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From: General Secretariat of the Council  
To: ERAC (European Research Area and Innovation Committee)

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Subject: Informal videoconference of ERAC (16/03) - Item 5 :  
The new edition of the EC- OECD STIP Compass  
Annex STIP Survey draft revisions - 2021 edition

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Dear ERAC delegates,

Please find enclosed the documents from the European Commission on above mentioned subjects, with a view to the ERAC videoconference on Tuesday 16 March (agenda item 5).

Best regards,

ERAC Secretariat

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## Revisions for the 2021 edition of the EC-OECD Science, Technology and Innovation (STIP) Survey

### 1. Executive summary

The survey approach introduced in 2017 was designed to remain stable over time, meaning there would be few changes to questions and taxonomies in subsequent surveys without good reason. This means that data submitted in one edition of the survey is used by the EC and OECD to prefill the next edition, with country respondents asked to validate this and report new developments. This stability reduces the reporting burden on countries and will eventually lead to a time series of reported national STI policies. Nevertheless, countries' experiences in responding to the survey, as well as the OECD's and EC's curation and use of the data in analysis, leads to suggestions for improvements. Revisions have been kept to a minimum, however, and countries that already have good quality data will only require National Contact Points (NCPs) to take note of a few changes when validating their prefilled data information.

These revisions can be grouped into three components that structure the survey: i) the questionnaire (i.e. the policy themes covered in the STIP Survey); ii) the standard fiche used in the survey to collect information on policy initiatives; and iii) the taxonomy used to describe the policy instruments deployed by policy initiatives. The detailed changes leading to the 2021 Survey are indicated in the accompanying Annex.

ERAC delegates are requested to review this proposal and to send any **feedback by 26 March 2021** to STIPolicy.Data@oecd.org. The planned revisions will also be sent in early March to delegates from the OECD Committee for Scientific and Technological Policy (CSTP), for their feedback in a parallel consultation. Under the current schedule, the OECD Secretariat plans to begin administering the survey by mid-April and to close it by the end of June 2021.<sup>1</sup>

### 2. Changes to the survey questionnaire

The following changes to the 2019 survey's questions are proposed for the 2021 edition (c.f. pages 1-4 in the Annex):

- Two questions have been edited to improve their wording and raise the quality of the data reported.
- The question on “Digital skills for researchers” under the “Human resources for research and innovation” policy area will be removed in the 2021 survey. This question, introduced in the 2019 edition, only gathered 34 policy initiatives, most of which were already reported under other questions in the survey. By comparison, other questions in the same policy area gather between 150 and 250 initiatives.

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<sup>1</sup> Prior editions of the STIP survey have been administered during the autumn season. At the request of the EC, the timeline for the 2021 edition of the survey will be brought further forward to the late spring / early summer. This will better align the survey with the EC's data needs for the European Semester process.

- Two questions from the 2019 edition-specific module “Emerging trends in STI policy” have been moved to the “Research and innovation for society” policy area of the core part of the 2021 survey: i) on mission oriented innovation policies (which has been slightly reformulated); and ii) on the ethics of emerging technologies. These questions gathered data with a certain level of quality in the 2019 edition and continue to be of high policy interest.
- A new question will be added to the “Research and innovation for society” policy area of the core survey, i.e. What policy initiatives, if any, has your country introduced to support research and innovation for clean energy and net-zero ambitions? This question will provide the EC and OECD with an additional source of information feeding into respective work on the climate emergency and green energy transitions. In particular, it focuses on one of the flagships areas for investments and reforms of the EC’s new Recovery and Resilience Facility.<sup>2</sup>
- The 2021 survey will have two edition-specific modules: “Countering impacts of COVID-19 on STI systems” with five questions. Four of these questions will be prefilled with the data collected in the OECD Survey on STI policy responses to COVID-19.<sup>3</sup> A separate module will have two questions focusing on ERA-related initiatives. In particular, this module aims to capture initiatives launched in the context of the EC’s communication “A new ERA for Research and Innovation”.<sup>4</sup>

### 3. Changes to the policy initiative fiche

NCPs and other country respondents use a single standardised fiche to describe and submit policy initiatives in answer to most of the STIP survey’s questions. Each policy initiative has several fields to be filled in. The Secretariat plans to maintain the same fields as used in 2019, with only two foreseen changes (c.f. page 5 in the Annex):

- Almost a year has passed since COVID-19 was declared a pandemic. The impacts of this crisis have brought shifts to practically all government policies. Efforts have been redirected to tackling the virus or mitigating its impacts. For this reason, the 2021 survey will see a new field “*Any shifts related to COVID-19?*” (multiple choice selection) to capture any changes in policy initiatives that relate to the pandemic.
- Several NCPs have pointed out a limitation of past editions of the STIP survey in that it has been impossible to indicate a hierarchical relationship that some policy initiatives display. For instance, an overarching national strategy or programme may lead to the launch of smaller-scale initiatives that contribute towards achieving some of its goals. The new field “*Parent initiative (if applicable)*” will allow such relationships to be reported.

