EC/OECD Science, Technology and Innovation Policy (STIP) Survey, edition 2023

Please cite this document as:

EC/OECD (2023), EC/OECD Science, Technology and Innovation Policy (STIP) Survey, edition 2023, https://stip.oecd.org.

Table of contents

1. Questions in the survey (policy themes)

1. The following sections list the 2023 STIP survey's core questions organised into six policy areas in the order they will appear in the online survey tool. To keep the reporting burden on participating countries to a minimum, the questions included in this part of the 2023 survey remain largely the same as those in the 2021 edition.

1.1 Governance

Table 1. STIP Survey questions under the "Governance" policy area

Policy Theme	Question	Question guidance
Governance debates	1.1 Briefly, what are the main ongoing issues of debate around how STI policy is governed?	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the governance of STI policy, including emerging visions and shifts in policy direction. A policy debate may include various positions or options regarding STI governance matters. These may be expressed in different settings such as government bodies, legislatures, the media, among research and innovation actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of various stakeholders and the different options considered during debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal. For the European Research Area (ERA): Changes to support ERA policy implementation, e.g. via national policy vehicles, EU missions, partnerships, green & digital transformations, industrial technology roadmaps and national/regional ecosystem development & implementation are particularly relevant (ERA Actions 10, 11, 12, 15 / priority areas for joint action in the Pact for R&I in Europe (in the following "Priorities") h, j and e)
STI plan or strategy	1.2 What strategies or plans exist, if any, to provide an overarching strategic direction to STI policy?	Research and/or innovation strategy and plan; economic development strategy and/or plan with a strong emphasis on research and/or innovation; policies introducing a structural change in priorities and strategic agenda relevant for research and innovation policy and governance.
Horizontal policy coordination	1.3 What arrangements exist to support cross-government coordination in STI policy?	Overarching/central coordination bodies/departments; cross-ministerial coordination councils; joint priority-setting, agenda-setting or programming mechanisms between different ministries or agencies; strategic advisory body and councils; ad hoc cross-sectoral expert groups. For the European Research Area: Report on cross-government coordination policies at the national level, relating to the e.g. EU missions, partnerships, green transformation, industrial technology roadmaps and national/regional ecosystem development & implementation. EU-wide coordination will be reported by the EC. (ERA Action 10, 11, 12 and 15 / Priorities h, j and e)

Strategic policy intelligence	1.4 What arrangements or policy initiatives exist to strengthen the evidence base for STI policy-making and governance (besides evaluation and impact assessment)?	Dedicated strategic policy intelligence body (high-level expert groups, advisory councils with analytical capacity, foresight departments, etc.). Regulation, standards and rules related to evidence-based policy making. Scoreboards, indexes and data for measuring research and innovation; technology assessment; technology foresight; policy monitoring; benchmarking and peer review exercises. Measures related to evaluation and impact assessment should be reported in the next question. For the European Research Area: Report policy initiatives linked to the implementation of ERA Action 19 / Priority p, as far as they go beyond the contributions to STIP Compass.
Evaluation and impact assessment	1.5 What arrangements exist to initiate, reform, perform or encourage the use of STI evaluation and impact assessment?	Dedicated evaluation or impact assessment (IA) bodies, laws, regulations, standards and rules related to evaluation/IA; Reforms of evaluation/IA frameworks and procedures; Evaluation/IA guidelines; Changes in evaluation/IA instrumentation (e.g. international peer review, bibliometrics, patent counts, IA studies etc.). Mechanisms and rules to use the evaluation and impact assessment results. All initiatives to support, improve and harmonise evaluation and IA in public research, including the adoption of the San Francisco Declaration on Research Assessment (DORA), the Leiden Manifesto, or similar initiatives. Measures aimed at the design, piloting and implementation of reformed research assessment criteria, tools and processes. Revision of assessment frameworks of public research by research funding organisations. System level revision of individual appraisal systems in higher education or public research institutes. Changes in the use of metrics in evaluation processes; Reviews of impact assessment processes of public research, etc. Arrangements for conducting system-level evaluation/IA including policy mixes. For the European Research Area: Report on policies linked to the implementation of ERA Action 3 / Priority d.
International STI governance policy	1.6 What arrangements exist to support the international governance of STI policy (e.g. joint strategies and agreements, horizontal coordination or regulatory oversight bodies)?	Research and/or innovation strategy and plan regarding the internationalisation of research and innovation activities; bilateral research and innovation cooperation agreements; participation in multilateral initiatives; joint international infrastructures or research centres; strategy and tools to enhance participation in STI programmes from international bodies (European Union, CERN, etc.). For the European Research Area: Report also on policy initiatives related to the development and uptake of the ERA values and principles of the Pact for R&I in Europe, for example in bi- or multilateral dialogues with partner countries and in international fora; contribution to the pilot initiatives on the Team Europe approach for a specific world region; contribution to a European Science Diplomacy Agenda, and initiatives addressing freedom of academic research and R&I foreign interference (ERA Actions 6 and 9 / Priorities f and g). The overall context and trends are to be reported in the policy debates sections.

1.2 Public research system policy area

Table 2. STIP Survey questions under the "Public research system" policy area

Policy Theme	Question	Question guidance
Public research debates	2.1 Briefly, what are the main ongoing policy debates around government support for the public research system?	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the public research system and relevant policy, including emerging visions and shifts in policy direction. A policy debate may include various positions or options regarding policy support to the public research system. These may be expressed in different settings such as government bodies, legislatures, the media, among research and innovation actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of various stakeholders and the different options considered during debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal. For the European Research Area: Describe how you encourage reforms of the national research and innovation system towards more competitiveness as well as inclusiveness. This question is particularly – but not exclusively – relevant for "widening countries" (ERA Action 16 / Priorities l and m).
Public research strategies	2.2 What strategies, roadmaps or plans exist, if any, to provide strategic direction to research policy?	Strategy and/or plan related to the public research system. Economic development strategy and plan that prominently includes a public research dimension.
Competitive research funding	2.3 What are the main competitive schemes and programmes for funding research in universities and public research institutes?	Main types of competitive award programmes from different research funding agencies (e.g. strategic programmes in specific domains, open schemes for bottom-up applications). Individual calls for proposals should not be reported.
Non-competitive research funding	2.4 What are the main non-competitive schemes and programmes for funding research in universities and public research institutes?	Block/institutional/core funding allocated to research performing organisations, with or without performance-based criteria or performance agreements.
Third-party funding	2.5 What policy initiatives exist to promote funding of public research from non-government sources?	Examples include: (1) Legal, regulatory, administrative reform of universities / public research institutes allowing increased revenues from third parties. (2) Incentives to promote increased revenues / attract funding to public research from outside stakeholders, including the business sectors, charitable foundations (e.g. tax-based initiatives to encourage scientific philanthropy), etc. Schemes for promoting collaborative research should be reported under question 4.3.
Structural change in the public research system	2.6 What policy initiatives exist, if any, to support or lead structural changes in the public research system?	Incentives, regulations, guidelines and other types of interventions to provoke, promote, and orient changes in the landscape of public research actors (e.g. mergers, organisational separation, closure), their missions (e.g. increase/decrease of autonomy of universities) and their linkages (e.g. formal partnerships between research actors).

Digital transformation in research-performing organisations	2.7 What policy initiatives exist, if any, to help research-performing organisations upgrade their use of digital technologies (e.g. high-performance computing, big data analytics and artificial intelligence)?	Dedicated (or significant part of) programme, regulation or incentive supporting universities and public research institutes to upgrade their use of digital technology in research, including their ability to implement the required organisational and management changes. Examples include financial support to purchase new digital equipment and infrastructure or upgrade existing ones and other measures strengthening digital capabilities and resources (e.g. computing capacity, access to data); policies promoting the use of AI in research; and schemes addressing regulatory and ethical challenges (e.g. data privacy; enabling trustworthiness, explainability, human-centricity in AI).
Open and enhanced access to publications	2.8 What policy initiatives exist to support open and enhanced access to publications?	Implementation of new infrastructures (e.g. new services such as IT and cloud computing services, national resource centres, database and repositories of scientific information, etc.). Other policy measures, regulations, guidelines and incentives to promote open access (OA) to publications in scientific journals: new licenses or intellectual property rights provisions; funding mechanisms; legal reforms; development and use of alternative metrics; reforms of career management. For the European Research Area: Report policies mainstreaming OA across national research funding programmes e.g. through requiring and encouraging OA practices as part of projects' methodologies and/or rewarding OA practices as part of proposals' evaluation (ERA Action 1 / Priority a).
Open and enhanced access to research data	2.9 What policy initiatives exist to support open access to research data?	Infrastructure initiatives (e.g. new services such as IT and cloud computing services, national resource centres, database and repositories of scientific information, etc.) Policy measures, regulations, guidelines and incentives in support of access to research data, but also related metadata, as well as bespoke algorithms, workflows, models, and software (including code). In particular, policies supporting the implementation of the Recommendation of the OECD Council concerning Access to Research Data from Public Funding, should be reported, including in the areas of: Data governance for trust ("As open as possible, as closed as necessary"); Technical standards and practices ("FAIR" data); Responsibility, ownership and stewardship (Responsible data and software management, use of open licenses), Incentives and rewards (recognition of data/software publications, and citation scores thereof); Sustainable infrastructures for data sharing; and Human capital for data management and stewardship. For the European Research Area, the following topics are of particular relevance: • Contributing to the European Open Science Cloud (EOSC) provisioning of services, tools and data on the usage, quality and impact of research outputs and on the uptake of open science practices. • Contributing to a catalogue of Open Science best practices across the Member States and Associated Countries and intensifying EOSC outreach and communication including through national EOSC events. • Contributing to the establishment of a critical mass of data scientists, data stewards and general FAIR data-literacy in Europe. • Increasing the connection of national/regional research infrastructures to the EOSC platform. (ERA Action 1 / Priority a)

