

RECOMMENDATIONS

COUNCIL RECOMMENDATION (EU) 2022/2415

of 2 December 2022

on the guiding principles for knowledge valorisation

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 182(5) and the first and second sentences of Article 292 thereof,

Having regard to the proposal from the European Commission,

Whereas:

- (1) On 10 April 2008, the Commission adopted Recommendation 2008/416/EC ⁽¹⁾ concerning the management of intellectual property (IP) in knowledge transfer activities and a Code of Practice for universities and other public research organisations. The Council welcomed and supported that Recommendation and Code of Practice in its Resolution of 30 May 2008 ⁽²⁾. Together, that Recommendation and Code of Practice gave impetus to many publicly funded knowledge producers. Some Member States have made strategic investments in knowledge transfer infrastructures and services such as technology transfer offices and other intermediaries, and some have implemented IP-specific policies. Further activities promoting knowledge transfer at Union level have been developed as part of the Innovation Union (2010).
- (2) The Council conclusions of 29 May 2018 on ‘Accelerating knowledge circulation in the EU’ considered that the Union needs to make full use of the relevant scientific and technological knowledge it produces and to ensure a more effective transfer of research and innovation (R&I) project results to society and industry in order to maximise the impact of R&I investment. The Council also invited Member States to step up efforts to examine and share best practices on knowledge transfer and called on the Commission to develop and implement a strategy for the dissemination and exploitation of R&I project results in order to further increase their availability and use and to accelerate their potential uptake.
- (3) The Commission communication of 10 March 2020 entitled “A New Industrial Strategy for Europe” and its 2021 update underlined the importance of IP management, in particular raising the research community’s awareness of IP, and announced a strategy on standardisation to support a more assertive stance regarding Union interests. The key priorities of the Union’s IP Action Plan of 25 November 2020 ⁽³⁾ to support the Union’s recovery and resilience include promoting the effective use and deployment of IP and ensuring easier access to and sharing of IP-protected assets in times of crisis.

⁽¹⁾ Commission Recommendation 2008/416/EC of 10 April 2008 on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations (OJ L 146, 5.6.2008, p. 19).

⁽²⁾ Council Resolution on the management of intellectual property in knowledge transfer activities and on a Code of Practice for universities and other public research organisations.

⁽³⁾ Making the most of the EU’s innovative potential. An intellectual property action plan to support the EU’s recovery and resilience.

- (4) The Union's Strategy on Standardisation emphasises the importance of raising strategic awareness of standardisation among researchers and innovators and engaging the R&I community early on in standardisation, as a way of developing relevant expertise and skills. That Strategy also states that the Commission will develop a Code of Practice for researchers on standardisation to strengthen the link between standardisation and R&I.
- (5) The Council conclusions of 1 December 2020 on 'The New European Research Area' recognised that additional efforts are needed to translate the Union's intellectual and scientific assets into new products and services that meet societal demands. The Council welcomed the Commission's initiative to review Recommendation 2008/416/EC in accordance with the New Industrial Strategy for Europe.
- (6) The Council conclusions of 28 May 2021 on "Deepening the European Research Area: Providing Researchers with Attractive and Sustainable Careers and Working Conditions and Making Brain Circulation a Reality" stressed the importance of supporting reforms in the national research systems to ensure the attractiveness of research careers and address the divergence in remuneration levels while improving the reward and assessment systems.
- (7) Council Recommendation (EU) 2021/2122 ⁽⁴⁾ on "A Pact for Research and Innovation in Europe" identifies knowledge valorisation as one of the priority areas for joint action in support of the European Research Area (ERA). That Pact also recognises value creation and societal and economic impact as part of the common set of values and principles for R&I in the Union that Member States should take into account in developing their R&I systems.
- (8) The ERA Policy Agenda for 2022-2024 annexed to the Council conclusions of 26 November 2021 on the 'Future governance of the European Research Area' includes an action to 'Upgrade EU guidance for better knowledge valorisation'. The first outcome of that action is to be to 'Develop and endorse Guiding Principles for knowledge valorisation'. That action also includes the development of a Code of Practice for the smart use of IP and a Code of Practice for researchers on standardisation, which are to provide more detailed guidance on how to implement certain aspects of knowledge valorisation.
- (9) Open Science, which is an approach to the scientific process based on open cooperative work, tools and diffusing knowledge, as defined in Regulation (EU) 2021/695 of the European Parliament and of the Council ⁽⁵⁾, is a standard method for working under the Union framework programmes for R&I and is identified as another priority area for joint action in Recommendation (EU) 2021/2122. Commission Recommendation (EU) 2018/790 ⁽⁶⁾ encourages Member States to set and implement national policies for dissemination of and open access to scientific publications and for the management of research data, in particular through the European Open Science Cloud. The final report of the Open Science Policy Platform ⁽⁷⁾ lists boosting awareness of the value of IP and management of IP assets among the elements that a shared research system for innovation should include. The Council conclusions of 10 June 2022 on 'Research assessment and implementation of Open Science' suggest that the evolution of the research assessment systems in Europe should take, inter alia, knowledge valorisation into consideration.
- (10) The Commission communication of 19 February 2020 entitled 'A European strategy for data' urges the public sector and businesses to seize the opportunity presented by data for social and economic good and considers that data potential should be put to work to address the needs of individuals and thus create value for the economy and society. Data-driven innovation can bring enormous benefits for citizens, for example through improved personalised medicine, new mobility and through its contribution to the European Green Deal.

