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ERA Country Report 2024
The Netherlands

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Report

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ERA Country Report 2024: The Netherlands

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ERA Country Report 2024
The Netherlands

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Table of contents

Key takeaways 3

1. National context 4

2. Status of the Implementation of the ERA Policy Agenda 5

ERA Priority 1: Deepening a truly functioning internal market for knowledge 6

ERA Priority 2: Taking up together the green transition and digital transformation and other challenges with impact on society and increasing society's participation in the ERA 9

ERA Priority 3: Enhancing access to research and innovation excellence across the Union and enhancing interconnections between innovation ecosystems across the Union 12

ERA Priority 4: Advancing concerted research and innovation investments and reforms 12

3. Contribution of ERA Actions to national performance in reaching ERA objectives 12

4. Effects of ERA Action implementation on the national R&I system ... 18

5. Conclusions 19

6. References 20

Annex 1 – List of ERA Dashboard Indicators 21

Key takeaways

- The Netherlands does not have a formal ERA strategy, but its aims and policies show very strong synergies with ERA Priorities. The Netherlands has committed to 16 ERA Actions, covering all four ERA Priority Areas.

- Key developments for the period mid-2023 to end-2024 include, among other initiatives and results, the Open Science NL Work Programme (allocating EUR 20,5 million of funding), the Recognition & Rewards programme and Dutch activity in participating in and establishing various Research Infrastructures.

- Besides the above research-related developments, the Netherlands is according to the European Innovation Scoreboard also one of the Innovation Leaders in the EU and is, all in all, largely on track with its R&I plans. Most ERA Dashboard Indicators confirm these statements.

- The Dutch mission-driven innovation approach has persisted during the reporting period. The country continues to stimulate progress in the green and digital twin transition through many initiatives and subsidies, involving research, public and private (including SMEs) organisations.

1. National context

The Netherlands is an EU Member State with a population size of 18 million. It had a GDP of EUR 56.140 million in 2023, which is considerably higher than the EU average. However, the Dutch Gross Domestic Expenditure on R&D (GERD) as a share of GDP is slightly lower than the average of the EU27. The Dutch researcher base is concentrated in the private sector.[1] The Netherlands has 6.391 researchers per million inhabitants, which is also significantly higher than the EU average. See Table 1 below for more information and references.

Table 1 Structural Key Indicators

Indicator	EU27	Netherlands		
	2023	2023	Average 2018-2020	Average 2021-2023
GDP in euro per capita, current prices	35 790.00	56 140.00	45 786.67	51 266.67
Gross Domestic Expenditure on R&D (GERD) as a share of GDP	2.27	2.18	2.17	2.19
Government Budget Allocations for R&D (GBARD) as share of GDP	0.73	0.88	0.72	0.82
Business Enterprise expenditure on R&D (BERD) as a share of GDP	1.52	1.49	1.45	1.48
Expenditure on R&D procurement as a percentage of GDP	0.06	0.13	/	0.13
Size of the population (million)	448.80	17.81	17.29	17.63
Researchers (in FTE) per million inhabitants	4 681.34	6 390.55	5 691.63	6 284.14
Share of female researchers, all sectors of performance (%)	33.71	/	27.83	/

Source: Annex 1

In the European Innovation Scoreboard 2024[2], the Netherlands is categorised as one of the *innovation leaders* in the EU, performing at 125.7 percent of the EU average. According to the Scoreboard, the country's strengths include the number of public-private co-publications and the size of the population involved in lifelong learning. Also, compared to 2023, strong increases of exports of medium and high technology products are reported. Relative weaknesses of the Netherlands include environment-related technologies and non-R&D innovation expenditures.

Being a relatively small country, the Dutch R&I policy is traditionally geared towards enabling research excellence and "world-class science".[3] Over the years, the Dutch government has stimulated innovation and societal impact through, among other initiatives, a mission-driven innovation policy and topical approaches like the Biotech Booster. R&I projects under this policy include the private sector (including Small and Medium Enterprises (SMEs)) and societal stakeholders. The "Knowledge and Innovation Covenant" (2024-2027)[4] is the most recent coordinating document underlining this ambition (more on this in Chapter 2), but also the National Science Agenda (*Nationale Wetenschapsagenda: NWA)* is important in this context. Other priorities are open science, including public engagement, recognising and rewarding researchers, research security, practice-based research and science communication.

[1] See Eurostat (2024). R&D personnel by sector of performance, professional position and sexhttps://doi.org/10.2908/RD_P_PERSOCC
[2] European Innovation Scoreboard 2024, Country Profile Netherlands.
[3] https://www.rathenau.nl/en/science-figures/policy-and-structure/infrastructure-knowledge/science-policy-and-innovation-policy, accessed 24-01-2025.
[4] Kennis- en Innovatieconvenant 2024-2027.

Relevant policy initiatives and recent developments will be presented in the subsequent chapter.

A main challenge for R&I is the shortage of skills and workers in several sectors (e.g., related to the energy- and climate transition), which is why initiatives related to Lifelong Learning are given prioritisation.[5] In addition, governmental budget cuts in the R&I ecosystem are currently implemented, except for practice based research, putting pressure on the capacity of research institutes.[6]

Key players in the Dutch R&I ecosystem are the Ministry of Education, Culture & Science *(Onderwijs, Cultuur & Wetenschap: OCW*), the Ministry of Economic Affairs (Economische Zaken: EZ), the Dutch Research Council (*Nederlandse Organisatie voor Wetenschappelijk Onderzoek: NWO),* the Netherlands Enterprise Agency (*Rijksdienst voor Ondernemend Nederland: RVO),* ZonMw (the research funder for healthcare and well-being), the Universities of the Netherlands (*UNL*), the Netherlands Association of Universities of Applied Sciences (*Vereniging Hogescholen*) and the Royal Netherlands Academy of Sciences (*Koninklijke Nederlandse Akademie van Wetenschappen: KNAW*). There are 14 public universities and 36 public universities of applied sciences in the Netherlands. Other research institutes include 14 *Rijkskennisinstellingen (*Governmental Knowledge Institutes)[7] and five *To2*'s (Applied Research Institutes).[8] Furthermore, there are various advisory bodies on R&I policy such as the Advisory Council for Science, Technology and Innovation *(Adviesraad voor Wetenschap, Technologie en Innovatie: AWTI)* and Rathenau Institute.

2. Status of the Implementation of the ERA Policy Agenda

Chapter 2 briefly summarises **new developments in the Netherlands since the publication of the ERA Country Report 2023**, based on the commitments to ERA Actions (Table 2). The findings are based on qualitative desk research and interviews.

The Netherlands **has committed to 16 ERA Actions, covering all four Priority Areas** (see Table 2). It decided to do so because many of its initiatives and priorities have synergies with ERA. The implementation of ERA Actions is mainly coordinated through OCW. As there is no formal national ERA action plan or strategy, the authority who has the lead on a specific ERA Action-related topic, is also made responsible by the Dutch government to synergise – where reasonable – the Dutch efforts with the ERA Action and act as the European point of contact for the respective ERA Action. In practice, merely a few adaptions to the Dutch R&I policy were necessary in order to align them with European priorities.

[5] See for instance the Lifelong Learning-Katalysator: https://www.llokatalysator.nl.
[6] https://thepienews.com/dutch-higher-education-reduced-budget-cuts/, accessed 22-01-2025.
[7] https://www.rijksoverheid.nl/contact/contactgids/rijkskennisinstellingen-rki, accessed 22-01-2025.
[8] https://to2-federatie.nl/, accessed 22-01-2025.

