
EU Innovation Policy – Part II

EU policies and instruments
supporting innovation



IN-DEPTH ANALYSIS

This publication aims to provide an overview of the measures and instruments that make up the EU's innovation policy mix. The paper focuses on current EU innovation initiatives and considers some issues limiting the development of an EU innovation policy.

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EXECUTIVE SUMMARY

The EU innovation policy mix encompasses both key policies targeting the actors in the innovation process (research and development, industrial, education and regional policy) and key framework conditions shaping the interactions and organising the flows of knowledge, skills and funds between those involved in the innovation process. The EU has taken several initiatives in the last 20 years to promote and support innovation in Europe, although its competences in this area are limited.

One of the EU's policy cornerstones is the concept of a European Research Area, which is still being implemented. The EU has also improved the framework for industrial policies, recently calling for a renaissance of European industry and developing specific policies to support SMEs. It has provided policy guidance and networking tools to put in place a clear framework at EU level for education and skills policies supporting innovation; and it has played a key role in developing, strengthening and implementing regional policies that foster innovation.

The key framework conditions are closely linked to the creation of a Single Market. Measures have been taken at EU level to promote European funding of innovation-related activities; to align regulations facilitating the innovation process; to harmonise standards; and to create a European framework for intellectual property rights, including the establishment of a unitary EU patent. There have also been EU initiatives to promote public-private partnerships and the Europeanisation of the innovation process. Finally, the Commission has taken steps to foster a culture in Europe that is conducive to innovation.

Most of these measures have the common objective of tackling the fragmentation of the European landscape for innovation. The diversity of initiatives and policies at national and regional level regarding all parts of the innovation policy mix creates barriers that hinder the innovation process and limit its efficiency in Europe. The key challenge at European level is to address these barriers in order to avoid a widening of the innovation divide between leading regions and those that lag behind, while at the same time maintaining the aspects of diversity that can be an asset helping to drive the innovation process.

In order to address the problems posed by fragmentation, there have been calls for a new approach to innovation governance, one based on a better definition of the competences of each governance level (EU, national, regional); on a stronger political commitment to innovation; and on improved coordination to ensure the overall consistency of innovation policies developed at each level.

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List of main acronyms used

ERA:	European Research Area
GDP:	Gross domestic product
ICT:	Information and communications technologies
IPR:	Intellectual property rights
R&D:	Research and development
SME:	Small and medium-sized enterprise

1. The EU innovation policy mix

1.1. Composition of the policy mix

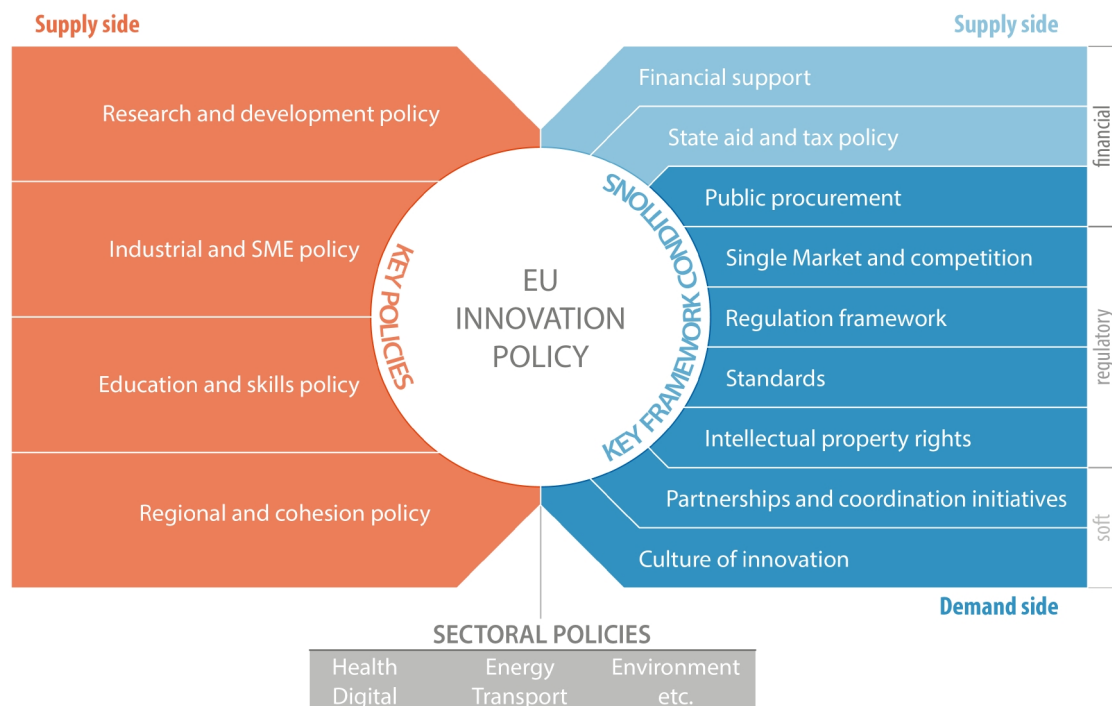
EU innovation policy encompasses all the policies and instruments at European level that influence the innovation process with the objective of increasing its performance and efficiency. The EU innovation policy mix includes:

- **Key policies** targeting the actors in the innovation process, by defining how they operate and/or how they are organised. This includes research and development (R&D) policy, industrial policy, education policy and regional policy; and
- **Key framework conditions** covering policies and instruments shaping the interactions and organising the flows of knowledge, skills and funds between the actors in the innovation process. These framework conditions include financial tools, regulatory tools and soft tools.

Sectoral policies can also have an impact on innovation. By introducing new regulations or standards for example, the policies developed in the health, environmental, energy or transport sectors will stimulate, or hamper, the innovation process.

Some policies and instruments support favourable conditions for innovation (so-called 'supply side' policies and instruments), while others fuel demand for innovation (so-called 'demand side' policies and instruments). **A key objective of policy-makers is to achieve a balanced policy mix and make sure the different policies and instruments address the bottlenecks in the innovation process and constitute a complementary portfolio at a given governance level (EU, national, regional), as well as between these levels.**¹

Figure 1 – The EU innovation policy mix



Source: EPRS.

¹ More information on the EU innovation policy mix can be found in [EU innovation policy –Part I: Building up the EU innovation policy mix](#), V. Reillon, EPRS, European Parliament, May 2016.

1.2. Competences of the European Union

The EU innovation policy mix interacts with the policy mixes developed at national and regional level. Each of these levels of governance may establish policies and instruments depending on their competences. Table 1 offers an overview of the EU's powers with regard to the various policies and instruments that are part of the European innovation policy mix. The table shows for each of them the EU's ability to provide funding, to adopt regulations, or to promote and implement soft measures (evaluations, guidelines, recommendations, voluntary agreements, etc.).

Table 1 – Competences of the EU for each of the components of the EU innovation policy mix

Key policies	Fund	Regulate	Promote
R&D policy	✓✓	✓	✓✓
Industrial and SME policy	✓	✓	✓
Education and skills policy			✓✓
Regional and cohesion policy	✓✓		✓✓
Key framework conditions	Fund	Regulate	Promote
Financial support	✓✓	✓	✓
State aid and tax policy		✓	✓✓
Public procurement	✓	✓	✓✓
Single Market and Competition		✓✓✓	✓
Regulation framework		✓	✓✓
Standards		✓	✓✓
IPR		✓✓✓	✓
Partnerships and initiatives	✓✓	✓	✓✓
Culture of innovation			✓

Source: EPRS ✓: Potential action or low competence ✓✓: Important feature ✓✓✓: Strong competence

2. Key policy areas for innovation

2.1. Research and development policies

A European innovation policy began to emerge in the 1960s with the launch of a Community policy on research and development. Supporting research at Community level was seen as important in the context of the global 'competition through innovation'. The idea of creating 'an effective single area for European science' was first proposed in 1973. The implementation of a framework programme for research to support R&D activities at the Community level started in 1982.

Based on a concept developed since 1973, the European Research Area (ERA) was proposed² in 2000 as the key European policy in R&D. The ERA focusses on the efficiency of national research systems; optimal transnational cooperation and competition; research infrastructure; a labour market for researchers based on gender equality; circulation and transfer of scientific knowledge; and international cooperation. Although the Council has often referred to the ERA as the European Research and Innovation Area in its conclusions, innovation has never been part of the ERA policy.

² Towards a European research area, Commission of the European Communities, [COM\(2000\) 6](#), 18 January 2000.

The goal set in 2010 under the Innovation Union flagship initiative³ to complete the ERA by 2014 has not been reached, and there are still obstacles to full implementation of the ERA concept. No clear definition of a European research system resulting from the application of the ERA concept has emerged from talks between the EU institutions, the Member States and the key stakeholders. The EU has limited competences in research policy, and a stronger commitment is expected from the Member States in order to implement the ERA.⁴ The Commission decided in June 2015 to focus its efforts in research policy on the concept of 'Open Science', which covers some aspects of the original ERA policy, and to leave to the Council the task of giving new impetus to the ERA.⁵

2.2. Industrial, entrepreneurship and SME policies

2.2.1. EU Industrial and entrepreneurship policies

In the 1970s, innovation policy became progressively more closely linked to industrial policy. Action at EU level consisted of improving the environment for the growth of businesses. These policy ideas were developed in the 1980s and 1990s in various communications from the Commission.⁶

In April 2000 the Commission communication on Enterprise policy in the knowledge economy⁷ stressed the need 'to identify and remove barriers to innovation and change'. In this context, industrial policy was recognised as having on one hand a horizontal component that 'aims at securing framework conditions favourable to industrial competitiveness', and on the other sectoral applications taking into account 'the specific needs and characteristics of individual sectors'.⁸ In the mid-2000s, initiatives were aimed at fostering an entrepreneurial spirit.⁹ The Commission also proposed¹⁰ a new framework for industrial policy in the context of the adoption of the Community Lisbon Programme. This communication stressed the importance of supporting the manufacturing sector in Europe. The Commission proposed to launch seven major cross-sectoral policy initiatives (such as on IPR, sectoral skills, and an integrated European approach to industrial research and innovation) and six sector-specific initiatives (pharmaceuticals, biotechnology, chemical industry, space, ICT, and mechanical engineering).

³ Europe 2020 Flagship Initiative Innovation Union, European Commission, [COM\(2010\) 546](#), 6 October 2010.

⁴ The [ERA roadmap](#), adopted by the Council in [May 2015](#), is expected to be supported by national ERA action plans to be presented at the end of May 2016, in which the Member States will outline the measures they are going to take to implement the ERA.

⁵ More information on the history and evolution of the ERA concept can be found in '[The European Research Area](#)', V. Reillon, EPRS, European Parliament, March 2016.

⁶ See for example the communications on [industrial innovation](#) and the [strategy to develop Europe's industry](#) in 1981, on [strengthening the Community industry](#) in 1985, and on [benchmarking the competitiveness of European industry](#) in 1996.

⁷ Challenges for enterprise policy in the knowledge-driven economy, Commission of the European Communities, [COM\(2000\) 256](#), 26 April 2000.

⁸ Industrial Policy in an Enlarged Europe, Commission of the European Communities, [COM\(2002\) 714](#), 11 December 2002.

⁹ Publication of a [green paper on Entrepreneurship in Europe](#) in 2003 and an action plan, the [European agenda for entrepreneurship](#), in 2004.

¹⁰ A policy framework to strengthen EU manufacturing - towards a more integrated approach for industrial policy, Commission of the European Communities, [COM\(2005\) 474](#), 5 October 2005.

In the context of the Europe 2020 strategy, in October 2010 the Commission launched¹¹ the flagship initiative 'An industrial policy for the globalisation era'. The communication introducing the initiative stated that 'a new industrial innovation policy is needed to encourage the much faster development and commercialisation of goods and services and to ensure that EU firms are first onto the market'. The initiative was welcomed by the European Parliament.¹² In 2012, a mid-term review of the flagship initiative proposed¹³ to establish specific partnerships between the EU, its Member States and industry on six priority actions: advanced manufacturing technologies; key enabling technologies; bio-based products; sustainable industrial and construction policy and raw materials; clean vehicles; and smart grids. At the same time, the 'Entrepreneurship 2020 Action Plan' was launched¹⁴ to 'unleash Europe's entrepreneurial potential, remove existing obstacles and revolutionize the culture of entrepreneurship in the EU'.

Following these initiatives, in 2014 the Commission published¹⁵ a communication calling for a European industrial renaissance. It argues that industry has to play a key role in the recovery from the economic crisis. The priorities announced include:

- **Creating an attractive place for enterprises and manufacturers**, concentrating on the implementation of an integrated, single European market;
- **Modernising European industry** by investing in innovation, new technologies, production inputs and skills. This is linked with the concept of industry 4.0¹⁶;
- **Supporting SMEs and entrepreneurship**, especially through an updated Small Business Act (see box below); and
- **Fostering the internationalisation of EU firms.**

BusinessEurope had called¹⁷ for such a 'broad and coherent industrial policy strategy' in February 2013. The communication was welcomed¹⁸ by the European Cultural and Creative Industries Alliance (ECCIA) representing European luxury industry associations, described as a model for the industrial renaissance in the document. The European Trade Union Confederation (ETUC) criticised¹⁹ 'the lack of specific content on jobs, youth employment and quality of work in the Commission Communication'. Following the communication, the European Round Table of Industrialists (ERT), a forum of about 50 chief executives of major European multinational companies, proposed²⁰ a 2014-2019 EU industrial renaissance agenda for action in May 2014. It is based on improved EU governance for growth and competitiveness; re-prioritisation of the completion of

¹¹ An Integrated Industrial Policy for the Globalisation Era, European Commission, [COM\(2010\) 614](#), 28 October 2010.

¹² Resolution on an Industrial Policy for the Globalised Era, European Parliament, [P7_TA\(2011\)93](#), 9 March 2011.

