

Lesson 1: Policy drivers, research agendas, European research policy

Learning outcomes:

LO#1 - The student can identify major policy drivers (e.g. UN developmental goals, cross-cutting issues) and assess their influence in shaping research agendas.

LO#2 - The student can identify examples of societal and economic drivers impacting and defining research policy (e.g. the COVID 19 situation).

LO#4 -The student can differentiate between policy and strategy and identify suitable examples in the context of the EU and at research institutions level.

LO#13 -The student can discuss and formulate arguments and confront opinions in the context of real cases of scientific policies

LO#17 - The student demonstrates curiosity and interest for systemic approaches and for the organization of the research ecosystem.

LO#18 - The student is able to accept others' views, and work together to provide the necessary support for the proposal's preparation.

LO#19 - The student is critical regarding his own work and that of others taking on a constructive attitude.

LO#20 - The student takes responsibility for its own work.

Introduction - a vision for Europe's driving Research and Innovation policy

The European Union is an economic and political union of 28 Member States. The European Union is a major collective enterprise that entails a vision for the future based on promoting peace and the wellbeing of its citizens. It aims to offer freedom, security and justice without internal borders, while promoting sustainable development based on balanced economic growth and a highly competitive market economy with full employment and social progress, and environmental protection. It wants to achieve this by combating social exclusion and discrimination, promoting territorial cohesion and solidarity amongst EU countries and by respecting cultural and linguistic diversity. This vision of the European Union demands for scientific and technological progress; thus, Research and Innovation is central in the building of the European Union, now and for the future. One of the major driving forces behind the launching

of the R&D policy was to boost the competitiveness of the European integration vis-à-vis the economic rivals. ([The EU in brief: https://europa.eu/european-union/about-eu/](https://europa.eu/european-union/about-eu/))

This is illustrated on a citation from a representative of the European Commission at a leader meeting in 2018:

"Research and Innovation are crucial for our future. They are the only way to simultaneously and sustainably tackle low economic growth, limited job creation and global challenges such as health, and security, food and oceans, climate and energy."

(European Commission's contribution to the Informal leaders' meeting 23 February 2018)

Such a statement sets the stage for **policy making**. If Research and Innovation are central for the European Union, then policies and strategies will have to be put in place to define action within the Research and Innovation field. **Policies** are “guidelines for organisational action and implementation of goals and objectives” that any governing structure needs in order to justify their action. Policies are frames to action. (<https://keydifferences.com/difference-between-strategy-and-policy.html#Definition>). **Strategy** is about the set of actions that allow to create a unique and valuable position of the organization (according to Michael Porter’s definition of strategy, Harvard Business Review).

EU bodies participating in shaping the EU R&I agenda

At the heart of the European decision-making process are the EU institutions — such as the Parliament, the Council and the European Commission — which you may have heard of, and there are others.

The main decision-making european institutions can be simply described as:

The European Parliament: the voice of the people

European Council: setting the strategy;

The Council: the voice of the Member States

The European Commission: promoting the common interest

Indeed, the European Parliament, represents the EU’s citizens and is directly elected by them; the European Council consists of the Heads of State or Government of the EU Member States; and the Council represents the governments of the EU Member States; the European Commission, represents the interests of the EU as a whole.

The European Council defines the general political direction and priorities of the EU but it does not exercise legislative functions. Generally, it is the European Commission that proposes new laws and it is the European Parliament and Council that adopt them.

The Member States and the Commission then implement them.

At the core of the EU are the Member States — the 28 states that belong to the Union — and their citizens. The unique feature of the EU is that, although these are all sovereign, independent states, they have pooled some of their ‘sovereignty’ in order to gain strength and the benefits of size. Pooling sovereignty means, in practice, that the Member States delegate some of their decision-making powers to the shared institutions they have created, so that decisions on specific matters of joint interest can be made democratically at European level. The EU thus sits between the fully federal system found in the United States and the loose, intergovernmental cooperation system seen in the United Nations.

The European Union is based on the rule of law. This means that every action taken by the EU is founded on treaties that have been approved voluntarily and democratically by all EU countries. The treaties are negotiated and agreed by all the EU Member States and then ratified by their parliaments or by referendum. The treaties lay down the objectives of the European Union, the rules for EU institutions, how decisions are made and the relationship between the EU and its Member States.

The treaties list the policy areas in which the EU can take decisions. In some policy areas, the EU has exclusive competence, which means that decisions are taken at EU level by the Member States meeting in the Council and the European Parliament. These policy areas cover trade, customs, competition rules, monetary policy for the euro area, and the conservation of fish. In other policy areas, the decision-making competences are shared between the Union and the Member States. This means that if legislation is passed at EU level, then these laws have priority. However, if no legislation is adopted at EU level, then the individual Member States may legislate at national level. Shared competence applies in many policy areas, such as the internal market, agriculture, the environment, consumer protection and transport. In all other policy areas the decisions remain with the Member States. Thus, if a policy area is not cited in a treaty, the Commission cannot propose a law in that area. However, in some fields, such as the space sector, education, culture and tourism, the Union can support Member States’ efforts. And in others, such as overseas aid and scientific research, the EU can carry out parallel activities, such as humanitarian aid programmes.