Table 2 Commitment to ERA Actions

1: Deepening a truly functioning internal market for knowledge								
1. Enable Open Science, including through EOSC	2. Propose an EU copyright and data legislative framework for research	3. Reform the Assessment System for research, researchers and institutions	4. Promote attractive research careers, talent circulation and mobility	5. Promote gender equality and foster inclusiveness	6. Protect academic freedom in Europe	7. Upgrade EU guidance for a better knowledge valorisation	8. Strengthen research infrastructures	9. Promote international cooperation
2: Taking up together the challenges posed by the twin green and digital transition, and increasing society's participation in the ERA					**3: Amplifying access R&I excellence across the Union**		**4: Advancing concerted research and innovation investments and reforms**	
10. Make EU R&I missions and partnerships key contributors to the ERA	11. An ERA for green transformation	12. Accelerate the green & digital transition of Europe's key industrial ecosystems	13. Empower Higher Education Institutions	14. Bring Science closer to citizens	16. Improve EU-wide access to excellence	17. Enhance public research institutions' strategic capacity	19. Establish an ERA monitoring system	

Source: European Commission (Note: Actions 15, 18 and 20 were not implemented)

ERA Priority 1: Deepening a truly functioning internal market for knowledge

ERA Action 1) Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)

The Open Science NL consortium, established at the start of 2023 (as mentioned in the previous report), has launched its first Work Programme (2024-2025) in December 2023. It has adopted five priority areas (Capacity building for Open Science (1); Open Science infrastructure (2); Robust research processes (3), Evidence base for Open Science (4), and; Empowering Open Science communities (5)).[9] In 2024, EUR 20.5 million were allocated to a wide range of initiatives. Most of those funds (EUR 17.5 million) were dedicated to the Open Science infrastructure. This initiative was received with great interest and its call for proposal received 174 submissions. Other initiatives include the Open Science Festival, preparations for the citizen science hubs (calls), support of citizen science NL and the National Training Platform for Research Data Professionals.[10] While preparations for the Work Programme 2026-2027 are already underway, budget cuts may jeopardise the impact of the programme. In the interview, OCW emphasises that they do not plan to change the priority of this ERA Action, regardless of these cuts.

ERA Action 2) Propose an EU copyright and data legislative and regulatory framework fit for research

In 2023, 92 percent of peer-reviewed research papers of Dutch Universities where published Open Access. This is an increase of 3 percent as opposed to 2022 and brings the Netherlands closer to UNL's goal of 100 percent Open Access publications.[11]

ERA Action 3) Advance towards the reform of the Assessment System for research, researchers and

Since mid-2023, many developments have taken place around the *Recognition & Rewards* programme.[12] First, the aforementioned Open Science NL investments were a big boost for the Recognition & Rewards programme, as Open Science is one of its key priorities in assessing quality of research and institutes. In addition, in April 2024, the first Recognition & Rewards Barometer was published, enabling to assess

[9] Open Science NL, Work Programme Open Science NL 2024-2025 (2023).
[10] Information provided through email exchanges with OCW.
[11] https://www.universiteitenvannederland.nl/files/publications/UNL%2024063%20U%20-%20OCW-%20Monitor%20Open%20Access%202023%20en%20vervolg.pdf, accessed 21-01-2025.
[12] https://recognitionrewards.nl/, accessed 21-01-2025.

institutions to improve their quality, performance and impact

the state of Recognition & Rewards in institutes.[13] The barometer shows that while 40 percent of the researchers is familiar with the programme, and a third notices (cultural) changes since the establishment of the programme, around 25 percent does not feel recognised or rewarded for the work that they do.

Another noteworthy development is the Recognition and Rewards Festival, which took place in November 2024, with a focus on "D*eveloping diversified and talented teams*".[14]

Furthermore, OCW recognises an increased international interest in the Strategic Evaluation Protocol (SEP, introduced in the previous report). As a result, the ministry has received a lot of foreign requests for presentations on SEP and Recognition & Rewards.

ERA Action 4) Promote attractive and sustainable research careers, balanced talent circulation and international, transdisciplinary and intersectoral mobility across the ERA

Not many developments have been notified regarding this specific ERA Action. However, OCW emphasises that part of this Action is also included in the Recognition & Rewards programme.

While there is increased political and societal pressure to reduce the number of foreign university students, OCW stated in the interview that this is in principle separate from the ambition to attract international research talent.

ERA Action 5) Promote gender equality and foster inclusiveness, taking note of the Ljubljana declaration

The 2023 edition of the 'Monitor Female Professors'[15] states that the share of female (as opposed to male) professors in 2022 is, while slightly increasing, with 27,6 percent still considerably low.[16]

In addition, the midterm-evaluation – published in November 2023 – of the 'National action plan for greater diversity and inclusion in higher education and research' concluded that the plan has generated mixed results since its adoption in 2020.[17] In sum, developments regarding its five goals are the following:

1. *Embed diversity more effectively in existing instruments:* Progress has been made, but fine tuning of the aim is recommended.
2. *Monitor diversity more widely:* Little progress has been made. Goal should have a higher (i.e. the highest) priority.
3. *Establish an award system to provide frameworks and set the direction for policy*: No or barely any progress, goal should be adapted to fit better with existing policy on and understanding of diversity.
4. *Bring together and support institutional diversity plans:* Realised.
5. *Establish a national centre of excellence:* No or limited progress.

As a response to these findings, then Minister of OCW Robert Dijkgraaf announced the abolishment of goal 3 of the National Action Plan, but emphasised the urgency of the other goals and had several meetings

[13] https://recognitionrewards.nl/wp-content/uploads/2024/06/2024-Culture-barometer-Recognition-Rewards-first-report.pdf, accessed 21-01-2025.
[14] https://recognitionrewards.nl/2024/09/09/recognition-rewards-festival-2024-2/, accessed 21-01-2025.
[15] Landelijk Netwerk Vrouwelijke Hoogleraren, Monitor Vrouwelijke Hoogleraren 2023.
[16] An analysis of the reasons for this low share is presented in the report: Technopolis, Onderzoek naar de uitval van vrouwen in de wetenschap (2022), https://open.overheid.nl/documenten/ronl-0115a5cc2a947101957ae7eaa013e403ca60cb0c/pdf, accessed 24-01-2025.
[17] Ferman A et al., Midterm-evaluatie Nationaal Actieplan voor meer diversiteit en inclusie in het hoger onderwijs en onderzoek (2023).

with stakeholders to encourage them to take concrete actions (such as better monitoring of diversity-related data).[18]

ERA Action 6) Deepening the ERA through protecting academic freedom in Europe

According to OCW, the continuation of the Dutch 'SafeScience' Platform (*Wetenschap Veilig,* presented in the previous report) underlines the importance of this ERA Action for the ministry.[19] An increasing number of SafeScience officers are appointed by knowledge institutes. In addition, the Netherlands are advising on European level on this subject. It has also played an important role in the establishment of the UNESCO Safety of Scientists Programme at the beginning of 2024.[20]

ERA Action 7) Upgrade EU guidance for better knowledge valorisation

The Netherlands continues to valorise research through their mission-driven 'Topsectoren' policy[21], through which research, governmental and societal organisations and the private sector are working in line with 25 future-oriented missions. The renewed 'Knowledge and Innovation Covenant 2024-2027' aims to coordinate the actions of the Dutch R&I ecosystem towards mission-driven innovation policy. National and regional governments, knowledge institutes and the private sector have reserved EUR 5.7 billion in 2024 for activities in line with eight thematical Knowledge and Innovation Agenda's (KIAs) in 2024.[22]

Another noteworthy initiative is the 'Perspectief Round 2024/2025', in where NWO's Domain Applied and Engineering Sciences (AES) invites researchers and users (e.g. companies) to submit proposals for research projects that generate economic and societal impact (total budget of EUR 26 million).[23]