### Policy instruments and facets

The 2021 edition will introduce several improvements to the policy instruments taxonomy and facets (c.f. pages 7-32 in the Annex). The OECD Secretariat reviewed the data reported in the 2019 survey to identify which facets and selectable options were prone to confusion or could be considered redundant. For example, NCPs and country respondents seldom (or never) chose a few of the selectable options. This has

<sup>2</sup> See [https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility\\_en](https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en).

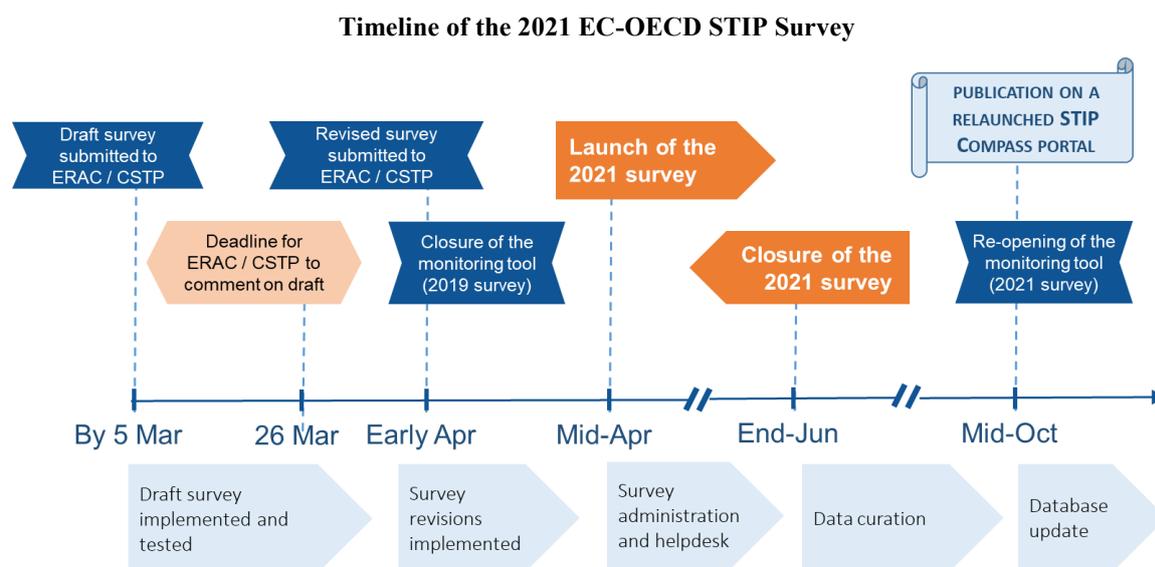
<sup>3</sup> The OECD has been tracking such policy efforts since March 2020 and recently launched a new interactive database, the STIP COVID-19 Watch (<http://stip.oecd.org/covid>) that leverages the STIP Compass infrastructure to provide open access to the data.

<sup>4</sup> See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A628%3AFIN>.

led to the proposed relabelling of two existing instruments and the editing or deletion of over 19 “facet choices” across all policy instruments in the 2021 edition of the survey.

## 5. Timeline and next steps

The figure below displays the timeline leading to the October launch of the data collected by the 2021 survey on a relaunched STIP Compass portal.<sup>5</sup>



ERAC and CSTP delegates are expected to comment on the survey’s planned revisions by 26 March. In the meantime, the OECD Secretariat will begin implementing and testing the revised survey in the online questionnaire tool. The survey will be further revised following any comments provided by delegates and a final version will be sent to both committees in the first week of April. At this time, the monitoring tool that countries use to update the data reported in the 2019 survey will be closed. This will allow prefilling the 2021 survey with the latest data reported in the monitoring tool. The 2021 survey will be launched around mid-April and will be administered for 2.5 months, until the end of June. Under the current arrangements, CSTP delegates are responsible for designating the survey’s NCPs for most countries.<sup>6</sup> However, ERAC delegates will also be invited to contribute in answering their country’s survey.<sup>7</sup>

The closure of the 2021 survey will mark the beginning of a round of data curation spanning the summer period and ending in September. The data is scheduled for publication in October in a launch event (most likely online) that will coincide with the release of a renewed STIP Compass portal. This event will gather country delegates and analysts working in the STI policy field and will consist of a keynote presentation of the project’s milestones and novelties, followed by a panel discussion with leading practitioners and academics. Once the database has been launched, the monitoring tool will be re-opened to allow countries to progressively improve and update their data.

<sup>5</sup> The design of the portal’s interfaces is being refreshed and extended to better meet user needs and provide a more modern look-and-feel.

<sup>6</sup> With the exception of countries that participate in the ERAC but do not take part in CSTP. In these cases, the ERAC delegate designates the NCP.

<sup>7</sup> For instance, ERAC delegates are well positioned to answer the two questions in the proposed ERA module.

