



Two Decades of European Partnerships

Our Achievements

A large, decorative graphic at the bottom of the page consists of two overlapping, curved shapes in shades of blue. The top shape is a lighter blue and curves upwards from the left, while the bottom shape is a darker blue and curves downwards from the left, creating a white, wave-like space between them.

Introduction

Over the past twenty years, European Partnerships have evolved into an impactful R&I policy instrument. With over 30,000 participations and over 6,000 projects, they have addressed grand challenges through a broad range of transformation-oriented research and innovation activities. As a tribute to the achievements of this period, the brochure showcases more than twenty impact stories of Partnerships over their 20-year existence.

The cases presented here cover only a very small fraction of the diverse impacts that the Partnerships have achieved over this time. While this selection is by no means exhaustive, it signals the importance of recording impacts and building narratives to grasp the full potential of the Partnerships as a strategic R&I policy instrument that brings multiple countries together to jointly address common challenges.

Across diverse thematic areas, the European Partnerships have mobilized investment and created leverage across the R&I system and beyond. Their activities have ranged from building vibrant innovation hubs and place-based transformations, to expanding international collaborations and strengthening the EU's position in key enabling technologies.

The cases featured represent a broad thematic palette: from AI-driven decision-making to biodiversity, from energy to urban transitions, and beyond. They highlight a wide range of pathways to impact, such as technological and social innovation, and fostering market and policy uptake, among many others. European Partnerships have also excelled in expanding the R&I system, supporting SMEs and start-ups, creating effective governance frameworks and devising mechanisms to connect actors and accelerate action.

What brings the cases presented here together is the proven capacity of European Partnerships to generate long-term impact and create real world change.

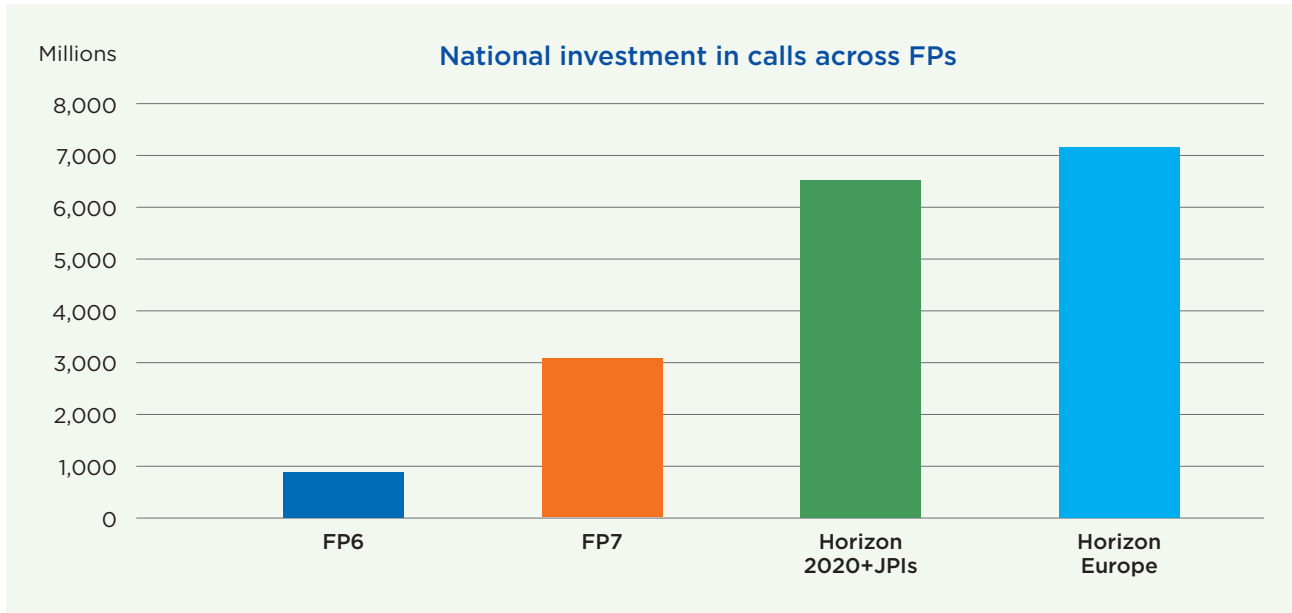
As the R&I and broader EU priorities continue to evolve and new challenges emerge, they require responsiveness, agility, and collaboration. This brochure, therefore, can also serve as a source for reflection on how the Partnerships instrument can be best used to advance action on the Sustainable Development Goals and enable the EU's resilience and sustainable competitiveness, building on the strengths, achievements and lessons learnt to date.

We encourage interested readers to further explore the diverse pathways that the Partnerships use to achieve their impact, beyond what this short publication could cover.

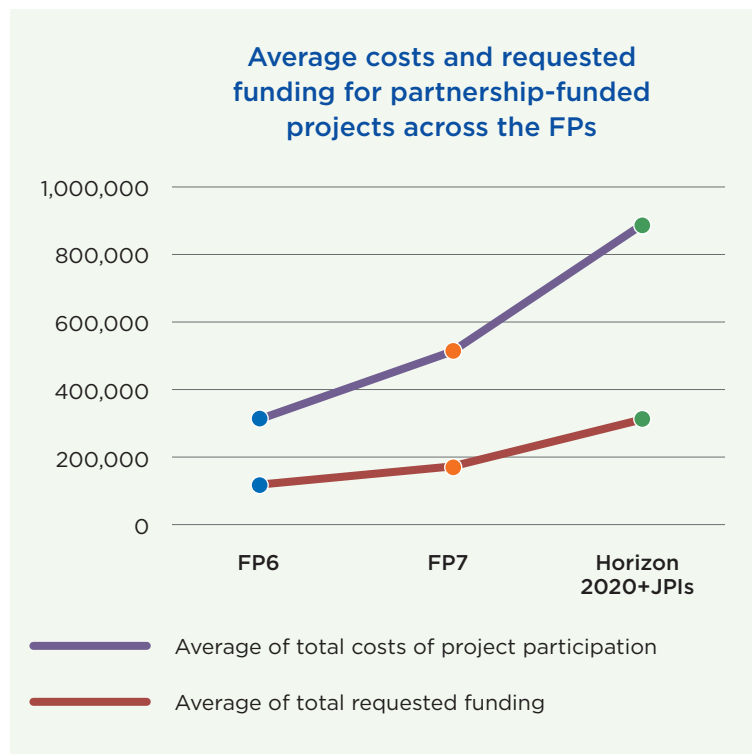
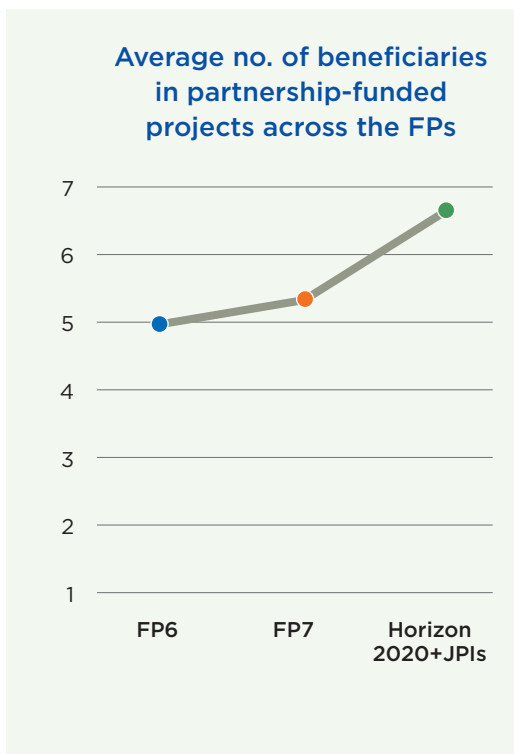
Please visit the [ERA-LEARN website](#) or contact the project team for further inquiries.

