

An illustration featuring a lighthouse with a red and white striped base and a yellow light, standing on a blue globe. A path of white steps leads up to the lighthouse, with several stylized people in various outfits (a graduate, a man in a yellow shirt, a woman in a white lab coat, a woman in a red dress, and a man in a suit) walking along it. The background consists of concentric green and yellow circles and blue wavy lines.

*LEAPS - 5th Plenary Meeting, 26 to
28 October 2022*

Paul Scherrer Institute

**ERA Policy Agenda 2022-2024
and the
New European Innovation Agenda**

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European Research Area (ERA)

The new ERA



Pact for research and innovation in Europe

- **10 values and principles**
- **4 priority areas**
 - Deepening ERA
 - Broadening ERA and relevance
 - Amplifying access to excellence
 - Advancing R&I investments and reforms
- **Research and development targets**



ERA Policy Agenda

- Designed to contribute to the priority areas of the Pact for R&I, setting out the voluntary **ERA actions** which are defined and coordinated at Union level.
- **20 actions for 2022-24**



ERA Governance

ERA Forum (+ subgroups)

Expert group for coordination and implementation of the ERA, together with EU countries, Associated countries and stakeholders

ERAC

high-level strategic policy body, providing advice

Council

Decision making
“Owner” of Policy Agenda



ERA Monitoring

- Ensure a proper basis for **evidence informed policy making**
- Provide evidence and analysis **in the context of the European Semester**

ERA Policy Agenda 2022-2024

DEEPENING A TRULY FUNCTIONING INTERNAL MARKET FOR KNOWLEDGE

1. Open sharing of knowledge, incl. EOSC
2. Data legislation fit for research
3. Reform of research assessment
4. Strengthen research careers
5. Gender equality and inclusiveness
6. Protect academic freedom
7. Better knowledge valorisation
8. Research infrastructures
9. International cooperation, reciprocity

TOGETHER FOR TWIN GREEN AND DIGITAL TRANSITION, AND INCREASING SOCIETY'S PARTICIPATION IN THE ERA

10. R&I Missions and Partnerships for ERA
11. Green energy transformation
12. Transition of industrial ecosystems
13. Empower higher education institutions
14. Bring science closer to society