## 6. Project background

Since 2015, the EC's Directorate-General for Research & Innovation (DG R&I) and the OECD's Directorate for Science, Technology and Innovation have joined forces to operate a joint science, technology and innovation policy (STIP) survey. This joint approach is part of wider efforts to streamline country monitoring and reduce the burden on countries to report changes in their STI policies and governance arrangements. Countries' responses to the survey constitute the main, broadest and most recent source of harmonised country-specific STI policy information available anywhere. More than 50 countries participate in the survey, representing more than 95% of the world's public spending on R&D and innovation.

As part of a wide-ranging initiative to improve the monitoring and analysis of countries' STI policies, the 2017 edition of the EC/OECD STIP Survey saw major revisions in its methodology for data collection. The new approach reduced the reporting burden on countries and significantly raised the database's usability for analysis. In particular, the survey saw its questions significantly streamlined and it was, for the first time, administered through a dedicated online survey application. It also made greater use of standard fiches and taxonomies to harmonise data.

Countries' responses to the EC-OECD STI Policy survey are the main data source for the EC-OECD STIP Compass (<http://stip.oecd.org/>), a portal that aims to gather in one place qualitative and quantitative data on national STI policies.

The most recent edition of the survey was administered at the end of 2019. The survey, unique in its scope, nature and coverage, is addressed to national government officials working on STI policies in a range of public administrations, including ministries and agencies. The survey covers policy themes around public research, business innovation and entrepreneurship, knowledge transfer, innovation skills, innovation for societal challenges and governance of the STI system.

## Annex: Revisions to the EC-OECD STIP Survey, 2021 edition

1. This annex indicates the modifications described above by showing the proposed changes in **red coloured text** on top of the 2019 edition of the EC/OECD STIP Survey. Notes are indicated in **blue coloured text**. Modifications are grouped into four survey components that correspond to the four sections that make up this annex: i) the **questionnaire** (i.e. the policy themes covered in the STIP Survey); ii) the **policy initiative fiche**; iii) the **direct beneficiaries** (i.e. the target groups that policy initiatives address); and iv) the **policy instruments** employed by policy initiatives.

### 1. Questions in the survey (policy themes)

2. Table 1 provides the classification of policy themes along with the corresponding questions to be included in the survey. To prevent additional reporting burden on participating countries, the questions included in this part of the survey remain largely stable in this edition.

**Table 1. Core STIP Survey questions and STIP Compass policy themes**

Policy Area	Policy Theme	Question in the 2017 EC-OECD STI Policy Survey
Governance	Governance debates	Briefly, what are the main ongoing issues of debate around how national STI policy is governed in your country?
	National STI plan or strategy	What strategies or plans exist, if any, to provide an overarching strategic direction to national STI policy?
	Horizontal policy coordination	What arrangements exist to support cross-government coordination in STI policy?
	Strategic policy intelligence	What arrangements or policy initiatives exist to strengthen the evidence base for STI policy-making and governance (besides evaluation and impact assessment)?
	Evaluation and impact assessment	What arrangements or governance structures exist to initiate, perform or encourage the use of STI evaluation and impact assessment?
	International STI governance policy	What arrangements exist to support the international governance of STI policy (e.g. joint strategies and agreements, horizontal coordination or regulatory oversight bodies)?
Public research system	Public research debates	Briefly, what are the main ongoing policy debates around government support for your country's public research system?
	Public research strategies	What strategies, roadmaps or plans exist, if any, to provide strategic direction to national research policy?
	Competitive research funding	What are the main competitive schemes and programmes for funding research in universities and public research institutes?
	Non-competitive research funding	What are the main non-competitive schemes and programmes for funding research in universities and public research institutes?

