



European
Commission

Stakeholder consultation on the Guiding Principles for knowledge valorisation

Report of results



*Edited by Dr Iiro Eerola
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Research and
Innovation

Stakeholder consultation on the Guiding Principles for knowledge valorisation – Report of results

European Commission

Directorate-General for Research and Innovation

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INTRODUCTION

In 2008, the European Commission issued a Recommendation on the management of intellectual property in knowledge transfer activities and a Code of Practice for universities and other public research organisations (C(2008)1329). The research and innovation (R&I) landscape has changed considerably since 2008 in terms of actors and the complexity of the R&I ecosystem, as well as in terms of global challenges. This requires policymakers to set new objectives and provide updated guidance on knowledge valorisation.

In July 2020, the European Commission published the policy review 'Knowledge valorisation channels and tools' as the first milestone in setting out a European knowledge valorisation strategy. It describes the different means at our disposal to:

- improve how we transform research results into new sustainable solutions;
- identify and analyse the main channels for the uptake of research and innovation results;
- get better at spreading excellent national practices;
- highlight best practices from Europe and beyond.

The Communication on 'A new ERA for Research and Innovation' (COM 2020 628 final) calls on the Commission in consultation with Member States and stakeholders to update and develop guiding principles for knowledge valorisation and a code of practice for the smart use of intellectual property (IP). These are expected by the end of 2022 and will support a common valorisation strategy for research and innovation based on existing good practice.

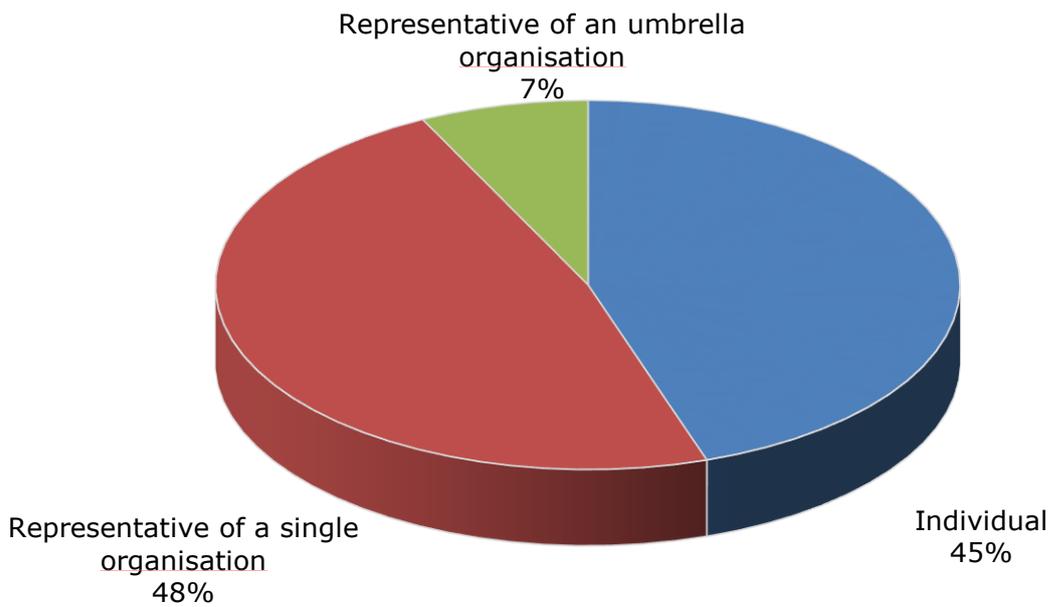
A stakeholder consultation was launched in July 2021 to reach out to a wide range of R&I stakeholders to collect their views on the relevant actors, channels, tools, obstacles and elements that the new guiding principles should cover. This consultation is an important input for the co-creation of the upcoming Guiding Principles for knowledge valorisation and the Code of Practice for the smart use of IP.

RESPONDENTS

437 replies were received by the closing date of 20 September 2021. Approximately 95% of replies came from the EU, from 24 EU Member States. In addition, 25 replies were received from non-EU countries, including Switzerland, the UK and Norway.

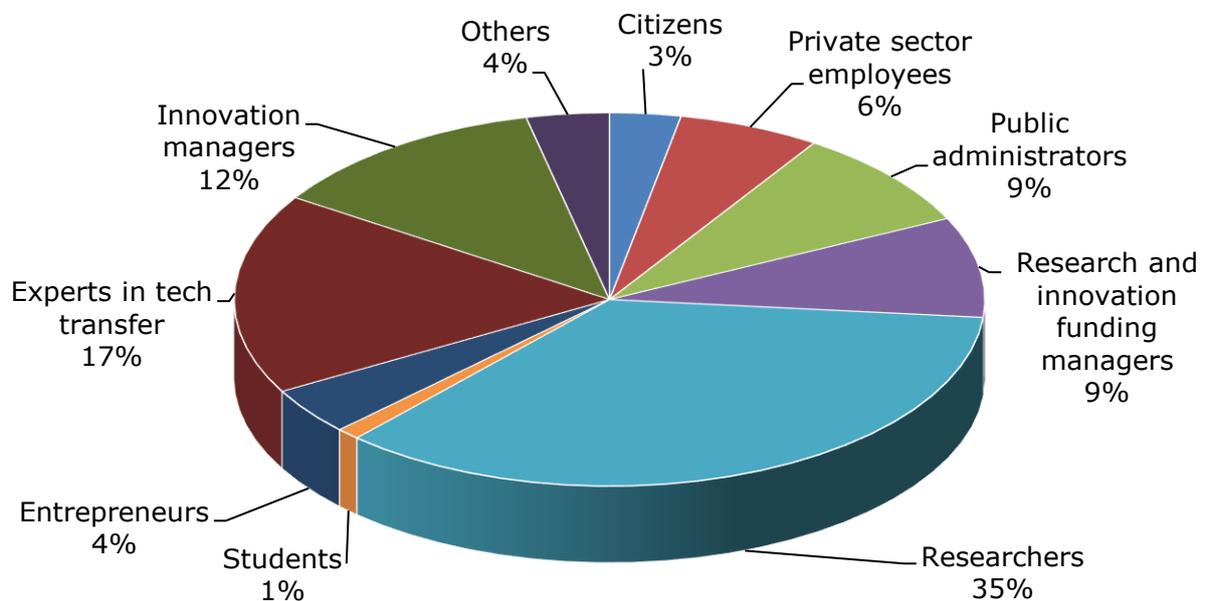
24 respondents attached a position paper to their reply. Key messages from these position papers are set out in Annex 1.

Respondents were asked to indicate whether they were responding as an individual or as a representative of an organisation or of an umbrella organisation.



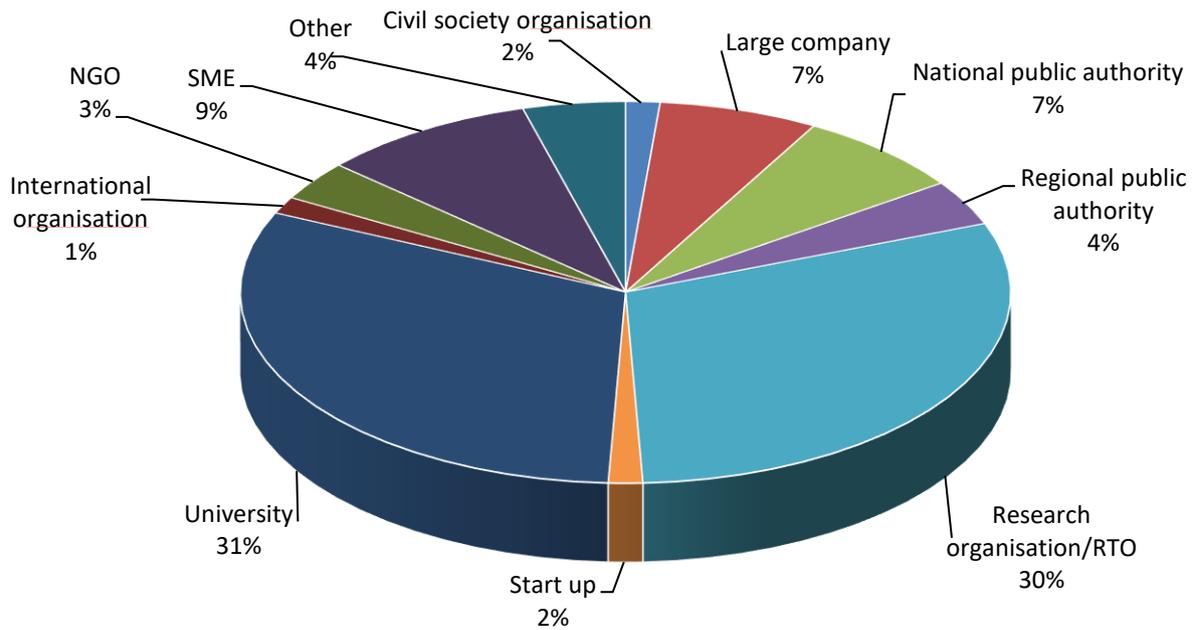
A slight majority of respondents were responding on behalf of either a single organisation (48%) or an umbrella organisation (7%). Individuals account for 45% of responses.