Partnerships in Numbers

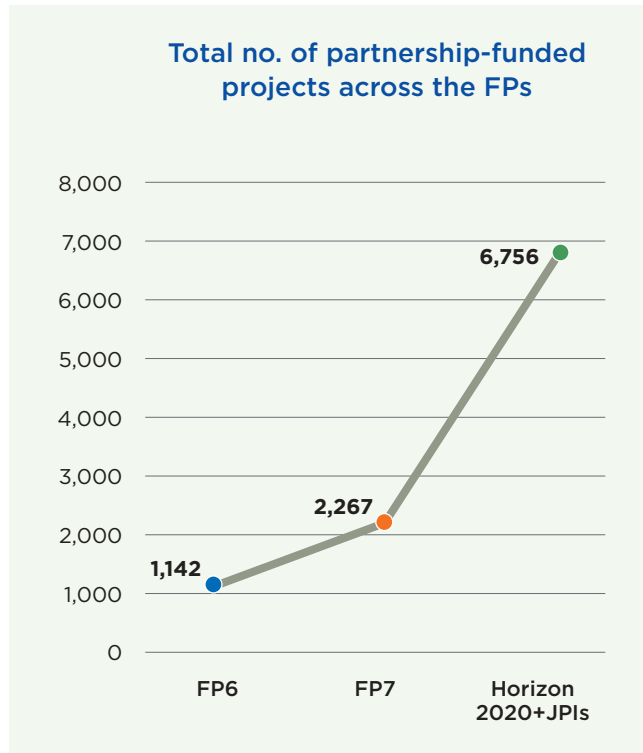
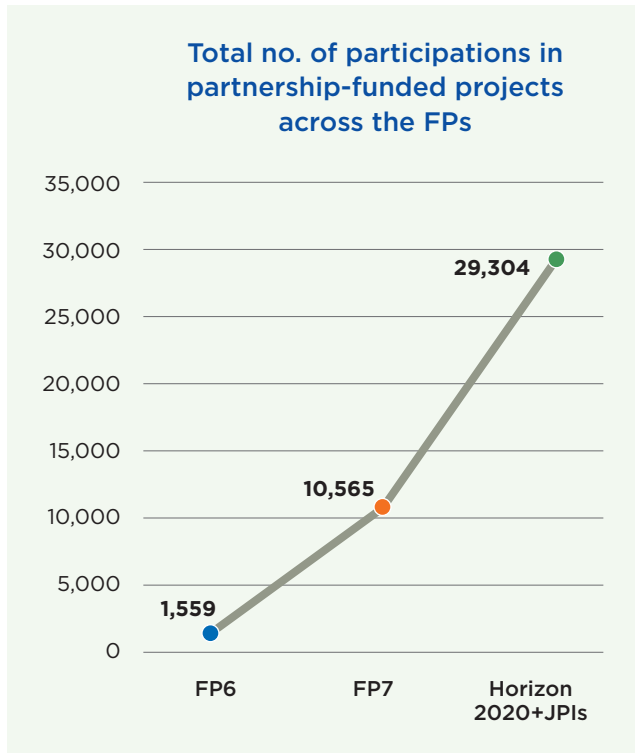
Over €10 billion invested, to date, by countries in partnership-funded projects between FP6 and Horizon 2020 and over €7 billion already committed in Horizon Europe partnership calls.



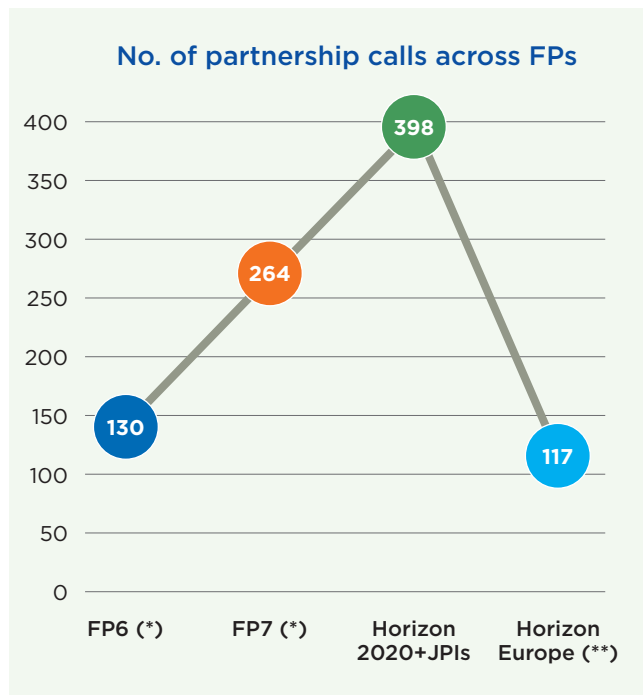
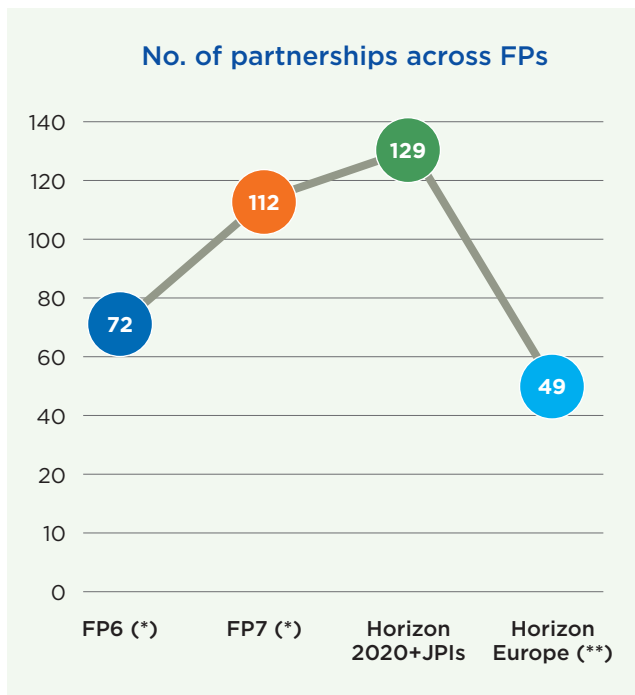
Partnership-funded projects are getting larger, both in size and budget



From around 1,500 to almost 30,000 participations and from around a thousand to more than 6,000 funded projects



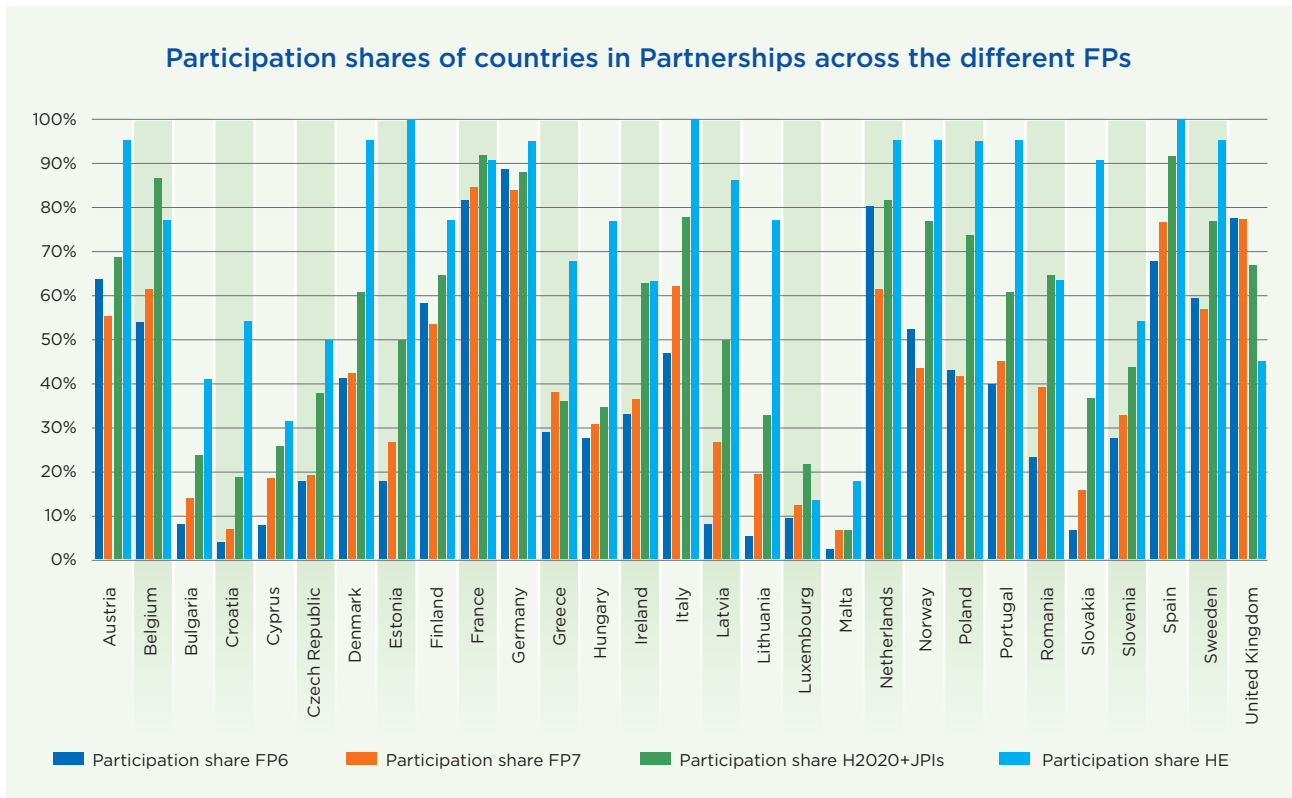
Fewer partnerships but three times more calls, between FP6 and Horizon 2020



