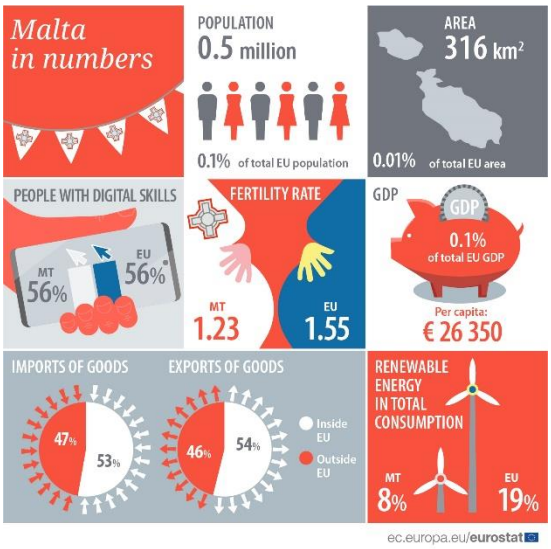
70 years of solidarity: A historical overview of the European R&D programmes



Most of the following are extracts from the European Parliament's publication EU framework programmes for research and innovation, Evolution and key data from FP1 to Horizon 2020 in view of FP9. The article continues building on the current Horizon Europe negotiations, and on other R&I funding initiatives available on a local, European, and international level.

Economic and political objectives linked to the control of energy sources – coal and nuclear energy – were at the root of the establishment of the European Coal and Steel Community (ECSC) in 1951 and the European Atomic Energy Community (Euratom) in 1958. The treaties establishing these communities included the development of the first research and technology programmes at Community level. Article 55 of the ECSC Treaty tasked the High Authority with encouraging technical and economic research with funds provided by the treaty. Under Article 4 of the Euratom Treaty the Commission is to carry out a Community research and training programme in nuclear research. The Joint Nuclear Research Centre (JRC) was also established under the Euratom Treaty as an internal Community research centre managed by the Commission. During that period Community research was limited to those specific energy fields, as the 1958 Treaty of Rome establishing the European Economic Community (EEC) did not include research as an area of competence for the Community.

As a result of this situation, research cooperation between European countries was progressively established outside the Community framework under intergovernmental initiatives: the European Organisation for Nuclear Research (CERN) was established in 1953; the European Southern Observatory (ESO) in 1962; and the European Molecular Biology Organisation (EMBO) in 1963.

European Cooperation in Science and Technology (COST) was founded in 1971 as an intergovernmental framework. COST launched concerted actions where various states opted à la carte to collaborate and exchange information on selected research fields (information science, telecommunications, metallurgy, materials, and environment). The intergovernmental setting offered the possibility for non-Community countries to take part.

In June 1972, Altiero Spinelli, a strong promoter of the Community approach, presented a communication developing the idea of a Community policy in research and development. In October 1972, a Community summit of Heads of State or Government decided that the Community should adopt new policies in the field of industrial, energy, technology and education policies. As the EEC Treaty did not provide a legal basis for conducting and funding research programmes, it was agreed that a broad application of Article 235 of the EEC Treaty would be used.6 In parallel the JRC was reformed, resulting in the centre losing its focus on nuclear energy and becoming a part of the wider Community research policy.

Various types of Community research action were defined. The JRC, as the internal research institution of the Commission, would conduct what would be known as direct actions whereas Community research programmes undertaken outside the JRC by public or private research institutions would be known as indirect actions. The Community would also take part in concerted actions such as those undertaken by COST, in which it would support coordination activities only, not research projects.

Formulated by the new Commissioner for research, Ralf Dahrendorf, in May 1973, Community research policy was geared towards the creation of 'an effective single area for European science' to be based on two dimensions: the coordination of national policies to avoid duplication and cooperation and competition between European entities (universities, research centres, researchers).

In May 1973 the first non-nuclear direct actions were adopted by the Council in the field of standards, environment and earth observation. They were complemented by the first indirect Community research programme adopted in June 1973. These programmes all referred to Article 235 of the EEC Treaty as their legal basis.