Background of individual respondents



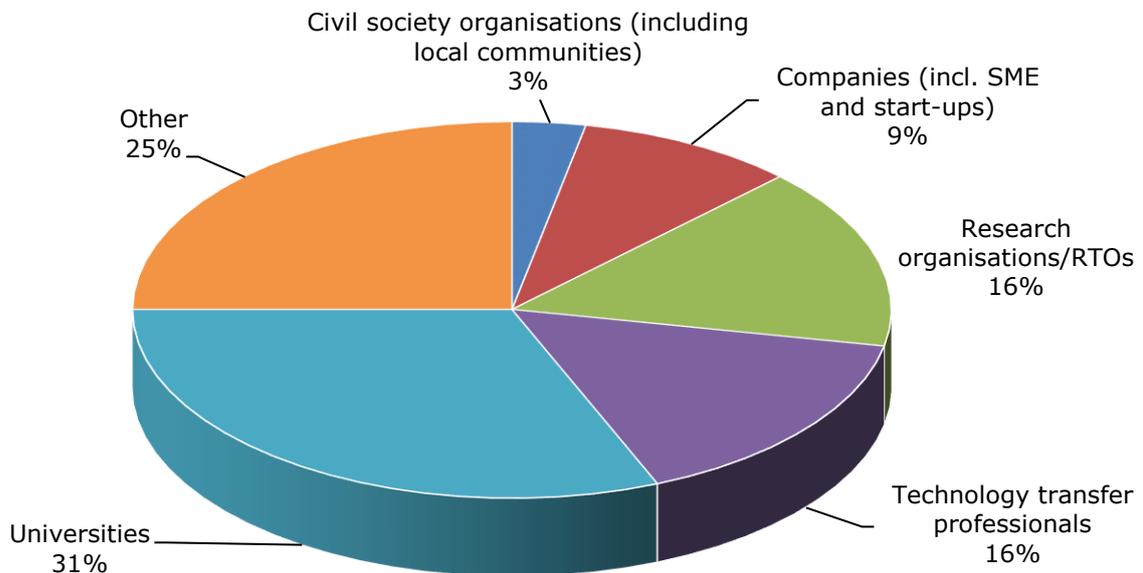
Among individual respondents, the biggest groupings were researchers (35%), experts in tech transfer (17%), and innovation managers (12%).

Breakdown of single organisations responding to the consultation



Single organisations were mainly universities (31%), and research organisations/RTO (30%). Companies accounted for 18% of responses by single organisations (9% SMEs, 7% large companies, 2% start-ups).

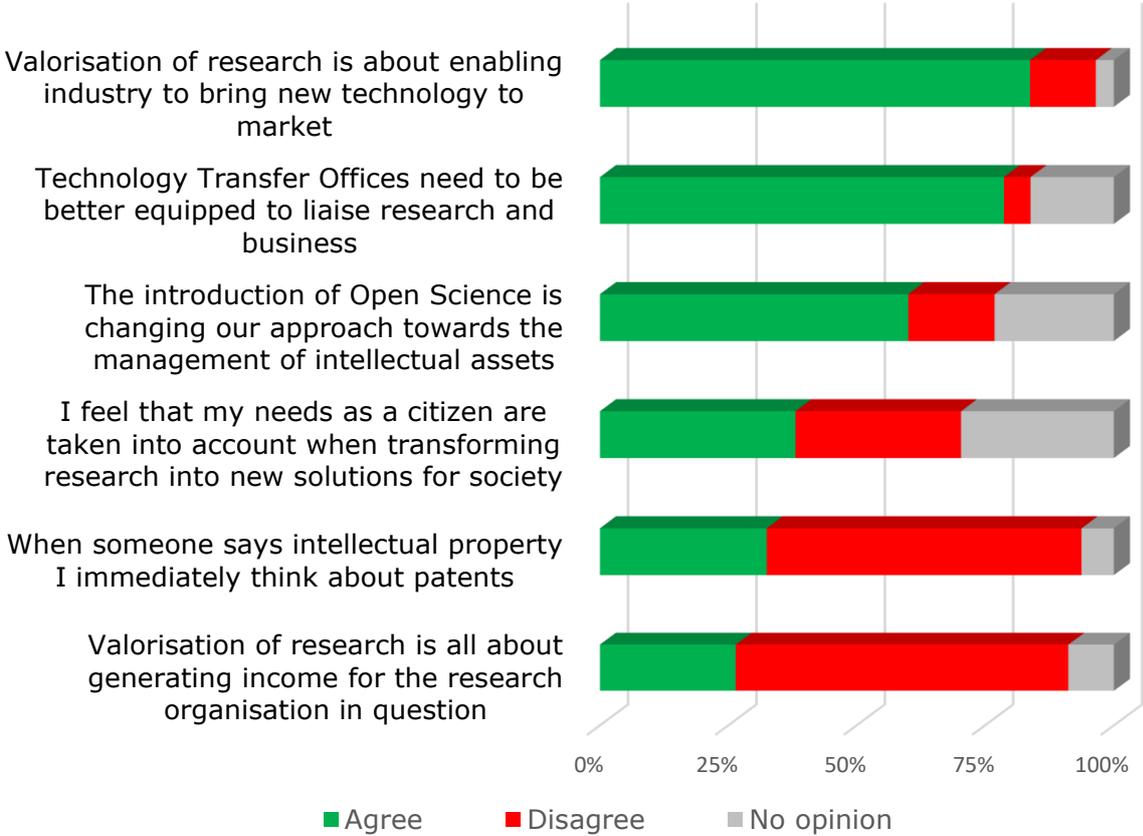
Breakdown of umbrella organisations responding to the consultation



Umbrella organisations showed a similar pattern, with majority of umbrella organisations being universities (31%), technology transfer professionals (16%) and research organisations/RTOs (16%).

STAKEHOLDER CONSULTATION QUESTIONS

Q1: What do you think of the following statements?



The first question tested whether the respondents agree or disagree with some statements related to knowledge valorisation.

There was strong agreement on following statements:

- 'Valorisation of research is about enabling industry to bring new technology to market';
- 'Technology transfer offices need to be better equipped to liaise research and business';
- 'The introduction of Open Science is changing our approach towards the management of intellectual assets'.

There was strong disagreement with:

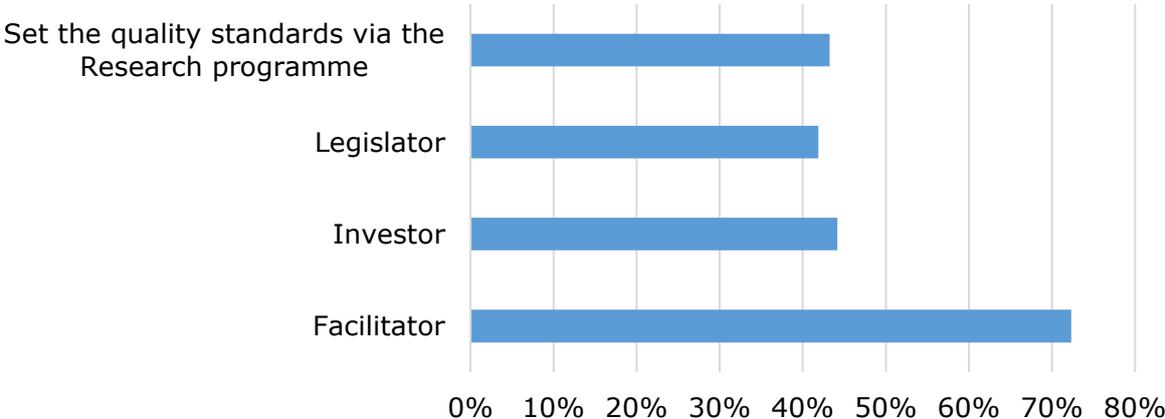
- considering valorisation as 'all about generating income for the research organisation'; and
- limiting intellectual property to patents.

