



# International partnerships: opportunities for competitiveness and recovery in the era of green and digital transformation

14 April 2023

## SESSION 2 PARTNERSHIPS FOR SCIENCE AND EMERGING CRITICAL TECHNOLOGIES

Partnering and collaboration in science and technology and selected example of OECD work and tools

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# The role of partnerships and international cooperation in science and technology for the green and digital transformation

- ❑ A new paradigm for partnerships in science and technology
- ❑ Examples of OECD S&T work that can support effective actions by the hubs



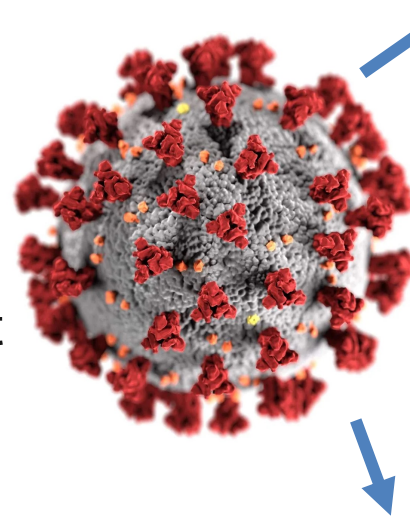


# A new paradigm for STI partnerships

Partnerships and international co-operation in STI can lead to:

- ❑ Pooling of resources (infrastructures, data, researchers), thus enhancing economies of scale and leading to cost reductions
- ❑ less duplications and cost and risk sharing among partners
- ❑ Improve learning among the different actors and generates knowledge spill-overs locally
- ❑ strengthen incentives for investment, and foster a level playing field through common standards and regulatory approaches