Research and technology infrastructures	2.10 What are the main policy initiatives for funding the construction, operation of, and access to research and technology infrastructures?	Specific research infrastructure projects and investments; Research infrastructure roadmaps; Equipment sharing schemes and mechanisms; Inventories and databases of infrastructure and large equipment. Countries are also asked to report on technology infrastructures such as those featured in Research and Technology Organisations (RTOs). Examples include demonstration and testing facilities, high-performance computing centres, etc. For the European Research Area: Report on policies linked to the implementation of ERA Action 8 / Priority b. Report also policies contributing to the development of technology infrastructure strategies, through road-mapping and implementation of the provisional activities identified for the pilot areas (for example, access, training, engagement with stakeholders) - ERA Action 12 - technology infrastructures / Priority j.
Internationalisation in public research	2.11 What are the main policy initiatives for promoting internationalisation in public research?	Incentives to encourage the internationalisation of domestic universities and PRIs (e.g. international research and PhD mobility schemes and programmes). Financial support to international collaborative R&D. National initiatives to support financially and/or technically applications to and participation in international research programmes (incl. EU Framework Programmes). Incentives to attract and retain staff from foreign universities and PRIs. Initiatives promoting the development of or participation in international infrastructure projects or international research centres. For the European Research Area: Report internationalisation policies linked to the implementation of ERA Action 4, ERA Action 13 (Alliances of higher education institutions) and ERA Action 16 (Make research institutions in the country more attractive for attracting international talents) / Priorities d, I, and l.
Cross-disciplinary research	2.12 What are the main policy initiatives for promoting inter, multi and transdisciplinary research?	Schemes to promote collaboration between different disciplines. Incentives to develop transversal skills for researchers, as well as to raise awareness of other research fields. Policies supporting research and education infrastructures that facilitate knowledge circulation between disciplines. Selection/evaluation criteria that better reward output from cross-disciplinary research, etc. For the European Research Area, the contribution to inter, multi and transdisciplinary skills development should be reported here (ERA Action 4 / Priorities d and m).
High-risk high-reward research	2.13 What policy initiatives exist, if any, offering dedicated support to high-risk high-reward research?	High-risk, high-reward (HRHR) research is defined as research that (1) involves a high degree of novelty; and; (2) carries a high risk of not realising its full ambition as well as the potential for transformational impact on a scientific, technological, or societal challenge. For the European Research Area: Report also policy initiatives linked to the implementation of ERA Action 13 (excellence initiative) / Priorities l and m.

Research integrity and reproducibility	2.14 What are the main policy initiatives for promoting research integrity and reproducibility?	Dedicated structures and bodies to prevent misconduct such as office/committee of research integrity; national mediator / ombudsman; codes of conduct and guidelines; education, training and awareness raising initiatives on scientific conduct. Initiatives such as surveys to scientists in order to monitor the level of integrity; protection of and guidelines for whistle blowers; improvement of access to research data such as clinical trial registries; support and incentives for reproducibility studies; initiatives to deal with identified research misconducts and abuses, etc. Any specific measures promoting integrity and reproducibility in AI-enabled research.
Research security	2.15 What are the main policy initiatives for promoting research security and academic freedom?	Dedicated initiatives to address concerns about information leakage and foreign interference in research, including safeguarding the freedom of scientific research. Examples include legislation, guidelines, risk assessment procedures and awareness raising. For the European Research Area: Report policy initiatives linked to the implementation of ERA Action 6.

1.3 Innovation in firms and innovative entrepreneurship

Table 3. STIP Survey questions under the "Innovation in firms and innovative entrepreneurship" policy area

Policy Theme	Question	Question guidance
Business innovation policy debates	3.1 Briefly, what are the main ongoing policy debates around government support to business innovation and innovative entrepreneurship?	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the business innovation system and relevant policy, including emerging visions and shifts in policy direction. A policy debate may include various positions or options regarding policy support to business innovation. These may be expressed in different settings such as government bodies, legislatures, the media, among research and innovation actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of various stakeholders and the different options considered during debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal.
Business innovation policy strategies	3.2 What strategies or plans exist, if any, to strategically direct government support to business innovation and/or innovative entrepreneurship?	Innovation strategy and plan; economic development strategy and plan that gives prominence to business innovation and/or innovative entrepreneurship.
Financial support to business R&D and innovation	3.3 What are the main policy initiatives for providing financial support to business R&D and innovation?	Dedicated (or significant part of) scheme, programme or subsidies (direct or indirect, incl. tax incentives) to finance or provide incentive to raise funding for business R&D and innovation; debt financing instruments (loans, credit guarantees schemes or risk-sharing mechanisms).
Non-financial support to business R&D and innovation	3.4 What are the main policy initiatives for providing non-financial support to business R&D and innovation?	Dedicated (or significant part of) scheme, programme or incentive to support or promote business innovation, through the provision of information, technical expertise, training, mentoring, networking, marketing and advertising support, etc.; Initiatives facilitating access to innovation support facilities (e.g. research equipment, ICT, networks, housing, etc.); access to a range of information and support services (e.g. training). Schemes aiming to raise firms' innovation visibility and recognition (e.g. awards, prizes, high impact events,

		contests, etc.).
Access to finance for innovation	3.5 What policy initiatives exist to promote firms' access to finance for innovation?	Dedicated (or significant part of) scheme, programme or incentive to promote firms' access to finance for innovation. Incentives for business angels, venture capital investors (tax reliefs, etc.). Public investment in investment banks and venture funds; public venture funds; specific regulations to promote venture capital, etc.
Entrepreneurship capabilities and culture	3.6 What policy initiatives exist to foster a spirit and culture of entrepreneurship in business or in individuals and to provide them with appropriate skills?	Policy programmes to implement a culture of entrepreneurship, including awareness campaigns or education initiatives (mass-media campaigns and big events, e.g. broadcasting programmes etc.). Promotion of exemplary entrepreneurship or business achievements (e.g. awards, prizes, contests, etc.). Partnerships between schools/universities and organisations such as venture capital firms and accelerator programmes).
Stimulating demand for innovation and market creation	3.7 What policy initiatives exist to stimulate demand for firms' innovations and to support market-creating innovation?	Dedicated (or significant part of) scheme, programme or incentive to support the demand for innovation (e.g. user-driven programmes, public procurement, lead markets, customer programmes, etc.). Initiatives supporting the early adoption and scale up of breakthrough ideas and new radical innovations (in terms of products, processes, business models, etc.) with the potential to disrupt existing and create new markets.
Digital transformation of firms	3.8 What policy initiatives exist, if any, to help firms upgrade their organisational and technological capabilities to undergo digital transformation?	Dedicated (or significant part of) scheme, programme or incentive to support firms to upgrade their use of digital technology including their ability to implement the required organisational and management changes. Examples include technology extension services (outreach to firms to identify their needs and help design suitable support), incentives (such as tax credits) and/or subsidies to purchase new digital equipment and infrastructure or upgrade existing ones, training and coaching, dissemination of information, for instance on use cases and best practices, for example through on-line portals, collaboration and partnership programmes, signposting to reliable private-sector service providers, and other business advisory and support services. Initiatives to strengthen research and innovation in key sectors and technologies for digital innovation in firms. Examples include public-private research and innovation partnerships in specific business sectors, direct and indirect funding of research in firms, specialised research and innovation centres, innovation-oriented cluster policies, and platforms and forums. Policies fostering the uptake of human-centric technologies or human-centric approaches in adopting digital technologies.
Foreign direct investment	3.9 What policy initiatives exist to attract knowledge-intensive foreign direct investment and promote transfers to domestic firms?	Direct financial support (e.g. grants, loans, R&D subsidies, etc.); tax incentives for non-domiciled, foreign-owned firms (e.g. corporate tax, R&D tax etc.); provision of services and facilities (e.g. administrative or networking support, etc.). Investment promotion policies (e.g. campaigns, events, websites, investment promotion agencies, etc.) to attract knowledge intensive FDI; provision of infrastructures (e.g. clusters, technology platforms, one-stop-shop etc.); public procurement of R&D and innovation; supply of human resources. Any initiatives/programmes to maximise knowledge spill-overs from FDI: support to domestic supplier backward linkages (e.g. supplier development programme, SME-multinationals partnership and networks, Industrial Linkage Programme, etc.); training, coaching and mentoring for upgrading suppliers in cooperation with multinationals; specific regulation promoting/incentivising technology transfer from multinationals (e.g. local content regulation, domestic procurement rules, etc.); domestic supplier databases.