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

Because of budget cuts, less extra funds are available for Research Infrastructures (RI). This means that while the structural resources for RI (EUR 40 million per year) remain the same, less new funding is left and this has impact on how many projects can be awarded.[24]

At the end of 2023, LOFAR-ERIC (LOw Frequency ARray European Research Infrastructure Consortium – ERIC is a legal entity for managing European RIs) was launched in the Netherlands. In addition, the establishment of EHRI-ERIC (Holocaust studies) in the Netherlands is almost finalised (pending final decision by the EC). Also, the Netherlands is preparing the proposals for DISSCo-ERIC (natural science collections) and GGP-ERIC (population and family dynamics) , which seat is also envisioned to be in the Netherlands. Discussions of the establishment of IBISBA-ERIC (industrial biotechnology and biomanufacturing), EMPHASIS-ERIC (plant phenotyping) and eLTER-ERIC (ecosystem research) are ongoing, although for these RIs, the Netherlands aims for a membership rather than hosts the RI as leading participant. The Einstein Telescope RI (gravitational waves) has been given a top priority in the past years, as the Netherlands plans to host this RI in the future.[25]

[18] https://open.overheid.nl/documenten/dpc-218f0632d5e1592030cc10c42ea03b36d6c6e247/pdf, accessed 19-02-2025.
[19] https://www.wetenschapveilig.nl/, accessed 21-01-2025.
[20] https://www.unesco.org/en/recommendation-science/freedom-and-safety, accessed 21-01-2025.
[21] https://www.topsectoren.nl/missiesvoordetoekomst, accessed 24-01-2025.
[22] Kennis- en Innovatieconvenant 2024-2027.
[23] https://www.nwo.nl/en/calls/perspectief-round-2024/2025, accessed 24-012-2025.
[24] Information provided through e-mail exchanges with OCW.
[25] Information provided through e-mail exchanges with OCW.

Furthermore, an analysis (December 2023) by the NWO confirmed the importance of the Dutch participation in 47 international RIs for the quality of the country's academic research ecosystem.[26]

ERA Action 9) Promote a positive environment and level playing field for international cooperation based on reciprocity

In this past period, in line with the Dutch International Knowledge and Talent Strategy *(Internationale Kennis- en Talentstrategie: IKT)*[27], Memorandums of Understandings (MoU's) have been signed with a range of countries, including Switzerland[28] and South Africa.[29] The Netherlands is also invited to take part of the 'G7 Group of Senior Officials on Global Research Infrastructure' and for the G20 in South Africa next year.[30] However, while the Netherlands is still member of many multilateral associations, staff of OCW expects that upcoming budget cuts will impact the capacity for some of these activities.[31] In addition, the Netherlands has been actively working to ensure that open international scientific cooperation is also safe. This happened through several knowledge security measures. For example, in 2024 there has been a Knowledge Security Sector Assessment on the Dutch Research Performing Organizations KNAW and NWO-I, and an exploration of a maturity model for knowledge security.[32]

ERA Priority 2: Taking up together the green transition and digital transformation and other challenges with impact on society and increasing society's participation in the ERA

ERA Action 10) Make EU R&I missions (10.1) and partnerships (10.2) key contributors to the ERA

The Dutch R&I policy is highly mission-oriented, with Mission-driven Topsectoren and Innovation Policy (*Missiegedreven Topsectoren- en Innovatiebeleid: MTIB*) as key driver.[33] These frameworks correlate with EU's move to a more mission-driven approach. Furthermore, in line with the European mission, the Netherlands provides support for innovating national Dutch 'Green Deal Initiatives'. At the moment, seven of these initiatives are being executed (231 have already ended).[34] The Netherlands continues to be active in European co-funded partnerships that are part of Horizon Europe (HE).[35]

ERA Action 11) An ERA for green transformation

Many of the programmes (referred to above, ERA Action 10) which the Netherlands is participating in are aligned with the green transformation, including Driving Urban Transitions (DUT), Clean Energy Transition, WATER4ALL and Sustainable Blue Economy Partnership (SBEP).

ERA Action 12) Accelerate the

The Netherlands continues to accelerate the twin green and digital transition through a wide range of subsidies that stimulate innovation in either

[26] NWO, Analysis of the Dutch participation in international research infrastructures (2023).
[27] https://www.government.nl/binaries/government/documenten/parliamentary-documents/2020/12/18/letter-on-international-knowledge-and-talent-strategy/International+Knowledge+and+Talent+Strategy.pdf, accessed 21-01-2025.
[28] https://www.health-holland.com/news/2024/12/memorandum-understanding-getekend-tussen-nederland-en-zwitserland, accessed 21-01-2025.
[29] https://www.rijksoverheid.nl/actueel/nieuws/2023/10/11/dijkgraaf-op-kennismissie-naar-zuid-afrika, accessed 21-01-2025.
[30] Ministry of Foreign Affairs, Kamerbrief over deelname G20 2025 (2024).
[31] Information gathered through an interview.
[32] Ministry of Education, Culture & Science, Letter to Parliament, Progress on the action plan for knowledge security in higher education and research (2024).
[33] Mathijs Jansen, Adviesnota monitoring en evaluatie missiegedreven innovatiebeleid (2023).
[34] https://www.rvo.nl/onderwerpen/green-deals#lopende-green-deals, accessed 24-01-2025.
[35] See https://www.nwo.nl/en/resetoarchprogrammes/european-partnerships for an overview.

green/digital transition of Europe's key industrial ecosystems

one or both of these areas. Since mid-2023 new rounds for applications have been opened for the programmes IPCEI (innovation projects in key technology sectors), MIT (SME innovation funding), WBSO (R&D tax credit for technical innovation), ERDF (EU regional development funding, including Interreg), CIF-NL (Circular economy investment support), SDE++ (large scale investment subsidy in renewable energy production) and VEKI (Industry subsidy for energy efficiency and CO_2 reduction).[36] The *National Growth Fund* (NGF, with a budget of EUR 11 billion dedicated to eight themes including *Security and Digitalisation* and *Energy and sustainable development*) also still has various projects running that accelerate the twin transition.[37] However new projects will not be funded anymore by the NGF.

At the end of 2023, the Energy System National Plan was published, which presents a roadmap for the Dutch energy system until 2050, underlining the need for adaption given the climatological and geopolitical (e.g. Russian aggression) context.[38] In June 2024, an update of the Dutch Integrated National Energy and Climate Plan 2021-2030 was presented, with new analyses, projections and plans for investments.[39]

Several ministries have expressed their concerns for the trend that an increasing number of Dutch companies postpone or do not consider big investments in sustainability projects.[40] As a response, additional subsidies (EUR 437 million in total) have been made available for the Demonstration Energy Innovation programme (DEI+).[41] To stimulate the green transition, the government also increased the CO2-levy for polluting businesses in 2024.[42]

The Investment Scheme for Facilities for Applied Research, mentioned in the previous report as a crucial framework for developing technologies for the green/digital transition, has committed EUR 100 million for the funding round of 2024. These proposals should be linked to either digitalisation or sustainability.[43] The new government has not renewed the programme.