¹³ A Stronger European Industry for Growth and Economic Recovery, European Commission, [COM\(2012\) 582](#), 10 October 2012.

¹⁴ Entrepreneurship 2020 Action Plan - Reigniting the entrepreneurial spirit in Europe, European Commission, [COM\(2012\) 795](#), 9 January 2013.

¹⁵ For a European Industrial Renaissance, European Commission, [COM\(2014\) 14](#), 22 January 2014.

¹⁶ [Industry 4.0 – Digitalisation for productivity and growth](#), R. Davies, EPRS, European Parliament, September 2015.

¹⁷ [Manufacturing a prosperous Europe](#), BusinessEurope, 11 February 2013.

¹⁸ EU Turns to the High-End Cultural and Creative Industries for the European Industrial Renaissance, ECCIA, 20 March 2014.

¹⁹ [Declaration on industrial policy, energy and the fight against climate change](#), ETUC, 12 March 2014.

²⁰ [EU Industrial Renaissance – Agenda for action 2014-2019](#), ERT, May 2014.

the single market; energy security; skills development; support for innovation; and boosting trade and investment. In November 2014, experts of the European Policy Centre noted²¹ that 'measures undertaken at [European and national] governance levels have been inconsistent and weak'. They concluded that 'a shift towards a coordinated approach at all levels, i.e. between Member States, across industry, between public and private entities, across all governance levels and the different Directorates-General of the European Commission, is required' and that 'this coordination approach should rely on clear objectives, a well-defined strategy and a mandate for the EU to act in the field of industrial policy'.

2.2.2. Specific policies for SMEs

The importance of support specifically for small and medium sized enterprises (SMEs) was identified²² in the 1970s. A first Community programme specifically designed to support SMEs was adopted²³ in 1989. In June 2000, the Member States endorsed the 'European Charter for Small Enterprises'²⁴ recognising that SMEs 'must be considered as a main driver for innovation, employment as well as social and local integration in Europe'. The Member States committed to creating the best possible environment for SMEs to flourish in Europe. In 2005, the Commission proposed²⁵ a modern SME policy for growth and employment.

These initiatives for SMEs were pushed further with the adoption²⁶ in 2008 of the 'Small Business Act for Europe' (SBA). Progress on implementing the principles of the SBA was assessed²⁷ in 2011. The Commission concluded that more was to be done on smart regulation and on financial support for SMEs at all levels. The process of reviewing the SBA was pursued through a public consultation opened in autumn 2014. However, no new communication has been adopted following this exercise. The SBA process is still being monitored²⁸ through the SME Performance Review.

Small Business Act

The Small Business Act proposed in 2008 by the Commission was aimed at giving new impetus to policies supporting SMEs by establishing a genuine political partnership between the EU and the Member States. The SBA set out 10 principles to be followed by policy-makers at EU and national level in order to foster an entrepreneurial spirit, adapt policy tools for SMEs and conceive rules according to the 'Think Small First' principle. It was planned that EU legislation would be adopted on State Aid, on providing a Statute for a European Private Company, and on reduced VAT rates. The monitoring of the implementation of the SBA and the possibilities to exchange best practices were two key elements in promoting change and monitoring progress.

²¹ [Towards a New Industrial Policy for Europe](#), EPC Issue Paper No 78, November 2014.

²² Report on some structural aspects of growth, Commission of the European Communities, [COM\(78\) 255](#), 22 June 1978.

²³ Adopted in [1989](#) for three years, the programme was renewed in [1993](#) for three years, in [1996](#) for another four years, in [2000](#) for five years and extended in [2005](#) until December 2006.

²⁴ [The European Charter for Small Enterprises](#), endorsed by the Member States at the Feira European Council on 19 and 20 June 2000.

²⁵ Modern SME policy for growth and employment, Commission of the European Communities, [COM\(2005\) 551](#), 10 November 2005.

²⁶ Think Small First - A 'Small Business Act' for Europe, Commission of the European Communities, [COM\(2008\) 394](#), 25 June 2008.

²⁷ Review of the 'Small Business Act' for Europe, European Commission, [COM\(2011\) 78](#), 23 February 2011.

²⁸ More information on the SME performance review can be found on the [website](#) of DG GROW.

Industrial policy and policies supporting SMEs and entrepreneurship at the EU level include a subset of elements that constitute the EU innovation policy mix, such as the establishment of the single market, support for internationalisation, access to finance, and regulation. Hence, **EU action is often restricted to the creation of soft tools such as partnerships or networks, and monitoring progress at EU level**. These measures tend to trigger action and reform at Member State level aimed at supporting the innovation process.²⁹

2.3. Education and skills policies

In November 1980, the Commission recognised that 'education and training systems failed to engender the flexibility and attitudes which would allow the European economy to develop in the way which present international and technological factors require'. To address this shortcoming, it suggested³⁰ promoting innovation in secondary education. Moving beyond initial training, the Commission stressed³¹ in December 1993 that 'particular attention should be paid to the continuing training of staff in SMEs'. Innovation was also identified³² as a key objective in the White Paper on Education and Training of November 1995.³³ Despite these initiatives, the Commission noted³⁴ in 2000 that 'another barrier to innovation and change is the shortage of skilled workers. ... The reform of education and vocational training systems to correct this situation will meet a goal of enterprise policy.' It stressed³⁵ again that 'entrepreneurship should become a discipline taught in universities and other institutes of higher education'.

In 2002 the Commission proposed³⁶ that the 'European dimension of lifelong learning could be backed up by European level qualifications', and also underlined that 'the European Union must transform education and training systems within a lifelong learning perspective'. The European Parliament backed³⁷ this position on education and skills in July 2006, urging 'Member States to promote entrepreneurship from the early stages of education onwards and to strengthen their support for life-long learning'. In the Innovation Strategy for the EU presented in September 2006, the Commission observed³⁸ once again that 'without education as a core policy, innovation will remain

²⁹ More information on EU industrial policy and EU policy in support of SMEs can be found on the [website](#) of DG GROW.

³⁰ Commission work programme relating to the promotion of innovation in secondary education in the European Community, Commission of the European Communities, [COM\(88\) 545](#), 14 October 1988.

³¹ Growth, competitiveness, employment – The challenges and ways forward into the 21st century, Commission of the European Communities, [COM\(93\) 700](#), 5 December 1993.

³² White Paper on Education and Training: Teaching and learning – Towards the learning society, Commission of the European Communities, [COM\(95\) 590](#), 29 November 1995.

³³ The Commission [Green Paper on Innovation](#) in December 1995 set the development of initial and further training as one of the 13 actions. The [First Action Plan for Innovation in Europe](#) placed 'Education and training first' as a key component of the priority to 'Foster a genuine innovation culture'.

³⁴ [COM\(2000\) 256](#), 26 April 2000, *op. cit.*

³⁵ Innovation in a knowledge-driven economy, Commission of the European Communities, [COM\(2000\) 567](#), 20 September 2000.

³⁶ The Lisbon Strategy - Making change happen, Commission of the European Communities, [COM\(2002\) 14](#), 15 January 2002.

³⁷ Resolution on implementing the Community Lisbon Programme: more research and innovation, European Parliament, [P6_TA\(2006\)0301](#), 5 July 2006.

³⁸ Putting knowledge into practice: A broad-based innovation strategy for the EU, Commission of the European Communities, [COM\(2006\) 502](#), 13 September 2006.

unsupported'. It stressed that 'the Member States' education systems should ensure that there is sufficient availability of key skills to support innovation'. Improving education was therefore the first of the 10 actions proposed in the strategy.

The year 2009 was promoted by DG Education and Culture (DG EAC) as the 'Year of creativity and innovation'.³⁹ The Council adopted⁴⁰ in May 2009 the strategic framework for European cooperation in education and training (known as 'ET 2020'). The fourth strategic objective of the programme is to 'enhance creativity and innovation, including entrepreneurship, at all levels of education and training'. Therefore, when launching the Innovation Union in March 2010, the Commission stressed that the 'Member States will need to ensure a sufficient supply of science, maths and engineering graduates and to focus school curricula on creativity, innovation, and entrepreneurship'. The 2010 Innovation Union flagship initiative insisted⁴¹ on the need to modernise education systems in the Member States and to reform higher education. It suggested⁴² creating 'Knowledge Alliances' involving businesses in designing new curricula addressing the innovation skills shortages.

The 2012 Commission communication on 'Rethinking education' focussed⁴³ again on the need for the Member States and the EU as a whole to invest in education and training, as these components are 'vital for innovation, growth and competitiveness'. The European Network of Education Councils (EUNEC) welcomed⁴⁴ this communication asking for more education benchmarks and 'a more strict follow-up and governance of the engagement of the Member States to implement common and national objectives'. It also stressed that the communication dealt more with the labour market and skills than with education.

The EU's competences in education and skills policy are limited to policy coordination. Modernising the education system, reforming higher education and promoting life-long learning in order to address skills shortages are in the hands of the Member States and/or the regions. Nevertheless, **the EU is providing policy guidance and networking tools for a coherent framework at EU level for education and skills policies, in order to improve the efficiency of the innovation process.**

2.4. Regional and cohesion policies

In 1981, support for innovation emerged as an important dimension of the Community's regional policy. The Commission suggested⁴⁵ that European regional and

³⁹ The [activities](#) promoted by DG EAC included the adoption of a [Manifesto](#) by the Ambassadors for Creativity and Innovation.

⁴⁰ Conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training (ET 2020), Council of the European Union, [OJ C 119](#), pp. 2-10. More information on the current developments under the ET 2020 can be found on the [website](#) of DG EAC.

⁴¹ [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

⁴² Knowledge Alliances were introduced in December 2013 in the [Erasmus+ programme](#) as 'alliances between, in particular, higher education institutions and the world of work aimed at promoting creativity, innovation, work-based learning and entrepreneurship by offering relevant learning opportunities, including developing new curricula and pedagogical approaches'.

⁴³ Rethinking Education: Investing in skills for better socio-economic outcomes, European Commission, [COM\(2012\) 669](#), 20 November 2012.

⁴⁴ [Statements on the European Commission Communication: Rethinking education](#), EUNEC.

⁴⁵ A policy for industrial innovation – Strategic lines of a community approach, Commission of the European Communities, [COM\(81\) 620](#), 20 October 1981.

social funds should give priority to innovation, and target strategic elements of the innovation framework.⁴⁶ The objective was to improve cohesion and ensure that no regions were left behind in terms of economic and social development. Support for the development of 'clusters of competitive activities' gathering various actors at the local level was proposed⁴⁷ in December 1993, with the aim of benefiting from regional diversity within the Community. In order to support the definition and implementation of an innovation policy at regional level, the Commission introduced in 1994 the Regional Technology Plan, later renamed the Regional Innovation Strategy (RIS).

Strengthening the regional dimension of innovation was one of the 13 actions proposed⁴⁸ by the Commission in December 1995, linked to support for SMEs, only confined⁴⁹ to the use of European structural funds in the 1996 Action Plan for Innovation. However, a 1998 Commission communication focussed⁵⁰ on the role of research and innovation in cohesion policy. The document stressed that 'innovation policies have to be integrated within the productive fabric of the region' and 'an integrated innovation strategy should be based on partnership between local and regional bodies, Member States and the European Union'.⁵¹

Nevertheless, **the Commission noted⁵² in 2000 that 'an "innovation divide", separating regions according to whether or not they are able to benefit from and thrive in the new economy, is an emerging danger'**. To address this challenge, 'regional and local authorities should include and strengthen innovation-enhancing measures in their development strategies so as to organise, at their own level, the right environment for a strong regional innovation capacity'. In the first European Innovation Scoreboard in September 2001, the Commission stated⁵³ that 'innovation has a strong regional dimension' and invited 'the European regions to participate actively in innovation policy benchmarking'. In October 2001, it drew attention on⁵⁴ the key role of regions in developing the European capacity in research and innovation.

In 2003 the development of clusters and the specialisation of regional innovation policy in order to benefit from the 'distinctiveness and the social and economic characteristics' of each European region was at the heart of the regional aspect of EU innovation policy in the context of the Lisbon strategy.⁵⁵ The regions 'must each

⁴⁶ The [Regulation](#) of the European regional development fund adopted by the Council in June 1984 mentioned the possibility of supporting SMEs in their innovation related activities.

⁴⁷ [COM\(93\) 700](#), 5 December 1993. *op.cit.*

⁴⁸ Green paper on Innovation, Commission of the European Communities, [COM\(95\) 688](#), 20 December 1995.

⁴⁹ The first action plan for innovation in Europe - Innovation for growth and employment, Commission of the European Communities, [COM\(96\) 589](#), 20 November 1996.

⁵⁰ Reinforcing cohesion and competitiveness through research, technological development and innovation, Commission of the European Communities, [COM\(98\) 275](#), 27 May 1998.

⁵¹ The [Regulation](#) of the European Regional Development Fund (ERDF) adopted in 1999 placed a stronger focus on the use of funds for 'research and technological development, with a view to promoting the introduction of new technologies and innovation'.

⁵² [COM\(2000\) 567](#), 20 September 2000, *op. cit.*

⁵³ [First European Innovation Scoreboard](#), Commission of the European Communities, September 2001.

⁵⁴ The Regional Dimension of the European Research Area, Commission of the European Communities, [COM\(2001\) 549](#), 3 October 2001.

⁵⁵ Innovation policy: updating the Union's approach in the context of the Lisbon strategy, Commission of the European Communities, [COM\(2003\) 112](#), 11 March 2003.

develop their own specific route to improved innovation capacity, depending on their own unique set of circumstances'. The Council followed⁵⁶ this approach, announcing it would 'examine the possibility of using to a greater extent structural funds to support research, development and innovation'. The European Parliament recognised⁵⁷ in July 2006 'that structural funds should be seen as a key means of supporting research and innovation capacity, especially in the pursuit of cohesion' and, following the suggestion in the Aho report⁵⁸, proposed 'a trebling of the amount of structural funds to be spent on research and innovation'.