Targeted support to SMEs and young innovative enterprises	3.10 What are the main policy initiatives specifically targeting research and innovation activities in SMEs, start-ups and young innovative enterprises?	Dedicated (or significant part of) scheme, programme, incentive or instrument specifically targeted to support innovation in SMEs, start-ups and young innovative enterprises, including: specific grants and subsidies; Small Business Innovation Research (SBIR)-type of schemes; innovation vouchers; public procurement for innovation; Intellectual Property Rights (IPRs) support; technology extension services; business advisory services; programmes for cooperation involving large companies or public research organisations; specific conditions in R&D tax credits; any incentives or subsidies or network support to link domestic SMEs, start-ups and young innovative enterprises to foreign sources of R&D and innovation, etc.

1.4 Knowledge exchange and co-creation

Table 4. STIP Survey questions under the "Knowledge exchange and co-creation" policy area

Policy Theme	Question	Question guidance
Knowledge exchange and co-creation debates	4.1 Briefly, what are the main ongoing policy debates around policy for knowledge exchange and co-creation involving academia, industry, government and society?	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the knowledge exchange and co-creation system and relevant policy, including emerging visions and shifts in policy direction. A policy debate may include various positions or options regarding knowledge exchange and linkages in different national settings such as Parliament, government bodies and events, in the press, among scientific actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of the various stakeholders and the different options considered during the debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal.
Knowledge exchange and co-creation strategies	4.2 What strategies or plans exist, if any, to strategically direct government support for knowledge exchange and co-creation?	Plan or strategy emphasising knowledge exchange, sharing and co-creation between different actors of the research and innovation system (science-industry, business-to-business, intermediary organisations, citizens, etc.). For the European Research Area: Report on the policy initiatives aimed at the creation of framework conditions for better co-operation and structured dialogue between business and academic institutions, including RTOs. . This question is particularly – but not exclusively – relevant for "widening countries" (ERA Actions 7 and 16 / Priorities l and m).
Collaborative research and innovation	4.3 What are the main policy initiatives to promote collaboration between public researchers and other stakeholders, including business and citizens?	Dedicated (or significant part of) scheme, programme or incentive to support collaborative research and innovation between the public and private sectors and civil society (e.g. living labs; dedicated research programme for supporting collaborative projects; PPPs or regulation promoting PPPs; public-private labs, platforms and research-industry research organisations). Mixed public private governance in research and innovation programmes and bodies; open innovation schemes. Schemes to promote the active engagement of citizens in the design and/or conduct of research and innovation.

Cluster policies	4.4 What policy initiatives exist to promote geographical and/or thematic innovative clusters?	Only national schemes should be included, covering things like the provision and implementation of networking infrastructures (e.g. new research centres, demonstrators, science parks, technology incubators, "innovation' hubs, technology platforms, etc.). Financial support to clusters activities, projects and cluster organisations; Incentives to strengthen liaisons between national and/or international clusters. Incentives or support to networking activities between national clusters. Other initiatives supporting thematic and/or place-based clusters.
Commercialisation of public research results	4.5 What policy initiatives exist to encourage commercialisation of public research results?	Dedicated (or significant part of) scheme, programme or incentive to support transfer of academic inventions via the sale, transfer or licensing of intellectual property, often on an exclusive basis, to existing firms or new ventures (e.g. academic spin-offs). Major policy initiatives may include a reform of universities and public research institutes for publicly funded research results, the establishment or consolidation of technology transfer offices and licensing offices at universities and PRIs, a revision of performance criteria of research performing institutes and R&D personnel, training and mentoring for academic staff, creation of spin-offs, incubators and accelerators, the provision of new demonstrator or proof-of-concept funding, etc. For the European Research Area: Report also policies linked to the development and implementation of the Guiding Principles for knowledge valorisation, Code of Practice for smart use of IP together with stakeholders and Code of Practice for researchers on standardisation are of relevance (ERA Action 7 / Priority e).
Inter-sectoral mobility	4.6 What policy initiatives exist to encourage mobility of human resources between the public and private sectors?	Policy initiatives to foster industry-science mobility of academics and researchers. Examples include reforms of the rules governing public sector employment, the implementation of secondment schemes, policy initiatives to improve pension portability, various incentives for researchers and/or companies and subsidised employment (incl. internships). For the European Research Area: This question is linked to the implementation of ERA Action 4 / Priority d.
Intellectual property rights in public research	4.7 What policy initiatives exist to ensure intellectual property rights in public research are conducive to promoting innovation?	Reform of IPRs legislation, and/or revision or strengthening of IPRs enforcement practices in public research (Bayh-Dole Act type of reform, professor privilege, etc.). Dedicated financial and non-financial scheme, programme, incentive or instrument to support IPR in public research (subsidies, training, information campaign, etc.). Dedicated body to support IPR in public research. For the European Research Area: Report initiatives addressing barriers/challenges and possible legislative and non-legislative measures related to access and reuse of publications and data (copyright and data legislative and regulatory frameworks). (ERA Actions 1 and 2 / Priority a)

1.5 Human resources for research and innovation

Table 5. STIP Survey questions under the "Human resources for research and innovation" policy area

Policy Theme	Question	Question guidance
STI human resources debates	5.1 Briefly, what are the main ongoing policy debates around government support for human resources for research and innovation?	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the STI human resources system and relevant policy, including emerging visions and shifts in policy direction. A policy debate may include various positions or options regarding policy support for human resources relevant to research and innovation. These may be expressed in different settings such as government bodies, legislatures, the media, among research and innovation actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of various stakeholders and the different options considered during debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal.
STI human resources strategies	5.2 What strategies or plans exist, if any, to strategically direct government support to human resources for research and innovation?	Plan or strategy emphasising the development of human resources for research and innovation.
STEM skills	5.3 What are the main policy initiatives for nurturing general STEM skills?	Revision of academic curricula to improve training in specific fields (e.g. mathematics, science, technical skills, etc.). Introduction of new learning practices and new instructional tools (e.g. increased use of digital technologies, cooperative learning exercises etc.). Additional training of teachers; involvement of outside stakeholders; assessment and evaluation of student performance in STEM, etc. For the European Research Area: This question is linked to the implementation of ERA Action 4 / Priority d.
Doctoral and postdoctoral researchers	5.4 What policy initiatives exist to specifically support doctoral and postdoctoral research and education?	Dedicated support for doctoral programmes and postdoctoral programmes. Rules and schemes for doctoral and postdoctoral programmes evaluation. Support to industry involvement in PhD training schemes (e.g. industrial PhD programmes, fiscal incentives, etc.). Reform of PhD training (e.g. training of transferable skills for future researchers etc.). Career guidance and information to students regarding funding/job opportunities in the public and private sectors. Schemes for financing/promoting PhDs in business or public firms. For the European Research Area: This question is linked to the implementation of ERA Action 4 / Priority d.

Research careers	5.5 What policy initiatives exist to make research careers more attractive?	Creation of new job opportunities in Public Research Institutes (PRIs) and universities (e.g. new chairs, new job positions, secondments etc.). Tenure system; Improved working conditions and salaries including financial rewards (e.g. stipends, social benefits, tax incentives, etc.) and non-financial incentives (e.g. autonomy, independence, reputation, provision of support staff, facilities, etc.) for researchers. Reform of employment conditions of researchers in the public and private sectors to ensure 'flexicurity', sectoral mobility and life-long employability and to promote transparency in career paths (e.g. tenure track systems, legal status, pension portability, activities related to the European Framework for Research Careers); initiatives to reduce precarity and promote different career options. For the European Research Area: This question is linked to the implementation of ERA Action 4 – Skills / Priority d.
International mobility of human resources	5.6 What policy initiatives exist to encourage international mobility of researchers?	Policy initiatives to foster international mobility of researchers. Examples include the reform of the rules governing public sector employment, reform of researcher recruitment rules, policy initiatives to improve international pension portability, various incentives for researchers and/or companies, subsidised employment (incl. internships), and fellowships targeted at overseas researchers. For the European Research Area: Report also on the system reform for more balanced talent circulation (ERA Action 4 / Priority d).
Equity, diversity and inclusion (EDI)	5.7 What policy initiatives exist to promote the participation of women and other under-represented groups in research and innovation activities?	Targeted measures aiming to reduce diversity gaps or to better include under-represented groups in research and innovation. Examples include: Quotas, regulations and rules for ensuring equal work opportunities in universities and PRIs. Access to senior positions in academia, high level offices, research councils, etc. Engaging with national research funding organisations to support the integration and evaluation of the gender perspective in research and innovation content, and for mitigating gender biases in research assessment. Measures to ensure work-family balance (e.g. part-time arrangements, parental leave, etc.). For the European Research Area: Report policy initiatives linked to the implementation of ERA Action 5 / Priority c.

