

研究・イノベーション学会  
科学技術・イノベーション政策分科会／研究戦略・評価分科会

STI 政策に関する「我が国の基本的課題のレビュー」シリーズ (8)

# EU や OECD における STI 政策の枠組みに関する 近年の検討や展開と我が国への示唆

2024 年 8 月 30 日

東京，政策研究大学院大学／オンライン (Zoom)

成城大学 社会イノベーション学部

伊地知 寛博

# アウトライン

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- (視点の提示)
- EU における近年の STI 政策の展開
- OECD における最近の検討
- 我が国における “ 共通 ” 制度に係る STI 政策に対応した変化
- (その他いくつかの所見)

# STI 政策の枠組み

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政策枠組みの「幅」ではなく、そもそも「次元」が異なるのでは？

- 施策そのもの

VS.

- 施策

+ 施策を展開する枠組み《／政策過程》

(アセスメント, モニタリング, 評価;

多様なステークホルダー;

厳格な意思決定過程; 法令の形式, ...)

+ 施策の展開及び政策の対象に関して測定し表示する方法

# EU における近年の STI 政策の展開

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# Horizon Europe (1/3)

## • The EU's 9th multiannual framework programme for research and innovation

12.5.2021

EN

Official Journal of the European Union

L 170/1

### and innovation

(Legislative acts)

#### REGULATIONS

REGULATION (EU) 2021/695 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 28 April 2021

establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 173(3), Article 182(1), Article 183, and the second paragraph of Article 188 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinions of the European Economic and Social Committee <sup>(1)</sup>,

Having regard to the opinion of the Committee of the Regions <sup>(2)</sup>,

Acting in accordance with the ordinary legislative procedure <sup>(3)</sup>,

Whereas:

- (1) It is an objective of the Union to strengthen its scientific and technological bases by strengthening the European research area (ERA) in which researchers, scientific knowledge and technology circulate freely and encouraging it to become more competitive, including in its industry, while promoting all research and innovation (R&I) activities to deliver on the Union's strategic priorities and commitments, which ultimately aim to promote peace, the Union's values and the well-being of its peoples.
- (2) To deliver scientific, technological, economic, environmental and societal impact in pursuit of this general objective and to maximise the added value of the Union's R&I investments, the Union should invest in R&I through Horizon Europe – the Framework Programme for Research and Innovation 2021-2027 (the 'Programme'). The Programme should support the creation, better diffusion and transfer of high-quality and excellent knowledge and high-quality technologies in the Union, attract talent at all levels and contribute to full engagement of the Union's talent pool, facilitate collaborative links and strengthen the impact of R&I in developing, supporting and implementing Union policies, support and strengthen the uptake and deployment of innovative and sustainable solutions in the Union's economy, in particular in small and medium-sized enterprises (SMEs), and in society, address global challenges, including climate change and the United Nations Sustainable Development Goals (SDGs), create jobs, boost economic growth, promote industrial competitiveness and boost the attractiveness of the Union in the field of R&I. The Programme should foster all forms of innovation, including breakthrough innovation, foster market deployment of innovative solutions, and optimise the delivery of such investment for increased impact within a strengthened ERA.

<sup>(1)</sup> OJ C 62, 15.2.2019, p. 33 and OJ C 364, 28.10.2020, p. 124.

<sup>(2)</sup> OJ C 461, 21.12.2018, p. 79.

<sup>(3)</sup> Position of the European Parliament of 17 April 2019 (not yet published in the Official Journal) and position of the Council at first reading of 16 March 2021 (not yet published in the Official Journal). Position of the European Parliament of ... (not yet published in the Official Journal).



**Recent Consideration and Development of Frameworks for STI Policies in EU and OECD, and their Implications for Japan**

**Meeting, Science, Technology and Innovation Policy Group (STIPG) and Research Strategy and Evaluation Group (RSEG), Japan Society for Research Policy and Innovation Management (JSRPIM), GRIPS, Tokyo and Online (Zoom), 30 August 2024**

**Tomohiro Ijichi**, Faculty of Innovation Studies, Seijo University

# Horizon Europe (2/3)

How Horizon Europe was developed - European Commission

2024/08/28 21:10

How Horizon Europe was developed - European Commission

2024/08/28 21:10



## Research and innovation



## How Horizon Europe was developed

How the Commission's proposal for Horizon Europe was designed, legal framework, factsheets and reports.

### The development process

In 2018 the Commission proposed an ambitious €100 billion research and innovation programme - Horizon Europe - to succeed Horizon 2020.

The European Parliament and the Council of the EU reached in March and April 2019 a [provisional agreement](#) on Horizon Europe. The European Parliament [endorsed](#) the provisional agreement on 17 April 2019.

The EU institutions reached a [political agreement on Horizon Europe](#) on 11 December 2020 and set the budget for Horizon Europe at €95.5 billion in current prices (including €5.4 billion from the Next Generation of the EU - Recovery Fund). On this basis, the European Parliament and the Council of the EU proceed towards the adoption of the legal acts.

[https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed_en)

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[https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed_en)

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### The Commission's proposal for Horizon Europe

The Commission initially proposed an ambitious €100 billion research and innovation programme to succeed Horizon 2020.

The proposal was made as part of the EU's proposal for the next [EU long-term budget](#), the multiannual financial framework (MFF).

Various building blocks were taken into account including the interim evaluation of Horizon 2020, the Lab-Fab-App report (informally the Lamy report), foresight studies and various other reports.

### Legal texts, factsheets and video

- [legal texts and factsheets](#) for Horizon Europe
- factsheet about [research and innovation in the new EU budget](#) (French and German versions [also available](#))
- [video explaining the aims of Horizon Europe](#)

### Reports and materials that shaped the proposal

#### Evaluating Horizon 2020

To make an effective proposal, the Commission built on what has been learned from Horizon 2020.




# Horizon Europe (3/3)

How Horizon Europe was developed - European Commission




2024/08/28 21:10

How Horizon Europe was developed - European Commission

2024/08/28 21:10


- [Communication on the interim evaluation of Horizon 2020](#) , adopted 11 January 2018 outlines views on how the impact of a successor research and innovation investment programme could be maximised
- [Horizon 2020 Evaluation](#) : Results of the interim evaluation of Horizon 2020, input studies and evaluation methods
- [LAB – FAB – APP: Investing in the European future we want](#) : Report of the independent high level group, led by Pascal Lamy, on maximising the impact of EU research and innovation programmes

## Mission-oriented policy


- [Mission-Oriented Research & Innovation in the EU](#) : A problem solving approach to innovation-led growth. This report is the result of Professor Mariana Mazzucato's academic reflections based on her research with input from internal and external stakeholders of the European Commission.
- [Presentation on mission-oriented research and innovation policy](#) : Outlines some of the main findings of the report by Professor Mariana Mazzucato
- [Analysis report: responses to the call for feedback on mission-oriented research and innovation in the European Union](#) 

[More studies and reports on missions](#) 

## Foresight scenarios

[BOHEMIA](#)  is an extensive, systematic, multi-year study that set out various future scenarios and recommendations for research and innovation policy.

## Economic rationale

Analysis to set out the [economic rationale for public R&I](#) , investments and their impact on growth and jobs carried out by the Commission.

## Involving citizens in setting priorities for the next framework programme

Report by the Democratic Society on [involving citizens in the next framework programme](#) 

## Report of the high level group on the European Innovation Council

[Europe is back: Accelerating breakthrough innovation](#) , recommendations on how a European Innovation Council (EIC) should be set up to fund and nurture breakthrough innovation.