The **2006 Innovation Strategy for the EU stressed⁵⁹ that 'the main competence to foster innovation often lies at regional level'**, and focussed again on support for local clusters and their internationalisation. The European Parliament supported⁶⁰ this policy on clusters and called 'on regional and local authorities to regard the Open Innovation principle (cooperation between industry, SMEs and government in research and innovation through clustering) as a motor for regional development'. The Commission reinforced⁶¹ its support to the regions by analysing how synergies could be created between the different EU funds for research and innovation.

In October 2010, a section of the Innovation Union flagship initiative was dedicated⁶² to maximising social and territorial cohesion with a focus on spreading the benefits of innovation across the Union. The Commission stated again that 'Europe must avoid an "innovation divide" between the strongest innovating regions and the others'. It introduced the concept of 'smart specialisation', where regions define priorities for investment focussing on the 'relative strengths where they can become excellent'. The Commission suggested that 'Member States should initiate the preparation of post-2013 Structural Fund programmes with an increased focus on innovation and smart specialisation'. These aspects were presented⁶³ in more detail in a subsequent communication on regional policy that focussed only on innovation.

In 2012, the Commission established⁶⁴ a platform to support the regions in developing their smart specialisation strategy.⁶⁵ Moreover, the framework for European Structural and Investment Funds for the period 2014-2020 made⁶⁶ the use of EU regional funds to

⁵⁶ Conclusions and Resolution in the areas of Industrial and Research Policies, Council of the European Union, [ST 12885 2003 INIT](#), 23 September 2003.

⁵⁷ [P6_TA\(2006\)0301](#), 5 July 2006, *op. cit.*

⁵⁸ [Creating an Innovative Europe](#), Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit and chaired by Esko Aho, January 2006.

⁵⁹ [COM\(2006\) 502](#), 13 September 2006, *op. cit.*

⁶⁰ Resolution on putting knowledge into practice: a broad-based innovation strategy for Europe, European Parliament, [P6_TA\(2007\)0212](#), 24 May 2007.

⁶¹ The Commission published a communication on '[Competitive European regions through research and innovation](#)' in August 2007, a staff working document on '[Regions delivering innovation through cohesion policy](#)' in November 2007, and the communication '[Towards world-class clusters in the EU](#)' in November 2008.

⁶² [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

⁶³ Regional Policy contributing to smart growth in Europe 2020, European Commission, [COM\(2010\) 553](#), 6 October 2010.

⁶⁴ More information on the 'smart specialisation strategy' can be found on the [Smart Specialisation Platform](#).

⁶⁵ [Smart specialisation: The concept and its application to EU cohesion policy](#), European Parliament, V. Halleux, EPRS, January 2016.

⁶⁶ Regulation (EU) No 1303/2013 of the European Parliament and of the Council laying down common provisions on the European Structural and Investment Funds, [OJ L 347](#), 20 December 2013, pp. 320–469.

support research and innovation activities conditional on the adoption of a smart specialisation strategy. This approach was supported⁶⁷ by the European Parliament. Despite these initiatives, the State of the Innovation Union reports since 2011 have stressed⁶⁸ that the 'innovation divide' remains a major concern, and that the adoption of the smart specialisation strategies have produced mixed results.

In the past two decades, **the regional level has become a key governance level for the support of innovation. The EU has played an important role in supporting regional authorities both financially and technically in developing efficient innovation policies.**

3. Key framework conditions for innovation

3.1. Single Market and competition

3.1.1. The establishment of a single market

The creation of a common market was a key objective of the European Economic Community established by the Treaty of Rome in 1957. In June 1985, the Commission published⁶⁹ a white paper on 'Completing the internal market' that led to the adoption of the European Single Act in 1986. This treaty set⁷⁰ the objective of establishing a single market by 31 December 1992. Since then, efforts have concentrated on ensuring the free movement of goods, persons, services and capital within the Union. The free circulation of knowledge was proposed⁷¹ in 2007 as a fifth freedom that should be guaranteed in Europe. Nevertheless, **the establishment of a fully functioning single market in Europe is still a work in progress.**

3.1.2. Single Market and innovation

The importance of 'eliminating the fragmentation of markets and improving incentives to innovation and the dissemination of knowledge' was stressed⁷² by the Commission in 1980. In its policy for industrial innovation published⁷³ in October 1981, the Commission recognised that 'a true Community-wide internal market' was a key requirement to create a favourable environment for innovation in Europe. In the 1996 action plan for innovation in Europe, the Commission stressed⁷⁴ again that 'action at Community level, while respecting the rules of subsidiarity is necessary to draw up and enforce the rules of the game, particularly those on competition, intellectual property rights and the internal market'. In March 2003, the Commission fully included⁷⁵ the

⁶⁷ Resolution on Innovation Union: transforming Europe for a post-crisis world, European Parliament, [P7_TA\(2011\)0236](#), 12 May 2011.

⁶⁸ The reports published in [2011](#), [2013](#), [2014](#) and [2015](#) pointed with concern to the deepening innovation divide in Europe and the limited achievements with respect to the development of a smart specialisation strategy.

⁶⁹ Completing the Internal Market, Commission of the European Communities, [COM\(85\) 310](#), 14 June 1985.

⁷⁰ Single European Act, [OJ L 169](#), 29 June 1987, pp. 1-28.

⁷¹ [The EU's Fifth Freedom: creating free movement of knowledge](#), Speech by Janez Potočnik, European Commissioner for Science and Research at the informal Competitiveness Council on 26 April 2007.

⁷² Industrial development and innovation, Commission of the European Communities, [COM\(80\) 755](#), 18 November 1980.

⁷³ [COM\(81\) 620](#), 20 October 1981, *op. cit.*

⁷⁴ [COM\(96\) 589](#), 20 November 1996, *op. cit.*

⁷⁵ [COM\(2003\) 112](#), 11 March 2003, *op. cit.*

internal market and competition as key policies influencing the innovation process, stating that 'a well-functioning Internal Market, without barriers to trading across borders, encourages competition in goods, services, capital and the mobility of people' and that 'competition is one of the main drivers of innovation'.

In January 2006, the Aho report highlighted⁷⁶ the importance of recalibrating the internal market 'to foster a transition to the knowledge-based economy'. The 2006 Innovation Strategy for the EU underlined⁷⁷ that the barriers that persist in the internal market need to be removed if a 'European innovation space' is to be created. In 2007, the European Parliament called on⁷⁸ 'the Member States to work together swiftly to complete the internal market'. In March 2010, the Commission considered⁷⁹ that new momentum was needed in the establishment of the single market. The Innovation Union flagship initiative published in October 2010 called⁸⁰ for the creation of an innovation single market and 'policies that stimulate demand for innovation, starting with an effective competition policy'.

In the context of the Europe 2020 strategy, in October 2010 the Commission published⁸¹ 50 proposals to re-launch the single market. These measures were developed into 12 levers to boost growth in a 'Single Market Act' published⁸² in April 2011. The objective of this initiative was to put 'an end to market fragmentation and eliminating barriers and obstacles to the movement of services, innovation and creativity'. It was complemented in October 2012 by a 'Single Market Act II' that proposed⁸³ 12 additional key actions. In October 2012, BusinessEurope also proposed⁸⁴ a way forward on the single market with 12 priorities covering public procurement, finance, IPR, and the energy, transport and digital markets. In September 2015, it called⁸⁵ for an ambitious internal market strategy from the Commission, focused on better enforcing existing rules before creating new ones.

In October 2015, the Commission published⁸⁶ its strategy in a communication that presented further measures to upgrade the single market. In this last communication, the impact of single market policy on innovation policy was clearly underlined. In its position on this communication, the European Trade Union Confederation underlined⁸⁷ 'the importance of quality jobs, the principle of equal treatment between all workers at the same workplace and urge[d] the EU institutions to adopt a social progress protocol'. It also requested that the European standardisation processes be made more democratic.

⁷⁶ [Creating an Innovative Europe](#), January 2006, *op. cit.*

⁷⁷ [COM\(2006\) 502](#), 13 September 2006, *op. cit.*

⁷⁸ [P6 TA\(2007\)0212](#), 24 May 2007, *op. cit.*

⁷⁹ Europe 2020 A strategy for smart, sustainable and inclusive growth, European Commission, [COM\(2010\) 2020](#), 3 March 2010.

⁸⁰ [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

⁸¹ Towards a Single Market Act, European Commission, [COM\(2010\) 608](#), 27 October 2010.

⁸² Single Market Act, European Commission, [COM\(2011\) 206](#), 13 April 2011.

⁸³ Single Market Act II, European Commission, [COM\(2012\) 573](#), 3 October 2012.

⁸⁴ [Single Market – The way forward](#), BusinessEurope, October 2012.

⁸⁵ [Building a true single market for Europe](#), BusinessEurope, 28 September 2015.

⁸⁶ Upgrading the Single Market: more opportunities for people and business, European Commission, [COM\(2015\) 550](#), 28 October 2015.

⁸⁷ [Position on single market strategy for Europe](#), ETUC, 17 December 2015.

The establishment of the single market is the driver for a lot of framework conditions regarding the improvement of the innovation process. The single market policy includes measures on areas such as intellectual property rights, taxation, public procurement, regulation and standardisation. **Fulfilling the objectives set under the single market policy is thus an important aspect of EU innovation policy.**

3.2. Financial support

3.2.1. European programmes funding innovation-related activities

The EU provides direct funding to support the innovation process through various programmes.⁸⁸ The most important ones⁸⁹ are:

- **Horizon 2020:** the eighth framework programme for research and innovation is focussing on supporting R&D activities but also encompasses specific programmes to support other activities of the innovation process.⁹⁰ With a budget of €74.8 billion, it is the largest EU programme funding innovation-related activities.
- **European Structural and Investment Funds:** the European Regional Development Fund (ERDF) and the European Social Fund (ESF) are the two main programmes⁹¹ supporting research and innovation activities at regional level. Research and innovation is one of the four priorities for which these funds can be used, corresponding to an expected EU contribution of about €40 billion.
- **EU programme for the Competitiveness of Enterprises and SMEs (COSME):** successor of the Competitiveness and Innovation Programme (CIP), this programme is designed to improve SMEs' access to finance and markets; to support entrepreneurs; and to create more favourable conditions for business creation and growth.
- **Specific research programmes:** besides Horizon 2020, the EU provides funding for research activities in nuclear energy through the Euratom Research and Training Programme (€1.6 billion) and the International Thermonuclear Experimental Reactor (ITER €2.9 billion). Another specific programme is the Research Fund for Coal and Steel (€319 million).
- **Sectoral programmes⁹²:** EU programmes providing direct and indirect support for various activities in the innovation process in some specific sectors such as: space with Galileo (€7 billion) and Copernicus (€4.3 billion); transport, energy and telecommunication with the Connecting Europe Facility (€21.9 billion); education with Erasmus+ (€14.8 billion); health care with the Third Health programme (€449 million); and the environment with the Life programme (€3.5 billion).
- **European Fund for Strategic Investments (EFSI):** the investment plan for Europe adopted⁹³ in June 2015 is expected to leverage €315 billion of investments for infrastructure, education, research and innovation, as well as risk finance for small businesses involved in the innovation process.

⁸⁸ More information on the different programmes is provided in '[Overview of EU funds for research and innovation](#)', V. Reillon, EPRS, European Parliament, September 2015.

⁸⁹ The budgets mentioned are for the 2014-2020 period, with the exception of the Euratom Research and Training Programme (2014-2018).

⁹⁰ '[Horizon 2020 budget and implementation](#)', V. Reillon, EPRS, European Parliament, November 2015.

⁹¹ The two other funds are the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund.

⁹² Only a fraction of the funding of these programmes is dedicated to supporting innovative activities.

⁹³ Regulation (EU) 2015/1017 of the European Parliament and of the Council of 25 June 2015 on the European Fund for Strategic Investments, [OJ L 169](#), 1 July 2015, pp. 1–38.

3.2.2. State Aid

The EU safeguards the internal market by ensuring that Member States do not take any measures that distort competition. Financially supporting the activities of the innovation process with state aid could lead to such a distortion of competition.⁹⁴ However, the 1993 Commission white paper on growth and competitiveness already noted⁹⁵ that **state aid could play a useful role in supporting innovation**. In February 1996, the Commission published⁹⁶ a Community framework for state aid for research and development defining what kind of activities could be supported by state aid, and what the level of this support could be. Innovative activities that did not qualify, such as fundamental research, industrial research and precompetitive development activity, could be supported if they conformed to the Commission policy on investment aid. Although the review of the framework was due in 2001, the Commission extended⁹⁷ its validity to the end of 2005.

In the State Aid Action Plan published⁹⁸ in June 2005, the Commission announced that 'the scope of the current framework should be extended to cover types of aid in favour of certain innovative activities, not already covered by existing guidelines or regulations'. In order to allow a consultation⁹⁹ to take place, the existing framework was extended¹⁰⁰ again until the end of 2006. In January 2006, the Aho report called¹⁰¹ for urgent action to be taken as the current State Aid framework was considered 'outmoded' and disadvantaged Europe. The updated Community framework for state aid for R&D and innovation was adopted in December 2006. It extended¹⁰² the range of activities in the innovation process that could be supported with state aid. However, the Commission underlined that 'State aid for innovation should be authorised not on the basis of an abstract definition of innovation but only to the extent that it relates to precise activities, which clearly address the market failures that are hampering innovation and for which the benefits of State aid are likely to outweigh any possible harm to competition and trade'. The review performed¹⁰³ in 2011 pointed out several interpretation issues arising from practical cases and announced a revision for 2013.

In May 2012, the Commission launched¹⁰⁴ the EU State Aid Modernisation plan. A Commission paper identified¹⁰⁵ adjusting the scope of the framework, improving its

⁹⁴ Articles 107-109 of the Treaty on the Functioning of the European Union, [OJ C 326](#), 26 October 2012, pp. 47–390.