The January 1974 Council resolution on an outline programme of the European Communities in the field of science and technology mentioned that Community civil research programmes would aim to support the sectoral policies of the Community. They should be integrated and contribute to the development of a common policy on science and technology. To select research programmes relevant to the Community, the Commission established a first set of criteria based on the choices already made for the first programmes launched. Community research programmes should demonstrate greater efficiency and rationalisation of efforts; be transnational; cover areas requiring large markets; and address common needs.

Over the following 10 years, more than 25 research programmes were approved by the Council in fields such as energy, materials, resources, environment, health and living conditions or industrial research. The Council also adopted consecutive programmes for the dissemination of information related to the Community research programmes. Meanwhile, additional intergovernmental structures supporting research were also established in Europe outside the Community framework: the European Science Foundation (ESF) in 1974; the European Space Agency (ESA) in 1975 and the European Molecular Biology Laboratory (EMBL) in 1977.

The First Framework Programme

A Commission communication adopted in October 1981 recognised that Europe was 'falling behind its main competitors' and urgently needed 'to make the best use of its financial resources'. The Commission was proposing to establish a 'true Community strategy' for research with the aim of contributing to the implementation of other sectoral policies.

The framework programme (FP) would act as a concertation mechanism and should be revised regularly. It would define thematic priority areas that needed support and implement horizontal actions to stimulate the efficacy of Community research. The Commission would also establish an evaluation process for the FP and a policy for the dissemination of the results obtained. It also planned on strengthening its capacity to define the scientific needs of the Community.

In 1982, the Commission adopted two successive documents presenting the objectives and structure of the first framework programme (FP1). The FP was to become not only a programming tool but also a financial one. It was to help address the economic crisis and support the competitive capacity of the Member States. The FP was also to play a role in modernising public research organisation structures, limit duplication of research activities in the Community and limit intra-Community competition. Its implementation would involve making 'a real choice between national, international and Community action' and considering which actions brought added value to national activities.

FP1 was adopted by the Council in July 1983 for the period 1984 to 1987. The programme covered both Community research activities undertaken under the Treaty of Rome and the research programme under the Euratom Treaty. The resolution established the FP, its objectives and the processes and criteria for adopting the specific programmes implementing FP1. The budget in the proposal – ECU 3 750 million – was merely indicative: it corresponded to the sum of the budgets of the specific programmes planned for the period. The procedure used to adopt FP1 and its specific programmes was introduced in the EEC Treaty, giving a firmer legal basis to the FP. Implementation of the free movement of people required removal of the legal and social barriers impeding the mobility of researchers. In this context, the FP would progressively become a financial and programming tool to help establish the ERA.

The Eureka Programme

Proposed by France, and supported by Germany and the European institutions, Eureka was established by the Paris Declaration of July 1985. It was meant to complement Community programmes allowing for cooperation beyond the Community with a bottom-up approach, different from the top-down approach of the FP. The creation of Eureka illustrated the continued tension between the Community and intergovernmental approaches in the 1980s. Eureka and eurostars in Malta is represented by Malta Enterprise.

The Second Framework Programme

The preparation of FP2 began in September 1985 with the Commission communication presenting the priorities for the 1987 to 1991 period under the banner of a European technology community. The structure of FP2 was to resemble that of FP1 with thematic objectives and transversal actions. There would be a special focus on access and support to research infrastructure, research worker mobility, support for actors in the innovation process, including small and medium-sized enterprises (SMEs) and the involvement of non- Community European countries in the programme. The Commission expected an increase in the Community budget for research and hoped that the modifications proposed by the SEA would simplify and speed up Community decision-making procedures. The resolution establishing FP2 was adopted in September 1987 by the Council under the procedures established by the SEA. The approved budget was ECU 5.4 billion, a 30 % decrease from the proposed budget.