1.6 Research and innovation for society

Table 6. STIP Survey questions under the "Research and innovation for society" policy area

Policy Theme	Question	Question guidance
Policy debates on innovation for societal challenges	6.1 Briefly, what are the current main policy debates around how policy for research and innovation can help address societal challenges? If applicable, please elaborate on how the Sustainable Development Goals (SDGs) are being incorporated into STI policy objectives, design and implementation.	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the use of research and innovation to address societal challenges, including emerging visions and shifts in policy direction. Please report debates related to net zero transitions separately in question M.1.1. A policy debate may include various positions or options regarding policy action to orient research and innovation activities towards meeting societal challenges. These may be expressed in different settings such as government bodies, legislatures, the media, among research and innovation actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of various stakeholders and the different options considered during debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal.
Research and innovation for society strategy	6.2 What strategies or plans exist, if any, to strategically direct government support for research and innovation specifically targeted at societal well-being and cohesion?	Dedicated national plan or strategy for fostering research and innovation to improve societal wellbeing and cohesion.
Mission-oriented innovation policies	6.3 What cross-government initiatives exist, if any, to coordinate and jointly operate different policy initiatives to achieve ambitious goals within a defined timeframe and address a societal challenge (e.g. the EU missions – Climate Change, Cancer, Oceans, Cities, Soil)?	Systemic initiatives gathering different policy measures, possibly spanning different stages of the innovation chain and cutting across various policy fields, in order to meet ambitious and concrete goals to address societal challenges. Examples include alignment of programmes between research and innovation agencies to provide seamless support to projects from research to demonstration; large-scale research and innovation programmes; inter-ministerial platforms to coordinate targeted actions towards societal challenges; and mission-oriented agency programmes; Challenge-led cross-government programmes and schemes (including "moonshots"). For the European Research Area: Report policy initiatives linked to the implementation of ERA Action 10 / Priority h.
Ethics of emerging technologies	6.4 What policy initiatives exist, if any, to address ethical challenges raised by emerging technologies (e.g. artificial intelligence, biotechnology, quantum computing)?	Dedicated (or significant part of) scheme, programme or governance structure aiming to help stakeholders involved in the development, regulation and use of emerging technologies (e.g. AI systems, biotechnology, quantum computing) to understand and/or address their ethical, legal, and societal aspects (e.g. laws and regulations, codes of ethics and best practice, standards, new ethics bodies or institutions, new mechanisms for public engagement). Stakeholders include, inter alia, scientists, engineers, developers, and organisations/individuals that deploy or operate these technologies, as well as policy makers, regulators, workers and the broader society.

Research and innovation for developing countries	6.5 What policy initiatives exist, if any, specifically dedicated to supporting research and innovation in developing and less technologically advanced countries?	Dedicated (or significant part of) scheme, programme or incentive to develop research and innovation in developing countries. Initiatives to address the UN Sustainable Development Goals through research and innovation in developing and less technologically advanced countries. International technology transfer schemes to the benefit of developing countries. Cooperative and joint research and innovation programmes (or institution such as a jointly operated research centre) with developing countries.
Multi-stakeholder engagement	6.6 What policy initiatives exist to promote a broad and diversified public engagement in research and innovation activities and policy making?	Initiatives and policy mechanisms to promote the participation of citizens or stakeholders in the different phases of STI and STI policy making (e.g. participatory agenda setting, governance processes). Policies promoting co-design of technology and governance solutions. All initiatives aimed at strengthening a strong societal orientation of research and innovation activities (broad and diversified public engagement, research ethics, etc.) to better ensure that the benefits of research and innovation are broadly shared across society and aligned with public needs and concerns. This includes initiatives promoting the uptake of the responsible research and innovation (RRI) approach by stakeholders and institutions (specific funding for RRI actions, incentives, norms, standards for applying RRI criteria, RRI toolkits and guidance, awareness raising campaigns, RRI training, RRI certification and monitoring). For the European Research Area: This question is linked to the implementation of ERA Action 14 / Priority k.
Science, technology and innovation culture	6.7 What are the main policy initiatives for building understandings and common STI culture across technical communities and citizens?	Awareness campaigns or education initiatives (e.g. science days, exhibitions, broadcasting programmes etc.); integrated communication operations (including more participatory strategies or face-to-face communications); the promotion of exemplary STI achievements (e.g. awards, prizes etc.); S&T museums, etc. Education initiatives encompassing the introduction of participatory learning techniques (e.g. hands-on learning exercises or mentorship at school etc.); major revisions of educational curricula or reforms of instructional practices in primary and secondary schools; innovation prizes and contests that have a wide audience. For the European Research Area: : This question is linked to the implementation of ERA Action 14 / Priority k.

1.7 Additional question module (policy themes)

2. The 2021 survey had two additional question “modules”, i.e. “Countering impacts of COVID-19 on STI systems” and “Policy initiatives for the European Research Area (for EU and EEA/EFTA countries only)”. The 2023 survey will have one question module on “Net zero transitions”, including five questions. The question on “Net zero transitions in energy” will be prefilled with the data currently in the STIP Compass net zero portal. The portal will be updated and expanded with the data collected by this question module.

Table 7. "Net zero transitions" question module for the 2023 survey

Policy Theme	Question	Guidance
Net zero transitions policy debates	M.1.1 Briefly, what are the current main policy debates around how net zero emission targets are being incorporated into STI policy objectives, design and implementation?	Your answer should provide a synthetic open text of 2 to 3 paragraphs describing the current main debates around the use of research and innovation to achieve net zero emission targets, including emerging visions and shifts in policy direction. A policy debate may include various positions or options regarding policy action to orient research and innovation activities towards net zero. These may be expressed in different settings such as government bodies, legislatures, the media, among research and innovation actors, etc. They may or may not have been followed up by concrete actions. Of particular interest are the different positions of various stakeholders and the different options considered during debates. Initiatives resulting from these debates should be reported in the different questions on policy initiatives, as relevant. This statement will be used to create dashboards and notes in the STIP Compass portal.
Government capabilities for net zero transitions	M.1.2 What reforms, if any, have been implemented to improve the operation and capabilities of STI ministries and agencies to better address net zero transitions?	Changes to governance structures, organisational capabilities, relationships with other areas of government, business and civil society, regulations, guidelines and other types of interventions to strengthen how the government designs and implements STI policies to support net zero transitions. Countries should only report changes in government departments (e.g. ministries or equivalent) and agencies.
Net zero transitions in energy	M1.3 What policy initiatives, if any, aim specifically to support research and innovation for net-zero carbon ambitions **in the energy sector** (electricity and heat)?	Clean energy is understood as "low-carbon energy". Clean energy research and innovation strategies and policies (e.g. major R&D and demonstration projects, new support schemes, emerging technology regulation) aiming to contribute to achieving net-zero CO2 emissions (i.e. deep decarbonisation), in any supply-side or end-use sector (e.g. power and heat generation, industry, buildings). Specific attention may be given to policies, strategies and/or programmes focusing on hard-to-decarbonise sectors where key technologies for decarbonisation are relatively less mature (e.g. heavy industry such as iron and steel and cement), or on key emerging low-carbon energy technologies (e.g. low-carbon hydrogen, carbon capture, utilisation and storage, advanced biofuels). For the European Research Area, the contribution to the implementation of Strategic R&I Agenda (SRIA) for Green Hydrogen is of particular relevance, including the emphasis on skills, the hydrogen value chain infrastructure and related regulatory issues, and the improvement/development of the European landscape of hydrogen valleys. Policy initiatives, if any, related to the implementation of relevant EU partnerships in the domain of green energy transitions should be elaborated (expanding the general input on EU partnerships included in question 1.6 "Internationalisation in public research"). (ERA Action 10 - relevant partnerships, ERA Action 11 / Priority h)