The statement 'I feel that my needs as a citizen are considered when transforming research into new solutions for society' received a 'no opinion' response rate of almost 30%. It should be noted that individuals, civil society and local communities account for a limited percentage of respondents – this could have influenced the high rate of 'no opinion'.

This first question demonstrates a good level of understanding by respondents of the importance of knowledge valorisation and the complexity of the landscape (see, for instance, the agreement on knowledge valorisation as an enabling industry to bring new technologies in the market, and disagreement on limiting IP to patents).

The substantial balance on the question relating to citizens needs could confirm the hypothesis that citizen engagement still plays a limited role in knowledge valorisation and is not yet fully understood by stakeholders. More work is needed to integrate this aspect into European knowledge valorisation.

Q2: In your view, what should be the main role of the European Commission in the creation of a modern knowledge valorisation policy?

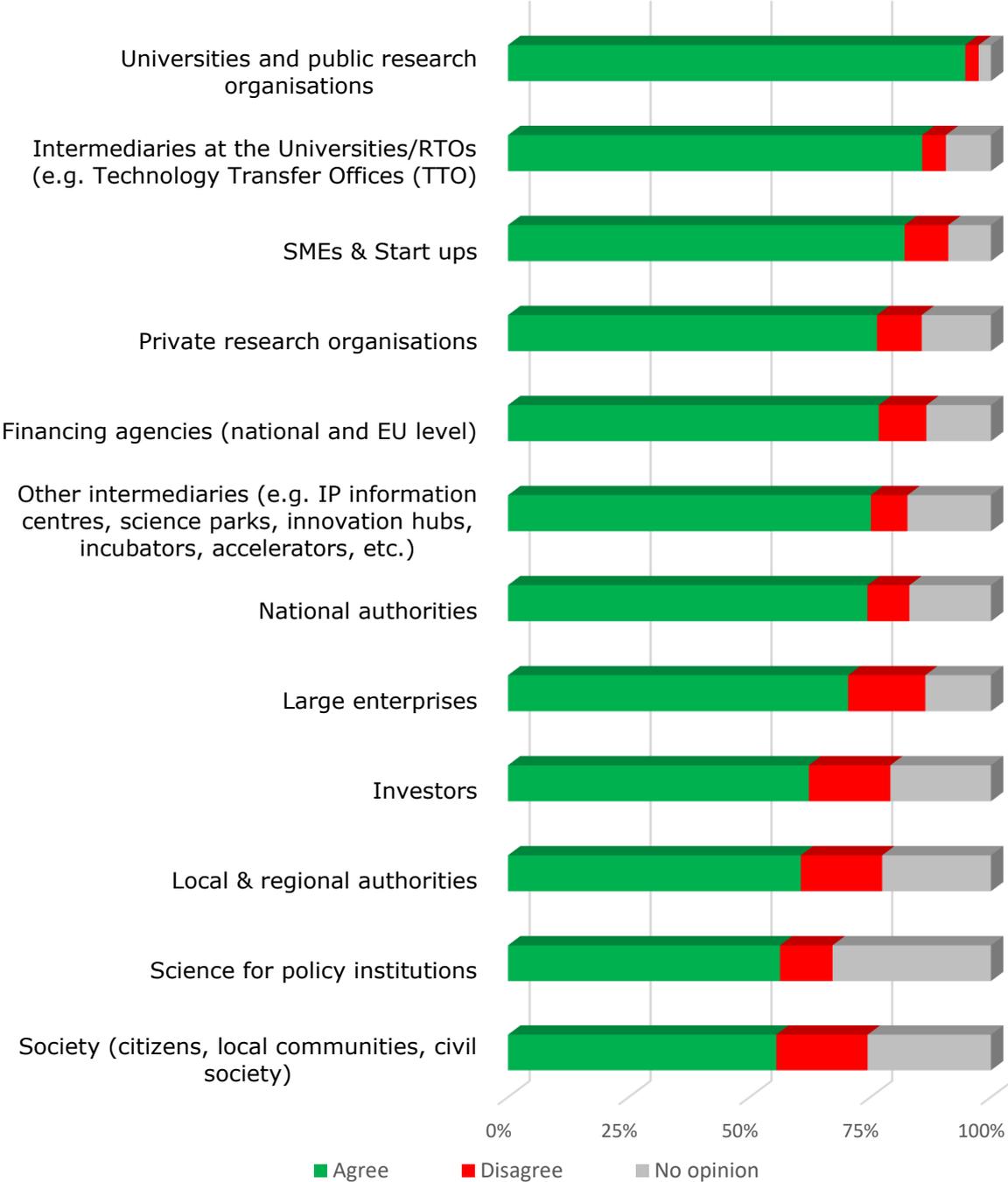


Question 2 asked about the main role of the European Commission in creating a modern knowledge valorisation policy.

As a multiple-choice question, respondents could choose more than one role. More than 70% of respondents argued that the Commission should act as a facilitator in creating a modern knowledge valorisation policy. All other suggested roles (investor, legislator, set the quality standards via the research programme) scored around 40%.

The results confirm the Commission's role in the co-creation process for the Guiding Principles for knowledge valorisation, working together with Member States and stakeholders.

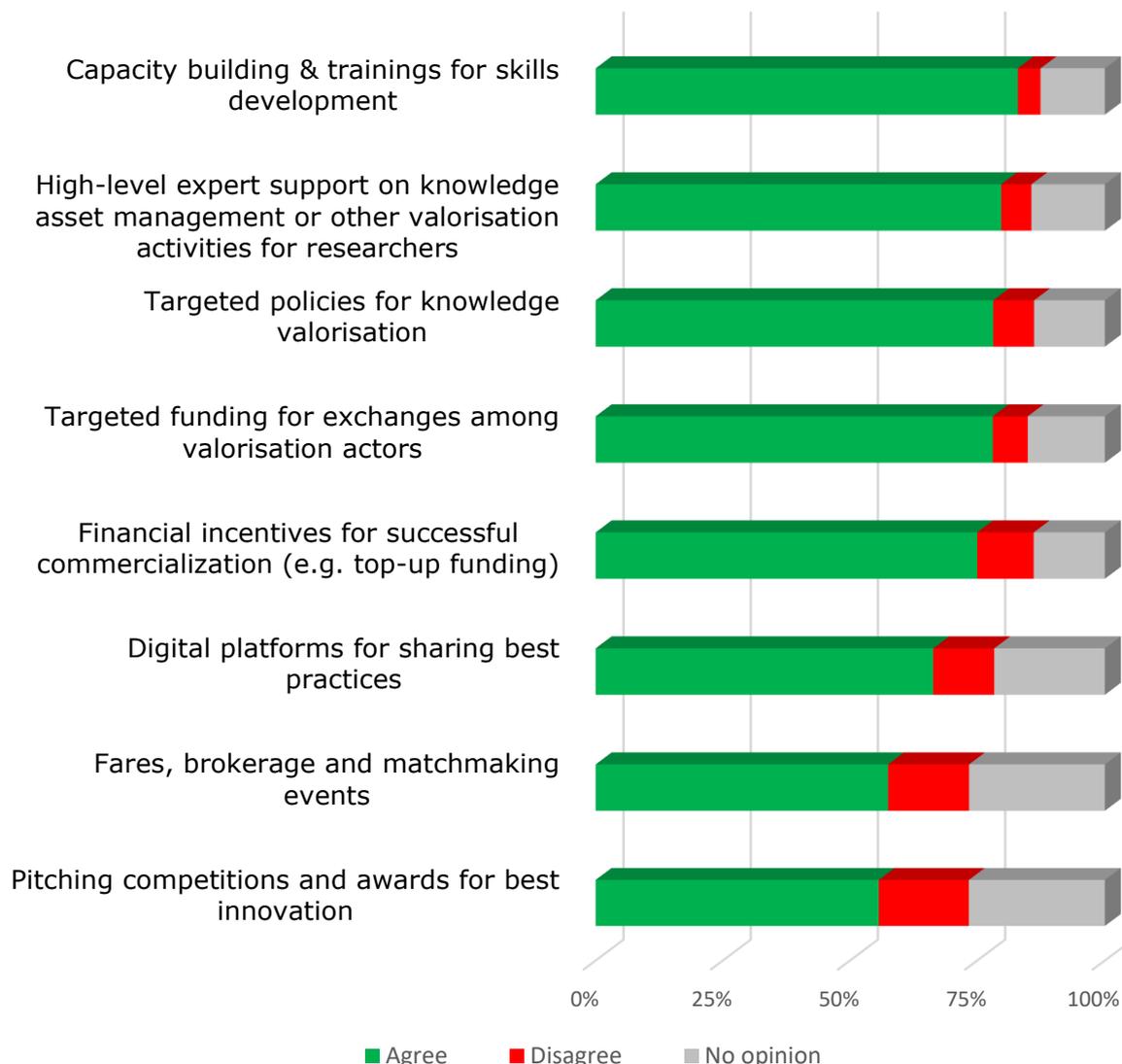
Q3: In your view, which of the following actors should the Guiding Principles for knowledge valorisation address?