The Third Framework Programme

In 1989, while the specific programmes of FP2 were still being adopted, the process of preparing FP3 began based on the idea of maintaining a rolling mechanism where successive FPs would overlap. In June 1989 the Commission adopted a discussion document aiming to provide a framework for Community research actions in the 1990s. This document followed the first evaluation of science and technology in Europe published in November 1988.34 This evaluation had pointed out nine key challenges for Community research policy. The Commission insisted on the role played by the FP to support competitiveness and improve the quality of life of the citizens. It also noted the increasing importance of new technologies such as ICT, biotechnologies and new materials. It stressed the need for better coordination and integration of skills and expertise, for more interaction between basic and applied research and between the producers and users of the technologies. The decision establishing FP3 was adopted by the Council in April 1990 for the 1990 to 1994 period with a budget of ECU 5.7 billion. Delays in the adoption of FP4 led the Commission in July 1992 to adopt an additional budget of ECU 900 million for FP3 in March 1993, leading to an overall budget for FP3 of ECU 6.6 billion, a 14 % decrease from the initial Commission proposal.

The Maastricht Treaty

The treaty of Maastricht, which entered into force on 1 November 1993, modified the legal basis for the framework programme in the Treaty establishing the European Community (TEC) slightly, but these modifications had major consequences. The updated Article 130f broadened the scope of Community activities in research beyond simply strengthening the competitiveness of European industry to all research activities supporting any goal pursued by the Union. This made research policy a fully horizontal policy and allow it to cover basic research39 as well as research in the fields of health environment or social sciences for example. The subsidiarity principle – formally introduced in the treaty – was translated in research by setting Community and national research policies on an equal footing, requiring them to be 'mutually consistent'. The FP was now a fully-fledged financial tool as its adopted budget became the 'maximum overall amount' to be dedicated to research activities over the period considered.

The Maastricht Treaty modified the process for the adoption of the framework programme, which would, from now on, imply the adoption of several decisions:

- a decision from the Council and the Parliament regarding the structure of the FP and its budget for the period considered adopted under the co-decision procedure with unanimity in Council
- a Council decision on the rules of participation and dissemination of the results adopted under the cooperation procedure; and
- a Council decision for each of the specific programmes implementing the FP adopted under the consultation procedure.

These new procedures, different from those set up in the Euratom Treaty for the adoption of the nuclear research programme, implied that this programme could no longer be included in the FP and would be established under separate decisions.43 The Commission also decided that the structure of the FP should abide strictly by the list of four activity types set out in the Treaty (Article 130g):

- transnational/cooperative research, technological development and demonstration programmes on selective topics;
- cooperation with third countries and international organisations;
- dissemination and optimisation of the results of activities in Community research;
- stimulation of the training and mobility of researchers in the Community.

This strict interpretation of the Treaty would guide the definition of FP4 and FP5.

The Fourth Framework Programme

The Commission presented its first discussion document for the preparation of FP4 in September 1992. The Commission aimed to impose greater selectivity on the topics chosen, further integration of national, Community and European activities and increase the flexibility of Community activities. Whereas the Commission had proposed seven themes for FP4, the decision adopted by the Council and the European Parliament in April 1994 included 13 topics under the first activity of the FP, showing the difficulty in applying the principle of selectivity. Hence the topics remained similar those defined in the previous FPs: ICT, industrial technologies, environment, life sciences, agriculture and fisheries, life sciences, non- nuclear energy and transport. The novelty was the introduction of targeted socio- economic research. The adopted budget of ECU 11 billion was raised to ECU 11.7 billion in March 1996 and slightly increased again in December 1997 (by ECU 115 million). The final budget for FP4 was then slightly superior to the formal proposal from the Commission, and 10 % under the initially planned budget.

The Fifth Framework Programme

The preparation of FP5 was guided by the idea of extending the scope of Community research policy and its main instrument, the FP, to put it at the service of society. The Commission proposal for FP5 was adopted in April 1997 founded on the guiding principles of concentration and flexibility. The Commission proposed three thematic programmes under the first activity, shaped no longer as topics but as challenges: unlocking the resources of the living world and the ecosystem; creating a user-friendly information society; and promoting competitive and sustainable growth. The three other activities were also renamed as: confirming the international role of European research; innovation and participation of SMEs; and improving human potential. The budget was proposed simply as a percentage breakdown for each of these six actions. It was updated in August 1997 with a proposed budget for FP5 of ECU 14.833 billion. The preparation of the specific programmes for FP5 was conducted in parallel. The decision establishing FP5 was adopted in December 1998 together with the rules on participation and dissemination. The three original themes under the first activity were reorganised as four: quality of life and management of living resources;