⁹⁵ [COM\(93\) 700](#), 5 December 1993, *op.cit.*

⁹⁶ Community framework for state aid for research and development, Commission of the European Communities, [OJ C 45](#), 17 February 1996, pp. 5–16. The framework was slightly [amended](#) in 1998. In July 1996, the Commission also [published](#) guidelines on state aid for SMEs.

⁹⁷ The framework was [extended](#) a first time in 2001 until June 2002 in order to provide more time for the review. The Commission decided in June 2002 to [extend](#) the validity of the framework until the end of 2005.

⁹⁸ State aid action plan, Commission of the European Communities, [COM\(2005\) 107](#), 7 June 2005.

⁹⁹ Consultation document on state aid for innovation, Commission of the European Communities, [COM\(2005\) 436](#), 21 September 2005.

¹⁰⁰ Commission communication concerning the prolongation of the Community Framework for State Aid for Research and Development, [OJ C 310](#), 8 December 2005, p. 10.

¹⁰¹ [Creating an Innovative Europe](#), January 2006, *op. cit.*

¹⁰² Community framework for state aid for research and development and innovation, [OJ C 323](#), 30 December 2006, pp. 1–26.

¹⁰³ [Mid-Term Review of the R&D&I Framework](#), European Commission, 10 August 2011.

¹⁰⁴ EU State Aid Modernisation, European Commission, [COM\(2012\) 209](#), 8 May 2012.

general architecture and better designing the compatibility rules as the main areas for reflection in the revision of the framework of state aid rules for R&D and innovation. As part of the consultation launched in 2014, BusinessEurope argued¹⁰⁶ that the approval process for state aid in research and innovation should be shortened and not result in excessive administrative burden. The European Association of Research and Technology Organisations (EARTO) focussed¹⁰⁷ on issues regarding public procurement and the supporting thresholds. The League of European Research Universities (LERU) also proposed¹⁰⁸ modification regarding research infrastructures, IPR and pre-public procurement. The updated framework, adopted¹⁰⁹ in June 2014, includes the possibility of developing state aid measures to support:

- **R&D projects**, in the categories of fundamental and applied research;
- **feasibility studies** related to R&D projects;
- **the construction and upgrade of research infrastructure**, when addressing market failures stemming from coordination difficulties;
- **innovation activities**, when the aid is mainly targeted at market failures related to positive externalities (knowledge spill-overs) or coordination difficulties; and
- **innovation clusters**, when the aid is aimed at tackling market failures linked to coordination problems hampering the development of clusters.

The intensity of the aid varies for each of these uses and also depends, for private undertakings, on their size (small, medium-sized or large enterprise).

3.2.3. Tax policy

Tax policy remains closely linked to Member States' sovereignty, and the EU has limited competences in this area. Measures are mostly taken by the Council acting unanimously, and aim to harmonise legislation with the objective of establishing an internal market. The tax policy framework can have an indirect impact on the innovation process. With regard to taxation measures for innovation, **EU action is often limited to the publication of recommendations and the exchange of best practices.** Measures on tax policy for innovation taken at Member State level also need to comply with the EU framework on state aid.¹¹⁰

The need to establish a tax environment that favours innovation has been stressed¹¹¹ several times in the 1970s and 1980s as an important aspect of an efficient innovation policy. The 1995 Commission green paper on innovation defined¹¹² the setting up of a tax regime beneficial to innovation as one of the priorities. The Member States were encouraged to adopt tax measures conducive to innovation, but to act with care in doing so as incentives have both advantages and drawbacks. The European Parliament

¹⁰⁵ [Revision of the state aid rules for research and development and innovation](#), European Commission, Competition DG, 12 December 2012.

¹⁰⁶ [State Aid Framework for Research, Development and Innovation](#), BusinessEurope, 18 March 2014.

¹⁰⁷ [Answer to EC Consultation on the RDI Framework](#), EARTO, 14 February 2014.

¹⁰⁸ [Consultation on the draft Union Framework for State aid for Research, Development and Innovation](#), LERU, 2014.

¹⁰⁹ Framework for State aid for research, development and innovation, [OJ C 198](#), 27 June 2014, pp. 1–29.

¹¹⁰ [Tax policy in the EU](#), C. Remeur, EPRS, European Parliament, February 2015.

¹¹¹ See for example the Commission communications on [Structural aspects of growth](#) of 1978, or on [Strengthening community industry](#) in 1985.

¹¹² [COM\(95\) 688](#), 20 December 1995, *op. cit.*

also called¹¹³ 'on the Member States urgently to review the impact of taxation regimes on the propensity to innovate'. In the context of meeting the Barcelona objective of invest equivalent to 3% of GDP in R&D by 2010, the Commission reaffirmed¹¹⁴ in September 2002 the need to explore 'ways that Member States could reform their tax systems to reduce existing disincentives to investment in R&D and innovation'. The Commission stressed¹¹⁵ again in 2003 that 'the development of an innovative enterprise culture and competitive nations depends crucially on taxation policies'.

In October 2005, the Commission announced¹¹⁶ its intention 'to bring about a more effective, stable and concerted use of R&D tax incentives across the EU'. In a 2006 communication, the Commission acknowledged¹¹⁷ that while 'tax incentives have grown to become one of the major instruments used by many Member States to increase business R&D', 'the diversity of schemes introduced has resulted in an increasingly complex landscape for R&D tax treatment in Europe, hindering trans-European collaboration'. Without interfering with the Member State competence for national tax policy, the Commission aimed at providing guidance to help them 'improve their R&D tax treatment'. The communication reminded the Member States of the legal framework in which they could operate in order for the tax incentives to be compatible with EU law (especially fundamental freedoms and state aid rules).

3.2.4. Public procurement

The purchase of services, works and supplies from companies by public institutions in the EU represents about 14% of GDP in Europe.¹¹⁸ In this domain, EU law provides a framework of harmonised rules in order to create a level playing field in Europe. **Given the high funding potential of public procurement, it has been seen in the last 15 years as an important tool to support the demand for innovation.** The Barcelona objective of an R&D investment of 3% of GDP by 2010 triggered¹¹⁹ strong interest in public procurement. In September 2002, the Commission noted¹²⁰ that 'EU governments' tendency to request established technologies in their tendering procedures discourages innovation. Moreover, continuing fragmentation of EU procurement markets in some areas reduces rewards for innovative risk-takers in the EU vis-à-vis those in the US. The directive adopted¹²¹ in 2004 did not refer to support for the innovation process.

In 2005, the Council introduced¹²² in the guidelines for economic policies a requirement for Member States to focus on 'encouraging public procurement of innovative products

¹¹³ Resolution on Green Paper on Innovation, European Parliament, [OJ C 181](#), 24 June 1996, pp. 35–41.

¹¹⁴ More research for Europe - Towards 3% of GDP, Commission of the European Communities, [COM\(2002\) 499](#), 11 September 2002.

¹¹⁵ [COM\(2003\) 112](#), 11 March 2003, *op. cit.*

¹¹⁶ More Research and Innovation – Investing for Growth and Employment – A Common Approach, Commission of the European Communities, [COM\(2005\) 488](#), 12 October 2005.

¹¹⁷ Towards a more effective use of tax incentives in favour of R&D, Commission of the European Communities, [COM\(2006\) 728](#), 22 November 2006.

¹¹⁸ More information on public procurement in the EU can be found on the [website](#) of DG GROW.

¹¹⁹ The use of public procurement to boost demand for innovation was already [suggested](#) in 2000.

¹²⁰ [COM\(2002\) 499](#), 11 September 2002, *op. cit.*

¹²¹ Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, [OJ L 134](#), 30 April 2004, pp. 114–240.

¹²² Council Recommendation of 12 July 2005 on the broad guidelines for the economic policies of the Member States and the Community (2005 to 2008), [OJ L 205](#), 6 August 2005, pp. 28–37.

and services'. The Commission confirmed¹²³ then that it 'will raise awareness of the benefits of re-orienting public procurement towards stimulating research and innovation and the scope for this under Community public procurement law'. An expert report for the Commission also concluded¹²⁴ that 'Europe can drive forward research and innovation by harnessing its large expenditure on civil public procurement', and recommended reviewing the 2004 directive by 2010.

The Aho report stressed¹²⁵ in 2006 the need to 'use public procurement to drive demand for innovative goods, while at the same time improving the level of public services'. The 2006 Innovation Strategy reaffirmed¹²⁶ that 'improved public procurement practices can help foster market uptake of innovative products and services, while raising the quality of public services in markets where the public sector is a significant purchaser'. In February 2007, the Commission published¹²⁷ a guide for public procurement for innovation presenting 10 elements of good practice. In December 2007, the Commission adopted¹²⁸ a communication focussing on public procurement of R&D activities, known as **pre-commercial procurement (PCP)**.

The European Parliament also considered¹²⁹ in June 2010 that 'there is significant untapped potential for promoting innovation via public procurement'. In the communication on the Innovation Union flagship initiative, the Commission lamented¹³⁰ the fact that 'little public procurement in Europe is aimed at innovation, despite the opportunities under the EU procurement directives'. The Commission started supporting pilot projects on **Public Procurement of Innovation solutions (PPI)**, where authorities act as a launch customer for innovative goods or services not yet available to the general public. The Commission also supported the setup¹³¹ of a platform for PPI that developed a range of services for procurers looking for partners: a resource centre for gathering and sharing examples, policies and strategies of PPI; a procurement forum for public authorities; and training and guidance services.

In the preparatory work to review the directive on public procurement, BusinessEurope stated¹³² that there was no pressing need to revise the directives, but that more efforts should concentrate on the 'uniform enforcement of existing rules'. As far as innovation was concerned, BusinessEurope noted that public procurement can play an important role, but 'the Commission should primarily focus its attention on soft measures, including guidance, sharing of best practice and enhanced dialogue between the public and private sectors'. The Council of European Municipalities and Regions (CEMR)

¹²³ [COM\(2005\) 488](#), 12 October 2005, *op. cit.*

¹²⁴ [Public Procurement for Research and Innovation](#) - Developing procurement practices favourable to R&D and innovation, Expert Group report, European Commission, September 2015.

¹²⁵ [Creating an Innovative Europe](#), January 2006, *op. cit.*

¹²⁶ [COM\(2006\) 502](#), 13 September 2006, *op. cit.*

¹²⁷ Guide on dealing with innovative solutions in public procurement, Commission of the European Communities, [SEC\(2007\) 280](#), 23 February 2007.

¹²⁸ Pre-commercial Procurement: driving innovation to ensure sustainable high quality public services in Europe, Commission of the European Communities, [COM\(2007\) 799](#), 14 December 2007.

¹²⁹ Resolution on EU 2020, European Parliament, [P7_TA\(2010\)0223](#), 16 June 2010.

¹³⁰ [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

¹³¹ More information can be found on the [website](#) of the PPI platform.

¹³² [Response to Green Paper on modernisation of public procurement policy](#), Business Europe, 18 April 2011.

called¹³³ for a 'light' regime for public procurement, and stressed the need to 'increase awareness and incentives to look for innovative solutions'.

The revised EU directive on public procurement adopted in 2014 specifically included¹³⁴ PPI and PCP as key dimensions of public procurement. Article 31 of **the Directive introduced the concept of 'Innovation partnership', a new tool combining procurement for the development and the purchase of innovative goods, services and works that helps create tailor-made solutions to public needs.** This allows more comprehensive and direct support for the innovation process. The directive had to be transposed into national law by 18 April 2016¹³⁵. In 2015, the Commission, through DG Connect, introduced¹³⁶ European Assistance for Innovation Procurement (eafip), which provides a toolkit supporting the design of PCP and PPI strategies. The eafip also offers legal assistance and organises events to promote PPI. Support for PCP and PPI has also been included¹³⁷ in Horizon 2020.

3.2.5. Venture capital

Venture capital provides seed funding for emerging companies and, as such, is a key element of financing innovation. In 2006, the Commission stressed¹³⁸ the importance of venture capital in supporting SMEs, and noted the lack of venture capital in Europe compared to the United States. This was attributed to the fact that the European venture capital market is fragmented. In December 2006, the Council asked¹³⁹ the Commission to identify 'obstacles to cross-border investment by venture capital funds'. The Commission presented¹⁴⁰ its conclusions in a communication in December 2007. The objective set by the Commission was to create better conditions for venture capital in Europe, especially by improving cross-border conditions.

In the context of the EU 2020 strategy, in line with the Innovation Union flagship initiative and as invited¹⁴¹ by the European Council, the **Commission proposed in 2011 a regulation to create a designation for recognised 'European venture capital funds', and included measures to address the fragmentation of venture capital markets in Europe.** This regulation was adopted¹⁴² in 2013. In September 2015, the Commission launched¹⁴³ a consultation to review the regulation in the framework of the establishment of a Capital Market Union.¹⁴⁴

¹³³ [Public Procurement – Keep it short and simple!](#), CEMR, June 2012.

¹³⁴ Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement, [OJ L 94](#), 28 March 2014, pp. 65–242.

¹³⁵ More information on the public procurement directive can be found on the [website](#) of DG GROW.

¹³⁶ More information can be found on the [website](#) of eafip.

¹³⁷ [EU funding opportunities for PCP and PPI](#), European Commission, March 2014.

¹³⁸ Financing SME Growth - Adding European Value, Commission of the European Communities, [COM\(2006\) 349](#), 29 June 2006.

¹³⁹ Council Conclusions on a broad-based innovation strategy, Council of the European Union, [ST 15717 2006 INIT](#), 4 December 2006.

¹⁴⁰ Removing obstacles to cross-border investments by venture capital funds, Commission of the European Communities, [COM\(2007\) 853](#), 21 December 2007.

¹⁴¹ European Council Conclusions, [EUCO 2/1/11](#), 4 February 2011.