Actors that had the highest agreement from respondents were universities and public research organisations (93% agreement), intermediaries at universities/RTOs (84% agreement) and SMEs and start-ups (81% agreement).

All suggested actors listed in the questionnaire received more than 55% of agreement from respondents. This confirms the need to take account of all players involved in the knowledge valorisation landscape, going beyond the traditional players addressed by the 2008 Recommendation.

Q4: In your view, which of the following types of initiatives are relevant to foster exchanges amongst valorisation actors?

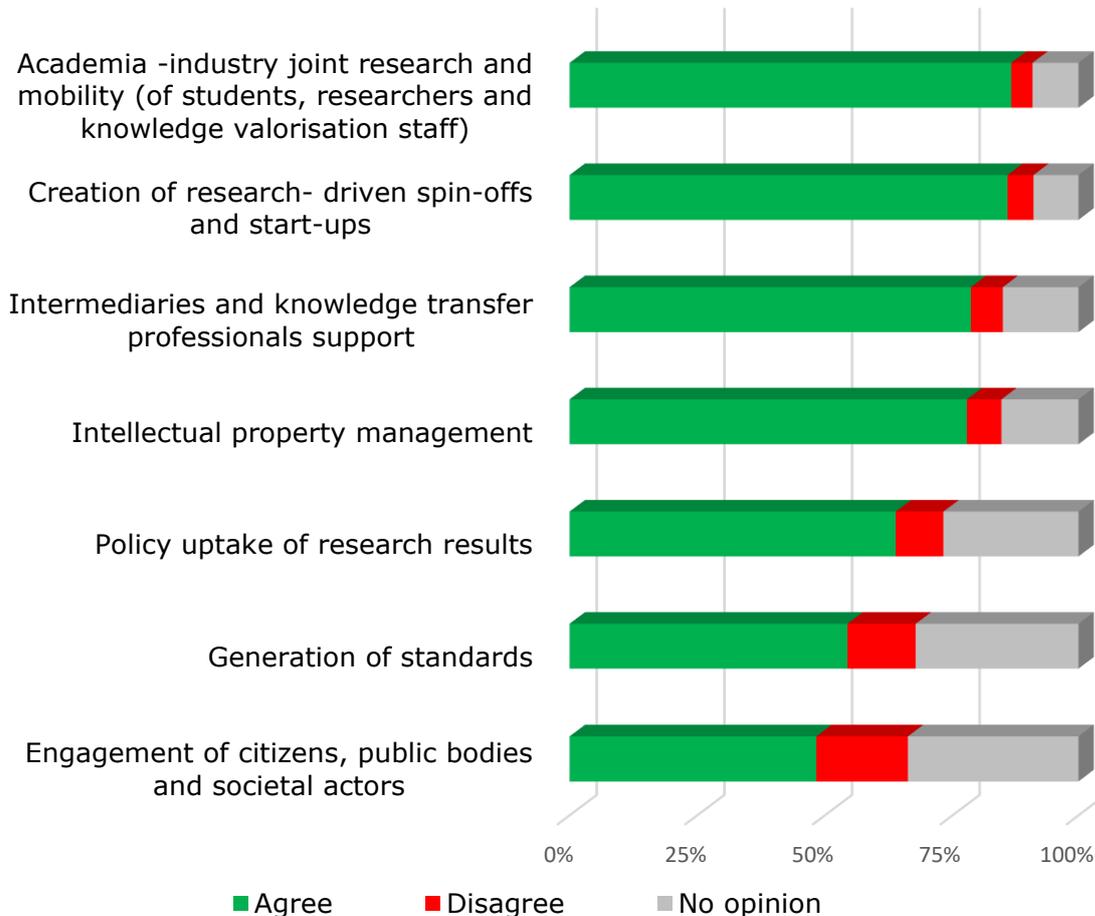


All types of initiatives listed in the questionnaire received more than 50% agreement from respondents. Types of initiatives which obtained the highest level of agreement from respondents are:

- capacity building & trainings for skills development (81% of agreement)
- high-level expert support on knowledge asset management or other valorisation activities for researchers (77% of agreement)
- targeted policies for knowledge valorisation (76% of agreement)
- targeted funding for exchanges among valorisation actors (76% of agreement)

A focus on skills, training, and expert support for knowledge valorisation are perceived as key initiatives by stakeholders. Less enthusiasm was observed for 'fares, brokerage and matchmaking events' and for 'pitching competitions and awards for best innovation' (even though both also score more than 50% positive responses). This can be understood as a call to raise awareness of knowledge valorisation early on in the R&I process rather than focusing on the end of the pipeline.

Q5: In your view, which of the following channels are relevant to ensure a successful knowledge valorisation policy?



The policy review on knowledge valorisation identified and analysed the main channels for promoting the uptake of R&I results. The aim of this question was to capture stakeholders' views on the relevance of these channels.

The knowledge valorisation channels which received the most positive responses from respondents are:

- academia-industry joint research and mobility (84% agreement)
- creation of research-driven spin-offs and start-ups (84% agreement)
- intermediaries and knowledge transfer professionals support (76% agreement)
- intellectual property management (76% agreement)

Almost all channels scored more than 50% positive responses by respondents. This shows the importance of a variety of channels to increase knowledge valorisation which should be reflected in the Guiding Principles for knowledge valorisation.

The high number of 'no opinion' answers for citizen engagement (32%) and for generation of standards (31%) may indicate a need to raise awareness of these channels among stakeholders.

Q6: Which additional knowledge valorisation channels should be explored?

A policy looking ahead to the future should be exploring new channels for knowledge circulation and valorisation. The aim of Question 6 was to explore potential new channels for knowledge valorisation.

Only around 25% of respondents answered this open question. Responses often referred to the channels already listed in Question 5, and included tools for knowledge valorisation.

Responses included the following:

For improving academia-industry joint research and mobility:

- consultancy from research to industry
- partnerships between academia and industry associations (e.g. clusters)
- a reward system for researchers

For creating research-driven spin-offs and start-ups:

- a focus on entrepreneurial guidance and a way of working that turns knowledge into an investor-ready proposition