⁽⁴⁾ Council Recommendation (EU) 2021/2122 of 26 November 2021 on a Pact for Research and Innovation in Europe (OJ L 431, 2.12.2021, p. 1).

⁽⁵⁾ Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013 (OJ L 170, 12.5.2021, p. 1).

⁽⁶⁾ Commission Recommendation (EU) 2018/790 of 25 April 2018 on access to and preservation of scientific information (OJ L 134, 31.5.2018, p. 12).

⁽⁷⁾ European Commission, Directorate-General for Research and Innovation, Mendez, E., Progress on open science: towards a shared research knowledge system: final report of the open science policy platform, Lawrence, R.(editor), Publications Office, 2020.

- (11) The Commission communication of 29 April 2021 entitled ‘Better regulation: Joining forces to make better laws’ underlines that scientific evidence is one of the cornerstones of better regulation, vital to establishing an accurate description of the problem, a real understanding of causality and therefore intervention logic, and to evaluating impact. High quality research cannot be done within a very short time period, so ensuring pertinent evidence is available when needed requires better anticipation and coordination of the needs for evidence. It also means better mobilisation and engagement of the research community in the regulatory process.
- (12) Fostering transversal skills such as entrepreneurship, creativity, critical thinking and civic engagement are among the objectives of the Commission communications ‘on achieving the European Education Area by 2025’, ‘the European strategy for universities’ and ‘the European Skills Agenda for sustainable competitiveness, social fairness and resilience’. The European Education Area (EEA) strategic framework promotes collaboration and peer learning between the Member States and key stakeholders, for example in the form of working groups.
- (13) The R&I ecosystem has profoundly changed since Recommendation 2008/416/EC, which was mainly aimed at public research organisations⁽⁸⁾. An update is needed, to focus on maximising the value of all knowledge assets generated by different types of actors in a dynamic R&I ecosystem. New challenges and developments should be addressed, such as increasingly complex knowledge value-chains, new market opportunities created by emerging technologies, new forms of collaboration between industry and academia and between public sector and academia, involvement of citizens, as well as R&I foreign interference and reciprocity in the management of intellectual assets in the context of international R&I cooperation.
- (14) The diversity of knowledge valorisation channels and tools⁽⁹⁾ should be reflected to address sustainability, social challenges and other sectoral policy priorities and to encourage multidisciplinary collaborations, not only within the traditional domain of knowledge transfer in technological areas, but also involving disciplines such as social sciences, the humanities and the arts, including looking at the interlinkages between social, environmental and economic policies.
- (15) The aim of the guiding principles for knowledge valorisation should be to adopt a common line on measures and policy initiatives for improving knowledge valorisation in the Union, in particular by: (a) broadening the scope of actors and activities compared to Recommendation 2008/416/EC; (b) implying a focus on the whole R&I ecosystem and its connections, on co-creation between actors and on the creation of societal value; (c) widening their scope to include intellectual asset management and emphasise the importance of developing entrepreneurial culture, practices and skills; and (d) emphasising new needs for increasing the impact of R&I, such as addressing new and persistent policy challenges, enhancing citizen engagement and sharing of best practices among various R&I actors.
- (16) The main concepts in the guiding principles for knowledge valorisation should be defined as follows:

“Knowledge valorisation” is the process of creating social and economic value from knowledge by linking different areas and sectors and by transforming data, know-how and research results into sustainable products, services, solutions and knowledge-based policies that benefit society. Focusing on knowledge valorisation makes it necessary to broaden the scope of Recommendation 2008/416/EC to encompass the entire R&I ecosystem and its increasingly diverse range of actors.