Net zero transitions in transport and mobility	M.1.4 What policy initiatives, if any, aim specifically to support research and innovation for net-zero carbon ambitions **in the transport and mobility sectors**?	Transport and mobility research and innovation strategies and policies (e.g. major R&D and demonstration projects, support schemes, emerging technology regulation) aiming to contribute to achieving net-zero CO2 emissions (i.e. deep decarbonisation), in any supply-side or end-use sector (e.g. research and innovation for electric vehicles, public transport systems innovation, smart cities, shared modes of transport). Specific attention may be given to policies, strategies and/or programmes focusing on hard-to-decarbonise sectors where key technologies for decarbonisation are relatively less mature (e.g. long-distance transportation such as shipping and aviation), or on key emerging low-carbon energy technologies (e.g. low-carbon hydrogen, advanced biofuels).
Net zero transitions in food and agriculture	M.1.5 What policy initiatives, if any, aim specifically to support research and innovation for net-zero carbon ambitions **in the food and agriculture sectors**?	Food and agriculture research and innovation strategies and policies (e.g. major R&D and demonstration projects, support schemes, emerging technology regulation) aiming to contribute to achieving net-zero CO2 emissions (i.e. deep decarbonisation), in any supply-side or end-use sector. Examples include carbon sequestration, remote sensing technologies to monitor land use, precision agriculture, non-CO2 emission abatement technologies, and food chain traceability and waste reduction technologies. Specific attention may be given to policies, strategies and/or programmes focusing on hard-to-decarbonise sectors where key technologies for decarbonisation are relatively less mature (e.g. gene editing and other plant breeding technologies).
STI policies for net zero	M.1.6 Please link to this question policies in other sections of the questionnaire (i.e. outside of this module) that prominently aim to achieve net zero carbon ambitions.	For example, strategies and plans or competitive research funding programmes that leverage STI to reduce carbon emissions should be linked here. Kindly make sure that such objectives are stated in such initiatives.

2. Policy initiative fiche (unit of reporting)

3. Besides “policy debate” questions beginning each section of the survey, questions are answered by reporting policy initiatives. To report a policy initiative, respondents have to provide a number of details. Table 8 lists the policy initiative fiche’s fields and describes the type of data collected.

Table 8. Fields in the Policy Initiative Fiche in the 2023 EC-OECD STI Policy Questionnaire

Field title	Type of field
Name in English*	(*free text*)
Name(s) in original language	(*multiple free text fields, one per name*)
Acronym	(*free text*)
Internet link(s)	(*multiple free text fields, one per link*)
Start date*	(*year*)
Policy initiative is a structural reform?	*yes/no*; if yes, the next field is disabled
End date	(*year*)
Short description*	(*free text*)
Objectives*	(*multiple free text fields, one per objective*)
Background including shifts in the policy initiative	(*free text*)
Type(s) of policy instruments*	(*multiple choice selection, see p. 19*)
Direct beneficiaries*	(*multiple choice selection, see p. 18*)
Name of responsible organisation(s)*	(*multiple free text fields, one per organisation*)
Estimated budget expenditure range per year (in EUR)* Note: As an alternatively to the multiple-choice selection of budget ranges in EUR, users can indicate an amount in national currency.	Multiple choice selection (in EUR) (one answer only): - Less than 1M; - 1M-5M; - 5M-20M; - 20M-50M; - 50M-100M; - 100M-500M; - More than 500M; - Don't know; - Not applicable
Parent initiative (if applicable)	(*dropdown selection listing other initiatives in the survey*)
Evaluated	*yes/no*
Link to evaluation	(*free text*)

Note: * Indicates the field is mandatory.

3. Direct beneficiaries

4. Table 9 includes the list of beneficiaries that can be selected in the policy initiative fiche. The table classifies them in categories used in the questionnaire interface and in the STIP Compass portal.

Table 9. Direct beneficiaries (target group) taxonomy

Category	Direct beneficiaries (target group)
Research and education organisations	
	Higher education institutes
	Public research institutes
	Private research and development lab
Researchers, students and teachers	
	Established researchers
	Postdocs and other early-career researchers
	Programme managers and other research support staff
	Undergraduate and master students
	Secondary education students
	PhD students
	Teachers
Firms by size	
	Firms of any size
	Micro-enterprises
	SMEs
	Large firms
	Multinational enterprises
Firms by age	
	Firms of any age
	Nascent firms (0 to less than 1 year old)
	Young firms (1 to 5 years old)
	Established firms (more than 5 years old)
Intermediaries	
	Incubators, accelerators, science parks or technoparks
	Technology transfer offices
	Industry associations
	Academic societies / academies
	Non-governmental organisations (NGOs)
Governmental entities	
	International entity
	National government
	Subnational government
Economic actors (individuals)	
	Entrepreneurs
	Private investors
	Labour force in general
Social groups especially emphasised	
	Women
	Disadvantaged and excluded groups
	Civil society

4. Policy instruments

5. Table 10 lists and classifies the policy instruments that survey respondents can select as being used in policy initiatives. This table classifies instruments using a functional approach, though many other classifications are possible (e.g. by the aforementioned themes and by target group). This classification aims to be straightforward to use in the questionnaire, providing a list of innovation policy instruments that follow OECD literature and that capture the data countries have submitted in prior editions of the STIP Survey.

Table 10. Policy instruments taxonomy

Category	Instrument	Definition
Governance		
	Strategies, agendas and plans	Strategies that articulate the government's vision regarding the contribution of STI to social and economic development. They set priorities for public investment in STI and identify the focus of government reforms, for instance in areas such as funding of public research and promoting business innovation.
	Creation or reform of governance structure or public body	Significant changes in the institutional arrangements concerning STI policy processes. Possible examples include mergers of STI-related ministries, reform of an innovation agency or creation of a new oversight body.
	Policy intelligence (e.g. evaluations, reviews and forecasts)	Tools for advancing policy learning that aim to improve the design and implementation of policies or that seek to fine-tune STI governance arrangements. Possible examples include policy evaluations, benchmarking studies, system reviews, technology assessments and foresight exercises.
	Formal consultation of stakeholders or experts	Programmes allowing non-government actors (e.g. the research community, business, civil society, regional and local governments) to express their views or provide expert advice that inform policy-making processes.
	Horizontal STI coordination bodies	Public body ensuring the coherence of STI policy making by setting up mechanisms to co-ordinate different levels of governments. For instance, research and innovation councils and committees may mediate between different ministries and agencies, provide policy advice, set policy priorities and/or oversee policy evaluation.
	Regulatory oversight and ethical advice bodies	Dedicated authorities or publicly funded boards that assess, monitor and/or advise on the implementation or need for formal regulations soft law or ethical frameworks accounting for technological developments. Examples include data protection authorities and bioethics committees.
	Standards and certification for technology development and adoption	Support provided for the development and adoption of local and international standards, including metrology, inspection, certification, accreditation and conformity assessments.
	Public awareness campaigns and other outreach activities	Instruments promoting the awareness of STI activities and entrepreneurial and innovation culture within non-governmental actors. Examples include science fairs in public schools and open days in universities or power plants.
Direct financial support		
	Institutional funding for public research	Non-competitive grants funding HEIs and PRIs according to various criteria (e.g. research capacity and performance indicators) to fulfil their research missions. Block funding provides these organisations with stable resources and a certain degree of autonomy in their research activities.
	Project grants for public research	A direct allocation of funding to HEIs or PRIs seeking to finance all or part of a research project. Grant schemes can vary from very simplistic, one-off funding allocations, to complex strategic programs built on formal public-private partnerships.
	Grants for business R&D and innovation	A direct allocation of funding to firms seeking to finance all or part of a project involving R&D and/or innovation activities. Grant schemes can vary from very simplistic, one-off funding allocations, to complex strategic programs built on formal public-private partnerships.
	Centres of excellence grants	Competitive grants funding the core activities of higher education and public research institutes and focusing on the promotion of high quality scientific research. Funding may be associated to a performance contract.
	Procurement programmes for R&D and innovation	The process whereby public bodies commission R&D activities or innovative goods and services from third parties. These bodies may include government agencies at different national and sub-national levels, as well as state-owned enterprises.

Fellowships and postgraduate loans and scholarships	Initiatives providing financial support to encourage researchers to establish careers in public sector research and industry (fellowships) and for higher education students at master's level or above (loans and scholarships).
Loans and credits for innovation in firms	Government-subsidised programmes that allow firms to raise working or investment capital by borrowing under better conditions compared to the market. Subsidised loans and credits are often geared toward specific objectives, such as export promotion (i.e. export credit) or the acquisition of new equipment.
Equity financing	Government-subsidised investment in which small and innovation-intensive companies sell equity (shares) to raise capital. They use this capital to fund their growth, as they often have limited capacity to generate revenue at this early stage of the entrepreneurial process.
Innovation vouchers	Vouchers are small grants allocated to SMEs to purchase services from external knowledge providers. Vouchers are often employed to fund business advisory and technology extension services, among others.