user-friendly information society; competitive and sustainable growth; and energy, environment and sustainable development. The budget adopted for FP5 was ECU 13.7 billion, 7 % under the initial proposal of the Commission. The seven specific programmes plus the one for the JRC were adopted all together in January 1999. FP5 was the last framework programme adopted under the unanimity rule in the Council. The Treaty of Amsterdam, which entered into force on 1 May 1999, modified the procedure for adopting the FP, requiring only a qualified majority of the Council.

The European Research Area

In September 1999, while the implementation of FP5 was underway, Philippe Busquin became Commissioner for Research. Taking stock of the work of his predecessors, he successfully launched and developed the concept of the European research area (ERA), starting with a communication adopted in January 2000. The ERA was to be part of the Lisbon strategy, adopted by the European Council in March 2000 and aiming to make the European Union 'the most competitive and dynamic knowledge-based economy in the world'. After decades maturing, the ERA's objective was to address the 'fragmentation, isolation and compartmentalisation of national research systems' and 'the lack of coordination in the manner in which national and European research policies are implemented'. This concept formed a strong base for a research policy at European level. In this context the FP was to become the main tool to implement this policy.

The Sixth Framework Programme

In October 2000, the Commission adopted a communication regarding the broad direction for the next framework programme, FP6. The Commission adopted its proposal for FP6 in March 2001. The objective was to step up the role of the FP in supporting the development of scientific and technical excellence in Europe, to increase its impact on the innovation process and to reinforce its contribution to integrating European research. The Council and European Parliament adopted the decision on FP6 in June 2002, with the structure proposed by the Commission.

The previous four-activity structure was replaced entirely by a new one with three programmes. Under the first programme 'Focusing and integrating Community research', seven thematic topics were defined covering the same areas as in the previous FP with the addition of space and a topic on 'citizens and governance in a knowledge- based society'. Support for policy development, for SMEs and for international cooperation was also included in this programme. The second programme 'Structuring the ERA' covered support for innovation, human resources, research infrastructure and the topic 'Science and society'. Finally, the last programme 'Strengthening the foundation of the ERA' gathered together actions to coordinate activities and promote the coherent development of research and innovation policies in Europe. FP6 had a budget of €16.3 billion for the 2002 to 2006 period, an amount corresponding to the initial proposal from the Commission, although funds were reallocated between the various programmes. This was because of the multi-annual financial framework had been adopted in 1999 for the 2000 to 2006 period, meaning that the amount available for FP6 had already been agreed upon. Following the enlargement of the EU, the budget for FP6 was raised to €17.9 billion in April 2004.

The Seventh Framework Programme

FP6 triggered the diversification and multiplication of instruments to implement the FP. Coordination with national programmes was implemented by creating public-public partnerships, such as the ERA networks (ERANETs) and the Article 169 partnerships. Various public-private partnerships were also launched, including the European technology platforms (ETP).

In March 2002, the European Council had set the objective of achieving a research effort of 3 % of EU gross domestic product (GDP) by 2010. In 2003, the Commission prepared an action plan to reach this target, in which the FP and its instruments played a major role. A year later, in June 2004, the Commission adopted a communication regarding the guidelines for the preparation of FP7. The new FP would be designed to help reach the 3 % target with an increased

budget. It was to support the establishment of a 'critical mass' of resources, strengthen excellence and exercise a 'catalytic' effect on national initiatives. The Commission proposed six major objectives for FP7:

- creating European centres of excellence through collaboration.
- launching European joint technology initiatives (JTIs) as public-private partnerships.
- creating a European Research Council (ERC) promoting competition at EU level.
- making Europe more attractive to the best researchers.
- developing the research infrastructures of European interest.
- improving the coordination of national research programmes.