Other noteworthy developments include the Roadmap Fuel Transition in Maritime Shipping (2024)[44] and a preparation study for a roadmap to achieve CO2-reduction in general aviation and business aviation.[45] The Dutch government is also highly active in increasing the capacities of the R&I ecosystem around (green) hydrogen.[46]

With regards to the digital transformation, the Netherlands has introduced a National Technology Strategy at the start of 2024, promoting

[36] For an overview, see: https://www.rvo.nl/subsidies-financiering.
[37] https://www.nationaalgroeifonds.nl/overzicht-lopende-projecten, accessed 24-01-2025.
[38] Ministry of Economic Affairs, Eindrapport Nationaal Plan Energysysteem: Effecten van piekverwarming: elektrisch of met duurzaam gas? (2023).
[39] Ministry of Economic Affairs, Update van het Integraal Nationaal Plan Energy en Klimaat 2021-2030 (2024).
[40] Ministry of Economic Affairs: Kamerbrief (Nr. 211), Industriebeleid: Kabinaatsaanpak Klimaatbeleid (2024).
[41] Ministry of Climate and Green Growth: Vaststelling van de begrotingsstaten van het Ministerie van Klimaat en Groene Groei (XXIII) voor het jaar 2025.
[42] Ministry of Economic Affairs: Kamerbrief (Nr. 211), Industriebeleid: Kabinaatsaanpak Klimaatbeleid (2024).
[43] https://www.rvo.nl/subsidies-financiering/faciliteiten-toegepast-onderzoek, accessed 22-01-2025.
[44] RVO, Roadmap Brandstoftransitie in de Zeevaart (2024).
[45] Koninklijke NLR, Verduurzaming General Aviation & Business Aviation (2024).
[46] See for an overview of developments: Ministry of Economic Affairs: Kamerbrief (Nr. 1395), Kabinaatsaanpak Klimaatbeleid (2024).

innovations and knowledge exchange to accelerate this transition.[47] Furthermore, the country is actively promoting involvement (e.g. with co-funding schemes) in the Digital Europe Programme.[48] This has for instance resulted in the establishment of five European Digital Innovation Hubs in the Netherlands.[49]

ERA Action 13) Empower Higher Education Institutions to develop in line with the ERA, and in synergy with the European Education Area

The Comenius programme, presented in the previous report, has made new grants available for Higher Education Institutions in 2024 and 2025, and dedicated the same budget as in previous years (EUR 6.2 million).[50] The National Growth Fund also continues to empower higher education through various innovative projects, of which many, such as 'Techkwadraat*',* are related to digitalisation.[51]

Furthermore, OCW has organised, since September 2023, grants for educational institutions (EUR 0.5 million per institute) to set up Centres for Teaching and Learning to provide lecturers with innovative tools and knowledge for their educational practices.[52]

ERA Action 14) Bring Science closer to citizens

The National Science Agenda (*Nationale Wetenschapsagenda: NWA)* of the NWO continues to bring science and society together through research programmes in where (the interests of) citizens are closely involved.[53] One of their most recent calls finances science communication projects (*NWA Wetenschapscommunicatie,* budget of EUR 1.5 million)*[54].*

The National Center of Expertise for Science and Society (*Nationaal Expertisecentrum Samenleving & Wetenschap: NEWS*), introduced in the previous report, has officially opened in 2024. The previous minister of OCW, Robert Dijkgraaf, was a great proponent for citizen science and a driving force behind the establishment of NEWS. It will start operationalising its plans in 2025.[55]

Citizen science has a prominent position in the Open Science NL Work Programme (presented under ERA Action 1). For instance, EUR 2 million is dedicated for opening five Citizen Science Hubs, which should bundle regional expertise of knowledge institutes, improving knowledge exchange and the visibility and promotion of best practices.

[47] Ministry of Economic Affairs, De Nationale Technologiestrategie: Bouwstenen voor strategisch technologiebeleid (2024).
[48] https://business.gov.nl/subsidy/digital-europe-programme/, accessed 22-01-2025.
[49] https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue?f%5B0%5D=edih_soe%3Aedih&f%5B1%5D=edih_soe%3Asoe, accessed 24-01-2025.
[50] https://www.nro.nl/en/researchprogrammes/comenius-programme, accessed 22-01-2025.
[51] https://www.nationaalgroeifonds.nl/overzicht-lopende-projecten/thema-onderwijs, accessed 24-01-2025.
[52] https://npuls.nl/en/knowledge-hub-learning-and-innovation/, accessed 22-01-2025.
[53] https://www.nwo.nl/onderzoeksprogrammas/nationale-wetenschapsagenda, accessed 22-01-2025.
[54] https://www.nwo.nl/calls/nwa-wetenschapscommunicatie-2025, accessed 24-01-2025.
[55] https://wetenschapensamenleving.nl/, accessed 22-01-2025.

ERA Priority 3: Enhancing access to research and innovation excellence across the Union and enhancing interconnections between innovation ecosystems across the Union

ERA Action 17) Enhance the strategic capacity of Europe's public research-performing organisations

New developments related to this area have been presented under Priority 1 and 2. Prominent examples are the Knowledge and Innovation Covenant 2024-2027 (see ERA Action 7), the NWO European co-funded partnerships (see ERA Action 9), and the continuous funding rounds for RI (see ERA Action 8). All these initiatives stimulate organisations to remain or become high performing research entities.
In addition, in line with the Dutch commitment to professionalizing Research Management (RM), the national RM Roadmap was drafted. This initiative, led by ARMA-NL and aligned with ERA Action 17, aims to enhance RM infrastructure.[56] The Netherlands actively participates in the RM ROADMAP project with three ambassadors, co-creation sessions developing Research Manager skills at the Recognition and Rewards festival in November 2024, and establishing a knowledge platform with over 100 members. Progress is also being made in recognizing research support staff, for instance, by developing function profiles by the NFU, and Minister Dijkgraaf's chamber letter on matching subsidies acknowledges their work. These efforts support better knowledge valorisation through professionalized RM.

ERA Priority 4: Advancing concerted research and innovation investments and reforms

ERA Action 19) Establish an efficient and effective ERA monitoring mechanism

Representatives of OCW emphasised in the interview that Statistics Netherlands and Rathenau Instituut remain important providers of data on R&I and add that the AWTI also delivers important analyses in this field. Furthermore, the 2024 edition of the Dutch Innovation Monitor was presented in December last year[57] and in 2024 the first *Monitor praktijkgericht onderzoek* (practice-based research) was published.[58]

3. Contribution of ERA Actions to national performance in reaching ERA objectives

This chapter provides a qualitative assessment of how the joint ERA Actions contributed to the Netherlands' performance in achieving the ERA objectives as defined in the Pact for R&I during the period 2022-2024.

ERA Priority 1 is addressed through a range of initiatives focussing on **ERA Actions 1 to 9**, aiming to enable – among others – more adequate recognition of and rewards to researchers, increased academic freedom, involvement in top-quality RI and a prominent position of open science. The implementation of these activities is largely on track and supported by dedicated

[56] https://armanl.eu/standingcommittees/sc-public-affairs/working-group-rm-roadmap, accessed 10-04-2025.
[57] SEO, Nederlandse Innovatie Monitor 2024.
[58] Rathenau Instituut, Monitor praktijkgericht onderzoek 2022 (2024).