	Third-party funding	What policy initiatives exist to promote <b>third-party</b> funding of public research <b>from non-government sources</b> ?
	Structural change of the public research system	What policy initiatives exist, if any, to support or lead structural changes in the public research system?
	Open science and enhanced access to publications and research data	What policy initiatives exist to support open science and enhanced access to publications and research data?
	<b>Large R</b> research infrastructures <b>and large equipment</b>	What are the main policy initiatives for funding <b>new the construction</b> and <b>existing operation of large</b> research infrastructures <b>and large equipment</b> ?
	Internationalisation in public research	What are the main policy initiatives for promoting internationalisation in public research?
	Interdisciplinary research	What are the main policy initiatives for promoting interdisciplinary research?
	High risk research	What policy initiatives exist, if any, offering dedicated support to high-risk research?
	Research integrity and reproducibility	What are the main policy initiatives for promoting research integrity and reproducibility?
	Embedding sex- and gender-specific analysis in research	What policy initiatives exist to incorporate sex and gender specificities in research content (e.g. questioning gender assumptions in research methods)?
Innovation in firms and innovative entrepreneurship	Business innovation policy debates	Briefly, what are the main ongoing policy debates around government support to business innovation and innovative entrepreneurship?
	Business innovation policy strategies	What strategies or plans exist, if any, to strategically direct national policy on business innovation and/or innovative entrepreneurship?
	Financial support to business R&D and innovation	What are the main policy initiatives for providing financial support to business R&D and innovation?
	Non-financial support to business R&D and innovation	What are the main policy initiatives for providing non-financial support to business R&D and innovation?
	Access to finance for innovation	What policy initiatives exist to promote firms' access to finance for innovation?
	Entrepreneurship capabilities and culture	What policy initiatives exist to foster a spirit and culture of entrepreneurship in business or in individuals and to provide them with appropriate skills?
	Stimulating demand for innovation and market creation	What policy initiatives exist to stimulate demand for firms' innovations and to support market creating innovation?
	Digital transformation of firms	What policy initiatives exist, if any, to help firms upgrade their organisational and technological capabilities to undergo digital transformation?
	Foreign direct investment	What policy initiatives exist to attract knowledge-intensive foreign direct investment and promote transfers to domestic firms?
	Targeted support to SMEs	What are the main policy initiatives specifically targeting research and innovation activities in SMEs?
Targeted support to young innovative enterprises	What policy initiatives exist to provide support services to young innovative enterprises and start-ups?	
Science-industry knowledge transfer and sharing	Transfer and linkages debates	Briefly, what are the main ongoing policy debates around national policy for science-industry knowledge transfer and sharing?
	Transfer and linkages strategies	What strategies or plans exist, if any, to strategically direct national policy on knowledge transfer and linkages?
	Collaborative research and innovation	What are the main policy initiatives for promoting collaboration and co-creation for research and innovation?
	Cluster policies	What policy initiatives exist to promote geographical and/or thematic innovative clusters?

	Commercialisation of public research results	What policy initiatives exist to encourage commercialisation of public research results?
	Inter-sectoral mobility	What policy initiatives exist to encourage mobility of human resources between the public and private sectors?
	Intellectual property rights in public research	What policy initiatives exist to ensure intellectual property rights in public research are conducive to promoting innovation?
Human resources for research and innovation	STI human resources debates	Briefly, what are the main ongoing policy debates around government support for human resources for research and innovation?
	STI human resources strategies	What national strategies or plans exist, if any, to foster human resources for research and innovation in your country?
	STEM skills	What are the main policy initiatives for nurturing general STEM skills?
	Doctoral and postdoctoral researchers	What policy initiatives exist to specifically support doctoral and postdoctoral research and education?
	Research careers	What policy initiatives exist to make research careers more attractive?
	<del>Digital skills for researchers</del>	<del>What policy initiatives exist, if any, to help ensure researchers will have the necessary skills to drive and reap the benefits of the digitalisation of science?</del>
	International mobility of human resources	What policy initiatives exist to encourage international mobility of the highly skilled?
	Gender balance and inclusiveness	What policy initiatives exist to promote the participation of women and other under-represented groups in research and innovation activities?
Research and innovation for society	Policy debates on innovation for societal challenges	Briefly, what are the current main policy debates around how national 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 design and implementation.
	Research and innovation for society strategy	What strategies or plans exist, if any, to promote innovation <del>for</del> specifically targeted at societal well-being and cohesion?
	<del>Mission-oriented innovation policies</del>	<del>What policy initiatives, if any, coordinate multiple instruments and/or regulatory measures that leverage research and innovation to achieve well-defined objectives addressing a societal challenge (e.g. climate change) in a defined timeframe?</del>
	<del>Note: This question comes from the 2019 module. The proposal is to retain it in the core survey.</del>	<del>What policy initiatives, if any, has your country introduced to support research and innovation for clean energy and net-zero ambitions?</del>
	<del>Green energy transitions</del>	<del>What policy initiatives, if any, has your country introduced to support research and innovation for clean energy and net-zero ambitions?</del>
	<del>Ethics of emerging technologies</del>	<del>What policy initiatives exist, if any, to address ethical challenges raised by emerging technologies (e.g. artificial intelligence, neuro-technology, gene editing)?</del>
	<del>Note: This question comes from the 2019 module. The proposal is to retain it in the core survey.</del>	<del>What policy initiatives exist, if any, to address ethical challenges raised by emerging technologies (e.g. artificial intelligence, neuro-technology, gene editing)?</del>
	Research and innovation for developing countries	What policy initiatives exist, if any, specifically dedicated to supporting research and innovation in developing and less advanced countries?
Multi-stakeholder engagement	What policy initiatives exist to promote a broad and diversified public engagement in research and innovation activities and policy making?	
Science, technology and innovation culture	What are the main policy initiatives for raising awareness in STI activities across society at large?	