The enlargement of the Union (including Malta), was a challenge to make sure that all the new Member States could 'take the road to excellence'. Complementarity between the FP and the structural funds appeared necessary to reach that goal. Once again, the Commission pointed out the need to identify topics of major European interest and the need to support the Union's political objectives. The issue of security was to be added as a new topic. The Commission also noted that the low success rate under FP6 – 20 % of proposals received funded overall, with 50 % of the proposals evaluated as excellent financed – was a growing issue. In terms of implementation, it stressed the need to pursue and extend the use of the executive agencies, increase the transparency of the evaluations, reduce delays, and minimise the costs of preparing projects.

The Commission adopted its proposal for FP7 in April 2005, a few months after the Barroso Commission took office, with the objective of 'building an ERA of knowledge for growth'. In the context of the relaunch of the Lisbon strategy, FP7 was prepared not to be 'just another framework programme'. The extension of the scope of the FP towards exploratory research and innovation activities and the multiplication of funding schemes and instruments that had begun under FP6 pointed to the need to simplify and rationalise the implementation of the FP. The Council and the Parliament adopted the package of decisions regarding FP7 in December 2006. FP7 marked the end of the overlap between two consecutive FPs, as FP6 finished in December 2006 and FP7 started in January 2007. The length of the programme was extended to seven years to match the length of the multiannual financial framework (MFF). The budget of €50 billion adopted presented a strong increase compared with FP6 but a 30 % reduction from the initial Commission proposal of €73 billion.

The structure of the programme was renewed and organised around four objectives:

- cooperation: support for transnational research projects in 10 thematic areas, with security as a new area and space as an area on its own.
- ideas: supporting bottom-up research projects with individual grants via the establishment of the European Research Council (ERC).
- people: strengthening human capital in research and support mobility.
- capacities: supporting key aspects of European research and innovation capacities (infrastructures, regional clusters, SMEs, international cooperation).

Support for research and innovation activities was also provided under other EU programmes adopted at the same time as FP7 such as the structural funds and the Competitiveness and Innovation Programme. Moreover, the president of the Commission had in 2005 proposed setting up a new EU institution supporting research and innovation: the European Institute of Innovation and Technology (EIT). This new entity was financed outside FP7 under its own budget. The Malta Council for Science and Technology (MCST) is the Malta's Contact Organisation on the programme.

The Lisbon Treaty

The Treaty of Lisbon, which was signed in December 2007, entered into force on 1 December 2009. It renamed the treaty establishing the European Community as the Treaty on the Functioning of the European Union (TFEU). It clarified the competences of the EU and recognised research as a shared competence yet set limitations for the Union. The objectives of EU research policy were broadened: the original focus on 'Community industry', introduced in 1986, shifted to implementation of the ERA concept.

Article 179(1) TFEU made this last point a legal requirement stating that 'the Union shall have the objective of strengthening its scientific and technological bases by achieving a European research area in which researchers, scientific knowledge and technology circulate freely, and encouraging it to become more competitive, including in its industry, while promoting all the research activities deemed necessary by virtue of other Chapters of the Treaties'. However, the articles regarding the adoption of the FP remained unchanged.

The Innovation Union Policy

In March 2010, the newly appointed Barroso II Commission, with Máire Geoghegan- Quinn as Commissioner for Research, Innovation and Science, presented the Europe 2020 strategy for smart, sustainable, and inclusive growth. The 'smart' aspect of the strategy was grounded on developing an economy based on knowledge and innovation. The 'innovation union' was introduced as one of the seven flagship initiatives of the strategy aiming 'to improve framework conditions and access to finance for research and innovation to ensure that innovative ideas can be turned into products and services that create growth and jobs'. The target of 3 % of GDP invested in research and innovation, expected to be achieved in 2010, was reset for 2020.

The 'innovation union' flagship initiative was presented by the Commission in October 2010. This communication marked a clear shift by considering innovation to be 'the overarching policy objective' and that the EU and the Member States had 'to adopt a much more strategic approach to innovation'. The innovation union initiative was designed to address six priority areas:

- strengthening the knowledge base and reducing fragmentation.
- getting good ideas to the market.
- maximising social and territorial cohesion.
- creating European innovation partnerships.
- leveraging EU policies externally.
- making it happen.