## Lessons from the pandemic



### Collaborative Platforms

Transdisciplinary research, co-creation models, IP sharing, Open Access

### New financing models

“Blended finance” in STI

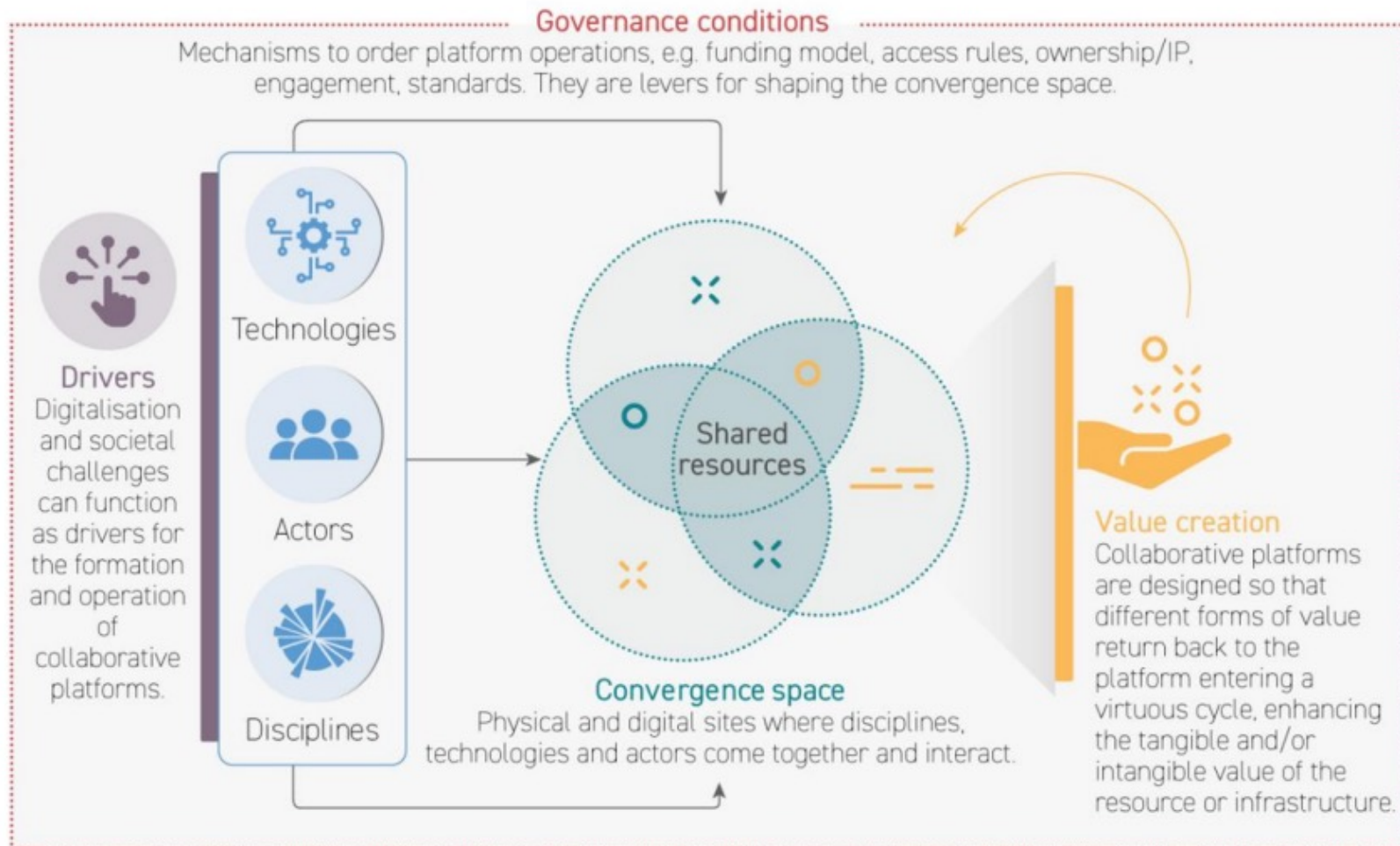
### National and Global missions

“Mission-Oriented” approaches





# Exploiting the power of collaborative platforms for emerging technologies



OECD publishing

## COLLABORATIVE PLATFORMS FOR EMERGING TECHNOLOGY

CREATING CONVERGENCE OECD publishing

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## COLLABORATIVE PLATFORMS FOR INNOVATION IN ADVANCED MATERIALS

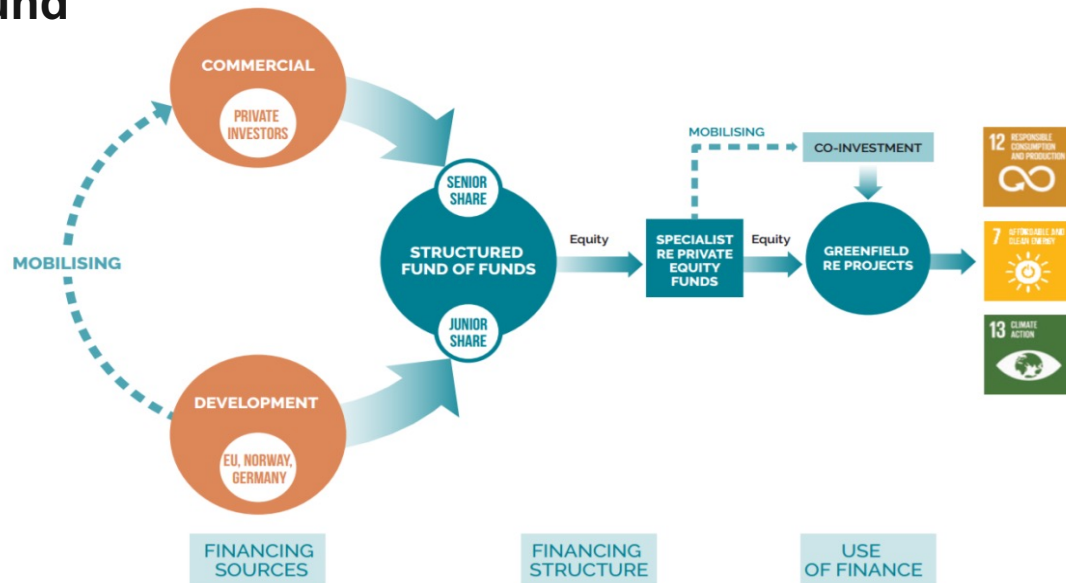
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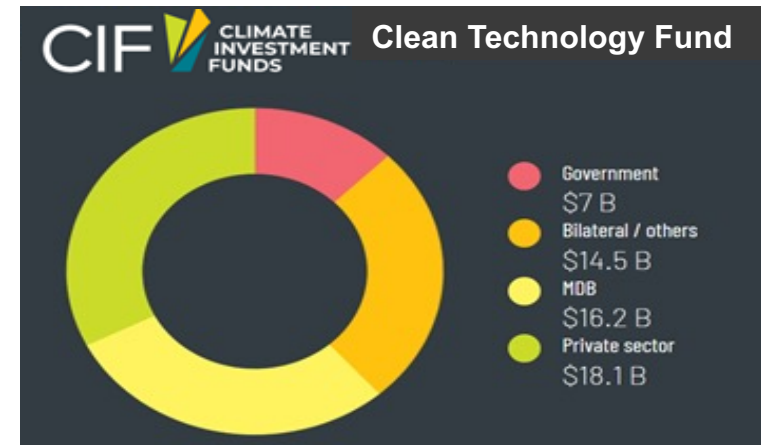
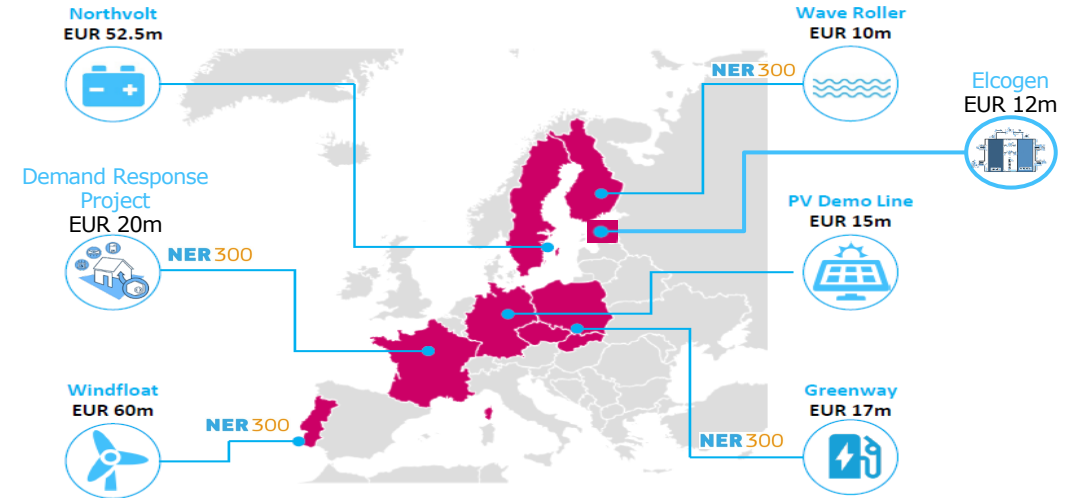
# Leveraging on blended finance to crowd in private investments for technology

Blended finance can bring much needed private funding to scale up the development and deployment of green tech by reducing the risks (technology and economic) and increasing the returns

## Global Energy Efficiency and Renewable Energy Fund



## InnovFin Energy Demo Projects





# Mobilising for a specific challenge: missions-oriented innovation policies (MOIPs)

MOIPs are systemic policy interventions that a growing number of countries has implemented in order to address societal challenges. These policies aim to alleviate some of the most prevalent weaknesses within many national systems of innovation, notably the lack of holistic strategic orientation and policy co-ordination, and fragmented policy mixes



- ❑ Building a delivery-focused alliance between countries, businesses, investors, and research institutes to accelerate green innovation
- ❑ 23 countries and the European Commission



- ❑ Accelerating the use of more energy efficient and cleaner technologies and mitigate climate change without undermining economic development (2005 ~ 2011)
- ❑ Australia, Canada, China, India, Japan, Korea, US



# Examples of what do we do in S&T that can support the hubs

- ❑ The good news
- ❑ The transforming potential of the Italian hubs initiative: “systemic intent” v. umbrella initiative

Percentage of scientific publications among the world's 10% top-cited publications (fractional)







# Effectively managing research infrastructures and research data sharing

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**REFERENCE  
FRAMEWORK FOR  
ASSESSING THE  
SCIENTIFIC AND  
SOCIO-ECONOMIC  
IMPACT OF RESEARCH  
INFRASTRUCTURES**