Indirect financial support

Tax or social contributions relief for firms investing in R&D and innovation	Incentives that reduce the tax burden of firms who invest in eligible R&D and innovation activities, representing an indirect way of financial support. Examples include corporate tax income benefits, reductions in tariffs for imported research equipment, reimbursements of value added tax and reductions to social insurance contributions.
Tax relief for individuals supporting R&D and innovation	Incentives that reduce the tax burden of individuals who donate monies to public research activities (e.g. conducted by universities) or who directly invest in R&D and innovation activities (e.g. R&D intensive start-up).
Debt guarantees and risk sharing schemes	Schemes working to cover some portion of the losses experienced by lenders when firms default on loans. These are widely used as financial instruments for supporting SME growth.

Collaborative infrastructures (soft and physical)

Networking and collaborative platforms	Instruments aiming to gather together actors within the innovation system. For instance, entrepreneurs, investors and companies sharing common geographical locations. Another example includes science-industry platforms seeking to support the commercialisation of knowledge.
Dedicated support to research and technology infrastructures	Instruments that support the creation of new facilities, resources and services used by the science community and Research and Technology Organisations (RTOs) to conduct research and foster innovation. They include major scientific facilities, demonstration and testing facilities, e-infrastructures such as data and computing systems and communication networks.
Information services and access to datasets	Online platforms providing access to collections of data on research and innovation activities. This includes resources such as archives or scientific data and directories of actors in a given innovation ecosystem.

Guidance, regulation and incentives

Technology extension and business advisory services	Instruments that support innovation and entrepreneurship activities by stimulating improvements in businesses. These may cover aspects such as operations, production, quality, logistics, workforce skills, learning capabilities and the adoption of new technologies and often have the objective of increasing firm productivity and efficiency.
Science and technology regulation and soft law	Laws, rules, guidelines, directives or other policies made by a public authority on the development or use of new technologies (e.g. artificial intelligence, biotechnology, quantum computing) or practices in science. Examples include the General Data Protection Regulation (GDPR) and bioethics legislation and scientific codes of conduct.
Labour mobility regulation and incentives	Instruments that promote the recruitment across sectors and/or countries of highly qualified individuals including scientists and engineers. Sample initiatives include funding for international research projects, talent attraction programmes and coherent and efficient migration regimes.
Intellectual property regulation and incentives	Instruments regulating and promoting the adoption of intellectual property rights and practices. This includes the registration and commercialisation of intangible assets that are the result of human innovation and creativity.
Science and innovation challenges, prizes and awards	A monetary (or other) incentive offered to STI actors in recognition of their contributions to research and innovation. Inducement prizes reward a solution to a research/innovation challenge. Recognition awards are ex-post prizes given to highly innovative companies and researchers in order to foster their role in the ecosystem or to signal specific projects/ventures.

6. The tables below introduce facets (descriptive characteristics) for each of the policy instruments presented above. Note that a highlighted facet indicates that multiple selections are possible.

4.1. Governance

4.1.1 Strategies, agendas and plans

Facet	Facet choices
Focuses on the following area(s) of the national innovation system	
	Research
	Business (innovation and/or entrepreneurship)
	Education and skills
	Governance
	Other
Foresight exercise included	
	Yes
	No
Strategy mainly prioritises	
Note: When the option "R&D intensity" is selected, there will be two additional non-mandatory fields: i) Quantifiable target (if set by the strategy): (short open text field) ii) Deadline for achieving target: (year selection)	STI policy governance (e.g. vertical and horizontal coordination, evaluation)
	R&D intensity (e.g. GERD as a % of GDP)
	Clusters and regional support (including regional/local R&D investments)
	Specific areas/sectors (e.g. new industrial policy, R&D targets for clean tech)
	Business innovation and innovative entrepreneurship
	Access to finance for innovation (e.g. venture capital, business angels, financial markets)
	Public research capabilities
	Digitalisation
	Skills for research and innovation
	Technology transfers and commercialisation
	Societal challenges (e.g. social inclusiveness)
	Environmental challenges (e.g. sustainability)
	International cooperation on STI
	Stakeholder participation and consultation
	Other
Specific sector(s) targeted	
	None specifically targeted
	Agriculture
	Mining and quarrying
	Food
	Energy
	Electronics
	Pharmaceuticals
	Automotive and road transportation
	Marine / Ocean
	Aerospace

	Education
	Health and healthcare
	Telecommunications and IT
	Finance
	Defence
	Public administration
	Other primary industries
	Other manufacturing
	Other services
Societal challenge(s) emphasised	
	None specifically emphasised
	Health
	Ageing populations
	Inclusiveness (e.g. inequality, job insecurity)
	Food security
	Energy security
	Climate change
	Environmental sustainability
	Other
Degree of coordination in implementing strategy (select the highest that applies)	
	1- Strategy communicated to public bodies
	2- Public bodies are expected to plan activities based on strategy
	3- Strategy provides recommendations to public bodies which they have to adopt or reject via formal procedures
	4- Strategy dictates public bodies' activities or budgets
Follow-up mechanism	
	Action plan
	Dedicated budget allocations
	Linked to new law or regulation
	Periodic monitoring and/or evaluation of progress
	Dedicated coordinating/monitoring public body
	None
	Other

4.1.2 Creation or reform of governance structure or public body

Facet	Facet choices
Description of changes in institutional arrangements	
	(free long text)

4.1.3 Policy intelligence (e.g. evaluations, benchmarking and forecasts)

Facet	Facet choices
Type of information	
	Evaluations
	Forecasting and foresight studies
	Reviews
	Technology assessments
	Roadmaps
	Scoreboards, indicators and benchmarking
	Other
Provides input to	
	Problem definition
	Policy objective formulation
	Policy design
	Policy implementation
	Policy assessment
	Other
Study performed by	
	Public administration
	Public research institute
	Academia
	Private firms or consultants
	Civil society organisation
	Intergovernmental organisation
	Other

4.1.4 Formal consultation of stakeholders or experts

Facet	Facet choices
Stakeholders contribute to	
	Problem definition
	Policy objective formulation
	Policy design
	Policy implementation
	Policy assessment
	Other
Method	
	Survey
	Conferences and public hearings
	Participatory workshops and seminars
	Focus groups
	Interviews
	Expert groups
	Online discussion fora
	Other

Number of participants	
	Less than 25
	25 to 100
	101 to 250
	More than 250

4.1.5 Horizontal STI coordination bodies

Facet	Facet choices
Type of coordinating public body	
	Ministry
	Coordination or advisory council / committee
	Agency (e.g. research council, innovation agency)
	Ad-hoc working group or network of representatives
	Other
Reports to	
	International organisation (e.g. European Commission, UNESCO)
	Head of national government
	Ministry
	Legislative branch (e.g. parliament)
	Agency / council
	Other
As mechanisms, the coordination body	
	Provides opportunities for ministries and/or public bodies to meet
	Provides opportunities to involve non-state stakeholders
	Undertakes studies scoped jointly by ministries
	Identifies and arbitrates policy divergences
	Issues specific recommendations to ministries
	Implements joint programming
	Decides budget allocations
Sectors of public administration involved	
	Science, technology and innovation
	Economic affairs
	Education
	Finance
	Transport and infrastructure
	Environment
	Energy
	Culture
	Defence
	Foreign affairs
	Labour
	Agriculture
	Justice
	Social affairs

	Health
	Other
The coordination body is composed of	
	Government representatives
	Academia representatives
	Business representatives
	Civil society representatives
	A technical secretariat (e.g. STI policy analysts)
	Other (please specify)
Discussions or reports are publicly available	
	Yes
	No

4.1.6 Regulatory oversight and ethical advice bodies

Facet	Facet choices
Type(s) of oversight or advice	
	Fundamental rights
	Ethical principles (e.g. integrity, accountability, impartiality)
	Guidelines
	Regulations
	Other
Challenge(s) addressed	
	Risks to human safety
	Environmental sustainability
	Privacy protection
	Social disruption (e.g. job insecurity)
	Unethical use (e.g. dual-use technologies)
	Security
	Fairness (e.g. discrimination)
	Limited competition (e.g. monopolies, oligopolies)
	Research misconduct
	Other
Activities	
	Monitor compliance
	Provide formal input to policymakers
	Provide guidance, advice and support to stakeholders
	Gather opinions from stakeholders on ethical principles, regulation improvements, etc.
	Provide expert ethical opinion
	Engage in long-term technology assessment
	Identify areas of oversight reform
	Cross-government coordination in developing/adopting guidelines, regulations, etc.
	Setting and adopting international standards
	Policy experimentation
	Other

Reports to	
	International organisation (e.g. European Commission, UNESCO)
	Head of national government
	Ministry
	Legislative branch (e.g. parliament)
	Agency / council
	None
	Other
The body is composed of	
	Mostly government representatives
	Mostly academia representatives
	Mostly business representatives
	Mostly civil society representatives
	A technical secretariat (e.g. policy analysts)
	A mix / other (please describe)
Reports are publicly available	
	Yes
	No