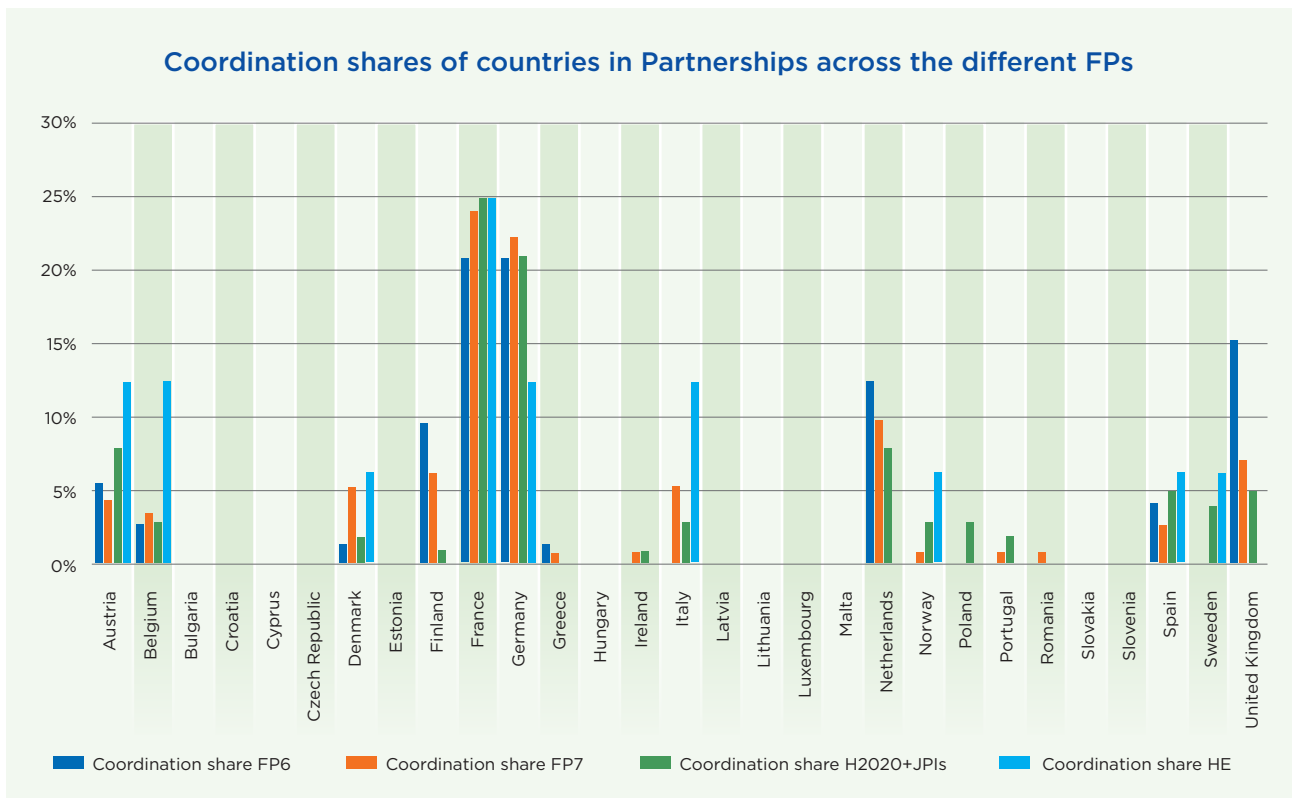
(*) Numbers not including the public-private partnerships

(**) Excluding the 9 partnerships under the Second Strategic Plan, PRIMA and the KIC Water, which are not covered in the other figures in this brochure and thus not included here.

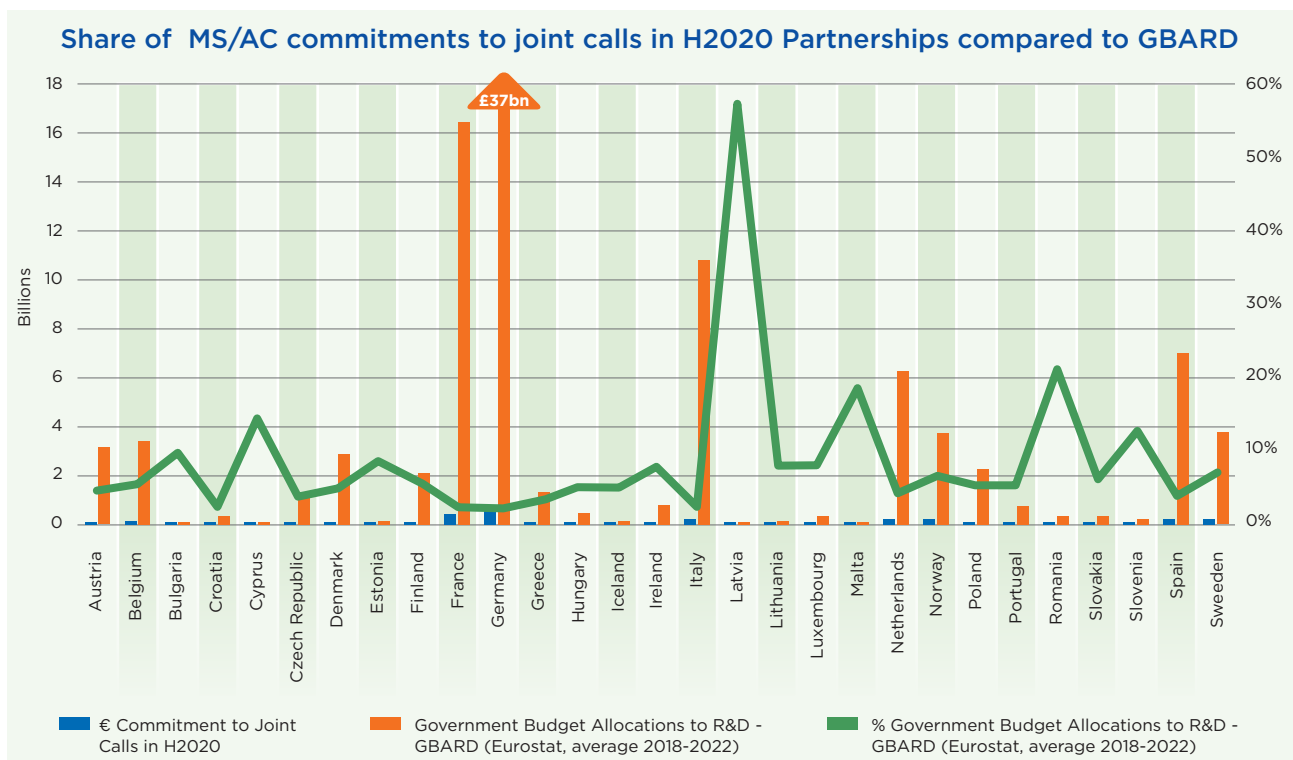
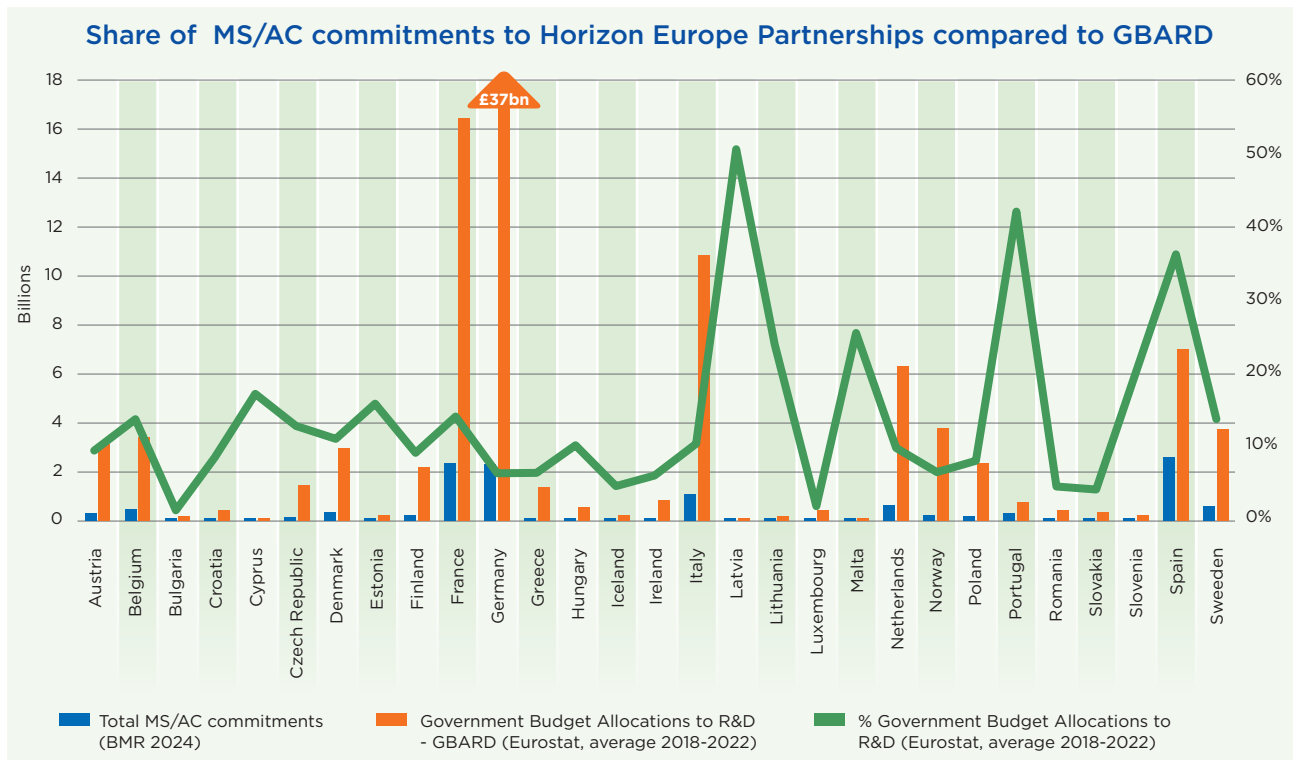
Participation shares of smaller or less engaged countries has skyrocketed in Horizon Europe