## Public input to the proposal

- [call for feedback on research and innovation missions](#) (Closed 4 April 2018 - thank you for your input)
- [public consultation on EU funds in the area of research & innovation](#)  (Closed 8 March 2018 - thank you for your input)

## Related links

Presentation explaining the Commission's proposal for Horizon Europe ([https://ec.europa.eu/info/files/presentation-horizon-europe\\_en](https://ec.europa.eu/info/files/presentation-horizon-europe_en))

Interview with Commissioner Carlos Moedas on the plans for Horizon Europe (<https://ec.europa.eu/research-and-innovation/en/horizon-magazine/horizon-europe-will-connect-public-european-science-carlos-moedas>)

Commissioner blog post announcing the name Horizon Europe ([https://ec.europa.eu/commission/commissioners/2014-2019/moedas/blog/horizon-2020-horizon-europe\\_en](https://ec.europa.eu/commission/commissioners/2014-2019/moedas/blog/horizon-2020-horizon-europe_en))

EU budget for the future website ([https://ec.europa.eu/commission/future-europe/eu-budget-future\\_en](https://ec.europa.eu/commission/future-europe/eu-budget-future_en))

Communication adopted on 14 February 2018 on a New, Modern Multiannual Financial Framework post-2020 ([https://ec.europa.eu/commission/sites/beta-political/files/communication-new-modern-multiannual-financial-framework\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/communication-new-modern-multiannual-financial-framework_en.pdf))

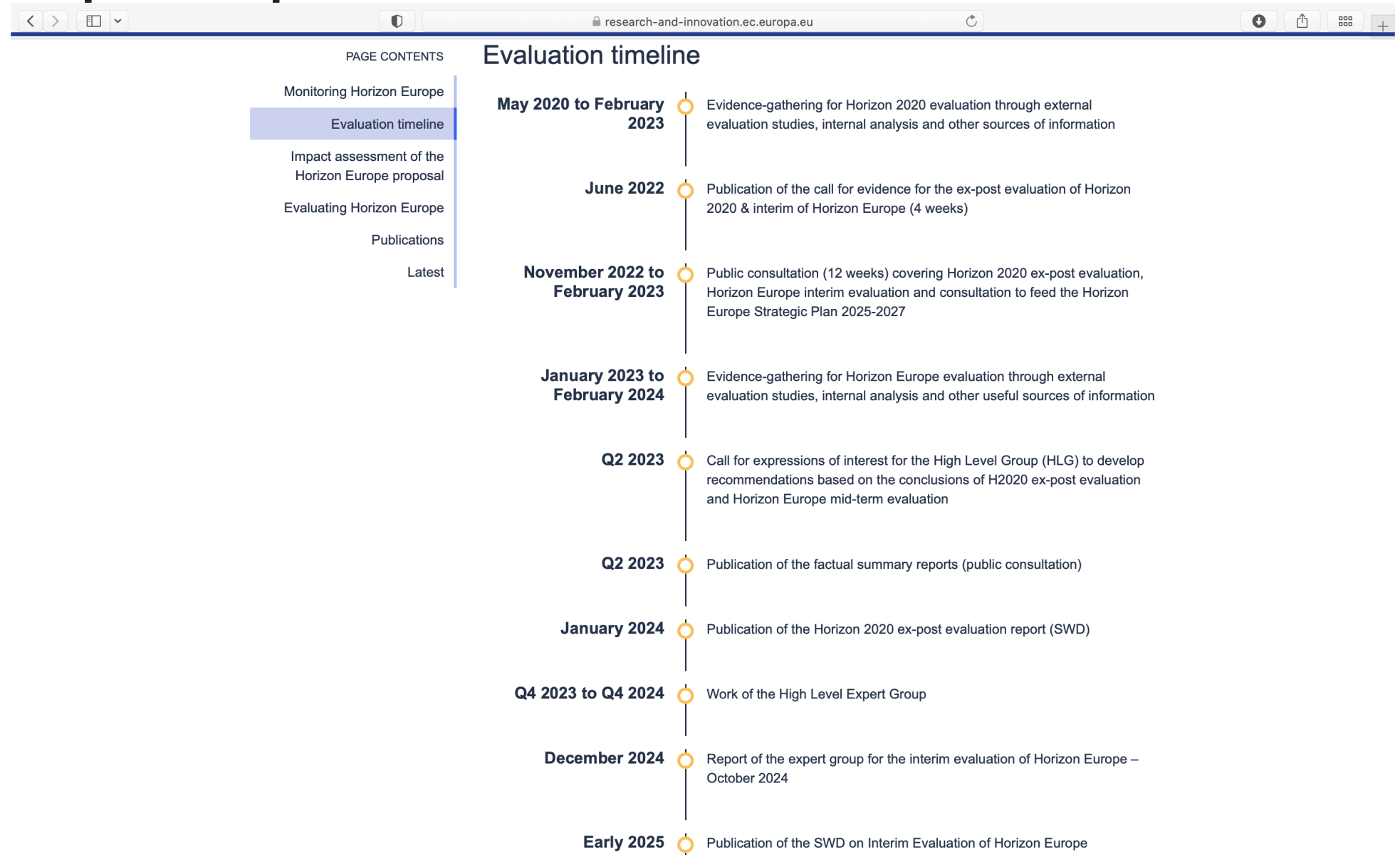
[https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed_en) 3 / 5 ページ

[https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-oppor...and-open-calls/horizon-europe/how-horizon-europe-was-developed_en) 4 / 5 ページ

# Proposal, Impact Assessment, and Evaluation (1/3)

 <p>Brussels, 29.5.2017 SWD(2017) 220 final</p> <p><b>COMMISSION STAFF WORKING DOCUMENT</b></p> <p><b>IN-DEPTH INTERIM EVALUATION of HORIZON 2020</b></p> <p>{SWD(2017) 221 final} {SWD(2017) 222 final}</p> <p>Version updated on 13.06.2017<sup>1</sup></p> <p><b>EN</b></p>	 <p>Brussels, 7.6.2018 COM(2018) 435 final 2018/0224 (COD)</p> <p>Proposal for a</p> <p><b>REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL</b></p> <p><b>establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination</b></p> <p>(Text with EEA relevance)</p> <p>{SEC(2018) 291 final} - {SWD(2018) 307 final} - {SWD(2018) 309 final}</p> <p><b>EN</b></p>	 <p>Brussels, 7.6.2018 SWD(2018) 307 final PART 1/3</p> <p><b>COMMISSION STAFF WORKING DOCUMENT</b></p> <p><b>IMPACT ASSESSMENT</b></p> <p><i>Accompanying the document</i></p> <p><b>Proposals for a</b></p> <p><b>REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL</b> <b>establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination</b></p> <p><b>DECISION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on</b> <b>establishing the specific programme implementing Horizon Europe – the Framework Programme for Research and Innovation</b></p> <p><b>COUNCIL REGULATION establishing the Research and Training Programme of the European Atomic Energy Community for the period 2021-2025 complementing Horizon Europe – the Framework Programme for Research and Innovation</b></p> <p>{COM(2018) 435 final} - {COM(2018) 436 final} - {COM(2018) 437 final} - {SEC(2018) 291 final} - {SWD(2018) 308 final} - {SWD(2018) 309 final}</p> <p><b>EN</b></p>
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# Proposal, Impact Assessment, and Evaluation (2/3)



# Proposal, Impact Assessment, and Evaluation (3/3)

PAGE CONTENTS

Monitoring Horizon Europe

Evaluation timeline

Impact assessment of the Horizon Europe proposal

Evaluating Horizon Europe

Publications

Latest

## Impact assessment of the Horizon Europe proposal

The impact assessment of Horizon Europe provides evidence-based policy and design recommendations. These include elements unique to the programme such as EU missions and a fully-fledged European Innovation Council.

The impact assessment for Horizon Europe was published in June 2018. It was drafted in line with the Commission's [better regulation guidelines](#) and builds on

- evidence and lessons learned from the interim evaluation of the preceding programme, Horizon 2020
- recommendations of the independent [high-level group](#), on maximising the impact of EU research and innovation
- results of a stakeholder consultation

Report | 26 July 2018 | Directorate-General for Research and Innovation

[A new horizon for Europe - impact assessment for Horizon Europe 2021-2027](#)

Book version of the impact assessment for Horizon Europe

## Evaluating Horizon Europe

Article 52 of the [Regulation establishing](#) Horizon Europe outlines that evaluations will be carried out in a timely manner to feed into the decision-making process on Horizon Europe and future framework programmes.

An interim evaluation of Horizon Europe should be carried out once there is enough information about its implementation. It must be done no later than 4 years after the start of the programme.

It will assess the programme's effect based on its indicators and targets and provide a detailed analysis of the degree to which the programme is

- relevant
- effective
- efficient
- providing enough EU added-value
- coherent with other EU policies

The evaluation will also identify deficiencies or problems. It will identify potential to improve the programme's activities and results and maximise the exploitation and impact of the programme.