The first priority aimed to deliver the ERA and to streamline EU research and innovation funding instruments. Hence the innovation union flagship policy provided a new framework that would influence the structure of the successor to FP7.

The Eight Framework Programme: Horizon 2020

The alignment of the FP with the MFF implied that the discussion about the various EU programmes and their budgets needed to take place before the Commission proposals for each programme. In February 2011 the Commission adopted a communication on the different programmes supporting research and innovation activities.86 The Commission noted that research and innovation were 'key drivers' for building the EU's future, enhancing the welfare of EU citizens and securing EU competitiveness, and that Europe needed to make a 'step change in its research and innovation performance'. The Commission proposed to merge existing programmes under a common strategic framework simplifying and streamlining existing instruments and rules to make 'EU funding more attractive and easy

to access for participants'. The ambition of the programme was to cover and support all the activities in the 'innovation chain in a seamless manner'.87 The Commission noted the underinvestment in research and innovation in Europe and the costly duplication and fragmentation of the support for these activities, and that national and regional governments were still largely working according to separate strategies.

The Commission adopted its proposal for the eighth framework programme, named Horizon 2020, in November 2011. Horizon 2020 would be structured around three pillars corresponding to the three priorities identified in February 2011: excellent science; industrial leadership; and societal challenges. The EIT would be integrated into the FP as would some parts of the Competitiveness and Innovation Programme. After two years of negotiations, the Council and the European Parliament adopted the regulations establishing Horizon 2020 in December 2013. The budget adopted for Horizon 2020 was €77 billion. One of the six initial challenges of the proposal was split in two resulting in seven identified societal challenges: health, food security, energy, transport, climate and environment, inclusive societies and secured societies. Two specific objectives were added to the three pillars on 'spreading excellence and widening participation' and on 'science with and for society'.

The rules of participation were made simpler and common to all parts of the programme. However, Horizon 2020 remained a complex programme managed by nine different directorates-general of the Commission and implemented by 22 different bodies. In June 2015 the Horizon 2020 budget was reduced to €74.8 billion by the adoption of the European Fund for Strategic Investments.

Further details could be found in the attached document, EU framework programmes for research and innovation, Evolution and key data from FP1 to Horizon 2020 in view of FP9.

The Malta Council for Science and Technology (MCST) is Malta's national contact point for Horizon 2020.

Partnership for Research and Innovation in the Mediterranean Area (PRIMA)

PRIMA fosters joint research and innovation activities among Mediterranean countries, aiming at developing innovative and sustainable solutions in agriculture, food production and water provision, encouraging application by communities, enterprises and citizens. It was set up by a joint decision of the European Parliament and the Council on 4 July 2017. PRIMA in Malta is represented by MCST.

The 9th Framework Programme: Horizon Europe

Currently, the Malta Council for Science and Technology is leading the Horizon Europe negotiations on behalf of Malta. On the 7 June 2018, the European Commission launched a proposal governing the next 2021-2027 Framework Programme for EU research and innovation. The proposal, titled ‘Horizon Europe’, is built on the premise that research and innovation (R&I) delivers on the priorities of citizens’, boosts the Union’s productivity and competitiveness, is crucial for sustaining the EU’s socio-economic model and values, and enables solutions to challenges in a systemic way. The Horizon Europe package consists of the following three proposals:

- a Framework Programme for Research and Innovation (Horizon Europe), including laying down its rules for participation and dissemination (as per Treaty on the Functioning of the European Union – ‘TFEU’);
- a specific programme to implement Horizon Europe (‘TFEU’);
- a Research and Training Programme under the Euratom Treaty

The primary objectives of Horizon Europe are to strengthen the EU's scientific and technological bases, contribute to achieving the Sustainable Development Goals (SDGs) and boost the Union's competitiveness. Moreover, Horizon Europe aims to help deliver on the Union's strategic priorities and supports the development and implementation of the Union's policies.

The debate surrounding the budget for the new EU Framework Programme is part of the wider deliberations on the general budget of the European Union. Horizon Europe will also take into account the UK's exit of the EU and the implications this has on the amount of available funding. The European Commission has suggested a budget of 91.4 billion Euros for Horizon Europe. The European Parliament, in contrast, has called for a budget of 120 billion Euros.