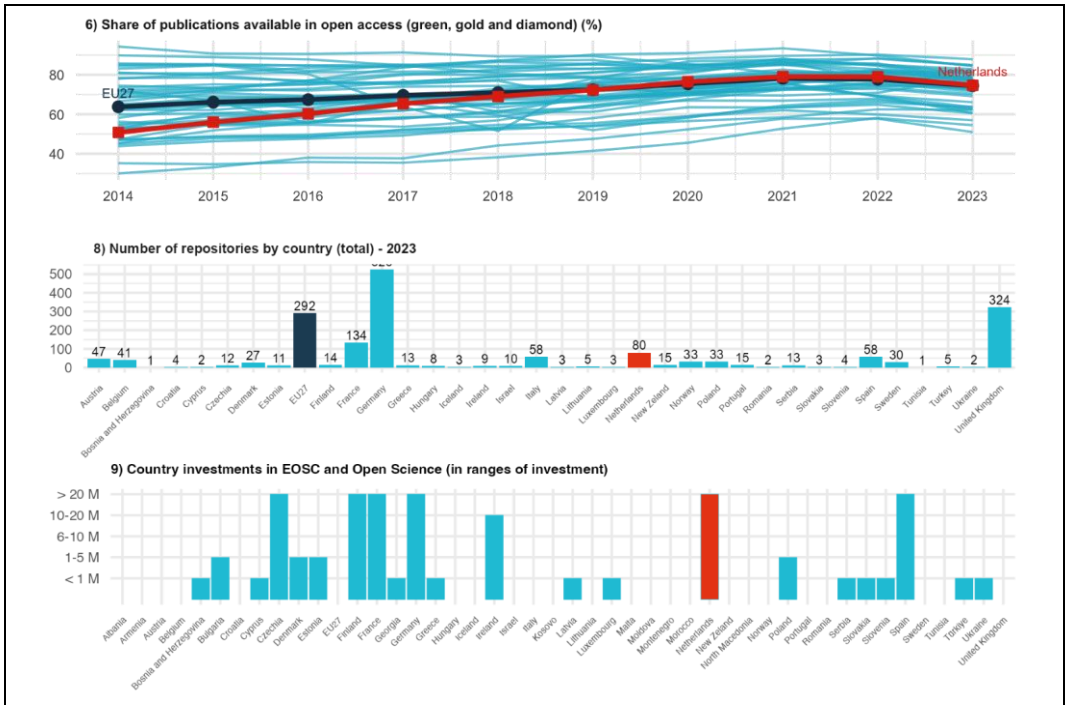
investments. The ERA dashboard Indicators are presented in the Figure 3-1 and give a good indication of the performance of The Netherlands in the last year.

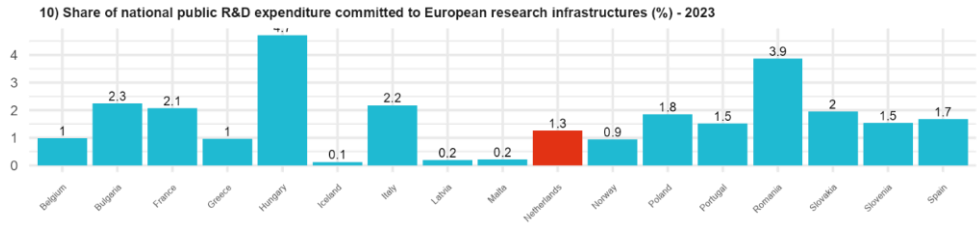
These indicators suggest that The Netherlands has a prominent position in Europe regarding ERA Action 1 (Open Science, ERA Dashboard Indicator 9) and ERA Action 8 (RI, ERA Dashboard Indicator 11). They also show that the Netherlands performs higher in terms of knowledge valorisation (ERA Action 7) than the European average (see Indicators 19, 20, 23 and 24), although the progress related to business enterprise researchers (Indicators 23 and 24) seems to be stagnating. The ERA Dashboard (especially ERA Dashboard Indicator 29) suggest that The Netherlands also has a leading position in ERA Action 9 (Global approach), although ERA Dashboard Indicator 30 shows that the number of international co-publications with non-EU partners per 1000 researchers has not increased in the last years (but still considerably higher than the European average).

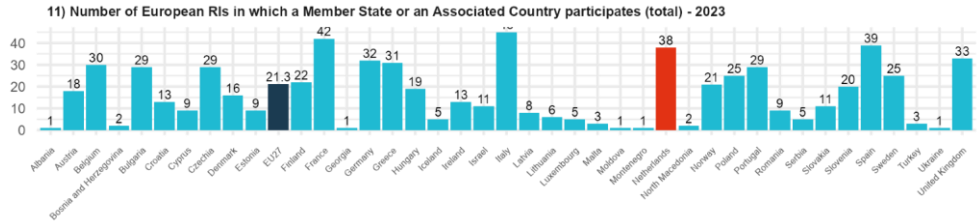
ERA Dashboard Indicator 27 might be alarming for the Dutch R&I system, as this shows that academic freedom, already below the European average, has declined from 2022 to 2023. While now direct relation is found, this decline could explain the efforts for the Dutch SafeScience Platform (see ERA Action 6, Academic freedom) to counterbalance the negative trend. ERA Dashboard Indicator 6 shows that the Netherlands follows the European trend of a declining share of open access publications, contrary to Dutch ambitions (see ERA Action 2, Copyright and data).

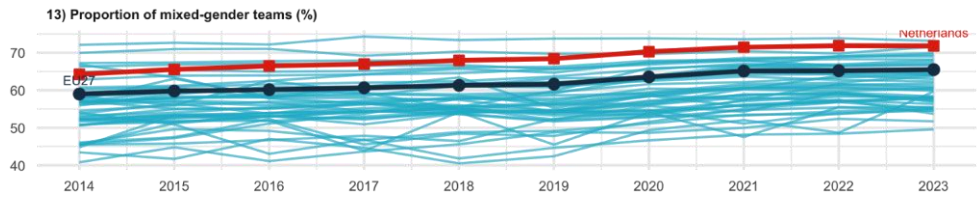
The ERA dashboard indicators give a critical view on the Dutch developments regarding ERA Action 5 (Gender equality). ERA Dashboard Indicators 13-15 suggest that while the Netherlands is still in a good position compared to the rest of Europe, it is hardly improving. ERA Dashboard Indicator 16 shows little indication of progress.

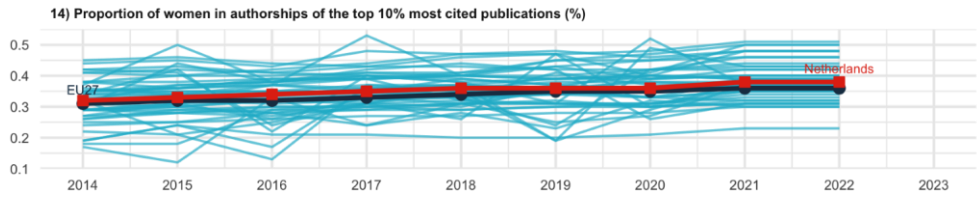
Figure 3-1 ERA Dashboard Indicators for ERA Priority 1

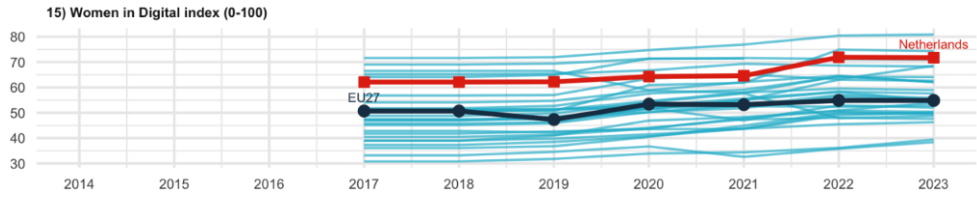


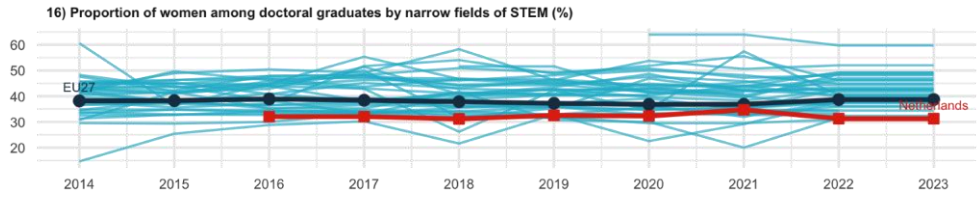

10) Share of national public R&D expenditure committed to European research infrastructures (%) - 2023
4
3
2
1
0
1
2.3
2.1
1
0.1
2.2
0.2
0.2
1.3
0.9
1.8
1.5
3.9
2
1.5
1.7
Belgium
Bulgaria
France
Greece
Hungary
Iceland
Italy
Latvia
Malta
Netherlands
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Spain