¹⁴² Regulation (EU) No 345/2013 of the European Parliament and of the Council of 17 April 2013 on European venture capital funds, [OJ L 115](#), 25 April 2013, pp. 1–17.

¹⁴³ [Public consultation](#) on the review of the European Venture Capital Funds (EuVECA) and European Social Entrepreneurship Funds (EuSEF) Regulations, European Commission, 30 September 2015.

¹⁴⁴ Building a Capital Markets Union, European Commission, [COM\(2015\) 63](#), 18 February 2015.

3.3. Regulation framework

Regulation provides the overall framework in which all the steps of the innovation process take place. Hence, **regulation impacts the willingness, opportunity and capability to innovate**. It can either have a positive effect, stimulating innovation, or hamper the activities that form part of the innovation process.¹⁴⁵

These effects were already identified in 1995 when the Commission published a Green Paper on Innovation. The Commission included¹⁴⁶ 'a favourable legal and regulatory framework' and 'simplify[ing] administrative procedures' as two of the 13 priority routes of actions. In its resolution¹⁴⁷ on the Green Paper, the European Parliament was concerned about the 'cumbersome legal and administrative procedures at both Member State and Union levels' and emphasised that 'harmonisation at European level can contribute to the simplification of administrative procedures by replacing 15 sets of regulation with a single set'. The second priority of the 1996 action plan for innovation in Europe was to set up a legal, regulatory and financial framework conducive to innovation. It focussed on the adaptation and simplification of the legal and regulatory environment in Europe.

The Commission noted¹⁴⁸ in September 2000 that 'the complexity of administrative and regulatory procedures continues to be a serious obstacle to the creation of new businesses and to entrepreneurship'. It again stressed the need to establish a regulatory framework conducive to innovation, acknowledging that 'regulation is necessary, but over-regulation hinders the development of innovative enterprises'. In December 2000, the Council set¹⁴⁹ as an objective of the multiannual programme for enterprise 'to simplify and improve the administrative and regulatory framework for business so that research, innovation and business creation in particular can flourish'. Despite these initiatives, the Commission noted¹⁵⁰ in 2003 that 'business and industry as a whole is still held back by a complex and incomplete regulatory environment'.

Following the 2001 Mandelkern Group report,¹⁵¹ the Commission started working on implementing better regulation at EU level. In March 2005, the Commission stated¹⁵² that 'better regulation creates the right incentives for business, cuts unnecessary costs and removes obstacles to adaptability and innovation'. The Commission announced¹⁵³ in October 2005 that it will 'step up its dialogue with stakeholders to identify regulatory barriers to research and innovation'. In January 2006, the Aho report stressed¹⁵⁴ the need to 'provide a harmonised regulatory environment across the EU favourable to

¹⁴⁵ [Does EU regulation hinder or stimulate innovation?](#), Jacques Pelkmans and Andrea Renda, CEPS Special Report No 96, November 2014.

¹⁴⁶ [COM\(95\) 688](#), 20 December 1995, *op. cit.*

¹⁴⁷ [OJ C 181](#), 24 June 1996, pp. 35–41, *op. cit.*

¹⁴⁸ [COM\(2000\) 567](#), 20 September 2000, *op. cit.*

¹⁴⁹ Council Decision of 20 December 2000 on a multiannual programme for enterprise and entrepreneurship, [OJ L 333](#), 29 December 2000, pp. 84–91.

¹⁵⁰ Choosing to grow: Knowledge, innovation and jobs in a cohesive society, Commission of the European Communities, [COM\(2003\) 5](#), 31 March 2003.

¹⁵¹ [Mandelkern Group on Better Regulation](#), Final Report, 13 November 2001.

¹⁵² Better Regulation for Growth and Jobs in the European Union, Commission of the European Communities, [COM\(2005\) 97](#), 16 March 2005.

¹⁵³ [COM\(2005\) 488](#), 12 October 2005, *op. cit.*

¹⁵⁴ [Creating an Innovative Europe](#), January 2006, *op. cit.*

innovation and based on early anticipation of needs'. The Commission committed¹⁵⁵ in September 2006 to taking decisive steps on regulation, as 'innovation requires a regulatory environment that is predictable and accommodates and even encourages new developments in goods and services'.

While launching¹⁵⁶ a new initiative for smart regulation in October 2010, the Commission reaffirmed¹⁵⁷ in the Innovation Union flagship initiative that 'smart and ambitious regulation can be a key driver for innovation'. In December 2012, the Commission announced¹⁵⁸ it would launch a Regulatory Fitness and Performance Programme (REFIT) in order to evaluate existing regulation and identify burdens, inconsistencies, gaps and ineffective measures in EU legislation and in how this legislation is implemented at national and sub-national level.¹⁵⁹

In May 2015, the Commission proposed¹⁶⁰ a new 'Better Regulation package'. The package includes guidelines and a toolbox for better regulation stressing the need to evaluate the impact of regulation on innovation and competitiveness. In this context, BusinessEurope advocated¹⁶¹ in June 2015 **the introduction of an 'Innovation Principle' as an integral component of the policy-making process, balancing the existing focus on risk avoidance**. The Commission document on 'Better regulation for innovation' published¹⁶² in December 2015 stressed that the inclusion of this principle is in line with the measures announced in May on regulation that help promote an innovation-friendly regulatory framework.¹⁶³

The **Commission proposed in this last communication to strike 'Innovation Deals' that would help to 'address regulatory uncertainties identified by innovators**, which can hinder innovation within the existing legal framework. In cases where a regulatory obstacle can only be addressed at EU level, the European Commission could help national, regional or local authorities to identify and make use of existing flexibility in the EU legislative framework or to implement specific legal provisions appropriately by providing clarification'.

3.4. Standards

Standards are voluntary technical specifications defining requirements for products, production processes, services or test-methods. The setting of standards involves the private sector, consumers, trade unions and public authorities in an open and transparent process. **Standards play a key role in ensuring interoperability promoting a single market, enhancing competition and reducing costs**. Hence they impact the innovation process, as shown by the success of the GSM standard developed by the

¹⁵⁵ [COM\(2006\) 502](#), 13 September 2006, *op. cit.*

¹⁵⁶ Smart Regulation in the European Union, European Commission, [COM\(2010\) 543](#), 8 October 2010.

¹⁵⁷ [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

¹⁵⁸ EU Regulatory Fitness, European Commission, [COM\(2012\) 746](#), 12 December 2012.

¹⁵⁹ The REFIT programme was evaluated in [2013](#), [2014](#) and [2015](#). In December 2015, the Commission set up the [REFIT Platform](#) to conduct an ongoing dialogue with Member States and stakeholders on improving EU legislation.

¹⁶⁰ All the documents of the Better Regulation package are accessible on the [website](#) of the Commission.

¹⁶¹ [Better Framework for Innovation - Fuelling EU policies with an Innovation Principle](#), BusinessEurope, June 2015.

¹⁶² [Better regulations for innovation-driven investment at EU level](#), European Commission, 2016.

¹⁶³ Commissioner Moedas announced that he supported the idea of the 'innovation principle' in a [speech](#) given in Brussels on 26 January 2016.

European Telecommunications Standards Institute.

In 1983, a Council directive provided¹⁶⁴ a framework for national and European standards institutions to exchange information about the setting of new standards. However, in 1985, the Council proposed¹⁶⁵ a new approach to technical harmonisation and standards, prioritising European standardisation through introduction of harmonised standards. In this new approach, the Commission is to issue standardisation mandates to the European standardisation organisations¹⁶⁶ (ESO).

The Commission published¹⁶⁷ a Green Paper on standardisation in October 1990, followed¹⁶⁸ by a Communication in December 1991. In these documents, the Commission proposed addressing the barriers to the internal market created by differences in national technical standards, and called for a harmonisation of standards.

In the 2000s, standards are seen as a key aspect of fostering innovation. In 2003, general guidelines for cooperation between the European standardisation organisations and the Commission were established¹⁶⁹. The Aho report stressed in 2006 the importance of standards to create an innovation-friendly market, and called on policy-makers 'to use standards-setting powers to demand high technical performance levels and reach agreement on new standards quickly and efficiently'. The 2006 Commission innovation strategy for the EU insisted on the need to develop interoperable standards¹⁷⁰. In March 2008, the Commission published¹⁷¹ a communication dedicated to the role of standards in innovation. The Commission stated that 'dynamic standardisation is an important enabler of innovation' and proposed nine measures to focus EU standardisation policy on innovation.

In connection with the Innovation Union, the Commission proposed¹⁷² in June 2011 a strategic vision for European standards. The objective is to adapt the European standardisation process to an evolving global landscape in which standards are needed for processes and not only for products. The standardisation process should also be 'accelerated, simplified and modernised'. The focus of European standardisation to support industrial policy and innovation is reaffirmed, as well as its importance to address key societal challenges. The communication was accompanied by a proposal for a regulation on European standardisation to replace the 1998 Directive, which was

¹⁶⁴ Council Directive 83/189/EEC of 28 March 1983 laying down a procedure for the provision of information in the field of technical standards and regulations, [OJ L 109](#), 26 April 1983, pp. 8–12. This Directive was [codified](#) in 1998.

¹⁶⁵ Council Resolution of 7 May 1985 on a new approach to technical harmonisation and standards, [OJ C 136](#), 4 June 1985, pp. 1–9.

¹⁶⁶ The European Committee for Standardization ([CEN](#)), the European Committee for Electrotechnical Standardization ([CENELEC](#)) and the European Telecommunications Standards Institute ([ETSI](#)).

¹⁶⁷ Green Paper on the development of European standardisation, Commission of the European Communities, [COM\(90\) 456](#), 8 October 1990.

¹⁶⁸ Standardization in the European Economy, Commission of the European Communities, [COM\(91\) 521](#), 16 December 1991.

¹⁶⁹ General Guidelines for the Cooperation between CEN, Cenelec and ETSI and the European Commission and the European Free Trade Association, [OJ C 91](#), 16 April 2003, pp. 7–11.

¹⁷⁰ The importance of standard setting for innovation was also recognised by the [Council](#) in December 2006 and by the [European Parliament](#) in May 2007.

¹⁷¹ Towards an increased contribution from standardisation to innovation in Europe, Commission of the European Communities, [COM\(2008\) 133](#), 11 March 2008.

¹⁷² A strategic vision for European standards, European Commission, [COM\(2011\) 311](#), 1 June 2011.

adopted¹⁷³ in October 2012. Every year, the Commission publishes¹⁷⁴ a communication on the annual programme for European standardisation that includes the standardisation requests to the ESO. In the framework of the Single Market Strategy launched in October 2015, the Commission proposed a Joint Initiative on Standardisation 'to ensure the most effective partnership possible between the Commission, standard setters, and the industry'. Additional information on this initiative is expected¹⁷⁵ in 2016.

3.5. Intellectual property rights

3.5.1. General framework for IPR

Intellectual property rights include patents, copyright, trademarks, design rights, and related issues such as trade secrets and geographical indications. In the context of the establishment of the single market, the EU institutions launched in the 1990s¹⁷⁶ a process to harmonise the legislation on these different components. In the November 1996 action plan for innovation in Europe, the Commission noted that 'action at Community level, while respecting the rules of subsidiarity, is necessary to draw up and enforce the rules of the game, particularly those on competition, intellectual property rights and the internal market'. The Treaty of Amsterdam in 1997 introduced, in the Treaty establishing the European Community (TEC), the possibility for the Council acting unanimously to adopt measures on intellectual property rights after consulting the European Parliament.¹⁷⁷

In 2007, the Treaty of Lisbon introduced¹⁷⁸ provisions dealing specifically with IPR in the Treaty on the Functioning of the European Union (TFEU). Article 118 states that the ordinary legislative procedure is to be used for the EU to 'establish measures for the creation of European intellectual property rights to provide uniform protection of intellectual property rights throughout the Union'. However, the linguistic aspects of European IPR regulations are the responsibility of the Council acting unanimously after consulting the European Parliament. Nevertheless, regulation on IPR has also been adopted on the basis of Article 114 TFEU¹⁷⁹ relating to the establishment and functioning of the internal market.

In May 2011, in the context of the Europe 2020 strategy and the Innovation Union flagship initiative, the Commission began working to establish a single market for IPR in Europe. Despite the measures taken, it acknowledged¹⁸⁰ that the IPR landscape is still fragmented in the EU, and that the acceleration of technological progress – especially on the digital aspect – puts existing rules under additional strain. For the Commission, **'European IPR legislation must provide the appropriate "enabling framework" that**

¹⁷³ Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation, [OJ L 316](#), 14 November 2012, pp. 12–33.

¹⁷⁴ The annual Union work programme for European standardisation and more information on standardisation policy can be found on the [website](#) of DG GROW.

¹⁷⁵ [Closing plenary of the Joint Initiative on Standardisation](#), Commission event, 29 April 2016.

¹⁷⁶ Intellectual property rights and standardization, Commission of the European Communities, [COM\(92\) 445](#), 27 October 1992.

¹⁷⁷ Article 133, Treaty establishing the European Community, [OJ C 340](#), 10 November 1997, pp. 173–306.

¹⁷⁸ Article 118, Treaty on the Functioning of the European Union, [OJ C 326](#), 26 October 2012, pp. 47–390.

¹⁷⁹ This article was numbered as Article 100a TEC after the Treaty of Maastricht (1993) and Article 95 TEC after the Treaty of Amsterdam (1997).

¹⁸⁰ A Single Market for Intellectual Property Rights, European Commission, [COM\(2011\) 287](#), 24 May 2011.

incentivises investment by rewarding creation, stimulates innovation in an environment of undistorted competition and facilitates the distribution of knowledge'.