Knowledge valorisation is a paradigm shift, bringing in new aspects that will maximise the value of existing and future R&I and of knowledge assets including tacit knowledge, tacit knowledge being any knowledge that cannot be codified and transmitted as information through documentation, academic papers, lectures, conferences or other communication channels. Such knowledge is more effectively transferred among individuals with a common social

⁽⁸⁾ The term ‘public research organisation’ includes both specialised technology research organisations and higher education institutions that engage in research and development and research training (RDT) activities with substantial funding support from public and quasi-public (e.g. charitable and non-profit organisation).

⁽⁹⁾ European Commission, Directorate-General for Research and Innovation, Research & innovation valorisation channels and tools: boosting the transformation of knowledge into new sustainable solutions, Publications Office, 2020.

context and physical proximity ⁽¹⁰⁾. Knowledge valorisation will lead to benefits for policymaking and to new ways of monitoring and evaluating R&I through the development of indicators and measurement tools. It will affect R&I funding and add value to science and research and their results. Knowledge valorisation requires the participation of the actors in the R&I ecosystem and the knowledge and innovation users/beneficiaries, with particular emphasis on the use, re-use and cross-fertilisation of knowledge among different sectors for the benefit of society. As such, it is a broader concept than dissemination, which involves making knowledge and results known and accessible. Finally, knowledge valorisation is expected to contribute to the implementation of the United Nations Sustainable Development Goals ⁽¹¹⁾ and the European Green Deal.

“Intellectual assets” is considered to cover any results, services or products generated by any R&I activities, such as patents, copyrights, trademarks, publications, data, know-how, prototypes, processes, practices, technologies, inventions, software or business models. Widening the scope from a narrow focus on management and protection of IP rights will also broaden the value creation opportunities. Leveraging the full value of intellectual assets generated by R&I activities requires organisations performing R&I activities to manage intellectual assets in a broad sense, both those that can be legally protected, such as patents, copyrights and trademarks and other intellectual assets that could be used in valorisation activities. This requires the development of management strategies and promotion of specific and transversal skills to leverage the full value of intellectual assets generated. Efficient management of intellectual assets is crucial for knowledge valorisation.

- (17) Openness as a principle supports value creation, and the use of intellectual asset management tools can lead to a better use of results, positively contribute to innovation and increase the overall added value of scientific results ⁽¹²⁾. Subject to the respect of IP rules, with the principle of ‘as open as possible and as closed as necessary’, it is important to recognise that both Open Science and Open Innovation, the basic premise of the latter being to open up the innovation process to all active players so that knowledge can circulate more freely and be transformed into products and services that create new markets thereby fostering a stronger culture of entrepreneurship ⁽¹³⁾, use and draw on the tools for intellectual asset management. Sensible use of research results to create socioeconomic benefits will also add to the overall value and importance of scientific research for society.
- (18) Entrepreneurial practices, processes, competences and skills, and those that facilitate engagement with citizens, civil society and policy makers, are necessary components of successful knowledge valorisation initiatives. Turning knowledge into novel value, regardless of whether it concerns incremental or disruptive innovations, evidence-based policymaking or wellbeing of citizens, requires proactive/enterprising and co-creation/cross-sectoral engagement attitudes, practices or cultures, combined with entrepreneurial efforts, at some or all stages of the valorisation process. In that way, the valorisation process could inspire adjustments in educational systems and researchers’ careers so that they better cater for the skills, competences and behaviours that would lead to higher creativity and societal value creation. Developing and using entrepreneurial approaches and diversity- and engagement/collaboration-oriented approaches is therefore crucial for valorisation to be effective.
- (19) Entrepreneurial processes and methods are experiment-based discovery and co-created actions, spanning organisational borders and involving many complementary competences. In this context, the entrepreneurial process is viewed as a discovery-driven method to address market- and society-related challenges and opportunities by experimentally developing and exploiting intellectual assets into novel and useful values (innovations) for a given set of stakeholders. Such processes and methods require the necessary social-entrepreneurial skills and capacities to facilitate social knowledge spillovers beyond commercialisation. Using open method of coordination of networks, tools and instruments from ERA and the EEA strategic framework will stimulate knowledge valorisation and the development of related skills.

⁽¹⁰⁾ OECD Report Global Competition for Talent: Mobility of the Highly Skilled.

⁽¹¹⁾ United Nations Resolution adopted by the General Assembly on 25 September 2015, Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1).