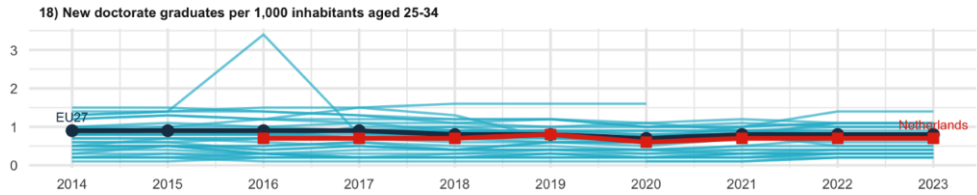

11) Number of European RIs in which a Member State or an Associated Country participates (total) - 2023
40
30
20
10
0
1
18
30
2
29
13
9
29
16
9
21.3
22
42
1
32
31
19
5
13
11
8
6
5
3
1
1
38
2
21
25
29
9
5
11
20
39
25
3
1
33
Albania
Austria
Belgium
Bosnia and Herzegovina
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
EU27
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Latvia
Lithuania
Luxembourg
Malta
Moldova
Montenegro
Netherlands
North Macedonia
Norway
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
Spain
Sweden
Turkey
Ukraine
United Kingdom

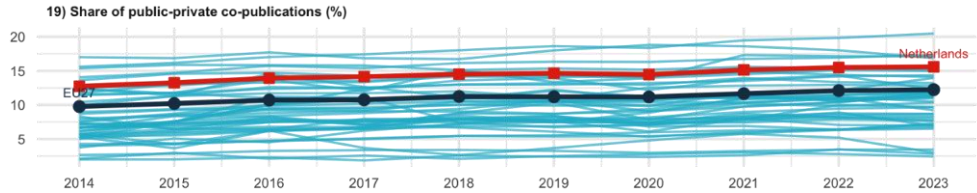

13) Proportion of mixed-gender teams (%)
70
60
50
40
EU27
Netherlands
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


14) Proportion of women in authorships of the top 10% most cited publications (%)
0.5
0.4
0.3
0.2
0.1
EU27
Netherlands
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

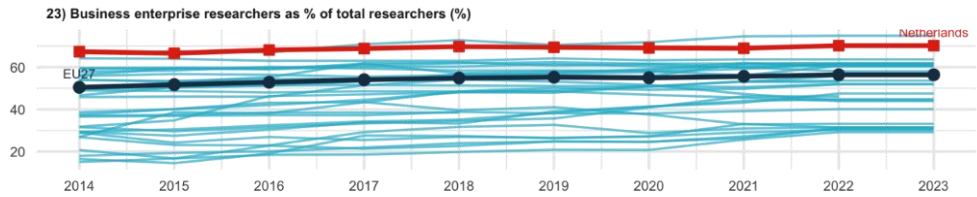

15) Women in Digital index (0-100)
80
70
60
50
40
30
EU27
Netherlands
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

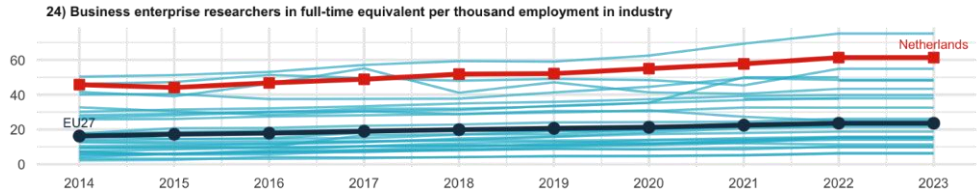

16) Proportion of women among doctoral graduates by narrow fields of STEM (%)
60
50
40
30
20
EU27
Netherlands
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

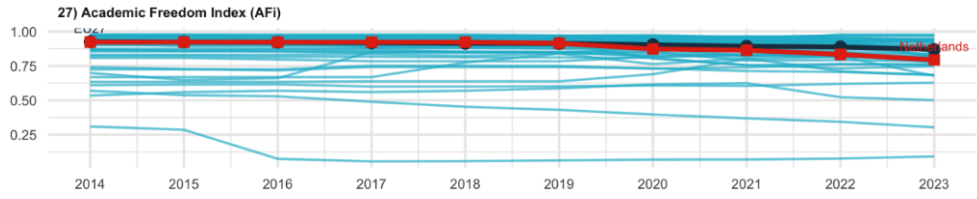

18) New doctorate graduates per 1,000 inhabitants aged 25-34
EU27
Netherlands
0
1
2
3
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


19) Share of public-private co-publications (%)
Netherlands
EU27
5
10
15
20
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


20) Best practice examples and methodologies for knowledge valorisation - 2023
0
10
20
30
10
25
2
2
6
4
1
7
9
11
2
1
7
13
3
4
3
1
21
1
11
1
1
1
6
13
6
6
Austria
Belgium
Croatia
Cyprus
Czechia
Denmark
Estonia
EU27
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Serbia
Slovakia
Slovenia
Spain
Sweden
United Kingdom


23) Business enterprise researchers as % of total researchers (%)
Netherlands
EU27
20
40
60
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

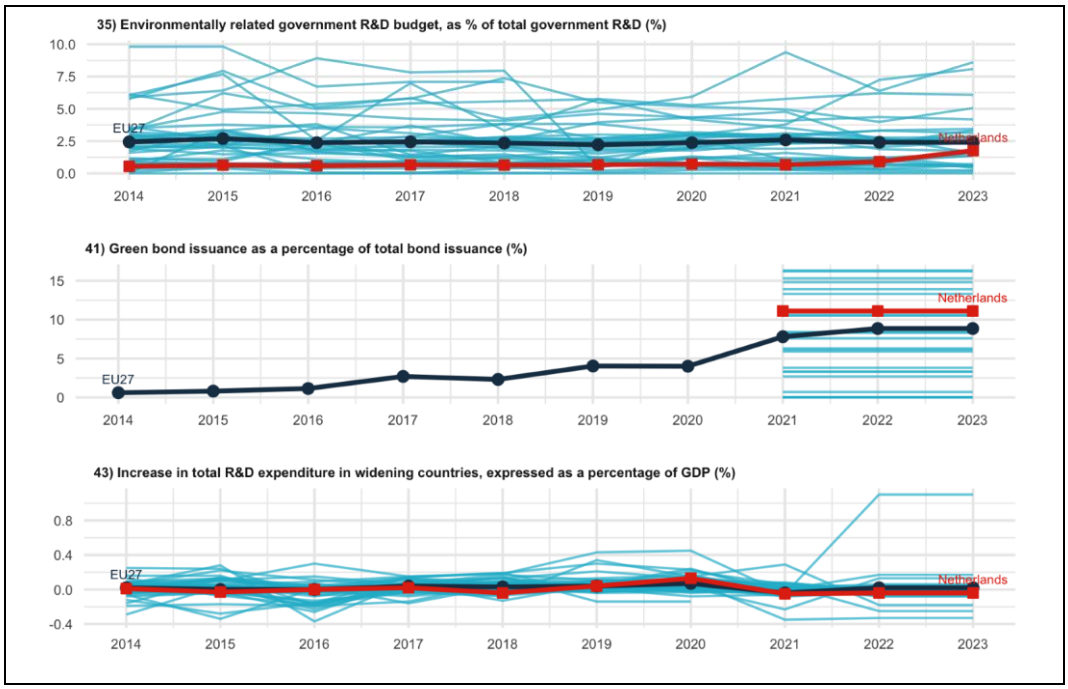

24) Business enterprise researchers in full-time equivalent per thousand employment in industry
Netherlands
EU27
0
20
40
60
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023


27) Academic Freedom Index (AFi)
Netherlands
0.25
0.50
0.75
1.00
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023

Source: see Annex 1

ERA Priority 2 is addressed through **ERA Actions 11 to 14,** with initiatives directed towards (amongst others) the twin digital and green transition, European missions, improving the capacities of higher education and connecting science with citizens. The ERA Dashboard Indicator 41 suggests that the same might be true for ERA Action 11 (Green transformation), yet ERA Dashboard Indicator 35 shows that the Netherlands is below the average of the rest of Europe (although it has improved its share of environmentally related government R&D budget significantly from 2022 to 2023).