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**OPTIMISING THE  
OPERATION AND  
USE OF NATIONAL  
RESEARCH  
INFRASTRUCTURES**

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**2019:** [Tools for assessing the overall impact of RIs](#)

**2020:** [Guidance on managing portfolios of RIs and Optimising the user-base](#)

**2021-22:** Very Large Research Infrastructures: issues and options

**2023-24:** Fostering research infrastructure ecosystems for addressing complex scientific and societal challenges

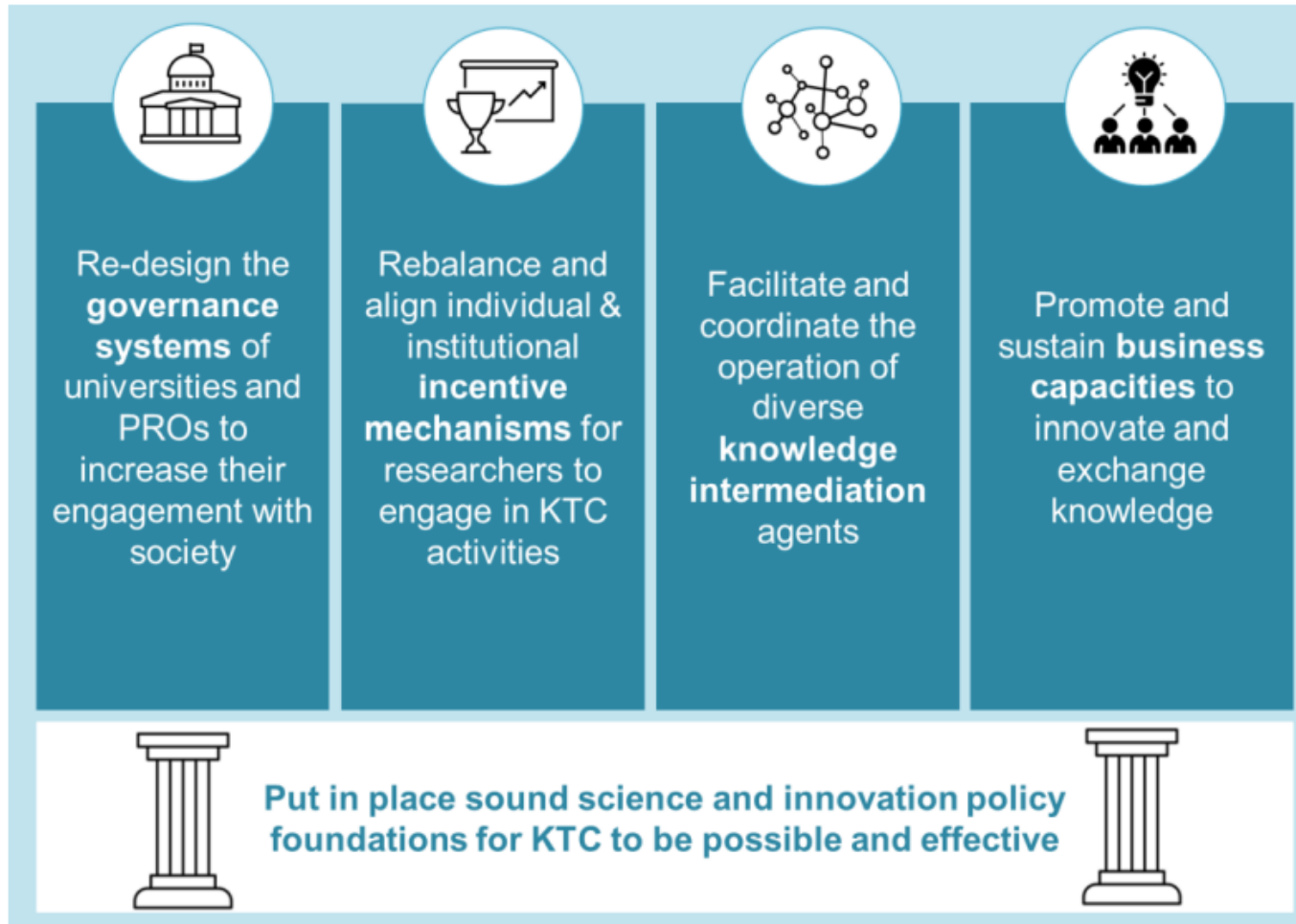
- What are the existing models for RI ecosystems, their rationale and organisation?
- What are the current limits and challenges faced by existing RI networks and cooperation?
- How could funders use increased collaboration between RIs to optimise their portfolio of investments, and increase the efficiency, effectiveness and resilience of the research ecosystem?