Despite Horizon Europe intending to continue using the three-pillar structure established under Horizon 2020, the titles of the pillars, as well as their scope, will change this time round.

Missions

Missions are a key novelty of Horizon Europe and aim to reconnect EU research with citizens by setting inspirational goals (as with President Kennedy's 'man on the moon' mission). The Commission believes that missions must have a direct link to positive experiences of citizens.

According to the criteria of Article 7 of the Horizon Europe proposal, missions must: have a clear EU-added value and contribute to reaching Union priorities; be bold and inspirational, and hence have wide societal or economic relevance; indicate a clear direction and be targeted, measurable and time-bound; be centred on ambitious but realistic research and innovation activities; spark activity across disciplines, sectors and actors; be open to multiple, bottom-up solutions. The Commission also considers that missions should connect with stakeholders and citizens, and should be mainly achievable via research and innovation.

5 mission areas have been identified, each with a dedicated mission board and assembly. They will help specify, design and implement specific missions in Horizon Europe.

- Adaptation to climate change including societal transformation
- Cancer
- Climate-neutral and smart cities
- Healthy oceans, seas, coastal and inland waters
- Soil health and food

European Partnerships

Horizon Europe will support European partnerships with EU countries, the private sector, foundations and other stakeholders. The aim is to deliver on global challenges and industrial modernisation through concerted research and innovation efforts. The Horizon Europe proposal lays down the conditions and principles for establishing European Partnerships. 3 types are proposed. Over 40 partnerships have been identified so far.

Co-programmed European Partnerships

Between the Commission and private and/or public partners. Based on memoranda of understanding and/or contractual arrangements

Co-funded European Partnerships using a programme co-fund action

Partnerships involving EU countries, with research funders and other public authorities at the core of the consortium.

Institutionalised European Partnerships

These are partnerships where the EU participates in research and innovation funding programmes that are undertaken by a number of EU countries. They are based on article 185 of the Treaty on the Functioning of the European Union (TFEU) which allows the EU to participate in such programmes.

These can also be public-private partnerships established under Article 187 TFEU, such as joint undertakings or EIT Knowledge and Innovation Communities.

These partnerships will only be implemented where other parts of the Horizon Europe programme would not achieve the objectives desired or expected impacts.

JPI Oceans

The European Commission proposed in a Communication in 2008 that the Member States of the European Union define common objectives and join forces for research and innovation to take place on major societal challenges. Joint Programming Initiatives (JPIs) were introduced.

The Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) was established in 2011 as an intergovernmental platform, open to all EU Member States and Associated Countries who invest in marine and maritime research. By joining forces, JPI Oceans focuses on long-term collaboration between EU Member States, Associated Countries and international partners. JPI Oceans in Malta is represented by MCST.

Eurostars

Eurostars supports international innovative projects led by **research and development- performing small- and medium-sized enterprises** (R&D-performing SMEs). With its bottom-up approach, Eurostars supports the development of rapidly marketable innovative products, processes and services that help improve the daily lives of people around the world. Eurostars has been carefully developed to meet the specific needs of SMEs. It is an ideal first step in international cooperation, enabling small businesses to combine and share expertise and benefit from working beyond national borders.

Eurostars is a joint programme between EUREKA and the European Commission, co-funded from the national budgets of 36 Eurostars **Participating States and Partner Countries** and by the European Union through Horizon 2020. In the 2014-2020 period it has a total public budget of €1.14 billion.

The role of SMEs for the economy has never been so important. Eurostars aims to bring increased value to the economy, higher growth and more job opportunities. Eurostars in Malta is represented by Malta Enterprise.

plumtri.org

Apart from the Framework Programmes a number of other initiatives on a local, European and International level are available. Apart from facilitating networking and knowledge sharing amongst the stakeholders involved, plumtri.org sevrves as a one-stop-portal for information on relevant funding opportunities and events. All the national funding provided by the Malta Council for Science and Technology and Malta Enterprise may be found on **https://www.plumtri.org/opportunities/funding**. Register now to keep yourself updated with the latest information.