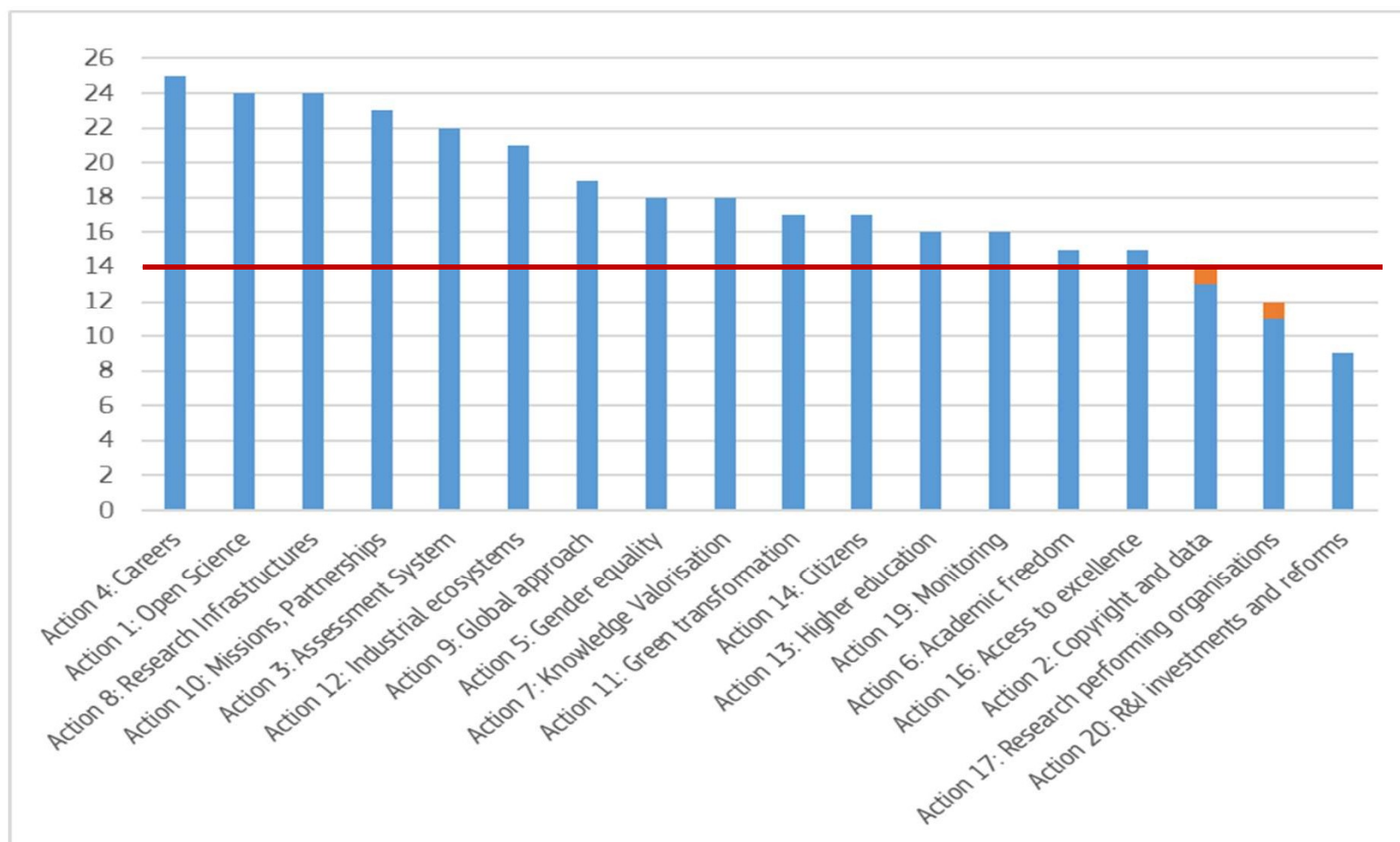
AMPLIFYING ACCESS TO RESEARCH AND INNOVATION EXCELLENCE ACROSS THE UNION

15. Regional and national R&I ecosystems
16. EU-wide access to excellence
17. Strategic capacity of public RPOs/RFOs

ADVANCING CONCERTED R&I INVESTMENTS AND REFORMS

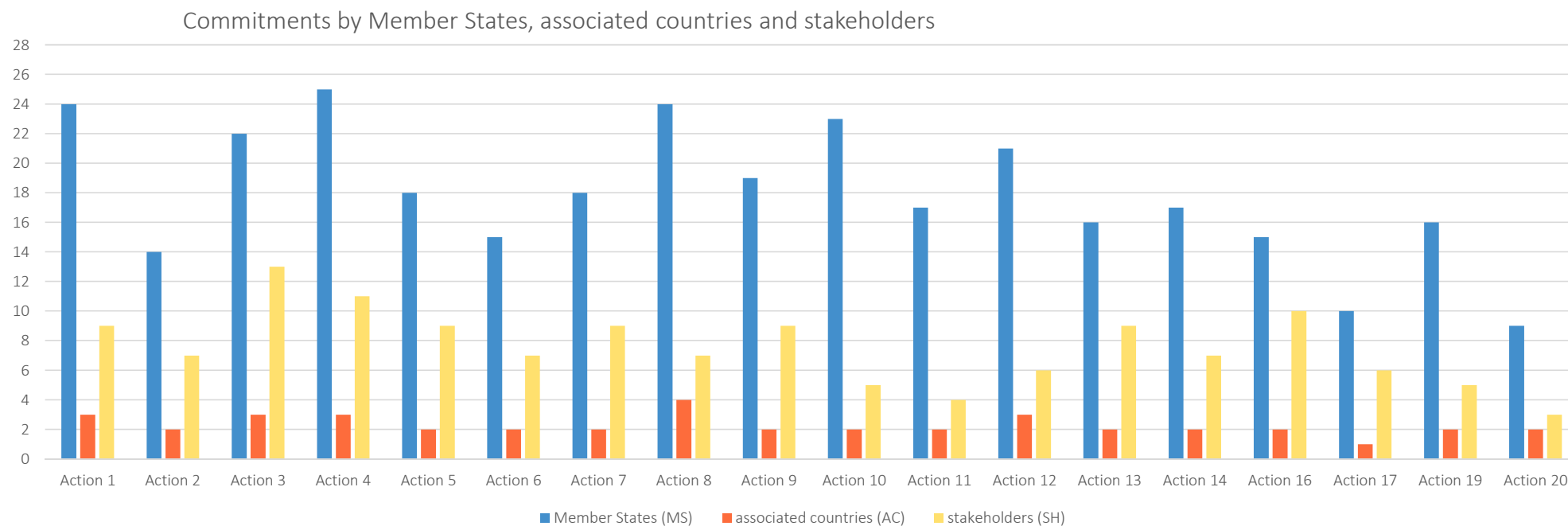
18. Coordination national support for ERA
19. ERA monitoring mechanism
20. Prioritisation and coordination of R&I investments and reforms