⁽¹²⁾ European Commission, Directorate-General for Research and Innovation, Open science and intellectual property rights: How can they better interact?: state of the art and reflections: executive summary, Publications Office, 2022.

⁽¹³⁾ European Commission, Directorate-General for Research and Innovation, Open innovation, open science, open to the world: a vision for Europe, Publications Office, 2016, p. 13.

- (20) Guiding principles should therefore cover the development, use and management of entrepreneurial practices, processes and skills at all levels of society in the private and public sectors involved in knowledge valorisation. That new scope requires policymakers to align their policy objectives accordingly and to put in place new approaches necessary for knowledge valorisation. Those guiding principles aim to help policymakers in Member States to meet such requirements.
- (21) The guiding principles in this Recommendation should therefore concern policy initiatives aimed at all categories of ecosystem actors involved in R&I activities, such as:
- academia, universities and other higher education institutions, research, innovation and technology organisations and other public research organisations, academies and learned societies, and intergovernmental initiatives and networks, such as Eureka;
 - civil society organisations, including citizen and non-governmental organisations;
 - private investors and funding and investment organisations, including foundations and charities;
 - individuals, such as innovators, entrepreneurs, researchers, scientists, teachers and students;
 - industry, including small and medium-sized enterprises (SMEs), start-ups, spin-offs, scale-ups and social enterprises;
 - intermediaries, such as knowledge and technology transfer professionals, incubators, science parks, Union, national and regional innovation hubs or clusters, IP experts, consultants and innovation support professionals, science communication and policy engagement teams, knowledge for policy/science advice organisations and citizen engagement professionals;
 - national, regional and local authorities and policymakers;
 - private research organisations, public and private service providers such as hospitals, public transportation providers and energy providers;
 - research infrastructures, technology infrastructures and other facilities and networks supporting R&I activities;
 - standardisation bodies.
- (22) The guiding principles should be formulated to be applicable to all or most of the categories listed in Recital 21. The implementation of the guiding principles should be adapted to the target actors through Code of Practice documents, namely a Code of Practice for smart use of IP and a Code of Practice for researchers on standardisation. If needed, other relevant Code of Practice documents could be co-created with stakeholders.
- (23) The guiding principles should be non-binding. Their application should respect international, Union and national law and they should be taken into account in efforts to make the Union legal framework supportive of knowledge valorisation. The guiding principles should be applied with the intention of the broadest possible societal use, including contribution to sustainable society in accordance with the Union guidelines for tackling R&I foreign interference ⁽¹⁴⁾. Where possible and depending on the context, valorisation activities should consider the needs of and the benefits for society, besides traditional profit drivers. One example is socially responsible licensing, where the licensing of intellectual assets should ensure that the price-setting of the final products and services does not undermine accessibility. The guiding principles should focus on maximising the value of R&I investments beyond traditional knowledge transfer and on involving all actors in the R&I ecosystem.
- (24) Knowledge valorisation is a complex process requiring significant resources to ensure that the necessary range of skills and scalable capacity is developed and maintained in the Union. It will require continued and up-scaled investment in the development of knowledge transfer and brokerage professionals and facilitators who act as intermediaries between relevant R&I actors. It is especially important to encourage SMEs to participate through strong national and regional innovation ecosystems. Additionally, proactivity in start-ups and scale-ups of all sizes should be encouraged and industrial partners should be persuaded to be open to taking risks,

⁽¹⁴⁾ European Commission, Directorate-General for Research and Innovation, Tackling R&I foreign interference: staff working document, Publications Office, 2022.

HEREBY RECOMMENDS:

that Member States and the European Commission apply the following guiding principles for knowledge valorisation:

1. Knowledge valorisation in research and innovation policy

- (a) Ensure that Union, national and regional support structures are in place to help organisations become aware of the scope of this Recommendation on knowledge valorisation, assess its implications for them, where appropriate mobilise financial and non-financial resources to put this Recommendation into practice and develop the necessary strategies and practices to implement and publicise it.
- (b) Ensure that value creation policies and practices are defined, implemented, shared and publicised at relevant organisational level.
- (c) Ensure that publicly funded R&I activities consider the broadest possible societal use and valorisation of intellectual assets generated by R&I activities while taking into account sovereignty issues and involving all ecosystem actors.
- (d) Strengthen structures, processes and practices in the use of research results and scientific knowledge for designing and implementing public policies and developing and revising standards.
- (e) Promote equality, diversity and inclusion as well as avoid gender bias in knowledge valorisation objectives and activities and the people involved in such activities, for example through diverse research teams and R&I content that reflect the perspectives, behaviours and needs of diverse groups in society.