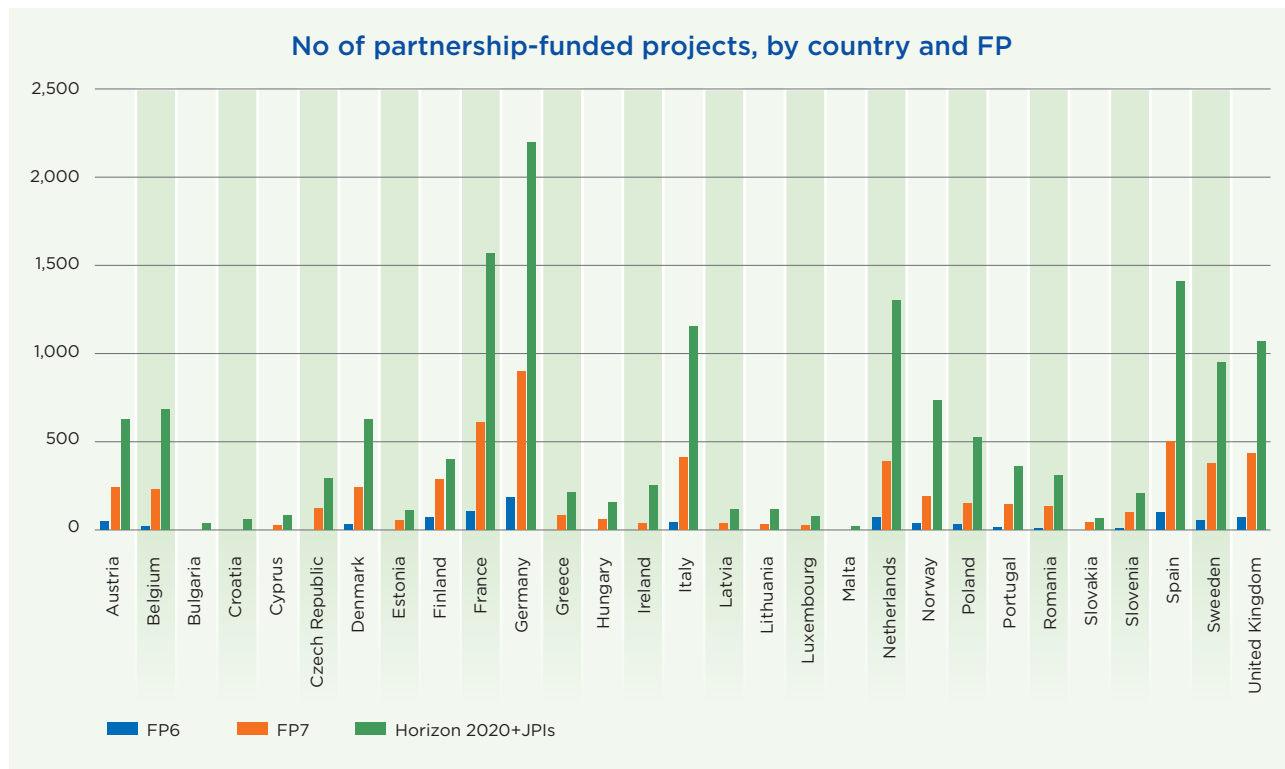
Coordination still in the hands of a few



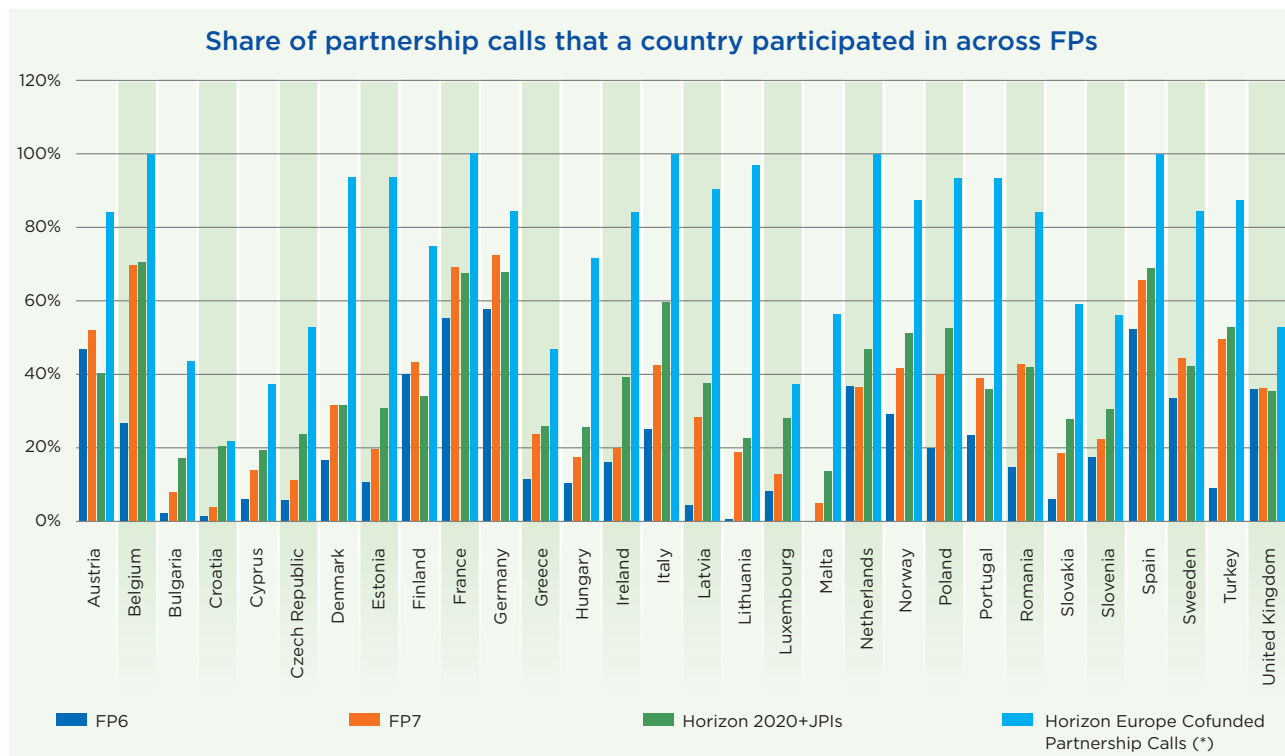
Proportionally, it is the smaller countries that invest more as a share of their government allocations to R&D. As more of them come forth in Horizon Europe, it seems that European Partnerships are a valuable instrument for the internationalisation of smaller R&I communities



Albeit to different degrees, all countries have been increasingly involved in partnership-funded projects



All MS/ACs have been increasing their participation in partnership calls across the FPs, with 17 MSs each taking part in at least 85% of them in Horizon Europe



(*) Horizon Europe includes only calls from Cofunded Partnerships to allow comparability with data for the other FPs

20+ Impact Cases for 20 years!

Co-programmed Partnerships

Connected Factories (predecessor of Made in Europe)

The [Sharework Project](#) has developed 14 integrated software and hardware mechatronics modules that provide robots with the intelligence they need to work alongside human operators and overcome human-related barriers. The SHERLOCK robots were able to adopt a human-like behaviour, being valuable co-workers, understanding the environment, the needs and preferences of the operators, predicting human intention and adapting their behaviour accordingly, thanks to the advances in perception and AI-driven decision making. The solutions developed by the project have been [successfully validated in four industrial environments](#) by demonstrating seamless human-robot collaboration. The complementary SHERLOCK project introduced the latest safe robotic technologies, including high and low payload collaborative arms, wearable robotics in the form of exoskeletons and mobile manipulators, enhancing them with smart mechatronics and AI-based cognition. SHERLOCK developed a portfolio of 19 software and hardware modules that have been applied in [four different industrial use cases](#). The systems have demonstrated gains in performance, ergonomics, a reduction of assembly errors, human stress, and high levels of operator acceptance, unveiling the real-world potential of highly intelligent assistive robotic systems.

*Compiled from the BMR 2024 fiche.