Member States' commitment per action



23-09-2022

Commitments by MS, AC & stakeholders



Overall, **action 8** received commitments by **24 Member States; 4 Associated Countries; 7 Stakeholders**

Research infrastructures

ERA Policy Agenda: Research Infrastructures

Deepening a truly functioning internal market for knowledge

Action 8 - Strengthen sustainability, accessibility and resilience of research infrastructures in the ERA

Set of foreseen activities

- **Strategic analysis** of the European Research Infrastructure **landscape**;
- Broader and more sustainable **access** for all countries to European research infrastructures and their services and revision of the European Charter of Access to Research Infrastructures;
- Update of the ESFRI **Roadmap** and implementation of the research infrastructures performance **monitoring** framework;
- Report on the **ERIC Framework**;
- Increased **cooperation** between research infrastructures, e-infrastructures and stakeholders, including through EOSC;

ESFRI State-of-play

- Analysis on the basis of concept notes and reports
 - **Landscape** analysis and update of roadmap methodology; **Access & Charter of Access to Ris**; **Stakeholder Engagement** strategy; **RI impact**; **Industrial** co-operation & synergies with Tis; **International** Cooperation; **RI funding**
- ESFRI input to the EC **Circular industrial technologies** roadmap completed
- **Monitoring** of ESFRI landmarks
 - ESFRI Landmark monitoring guide is publicly available, workshop held in September
 - Submission of reports by 1st batch Landmarks in January 2023
 - Final reports by panels & review by monitoring committee June 2023
- **Stakeholder Forum**
 - Meetup in Brussels on 15 September 2022; High-level event in  March 2022 with High-level event

ERIC Regulation

- Council invited Commission to submit its third 'ERIC Report by 2022' on the implementation of the ERIC Framework Regulation
- ERA Policy Agenda **Action 8** - Strengthen sustainability, accessibility and resilience of research infrastructures in the ERA
- Assessment of the implementation of the ERIC Regulation by the Commission **Expert Group** chaired by Carlo Rizzuto (published in October 2021)

Consultation and engagement of stakeholders:

- 2021
 - Workshop (September)
 - ERIC Committee exchange of views (October)
 - ESFRI Forum (December)
- 2022:
 - ERIC Committee provided written input based on a structured template
 - ERIC Forum invited to contribute (same structured template)

ERA Policy Agenda: R&I for the green/digital transition

Taking up together the challenges posed by the twin green and digital transition, and increasing society's participation in the ERA

Objectives

- Create a stronger **link** between **research & innovation** and **industrial** policies
- Encourage systematic **transfer of R&I results** into EU industrial ecosystems, also through the development of an appropriate technology infrastructure landscape.
- Mobilise private and public **R&I investments** for a faster development and deployment of key green technologies, technology infrastructures, knowledge, and business solutions to move ahead in the digital and green twin transitions and develop more resilience.
- Foster the **preparedness of the key actors and industrial ecosystems** concerned, to adopt and work with new knowledge, skills, infrastructures and technologies.

Action 12 – Accelerate the green/digital transition of Europe's key industrial ecosystems

Challenges to be addressed

Strengthening and accelerating the transfer of R&I to the economy

Increase private and public investments on R&I in sectors where low-carbon technologies/circular technologies are needed