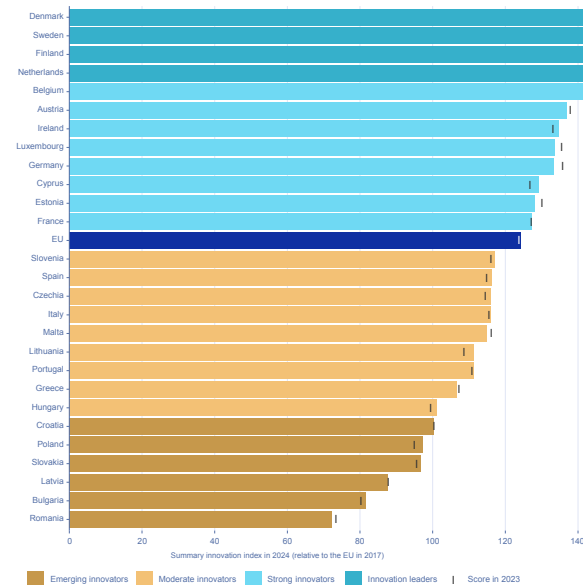
# European Innovation Scoreboard (1/4)



Between 2017 and 2024, the coefficient of variation, which indicates whether lower performing Member States are catching up with other Member States, shows a modest positive convergence trend at the EU level. This suggests that the innovation divide persists and only a slight decrease in the disparities in innovation performance is observed across the EU. A

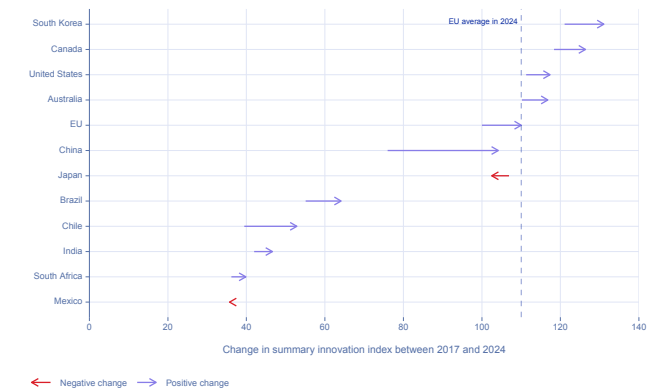
more detailed analysis is required to confirm this trend. This modest convergence in innovation performance is primarily observed in reduced differences within the groups of Strong Innovators and Moderate Innovators. However, divergence in innovation performance has increased within the Innovation Leaders and Emerging Innovators between 2017 and 2024.

Figure 2: Innovation performance of the EU Member States, relative to the EU in 2017 and compared to national performance in 2023.



Note: All performance scores are relative to that of the EU in 2017. Coloured bars show countries' performance in 2024, using the most recent data for 32 indicators. The vertical bars show performance in 2023, using the next most recent data.

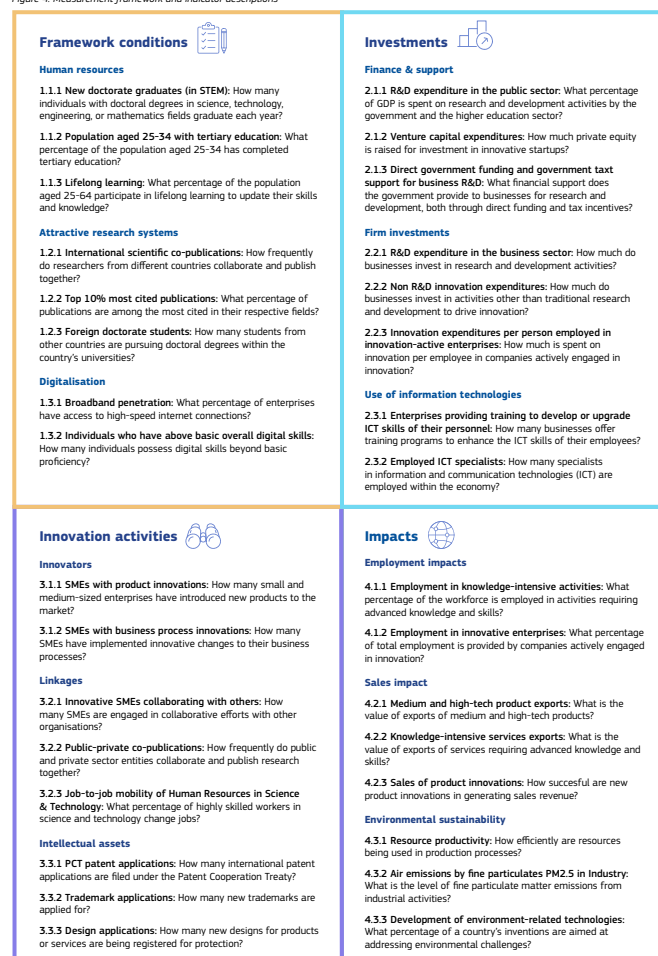
Figure 3: Innovation performance change from 2017 to 2024 - EU versus global competitors



Note: Performance change is measured as the difference between 2024 and 2017 scores, relative to that of the EU in 2017. Due to limited data availability for global competitors, scores are calculated using a smaller set of indicators.

# European Innovation Scoreboard (2/4)

Figure 4: Measurement framework and indicator descriptions

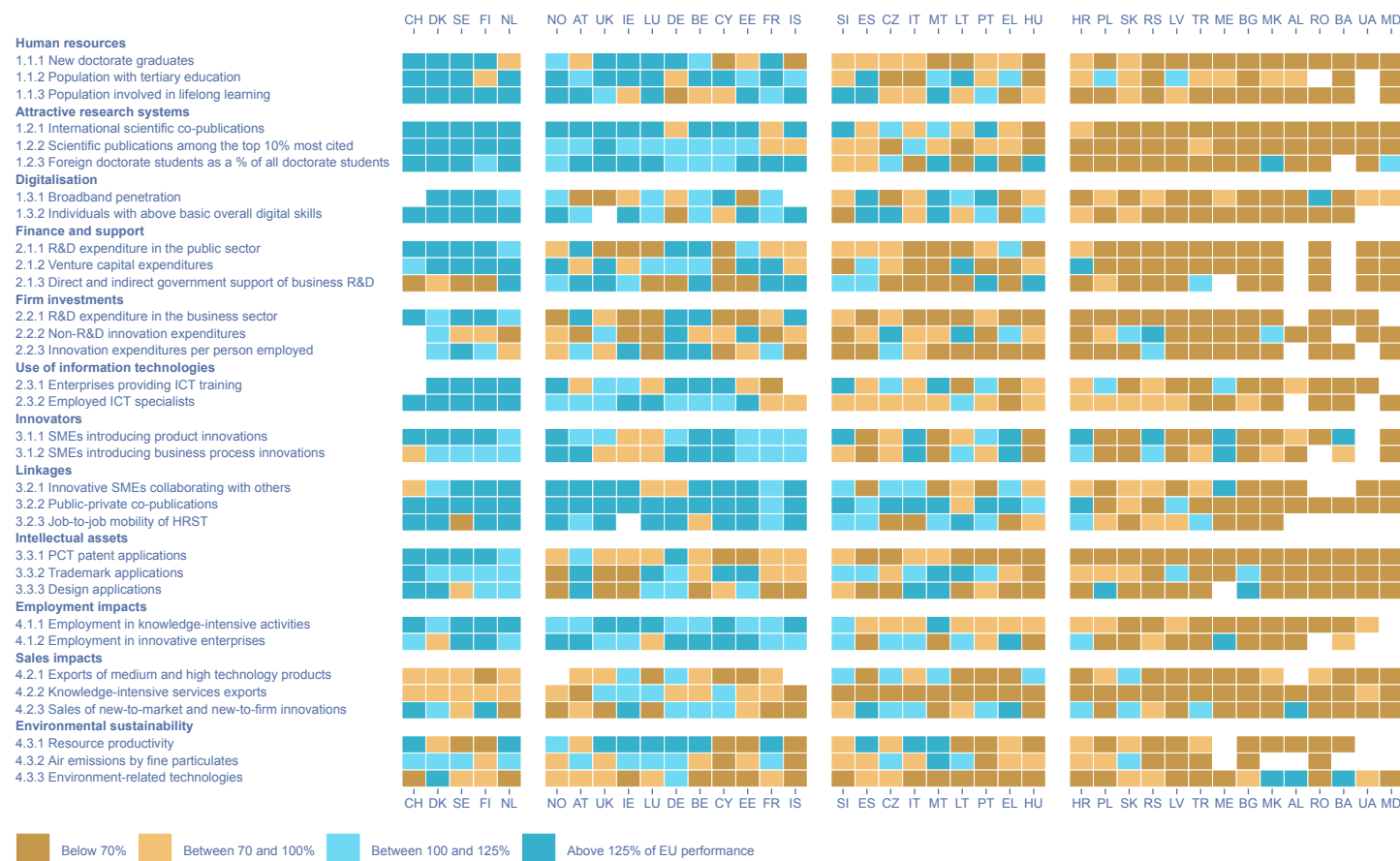


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# European Innovation Scoreboard (3/4)