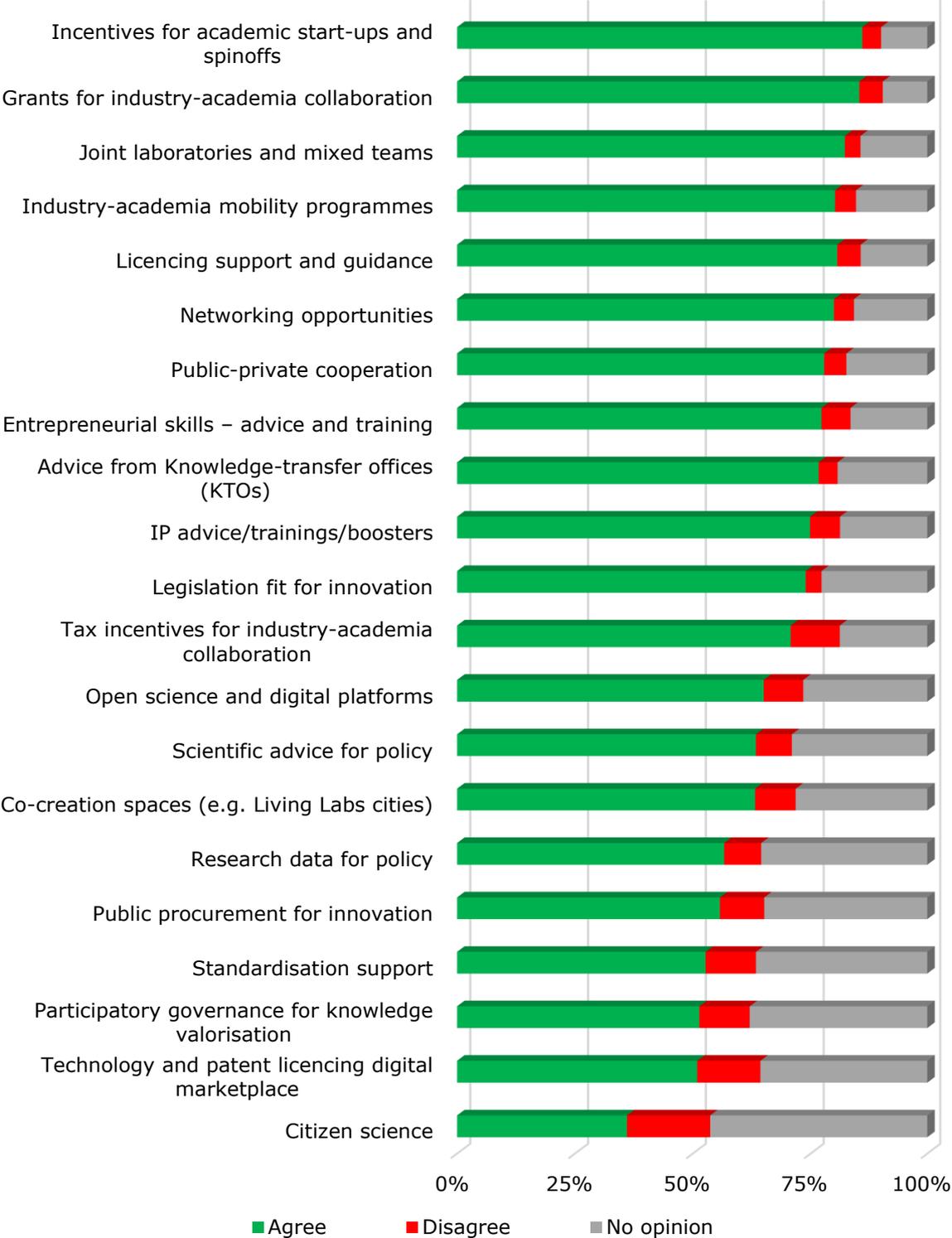
For supporting intermediaries and knowledge transfer professionals:

- skills development including entrepreneurial skills
- focussed meetings with technology transfer specialists
- support from independent consultants
- engagement with citizens, public bodies and societal actors
- consultation of public opinion
- development of social entrepreneurial skills
- developing relations with communities and mechanisms for community consultation
- engage with local actors
- low threshold for spreading knowledge from academia to society/citizens

For intellectual property management

- academia-to-business licensing and business-to-business licensing
- IP management support for SMEs

Q7: In your view, which of the following tools are relevant for knowledge valorisation?



The transformation of research results into solutions occurs via a wide range of tools, from policy initiatives to targeted actions. This question aimed to identify the main tools for the knowledge valorisation.

The tools with highest levels of positive responses are:

- incentives for academic spin-offs and start-ups (84% agreement)
- grants for industry-academia interactions (82% agreement)
- joint laboratories and mixed teams (79% agreement)

These tools belong to the 'creation of research-driven spin-offs/start-ups' and 'industry-academia joint research' channels, which are the leading channels identified in Question 5 above.

However, most of the tools listed in the questionnaire received positive responses from more than 50% of respondents, demonstrating the need for and the importance of having a broad range of tools available for knowledge valorisation.

The results seem to indicate that there is still a need to focus on areas that were already considered in the 2008 Recommendation, such as industry-academia collaboration, the creation of research-driven spin-offs and start-ups, intellectual property management, and knowledge transfer support. However, there also seems to be a need to enlarge the scope of the guidelines and address new elements that were not covered in the 2008 Recommendation, such as scientific advice for policy (above 60% agreement), and open science and digital platforms (above 60% agreement).

Q8: What are the obstacles for knowledge valorisation in Europe?



The aim of Question 8 was to capture stakeholders' views on the main obstacles for knowledge valorisation in Europe.

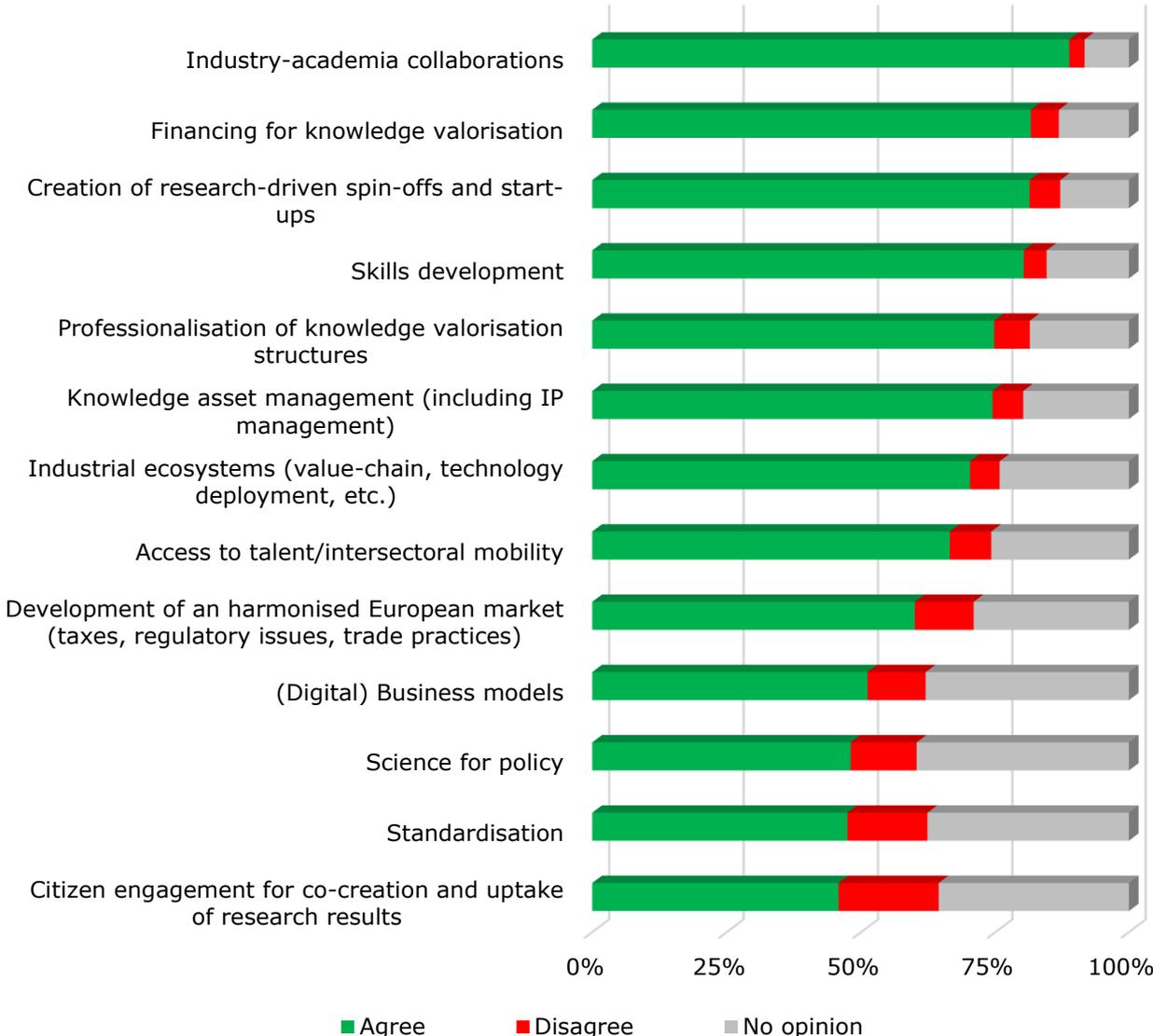
All obstacles listed in the questionnaire received a higher level of agreement than disagreement, including the ones with less than 50% agreement, such as 'insufficient level of knowledge on EU State aid rules in the field of research and innovation' (45% agreement; 15% disagreement; 36% of no opinion).