For more information:

<https://www.connectedfactories.eu/>

European Open Science Cloud (EOSC)

EOSC has been instrumental in addressing the challenges in data interoperability, data sovereignty/security, analytical capability and computational capacity that were exposed by the SARS-CoV-2 pandemic. The INFRAEOSC-destination project “Beyond CoVID” and “Galaxy” demonstrate an effective contribution to the European and global pandemic readiness. [The European COVID-19 Data Platform](#) enables the rapid collection and comprehensive sharing of available research data from different sources for the European and global research communities, in order to accelerate research on coronaviruses worldwide. The Portal is forming part of the pandemic preparedness toolkit to address future pathogen outbreaks, globally. The Galaxy Project pools free global computational resources, making deep sequencing analysis accessible and providing a framework for global pathogen surveillance. Public computational infrastructure (XSEDE, ELIXIR, Nectar Cloud) with open-source software offers a solution. However, a unified platform is needed, best supported by an international community. [The two-stage platform on public Galaxy instances in the US, EU, and Australia supports hundreds of thousands of analyses monthly, providing nearly unlimited computation capacity](#). EOSC has also contributed to international astronomical data exploration and distribution. The [CosmoHub](#) is an international platform, currently evolving into a multi-messenger framework, with the capacity to analyse

data from gamma ray telescopes, neutrino telescopes as well as gravitational wave data. [CosmoHub encourages international users to upload, distribute and analyse their data through the platform, enabling worldwide collaborations to unveil the current astronomical challenges.](#)

*Compiled from the BMR 2024 fiche.

For more information on the funded projects: <https://eosc.eu/horizon-europe-projects/>

2Zero following from the EGVI and EGCI partnerships

The 2Zero Partnership aims to accelerate the transition towards zero tailpipe emission road mobility across Europe. 2Zero builds on the successes of the European Green Cars Initiative (EGCI: 2009-2013) and the European Green Vehicles Initiative (EGVI: 2014-2020). Impact cases include the [USER-CHI](#) project that contributed to the preparation of two CEN Workshop Agreements: CWA18090: User-centric charging infrastructure for electric vehicles – [Guidelines for operators to implement advanced smart charging and management strategies](#), and CWA18091: User-centric charging infrastructure for electric vehicles – [Charging stations of the future – Stations models considering users' expectations](#). Regarding the first, the USER-CHI project developed a smart charging tool to enhance EV charging in public areas. The resulting CWA aims to optimise energy costs, utilise renewable energy efficiently, and enable smart grid participation. Regarding the second CWA, the project identified key factors influencing charging decisions and acceptance barriers. The resulting CWA outlines four innovative charging station models designed to meet user expectations and provides guidelines and design features for future charging stations. The two new standards contribute to adopting new solutions for sustainable transportation. The [ALLIANCE](#) project (AffordabLe LIghtweight Automobiles AlliaNCE) is aimed at developing novel advanced materials (steel, aluminum, hybrid materials) and production technologies to achieve an average weight reduction of 30 % over 100k units/year, at

costs less than 3 €/kg-saved and a 6% Global Warming Potential (GWP) reduction. The final results indicate that a significant weight reduction of up to 33% can be achieved while limiting the additional costs below 3 €/kg-saved. The weight savings directly impact the GWP of each component studied leading to about 25% reduction in GWP at component level.

For more information on the funded projects: <https://www.2zeroemission.eu/research-projects/>

Photonics21 (predecessor of the Photonics Partnership)

The Photonics Partnership represents a long-term commitment between the European Commission and the Photonics Stakeholders to invest in Europe with the aim of securing Europe's industrial leadership and economic growth in photonics and its enabled industries. It is the successor of the Photonics21 cPPP under Horizon 2020 that supported a number of projects including, for instance, the PhotonHub Europe. The flagship project supported by the Photonics21 cPPP, is a digital innovation hub for photonics. In order to accelerate the uptake of photonics technologies by the European industry, and thereby help to boost competitiveness and to foster new business and business models, [PhotonHub Europe](#) has established a unique European full-service one-stop-shop Photonics Innovation Hub in a manner which is deeply rooted within the wider ecosystem of innovation hubs and manufacturing right across Europe for maximum coverage, leverage, impact and long-term sustainability. PhotonHub Europe offers tailored advice for prototyping, upscaling, and manufacturing across all industry sectors, supporting every step of the way towards successful photonics innovation. Over the last 4 years, the PhotonHub has addressed 100 innovating SMEs and has helped them achieve 750M€ increased revenues and 250M€ increased venture capital, while it created 1000 EU jobs.

For more information on the funded projects: <https://www.photonics21.org/ppp-projects/>

BATT4EU Partnership

Several BATT4EU projects are contributing to the future battery passport. One of the main ongoing efforts in the European context is the [Battery Pass](#) project financed by the German Federal Ministry for Economic Affairs and Climate Action. The Battery Pass is highly collaborative, as there is close collaboration with European and International partners, including the Global Battery Alliance. The Battery Pass is also collaborating with two other projects with a different scope, but whose work content and data exchange will likely influence the future battery passport: CATENA-X and the CIRPASS project. The [Catena-X](#) is aiming to develop a trusted data space for the automotive sector, which will allow for entities to track materials along the value chain and share data with collaborators, ensuring data sovereignty. The [CIRPASS](#) project has been doing preparatory work for the deployment of digital passport products more broadly but has also looked at the content that will need to go into the battery passport. Next to CIRPASS, several other ongoing projects under Horizon 2020 and Horizon Europe are also undertaking activities on the battery passport, albeit in a more focused way and linked to their main research topics. [BATRAW](#), [FREE4LIB](#) and [CUBER](#). The BATT4EU Partnership will keep this topic in focus for the next years, supporting the different H2020 and Horizon Europe projects with their dissemination efforts.

Other BATT4EU projects are contributing to the targets of the Critical Raw Materials Act (CRMA) as they cover the raw materials supply chain; from processing to recycling, including [ENICON](#), [LiCORNE](#), [RELIEF](#), [RESPECT](#), [FREE4LIB](#), [RHINOCEROS](#), [GR4FITE3](#), [SOURCE](#), [BatteReverse](#), [REBELION](#), [RECIRCULATE](#) and [REINFORCE](#) that aim to bring new and advanced technologies to improve recycling efficiency and processing capabilities.

For more information on the funded projects: BATT4EU projects – [BATT4EU](#), <https://bepassassociation.eu/funding-opportunities/funded-projects/>

Institutionalised Partnerships

Innovative Health Initiative (HI)

The IHI initiative has plenty of impact cases in a number of areas. For instance, the [GetReal Initiative](#) projects developed new tools and resources to help advance the use of real-world evidence (RWE) in drug development and healthcare decision-making, such as the RWE Navigator, The GetReal Academy, the GetReal Trial Tool and the Aggregate Data Drug Information System (ADDIS). The [GetReal Institute](#) was also set up in 2021 as a self-sustaining non-profit entity to increase the quality of RWE generation and advance its appropriate use in drug development and regulatory, health technology assessment and reimbursement practices and processes across Europe. The [HARMONY Alliance](#), the European Public-Private Partnership for Big Data in Hematology resulting from HARMONY and HARMONY PLUS projects on blood cancers, built a robust, open, collaborative research community that leverages big data to improve treatments and more effective strategies for patients with hematological malignancies. The HARMONY Big Data Platform contained 150.000 patients' datasets by December 2022 and was expanded with new services, including access to large longitudinal datasets, real-world evidence data, and virtual / in-silico data. The [conect4children](#) (c4c) project set up a pan-European paediatric clinical trials network comprising 20 National hubs in 21 European countries providing access to more than 230 clinical sites able to conduct high-quality multinational paediatric clinical trials for all disease areas and all phases of the clinical drug development. [COMBACTE-CARE](#) focuses specifically on the challenges posed by carbapenem-resistant Gram-negative bacteria. The consortium worked on a novel antibiotic product combination, Aztreonam-Avibactam (ATM-AVI), which Pfizer considered through an [official communication](#) to be effective and well-tolerated in treating infections caused by Gram-negative bacteria.

*Compiled from the BMR 2024 fiche.

For more information on the funded projects and results: <https://www.ih.europa.eu/projects-results>

EDCTP 2 (predecessor of EDCTP 3)

The Stopping Transmission Of Intestinal Parasites (STOP)'s ALIVE trial, funded by EDCTP2, has demonstrated that combining a fixed dose of albendazole and ivermectin in one single pill is safe and- if preliminary results are confirmed- effective against whipworm (*Trichuris*) and the other species of soil-transmitted helminths (STH). The [STOP2030](#) project has now received funding from the Global Health [EDCTP3 Joint Undertaking](#) for the final phase of development of this new pill, including its registration by the European Medicines Agency. If successfully implemented, the new co-formulation could help countries achieve the WHO's objective to reduce infection prevalence in children below 2% by 2030 and eliminate STH as a public health problem.

*Compiled from the BMR 2024 fiche.