Decision-making at EU level involves various several types of legal acts which are applied in different ways.

A regulation is a law that is applicable and binding in all Member States directly. It does not need to be passed into national law by the Member States although national laws may need to be changed to avoid conflicting with the regulation.

A directive is a law that binds the Member States, or a group of Member States, to achieve a particular objective. Usually, directives must be transposed into national law to become effective. Significantly, a directive specifies the result to be achieved: it is up to the Member States individually to decide how this is done.

A decision can be addressed to Member States, groups of people, or even individuals. It is binding in its entirety. Decisions are used, for example, to rule on proposed mergers between companies.

Recommendations and opinions have no binding force.

See more at [The European Union explained: How the EU works](#)

External drivers of European R&I policy

There are different sorts of **drivers of R&I policy**, that is, the needs/ pressures/ trends that push politicians into thinking it is necessary to transform the European Union into a knowledge-based economy - a system of consumption and production that is based on intellectual capital (the ability to capitalize on scientific discoveries and basic and applied research, see more at <https://www.investopedia.com/terms/k/knowledge-economy.asp>, or at OECD, 2005, “The Measurement of Scientific and Technological Activities: Guidelines for Collecting and Interpreting Innovation Data: Oslo Manual, Third Edition” prepared by the Working Party of National Experts on Scientific and Technology Indicators, OECD, Paris, para. 71). These drivers are **external drivers**, because they are external to a given institution, they relate to the society as a whole.

The following text from the European Commission illustrates in more detail why Research and Innovation are important for Europe and what drives European policies on Research and Innovation. Read the text trying to identify different **drivers of R&I policy**.

Investing in research and innovation is investing in Europe’s future. It helps us to compete globally and preserve our unique social model. It improves the daily lives of millions of people here in Europe and around the world, helping to solve some of our biggest societal and generational challenges. From making 1.6 million Ebola vaccine doses available, to creating a battery 100 times more powerful than ordinary ones, through to developing hydrogen fuel cell powered buses for our cities, research and innovation is everywhere around us. This reflects the fact that society can only move forward as fast as it innovates. It can only provide lasting prosperity if it makes the most of the knowledge, entrepreneurial spirit and productivity of its people. And it shows that any economy can only stay ahead of the competition if it stays at the frontier of cutting-edge research and innovation. This is the challenge facing our Union today as we seek to maintain and improve the European way of life.

Countries around the world are investing massively on research and innovation in all areas of the economy. This is intensifying global competition and threatens the leading competitive position of Europe in key industrial sectors. Deepening Europe’s innovation capability, ensuring the necessary investments, and accelerating the diffusion of innovation across Europe is therefore a question of necessity for our future prosperity.

The stakes are high – but so is Europe’s potential. The next wave of innovation, combining physical and digital, will be rooted in science, technology and engineering, where Europe has and needs to maintain a competitive edge. With 7% of the global population, Europe accounts for 20% of global research and development investment and around one third of all high-quality scientific publications. Europe is also home to a strong industrial base.

Europe must build on these assets and on its values to develop its own distinct model of innovation. It should make the most of its collaborative, partnership-based culture, which helps to foster innovation right across our Union. And as it does so, it must ensure the high level of European protection of citizens' data and privacy – which is now the global benchmark – becomes a source of competitive advantage when it comes to new technologies, such as Artificial Intelligence or big data.

Reference: European Commission. (2018). *COM(2018) 306 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A renewed European Agenda for Research and Innovation - Europe's chance to shape its future* [The European Commission's contribution to the Informal EU Leaders' meeting on innovation in Sofia on 16 May 2018]. <https://ec.europa.eu/info/sites/info/files/com-2018-306-a-renewed-european-agenda-for-research-and-innovation-may-2018-en-0.pdf>

The text clearly identifies several current external policy drivers that create demand for clear and wide scope R&I policy in Europe. Some examples these drives are: improve daily lives of people, provide lasting prosperity, maintain European way of life, maintain a leading competitive position of Europe in Key industrial sectors, take advantage of Europeans potential (in R&D, in collaborative and partnership spirit, strong industrial basis), protect European's citizens data and privacy....).

The vision and the principles defended by the European Union project provide a master frame for action, but the European Union project must be built day by day, responding to the new challenges and demands from society. Nothing can be taken for granted, and such an ambitious and long-term project as the EU is no exception, it needs to be constantly built and adapted, and all European citizens have a major role to play in this process.