Digital transition of research infrastructures

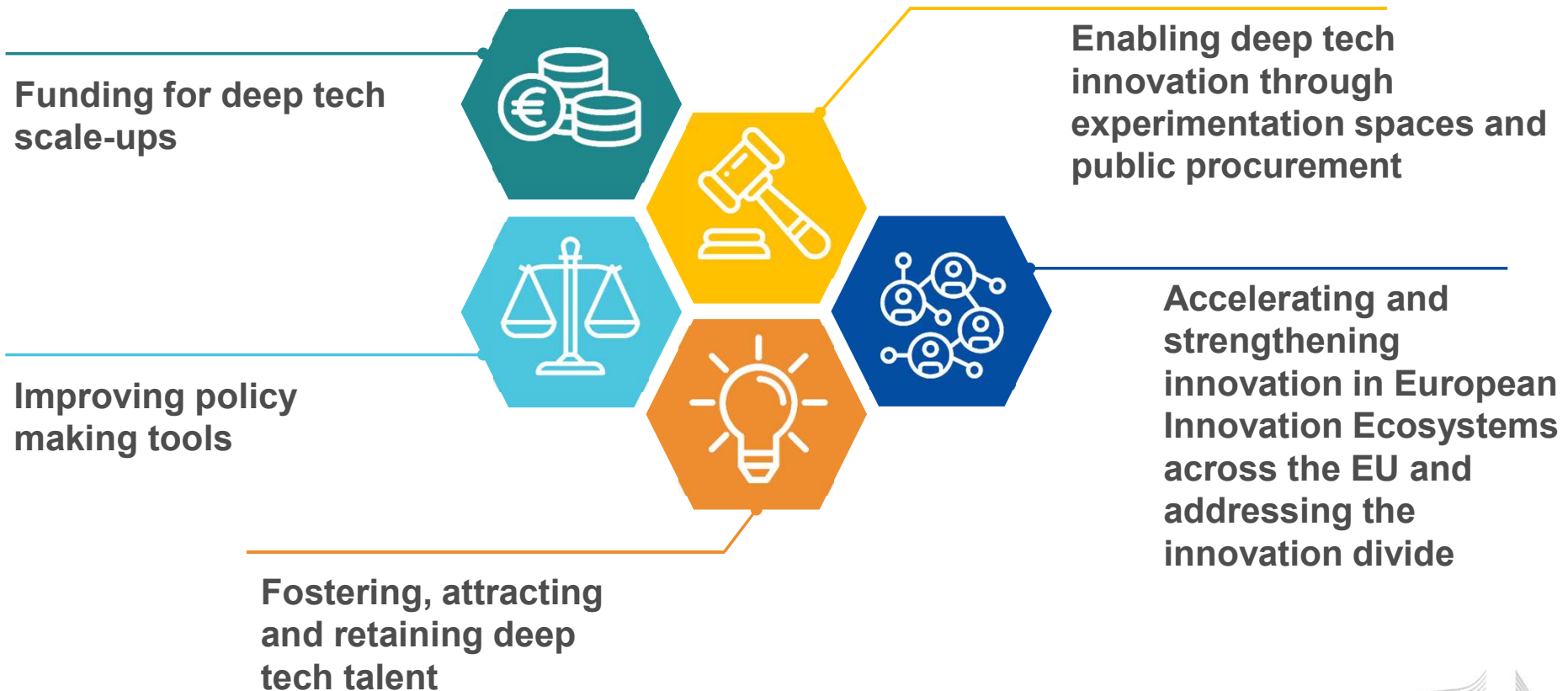
- Digital transition has multiple dimensions
 - digitalisation of instrumentation, remote access and remote operation; integration of data and information from RIs e.g. in digital twins; technology development + value chains; Skills and training
- Coordination and interconnection between physical and digital infrastructures
 - User-driven digital developments based on RI roadmaps and relying on EOSC interoperability requirements
- ESFRI RIs generate/process big data and need data-intensive capacities: data providers and users of EOSC data and services
 - cooperation between ESFRI and EOSC facilitating coherent and complementary strategies as well as joint activities

Greening of research infrastructures

- New technologies and solutions for reducing the environmental and climate footprint of RIs
- Optimisation of resource and energy consumption integrated through the full life cycle of research infrastructures
- Increased long-term sustainability of European research infrastructures
- Identify common interoperable methodologies to assess environmental impact and strategies to reduce it, efficiency gains in the broader ecosystem

New European Innovation Agenda (NEIA)

New European Innovation Agenda: five flagships



New European Innovation Agenda

Accelerating & strengthening innovation in European Innovation Ecosystems & addressing the innovation divide

Challenges

- Innovation divide between regions has increased
- Diffusion of innovations and the uptake of breakthrough technologies including through inter-regional linkages remain sub-optimal
- Despite the existing structures and services there is a complex and fragmented European innovation ecosystem, hindering the ability of innovators to leverage the support and opportunities
- Unexploited potential in regional innovation ecosystems