Figure 28: Performance of EU Member States and neighbouring countries per indicator in 2024, compared to the EU average in 2024



# European Innovation Scoreboard (4/4)



GERMANY

Strong Innovator

Summary innovation index (relative to EU in 2017): **122.8**  
Rank: **12**

Change vs 2023: ▼-3.4 Change vs 2017: ▲3.8

Indicator	Performance relative to the EU in 2024	Performance change 2017-2024	Performance change 2023-2024
<b>SUMMARY INNOVATION INDEX</b>	<b>111.6</b>	<b>3.8</b>	<b>-3.4</b>
<b>Human resources</b>	<b>94.0</b>	<b>-5.2</b>	<b>-0.9</b>
New doctorate graduates	139.4	-23.1	-11.6
Population with tertiary education	74.4	8.9	10.1
Population involved in lifelong learning	61.9	6.1	2.0
<b>Attractive research systems</b>	<b>101.1</b>	<b>-1.5</b>	<b>-0.8</b>
International scientific co-publications	92.1	20.9	-3.7
Scientific publications among the top 10% most cited	107.1	-10.5	-0.7
Foreign doctorate students as a % of all doctorate students	100.6	-1.9	1.9
<b>Digitalisation</b>	<b>86.4</b>	<b>28.9</b>	<b>5.8</b>
Broadband penetration	100.0	-0.9	6.9
Individuals with above basic overall digital skills	67.7	4.2	4.2
<b>Finance and support</b>	<b>95.0</b>	<b>17.6</b>	<b>1.9</b>
R&D expenditure in the public sector	136.1	0.0	0.0
Venture capital expenditures	100.7	50.1	2.0
Direct and indirect government support of business R&D	40.1	5.8	5.0
<b>Firm investments</b>	<b>141.1</b>	<b>4.7</b>	<b>-7.0</b>
R&D expenditure in the business sector	143.7	7.5	1.5
Non-R&D innovation expenditures	135.0	4.5	-6.1
Innovation expenditures per person employed	144.1	1.8	-17.3
<b>Use of information technologies</b>	<b>115.3</b>	<b>-7.8</b>	<b>9.1</b>
Enterprises providing ICT training	128.2	-16.0	22.3
Employed ICT specialists	102.9	0.0	-3.2
<b>Innovators</b>	<b>119.0</b>	<b>13.4</b>	<b>-29.4</b>
SMEs introducing product innovations	104.3	-21.0	-41.4
SMEs introducing business process innovations	130.8	-5.6	-18.2
<b>Linkages</b>	<b>131.8</b>	<b>20.3</b>	<b>-11.3</b>
Innovative SMEs collaborating with others	94.0	38.5	-22.0
Public-private co-publications	185.3	50.1	-13.9
Job-to-job mobility of H&ST	141.6	0.0	0.0
<b>Intellectual assets</b>	<b>120.2</b>	<b>-19.2</b>	<b>-7.7</b>
PCT patent applications	130.3	-9.8	-1.5
Trademark applications	106.4	5.2	-5.7
Design applications	119.3	-50.8	-17.3
<b>Employment impacts</b>	<b>126.8</b>	<b>9.1</b>	<b>0.6</b>
Employment in knowledge-intensive activities	104.5	10.8	6.0
Employment in innovative enterprises	145.9	7.4	-4.5
<b>Sales impacts</b>	<b>101.3</b>	<b>0.3</b>	<b>-3.8</b>
Exports of medium and high technology products	108.0	-2.9	2.8
Knowledge-intensive services exports	90.2	-0.3	-9.7
Sales of new-to-market and new-to-firm innovations	108.1	5.8	-6.4
<b>Environmental sustainability</b>	<b>114.6</b>	<b>7.9</b>	<b>0.0</b>
Resource productivity	127.7	-46.1	6.3
Air emissions by fine particulates	116.0	1.3	0.5
Environment-related technologies	100.2	-13.7	-6.0

Emerging Innovators Moderate Innovators Strong Innovators Innovation Leaders

Germany is a Strong Innovator with performance at 111.6% of the EU average in 2024. Performance is above the average of the Strong Innovators (111.3%). Performance is increasing less than the EU (+10%).

## Relative strengths

- Public-private co-publications
- Employment in innovative enterprises
- Innovation expenditures per person employed

## Relative weaknesses

- Direct and indirect government support of business R&D
- Population involved in lifelong learning
- Individuals with above basic overall digital skills

## Strong increases since 2017

- Venture capital expenditures
- Broadband penetration
- Resource productivity

## Strong decreases since 2017

- Design applications
- New doctorate graduates
- SMEs introducing product innovations

## Strong increases since 2023

- Enterprises providing ICT training
- Population with tertiary education
- Broadband penetration

## Strong decreases since 2023

- SMEs introducing product innovations
- Innovative SMEs collaborating with others
- SMEs introducing business process innovations

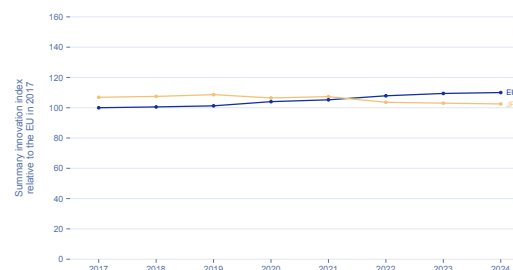
**Footnote:** The first data column shows scores relative to the EU in 2024, with colour codes indicating performance levels. The subsequent columns show performance changes over time, with scores relative to the EU in 2017, coloured in purple for positive change and red for negative change. As reference years differ between the first column (2024) and the last two columns (2017), scores cannot be directly compared or subtracted across these columns.

European Innovation Scoreboard – 2024



JAPAN

Japan is a global Moderate Innovator, with a performance level at 93.2% of that of the EU in 2024. Japan's performance has been decreasing since 2017 (-4.4%-points), including a further decline from 2023 (-0.5%-points). The country's strengths lie in *PCT patent applications*, *Trademark applications*, and *R&D expenditure in the business sector*. Japan's weaknesses are in *Scientific publications among the top 10% most cited*, *SMEs introducing product innovations*, and *Environment-related technologies*. The country's relative strengths over other global competitors can be seen in Figures 34-37.