## 1.2 Additional questions module (policy themes)

3. The 2019 survey had an additional question “module”, i.e. “Emerging trends in STI policy” that included seven questions. The 2021 edition will have two modules: “Countering impacts of COVID-19 on STI systems” with five questions. Four of these questions will be prefilled with the data collected in the OECD Survey on STI policy responses to COVID-19. A separate module will have two questions focusing on the European Research Area (ERA). In particular, this module aims to capture initiatives launched in the context of the European Commission’s communication “A new ERA for Research and Innovation”.<sup>1</sup>

**Table 2. Question modules for the 2021 survey**

Module name	Policy Theme	Question in the 2021 EC-OECD STI Policy Survey	Prefilled from the OECD Survey on STI policy responses to COVID-19
Countering impacts of COVID-19 on STI systems	STI system orientation policy debates	What are the main policy debates, if any, on the purpose and orientation of your country’s national STI system, as a long-term response to the COVID-19 crisis?	Yes
	Governance arrangements to tackle COVID-19	What policy initiatives, if any, are in place for strategic planning, coordination and monitoring of the STI response to COVID-19 in your country?	Yes
	Stimulus for STI systems	What policy initiatives, if any, has your country taken to sustain research and innovation activities during the COVID-19 pandemic?	Yes
	Mitigating long-term impacts of COVID-19	What policy initiatives, if any, has your country introduced to mitigate longer-term negative impacts of COVID-19 on the STI system?	Yes
	Building more resilient societies and economies	In the wake of the COVID-19 crisis, what policy initiatives (if any) has your country introduced to make our societies more sustainable, resilient and better prepared for future crises?	No
ERA-related initiatives	ERA-related strategies	What strategies or plans exist, if any, to contribute to the strengthening of ERA and, more generally, to improve the coordination of national and other EU countries’ research and innovation policies?	No
	Strengthening R&I within the ERA	What national policy initiatives, if any, have been introduced to prioritise R&D investment targets as a response to the recent European Commission Communication on “A new ERA for Research and Innovation”, i.e. COM(2020) 628 final?	No

## 2. Policy initiative fiche (unit of reporting)

4. 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 3 lists the policy initiative fiche’s fields and describes

<sup>1</sup> See <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A628%3AFIN>.

the type of data collected. In the 2019 edition, this fiche was composed of 16 fields, of which only seven were set as mandatory (to capture essential information). The 2021 edition has two additional non-mandatory fields “Any shifts related to COVID-19?” and “Parent initiative”.

**Table 3. Fields in the Policy Initiative Fiche in the 2017 EC-OECD STI Policy Questionnaire**

<b>Field title</b>	<b>Type of field</b>
Name in English*	(free text)
Name(s) in original language	(multiple free text fields, one per name)
Acronym	(free text)
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)
Any shifts related to COVID-19?	Multiple choice selection (multiple answers possible): <ul style="list-style-type: none"> <li>- Reduced funding;</li> <li>- Increased funding;</li> <li>- Prioritisation of COVID-related research/innovation support;</li> <li>- Introduced flexible eligibility criteria, application requirements and/or deadlines;</li> <li>- Other (please specify)</li> </ul>
Type(s) of policy instruments*	(multiple choice selection, see p. 7)
Direct beneficiaries*	(multiple choice selection, see p. 5)
Name of responsible organisation(s)*	(multiple free text fields, one per organisation)
Estimated budget expenditure range per year (in EUR)*	Multiple choice selection (in EUR) (one answer only): <ul style="list-style-type: none"> <li>- Less than 1M;</li> <li>- 1M-5M;</li> <li>- 5M-20M;</li> <li>- 20M-50M;</li> <li>- 50M-100M;</li> <li>- 100M-500M;</li> <li>- More than 500M;</li> <li>- Don't know;</li> <li>- Not applicable</li> </ul>
Note: As an alternative to the multiple choice selection of budget ranges in EUR, users can indicate an amount in national currency.	
Parent initiative (if applicable)	(dropdown selection listing other initiatives in the survey)
Internet link(s)	(multiple free text fields, one per link)
Evaluated	yes/no
Link to evaluation	(free text)

Note: \* Indicates the field is mandatory.

### 3. Direct beneficiaries

5. Table 4 includes the list of beneficiaries that can be indicated in the policy initiative fiche. The table classifies them in categories used in the questionnaire interface and in the STIP Compass portal. When submitting policy information, this classification allows the list to be more easily browsed when entering the data in the questionnaire interface. Likewise, in STIP Compass, this grouping also allows the data to be aggregated and

summarised in visualisations. Under the current proposal, the list of beneficiaries of the 2019 edition of the survey is left unchanged in the 2021 edition.

**Table 4. Direct beneficiaries (target group) taxonomy**

<b>Category</b>	<b>Direct beneficiaries (target group)</b>
<b>Research and education organisations</b>	Higher education institutes Public research institutes Private research and development lab
<b>Researchers, students and teachers</b>	Established researchers Postdocs and other early-career researchers Undergraduate and master students Secondary education students PhD students Teachers
<b>Firms by size</b>	Firms of any size Micro-enterprises SMEs Large firms Multinational enterprises
<b>Firms by age</b>	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)
<b>Intermediaries</b>	Incubators, accelerators, science parks or technoparks Technology transfer offices Industry associations Academic societies / academies
<b>Governmental entities</b>	International entity National government Subnational government
<b>Economic actors (individuals)</b>	Entrepreneurs Private investors Labour force in general
<b>Social groups especially emphasised</b>	Women Disadvantaged and excluded groups Civil society

## 4. Policy instruments

6. Table 5 lists and classifies the policy instruments survey respondents can associate to 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. The main improvements in the 2019 edition of the survey is the creation of the “Regulatory oversight and ethical advice bodies” and “Emerging technology regulation” policy instruments to better collect data on regulatory aspects. In addition, the most frequently used instruments are now placed higher up in the list to facilitate selection in the online questionnaire tool.