The obstacles with the highest levels of agreement from respondents are:

- Limited knowledge valorisation skills among researchers (incl. entrepreneurial skills) (74% agreement and very low disagreement of 8%)
- Culture of adversity to risk (72% agreement)
- Lack of valorisation funding and Limited incentives for researchers to engage with industry/society (around 65% agreement)

The results clearly show the need to focus on knowledge valorisation skills among researchers (incl. entrepreneurial skills), changing the culture to move away from risk adversity and work on the incentives for researchers to engage with industry and wider society.

Q9: Which of the following elements do you think the knowledge valorisation guiding principles should address?

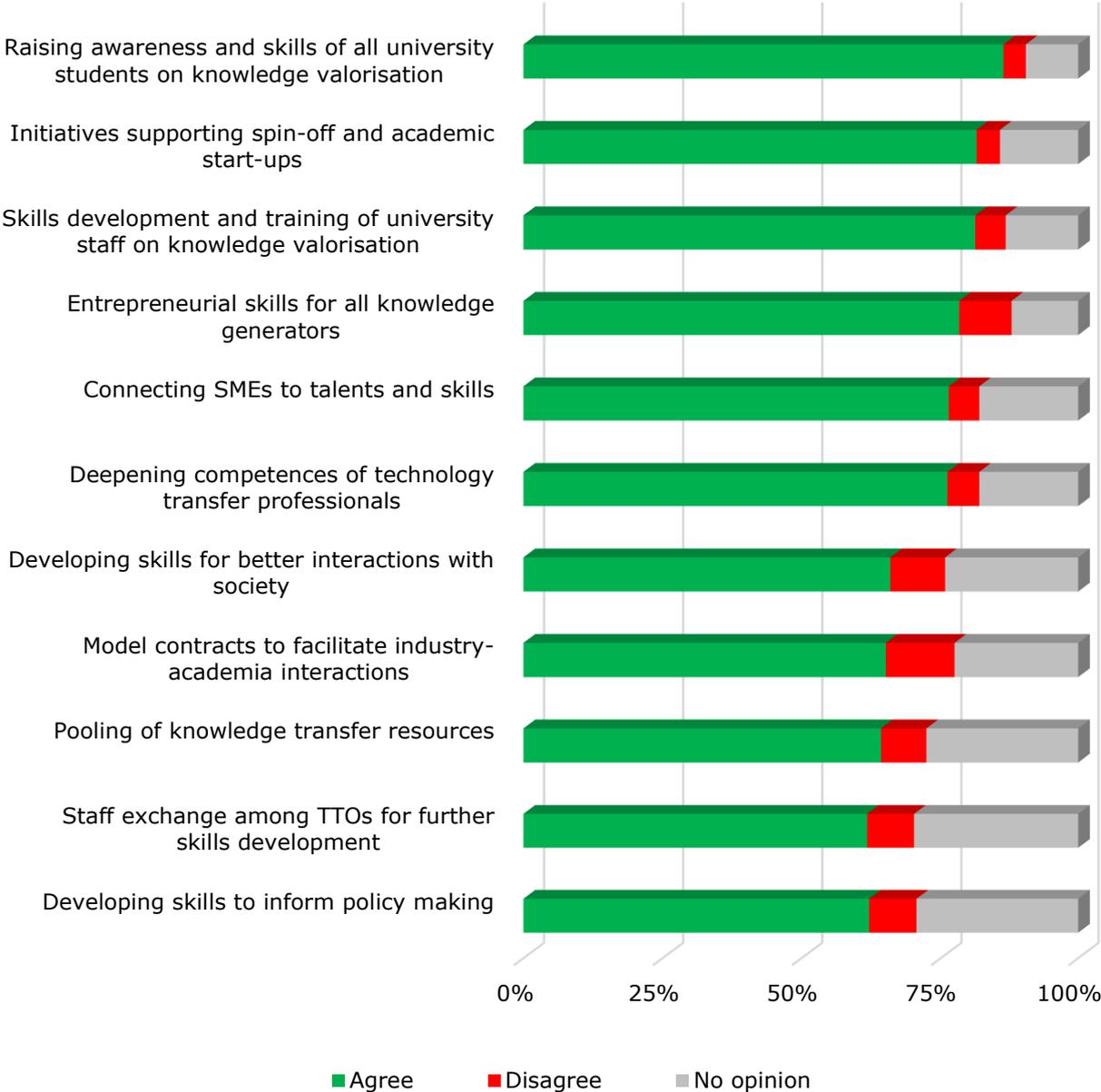


The aim of this question was to capture stakeholders' views of the elements that the Guiding Principles for knowledge valorisation should cover. The following elements listed in the questionnaire received the highest levels of positive responses:

- Industry-academia collaborations (86% agreement)
- Creation of research-driven spin-offs and start-ups (78% agreement)
- Financing for knowledge valorisation (78% agreement)
- Skills development (77% agreement)

The fact that almost all suggested elements received more than 50% agreement from respondents indicates the need for the guiding principles to cover a wide range of topics. This is in line with the results from Question 7 on the importance of different tools for knowledge valorisation.

Q10: Which of the following elements relating to capacities and skills should the guiding principles address?



The last question focused on exploring which elements relating to capacities and skills the guiding principles should address.

All capacities and skills listed received more than 60% agreement from respondents. Capacities and skills with highest levels of agreement were:

- Raising awareness and skills of all university students on knowledge valorisation (83% agreement)
- Initiatives supporting spin-offs and start-ups (78% agreement)
- Skills development and training for university staff on knowledge valorisation (77% agreement)

The fact that all the items suggested scored more than 60% agreement shows the need for the guiding principles to cover a wide range of capacities and skills and a need to involve both students and staff.

CONCLUSIONS

There is a good level of understanding among the stakeholders on the importance of knowledge valorisation and on the complexity of the landscape. Knowledge valorisation is understood as a way of generating positive socio-economic value from research and innovation outputs.

The results of the consultation confirm the need for the Commission's role as a facilitator in the co-creation process for developing knowledge valorisation policy, working together with Member States and stakeholders.

The consultation also confirms the need to consider all players involved in the knowledge valorisation landscape when drawing up the Guiding Principles for knowledge valorisation, going beyond the traditional players addressed in the 2008 Recommendation. This is in line with the key conclusions from the survey to the Member States and EEA countries carried out in spring 2021.

There is also broad agreement among stakeholders on the importance of reflecting a variety of valorisation channels in the Guiding Principles for knowledge valorisation. Likewise, there is a clear indication of the need for and the importance of having a broad range of tools available for knowledge valorisation.

The consultation confirms the need to cover areas such as industry-academia collaboration, the creation of research-driven spin-offs and start-ups, intellectual property management, and knowledge transfer support. There also seems to be a need to enlarge the scope of the guidelines and cover new elements that were not covered in the 2008 Recommendation, such as scientific advice for policy, open science and digital platforms.

The results show that stakeholders are calling for further development of skills, training and expert support for knowledge valorisation as key areas for the guiding principles. This can also be seen as a need to improve awareness raising regarding knowledge valorisation early in the R&I process.

The replies from the stakeholders clearly underline the needs to change the culture and improve entrepreneurial skills, move away from risk adversity and work on improving incentives for researchers to engage with industry and society.

The potential for increasing valorisation through citizen engagement and standardisation does not yet seem to have been fully understood by all stakeholder groups. More awareness raising of these channels among stakeholders is needed and these aspects must be further emphasised in the European Guiding Principles for knowledge valorisation.

ANNEX 1: POSITION PAPERS RECEIVED IN THE CONSULTATION

Respondents were also invited to provide further input by attaching a position paper to the reply. 24 position papers were received, of which:

- 15 are from single organisations representing research organisations, universities, large companies, international organisations, NGOs, SMEs, national public authorities and other organisations;
- 6 are from umbrella organisations which represent technology transfer professional organisations, research organisations, civil society organisations, universities and other organisations;
- 3 are from individuals: an innovation manager, a tech transfer expert and an entrepreneur.