## Performance in 2024 relative to the EU in 2024 and change in performance between 2017 and 2024

Japan	2024	Change	Structural differences	JP	EU
<b>New doctorate graduates</b>	47.4	-2.1	<b>Performance and structure of the economy</b>		
Population with tertiary education	174.2	31.7	GDP per capita	44507.8	52102.6
International scientific co-publications	64.5	20.7	Average annual GDP growth	1.8	4.7
Scientific publications among the top 10% most cited	24.2	-13.0	Employment share Agriculture	3.1	4.1
R&D expenditure in the public sector	91.5	-8.4	Employment share Industry	23.8	24.7
Direct and indirect government support of business R&D	58.9	-27.6	Employment share Services	75.1	71.1
R&D expenditure in the business sector	187.5	-10.1	Employment share Knowledge-intensive services	20	14.9
Employed ICT specialists	104.7	31.7	<b>Business and entrepreneurship</b>		
SMEs introducing product innovations	51.7	-17.3	Total early-stage Entrepreneurial Activity (TEA)	6.3	6.8
SMEs introducing business process innovations	60.3	-18.5	FDI net inflows	1	1.9
Innovative SMEs collaborating with others	146.3	-1337.4	Top R&D spending enterprises per 10 million population	20	8.4
Public-private co-publications	84.9	11.5	Top R&D spending enterprises, average R&D spending	451.8	528
PCT patent applications	311.0	16.7	Number of unicorns	7	107
Trademark applications	201.7	146.8	Buyer sophistication	5	3.6
Design applications	111.9	19.8	<b>Governance and policy framework</b>		
Exports of medium and high technology products	114.3	-5.9	Corruption Perceptions Index	73	63.6
Knowledge-intensive services exports	109.8	22.3	Basic-school entrepreneurial education and training	2.3	2.6
Air emissions by fine particulates	96.8	-5.6	Government procurement of advanced technology products	4	3.4
Environment-related technologies	44.1	-57.0	<b>Demography</b>		
			Rule of law	1.5	1
			Population size	125.7	447.4
			Average annual population growth	-0.5	0
			Population density	346.2	112

**Footnote:** The top three scores and the three largest improvements are highlighted in purple. The bottom three scores and the three smallest improvements (or largest decreases) are highlighted in red.

# ERA: European Research Area (1/3)

research-and-innovation.ec.europa.eu

An official website of the European Union How do you know? ▾

European Commission

EN

Search

Research and innovation

Home > Strategy on research and innovation > Strategy 2020-2024 > Our digital future > European research area

## European research area (ERA)

The European Research Area (ERA), ERAvCorona action plan, recommendations to EU countries in the European Semester, timeline to revitalise ERA, news

PAGE CONTENTS

- What is ERA?
- ERA in the regions
- Recommendations to EU countries
- ERA progress reports
- Documents
- Latest
- Events

### What is ERA?

The European Research Area (ERA) is the ambition to create a single, borderless market for research, innovation and technology across the EU.

By strongly aligning their research policies and programmes, European countries become more effective on the research sector. The ERA is based on excellence and

- prioritises investments and reforms in research and innovation
- boosts market uptake
- strengthens mobility of researchers and free flow of knowledge and technology
- improves access to excellence

The ERA policy framework is based on

1. the ERA governance, including the ERA Forum, ERAC and the Council;
2. the Pact for Research and Innovation in Europe;
3. an ERA Policy Agenda with concrete actions.

[More information on ERA, its governance and implementation](#)

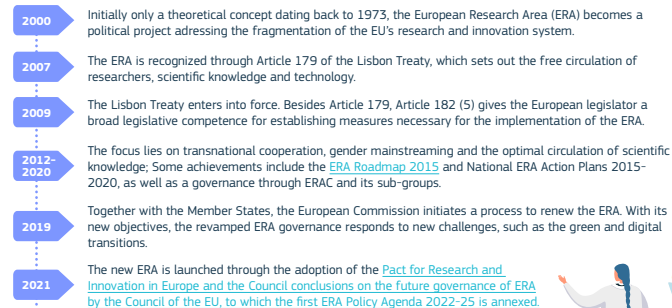
# ERA: European Research Area (2/3)



## What is the European Research Area?



## ERA-Milestones

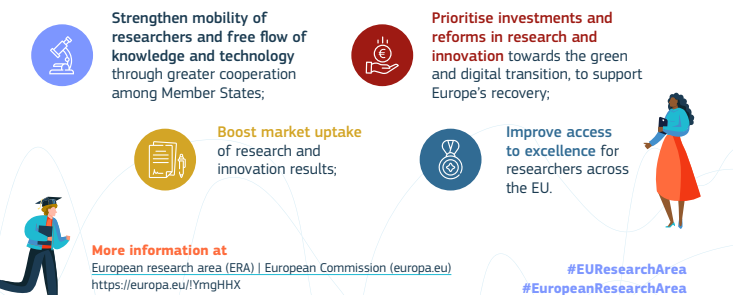


## ERA policy framework

Through its governance, the Pact and the ERA Policy Agenda, the ERA policy framework sets up the broader parameters, for example working modalities and institutional settings, through which the ERA objectives are implemented.

Pact for Research and Innovation in Europe	ERA Policy Agenda	ERA Governance
<ul style="list-style-type: none"> <li>Provides the long-term vision.</li> <li>Sets out principles for research and innovation:                             <ul style="list-style-type: none"> <li>Upholding values</li> <li>Working better</li> <li>Working together</li> </ul> </li> <li>Defines 14 priority areas for joint action, ranging from open science to coordination of research and innovation investments, as a long-term framework for the ERA Policy Agendas.</li> <li>Outlines research and development targets.</li> </ul>	<ul style="list-style-type: none"> <li>Describes concrete actions, based on the priority areas of the Pact. These are implemented jointly with the Member States Horizon Europe associated countries and stakeholders</li> <li>The ERA Policy Agenda 2022-2024 encompasses 20 actions, based on the 16 priority areas of the Pact.</li> </ul>	<ul style="list-style-type: none"> <li><b>Council of the EU</b> adopts the ERA Policy Agenda.</li> <li><b>European Research Area and Innovation Committee (ERAC)</b> provides high-level strategic advice.</li> <li><b>ERA Forum (+subgroups)</b> brings together the Commission, EU countries, Horizon Europe associated countries and research and innovation stakeholders in an expert group to coordinate and implement the ERA Policy Agenda.</li> </ul>
ERA Monitoring		
The implementation of the actions is monitored by the European Commission to insure a proper basis for evidence-informed policy.		

## In the European Research Area we will:



# ERA: European Research Area (3/3)



## History of the European Research Area

+++  
+++  
+++

### 20 YEARS OF WORKING TOGETHER TO STIMULATE COHERENT RESEARCH POLICY IN EUROPE



**“My ambition is to revitalise the European Research Area, both to make it fit for purpose in a globally changing environment and to tackle its longstanding challenges.”**

Commissioner **Mariya Gabriel**

#### Phase 1 MORE COHERENCE, LESS FRAGMENTATION | 2000 – 2007

##### Towards a European Research Area

*‘The problem is not money but **fragmentation** of the efforts carried out at European level... So it is imperative that we mobilise resources and create a movement towards coherence of research policies in Europe. This is why I have launched the idea of a European Research Area.’*

Commissioner **Philippe Busquin**, 18 November 2000

###### FOCUS

A better organisation of research in Europe by addressing the fragmentation, isolation and compartmentalisation of national research systems and the lack of policy coordination between Member States and the EU.

###### PRIORITIES

- Large scale research infrastructures
- coherent implementation of national and European research activities
- mobile human resources
- cohesion
- attractiveness of the European R&I system
- common social and ethical values

###### ACHIEVEMENTS

- New instruments of FP6, ERA-NET
- Article 185 and 187 initiatives
- EURAXESS
- European Charter for Researchers
- the Code of Conduct for Recruitment of Researchers

#### Phase 2 THE FIFTH FREEDOM TO BECOME A REALITY | 2007 – 2012

##### The ERA: new perspectives

*‘We are gradually lifting the barriers to the freedom of movement of knowledge: we are making the “5th Freedom” a reality... Investing in R&D and innovation is not a supplementary burden but an indispensable investment in future jobs and growth.’*

Commissioner **Janez Potocnik**, 2 December 2008

###### FOCUS

Consolidating the partnership between the Commission and the Member States and positioning knowledge as the Fifth Freedom.

###### PRIORITIES

- Research mobility at all levels,
- world-class infrastructures,
- excellent research institutions forming clusters and engaging in public-private partnerships;
- effective knowledge sharing,
- well-coordinated research programmes
- priorities through joint programming, and opening of ERA to the World

###### ACHIEVEMENTS

- Ljubljana process
- ERA Vision 2020
- Lund Declaration
- Joint Programming in research
- Commission Recommendation on the management of IP in knowledge transfer activities and
- Code of Practice for universities and other public research organisations
- European Partnership for Researchers
- Strategic European framework for international S&T cooperation
- legal framework for ERIC, a European Research Infrastructure Consortium
- Treaty recognition of ERA through Article 179 of the Lisbon Treaty

#### Phase 3 STRENGTHENING THE PARTNERSHIP BETWEEN THE COMMISSION, MEMBER STATES AND STAKEHOLDERS | 2012 – 2020

##### A reinforced ERA partnership for excellence and growth

*Talk to any business leader and they will tell you that the quality of the research base is a major factor in their investment decisions. In today's economy, no Member State or region can afford to neglect its knowledge base.’*

Commissioner **Maire Geoghegan-Quinn**, 17 July 2012

###### FOCUS

Creating a genuine single market for knowledge, research and innovation.