# Enhancing public research-business collaboration

## Enhancing public research-business collaboration



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### IMPROVING KNOWLEDGE TRANSFER AND COLLABORATION BETWEEN SCIENCE AND BUSINESS IN SPAIN

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### THE CONTRIBUTION OF RTOS TO SOCIO-ECONOMIC RECOVERY, RESILIENCE AND TRANSITIONS

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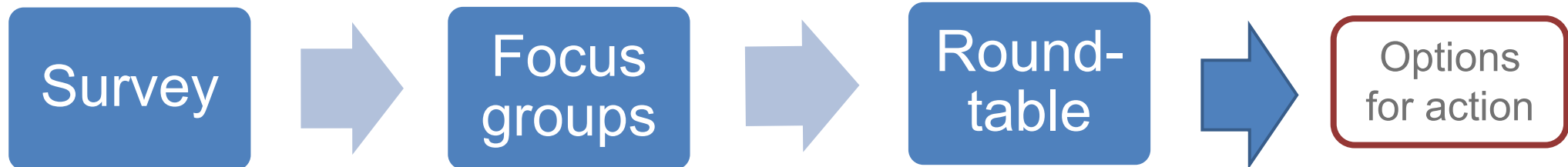


# Accompanying actions on the ground

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Developing a monitoring framework to track progress of each hub in terms of setting:

- clear shared objectives
- effective governance mechanisms for aligning plans of the different partners in each spokes
- the appropriate interventions and actions to meet the objectives





# STIP COMPASS

+1600 policy officials

+6500 policy initiatives

57 countries

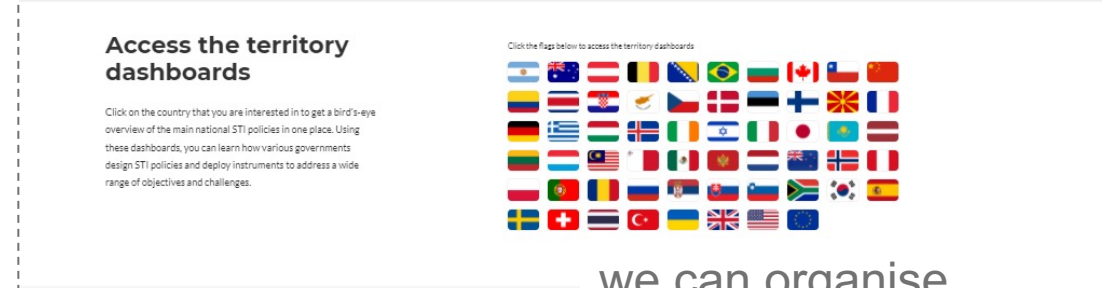
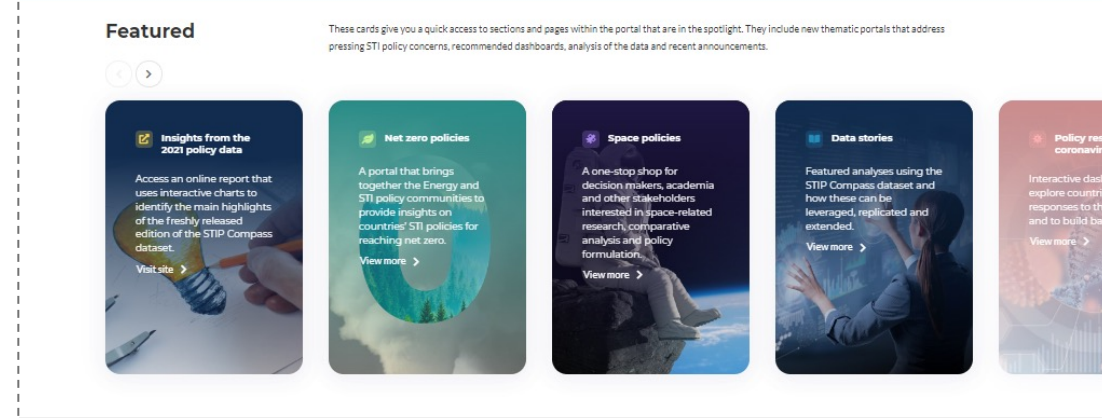
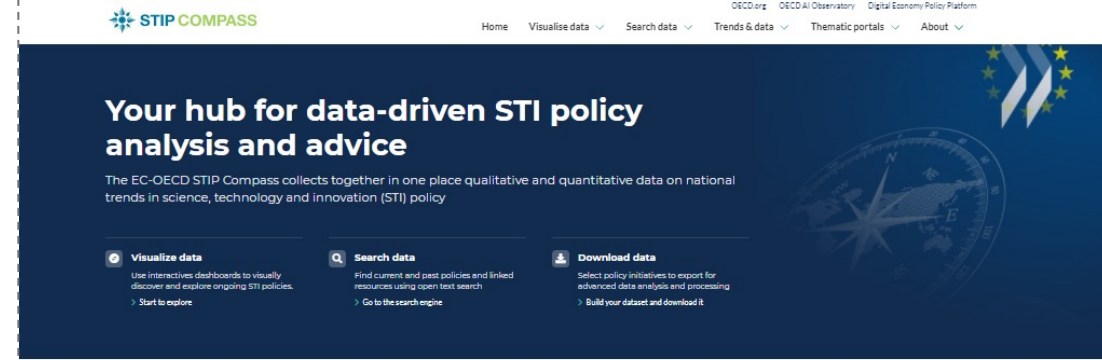
+700 dashboards