Actions

1. Establish and connect regional tech innovation valleys
2. Commission notice on synergies between Horizon Europe and European Regional Development Fund programme
3. Double the number of Hydrogen Valleys
4. Establish Innospace – one stop shop for innovation ecosystems' players
5. Launch Scaleup 100

New European Innovation Agenda - Fostering, attracting & retaining talents

Challenges

- EU appears to be losing the global race for talent with skilled researchers moving to US
- EU's working age population is shrinking due to demographic change
- High concentrations of talents in main cities of EU MS leading to disparity between the needs of the economy and the availability of talent
- Entrepreneurial networks and training is not equally accessible
- Employee ownership remains at low levels across Europe

Actions

1. Launch EIT deep tech talent initiative
2. Launch innovation intern scheme
3. Launch an EU Talent Pool to help businesses, including startups, find non-EU talents
4. Establish Women Entrepreneurship and Leadership scheme
5. Best practice exchange on startup employees' stock options
6. Education and Innovation practice community
7. Launch Erasmus+ Alliances for Innovation
8. Launch Digital Europe call to train experts in future-oriented fields

Next steps

- An implementation roadmap is currently being prepared, highlighting next steps, future deliverables and units in charge of implementation for each of the 25 actions proposed in the Agenda.
- Draft Council Conclusions on the Agenda were presented at a meeting of the Council's Working Party on Research under the Czech Presidency on 22 September. The CC will be adopted at COMPET Council in December.

Programmes

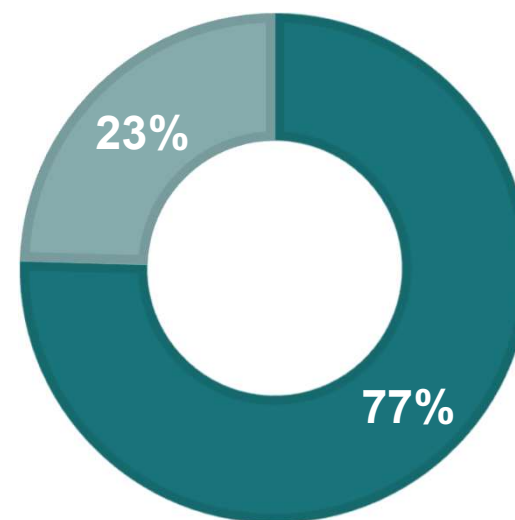
The RRF, a powerful tool for R&I investments & reforms

Total amount of R&I investments in the RRP*s:

47 bn EUR

R&I MEASURES

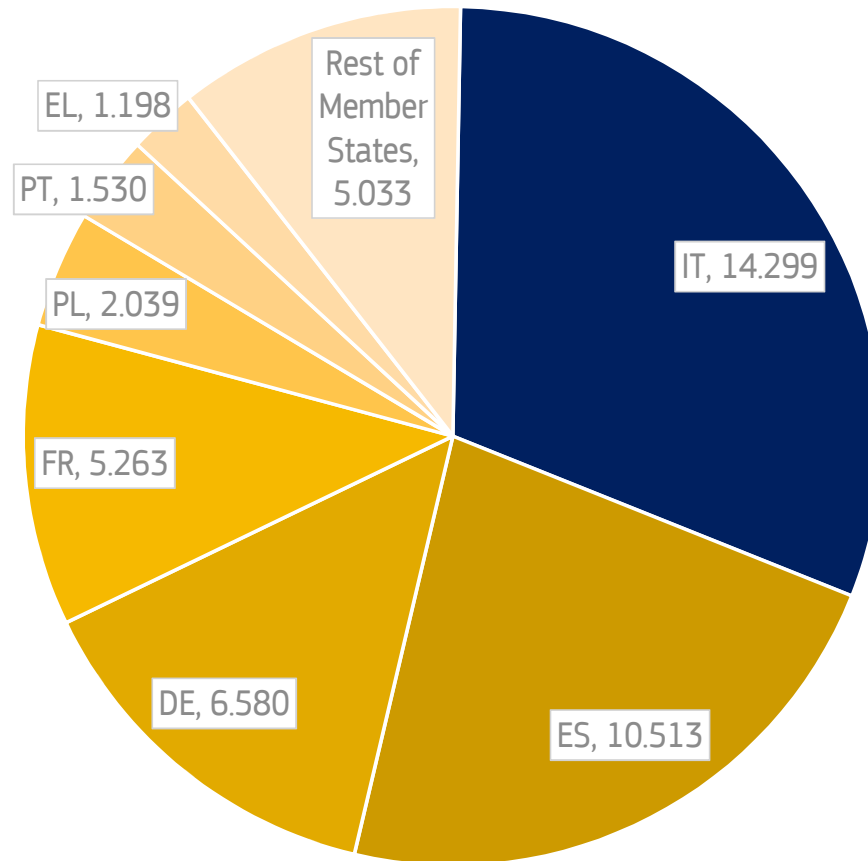
■ R&I investments ■ R&I reforms



** Based on the 25 RRP*s approved by the Council by September 2022*

Total expenditure on R&I per Member State

In EUR millions

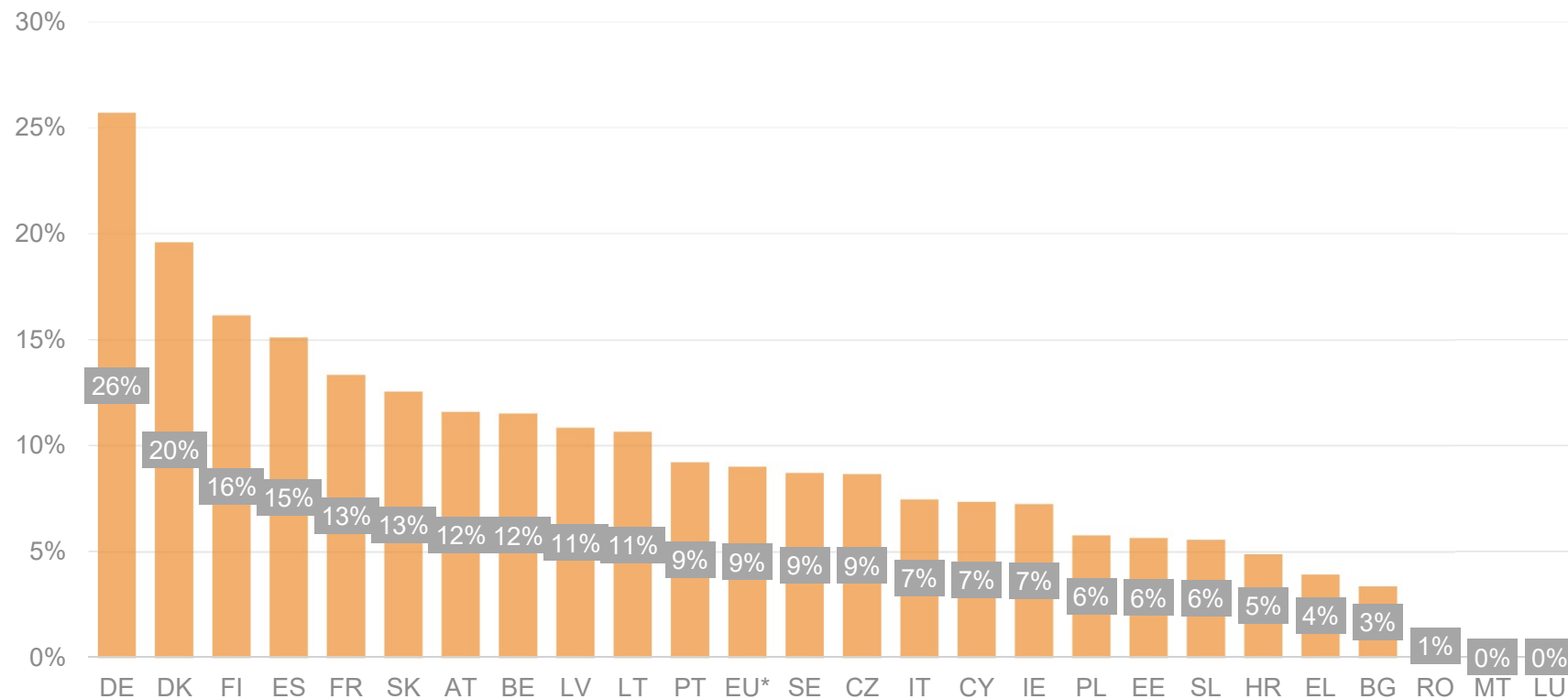


This chart shows estimated expenditure based on the pillar tagging methodology for the Recovery and Resilience Scoreboard and corresponds to the measures allocated to the policy areas “R&D&I in green activities”, “Digital-related measures in R&D&I” and “R&D&I” as primary or secondary policy areas.