Key messages from the position papers

1.1 Research organisations

- Licensing is a way of boosting EU competitiveness. Revenues generated by licensing are used to finance future applied pre-competitive research.
- Spin-offs are an important way of exploiting results of R&D projects, for developing ingenious ideas and innovative business models for tapping into new markets and creating sustainable jobs.
- Recognise and raise awareness about the major economic significance of standards at European level. This is essential to achieve the twin transition and fulfil the objectives of the EU Green Deal and of the European Digital Decade. Proactive standardisation activities play an important role in knowledge valorisation and spreading technologies into national and international markets.
- Provide effective incentives and support to all European RD&I actors to contribute and collaborate in European standard-setting activities and to represent European interest in international standardisation. Standardisation is costly, and it should be further supported and incentivised both at national and EU levels, and better incorporated into RD&I publicly funded programmes. Standards resulting from research projects should receive equal recognition compared to publications and patents.
- Standards and patents are complementary. The development of a European standardisation strategy is only possible if it does not weaken the IPRs framework, including for standard essential patents, essential copyrights and associated rights (*sui generis* database rights).
- IP's crucial role in innovation and in supporting knowledge co-creation also needs to be better recognised at EU level, for instance by ensuring a balanced approach between 'Open Science' and IP policy. Further incentives should also be put in place for researchers to efficiently disseminate and exploit their research results and encourage the translation of these into the commercial world, especially through patent filing.
- The best way for research results to reach the market is rarely through non-exclusive royalty-free licensing. For the results of RD&I investments to be taken up by industry, conveying a form of exclusivity is essential for the industrial buyer or licensee to create a business case for further development.

- Ensure the right framework conditions to stimulate knowledge and technology co-creation in Europe and prevent the creation of unwanted regulatory barriers hampering European innovation capacity. Considering the specificities of the RD&I sector in the revised EU State aid rules for RD&I will be key.
- Public procurement should play a much bigger role in the EU. It enables to share the risks and benefits of designing, prototyping and testing a limited volume of new products and services with the suppliers. It helps to create the optimum conditions for wide commercialisation and uptake of RD&I results, in a limited setting.
- 'Open Science' and 'Open Data' do not exempt from intellectual property protection.
- Many Knowledge Transfer Offices (KTOs), in particular in the eastern and southern parts of Europe, but also prominent ones such as Cambridge Enterprise, have started to empower other knowledge transfer vehicles (in addition to patenting and licensing), including contract and collaborative research and services, which bring results for the global/national/regional/local economy.
- To improve the quality of the KTO operation KPIs need to be set to monitor KTO processes and evaluate the quality of these. There should be a focus on measuring the efficiency of the KT process, using detailed activity or process KPIs, organised as a funnel, and based on this, seek to remedy KTO efficiency shortcomings.
- The guiding principles should address: 1) operational principles (every KTO should have a set of operational principles, an honour code and a code of conduct as a basis of its operation); 2) accounting issues (emphasise the importance of intangible assets registration); 3) State aid and evaluation methods with competition law; 4) Synergies; 5) Wider view on IPR; 6) Diversification of KT activities; 7) Wider approach to science disciplines (collaboration with social sciences and humanities); 8) Systematic research approach to KT content and increasing the quality; 9) Alignment at the Horizon Europe framework programme level; 10) Beneficiaries of the KT activities (students as private individuals are not the target of the 2008 Recommendation); 11) Organisational issues in different specific situations (for smaller institutions which do not have the capacity nor the need to retain a full pledged KTO); 12) Pooling and open science; 13) Career progression in KT; 14) Managing the financial return.
- Establish collaboration between KTOs and national Enterprise Europe Network offices to assure a full in-depth support to researchers and SMEs.

1.2 Universities

- Encourage national authorities to provide systemic support and funding for KT activities and KTOs at national level.
- Promoting the advantages of cooperation between academia and industry and for knowledge valorisation through KTT metrics of European universities. See proposal: <https://www.astp4kt.eu/about-us/kt-news/knowledge-transfer-community-proposes-new-measures-for-impact-in-horizon-europe.html>
- Further support for developing TTOs through coaching programmes like PROGRESS-TT <https://cordis.europa.eu/project/id/643486/reporting/> which should be long-term, enabling real growth and development of the KTOs. Offer more EC supported services like IP Booster <https://ipbooster.meta-group.com/>.

- Support universities in becoming hubs in their ecosystems, and connecting those ecosystems. EIT HEI Initiative is a step in this direction but a more systematic and long-term support is needed for all EU universities. <https://www.eit-hei.eu/>
- Nurturing academia – industry/ stakeholder relationships; promoting the academia-industry/ stakeholder cooperation in the habilitation and other career development criteria at universities level. Researchers have more incentives to publish articles, the culture does not yet reward knowledge transfer at the same level. Promoting creation of spin-off companies at the EU level – changing the culture.
- Innovation management activities should contribute to both economic and social welfare. Social innovation can also be a change of behaviour, therefore e.g. good knowledge transfer in social sciences and humanities is crucial and should be promoted.
- Develop proof-of-concept funds for researchers to upgrade their research results towards products for the market, produce high quality prototypes and lessen the risk for companies.
- Enable collaboration spaces for researchers, with innovation management tools and coworking options, innovation management templates, moderation templates. Include industry in the education process – challenge-based learning/research. Support Investor relations with researchers – most universities don't have access to investors and have no know-how on venture building – EU guidelines and investor pool is crucial.

1.3 Technology Transfer professional organisations

- Tax incentives, digital marketplace for technologies, standardisation support may be difficult to implement as compared to other tools.
- The reference to SMEs using IPR to leverage finance also applies to public research organisations. Negotiations with investors (and/or company founders) would be assisted by the creation of some guidance on fair terms. As well as requiring financial support for survival and growth, SMES often also need access to enhanced skills around IPR strategies.
- It is essential that in all the updated IPR policies around collaborative R&D, there must be a more balanced approach to ensuring that by structuring appropriate ownership and access rights regimes involving public and private partners, with a fair and reasonable compensation always granted back to the public institutions.
- Many PROs are still trying to fully develop policies and resources to support IPR and knowledge valorisation for their mainstream researchers and have not yet found time or space to focus on student IP activity.
- While the 2008 paper needs an update, it does not require a complete change of the global messages in terms of recommendations for how PROs could approach many of the policy issues they need to implement for an effective valorisation strategy.
- The introduction of knowledge valorisation guiding principles which will be applicable to both public and private sector would be very much welcomed.
- Valorisation is not all about generating income. It is about generating a positive impact from research outputs, which is mainly achieved by using research outputs to solve specific market and user needs.

- Disagree that direct engagement of citizens is a relevant channel to ensure a successful knowledge valorisation policy, as they consider it is rather useful for development of participative solutions to specific challenges.
- Digital marketplaces have shown little effectiveness in knowledge valorisation because knowledge transfer is a rather complex process. These marketplaces are probably useful for exchange of information related to mature technologies (high TRL), yet their contribution to valorisation is arguable.
- Knowledge valorisation skills among researchers is not a critical issue, as long as the role of intermediaries is reinforced so they can collaborate with researchers from the inception of research projects and are considered part of the research teams.
- The profession of knowledge transfer (KT) officer does need further recognition. In many cases executive positions are not available for KT officers. Besides, their competences are frequently ill-defined and mixed up with issues unrelated to knowledge valorisation. The insufficient recognition means that the KT officer career is not attractive enough for professionals that might have a highly useful expertise. A formal or recognised specialisation could give greater value to KT officers.