**Table 5. Policy instruments taxonomy**

Category	Instrument	Definition
<b>Governance</b>		
	National strategies, agendas and plans	Strategies that articulate the government's vision regarding the contribution of STI to a country's 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.
<b>Direct financial support</b>		
	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

Corporate 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 and, 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 infrastructures	Instruments that support the creation of new facilities, resources and services used by the science community to conduct research and foster innovation. They include: major scientific equipment, 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.
Emerging Science and technology regulation	Laws, rules, guidelines, directives or other policies made by a public authority on the development or use of new technologies (e.g. artificial intelligence, neuro-technology and gene-editing) 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.

7. 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.

## GOVERNANCE

### 1. National strategies, agendas and plans

Facet	Facet choices
Focuses on the following area(s) of the national innovation system	<p>Research</p> <p>Business (innovation and/or entrepreneurship)</p> <p>Education and skills</p> <p>Governance</p> <p>Other</p>
Foresight exercise included	<p>Yes</p> <p>No</p>
Strategy mainly prioritises	<p>STI policy governance (e.g. vertical and horizontal coordination, evaluation)</p> <p>R&amp;D intensity (e.g. GERD as a % of GDP)</p> <p>Clusters and regional support (including regional/local R&amp;D investments)</p> <p>Specific areas/sectors (e.g. new industrial policy, R&amp;D targets for clean tech)</p> <p>Business innovation and innovative entrepreneurship</p> <p>Access to finance for innovation (e.g. venture capital, business angels, financial markets)</p> <p>Public research capabilities</p> <p>Digitalisation</p> <p>Skills for research and innovation</p> <p>Technology transfers and commercialisation</p> <p>Societal challenges (e.g. social inclusiveness)</p> <p>Environmental challenges (e.g. sustainability)</p> <p>International cooperation on STI</p> <p>Stakeholder participation and consultation</p> <p>Other</p>
Specific business sector(s) targeted	None specifically targeted

Note: for each selection that is made, we would like there to 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)

Example, if 'Environmental challenges' is selected:  
Quantifiable target 1: R&D investment in clean technologies of 100 M€  
Deadline 1: 2021  
Quantifiable target 2: CO2 emissions reduced by 10%  
Deadline 2: 2022

Note: The 2019 edition of the survey experimented in gathering the above details on targets. Only in a few instances were these reported and, in most cases, targets were left unreported. This suggests that the STIP survey should not aim to capture data with this level of granularity.

	Agriculture
	Mining and quarrying
	Food
	Energy
	Electronics
	Pharmaceuticals
	Automotive and road transportation
	Marine
	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

## 2. Creation or reform of governance structure or public body

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

## 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. 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	
	Online survey
	Offline Survey
	Note: this option will be merged with the one above.
	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

### 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)

Discussions or reports are publicly available

Yes

No

## 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 <del>(e.g. discrimination)</del> 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 Other
Reports to	International organisation (e.g. European Commission, UNESCO) Head of national government Ministry Legislative branch (e.g. parliament) Agency / council None <del>(independent body)</del> Other
The coordination 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

## 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) 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

### 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

## DIRECT FINANCIAL SUPPORT

### 9. 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 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

### 10. 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	<ul style="list-style-type: none"> <li>Basic research</li> <li>Applied research</li> <li>Multidisciplinary research</li> <li>Experimental development</li> <li>Demonstration / testing</li> </ul>
Requires a form of collaboration	<ul style="list-style-type: none"> <li>No</li> <li>With other public research actors</li> <li>With industry partners</li> <li>With international partners</li> <li>With users of research outputs (e.g. technology, innovation)</li> <li>With other partners</li> </ul>
Selection criteria	<ul style="list-style-type: none"> <li>Track record of applicant</li> <li>Scientific impact anticipated</li> <li>Societal impact anticipated</li> <li>Commercial impact anticipated</li> <li>Third-party income and co-funding (e.g. contract research, other grants)</li> <li>The participation of early-career researchers</li> <li>Geographical location (to promote regional or cluster policy)</li> <li>Social inclusion in research (e.g. women and other under-represented groups)</li> <li>Alignment with national research priorities</li> <li>Other</li> </ul>
Type(s) of proposal screening	<ul style="list-style-type: none"> <li>Internal: review by grant manager (i.e. funding agency)</li> <li>External peer review: including members of the scientific community</li> <li>External peer review: including business society representatives</li> <li>External peer review: including research users and stakeholders</li> <li>Experimental methods (e.g. lotteries, sandboxes)</li> </ul>
Success rate (share of grants awarded as a % of total applications)	<ul style="list-style-type: none"> <li>Too early to estimate</li> <li>Less than 10%</li> <li>10-19%</li> <li>20-29%</li> <li>30-39%%</li> <li>40% or higher</li> </ul>