It is based on the 25 national Plans approved by the Council by September 2022

Very R&I-rich RRPs

SHARE OF EXPENDITURE ON R&I
 % OF TOTAL ALLOCATION PER MEMBER STATE



Based on the 25 RRPs approved by the Council by September 2022

The RRF, a unique opportunity to strengthen national R&I systems in all their dimensions

All RRFs include R&I measures, aiming notably at:

- strengthening the **public science base**
- upgrading research & technology **infrastructures**
- enhancing the attractiveness of **research careers** and tackling brain drain
- fostering **science-business cooperation** and **technology transfer**
- Supporting **business innovation** and **access to finance** for innovative firms

RIs in Horizon Europe – Five destinations

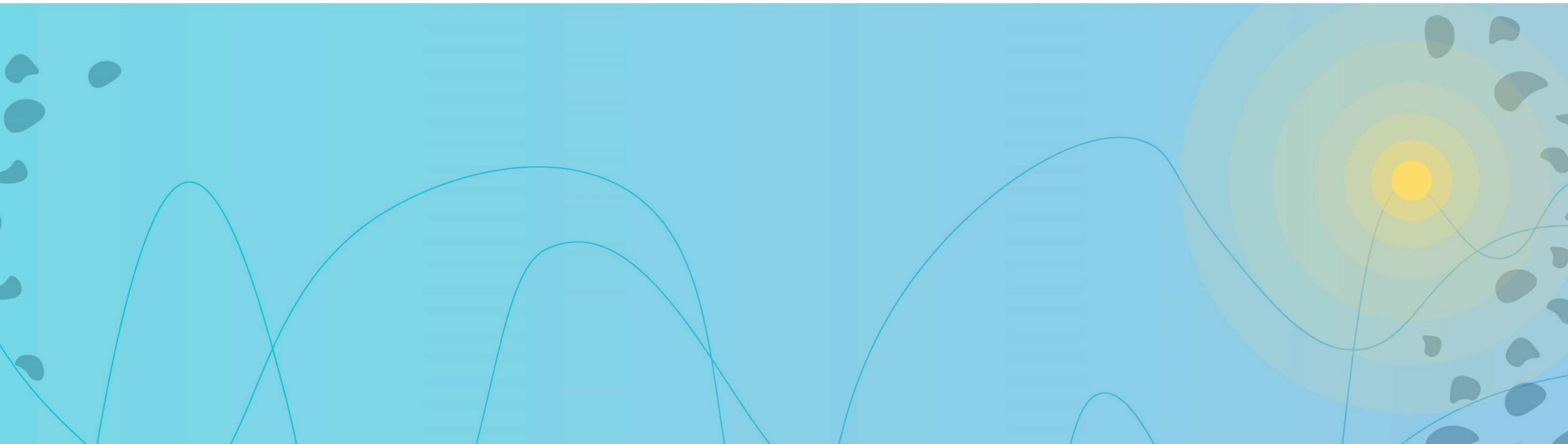
- **INFRADEV :** Developing, consolidating and optimising European RIs landscape, maintaining global leadership
- **INFRAEOSC :** Enabling an operational, open and FAIR EOSC ecosystem
- **INFRASERV :** RI services to support health research, accelerate the green and digital transformation, and advance frontier knowledge
- **INFRATECH :** Next generation of scientific instruments, tools and methods and advanced digital solutions
- **INFRAKET :** Network connectivity - enabler for collaboration without boundaries

R&I support to research infrastructures: challenges and opportunities

- **Systemic links** among different European RI processes and establishing R&I priorities
 - e.g. ESFRI landscape analysis, existing roadmap processes (national, networks),
- **Optimising needs** for curiosity-driven and science-based solutions and services
 - identifying the right balance and strategic approach
- Structured and systemic involvement of **stakeholders**
 - to anticipate R&I needs
- Untap the potential of more **strategic investments** including through Horizon Europe

Next steps

- Q4 2022: Publication of WP 2023-2024 and opening of calls
- Q4 2022: opening consultation interim evaluation Horizon Europe
- 2024: interim evaluation Horizon Europe



Thank you!