1.4 *Large companies and SMEs*

- High level of intellectual property rights (IPR) protection is important, fostering reinvestment into R&D when commercialisation proves successful, as well as enabling the exchange of knowledge and cooperation between innovators.
- Increase awareness on the value of IPR (and patent protection in particular) as a commercial value. IPR enables EU innovators to engage as equals with some of the largest companies in the world. This is relevant not only for large companies, but also for SMEs, research institutes and universities, which focus on (mid to long-term) leading edge R&D rather than commercialisation of products.
- Standardisation is an innovation model ideally suited to the knowledge valorisation. Standardisation has the potential to bring together highly specialised smaller innovators which might not otherwise find a viable path to market, with larger corporations, research institutes and academics.
- Generating income for the organisation producing the research remains an important and legitimate objective. Research and innovation are interlinked through a virtuous cycle, which, through generated and reinjected income, ultimately finances the research and co-creation needed to ensure that the EU remains at the forefront of innovation.
- There is a clear and urgent need to promote the valorisation and deployment of research and development in Europe and to support technological research that bridges the gap between academic research and industrial R&D.
- Contributing the development of standards is a lengthy and cost-intensive endeavour. Royalties obtained by patent-holders through the licensing of their standards-essential patents reward them for their investments in R&D.
- Support to the adoption a code of practice for the smart use of intellectual property, as long as such 'smart' use entails the effective and sustainable protection of IP rights.

- Increased knowledge valorisation could lead to more technology transfers and additional inputs for the development of standards, leading to higher quality standards and more successful transfer of research results into final products, translating into more competitive and innovative products, thereby contributing to EU digital sovereignty.

1.5 International organisations

- Universities need to have advanced intellectual property (IP) policies in place to support successful valorisation of the research results.
- Specialised valorisation teams may be established as part of traditional KTOs/TTOs (Knowledge or Technology Transfer Offices) or as more innovation focused TLOs (Technology Licensing Offices).
- The creation of the Unitary Patent will be instrumental for universities and businesses to access at lower cost a wider geographical commercialisation area, thus creating the conditions for their scale up. Commercialisation of inventions within the single market will be thereby facilitated, as well as the cross-border collaborations that are often instrumental for this purpose.
- R&D funding providers should allow for the budgeting of patent costs beyond the project lifetime, allowing for the financing of patent protection beyond the priority year (ideally until 30/31 months and in exceptional cases even beyond) as means to further incentivise and facilitate the continuation of promising research projects through spinouts or collaboration with private partners.
- National or regional funding schemes should align with 'the principles regarding collaborative and contract research' as contained in the European Commission 2008 Recommendation.

1.6 National public authorities and national research funding agencies

- In EU rules and policies allow 'new product development' as part of the process with realistically set IP valuations allowing some element of payback and recognition for the public funding.
- EU policies have fallen short of embracing the 'close to market' elements required resulting in poor valorisation of research results. There are not enough incentives for researcher for technology transfer. Researchers should get career recognition for successful transfer to industry as a measured metric. The valuation of IP by TTOs is often overly high, formulaic and inflexible. Especially in areas where efforts are required to stimulate innovation a much more flexible and incentivising approach is required.
- Within the proposed guiding principles, we are concerned that the arts and humanities – and the social sciences - are all but absent, being relegated to single paragraphs on arts for diffusion, and citizen science and social innovation, respectively.
- The humanities create knowledge for social benefit in a wide range of settings through diverse models of KE that embrace bottom-up community priorities and co-creation. This is absent in the current guiding principles document.

1.7 *Civil society organisations, NGOs, Investor, Innovation hub*

- Local community and civil society initiatives will be strong actors in sustainability initiatives. Resilience and self-reliance as well as self-organisation and autonomy are important factors in society to bring about change and to deal with it.
- Initiatives to promote/safeguard democracy, human rights, gender and diversity, rule of law, European values and the TFEU are relevant to foster exchanges and maximise valorisation.
- The EU institutions should: 1) embrace a modern vision for full integration of universities in innovation ecosystems; 2) safeguard that universities are enabled to act autonomously and to be able to deploy physical, human and monetary assets to support the development of the ecosystem; 3) safeguard appropriate rules, regulation and explore financial instruments to empower universities to enhance inter-sectoral mobility.
- Regional and national governments should: 1) ensure national funding agencies support the diverse activities universities do as engines in their innovation ecosystems; 2) ensure universities can act autonomously; 3) ensure appropriate rules, regulation and explore financial instruments to empower universities to enhance inter-sectoral mobility; 4) ensure financial support for basic research at universities in relation to non-university institutions.
- Universities should integrate and support stable career paths of 'facilitators' and 'innovators' with expertise and skills in both research and innovation, to enhance and strengthen connections between the university and the broader innovation ecosystem (including social innovation engaging civil society).
- The knowledge valorisation platform should provide resources (IP management guides, model partnership agreements, and a guide on State aid) helping companies throughout the EU access the information they need to engage in research partnerships.
- The guiding principles should seek to promote further integration of talent between universities and industry. Deeper integration will allow students to further develop their research excellence while engaging first-hand with the concerns experienced in industry.
- Higher education institutions should set up centres for business engagement, with the aim of using partnerships between industry and academia to expose students to real-life industry problems. The ERA could provide a framework that advises best practices for setting up such a centre.
- Partnership should be considered with a broad approach which includes opportunities for other disciplines than STEM to contribute to the valorisation of R&I. In particular involving humanities and business departments in these collaborations would be fruitful. The guiding principles should address collaboration with academic disciplines in the arts and humanities.
- European Commission should look at the blended finance approaches accelerating investment into companies, projects, and funds that are working towards achieving the Sustainable Development Goals. To help scale the most promising spinouts, the European Commission should consider providing grant funding for technical assistance to early-stage companies.
- The European Commission could consider hosting EU-wide hackathons in which a hackathon takes place simultaneously in cities across the EU. Such events can help regional communities engage with large-scale problems.

- The current knowledge valorisation platform does not engage citizens as it focuses on sharing of best practices from industry and RPOs from different European countries. To reach citizens, the European Commission should consider creating a knowledge valorisation initiative that focuses on what citizens want and need to learn about knowledge valorisation.
- The guiding principles should address the role that industry can play in knowledge dissemination.
- European deep tech spinouts underperform because their funding is too soft and too local. There needs to be a process that allows certain deep tech start-ups that have great promise to be seen to stand out from their peers and show early promise of likelihood to achieve the global scale. The most reliable measurable characteristic of future promise is the degree of willingness of commercial companies to engage early with such start-ups as paid early adopters.
- Design specific tools and coaching programmes, and organise regular workshops and networking events, to strengthen the human capital of start-ups and boost their managing teams at all phases of development.

1.8 *Individuals*

- Strong weakness in Europe to sustain R&D efforts after R&D projects funded by EC, to bring project results to the market. Priority is not put high enough on Business Development aspects when selecting proposals for funding. Change selection criteria for projects, support projects closer to the market and involve investors in R&D projects or as reviewers.
- Europe is globally naive with respect to international competition - e.g. open source software is too much promoted, drawbacks of standardisation should not be ignored, SMEs get too much attention, communication means do not ensure enough confidentiality. Change of policy needed.
- One of the main obstacles to the valorisation of research results and uptake by SMEs are the costs for obtaining and maintaining a patent, in particular professional support in possible litigations. Assistance by specialised lawyers is very expensive, and the chances of success for a small company vs a large one are limited. Legal assistance for litigation for small SMEs should be provided.
- Research is typically planned and carried out in a near-vacuum from valorisation. Companies are typically brought in as last-minute partners, asked to engage as business partners carrying out demonstrators and assist with business planning. They may not be involved in generating IP and have limited access to generated IP. RPOs have limited interest in trade secret IP.
- TTOs performance KPIs are typically not impact- or outcome-based. RPO's invention disclosure of findings have no agreed standards, and they are converted into protected IP at low rates. Licensing systems are generally too complex and expensive. The percentage of RPO patent applications that are dropped prior to PCT stage is very significant, and a sign of failed KPIs. The reality of the current knowledge valorisation system needs to be examined firstly, through honest statistics and interviews outside of the RPO IP system.

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The Commission Communication on “A new ERA for Research and Innovation” (COM 2020 628 final) calls to update and develop Guiding Principles for knowledge valorisation and a Code of Practice for the smart use of intellectual property (IP) by the end of 2022. This report presents the results of a Consultation launched in July 2021 which collected the views of a wide range of research and innovation stakeholders on the relevant actors, channels, tools, obstacles and elements to be addressed by the future Guiding Principles for knowledge valorisation.

The results of this Stakeholder Consultation indicate the need for the future Guiding Principles to take into account all actors and channels involved in knowledge valorisation and address a broader range of aspects going beyond the scope of the Commission 2008 Recommendation on the management of intellectual property in knowledge transfer activities (C(2008)1329). The results of this Consultation constitute an important input for the co-creation of the upcoming Guiding Principles for knowledge valorisation.

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