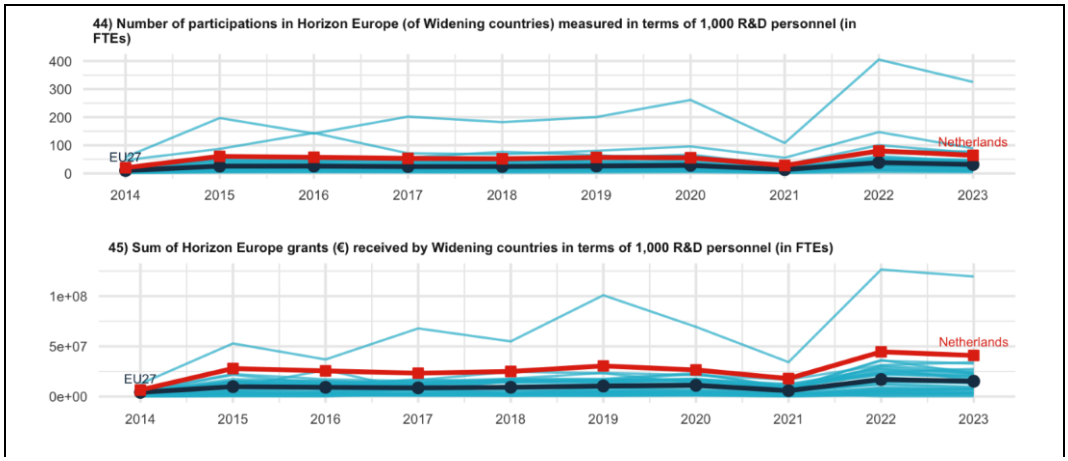
Figure 3-2 ERA Dashboard Indicators for ERA Priority 2



Source: see Annex 1

ERA Priority 3 is targeted through **ERA Action 17** (Research performing organisations) by enhancing the strategy capacity of research institutes. The ERA Dashboard Indicators all suggest that the Netherlands is in a prominent position with regard to other EU Member States. Nevertheless, these indicators give a mixed view on the Dutch progress on ERA Action 17. ERA Dashboard Indicators 44 and 45 show – along with the EU average – a downward trend, while Indicators 46 and 48 suggest overall progress is being made.

Figure 3-3 ERA Dashboard Indicators for ERA Priority 3



Source: see Annex 1

4. Effects of ERA Action implementation on the national R&I system

This chapter presents a qualitative assessment of the ERA Action commitments of The Netherlands and their effects on national R&I system, including the quantitative performance in the ERA Dashboard.

As was briefly mentioned in Chapter 1 of this report, the Netherlands has no formal ERA Action plan, but many policy initiatives have significant overlap with ERA Actions. The Netherlands has installed leading persons for specific ERA Actions, who are responsible for implementing the respective action in line with national policies. In practice, as was mentioned in an interview, few adaptions were necessary in the past 1.5 years, as the content of ERA Actions was already adequately aligned with the Dutch R&I policy. No significant conflicts between the two have been recognised in the past period of time. Furthermore, national plans related to R&I are overall on track.

Overall, ERA Actions make a good contribution to the national R&I system. They help establish a level playing field, both nationally and internationally, which is beneficial for researchers, research institutes and policy makers. Positive effects are already present, but it is hard to make them measurable.

The following paragraphs will zoom in on specific ERA Priorities. For **ERA Priority 1**, ERA Action 2 (related to open access) contributes clearly to UNL's aim to reach 100 percent open access publications.[59] It should be noted however that ERA Dashboard Indicator 6 (see

[59] https://www.universiteitenvannederland.nl/files/publications/UNL%2024063%20U%20-%20OCW-%20Monitor%20Open%20Access%202023%20en%20vervolg.pdf, accessed 21-01-2025.

charts in the Chapter 3) shows a downward trend. In addition, much attention and priority are given in the Netherlands at the moment to the Recognition & Rewards Programme, which has obvious correlations with ERA Actions 3 and 4.

Considering **ERA Priority 2**, ERA Actions 11 and 12 provide guidance and support to the Dutch ambitions for a green transition and CO2-reductions, and the Netherlands continues to accelerate the twin transition through numerous subsidy programmes and policy initiatives. Enhancing the strategic capacity of public research institutions (ERA Action 17 under **ERA Priority 3**) remains a priority for the Dutch ministries, as the documentation in the respective section of this report highlights. The governmental cutbacks put pressure on the research institutes capacity, especially for the future years.

Synergies with **ERA Priority 4** are less straightforward, but this is not remarkable considering that there is just one implemented action under this priority.

5. Conclusions

Although the Netherlands does not have a formal ERA action plan, its policies, aims and initiatives are closely aligned with the ERA Priorities and Actions. Almost all committed ERA Actions are in line with explicit national priorities and aims, which is why few adaptions for ERA alignment had to be made in Dutch policies. The Netherlands has committed to 16 ERA Actions, covering all four Priority Areas.

OCW denotes that the Netherlands is largely on track with their R&I related national plans, and most ERA Dashboard Indicators confirm this. The budget cuts in national R&I policies might put pressure on the Dutch commitments to ERA Actions in the future and already has effects on these actions (concerning ERA Action 8 on RI for instance).

For **ERA Priority 1**, key developments in the past 18 months were the Open Science NL Work Programme (allocating EUR 20.5 million of funding), the Recognition & Rewards programme and Dutch efforts in the participation in and establishment of various RIs. ERA Dashboard indicators suggest that progress related to Open Access and diversity has not been made in the past period.

Turning to **ERA Priority 2**, the Netherlands continues to be active in many European Partnerships, most of them contributing to the green transformation. In addition, the country has launched and continued many initiatives and subsidies to stimulate the green and digital transition, trough close involvement of research institutes, the private sector and societal stakeholders. ERA Dashboard indicators suggest that the Netherlands is overall still ahead of most European MS (and booking progress in some areas). The launch of new NWA-calls, NEWS and grants for Centers for Teaching and Learning also indicate progress towards the objective of this priority.

For **ERA Priority 3 and 4**, the Netherlands has committed to one action each. Nevertheless, regarding the former, various initiatives have been introduced, and the ERA Dashboard indicators show that the Netherlands is still in a top position compared to the rest of EU Member States.

6. References

European Innovation Scoreboard 2024, Country Profile Netherlands.

Kennis- en Innovatieconvenant 2024-2027.

Open Science NL, Work Programme Open Science NL 2024-2025 (2023).

Ferman A et al., Midterm-evaluatie Nationaal Actieplan voor meer diversiteit en inclusie in het hoger onderwijs en onderzoek (2023).

Ministry of Education, Culture & Science, Letter to Parliament, Progress on the action plan for knowledge security in higher education and research (2024).

Landelijk Netwerk Vrouwelijke Hoogleraren, Monitor Vrouwelijke Hoogleraren 2023.

NWO, Analysis of the Dutch participation in international research infrastructures (2023).

Ministry of Foreign Affairs, Kamerbrief over deelname G20 2025 (2024).

Ministry of Economic Affairs, De Nationale Technologiestrategie: Bouwstenen voor strategisch technologiebeleid (2024).