4.1.7 Standards and certification for technology development and adoption

Facet	Facet choices
Geographical dimension	
	National
	International
Objective(s)	
	Compatibility and interoperability
	Variety reduction
	Quality and performance
	Other
Standards developed through	
	Dedicated national public body/bodies
	Multi-stakeholder platforms and fora
	Financial support to public research and commercialisation
	Other
Adoption fostered by	
	Legislation (e.g. product market regulation, regulatory sandbox)
	Guidelines
	Eligibility criteria for public funding (e.g. grants, tax relief and procurement)
	Business advisory services (e.g. consulting and training)
	Collaborative platforms
	Information services and databases
	Public outreach activities (e.g. awareness campaigns)
	Other

The following services associated to the standards have public support	
	Measurement
	Certification
	Training
	None of the above
	Other

4.1.8 Public awareness campaigns and other outreach activities

Facet	Facet choices
Medium	
	Public events
	School campaigns
	Conferences, workshops and/or training courses
	Museums
	Television
	Radio
	Competitions
	Printed publications
	Websites
	Social media
	Science fairs
	Open days (e.g. visits to universities or energy plants)
	Other
Aspect(s) being promoted	
	Science
	Entrepreneurship
	Technology
	Innovation
	Research careers
	Skills for STEM
	Gender equality
	Other

4.2. Direct financial support

4.2.1 Institutional funding for public research

Facet	Facet choices
Funding includes a teaching component	
	Yes
	No
Performance-based element to the allocation	
	Yes
	No

Criteria for funding	
	Research publications and outputs (excellence)
	Research impact
	Student enrolment or attainment rates
	Total staff
	Research-active staff
	Number of co-publications
	R&D expenditure
	Research infrastructure expenditures
	Commercialisation of research-generated intellectual property
	Employability of graduates
	Scientific partnerships and collaborations
	Social inclusion (e.g. women and other under-represented groups) of student and research staff
	Alignment with national research priorities
	Budget allocated to institution in previous years
	Other
Funding is attached to	
	Institutional performance contract
	National performance-based research assessment
	Strategic programme or other policy initiative
	None of the above
Penalties and rewards associated to performance	
	Financial penalties
	Bonuses and incentives
	None of the above
Funding amount allocated for an average time-period of	
	3 years or less
	4-6 years
	7 years or more

4.2.2 Project grants for public research

Facet	**Facet choices**
Maximum grant duration	
	12 months or less
	13-24 months
	25-36 months
	More than 36 months
Maximum amount of grant awarded in euros	
	Less than 100K
	100K-500K
	500K-1M
	More than 1M

Type of activity	
	Basic research
	Applied research
	Multidisciplinary research
	Experimental development
	Demonstration / testing
Requires a form of collaboration	
	No
	With other public research actors
	With industry partners
	With international partners
	With users of research outputs (e.g. technology, innovation)
	With other partners
Selection criteria	
	Track record of applicant
	Scientific impact anticipated
	Societal impact anticipated
	Commercial impact anticipated
	Third-party income and co-funding (e.g. contract research, other grants)
	The participation of early-career researchers
	Geographical location (to promote regional or cluster policy)
	Social inclusion in research (e.g. women and other under-represented groups)
	Alignment with national research priorities
	Other
Type(s) of proposal screening	
	Internal: review by grant manager (i.e. funding agency)
	External peer review: including members of the scientific community
	External peer review: including business society representatives
	External peer review: including research users and stakeholders
	Experimental methods (e.g. lotteries, sandboxes)
Success rate (share of grants awarded as a % of total applications)	
	Too early to estimate
	Less than 10%
	10-19%
	20-29%
	30-39%%
	40% or higher

4.2.3 Grants for business R&D and innovation

Facet	Facet choices
Maximum grant duration	
	12 months or less
	13-24 months
	25-36 months
	More than 36 months
Maximum amount of grant awarded in euros	
	Less than 100K
	100K-500K
	500K-1M
	More than 1M
Type of activity	
	Basic research
	Applied research
	Experimental development
	Non-technological innovation
	Demonstration / testing
Requires a form of collaboration	
	No
	With higher education institutes or public research institutes
	With industry partners
	With SMEs
	With international partners
	With intermediaries (e.g. accelerators)
	With users of R&D or innovation outputs
	With other partners
Selection criteria	
	Track record of applicant
	Feasibility of project
	Anticipated return on investment
	Societal impact anticipated
	Geographical location (to promote regional or cluster policy)
	Social inclusion (e.g. women and other under-represented groups)
	Alignment with national strategic priorities (e.g. targeted business sectors and technologies)
	Experimental methods (e.g. lotteries, sandboxes)
	Other
Contribution (e.g. matching funds) required from beneficiary	
	Yes
	No

4.2.4 Centres of excellence grants

Facet	Facet choices
Maximum duration of funding for individual unit/centre	
	5 years or less
	6-10 years
	More than 10 years
	Indefinite
Share of public funding (as a % of total funding of the centre of excellence)	
	100%
	90-99%
	70-89%
	50-69%
	Less than 50%
Focus	
	Field of science
	Key technology (basic research)
	Key technology (commercial applications)
	Promoting early-stage researchers
	Enhanced access to research results and research data
	Networking/co-operation (e.g. science-industry)
	Recruiting foreign researchers and other international linkages
	Societal challenge(s)
	Sharing equipment and infrastructures
	Demonstration and testing facilities
Criteria for funding	
	Alignment to national research priorities
	Result of a national performance-based assessment
	Novelty of research or its application
	Existing research capacity
	Track record
	Scientific impact anticipated
	Commercial impact anticipated
	Societal impact anticipated
	Ability for the centre to acquire additional funds
Requires a form of collaborative research	
	No
	Science-science
	Science-industry
	Industry-industry
	Other

Ownership of Intellectual Property (IP) stemming from science-industry research	
	No IP registered
	Some IP owned exclusively by the public sector
	Some IP owned exclusively by the private sector
	Some IP co-owned between public and private actors
	Not applicable
Penalties and rewards associated to performance	
	Financial penalties
	Bonuses and incentives
	None of the above

4.2.5 Procurement programmes for R&D and innovation

Facet	Facet choices
Type of programme	
	Reform of regulatory conditions for innovation procurement
	Improving the capacity and competence of the innovation procurement process
	Dedicated innovation procurement fund
	Dedicated R&D procurement fund
	Other
R&D/innovation objective(s)	
	None specified
	Create demand for technology or innovative products and services
	Promote specific research priorities
	Help innovators bridge the pre-commercialisation gap
	Facilitate access to private third-party funding by providing preliminary financial support
	Tackle societal or environmental challenges
	Support innovative SMEs, researchers or other programme beneficiaries
	Other
Programme focus	
	No specific focus
	Public sector innovation
	Promote science-industry cooperation
	Support innovative SMEs
	Green growth
	Strategic business sector
	Strategic technology
	Societal challenges
	Other

4.2.6 Fellowships and postgraduate loans and scholarships

Facet	Facet choices
Type of financial assistance	
	Repayable
	Non-repayable
Type of individual sponsored	
	Master student
	Doctoral student
	Post-doctoral researcher
	Established researcher
Promotes international mobility of students and researchers	
	Outgoing
	Incoming
	Both outgoing and incoming
	No
Promotes intersectoral mobility (e.g. between the academic and private sectors)	
	From academia to the private sector
	From the private sector to academia
	No

4.2.7 Loans and credits for innovation in firms

Facet	Facet choices
Average term	
	1-3 years
	4-6 years
	7-9 years
	10 years or more
Type(s) of finance targeted	
	Working capital
	Financing expansion
	Investing in innovation
	Other
Specific loan/credit objective(s)	
	None specified
	Developing new products and processes
	Upgrading an existing product or process
	Acquiring a technology
	Other
Mechanisms used	
	Loan with a subsidised interest rate
	Loan to be reimbursed in case of success
	Equity-backed loan
	Other

4.2.8 Equity financing

Facet	Facet choices
Type of financing	
	Venture capital (growth and late stage)
	Seed capital (early stage)
	Other
Type of fund	
	None
	Direct public equity fund
	Fund-of-funds
	Co-investment fund
	Other
Focus	
	None
	Support innovative start-ups and SMEs
	Facilitate crowdfunding
	Attract international entrepreneurs
	Support access to international markets
	Foster public research spin-offs
	Social entrepreneurship
	Other

4.2.9 Innovation vouchers

Facet	Facet choices
Minimum voucher amount	
	Less than 2K EUR
	2K-6K EUR
	6K-10K EUR
	More than 10K EUR
	Varies depending on conditions
Maximum voucher amount	
	Less than 2K EUR
	2K-6K EUR
	6K-10K EUR
	More than 10K EUR
	Varies depending on conditions
Eligibility criteria	
	Firm is registered in the country
	Firm size
	Firm has not received more than a certain amount of public aid over a defined period of time
	Firm has not entered in any commitments with the knowledge provider that will carry out the project
	Knowledge provider is certified

Type of knowledge provider	
	Higher education institutes
	Public research institutes
	Private business
	Other
Brokerage services are provided	
	Yes
	No
Contribution (e.g. matching funds) required from recipient	
	Yes
	No

4.3. Indirect financial support

4.3.1 Tax or social contributions relief for firms investing in R&D and innovation

Facet	Facet choices
Applicable provisions (i.e. eligible expenses)	
	Expenditures on R&D
	Expenditures on other innovation activities
	Expenditures on training and upskilling of employees
	Incomes from IP licensing or asset disposal

7. Note: The OECD Working Party of National Experts on Science and Technology Indicators (NESTI) already provides detailed information on tax relief instruments. The Secretariat plans to integrate this data into STIP Compass and display it where appropriate.