The Commission planned to revise all the components of IPR as well as to review the 2004 Directive¹⁸¹ on IPR enforcement. On this later matter it published,¹⁸² in July 2014, an EU action plan, and at the beginning of 2016 conducted¹⁸³ a public consultation on the evaluation and modernisation of the legal framework for the enforcement of IPR. The European Parliament supported¹⁸⁴ this action plan while stressing that Member States are responsible for IPR enforcement, and that 'the key objective of the action plan should be to ensure the effective, evidence-based enforcement of IPR, which plays a key role in stimulating innovation, creativity, competitiveness, growth and cultural diversity'. In its October 2015 communication on the Single Market, the Commission announced¹⁸⁵ that it will come up with a modernised framework for IPR and a review of the IPR enforcement framework in 2016-2017.¹⁸⁶

3.5.2. European patent

A patent is a legal title granted for a limited period of time for any invention having a technical character, provided that it is new, involves an 'inventive step', and is susceptible to industrial application. In exchange for the right granted by the patent, the invention is publicly disclosed. The Working Party on Scientific and Technical Research Policy (PREST), charged with exploring the possibilities for establishing a European research policy, suggested¹⁸⁷ in October 1967 that 'the creation of a European patent should be decided as quickly as possible'. The European Parliament formulated¹⁸⁸ the same request in November 1967. However, it was thought then that such an initiative could not be implemented at Community level because the Community did not have competence over that matter, and it should therefore be pursued outside the Community legal framework. This led to the signature of the Convention of the Grant of European Patent¹⁸⁹ – known as the Munich Convention – in October 1973. While this international convention established a single procedure for the granting of patents, they remained national patents subject to national rules¹⁹⁰.

¹⁸¹ Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights, [OJ L 157](#), 30 April 2004, pp. 45–86.

¹⁸² [Public consultation on the evaluation and modernisation of the legal framework for the enforcement of IPR](#), European Commission, 9 December 2015.

¹⁸³ Towards a renewed consensus on the enforcement of Intellectual Property Rights: An EU Action Plan, European Commission, [COM\(2014\) 392](#), 1 July 2014.

¹⁸⁴ Resolution on 'Towards a renewed consensus on the enforcement of Intellectual Property Rights: An EU Action Plan', European Parliament, [P8_TA\(2015\)0220](#), 9 June 2015.

¹⁸⁵ Upgrading the Single Market: more opportunities for people and business, European Commission, [COM\(2015\) 550](#), 28 October 2015.

¹⁸⁶ More information on the current activities of the Commission regarding IPR can be found on the [website](#) of DG GROW.

¹⁸⁷ [Pour une politique de recherche et d'innovation dans la Communauté](#), PREST, 9 October 1967.

¹⁸⁸ Résolution du 27 novembre 1967 sur la politique européenne de recherche scientifique et technologique, European Parliament, [OJ 307](#), 18 December 1967, pp. 1–8.

¹⁸⁹ [Convention on the Grant of European Patents](#) (European Patent Convention), 15th Edition, European Patent Office, September 2013.

¹⁹⁰ The convention established the [European Patent Organisation](#) with an Office which manages the patenting process and the Administrative Council which supervises the organisation. The EPO currently has 38 member states.

A second attempt to establish a European patent led to the signature of the Convention on the Community Patent¹⁹¹ – known as the Luxembourg Convention – in December 1975. This Community convention was then amended¹⁹² in December 1989 by an Agreement that included additional regulatory aspects concerning litigation on Community patents. However, not all Member States ratified the Luxembourg convention, so it never entered into force. The issues of the cost of translating patents into all Community languages, and of legal uncertainties regarding the judicial system for litigation, were seen as the reasons for the failure of this initiative.

Following the publication of the Green Paper on innovation in 1995 and the corresponding action plan for innovation in Europe in 1996, the Commission launched a new initiative through the publication¹⁹³ of a green paper on the Community patent and the patent system in Europe. This document discussed the need to transform the Luxembourg Convention into a legal instrument through the adoption of Community regulation. Following a public consultation, and with the support¹⁹⁴ of the European Parliament, the Commission concluded in February 1999 that a Community regulation was needed¹⁹⁵ on the European patent.

The Community patent proposal published¹⁹⁶ by the Commission in August 2000 was approved¹⁹⁷ by the European Parliament with amendments in April 2002. However, no agreement could be reached¹⁹⁸ in the Council on the proposal. In January 2006, in the context of the October 2005 initiative on industrial policy, the Commission launched a public consultation on the future of patent policy. In July 2006, the European Parliament asked¹⁹⁹ 'the Council to end the stalemate over the proposed Community patent as far as the language regime is concerned' and, in October 2006, it urged²⁰⁰ 'the Commission to explore all possible ways of improving the patent and patent litigation systems in the EU'. The conclusions of the consultation²⁰¹ led the Commission to publish²⁰² in April 2007 a communication on the patent system in Europe in order 'to revitalise the debate on the patent system in Europe in a way which encourages Member States to work towards consensus and real progress on this issue'. The

¹⁹¹ Convention for the European patent for the common market (Community Patent Convention), [OJ L 17](#), 26 January 1976, pp. 1–28.

¹⁹² Agreement relating to Community patents, [OJ L 401](#), 30 December 1989, pp. 1–27 and Joint Declaration Agreement relating to Community patents, [OJ L 401](#), 30 December 1989, pp. 57–66.

¹⁹³ Green Paper on the Community patent and the patent system in Europe, Commission of the European Communities, [COM\(97\) 314](#), 24 June 1997.

¹⁹⁴ Resolution on the Commission Green Paper on the Community patent and the patent system in Europe, European Parliament, [T4_0689/1998](#), 19 November 1998.

¹⁹⁵ Promoting innovation through patents, Commission of the European Communities, [COM\(99\) 42](#), 5 February 1999.

¹⁹⁶ Proposal for a Council Regulation on the Community patent, Commission of the European Communities, COM(2000) 412, [OJ C 337E](#), 28 November 2000, pp. 278–290.

¹⁹⁷ Decision on the Proposal for a Council regulation on the Community patent, European Parliament, [P5_TA\(2002\)0163](#), 10 April 2004.

¹⁹⁸ The file was [referred](#) to the President of the European Council in 2004.

¹⁹⁹ [P6_TA\(2006\)0301](#), 5 July 2006, *op. cit.*

²⁰⁰ Resolution on future patent policy in Europe, European Parliament, [P6_TA\(2006\)0416](#), 12 October 2006.

²⁰¹ [Future patent policy in Europe - Preliminary findings](#), Commission of the European Communities, 12 July 2006.

²⁰² Enhancing the patent system in Europe, Commission of the European Communities, [COM\(2007\) 165](#), 3 April 2007.

Competitiveness Council then sought²⁰³ to find a compromise on the issue of the Community Patent and the patent litigation system. However, the entry into force of the Lisbon Treaty in 2009 implied that the proposal had to be revised, and a proposal on the translation arrangements for the EU patent was published²⁰⁴ by the Commission in June 2010. Whereas the Community patent was described²⁰⁵ as 'a symbol of the Union's commitment to a knowledge-driven economy' in February 2005, it had become²⁰⁶ 'a symbol for Europe's failure on innovation' in the communication on the Innovation Union flagship initiative in October 2010.

In order to solve the issues related to the EU patent, the Competitiveness Council suggested²⁰⁷ in December 2010 to use the possibility of enhanced cooperation. The Commission proposal for enhanced cooperation in the area of the creation of unitary patent protection was adopted²⁰⁸ by the Council in March 2011, after obtaining the consent²⁰⁹ of the European Parliament. The Commission proposals were published immediately afterwards and were both adopted²¹⁰ in December 2012. The Unified Patent Court Agreement was signed²¹¹ in February 2013. However, the agreement has to be ratified by 13 Member States in order for the Unitary Patent to become effective. In September 2015, Italy joined²¹² the Unitary Patent. In December 2015, the Commission noted²¹³ that 'it is not certain whether or when the Unitary Patent will be delivered'. In May 2016, the agreement had been ratified by nine²¹⁴ Member States.

3.5.3. Copyright and neighbouring rights

Copyright grants the rights of distribution and use of an original work (book, artworks, etc.) to its creator. The Commission Green Paper published²¹⁵ in June 1988 marked the first step in putting in place a Community framework for copyright and neighbouring

²⁰³ Enhancing the patent system in Europe (a) Proposal for a Regulation on the Community patent (b) Draft Agreement on the European Union Patent Court, Presidency document to the Council of the European Union, [ST 16006 2008 INIT](#), 21 November 2008 and 2910th Meeting of the Competitiveness Council, Council of the European Union, [ST 16577 2008 INIT](#), 1-2 December 2008.

²⁰⁴ Proposal for a Council Regulation (EU) on the translation arrangements for the European Union patent, European Commission, [COM\(2010\) 350](#), 30 June 2010.

²⁰⁵ Working together for growth and jobs - A new start for the Lisbon Strategy, Commission of the European Communities, [COM\(2005\) 24](#), 2 February 2005.

²⁰⁶ [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

²⁰⁷ 3057th Council meeting Competitiveness, Council of the EU, [ST 17668 2010 INIT](#), 10 December 2010.

²⁰⁸ Council Decision of 10 March 2011 authorising enhanced cooperation in the area of the creation of unitary patent protection, [OJ L 76](#), 22 March 2011, pp. 53–55.

²⁰⁹ Resolution on the draft Council decision authorising enhanced cooperation in the area of the creation of unitary patent protection, European Parliament, [P7_TA\(2011\)0054](#), 15 February 2011.

²¹⁰ Regulation (EU) No 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection, [OJ L 361](#), 31 December 2012, pp. 1–8, and Council Regulation (EU) No 1260/2012 of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection with regard to the applicable translation arrangements, [OJ L 361](#), 31 December 2012, pp. 89–92.

²¹¹ Agreement on a Unified Patent Court, [OJ C 175](#), 20 June 2013, pp. 1–40.

²¹² Only Spain and Croatia have not taken part in the initiative so far.

²¹³ [State of the Innovation Union 2015](#), European Commission, December 2015.

²¹⁴ Austria, Belgium, Denmark, France, Luxembourg, Malta, Portugal, Sweden and Finland. See the [website](#) of the Council for updated information on the ratification.

²¹⁵ Green paper on copyright and the challenge of technology, Commission of the European Communities, [COM\(88\) 172](#), 7 June 1988.

rights (including, for example, performers', producers' and broadcasting rights). It was followed by a working programme²¹⁶ in January 1991 charting the path for harmonised legislation in that field and addressing issues such as piracy, copying at home, computer programmes and databases, and which led to the adoption of five Council directives.²¹⁷

In the context of the emerging information society,²¹⁸ the Commission presented²¹⁹ a new green paper on copyright in July 1995. The upcoming digitalisation of information, services and products was seen as a challenge for copyright that needed to be addressed. The Commission presented²²⁰ in December 1997 a proposal for a directive on the harmonisation of certain aspects of copyright. The directive was adopted²²¹ by the European Parliament and the Council in May 2001.

The 2011 Commission communication on the Single Market for IPR stressed the need to review the framework for copyright in Europe, as it was no longer fit for purpose in the digital age. A public consultation was launched in 2014 on the review of EU copyright rules.²²² The Commission published²²³ its conclusions in December 2015 and announced the review of the 2001 copyright directive and of other directives such as the 1993 satellite and cable directive. The Commission will consider amending the legal framework for the enforcement of intellectual property rights and setting solutions at EU level with regard to the remuneration of authors and performers in the EU.

The Manifesto published²²⁴ by Copyright for Creativity, a platform gathering a wide range of stakeholders, advocated in January 2015 a reform of copyright that would support innovation and creativity. European stakeholders in research also voiced²²⁵ concerns, underlining the need to provide a text and data mining exception for research activities in the review of the copyright reform.

The issue of territoriality of rights²²⁶ (covering the issues of geo-blocking, cross-border portability and exceptions and limitations to copyrights protection) also needed to be

²¹⁶ Working programme of the Commission in the field of copyright and neighbouring rights, Commission of the European Communities, [COM\(90\) 584](#), 17 January 1991.

²¹⁷ The Computer Programs Directive ([91/250/EEC](#)), the Rental Right Directive ([92/100/EEC](#)), the Satellite and Cable Directive ([93/83/EEC](#)), the Terms of Protection Directive ([93/98/EEC](#)) and the Databases Directive ([96/9/EC](#)).

²¹⁸ Europe's way to the information society – An action plan, Commission of the European Communities, [COM\(94\) 347](#), 19 July 1994.

²¹⁹ Green paper on Copyright and related rights in the information society, Commission of the European Communities, [COM\(95\) 382](#), 19 July 1995.

²²⁰ Proposal for a directive on the harmonisation of certain aspects of copyright and related rights in the Information Society, Commission of the European Communities, [COM\(97\) 628](#), 10 December 1997.

²²¹ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, [OJ L 167](#), 22 June 2001, pp. 10-19.

²²² [Towards reform of the EU Copyright Directive](#), T. Madiaga, EPRS, European Parliament, 2 July 2015 and [Review of the EU copyright framework](#), S. Reynolds, EPRS, European Parliament, October 2015.

²²³ Towards a modern, more European copyright framework, European Commission, [COM\(2015\) 626](#), 9 December 2015.

²²⁴ [The Copyright Manifesto](#), Copyright for Creativity, January 2015.

²²⁵ See for example the position of [Science Europe](#) in April 2015, or of the [League of European Research Universities](#) in December 2015.

²²⁶ [EU copyright reform: Revisiting the principle of territoriality](#), T. Madiaga, EPRS, European Parliament, September 2015.

addressed. The Commission proposed²²⁷ a regulation on cross-border portability of online content service in December 2015.

3.5.4. Design rights

The harmonisation of the protection of industrial design rights started in 1993 when the Commission put forward²²⁸ a proposal for a directive on the legal protection of designs. The directive was adopted²²⁹ in October 1998. It was complemented²³⁰ in 2002 by a regulation on Community design that introduced a unitary design right avoiding fragmentation of rights at EU level.

3.5.5. Trademarks

A trademark is a label which distinguishes the goods and services of one company from those of another. The first Council Directive on trademarks was adopted²³¹ in 1988 to harmonise the registration of trademarks at national level. It was complemented²³² by a Regulation in 1993 establishing a Community trademark. These two pieces of legislation were codified respectively in 2008²³³ and 2009²³⁴.