For more information on the funded projects: <https://www.edctp.org/projects-2/>

EuroHPC

[Three of EuroHPC JU's pre-exascale supercomputers have been ranked in the top 10 fastest supercomputers in the World.](#)

LUMI HPC (Finland) is ranked in 5th place, Leonardo (Italy) is ranked in 6th place and MareNostrum 5 (Spain) enters in 8th place. All other EuroHPC supercomputers remain ranked amongst the world's most powerful and greenest supercomputers. The EuroHPC JU has signed hosting agreements with six sites across Europe to host and operate EuroHPC quantum computers. These quantum computers will allow European users to explore a variety of quantum technologies coupled to leading supercomputers. The six new EuroHPC quantum computers will be integrated into existing supercomputers in Czechia, France, Germany, Italy, Poland and Spain. The project

titled Advancing [Spatially Fractionated Radiation Therapy \(SFRT\)](#) aims to advance and optimise the use of SFRT. By using supercomputing to analyse the images to optimize this therapy, doctors will be able to prescribe evermore precise radiotherapy treatments to cancer patients. This pioneering project has significant societal impact, offering a completely innovative approach to radiotherapy. By generating safer and more efficient treatments, the new techniques could reduce side effects compared to traditional RT methods. Clinical trials in proton minibeam radiotherapy are run by the [Institut Curie](#), highlighting the real-world potential of this research.

*Compiled from the BMR 2024 fiche.

For more information on the funded projects: https://eurohpc-ju.europa.eu/research-innovation/our-projects_en

Shift2Rail (predecessor of Europe's Rail JU)

Shift2Rail has been promoting the competitiveness of the European rail industry, ensuring the attractiveness of rail as a safe and sustainable low carbon transport mode. The research work initiated within the Shift2Rail Programme soon demonstrated the need for harmonization of operational procedures across Europe. The signing of a Memorandum of Understanding between Shift2Rail, CEN and CENELEC has been pivotal in this regard. Promising specific technologies, such as noise and vibrations solutions (e.g. innovative bridge dampers), have also been validated within its programme, having the potential to reduce negative externalities. A special impact case has also been the field tests of automated freight train operation (ATO) under European Train Control System (ETCS) that were successfully performed for the first time in the history of European rail. After a two-year journey, the [Automated Rail Cargo Consortium \(ARCC\)](#) led by DB Cargo, in collaboration with the X2Rail-3 consortium led by Thales, successfully activated four different ATO on-board units in mixed traffic, based on the Shift2Rail requirements towards interoperability and

interchangeability. The results that were achieved marked a key milestone for the “Shift2Rail” Joint Undertaking, delivering important results for the sector.

For more information on the funded projects: https://projects.shift2rail.org/s2r_projects.aspx; <https://rail-research.europa.eu/eu-rail-projects/>

The successor of Shift2Rail, Europe's Rail Joint Undertaking (EU-Rail), organised a train ride in September 2024, on a dedicated European train, from Brussels to InnoTrans 2024 in Berlin. The train journey began with a kick-off event on board the train in the presence of Mr Georges Gilkinet, Belgian Deputy Prime Minister and Minister for Mobility, Ms Tilly Metz, Member of the European Parliament, Mr Kristian Schmidt, Director, Land Transport at the Directorate-General for Mobility and Transport, European Commission, Ms Paloma Iribas Forcat, Chairperson of the Management Board, European Union Agency the Railways, Mr Rodrigo da Costa, Executive Director of the European Union Agency for the Space Programme and Mr Giorgio Travaini, Executive Director of the Europe's Rail Joint Undertaking. This session showcased cutting-edge rail technology and the outputs of the current and inherited R&I Programme of EU-Rail. Successful partnership results were highlighted emphasizing benefits for end-users, operators, infrastructure managers, and suppliers. When the European train arrived in Berlin in the afternoon, a welcome ceremony was held at Berlin Hauptbahnhof in the presence of Mrs Ute Bonde, Senator for Urban Mobility, Transport, Climate Action and the Environment for the State of Berlin, Mr Richard Lutz, CEO of Deutsche Bahn, and the high-level guests disembarking the train.

For more information on the produced innovations: <https://rail-research.europa.eu/calendar/innotrans-2024/>

EMRP and EMPIR (predecessor of the European Metrology Partnership)

The European Metrology Partnership continues the work of its predecessors, [EMRP and EMPIR that have made significant contributions in a variety of sectors and industries](#). Case studies from EMRP and EMPIR projects demonstrated their economic impact, in terms of actual and projected sales of innovative products influenced by the programmes, of 1,627 million Euro. Early adopters of the research results, including the instrumentation and accredited laboratory sector, estimated that 340 million Euro is directly attributable to the programme. While this was expected to rise as further projects were completed, new products brought economic benefits to many of the end-users based on [42 case studies demonstrating examples of secondary economic impacts](#). Three of the Metrology programmes' themes explicitly focused on social impact in the areas of [health](#), [the environment](#) and [energy](#) by addressing the need for accurate data and appropriate instrumentation. Twenty-eight case studies demonstrate social impact in these themes. The case studies provide examples of the adoption of project outputs and show that the route to longer-term impact has commenced. Besides achieving a coherent, sustainable and integrated European metrology landscape, EMRP and EMPIR research contributed to the redefinition of the International System of Units. In terms of scientific impact, the more than 2,000 scientific papers that were published by EMRP researchers are above world averages in terms of citations, impact factor and highly cited papers. In addition, the level of [international co-authored peer-reviewed papers](#) has increased from 32 % to 47 %.

For more information on impact: <https://www.euramet.org/metrology-for-societys-challenges>

Fuel Cell and Hydrogen Joint Undertaking (Predecessor of Clean Hydrogen)

The activities carried out by the FCH JU and follow-up partnerships have contributed to placing the EU in the global lead for key hydrogen technologies, notably on electrolysers, hydrogen refuelling stations and megawatt-scale fuel cells. Several technologies were developed and managed to come close to maturity, alongside the development of high-profile projects in promising applications. For example, [GrInHy2.0](#) is the world's biggest high temperature solid oxide electrolyser, demonstrated in August 2021. The project [HEAVEN](#), in September 2023, managed to deliver a hydrogen fuelled passenger plane, which completed the first ever flight using liquid hydrogen as a fuel.

*Compiled from the BMR 2024 fiche.

For more information on the funded projects: https://www.clean-hydrogen.europa.eu/projects-dashboard_en

Clean Sky 2 (Predecessor of Clean Aviation)

Clean Sky 2 has significantly contributed to ensuring the EU's technological sovereignty in the aviation sector. Some examples are the following flagship demonstrators: the [Clean Sky Flying Test Bed 2](#), which took to the skies in January 2022; the [RACER demonstrator](#), a full-scale fast helicopter demonstrator; the [Multi-Functional Fuselage Demonstrator](#), which is a unique 8-metre-long fuselage barrel that serves as a platform for examining the full potential of [thermoplastic composites](#); the [Tech turboprop engine demonstrator](#); and the [UltraFan engine](#), which is capable of running on 100 % Sustainable Aviation Fuel. Clean Sky 2 has also led the way in setting new global standards for safe and clean air transport. Since 2022, the [CAJU has collaborated closely with the European Aviation Safety Agency \(EASA\) under a Memorandum of Cooperation \(MoC\)](#) to advance European R&I and create more

efficient certification processes, in view of setting new global standards for safe, reliable, affordable, and clean air transport.

*Compiled from the BMR 2024 fiche. For more information on result stories: <https://www.clean-aviation.eu/clean-sky-2/results-stories>

ECSEL JU and KDT JU (predecessors of Chips JU)

The collaborative approach favoured by the large projects supported by the Chips JU is essential to drive innovation further, just as the predecessor programmes did. Recently concluded projects showcase the importance of the results produced. For example: [AI4DI](#) shaped the embedded and edge AI, and its outcomes have significantly impacted innovation and competitiveness across various industries. [Arrowhead Tools](#) effectively reduced automation engineering costs through innovative paradigms and provided open source and free-to-use technology. [UltimateGaN](#) enabled mass production of essential chips for Europe's technological future in telecommunication.

*Compiled from the BMR 2024 fiche.

For more information on result stories: <https://www.chips-ju.europa.eu/Projects/>

Bio-based Industries JU (predecessor of the Circular Bio-based Europe JU)

The BBI-funded [PEference](#) project aimed to build a unique, industrial scale flagship plant for the production of bio-based chemicals from agricultural residues. The resulting bio-based building block, FDCA, can be used to produce a wide range of circular bio-based materials, including polyethylene furanoate (PEF), a 100% bio-based plastic that outperforms traditional fossil-based PET. The completed plant will support the increasing demand for sustainable packaging and textile solutions across many industries by producing 5000 tonnes of FDCA per year. The [SWEETWOODS](#) project is building a first-of-its-kind, highly efficient industrial biorefinery to produce high-

value compounds using hardwood waste as a raw material. The biorefinery is part of a new circular industry that is advancing an innovation hub in Estonia working on forestry based chemicals and materials. The [EFFECTIVE](#) project team has designed bio-based polyamides and polyesters from renewable plant-based sources, such as leftovers from the sugar beet industry, rather than crude oil. With the improved materials, the project has already produced sportswear, a swimsuit and biking pants, and an entirely bio-based nylon carpet for cars. Besides being more easily recycled, these products will potentially reduce CO₂ emissions by 28% to 45% compared to the current products on the market. The CBE JU-funded [Grete project](#) has revolutionised how textile fibres can be made from wood residues. The project developed novel chemicals called ionic liquid (IL) that can increase the safety, sustainability and economic viability of wood-based textile fibre production, while avoiding the use of toxic and explosive chemicals for processing. Another innovation was the development of innovative fibre modifications that can enable water-scarce finishing treatments and dyeing, thus addressing the overuse of water. [URBIOFIN](#) developed a proof of concept model for an urban biorefinery as a more sustainable alternative to current processing practices. The biorefinery concept was tested first at lab and pilot scale, before being demonstrated at a semi-industrial scale, across three Spanish sites. The next step for the team is to scale up their urban biorefinery to a first-of-its-kind industrial level.