###### PRIORITIES

- more effective national research systems
- optimal transnational cooperation and competition
- an open labour market for researchers
- gender equality & gender mainstreaming
- optimal circulation, access to and transfer of scientific knowledge
- international cooperation

###### ACHIEVEMENTS

- ERA Roadmap 2015 and ERA National Action Plans 2015-2020
- Governance through ERAC and dedicated ERAC configurations and subgroups
- ERA Progress Reports

Research and Innovation

Recent Consideration and Development of Frameworks for STI Policies in EU and OECD, and their Implications for Japan

Meeting, Science, Technology and Innovation Policy Group (STIPG) and Research Strategy and Evaluation Group (RSEG), Japan Society for Research Policy and Innovation Management (JSRPIM), GRIPS, Tokyo and Online (Zoom), 30 August 2024

Tomohiro Ijichi, Faculty of Innovation Studies, Seijo University

# COUNCIL RECOMMENDATION (EU) 2021/2122 of 26 November 2021 on a Pact for Research and Innovation in Europe

2.12.2021

EN

Official Journal of the European Union

L 431/1

## II

(Non-legislative acts)

## RECOMMENDATIONS

### COUNCIL RECOMMENDATION (EU) 2021/2122 of 26 November 2021 on a Pact for Research and Innovation in Europe

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 292 in conjunction with Article 182(3) thereof,

Having regard to the proposal from the European Commission,

Whereas:

- (1) On 30 September 2020, the Commission adopted a Communication on 'A New ERA for Research and Innovation', in which it sets out a new vision for the European Research Area (ERA) and announces the intention to propose a Pact for Research and Innovation (R&I) in Europe.
- (2) The Council Conclusions on the New European Research Area, adopted on 1 December 2020, call on the Member States and the Commission to develop in 2021 an ERA policy agenda and a multi-level governance model to deliver on the new ambition for the ERA.
- (3) Over the past two decades, the implementation of the ERA has contributed to some major achievements in areas such as research infrastructures, open science, transnational and international cooperation, gender balance in R&I, joint programming, research careers and the mobility of researchers, as well as to structural reforms. However, the pace of progress on R&I investment at Union level has slowed down overall recently, and more needs to be done to reverse that trend.
- (4) In order to address global challenges and support Europe's competitiveness, international cooperation through ERA should take into account the priorities of the Union's external relations, based on multilateralism and balanced reciprocal openness and should promote a level playing field and reciprocity underpinned by fundamental values and common framework conditions.
- (5) To deliver on an ERA fit for the future, it is necessary to strengthen coordination and to deepen coherence between the Union, national and regional policies. The Commission Communication 'A New ERA for Research and Innovation' therefore calls for mobilising Member States around key common principles and values and for identifying shared priority areas for action. This is particularly relevant at a time when increased and more focused national and regional funding and reforms are necessary to accelerate the contribution to the United Nations (UN) Sustainable Development Goals, the green transition and digital transformation and to implement the Paris Agreement goals, in line with European Green Deal objectives.
- (6) A common set of principles and values is necessary to reaffirm solid foundations for R&I in the Union, underlining values (ethics and integrity; freedom of scientific research; gender equality and equal opportunities), setting out better working conditions (free circulation of researchers, knowledge and technology across the Union; pursuit of excellence; value creation and impact of R&I) and increasing cooperation (coordination, coherence, commitment; global outreach; inclusiveness; societal responsibility).

# COUNCIL RECOMMENDATION of 18 December 2023 on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe



Official Journal  
of the European Union

EN  
C series

C/2023/1640

29.12.2023

## COUNCIL RECOMMENDATION of 18 December 2023

on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe

(C/2023/1640)

THE COUNCIL OF THE EUROPEAN UNION,

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

Having regard to the proposal from the European Commission,

Whereas:

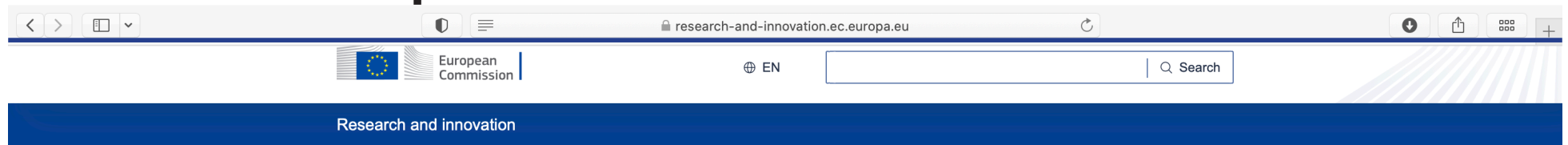
- (1) Commission Recommendation 2005/251/EC<sup>(1)</sup> played an important role in supporting researchers and research careers in the Union. The European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers ('Charter and Code for Researchers') have become reference points for researchers and employers or funders of researchers, contributing to strengthening the European Research Area (ERA) and supporting the development of a more attractive, open and sustainable Union labour market for researchers. A European procedure certifying the commitment and progress of an institution towards the implementation of the principles of the Charter and Code for Researchers, the Human Resources Strategy for Researchers (HRS4R), is in place since 2008.
- (2) The Commission Communication entitled 'European Skills Agenda for sustainable competitiveness, social fairness and resilience', adopted on 1 July 2020<sup>(2)</sup>, underlines that researchers are at the forefront of science and innovation, and that they need specific sets of skills to have successful careers within and outside academia. It foresees the definition of a taxonomy of skills for researchers to allow, inter alia, the statistical monitoring of brain circulation, the development of a European Competence Framework for Researchers, and support for equipping researchers with the skills needed for inter-sectoral mobility. The first flagship action of the Skills Agenda, the Union Pact for Skills, supports upskilling and reskilling through collaboration between industry, education and training providers, social partners and public authorities in largescale skills partnerships.
- (3) The Commission Communication entitled 'A New ERA for Research and Innovation', adopted on 30 September 2020<sup>(3)</sup>, acknowledges that career development conditions to attract and retain the best researchers in the Union are necessary in the global race for talents, and that precarious employment, notably for early-career researchers, has not been adequately addressed over the past years. It also highlights the frequent misalignment between researchers' skills and the needs of society and the economy, and the importance to train and incentivise researchers to pursue a career outside academia, involving industry. That Communication points out that in order to strengthen research careers in Europe, there is a need for a toolbox of measures aiming at the recognition of researchers' skills, the development of a competence framework for researchers, enhanced mobility and exchange mechanisms between academia and industry, targeted training opportunities, and a one-stop-shop portal that researchers from the public and private sectors can all access for a wide range of support services. That Communication also foresees the improvement of the research assessment system to rightfully and properly recognise diversity of career paths and activities that better respond to the requirements of society.

<sup>(1)</sup> Commission Recommendation 2005/251/EC of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers (OJ L 75, 22.3.2005, p. 67).

<sup>(2)</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'European Skills Agenda for sustainable competitiveness, social fairness and resilience', COM(2020) 274 final.

<sup>(3)</sup> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'A new ERA for Research and Innovation', COM(2020) 628 final.

# ERA and the European Semester



[Home](#) > ... > [News](#) > [All research and innovation news](#) > The key role of Research and Innovation in the European Semester Spring Package

NEWS ARTICLE | 19 June 2024 | Directorate-General for Research and Innovation | 1 min read

## The key role of Research and Innovation in the European Semester Spring Package

The European Commission has released the European Semester [Spring Package](#). The Package underscores the role of research and innovation in shaping Europe's future, driving macroeconomic stability, productivity, environmental sustainability and fairness across Europe.

Anna Panagopoulou, Director for ERA & Innovation at DG R&I said:

"The special attention given to R&I in this year's Spring Package is a clear and timely reminder that, in the current challenging fiscal context, R&I should remain a priority and that future-oriented, growth-enhancing investments should be preserved and reinforced!"