As stated by the European Commission President Jean-Claude Juncker State of the Union, Strasbourg, 13 September 2017: *"Our future cannot remain a scenario, a sketch, an idea amongst others. We have to prepare the Union of tomorrow, today."*

There are factors that suddenly become very important and influence policy very strongly diverting the course of action. One very recent example is the 2020 pandemics of Covid-19 that had a massive impact on several areas, including R&I policy, by changing the R&I funding scenarios and, consequently, by deviating the course of research into areas that, in one way or another, could help fighting the Covid-19 pandemics. The corona virus acted as the major policy driver in the whole world, and it was to a very large extent unpredictable. The following blog (<https://sciencebusiness.net/covid-19/news/live-blog-rd-response-covid-19-pandemic>) provides examples of how universities and research institutes' R&I agendas were disrupted across the world, and how they started working very hard to find out how the disease could be stopped and its effects mitigated. The news between the months of April, May and June 2020 provide clear examples about how the crisis impacted research and innovation, and what governments, funders, companies, universities, associations and scientists were doing to stop or cope with the pandemic.

Policy versus Strategy

Is policy enough for governments or institutions to act? Is it enough to state that Europe needs to become a knowledge-based economy for that to happen? No. It is necessary to know how that overarching goal of becoming a knowledge-based economy will be achieved. While policy frames action, strategy defines action. Strategy is what will be used for Europe to “develop its own distinct model of innovation”. It is thus important to distinguish policy from strategy.

Despite the distinction between policy and strategy varies depending on the context, in this module we use the definitions in the literature often employed by institutions, including companies and research performing organizations, which are not identical from the ones used in EU documentation (in which strategy is used to imply policy action). In either case, what is important is that students understand the difference between the concept of providing a framework for action (called policy in this Module) from the specific plan for action (called strategy in this module).

Several definitions available in the literature support the distinction adopted at this Module. Examples follow:

Policy	Strategy
“a guideline for organisational action and implementation of goals and objectives... translated into rules, plans and procedures	“the direction and scope of an organisation over the long term, which achieves advantage in the changing environment through its configuration of resources and competences”
“what is done to put the strategy into practice”	“how an organisation pursues competitive advantage across its chosen direction”
	“a formulated plan to achieve one or more goals under changing conditions. It’s about setting a target and describing a way to reach that target”

The following documents about influence on research and innovation in Europe, can be assigned to either the **policy** or the **strategy categories**:

- TRANSFORMING OUR WORLD: THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT: <https://www.un.org/sustainabledevelopment/>

- Brussels, 17.7.2012 COM(2012) 392 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A Reinforced European Research Area Partnership for Excellence and Growth: https://ec.europa.eu/info/research-and-innovation/strategy/era_en
- Mission-Oriented Research & Innovation in the European Union: A problem-solving approach to fuel innovation-led growth. European Commission Directorate-General for Research and Innovation Directorate Brussels. Publications Office of the European Union, 2018: https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme/missions-horizon-europe_en#what
- Horizon 2020 Work Programme for the Marie Curie S. Actions: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/>
- Horizon 2020 Work Programme for the Widening programme: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/>
- NOVA University of Lisbon strategic plan: <https://www.unl.pt/en/nova/mission-and-strategic-plan>
- EU programme for education, training, youth and sport (ERASMUS Plus): https://ec.europa.eu/programmes/erasmus-plus/node_en
- EUA Position report Europe's Universities Shaping the Future, 25 June 2020

When designing a research project, it is important to think how the existing R&I policy and strategy affect the proposed plan. If funds will be demanded to support a research project, the funder often requests for specific elements to be included in the project to meet policy or strategy requirements. For example, a funder may ask for the researcher to design a research proposal to meet one of the UN Sustainable Goals, or it may ask the researchers to publish the project results in Open Access, or to follow specific ethical guidelines applicable to research involving human beings.

It is thus important to be aware of the wide portfolio of policies and strategies affecting European research and innovation. The list of R&I policies and strategies can be further completed with policy R&I agendas or strategy documents relating to R&I funding in the links presented next:

References for policy documents:

- General:
 - https://ec.europa.eu/info/about-european-commission/what-european-commission-does/strategy-and-policy_en
 - https://ec.europa.eu/info/research-and-innovation/strategy/support-policy-making/shaping-eu-research-and-innovation-policy_en
- Open research: https://ec.europa.eu/info/files/open-science_en
- Regional policy:
 - structural funds https://ec.europa.eu/regional_policy/EN/funding/
 - smart specialization strategies at country or regional levels: Example of a summary of main policies affecting research in a given country (Portugal): in chapter 3 of OECD report 2019 (reference: OECD (2019), OECD Review of Higher Education,

Research and Innovation: Portugal, OECD Publishing, Paris.
<https://doi.org/10.1787/9789264308138-en>

References for strategy documents:

- International:
 - Funding & Tenders portal <https://ec.europa.eu/info/funding-tenders/opportunities/portal/>
 - Work Programmes of European funding (e. g, Work programmes for H2020 (compare MSCA vs Thematic vs Widening), for Erasmus +, etc
 - National: find national examples of funding programmes

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- Skrodzka, I. (2016). *Knowledge-Based Economy In The European Union – Cross-Country Analysis*. Undefined. <https://www.semanticscholar.org/paper/Knowledge-Based-Economy-In-The-European-Union-%E2%80%93-Skrodzka/09df619142554720cb7c4f9bc94af816c9ef36eb>