## 11. Grants for business R&D and innovation

Facet	Facet choices
Maximum grant duration	<ul style="list-style-type: none"> <li>12 months or less</li> <li>13-24 months</li> <li>25-36 months</li> <li>More than 36 months</li> </ul>
Maximum amount of grant awarded in euros	<ul style="list-style-type: none"> <li>Less than 100K</li> <li>100K-500K</li> <li>500K-1M</li> <li>More than 1M</li> </ul>
Type of activity	<ul style="list-style-type: none"> <li>Basic research</li> <li>Applied research</li> <li>Experimental development</li> <li>Non-technological innovation</li> <li>Demonstration / testing</li> </ul>
Requires a form of collaboration	<ul style="list-style-type: none"> <li>No</li> <li>With higher education institutes or public research institutes</li> <li>With industry partners</li> <li>With SMEs</li> <li>With international partners</li> <li>With intermediaries (e.g. accelerators)</li> <li>With users of R&amp;D or innovation outputs</li> <li>With other partners</li> </ul>
Selection criteria	<ul style="list-style-type: none"> <li>Track record of applicant</li> <li>Feasibility of project</li> <li>Anticipated return on investment</li> <li>Societal impact anticipated</li> <li>Geographical location (to promote regional or cluster policy)</li> <li>Social inclusion (e.g. women and other under-represented groups)</li> <li>Alignment with national strategic priorities (e.g. targeted business sectors and technologies)</li> <li>Other</li> </ul>
Contribution (e.g. matching funds) required from beneficiary	<ul style="list-style-type: none"> <li>Yes</li> <li>No</li> </ul>

## 12. 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 Structural inclusion of beneficiaries in host institutes Note: this option has only been selected by a couple of initiatives.
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

### 13. Procurement programmes for R&D and innovation

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

#### 14. 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

#### 15. 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

**16. Equity financing****Facet****Facet choices**

Type of financing

Venture capital (growth and late stage)

Seed capital (early stage)

Other

**Mechanism(s)**

Note on why this being deleted: The results we have gathered here are not useful: Fund (100 initiatives), Tax incentives (3), Regulatory framework (5) and Other (10).

Fund

Tax incentives

Regulatory framework

Other

Type of fund

None

Direct public equity fund

Fund-of-funds

Co-investment fund

Other

**Focus**

None

Support innovative start-ups and SMEs

Attract international entrepreneurs

Support access to international markets

Foster public research spin-offs

Social entrepreneurship

Other

**17. 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	<p>Less than 2K EUR</p> <p>2K-6K EUR</p> <p>6K-10K EUR</p> <p>More than 10K EUR</p> <p>Varies depending on conditions</p>
Eligibility criteria	<p>Firm is registered in the country</p> <p>Firm size</p> <p>Firm has not received more than a certain amount of public aid over a defined period of time</p> <p>Firm has not entered in any commitments with the knowledge provider that will carry out the project</p> <p>Knowledge provider is certified</p> <p>Exporting firm Note: this option has not been used.</p>
Type of knowledge provider	<p>Higher education institutes</p> <p>Public research institutes</p> <p>Private business</p> <p>Other</p>
Brokerage services are provided	<p>Yes</p> <p>No</p>
Contribution (e.g. matching funds) required from recipient	<p>Yes</p> <p>No</p>
Possible to pool vouchers from several firms	<p>Yes</p> <p>No</p>

## INDIRECT FINANCIAL SUPPORT

### 18. ~~Corporate tax~~ or social contributions relief for firms investing in R&D and innovation

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

8. 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.

### 19. Tax relief for individuals supporting R&D and innovation

Facet	Facet choices
Applicable provisions (i.e. eligible expenses)	<ul style="list-style-type: none"> <li>Donations to public research activities</li> <li>Investments in start-ups and SMEs</li> <li>Other</li> </ul>

### 20. Debt guarantees and risk sharing schemes

Facet	Facet choices
Scheme managed by	<ul style="list-style-type: none"> <li>Government</li> <li>Private sector</li> <li>Other</li> </ul>
Type(s) of finance targeted	<ul style="list-style-type: none"> <li>Working capital</li> <li>Financing expansion</li> <li>Investing in innovation</li> <li>Other</li> </ul>
Specific loan/credit objective(s)	<ul style="list-style-type: none"> <li>None specified</li> <li>Developing new products and processes</li> <li>Upgrading an existing product or process</li> <li>Acquiring a technology</li> <li>Other</li> </ul>
Claims rate (latest estimate)	<ul style="list-style-type: none"> <li>Too early to estimate</li> <li>less than 1%</li> <li>1-2%</li> <li>3-5%</li> <li>More than 5%</li> </ul>