The publication underlines that there is still untapped potential in the Member States when it comes to R&I performance. As a result, R&I has been identified as a 'key priority ahead' in nearly all Country Reports. For the first time since COVID-19, the Commission is proposing Country-Specific Recommendations on R&I for several Member States.

The analysis reveals three areas where Europe needs further efforts:

1. foster scientific excellence, attract talent and boost investment in R&I
2. tighten science-business linkages
3. stimulate business innovation

Tailored responses to these challenges adapted to the unique research and innovation ecosystems of each Member State, are crucial. This approach is essential for Europe to achieve its target of allocating 3% of GDP target for R&D.

The European Commission and DG R&I stand ready to bring its support to every Member State through our collaborative instruments. This includes the expert-lead [Policy Support Facility](#) and the open, country-tailored, bottom-up [Enhanced Dialogues](#).

The strong R&I coverage in the European Semester is a promising signal to turn the fifth freedom into reality through a strong and well-functioning European Research Area.

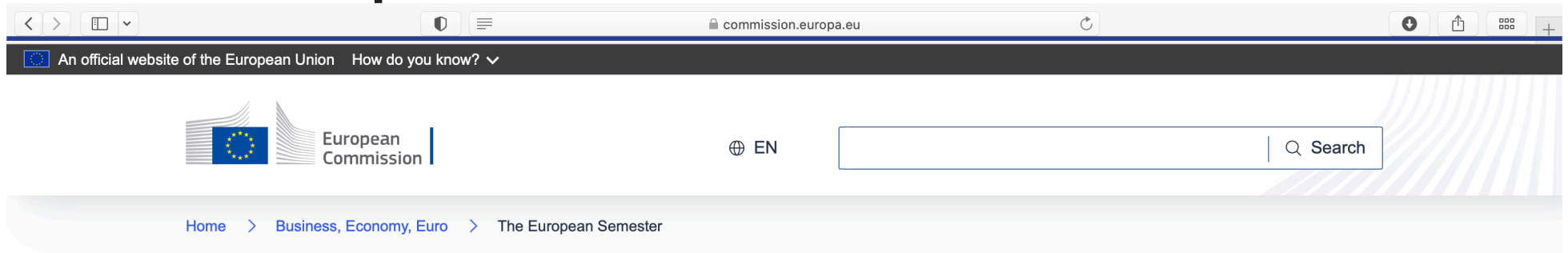
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**Tomohiro Ijichi**, Faculty of Innovation Studies, Seijo University



# (参考) The European Semester



## The European Semester

The European Semester is the European Union's framework for the coordination and surveillance of economic and social policies.

### PAGE CONTENTS

- What is the European Semester?
- The European Semester framework
- The European Semester timeline
- European Semester in your country

## What is the European Semester?

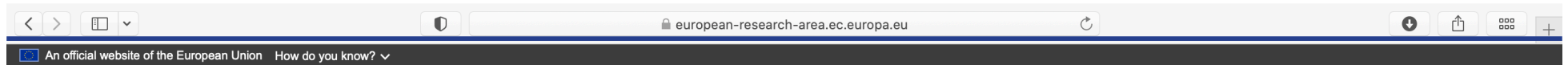
The European Semester is an annual exercise that coordinates the EU's economic and social policies. During the Semester, EU Member States align their budgetary and economic policies with the objectives and rules agreed upon at EU level.

By achieving stronger economic and social coordination, the European Semester aims to ensure sustainable economic growth, job creation, macroeconomic stability and sound public finances across the EU.

The Semester timetable follows a recurring cycle, starting in autumn with the presentation of economic and social priorities by the European Commission. It concludes in October of the subsequent year when EU Member States submit their draft budgetary plans. Following this, the cycle starts over again.

## The European Semester framework

# ERA Performance Indicators



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## European Research Area Platform

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Home > ERA Performance Indicators

## ERA Performance Indicators

This part of the ERA Policy Platform provides you with a comprehensive overview of the progress made towards achieving the ERA priorities through a set of indicators. Each indicator represents a proxy for one of the 16 priority areas for joint action as defined in the [Pact for R&I in Europe](#). Two additional indicators (Indicator #1 and Indicator #2) measure progress in the European R&I system more generally.

More information on the indicators and the methodology applied can be found in the [ERA Scoreboard report 2023](#) and the [ERA Dashboard report 2023](#) as well as the accompanying methodology reports.



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# Research and Innovation Careers Observatory (ReICO)

ERA Talent Platform

Research and Innovation Careers Observatory (ReICO)

**Overview:**

The purpose of the Observatory is to become the “place to go” for policymakers, organizations and researchers for trustworthy information on R&I talent and careers. The objective is to develop a living information repository for monitoring trends in research and innovation talent development, careers and circulation in EU and OECD countries and other major economies. This action will combine the best of current EU and OECD data in one single place, in addition to collecting new data, while further enhancing their use and relevance for policymakers, organisations, and researchers.

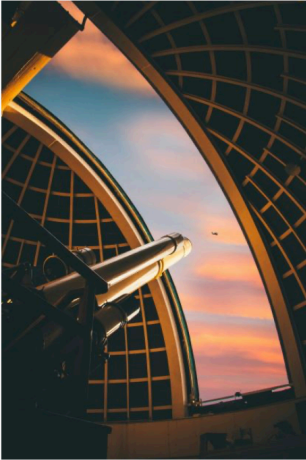
The Observatory is proposed to monitor three dimensions of research careers:

- Researcher's skills and trainings
- Researcher's jobs & careers
- Researcher's mobility

It will enable monitoring of national systems of remuneration and employment conditions, social security policies, portability of grants and pensions, research mobility patterns of researchers both geographically and intersectorally, paying particular attention to gender and intersectional differences in research careers.

The Action is framed in the context of the WIDERA work programme and contributes to the monitoring of the implementation of the Council Recommendation on a European framework to attract and retain research, innovation, and entrepreneurial talents in Europe, in short, the “Framework for research careers”. It will provide evidence on the effectiveness of measures aiming at strengthening the attractiveness of research careers and at a balanced talent circulation. Expected results of this initiative include improved monitoring of the Framework's implementation and systemic reforms, fostering a common understanding among EU Member States and research organisations about the data needs for advancing research careers, and enhancing the attractiveness of research organisations to top talent by providing accessible data that supports career development.

**The Observatory is currently under development. Data are currently being collected and will be available in the second half of 2025.**



ERA Talent Platform

This site is managed by the Directorate-General for Research and Innovation

Contact us

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Tomohiro Ijichi, Faculty of Innovation Studies, Seijo University

# OECD における最近の議論

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- CSTP (科学技術政策委員会) 閣僚級会合 (2024 年 4 月) から
- いくつかの keywords:
  - Transformation
  - Transition
  - Emerging technologies
  - ...

# OECD/CSTP Ministerial Meeting (1/4)



On 24 April 2024, high-level science and technology representatives of more than 50 countries and international organizations adhered to a Ministerial Declaration that emphasizes the need for transformative science, technology, and innovation policies that foster sustainability and inclusivity. Ministers also welcomed a new OECD Framework for the Anticipatory Governance of Emerging Technologies that promotes responsible innovation to help realize the transformative potential of emerging technologies while managing potential risks.

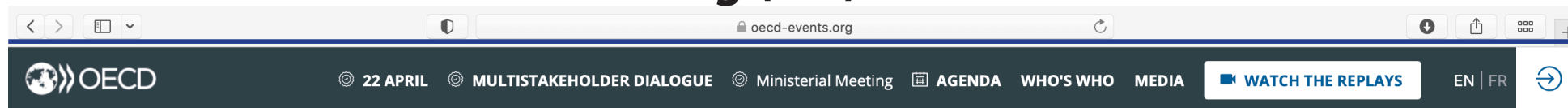


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# OECD/CSTP Ministerial Meeting (2/4)



## Learn more about the key issues



### International co-operation and competition

Patterns of international collaboration in science, technology and innovation (STI) are changing. Recent decades witnessed a significant increase in international collaboration in science, as evidenced by the rising trend in international co-authorship of scientific publications. However...