4.3.2 Tax relief for individuals supporting R&D and innovation

Facet	Facet choices
Applicable provisions (i.e. eligible expenses)	
	Donations to public research activities
	Investments in start-ups and SMEs
	Other

4.3.3 Debt guarantees and risk sharing schemes

Facet	Facet choices
Scheme managed by	
	Government
	Private sector
	Other

Type(s) of finance targeted	
	Working capital
	Financing expansion
	Investing in innovation
	Other
Specific loan/credit objective(s)	
	None specified
	Developing new products and processes
	Upgrading an existing product or process
	Acquiring a technology
	Other
Claims rate (latest estimate)	
	Too early to estimate
	less than 1%
	1-2%
	3-5%
	More than 5%

4.4. Collaborative infrastructures (soft and physical)

4.4.1 Networking and collaborative platforms

Facet	**Facet choices**
Focus	
	Business innovation-oriented
	Technology-oriented
	Geographic clustering
	Research-oriented
	Education-oriented
	Building international linkages
	Addressing societal or environmental challenges
	Other
Share of the platform's funding coming from the private sector (as a % of total funding)	
	More than 75%
	51-75%
	26-50%
	1-25%
	0%
Exchanges take place via	
	Online platform
	Meetings and events
	Sharing infrastructures or facilities
	Mobility of personnel, researchers or students
	Other

Objective(s)	
	Promote economic growth (e.g. productivity, competitiveness)
	Promote business partnerships (e.g. consortia-building)
	Promote research partnerships
	Promote citizen engagement in research and innovation (e.g. living labs)
	Define research priorities
	Coordinate R&D developments
	Share R&D data
	Coordinate on intellectual property practices (e.g. co-patenting and licensing)
	Set standards
	Demonstrate technological developments and innovations
	Foster fundraising and investor networking
	Other
Ownership of IP stemming from science-industry research	
	No IP registered
	Some IP owned exclusively by the public sector
	Some IP owned exclusively by the private sector
	Some IP co-owned between public and private actors
	Not applicable

4.4.2 Dedicated support to research and technology infrastructures

Facet	**Facet choices**
Main focus of support	
	National infrastructure(s)
	International infrastructure(s)
Objective(s)	
	Address national research priorities
	Support the internationalisation of public research
	Promote partnerships among HEIs/PRIs
	Foster science-industry collaboration
	Demonstrate technological developments and innovations
	Address societal or environmental challenges
	Promote regional or cluster policy
	Other

Funding used for	
	Acquiring major scientific or technical equipment
	Building new facilities
	Renewing or modernising existing facilities
	Increasing user access to infrastructure
	Gaining access to existing international infrastructures
	Hiring research and technical staff
	Training research and technical staff
	Building knowledge repositories of scientific data and archives
	Building computing systems and virtual infrastructures
	Other

4.4.3. Information services and access to datasets

Facet	Facet choices
Openness	
	Publicly available
	Restricted access
Type of data disseminated	
	Data collected through the provision of public services (administrative data) (e.g. medical data of patients)
	Job postings
	Information on STI actors (e.g. researcher resumes, profiles of firms, research groups and institutes)
	Academic articles and other types of scientific production
	Intellectual property registries (e.g. patent databases)
	Research results and raw research data
	Information on grants, scholarships and other types of government support
	Directory of firms, investors, R&D institutes and other types of STI actors
	Guidelines
	Crowdfunding initiatives
	Other

4.5 Guidance, regulation and other incentives

4.5.1 Technology extension and business advisory services

Services provided by	
	Higher education institutes
	Public research institutes
	Public body from national government
	Public body from regional or local government
	Private consultants and business experts
	Intermediaries (e.g. technology transfer offices, incubators)
	Other

Modality	
	Consultancy
	Training
	Networking with investors, clients, suppliers, etc.
	Other
Type of advisory service	
	Intellectual property protection (e.g. filing and litigation)
	Intellectual property commercialisation (e.g. licensing and royalty agreements)
	Support the adoption of existing technologies
	Implement technology best practices or support meeting national or international standards
	Quality management and process efficiency
	Environmental impacts and energy use
	Human resource development
	Product development
	Support to drafting applications for grants and other policy instruments
	Support to business plan preparations
	Marketing (including market research)
	Fundraising
	Export promotion
	Other

4.5.2 Science and technology regulation and soft law

Facet	Facet choices
Objective(s)	
	Market regulation (e.g. antitrust law)
	Enable technology/innovation (e.g. interoperability standards)
	Risk mitigation (e.g. consumer and social protection)
	Regulate the delivery of public services (e.g. requirements in procurement, education)
	Promote research integrity
	Protect public values
Challenge(s) addressed	
	Risks to human safety
	Environmental sustainability
	Privacy protection
	Social disruption (e.g. job insecurity)
	Unethical practices (e.g. discrimination)
	Security (e.g. dual-use technologies)
	Limited competition (e.g. monopolies, oligopolies)
	Other

Type(s) of regulation or soft law	
	Formal law or regulation
	International agreement
	Self-regulation (e.g. codes of conduct, scientific advice, standards)
	Regulatory experiments (e.g. sandboxes)
	Other
Approach	
	Technology or input-based (e.g. moratoria, standards of use)
	Performance or output-based (e.g. safety thresholds)
Level of governance	
	Local
	Regional
	National
	International
Approach to monitor compliance	
	The oversight body develops and maintains technologies for data collection, transmission and/or analytics
	Parties are incentivised to adopt monitoring technology that is not managed by the regulator
	Parties are simply required to share compliance data (no regulator support)
	None

4.5.3 Labour mobility regulation and incentives

Facet	Facet choices
Type of mobility	
	Intersectoral (public to private sector or vice-versa)
	International
	Within country
Programme objective(s)	
	Promote international knowledge flows
	Attract back diaspora (e.g. emigrating talent)
	Attract foreign talent
	Build industry-science linkages
	Promote research excellence
	Improve performance of host institutes/firms
	Other
Mechanism	
	Regulatory (e.g. immigration legislation and quotas)
	Guidelines
	Service or information (e.g. web portal)
	Economic (e.g. salary subsidy)
	Networking (e.g. coordinating staff exchange)
	Other

Portion of salary subsidised by the instrument	
	No
	Less than 40%
	40-80%
	More than 80%
Average duration of salary subsidy	
	Not applicable
	No subsidy
	less than 6 months
	6-18 months
	More than 18 months
Screening scheme	
	Not applicable
	Employer-led
	Government-led (e.g. points based)
	Hybrid (government and employer)
Intended mobility destination	
	None specified
	Higher education institutes
	Public research institutes
	Private research and development labs
	Firms
	Other

4.5.4 Intellectual property regulation and incentives

Facet	Facet choices
Mechanism(s)	
	Legislation
	Sandbox
	Streamlined administrative procedures
	Intellectual property regime reform (e.g. patent law)
	Subsidies for intellectual property operations (e.g. filing and renewal costs)
	Supporting IPR clinic services (e.g. consultancies and guidance)
	Training
	Data dissemination (e.g. patent registries)
	Awareness campaigns
	Other
Area(s) of the intellectual property system promoted	
	Registration and ownership
	Commercialisation (e.g. licensing)
	Enforcement
	Litigation
	Internationalisation

Type(s) of intellectual property promoted	
	Patents
	Copyrights
	Trademarks
	Industrial designs
	Utility models
	Geographical indications
	Open source
	Other

4.5.5 Science and innovation challenges, prizes and awards

Facet	Facet choices
Selection type	
	Ex-ante (based on a solution to a proposed challenge)
	Ex-post (based on a scientific achievement or developed innovation)
Type of challenge	
	Health
	Ageing population
	Social inclusion
	Food security
	Energy security
	Climate change
	Environmental sustainability
	Research challenge, i.e. centred on a specific domain of science or technology
	Business challenge, i.e. centred on a specific market need
	Other
Type of reward	
	Monetary
	Honorific (e.g. label, recognition)
	Exposure to a network of investors
	Provision of business innovation and technology advice
	Other