## COLLABORATIVE INFRASTRUCTURES (SOFT AND PHYSICAL)

### 21. Networking and collaborative platforms

Facet	Facet choices
Focus	<ul style="list-style-type: none"> <li>Business innovation-oriented</li> <li>Technology-oriented</li> <li>Geographic clustering</li> <li>Research-oriented</li> <li>Education-oriented</li> <li>Building international linkages</li> <li>Addressing societal or environmental challenges</li> <li>Other</li> </ul>
Share of the platform's funding coming from the private sector (as a % of total funding)	<ul style="list-style-type: none"> <li>More than 75%</li> <li>51-75%</li> <li>26-50%</li> <li>1-25%</li> <li>0%</li> </ul>
Exchanges take place via	<ul style="list-style-type: none"> <li>Online platform</li> <li>Meetings and events</li> <li>Sharing infrastructures or facilities</li> <li>Mobility of personnel, researchers or students</li> <li>Other</li> </ul>
Objective(s)	<ul style="list-style-type: none"> <li>Promote economic growth (e.g. productivity, competitiveness)</li> <li>Promote business partnerships (e.g. consortia-building)</li> <li>Promote research partnerships</li> <li>Define research priorities</li> <li>Coordinate R&amp;D developments</li> <li>Share R&amp;D data</li> <li>Coordinate on intellectual property practices (e.g. co-patenting and licensing)</li> <li>Set standards</li> <li>Demonstrate technological developments and innovations</li> <li>Foster fundraising and investor networking</li> <li>Other</li> </ul>

### 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

## 22. Dedicated support to research infrastructures

Facet	Facet choices
Main focus of support	<ul style="list-style-type: none"> <li>National infrastructure(s)</li> <li>International infrastructure(s)</li> </ul>
Objective(s)	<ul style="list-style-type: none"> <li>Address national research priorities</li> <li>Support the internationalisation of public research</li> <li>Promote partnerships among HEIs/PRIs</li> <li>Foster science-industry collaboration</li> <li>Address societal or environmental challenges</li> <li>Promote regional or cluster policy</li> <li>Other</li> </ul>
Funding used for	<ul style="list-style-type: none"> <li>Acquiring major scientific equipment</li> <li>Building new facilities</li> <li>Renewing or modernising existing facilities</li> <li>Increasing user access to infrastructure</li> <li>Gaining access to existing international infrastructures</li> <li>Hiring research and technical staff</li> <li>Training research and technical staff</li> <li>Building knowledge repositories of scientific data and archives</li> <li>Building computing systems and virtual infrastructures</li> <li>Other</li> </ul>

## 23. Information services and access to datasets

Facet	Facet choices
Openness	<ul style="list-style-type: none"> <li>Publicly available</li> <li>Restricted access</li> </ul>

Type of data disseminated
---------------------------

Data collected through the provision of public services (administrative data) (e.g. medical data of patients)
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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
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Guidelines
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Crowdfunding initiatives
--------------------------

Other
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## ***GUIDANCE, REGULATION AND OTHER INCENTIVES***

### ***24. 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

## 25. *Emerging Science and technology regulation*

Facet	Facet choices
Role of governmentObjective	<p>Market regulation<del>er</del> (e.g. antitrust law)</p> <p>Enable <del>T</del>technology/innovation <del>enabler</del>—(e.g. interoperability standards)</p> <p>Risk mitigation (e.g. consumer and social protection)</p> <p>Regulate the <del>D</del>delivery of public services (e.g. requirements in procurement, education)</p> <p>Promote research integrity</p> <p>Protect<del>er</del> of public values</p>
Challenge(s) addressed	<p>Risks to human safety</p> <p>Environmental sustainability</p> <p>Privacy protection</p> <p>Social disruption (e.g. job insecurity)</p> <p>Unethical <del>use-practices</del> (e.g. discrimination)</p> <p>Security (e.g. dual-use technologies)</p> <p>Limited competition (e.g. monopolies, oligopolies)</p> <p>Other</p>
Type(s) of regulation	<p>Formal law or regulation</p> <p>International agreement</p> <p>Self-regulation (e.g. codes of conduct, scientific advice, standards)</p> <p>Regulatory experiments (e.g. sandboxes)</p> <p>Other</p>

Regulatory approach	Technology or input-based regulation (e.g. moratoria, standards of use) Performance or output-based regulation (e.g. safety thresholds)
Level of governance	Local Regional National International
Approach to monitor compliance	The regulator develops and maintains technologies for data collection, transmission and/or analytics Regulated parties are incentivised to adopt monitoring technology that is not managed by the regulator Regulated parties are simply required to share compliance data (no regulator support)

## 26. 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

## 27. Intellectual property regulation and incentives

Facet	Facet choices
Mechanism(s)	Legislation
	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

## 28. 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