[Read more](#)

### A transformative STI agenda for the green transition

Without a major acceleration in low-carbon innovation, reaching net-zero emissions by 2050 will be unachievable. Reaching this target requires rapid large-scale deployment of available technologies, such as wind and solar, as well as the development and widespread use of technologies that are...

[Read more](#)

### Anticipatory governance of emerging technologies

Today's technological landscape presents not only unprecedented opportunities, but formidable challenges and deep uncertainties. Even as we invest heavily in emerging technologies to drive ecological, social, and economic transformations, we are confronted by governance challenges.

[Read more](#)

### International action for global challenges: making Open Science a reality

'Open Science' combines principles and practices to make scientific knowledge openly available, accessible, and reusable for everyone. Many benefits can stem from such openness. To achieve these benefits...

[Read more](#)

## Access the key documents



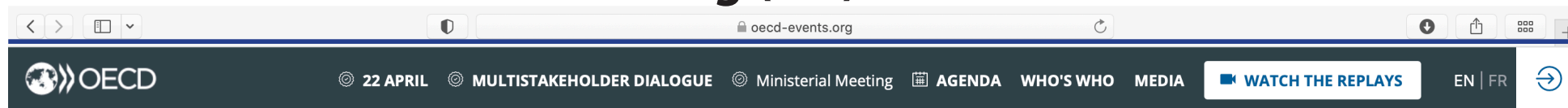
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# OECD/CSTP Ministerial Meeting (3/4)



Access the key documents

		
<b>Transformative Agenda for STI Policy</b> Access the <a href="#">Agenda for Transformative Science, Technology and Innovation Policies</a> <a href="#">Read the Highlights version</a>	<b>Framework for Anticipatory Governance of Emerging Technologies</b> Access the <a href="#">Framework for Anticipatory Governance of Emerging Technologies</a> <a href="#">Read the Highlights version</a>	<b>Declaration on Transformative Science, Technology and Innovation Policies for a Sustainable and Inclusive Future</b> <a href="#">Access the Declaration</a>



# OECD/CSTP Ministerial Meeting (4/4)

<p>OECD SCIENCE, TECHNOLOGY AND INDUSTRY POLICY APRIL 2024 No. 164</p> <p><b>AGENDA FOR TRANSFORMATIVE SCIENCE, TECHNOLOGY, AND INNOVATION POLICIES</b></p>	<p>OECD SCIENCE, TECHNOLOGY AND INDUSTRY POLICY APRIL 2024 No. 165</p> <p><b>FRAMEWORK FOR ANTICIPATORY GOVERNANCE OF EMERGING TECHNOLOGIES</b></p>	 <p>Declaration on Transformative Science, Technology and Innovation Policies for a Sustainable and Inclusive Future</p>  <p><b>OECD Legal Instruments</b></p> 
		

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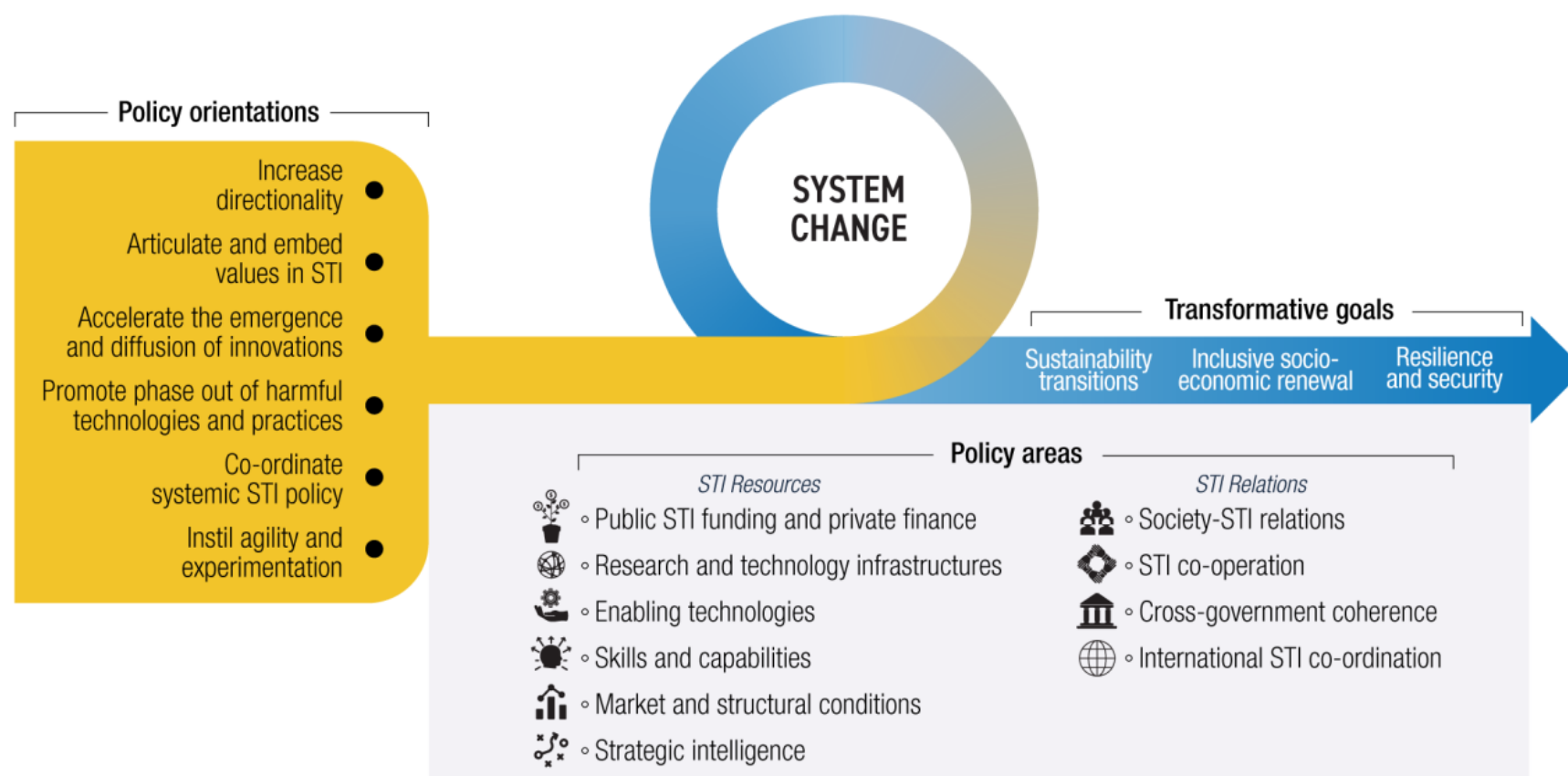
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# The Transformative Agenda's transformative goals, policy orientations and STI policy areas

Figure 1.1. The Transformative Agenda's transformative goals, policy orientations and STI policy areas



Note: The figure provides a visualisation of the different pieces of the Transformative Agenda and their interactions.

# 我が国における“共通”制度に係る STI 政策に対応した変化

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- 独立行政法人制度：国立研究開発法人という区分の導入

## (その他いくつかの所見)

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# 中長期的展望（例．マクロ経済見通し）の位置づけの「弱さ」？

---

- EU 及び EU メンバー国
  - The European Semester という枠組み
- 日本
  - 「経済財政運営と改革の基本方針」
  - 「経済白書」（「年次経済財政報告（経済財政政策担当大臣報告）」）

# 政策関係機関内部における構造的な専門的組織能力の「不足」？

---

- 「専門性を必要とする職や機関」や  
「全体を俯瞰して見ることを必要とする職や機関」について  
相対的にあまり顧みられていない ... ?
  - 例. 評価, 統計, ...
- 機構・定員管理
  - 「国の行政機関の機構・定員管理に関する方針」
  - 「府省縦割り」
  - 府省間分散型業務における維持・拡充等の “ 難しさ ”

# STI 政策の枠組み《再掲》

---

政策枠組みの「幅」ではなく、そもそも「次元」が異なるのでは？

- 施策そのもの

VS.

- 施策

+ 施策を展開する枠組み《／政策過程》

(アセスメント, モニタリング, 評価;

多様なステークホルダー;

厳格な意思決定過程; 法令の形式, ...)

+ 施策の展開及び政策の対象に関して測定し表示する方法