The Commission proposed in 2013 to review the framework for trademarks based on a study it commissioned that was published²³⁵ in 2011. The package included a directive and a regulation that were both adopted²³⁶ in December 2015. This new legislation simplifies, accelerates and harmonises trademark application procedures; ensures better coordination between national offices and the EU trademark agency; and updates the governance rules of the EU trademark agency.

3.5.6. Trade secrets

Trade secrets are confidential information providing a competitive advantage to a company. In 2013, the Commission put forward a proposal aimed at aligning existing laws against the misappropriation of trade secrets across the EU. The directive focussed

²²⁷ Proposal for a regulation on ensuring the cross-border portability of online content services in the internal market, European Commission, [COM\(2015\) 627](#), 9 December 2015. More information in [Cross-border portability of online content services](#), T. Madiega, EPoS, European Parliament, February 2016.

²²⁸ Proposal for a directive on the legal protection of designs, Commission of the European Communities, [COM\(93\) 344](#), 3 December 1993.

²²⁹ Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the legal protection of designs, [OJ L 289](#), 28 October 1998, pp. 28–35.

²³⁰ Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs, [OJ L 3](#), 5 January 2002, pp. 1–24.

²³¹ First Council Directive 89/104/EEC of 21 December 1988 to approximate the laws of the Member States relating to trade marks, [OJ L 40](#), 11 February 1989, pp. 1–7.

²³² Council Regulation (EC) No 40/94 of 20 December 1993 on the Community trade mark, [OJ L 11](#), 14 January 1994, pp. 1–36.

²³³ Directive 2008/95/EC of the European Parliament and of the Council of 22 October 2008 to approximate the laws of the Member States relating to trade marks (Codified version), [OJ L 299](#), 8 November 2008, pp. 25–33.

²³⁴ Council Regulation (EC) No 207/2009 of 26 February 2009 on the Community trade mark (codified version), [OJ L 78](#), 24 March 2009, pp. 1–42.

²³⁵ [Study on the overall functioning of the European Trade Mark System](#), Max Planck Institute for Intellectual Property and Competition Law, European Commission, 15 February 2011.

²³⁶ Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks, [OJ L 336](#), 23 December 2015, pp. 1–26 and Regulation (EU) 2015/2424 of the European Parliament and of the Council of 16 December 2015, [OJ L 341](#), 24 December 2015, pp. 21–94. For more information, consult [The EU Trademark reform package](#), EPoS, European Parliament, December 2015.

on providing protection for trade secret holders to defend their rights when trade secrets are stolen or misused. Nevertheless, it also protects journalists, their sources and whistle-blowers in the context of the rights of expression and information to reveal misconduct of illegal activities. In December 2015, the Council and the European Parliament reached²³⁷ a provisional agreement on the proposed directive. The European Parliament adopted²³⁸ the text on 14 April 2016. When the directive enters into force, the Member States will have a maximum of two years to incorporate its provisions into domestic law.

3.6. Partnerships and initiatives

Since 2000 the EU has launched several initiatives to support the Europeanisation of the innovation process, with the objective of strengthening the innovation base in Europe. These initiatives are voluntary and focus mainly on establishing networks between private and public actors in the innovation process. The most prominent initiatives are:

- **European Technology Platforms (ETP):** ETPs are industry-led stakeholder fora aimed at setting out a common vision and developing a strategic research agenda in a given area at European level. They ensure that the efforts of all the various actors are streamlined to achieve common objectives. There are currently 41 active ETPs in the fields of energy, the environment, ICT, transport, production and processes, and a bio-based economy.²³⁹
- **European Institute for Innovation and Technology (EIT):** the EIT was established²⁴⁰ in March 2008 as an incubator of 'Knowledge and Innovation Communities' (KICs). The KICs are European public-private partnerships of higher education institutions, research organisations, companies and other stakeholders in the innovation process. Five KICs are currently active on climate, ICT, energy, health and raw materials. Calls for partnerships in order to establish two new KICs on food and manufacturing were launched in January 2016. The European Court of Auditors published²⁴¹ in April 2016 a special report criticizing the complex operational framework of the EIT and calling for adjustments.
- **Joint Technology Initiatives (JTI):** JTIs build on existing ETPs, offering stronger support (including financing support from the framework programme for research) for existing public-private partnerships. A Joint Undertaking is established under EU law in order to manage the funding activities of the JTIs. There are currently six JTIs funded under Horizon 2020.²⁴²
- **The Lead Market Initiative (LMI):** a lead market is a pioneer region in producing and adopting innovative goods and services. Initiatives to support the establishment of lead markets are a policy tool to support demand for innovation. In 2007, the

²³⁷ [Protecting businesses' trade secrets](#), T. Madiaga, EPRS, European Parliament, 7 April 2016.

²³⁸ European Parliament legislative resolution on the proposal for a directive of the European Parliament and of the Council on the protection of undisclosed know-how and business information, European Parliament, [P8_TA\(2016\)0131](#), 14 April 2016.

²³⁹ The list of active ETPs can be found on the [website](#) of the Commission.

²⁴⁰ More information on the EIT and KICs can be found on the [website](#) of the EIT.

²⁴¹ Special report No [04/2016](#): The European Institute of Innovation and Technology must modify its delivery mechanisms and elements of its design to achieve the expected impact, European Court of Auditors, 14 April 2016.

²⁴² [Horizon 2020 budget and implementation](#), V. Reillon, EPRS, European Parliament, November 2015.

Commission launched the LMI in order to turn Europe into a lead market in eHealth, protective textiles, sustainable construction, recycling, bio-based products and renewable energies. The evaluation of the initiative in 2011 concluded²⁴³ that 'varying degrees of success were achieved in relation to the different Action Plans' established in each domain.

- **Contractual Public Private Partnerships (cPPP):** a cPPP is a contractual arrangement between the Commission and an association representing the interests of the private sector in a field in which both parties commit to a long term investment in research and innovation. cPPPs were created as a more flexible instrument alternative to JTIs. Eight cPPPs have been agreed²⁴⁴ since 2008.
- **European Innovation Partnerships (EIP):** EIPs were proposed in 2010 as new public-private partnerships to support the activities of the different actors in the innovation process in a given area. EIPs combine some features of JTIs with some aspects of the lead market initiatives. EIPs are still active²⁴⁵ today on Active and Healthy Ageing; Agricultural Productivity and Sustainability; Raw Materials; Water; and Smart Cities and Communities.

In June 2015 Commissioner Moedas proposed that a European Innovation Council (EIC) be created, as a new instrument to foster innovation in Europe. However, the objective and shape of the EIC have not yet been defined. A call for ideas was made²⁴⁶ in April 2016 to provide some content for this as yet undefined entity, which is to be developed under Horizon 2020 as part of the mid-term evaluation of that programme.

3.7. Culture of innovation

Developing a culture of innovation – a particular set of values, norms and patterns of behaviour that stimulate the innovation process – appears nowadays to be as important as managing the innovation process itself. In order to thrive, innovation needs a new global approach and a fresh mind-set on 'how to do things' that includes creative thinking, collaboration, initiative, openness, a positive approach to failure and high trust.

These different aspects have been cited throughout the history of the development of an EU innovation policy. The Commission stressed²⁴⁷ in June 1978 that 'the cultural environment unfavourable to risk taking' was a limitation for innovation in Europe. In November 1980, it identified²⁴⁸ the need to create 'an environment of attitudes and opinion which is receptive to change'. The Commission noted in October 1981²⁴⁹ that 'there is the fundamental problem of social acceptability of innovation and new technology' and in December 1995²⁵⁰ that 'traditional Europe is suspicious and its enterprises tend to shy away from risk. Innovators are seen as a nuisance'. As a result, the first priority of the 1996 action plan for innovation in Europe was²⁵¹ to foster an

²⁴³ [Final Evaluation of the Lead Market Initiative](#), CSES and Oxford research, July 2011.

²⁴⁴ More information on the cPPPs can be found in [Horizon 2020 budget and implementation](#), V. Reillon, EPRS, European Parliament, November 2015.

²⁴⁵ More information on the EIPs can be found on the [website](#) of the Innovation Union.

²⁴⁶ More information on the EIC consultation on the [website](#) of DG Research and Innovation.

²⁴⁷ [COM\(78\) 255](#), 22 June 1978, *op. cit.*

²⁴⁸ [COM\(80\) 755](#), 18 November 1980, *op. cit.*

²⁴⁹ [COM\(81\) 620](#), 20 October 1981, *op. cit.*

²⁵⁰ [COM\(95\) 688](#), 20 December 1995, *op. cit.*

²⁵¹ [COM\(96\) 589](#), 20 November 1996, *op. cit.*

innovation culture. The Commission declared that 'innovation requires, first and foremost, a state of mind combining creativity, entrepreneurship, willingness to take calculated risks and an acceptance of social, geographical or professional mobility'.

The European Parliament recognised²⁵² in May 2000 that 'a better understanding of research and innovation needs to be fostered among the members of the general public (the citizens)'. This aspect was a key objective of the September 2000 Commission Communication on innovation. The Commission focussed²⁵³ its approach on organising public debates about benefits, costs and risks of innovation, in order to foster a society open to innovation. In December 2001, the Commission adopted²⁵⁴ a Science and Society Action Plan, in which it stated that 'the relationship between science, technology and innovation, on the one hand, and society, on the other, must be reconsidered'. It proposed 38 actions to bring innovation closer to citizens.

In March 2003, the Commission noted²⁵⁵ that 'European diversity brings with it different aspirations and attitudes to innovation that have to be respected' and that 'the creation of new markets and acceptance of new products by customers are of paramount importance for innovation'. The 2006 Aho report argued²⁵⁶ that there is a need to foster a cultural shift which celebrates innovation, a position supported²⁵⁷ by the European Parliament. However, the Commission noted²⁵⁸ again in September 2009 that 'new technologies are often met with scepticism, and public debate tends to underplay the importance of scientific insight and evidence and often remains focused on concerns and potential threats to human health or the environment'. So, there is a need 'to make sure that the mindset of society remains favourable towards innovation'.

Following the launch of the Innovation Union flagship initiative in October 2010, both the Council²⁵⁹ and the European Parliament²⁶⁰ recognised the importance of stimulating a culture of creativity, entrepreneurship and risk-taking. The state of the Innovation Union reports mentioned²⁶¹ this aspect again and stressed the need to involve society more closely in the innovation process. However no additional measures were taken at EU level to specifically support the development of a culture of innovation beyond the development of EU prizes: the European Capital of Innovation Award, the EU Women Innovators prize, the European Prize for Innovation in Public Administration, and the Horizon Prize for Social Innovation.²⁶²

²⁵² Resolution of 18 May 2000 on the communication 'Towards a European Research Area', European Parliament, [OJ C 59](#), 23 February 2001, pp. 250-258.

²⁵³ [COM\(2000\) 567](#), 20 September 2000, *op. cit.*

²⁵⁴ Science and Society Action plan, Commission of the European Communities, [COM\(2001\) 714](#), 4 December 2001.

²⁵⁵ [COM\(2003\) 112](#), 11 March 2003, *op. cit.*

²⁵⁶ [Creating an Innovative Europe](#), January 2006, *op. cit.*

²⁵⁷ More research and innovation – investing for growth and employment, European Parliament, [P6_TA\(2006\)0301](#), 5 July 2006.

²⁵⁸ Reviewing Community innovation policy in a changing world, Commission of the European Communities, [COM\(2009\) 442](#), 2 September 2009.

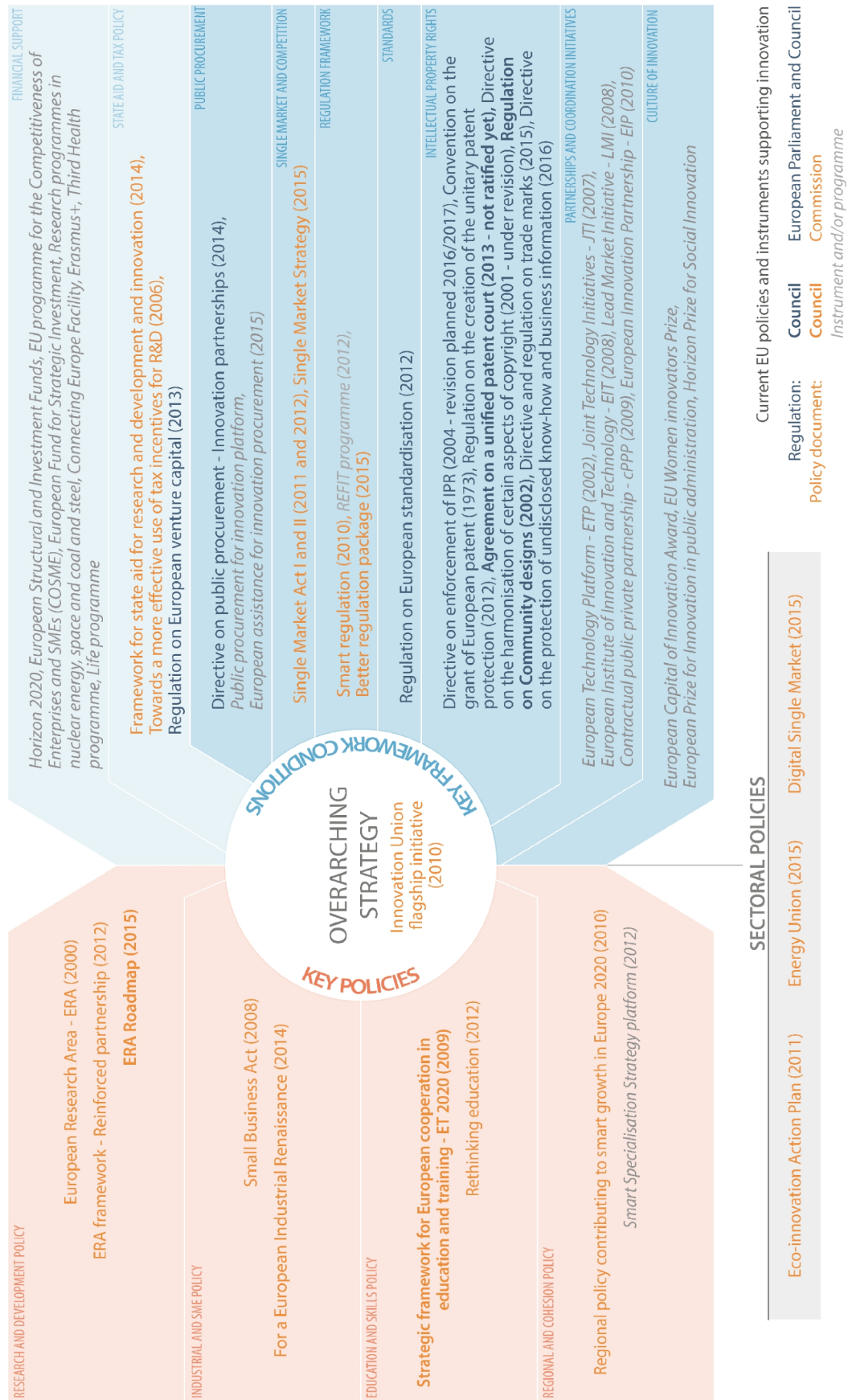
²⁵⁹ Conclusions on the Europe 2020 Flagship initiative 'Innovation Union', Council of the European Union, [ST 17165 2010 INIT](#), 29 November 2010.