2. Skills and capacities

- (a) Promote the development of the competences, skills and capacities needed to support knowledge valorisation operations involving all stakeholders, from students, researchers and inventors to entrepreneurs and professional intermediaries, and from knowledge users to policymakers.
- (b) Ensure that mobility schemes are in place between academia, industry and the public sector to facilitate skill development and cross-fertilisation of competences, culture and practices, also as a life-long learning process, among knowledge valorisation actors at Union, national and regional levels.
- (c) Ensure that the tacit knowledge of those generating the intellectual assets is recognised as one of the elements in the valorisation process. It is important to promote participatory collaboration approaches that make it possible to include talents, skills and tacit knowledge in innovation and valorisation
- (d) Encourage and facilitate multidisciplinary and interdisciplinary collaboration going beyond technological areas and involving disciplines such as social sciences, the humanities and the arts, as well as co-creative approaches.

3. System of incentives

- (a) Develop and put in place a relevant and fair system to incentivise all R&I ecosystem actors, in particular researchers, innovators, students and the staff of universities and public research organisations, to learn, apply and practice knowledge valorisation, as well as to attract and retain talent.
- (b) Provide measures for businesses, particularly SMEs, civil society, citizens, end-users and public authorities to be active partners in co-creating value-adding innovation, thereby improving access to and the use of knowledge, increasing skills acquisition and encouraging joint experimentation.
- (c) Encourage, support and incentivise organisations that undertake knowledge valorisation to collect, share and use metrics that improve learning and the performance of knowledge valorisation actors in the Union.

4. Intellectual asset management

- (a) Ensure that policies and practices for intellectual asset management are defined, implemented, shared, publicised and promoted in all organisations involved in knowledge valorisation.
- (b) Raise awareness among universities, research organisations, public authorities and businesses of the importance of managing intellectual assets in an international environment, while taking into account sovereignty issues.
- (c) Ensure that intellectual assets developed by publicly funded R&I activities in the Union are managed and controlled in such a way that the socioeconomic benefit, including contribution to sustainability for the Union as a whole, is taken into account and maximised.
- (d) Increase awareness and uptake of intellectual asset management practices and tools in Open Science as well as in Open Innovation to facilitate the use of results and data for innovation.
- (e) Increase efficient management of intellectual assets, for example by supporting active portfolio building and by promoting platforms linking offer and demand for intellectual assets, in order to maximise value creation for all involved.

5. Relevancy in public funding schemes

- (a) Consider how to strengthen the application of knowledge valorisation principles in publicly funded research.
- (b) Consider specific funding schemes to complement research funding in order to ensure that knowledge valorisation is incentivised early on in research, including support to intermediaries.

6. Peer learning

- (a) Promote and support national and transnational peer learning processes and practices for disseminating and encouraging the sharing of best practices ⁽¹⁵⁾, case studies, role models and lessons learned and for developing common specifications for knowledge valorisation.
- (b) Benchmark successful knowledge valorisation organisations, ecosystems and initiatives in order to develop and promote common concepts, models and incentives to serve as a guide for assessing and implementing knowledge valorisation management and processes. Also, use the expertise, networks and lessons learned from relevant organisations, such as the European Union Intellectual Property Office, the European Patent Office, the Enterprise Europe Network, European Institute of Innovation and Technology and their knowledge and innovation communities and other international, European, national or regional organisations.
- (c) Encourage universities and public research organisations to pool their resources, expertise, data and infrastructure across disciplines, countries and regions to promote more peer-learning practices.

7. Metrics, monitoring and evaluation

- (a) Promote collaborative efforts to adopt common agreed definitions, metrics and indicators, encompassing the variety of valorisation channels, to help improve the Union's knowledge valorisation performance, taking into consideration the contextual differences between Member States and knowledge valorisation actors and the specificities of different sectors.
- (b) Ensure that the monitoring and evaluation practices used to assess and evaluate knowledge valorisation operations are aligned with the wider ERA monitoring framework and minimise the administrative burden on Member States and stakeholders, while developing synergies with other relevant ERA policy actions.

⁽¹⁵⁾ A repository of best practice examples is available on the knowledge valorisation platform of the European Commission which is continually open for submissions of new best practice examples.

Recommendation 2008/416/EC is replaced by this Recommendation.

Done at Brussels, 2 December 2022.

For the Council
The President
J. SÍKELA
