date of the grant agreement. Furthermore, the lack of physical meetings and interactions is seen as a major factor that could negatively affect both the research community and the wider P2P community, such that networks need this to remain productive and connected and to build on their inherent strengths.

