

## European Technology Platforms

European Technology Platforms (ETP) were the first type of public-private partnership established in the research field at European level. These industry-led stakeholders' fora define and implement a strategic research agenda (SRA) aiming at aligning research priorities in a technological area. Without dedicated funding, ETPs remain coordination and advisory structures, helping to define the topics of research programmes at European, national and regional level.

### Policy context

In March 2000, the European Council [adopted](#) the Lisbon strategy, aiming to make the European Union 'the most competitive and dynamic knowledge-based economy in the world'. In the field of research, this was to be implemented by creating a [European Research Area](#) (ERA) in which national research systems would become interoperable and integrated. In March 2002, the European Council also [adopted](#) the Barcelona objective stating that 'overall spending on R&D and innovation in the Union should be increased with the aim of approaching 3 % of GDP by 2010', with the private sector providing two-thirds of this investment.

With the twin objectives of addressing the fragmentation of research and increasing private investment in research, the European Commission suggested creating [public-private partnerships](#) (PPP). In [October 2000](#) and [September 2002](#), the Commission proposed creating technology platforms at the European level. In March 2003, the European Council [supported](#) the idea of creating 'European technology platforms bringing together technological know-how, industry, regulators and financial institutions to develop a strategic agenda for leading technologies'.

### Defining the European technology platform concept

As defined in the Commission [action plan](#) for investing in research adopted in June 2003, European Technology Platforms (ETPs) would 'bring together the main stakeholders – research organisations, industry, regulators, user groups, etc. – around key technologies, in order to devise and implement a common strategy for the development, the deployment and the use of these technologies in Europe'.

In September 2004, the Commission published [guidelines](#) for the development of the ETPs which began to be established. ETPs were expected to provide major research and technological advances on strategically important issues. They aimed at creating pan-European partnerships to tackle complex and large scale technological issues, such as the hydrogen economy or nanoelectronics, two topics already identified in the 'quick start programme' [adopted](#) in November 2003. Their objective was also to strengthen European industrial competitiveness and economic growth. Establishing an ETP required a three stage approach:

1. Bringing the relevant stakeholders together, developing a vision document for the technologies.
2. Elaborating a strategic research agenda (SRA), setting out the research priorities for the medium to long-term on the technologies/field concerned.
3. Implementing the SRA, mobilising public and private investment such as existing instruments in the FP.

In this process, the Commission acts as a catalyst to help stakeholders establish and develop the ETPs.

### European technology platform's advisory role

As the process to establish ETPs is bottom-up, flexible and industry-led, 25 ETPs were [established](#) in the first two years on topics as diverse as nanomedicine, road transport, animal health, manufacturing, forestry or photovoltaics. The European Parliament supported the concept of ETPs in a [resolution](#) adopted in March 2005. The Commission [took stock](#) of progress in June 2005, noting the need for ETPs to demonstrate strong leadership, to be open to participation and avoid becoming 'closed shops', and to remain flexible. A second [report](#) in May 2006 noted that most of the 29 ETPs had developed their vision document and SRAs. These



were used as input for the definition of the research priorities under FP7 [adopted](#) in December 2006. The focus was on the [openness and transparency](#) of the ETPs and on the need to move to the implementation phase by using all possible sources of funding. A third [report](#) in March 2007 noted progress on these aspects, with the increased integration of Member States within the ETPs under 'mirror groups' of national experts set up by most of the 31 ETPs and an improvement of cross-platform interactions. Nevertheless, alignment of research policies at different levels (European, national and regional) with the SRAs remained a challenge.

External evaluations of the ETPs conducted in [2008](#) and [2009](#) acknowledged the successes of the ETPs: open involvement of a broad range of EU-wide stakeholders; development of joint visions and SRAs that influence research priorities; substantial effects on coordination; and synergy effects between the partners. On the other side the experts noted: the low involvement of SMEs and end-users; the lack of coordination between ETPs; the inconsistent role of the Commission in terms of oversight and funding; and the necessity of financial engineering for the implementation of the SRA. In not benefiting from direct funding, ETPs must mobilise a wide range of sources (private funds, national and regional programmes, applications to the FP calls, structural funds or financing instruments developed by the European Investment Bank), to try to implement their SRAs. Both reviews requested an evolution of the ETP concept, from scientific and technological challenges towards a focus on socio-economic challenges, an issue already [raised](#) to the European Commission by the European Research Advisory Board in 2004. These aspects were developed in the fourth status [report](#) in 2009.

The main role of the ETPs lays in the capacity of their SRA, developed jointly by private and public actors at the EU level, and updated regularly, to influence research and innovation programmes at EU, national and regional levels. This advisory role was integrated in the [regulation](#) of the Horizon 2020 framework programme adopted in 2013. The specific Horizon 2020 [programme](#) mentions that priority-setting may take the SRAs into account and that appropriate links should be established with the ETPs regarding the societal challenges.

### Other types of EU research public-private partnerships

In 2004, it [appeared](#) that some strategic research agendas would be so large in ambition, complexity and scale that the existing instrument for funding would be insufficient. In such cases the Commission proposed establishing institutional public-private partnerships funded by the framework programme known as [Joint Technology Initiatives](#) (JTI). European technology platforms were selected based on transparent criteria, and the JTIs were formally introduced in 2007 within FP7. Under the European economic recovery [plan](#), the Commission decided to establish lighter cooperation structures than the JTIs: the [contractual public-private partnerships](#) (cPPP). The topics for the cPPPs emerged from existing ETPs.

The 2009 [review](#) by the ETP expert group suggested that the existing ETPs should be enlarged to include innovation and address societal challenges. This idea was included in the framework of the Europe 2020 strategy within the innovation union flagship [initiative](#), by creating the [European Innovation Partnerships](#) in 2010. ETPs assisted the establishment of the European industrial initiatives under the strategic energy technology plan ([SET plan](#)), which merged with existing ETPs in 2015 as [European Technology and Innovation Platforms](#) (ETIP). The ETPs were also key to developing [lead market initiatives](#) in 2007 and to providing input in the preparation of the European Strategy Forum on Research Infrastructures ([ESFRI](#)) roadmap.

### The new European technology platform strategy 2020

Following the [review](#) of the public-private partnerships in preparation for Horizon 2020, the Commission adopted a new [strategy](#) for the ETPs in 2013. In the context of [open innovation](#), ETPs would have to take a holistic view to help European companies to gain a competitive advantage in global markets. The ETPs' missions were reviewed around three functions: providing coherent business-focused analysis of research and innovation bottlenecks and opportunities related to societal challenges (strategic function); mobilising and networking innovation actors within the EU (mobilisation function); and sharing information and enabling knowledge transfer (dissemination function). Besides development of the SRA, the ETPs are expected to encourage industry participation in Horizon 2020, identify opportunities for international cooperation, provide networking activities to address cross-sectoral challenges, and facilitate the formation of new partnerships.

The European Commission credited the European technology platforms under a new set of criteria: alignment with Europe 2020 priorities; scale of market opportunity; EU added value; transparency and openness; scope; and leverage. There are currently [38 ETPs](#) active in bio-based economy, energy, environment, ICT, production and processes and transport, as well as three cross-cutting ETP initiatives on sustainable nanotechnologies, industrial safety and consumer goods. The platforms remain autonomous and self-financing.