+8k EC + OECD publications

- **EC-OECD joint initiative** to collect together in one place qualitative and quantitative data on national trends in **STI policy**.
- uses a **semantic database** for storing, accessing and linking various kinds of data (policies, statistics, publication metadata, twitter feeds...).
- **publicly available @ [stip.oecd.org](http://stip.oecd.org)**.

## Testimonials

“STIP Compass is an effective go-to place to **monitor policies in my own country**” “It has helped us **identify overlaps in national programmes**”  
 “Filling in the survey has helped my ministry **build cross-government relations in STI policy**” “I have **learned about new agencies** that manage STI policies in my own country, that I was previously unaware of.”





# 2023 EC-OECD STIP Survey: New uses of the data

 **STIPCOMPASS**  
INTERNATIONAL DATABASE ON STI POLICIES

**EC/OECD STIP SURVEY**  
15 FEBRUARY - 28 APRIL 2023



European  
Research Area

**S&T POLICY 2025**  
Enabling Transitions through  
Science, Technology and Innovation

## STI policies for net zero



**Tracking Clean Energy Progress**  
Assessing critical energy technologies for global clean energy transitions



**ITF Transport Outlook 2021**



OECD International Transport Forum



**Agricultural Policy Monitoring and Evaluation 2022**  
REFORMING AGRICULTURAL POLICIES FOR CLIMATE CHANGE MITIGATION

Committee for  
Agriculture  
(COAG)

OECD





# Stepping up collaboration: the biodiversity hub



Biodiversity ecosystems will need to be supported by transdisciplinary science, collaboration across actors (research, industry, government and society at large), citizens engagement, participatory processes involving local communities, multilevel governance of policies across ministries of different areas and at different levels (local, national and international). A biodiversity “moonshot” is a global mission and hence it strongly relies on international cooperation of efforts.

OECD can deliver recommendations and share best practices to help formulate **STI policy packages that accelerate a transition towards biodiversity objectives**. In particular, the collaboration with the biodiversity hub will focus on:

- (1) capabilities (skills and infrastructures, including data sharing for biodiversity)
- (2) co-creation activities and actors’ partnerships that can support the realization of biodiversity objectives (the ecosystem for biodiversity), including participatory processes involving local communities



**THANK YOU!**

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