For more information on the projects' achievements funded by CBE JU and BBI JU <https://www.cbe.europa.eu/achievements>

EIT InnoEnergy

EIT InnoEnergy has supported 500+ sustainable energy innovations and invested in 200+ companies, all on track to generate 110 billion in revenue and save 2.1 gigatonnes of CO_{2e} cumulatively by 2030. 90% of its start-ups already work with global brand names including ABB, BMW, EDF, Engie,

Volkswagen, Galp, Schneider Electric, Siemens, Naturgy. The EIT InnoEnergy Master School has attracted students from almost 100 countries and now has more than 2,000 graduates making an impact in the energy transition all around the globe. EIT InnoEnergy is also spearheading the way to a decarbonised Europe by 2050 through the leadership of three [industrial alliances](#): battery storage, green hydrogen and solar photovoltaics. These alliances bring together the knowledge and experience required to support large industrial projects, which directly impact the energy trilemma: reducing the cost of energy, limiting greenhouse emissions and increasing availability and security.

For more information on the solutions and innovations offered: <https://www.innoenergy.com/discover-innovative-solutions/online-marketplace-for-energy-innovations/>

EIT Food

EIT Food presents important start-up cases. [Onego Bio](#) is a young but multi award winning Finnish startup and member of EIT Food's RisingFoodStars, producing animal-free egg protein using precision fermentation. This technology allows it to produce bioidentical egg protein, with great potential impact on environment and animal welfare, supply chain stability, global health and food security. As an EIT Food RisingFoodStar, Onego Bio has received €1 m in investment from EIT Food, benefited from [ScaleUp Scan](#), enjoyed preferential access and speaking slots in EIT Food's events, and a seat in EIT Food's Startup Focus Group, where the main challenges faced by startups in Europe are discussed, both regulatory and non-regulatory.

For more information on the solutions and innovations offered: <https://www.eitfood.eu/innovation>

EIT Climate

EIT Climate-KIC is a leading player in accelerating and scaling climate action through place-based transformations. The approach has been designed to foster coordinated systemic change and includes examples such as [circular and low-carbon economy in Slovenia](#) and [climate-neutral food system transformation in Ireland](#). EIT Climate-KIC has also supported European cities to accelerate and consolidate their climate transformation journeys including Amsterdam, Madrid and [Krakow](#), while the new [Pathways2Resilience](#) flagship initiative aims to foster climate resilience in 100 European regions. To disseminate the knowledge produced, Climate-KIC applies various initiatives such as the [Climate Leadership Academy](#) and [Climate Journeys](#), engaging wide audiences spanning school students to business leaders. Today, the [EIT Climate-KIC Alumni Association](#) comprises over 2,000 highly skilled professionals from Europe, the Americas, Asia, and Africa. The [Climate Launchpad](#) has become a leading global green business competition, while [ClimAccelerator](#) has incubated over 2100 companies worldwide. The recently launched [1.5 Investing for 1.5C initiative](#) has engaged leading venture capital impact funds to invest in accelerating and scaling climate action. Together with other leading foundations, philanthropists, corporations and public institutions, including the Club of Rome and the Open Earth Foundation, Climate-KIC co-leads the [Systemic Climate Action Collaborate](#) to foster system-wide transformations focusing on prosperity, inclusion and climate resilience.

For more information on the innovation project portfolio: <https://www.climate-kic.org/in-detail/2020-innovation-portfolio/>

Co-funded Partnerships and JPIs

Biodiversa+

Biodiversa+ partners are committed to transferring knowledge and disseminating research results, produced in projects they fund, to a range of stakeholders, in order to achieve societal impact. A key tool to inform decision-making at all relevant scales are the Biodiversa policy briefs that synthesize relevant scientific evidence and link it up to major (European) policies. The process is coordinated by Biodiversa and conducted by knowledge brokers that act as interpreters/intermediaries in the dissemination of key Biodiversa-funded research to decision makers. For example, Biodiversa policy briefs helped bring some topics to the policy agenda, such as the [rise of infectious diseases](#) in the wild or the potential of [natural forest expansion](#) and its inclusion in land use planning and in the EU Forest Strategy, or raising awareness of the importance of EU policies on, for instance [forests](#) or [small mammals](#). These briefs also showcase the high potential of knowledge based tools and approaches for policy making, for example for [managing trade-offs](#) between ecosystem services or managing marine areas through [protection](#) or [sustainable use](#). Also highlighted are promising tools for integrating climate change in [invasive alien species](#) policy, or for the governance of socio-ecologically resilient and effective [networks of Marine Protected Areas](#).

For more information on the funded projects: <https://www.biodiversa.eu/research-funding/funded-projects/> and find all current [Biodiversa policy briefs here](#).

JPI AMR

Around eighteen percent of the total investment made by JPI AMR has been directed to the priority area of Therapeutics where JPIAMR has invested approximately 24.5 million Euros and has supported 20 research projects through three different transnational project calls that have connected 98 researchers from 17 different countries. These projects include research on the discovery of new antibiotics and therapeutic alternatives, repurposing Neglected and Disused Antibiotics (ND-AB), designing combinations of ND-AB, antibiotic and/or non-antibiotic and improvement of current antibiotics and treatment regimens against pathogens identified in the WHO Priority Pathogens List. The JPIAMR discovery pipeline resulting from the funded research projects has a high level of diversity including direct acting molecules, potentiators or enablers, anti-virulence agents, repurposed agents, phage and nanobiotics. The research projects are addressing both traditional (45%) and non-traditional (50%) approaches to develop lead candidate. The research project [DesInMBL](#) developed the Beta-Lactamase Database that contains information on all β -lactamases described in the literature, as well as the crystallographic structures and kinetic data of these enzymes that have been deposited in other databases. Some research projects received additional external funding for complementary activities related to academia-industry research partnership. An additional outcome from the research networks is the development of policy measures and economic stimuli to minimise barriers for the development, availability and introduction of such new therapies and alternatives for AMR.

For more information on the funded projects: <https://www.jpiamr.eu/projects/#/>

CORE Organic I and II and Cofund (followed up by the CORE Organic Pleiades)

The CORE Organic Pleiades is an international network of 44 partners in 28 countries/regions, that joins forces to fund transnational research projects within the area of organic food and farming. The network is implemented under the Horizon Europe project OrganicTargets4EU. The [CORE Organic network](#) has existed since 2004. The current network period, CORE Organic Pleiades, is focused on increasing R&I funding to support the European Green Deal targets for organic food, farming, and aquaculture. Based on various assessments that have been carried out, some of the achievements include: the creation of a coordinated critical mass that has served as a basis for an organic research community; the capability to recognize novel technologies, emerging needs and new research fields not always covered by national funding, and to direct research efforts in those directions; the focus on innovation opportunities and solution-oriented research with potentially high impact in practice; influencing national policies, both indirectly (national plans refer to the CORE Organic ERA-NETs) and through direct contacts and support; or supporting access to research findings through the development of a range of sources, including the open-access database, Organic Eprints. CORE Organic has become a catalyst for further innovation and a flagship for the entire organic sector.

For more information on the funded projects: <https://www.coreorganic.org/Pages/Research-projects/Research-projects.html>

NEURON

The ERA-Net NEURON Cofund2 is focused on neurological and mental disorders and holds a strategic position in bringing pre-clinical and clinical research communities closer together and fostering translational research, while covering the entire value chain. Research into the brain, the nervous system and their diseases greatly benefits from joint funding schemes by the ERA-NET NEURON network, including 35 research funding organisations and ministries from 28 countries, that support basic, clinical and translational research and also address legal, ethical and societal aspects. Some of the excellent results that have been showcased as success stories include, for instance, the [DiSCoVeR](#) project that was set to examine the effects of a novel, home-based treatment approach to alleviate depression. To achieve this, a videogame training cognitive control combined with non-invasive brain stimulation (NIBS) was self-applied by the patients in the comfort of their home, offering promising prospects for wider accessibility, compliance and effectiveness. The project led to a digital tool called CURRENT, an advanced computer-vision tool for stimulation electrode placement at home, designed to improve home-based therapy for psychiatric and neurological disorders. Developed through DiSCoVeR, the system where the CURRENT algorithm is embedded, is now being utilized in a multinational randomized clinical trial investigating the potential effects of NIBS and cognitive training in individuals with major depression. NEURON promotes research translation via the generation of patents, software developments and startups. Impact for society is maximized by involving patients at every level, disseminating research results and communicating with the interested public.