Mathijs Jansen, Adviesnota monitoring en evaluatie missiegedreven innovatiebeleid (2023).

Technopolis, Onderzoek naar de uitval van vrouwen in de wetenschap (2022), https://open.overheid.nl/documenten/ronl-0115a5cc2a947101957ae7eaa013e403ca60cb0c/pdf, accessed 24-01-2025.

Ministry of Economic Affairs, Eindrapport Nationaal Plan Energysysteem: Effecten van piekverwarming: elektrisch of met duurzaam gas? (2023).

Ministry of Economic Affairs, Update van het Integraal Nationaal Plan Energy en Klimaat 2021-2030 (2024).

Ministry of Economic Affairs: Kamerbrief (Nr. 211), Industriebeleid: Kabinaatsaanpak Klimaatbeleid (2024).

Ministry of Climate and Green Growth: Vaststelling van de begrotingsstaten van het Ministerie van Klimaat en Groene Groei (XXIII) voor het jaar 2025.

RVO, Roadmap Brandstoftransitie in de Zeevaart (2024).

Koninklijke NLR, Verduurzaming General Aviation & Business Aviation (2024).

See for an overview of developments: Ministry of Economic Affairs: Kamerbrief (Nr. 1395), Kabinaatsaanpak Klimaatbeleid (2024).

SEO, Nederlandse Innovatie Monitor 2024.

Rathenau Instituut, Monitor praktijkgericht onderzoek 2022 (2024).

Annex 1 – List of ERA Dashboard Indicators

The indicators used in the report are taken from the ERA Dashboard 2024. The full ERA Dashboard Report and the supporting Data Replication Package can be downloaded at https://european-research-area.ec.europa.eu/era-monitoring-reports. However, *GDP (in million €)*, *Size of the population (million)*, and *Share of female researchers, all sectors of performance (%)* were added to provide additional context and directly retrieved from the Eurostat website.

Additionally, EU and country averages are for 2023, except *Share of female researchers, all sectors of performance (%)* (2021).

Table 1 Structural Key Indicators:

Indicator number	Indicator	Source
/	GDP in euro per capita, current prices	Eurostat https://doi.org/10.2908/TEC00001
1	Gross Domestic Expenditure on R&D (GERD) as a share of GDP	Eurostat
2	Government Budget Allocations for R&D (GBARD) as share of GDP	Eurostat
4	Business Enterprise Expenditure on R&D (BERD) as a share of GDP	Eurostat
5.2	Expenditure on R&D procurement as a percentage of GDP	EC/European Innovation Procurement Observatory
/	Size of the population (million)	Eurostat, https://doi.org/10.2908/TPS00001
3	Researchers (in FTE) per million inhabitants	Eurostat
/	Share of female researchers, all sectors of performance (%)	Eurostat, https://doi.org/10.2908/TSC00005

Figure 3.1 Indicators for ERA Priority 1

Indicator number	Indicator	Source
6	Share of publications available in open access (green, gold, and diamond)	OpenAIRE
7	Number of open-access research datasets by country	OpenAIRE
8	Number of repositories by country	EOSC - Re3data
9	Country investments in EOSC and Open Science (in ranges of investment)	EOSC Observatory
10	Share of national public R&D expenditure committed to European research infrastructures	ESFRI
11	Number of European RIs in which a Member State or an Associated Country participates	ESFRI
12	Proportion of women of Grade A among academic staff/researchers	Women in Science - She Figures
13	(Corrected) Proportion of mixed-gender teams	EC_Scopus
14	(Corrected) Proportion of women in authorships of the top 10% most cited publications	EC_Scopus
15	Women in Digital index (0-100)	EC-Women in Digital Scoreboard

16	Proportion of women among doctoral graduates by narrow fields of STEM	Eurostat
17	Share of foreign doctorate students as a percentage of all doctorate students	Eurostat
18	New doctorate graduates per 1,000 inhabitants aged 25-34	Eurostat
19	Share of public-private co-publications	EC_Scopus
20	(Cumulative number of) Best practice examples and methodologies for knowledge valorisation	Knowledge Valorisation Platform
21	Number of PCT patent applications divided by GDP in million Euros/Dollars	OECD, Eurostat & World Bank
22	Share of innovating firms collaborating with HEI/PRO out of all innovative firms	Eurostat CIS (own calculations)
23	Business enterprise researchers as % of total researchers	OECD
24	Business enterprise researchers in full-time equivalent per thousand employment in industry	OECD
25	Patents by universities and public research organisations	EPO PATSTAT - Fraunhofer ISI calculations
26	% of scientific publications among the top-10% most cited publications worldwide	EC_Scopus
27	Academic Freedom Index (AFi)	V-Dem Varieties of Democracy
28	Average ranking score of top 10 universities by country and year	QS World University Ranking
29	Sum of ERC grants received by country in a given year per 1,000 R&D personnel (in FTEs)	EC-ERC
30	International co-publications with non-EU partners per 1,000 researchers in the public sector	EC_ScienceMetrix and Eurostat/OECD
31	Share of patents with foreign co-inventors	OECD
32	European and international co-patenting in EPO applications at national and EU level	Eurostat
33	Government budget allocations for R&D (GBARD) according to NABS as % total GBARD	Eurostat

Figure 3.2 Indicators for ERA Priority 2

Indicator number	Indicator	Source
34	Note: The ERA Dashboard Indicator 34 was removed from the Dashboard in January 2025. As a consequence, the indicator has also been omitted from the Country Report, while, however, keeping the original numbering of the indicators.	
35	Environmentally related government R&D budget, as % of total government R&D	Eurostat
36	National public and private investments as suggested in the SET Plan progress report 2021 (EUR million)	SETIS R&I data
37	% Patents on environmental technology	OECD
38	Share of innovative firms cooperating with higher education institutions or public/private research institutions	Eurostat CIS
39	Enterprises that purchased or licensed-in patents or other IPRs from public research organisations, universities or higher education institutions	Eurostat CIS

40	Direct government support and indirect government support through R&D tax incentives as a % GDP	OECD
41	Green bond issuance as a percentage of total bond issuance	Eurostat - EEA
42	Trust in Science	Eurobarometer 95.2
43	Increase in total R&D expenditure in widening countries, expressed as a percentage of GDP	Eurostat, OECD, UNESCO

Figure 3.3 Indicators for ERA Priority 3

Indicator number	Indicator	Source
44	Number of participations in Horizon Europe (of Widening countries) measured in terms of 1,000 R&D personnel (in FTEs)	Cordis - Eurostat
45	Sum of Horizon Europe grants (€) received by Widening countries in terms of 1,000 R&D personnel (in FTEs)	Cordis - Eurostat
46	Summary Innovation Index (Widening countries)	EC_EIS
47	Share of enterprises using public funds from different governance levels (local or regional, national, and EU) for R&I activities	Eurostat CIS
48	Number of Seal of Excellence projects on the InvestEU Portal per 1,000 R&D personnel (in FTEs)	EC - Invest EU
49	Number of collaboration networks of RPOs in Widening countries with other EU countries	Cordis - Horizon Dashboard
50	Average number of partners from non-widening countries per institution from a Widening country participating in the Horizon programme each year	Cordis - Eurostat
51	Share of patents registered by a Widening country together with partners from other EU countries	OECD
52	Share of innovative enterprises that cooperated with RPOs located in other countries	Eurostat CIS
53	Share of public R&D expenditures financed by the private sector	Eurostat

Figure 3.4 Indicators for ERA Priority 4

Indicator number	Indicator	Source
54	GBARD allocated to Europe-wide transnational, as well as bilateral or multilateral, public R&D programmes per FTE researcher	Eurostat

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ERA Monitoring 2024: ERA Country Report The Netherlands.

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