²⁶⁰ [P7_TA\(2011\)0236](#), 12 May 2011, *op. cit.*

²⁶¹ This aspect is mentioned in the [2013](#), [2014](#) and [2015](#) reports.

²⁶² The three first prizes were [developed](#) under the Innovation Union flagship initiative. The Social Innovation prize was [created](#) as a Horizon 2020 prize.

Figure 2 – Current EU policies and instruments supporting innovation



Source: EPRS.

4. Sectoral policies

4.1. Environment

One important initiative in the field of environmental policy was the adoption in December 2011 of the eco-innovation action plan. The focus on eco-innovation had already been set in 2005 in the new start for the Lisbon strategy. The promotion of eco-innovation was specifically mentioned as an objective of the Competitiveness and Innovation Framework Programme in 2006. It was then defined²⁶³ as **'any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment or achieving a more efficient and responsible use of natural resources'**.

The action plan included²⁶⁴ actions on environmental policy and legislation; supporting research and demonstration activities; developing new standards; mobilising financial instruments; promoting international cooperation; supporting the development of emerging skills and jobs; and promoting eco-innovation through the establishment of European Innovation Partnerships. The action plan also aimed at coordinating better the activities between the Commission and the Member States and raising the awareness of eco-innovation benefits and opportunities.

The eco-innovation action plan still provides²⁶⁵ a policy framework for EU activities in this field. Funding for eco-innovation projects is now available under Horizon 2020, the European Structural and Investment Funds, COSME and the Life programme. The Circular Economy package adopted²⁶⁶ in 2015 was presented as a component of the action plan.

4.2. Energy Union

The Energy Union strategy presented²⁶⁷ in February 2015 is currently the main EU policy on energy, indirectly addressing also transport and climate policies. The strategy aims to shift from centralised energy production based on fossil fuels, to more decentralised production supported by the development of renewable energies. It also tackles the issues of energy infrastructure, energy security, the establishment of an internal energy market, energy efficiency, and decarbonisation. The strategy foresees a new role for 'prosumers' – both suppliers and consumers of energy – in the context of a more flexible use of energy, with much greater demand response.

The Energy Union policy acts as an important demand-side policy for innovation, since the many challenges it poses will need to be addressed with innovative solutions. Research and innovation activities constitute the fifth dimension in the strategy and focus primarily on renewable energy and energy storage; consumer participation through smart grids, cities and homes; efficient energy systems and energy-neutral buildings; and sustainable transport systems.²⁶⁸ They are a key element

²⁶³ Decision No 1639/2006/EC of 24 October 2006 establishing a Competitiveness and Innovation Framework Programme, [OJ L 310](#), 9 November 2006, pp. 15-40.

²⁶⁴ The Eco-innovation Action Plan, European Commission, [COM\(2011\) 899](#), 15 December 2011.

²⁶⁵ More information can be found on the [website](#) of the eco-innovation action plan.

²⁶⁶ [New circular economy package](#), D. Bourignon, EPRS, European Parliament, January 2016.

²⁶⁷ A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, European Commission, [COM\(2015\) 80](#), 25 February 2015.

²⁶⁸ [Energy Union](#), EPRS, European Parliament, 5 March 2015.

of 17 actions in the updated²⁶⁹ roadmap for the Energy Union presented in November 2015 as part of the State of the Energy Union address.

4.3. Digital Single Market

The Digital Single Market strategy presented²⁷⁰ in May 2015 focuses on three pillars: (i) boosting consumers' and businesses' access to digital goods and services, (ii) developing the conditions for digital networks and services to expand, and (iii) making the best of the growth potential of the digital economy.²⁷¹ **Research and innovation is a key dimension²⁷² of the Digital Single Market, which is designed to support the ICT innovation ecosystem in Europe.** The development of ICT infrastructure offers new opportunities to set up innovative businesses. For example, the European Cloud Initiative launched²⁷³ in April 2016 under the DSM, supporting the development and use of data, opens up 'the possibility for major industrial and social innovations'.

Limitations in sectoral policies

While sectoral policies include initiatives that support innovation, they also cover some aspects that can hinder innovation or which have been perceived as barriers to the innovation process. For the three domains mentioned here, the issue of energy security, the precautionary principle in environmental policy, or the issue of data privacy and security may be seen as constraining the innovation process. However, these aspects may also be seen as additional challenges in need of innovative solutions.

5. Outlook

5.1. Fragmentation: a transversal issue

Most policies and instruments in the EU innovation policy mix attempt to address a common issue: the fragmentation of the innovation landscape resulting from the diversity of national and regional policies. The 2010 Innovation Union flagship initiative focussed strongly on this general issue. The Commission noted that '**national and regional research and innovation systems are still working along separate tracks with only a marginal European dimension.** This leads to costly duplication and overlap which is unacceptable at a time of tight finances'. It concludes that 'EU and national research & innovation systems need to be better linked up with each other'.

This fragmentation creates barriers that prevent the innovation process from reaching its full potential at European level. The implementation of the single market policy has proved to have important ramifications in all components of the EU innovation policy mix: financial tools and consistent tax policy; a coherent EU regulation framework; harmonised standards; a unitary patent; and a European IPR framework. The concept of a single market has also been extended to some of EU sectoral policies: research with the European Research Area, energy with the Energy Union, or telecommunications with the Digital Single Market. **One difficulty in addressing the fragmentation issue is the limited competences of the EU in most components of the**

²⁶⁹ State of the Energy Union 2015, Annex Updated roadmap of the Energy Union, European Commission, [COM\(2015\) 572](#), 18 November 2015.

²⁷⁰ A Digital Single Market Strategy for Europe, European Commission, [COM\(2015\) 192](#), 6 May 2015.

²⁷¹ [Towards a Digital Single Market Act](#), G. Erbach, EPRS, European Parliament, 14 January 2016.

²⁷² More information is available on the Research and innovation section of the DSM [website](#).

²⁷³ European Cloud Initiative, European Commission, [COM\(2016\) 178](#), 19 April 2016.

innovation policy mix. This implies that the EU is often restricted to implementing soft measures to trigger developments and reforms at national and regional level.

If diversity can lead to fragmentation, it is also a strong asset for the innovation process, as it provides a varied breeding ground for the development of new ideas, products, processes and markets. Therefore, **the key challenge at EU level is to be able to provide sufficient harmonisation of policies to facilitate the innovation process in Europe, while at the same time preserving the positive aspects of diversity.**

The reduction of the innovation divide is another important issue related to the fragmentation of the EU innovation landscape. The support offered by the EU regional policies and funds is essential in order to make sure that all regions in the EU develop their innovation potential, and are not left behind in terms of economic development.

5.2. Renewed governance

Renewed governance for innovation is an important element of addressing the challenges posed by fragmentation. Managing the innovation process implies considering three dimensions of governance: coordination and balance between the different components of the innovation policy mix; coordination of these policies with sectoral policies impacting innovation; and coordination between different governance levels (EU, national and regional).²⁷⁴

On this last aspect, the 1995 Green Paper on Innovation already identified²⁷⁵ the lack of coordination in Europe as a weakness. The 1996 Action Plan stressed²⁷⁶ that 'efforts to rationalise structures and coordinate initiatives need to be accentuated so as to maximise their added value and their effectiveness'. In 2000, the Commission introduced²⁷⁷ the Open Method of Coordination, aimed at benchmarking national policies and spreading good practices.

In 2003, the Commission noted²⁷⁸ that 'while innovation policy takes place mostly at the national and regional levels, the Member States and the Commission need to intensify their cooperation for the strengthening of innovation in the EU'. It stressed that 'coordination should take place a high political level' and saw the establishment of the Competitiveness Council as a way to promote 'vertical coordination, so that policies interlock at EU, national and regional levels'. It also proposed that 'the Member States and the Commission should define a common framework, and a set of priorities and objectives, for both European and national innovation policy, respecting the characteristics of national innovation systems and the diversity within the European Union'. In 2005, the Commission observed²⁷⁹ that 'many regulatory and administrative practices affecting research and innovation are the responsibility of Member States. Nevertheless, the Community can both lead by example in its own areas of competence and support Member States in theirs – not by intervening more but via better and more focused regulation and policies'.

²⁷⁴ The first two dimensions are discussed in [EU innovation policy – Part I: Building up the EU innovation policy mix](#), V. Reillon, EPRS, European Parliament, May 2016.

²⁷⁵ [COM\(95\) 688](#), 20 December 1995, *op. cit.*

²⁷⁶ [COM\(96\) 589](#), 20 November 1996, *op. cit.*

²⁷⁷ [COM\(2000\) 567](#), 20 September 2000, *op. cit.*

²⁷⁸ [COM\(2003\) 112](#), 11 March 2003, *op. cit.*

²⁷⁹ [COM\(2005\) 488](#), 12 October 2005, *op. cit.*

The 2006 Aho report called²⁸⁰ for the creation a 'Pact for Research and Innovation', requiring 'a huge act of will and commitment from political, business and social leaders'. The Innovation Strategy adopted²⁸¹ by the Commission in September 2006 recognised that 'an improved governance structure for innovation is necessary', stressing that Europe was lacking 'political leadership and decisive action' in order to achieve its objectives on innovation. The Council noted²⁸² in 2008 that 'the Community and the Member States should better coordinate their efforts to improve the framework conditions for innovation.' In December 2008, the European Council called²⁸³ for a European plan for innovation to be launched. The Commission adopted²⁸⁴ this idea of a European Innovation Act in September 2009, acknowledging that 'the needed synergies between policies and instruments at different levels have not yet been created across the European Union', and that 'the coordination of policies to support innovation at regional, national and EU level has to improve significantly and a better governance system is needed'. This renewed call for better coordination was supported by the Council²⁸⁵ and the European Parliament.²⁸⁶

In the 2010 Innovation Union flagship initiative, the Commission argued²⁸⁷ that 'the European Council should provide a steer and a political impetus'; 'the Council should play a leading role in adopting the necessary measures to improve the EU's framework conditions' and 'should meet once every semester as an Innovation Council'; 'the European Parliament is invited to give priority to Innovation Union proposals and initiatives'; 'The Member States (and their regions) should ensure that the necessary governance structures are put in place where these do not yet exist'. The Council²⁸⁸ and the European Parliament²⁸⁹ both supported this general approach.

In order to improve the governance of European innovation policy, there is a need to clarify the competences of each governance level (EU, national and regional) and the objectives each of them should pursue; to obtain a stronger political commitment to support the innovation process at all governance levels; and to set up mechanisms to ensure overall coherence between the innovation policy mixes developed at each level.

²⁸⁰ [Creating an Innovative Europe](#), January 2006, *op. cit.*

²⁸¹ [COM\(2006\) 502](#), 13 September 2006, *op. cit.*

²⁸² Key Issue Paper, Council of the European Union, [ST 6933 2008 INIT](#), 26 February 2008.

²⁸³ European Council Conclusions, [ST 17271 2008 INIT](#), 12 December 2008.

²⁸⁴ [COM\(2009\) 442](#), 2 September 2009, *op. cit.*

²⁸⁵ Guidance on future priorities for European research and research-based innovation in post-2010 Lisbon strategy, Council of the European Union, [ST 17189 2009 INIT](#), 8 December 2009.

²⁸⁶ Resolution on Community innovation policy in a changing world, European Parliament, [P7 TA\(2010\)0209](#), 15 June 2010.

²⁸⁷ [COM\(2010\) 546](#), 6 October 2010, *op. cit.*

²⁸⁸ [ST 17165 2010 INIT](#), 29 November 2010, *op. cit.*

²⁸⁹ [P7 TA\(2011\)0236](#), 12 May 2011, *op. cit.*

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The EU innovation policy mix comprises, on the one hand, key policies targeting the actors of the innovation process (research and development, industrial, education and regional policy); on the other, it includes key framework conditions covering policies and instruments shaping the interactions and organising the flows of knowledge, skills and funds between the innovation players (funding, taxation, single market and competition, regulation, standards, intellectual property rights, etc.).

Most measures taken at EU level aim to address the fragmentation of the European innovation landscape resulting from the diversity of national and regional policies. Although progress has been made in addressing the barriers created by fragmentation, there is a need to renew the governance of innovation policies in order for innovation to reach its full potential in Europe.

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