For more information on the success stories: <https://www.neuron-eranet.eu/news-publications/publications/success-stories/>

The European Partnership on Innovative SMEs

Innovative SMEs is based on Eureka, a network of innovation funders in 37 countries and the EC, that supports SMEs to innovate in any area and bring new technologies to the market with the aim of increasing European competitiveness, innovation and internationalisation. Innovative SMEs will deploy the funding programmes of Eureka, that present a number of impact cases. With an average success rate of 29%, [Eurostars](#) can boast of several benefits for the business participants of the funded projects. Based on the evaluation and assessment studies carried out over the years, the participating companies experience an average of 15% annual turnover increase, while 69% of companies enter new markets and 68% achieve improved market shares. Participants state that R&D relationships transform into business relationships and the visibility of their organisations increase in their specialist fields. As an example of a concrete impact case, the Austrian start-up [Revo Foods](#) is revolutionising food production through their 3D printed plant-based seafood alternatives. The company raised millions in public and private funding (also from the EIT Food) to deploy their production process at scale. Under Innowide, a programme that encourages SMEs to explore markets outside Europe, the Slovenian company [Flux Performance](#) is on a mission to deliver a greener version of dirt bike thrills to amateurs and professionals alike across the US. The [Investment Readiness](#) programme brought together PolyChord, a spin-out of the Cambridge University Astrophysics using AI for simulation and process improvement, with AVL, a global powertrain player. This collaboration resulted to a tool that optimises complex battery simulations, making them more accurate and 2000 times faster.

For more information: <https://eurekanetwork.org/about-us/european-partnership-on-innovative-smes/>

Water JPI (predecessor of Water4All)

The Water JPI aims to enhance collaboration in water research and innovation across Europe and beyond. Supported through several ERA-NET Cofund actions and CSA grants under H2020, Water JPI has supported more than a hundred projects and produced a wide range of policy-support and research and innovation-oriented papers. Water JPI's policy briefs have served as prime tools for informing decision-makers, stakeholders, and the public about pressing water-related challenges and potential solutions. To mark the beginning of the “Decade on Nature Restoration”, the Water JPI, for example, delivered a [policy brief on ecosystem services](#) that emphasises the critical role that natural ecosystems play in water management and sustainability. It outlines how ecosystem services – such as flood regulation, water purification, and biodiversity support – can enhance policy and practice in the water sector. By integrating ecosystem-based approaches into water governance, the brief advocates for more holistic and effective management strategies that address ecological, health and human needs. The recommendations nudge collaboration amongst stakeholders, thus promoting the incorporation of ecosystem services into water decision-making processes.

For more information on the funded projects and other achievements: <http://www.waterjpi.eu/joint-calls> & [Water JPI Showcase Campaign – Water challenges for a changing world](#)

EJP Rare Diseases (RD) (predecessor of ERDERA Partnership)

Following the achievements of ERA-NET E-RARE, the EJP RD programme aimed to create a cohesive RD research ecosystem to promote research, innovation and collaboration across sectors to benefit RD patients. EJP RD has proven to be fundamental in decreasing fragmentation of RD expertise and research resources while emphasizing a patient-centered approach. The programme elaborated tools and services like the [Resource Finder Mind Map](#) and the [EJP RD Virtual Platform](#) that opened a single door to discover, query and eventually access patient registries, biobanks, genomics & multi-omics repositories, knowledge bases, resources (such as animal models and cell lines libraries), omics deposition & analysis platforms, and translational & clinical research supporting material and services, in a coordinated manner. The platform also incorporates systems biology tools and methods to help overcome the challenges posed by limited patient and sample data. Furthermore, a reference library of resources specific for rare disease translational medicine, the [EJPRD IMT – Innovation Management Toolbox](#) and [Rare Diseases Clinical Trials Toolbox](#) were also created providing support for clinical trial readiness. The EJP RD has also had a significant impact through its training and mentoring activities, helping researchers translate their findings into practical applications, reaching over 10,000 trainees worldwide. EJP RD developed a [Short guide on patient partnerships in rare diseases research projects](#) and supported funding of Patient Advocacy Organisations. EJP RD also strengthened connections with national stakeholders by establishing National Mirror Groups in the participating countries that aligned European and national research policies, addressing policy gaps, and advocating for reforms. Under Horizon Europe, the story continues as ERDERA will now leverage EJP RD's sustainability plan and an exit strategy to ensure its long-term viability by linking development and delivery efforts. At the heart of ERDERA are the European Clinical Research Network and

Acceleration Hub, dedicated to accelerating diagnostics, clinical trial readiness, innovative therapies development, and outcome research.

For more information on funded projects: <https://funded-projects.ejprarediseases.org/>

JPI Urban Europe (predecessor of DUT)

JPI Urban Europe was established in 2010 to address the global urban challenges with the ambition to develop a European research and innovation hub on urban matters and create European solutions by means of coordinated research and innovation. One of the key achievements of JPI Urban Europe has been the strong stakeholder involvement and strategic programme management. Local authorities and municipalities, business, and citizens from twenty European countries, and an international outreach, were mobilised to translate global strategies into local action, to make the urban change happen. [Driving Urban Transitions to a Sustainable Future \(DUT\)](#) - the new programme of JPI Urban Europe since 2022 - joins the forces of 27 countries in three transition pathways (Circular Urban Economies, Positive Energy Districts and 15-Minute City), with a close link to the European mission of 100 climate-neutral and smart cities. The JPI Urban Europe Projects Catalogues series issued since 2016, provides a comprehensive overview of project results and solutions, some of which are already active in Europe's cities today ([food, water and energy nexus](#) and [urban migration](#)). By looking at cities from a systemic point of view helped to better understand the food-water-energy system's complexity and develop novel solutions including multi-level governance and management. By framing the Positive Energy Districts (PED) concept and its elements, working closely with cities and testing the concept in Urban Living Labs, JPI UE/DUT projects provided concrete support in terms of tools and methods, leading to a number of PED projects in cities across Europe.

For more information on the funded projects: <https://jpi-urbaneurope.eu/projects/#>

Blue Bioeconomy ERA-NET Cofund (one of the predecessors of the Sustainable Blue Economy Partnership - SBEP)

The Blue Bioeconomy ERA-NET Cofund (BlueBio) was a coordinated R&D funding scheme to strengthen Europe's position in the blue bioeconomy. The goal was to identify new and improve existing ways of bringing bio-based products and services to the market, funding projects along the whole value chain. While finding new ways of creating value from the blue bioeconomy, the funded projects encountered regulatory barriers that hindered the further development of their products and solutions. To address these barriers, BlueBio wrote a [policy brief "Connecting the dots for a circular blue bioeconomy: from science to policy and regulatory solutions"](#) that addressed the need for regulatory reform in authorising algae as an ingredient and to valorise aquaculture and fisheries side-streams. The policy brief was presented at an [event in the European Parliament hosted by MEP Clara Aguilera](#), with interventions from MEP Catherine Chabaud, representatives from DG MARE and DG SANTE, BlueBio project coordinators, and representatives from the food safety, algae, fisheries and aquaculture sectors. The event resulted in a workshop on the need for policy reform in European aquaculture in October 2024 organised by the Hungarian Presidency of the Council of the European Union. The policy brief was also used as a base for [Joint AC Advice on "Valorisation of fisheries and aquaculture by-products"](#) by the Advisory Councils for North Sea (NSAC), Market (MAC), Aquaculture (AAC) and Outer Regions (CCRUP). The Joint Advice is greatly appreciated by industry actors in Europe who need regulatory reform to implement the Green Deal Europe needs.

For information on the funded projects:

[Projects - BlueBio Cofund](#)

The successor partnership SBEP builds upon the legacy of previous regional initiatives while adding a cross-basin dimension and incorporating the thematic areas of the previous Cofund initiatives like Blue Bio as well as the ERA-NETs [COFASP](#) and [ERA-MBT](#). SBEP has a strong impact-oriented approach. To maximize the impact of the Partnership, several measures are implemented. These include the co-branding of the call by the UN-Decade of Ocean Science for Sustainable Development with funded projects joining the UNESCO/IOC efforts to contribute to the global dimension, making the application of the Theory of Change concept mandatory, with stakeholder involvement during all stages of the projects, and strongly recommending cooperation with private partners. To facilitate the market uptake of the solutions produced, specific training is organised for project participants, while clusters of projects are established dealing with the same thematic area. Portfolios of projects on common domains will also be developed by the Partnership, including ongoing projects financed at the national level or from other European instruments/programmes.

Abbreviations

AC: Associated Country

DG: Directorate General

FP: Framework Programme

FP6: Framework Programme 6 (2002-2006)

FP7: Framework Programme 7 (2007-2013)

FP8: Framework Program 8, Horizon 2020 (2014-2020)

FP9: Framework Program 9, Horizon Europe (2021-2027)

GBARD: Government budget allocations for R&D

H2020: Horizon2020 corresponding to FP8.

HE: Horizon Europe corresponding to FP9

JPI: Joint Programming Initiative

MEP: Member of the European Parliament

MS: Member State

R&D: Research and Development.

R&I: Research and Innovation
