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REPUBLIC OF SLOVENIA
MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION

ARIS Slovenian Research and Innovation Agency

CHALLENGES & OPPORTUNITIES FOR SUCCESSFUL AND IMPACTFUL RESEARCH CAREERS IN SLOVENIA AND EUROPE

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5 May 2026, Center Rog, Ljubljana, Slovenia

Slides prepared for the „Shaping the Future of Research Careers: From Policy to Implementation“ conference organised by the Ministry of Higher Education, Science and Innovation of the Republic of Slovenia.

STRUCTURE OF THE PRESENTATION

- **State of Play in Slovenia**
  - Normative framework related to research careers
  - General R&D&I statistics

- **Feedback from the Research Community**
  - Consultation and survey conducted as part of „The state of play and development of the research career system in Slovenia according to the recommendations of the Council of the European Union and the OECD“ project (CRP V5-24059)
  - Focus groups during the evaluation of the implementations of the Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30) in 2025 (C3360-24-952015)

- **Related Studies on Efficiency and Impact of R&D&I in Slovenia and the EU**
  - The impact of investing in science on the economic competitiveness (CRP V5-24056)
  - Research infrastructures and science-industry collaboration (from the V5-2283 „Analysis of research infrastructures to strengthen national and EU research capacities“ project)
  - The role of FDI in promoting R&D (a periodic study among foreign-owned businesses in Slovenia)

- **Lessons Learnt and Way Forward**

NORMATIVE FRAMEWORK

Legislation, Regulations and Rules Related to Research Careers

- **The Scientific Research and Innovation Activities Act (ZZrID):** aims to create favorable conditions for the comprehensive development of career paths and mobility in the field of scientific research and innovation, while ensuring equal opportunities (**Article 3, point 6;** related objectives pertain to securing stable framework conditions and promoting a collaborative, internationalised and impactful R&D&I ecosystem)
- **Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30):** aims to achieve researchers' career development and excellent science (**Objective 3**)
- **Research Infrastructure Development Plan 2030 (NRRI2030):** consistent with ReZrIS30 and ESFRI Roadmap; aims to support the development of modern, competitive, and accessible research infrastructure as one of the key tools for scientific excellence and career development and further development of Slovenia as a knowledge- and innovation-based society
- **Rules and Methodologies**:
  - Rules on the Research titles
  - Rules on the Procedures for the (Co)financing and Assessment of Research Activities and on Monitoring the Implementation of Research Activities (Unofficial Consolidated Text, No.2)
  - Rules on the Criteria for Establishing Compliance with the Conditions for being the Head of a Research Project

(Udovič et al., 2025)

Challenges Related to the Normative Framework in Slovenia

- **ZZrID**:
  - Lack of consideration for financial sustainability of research organizations
  - Unequal conditions related to ancillary employment of teaching and research staff
  - Limited possibilities for management to engage in research
  - Difficulties in implementing certain articles (e.g., Article 64 and Article 65)
  - Risk of autonomy leading to arbitrariness

(Udovič et al., 2025)

- **ReZrIS30**:
  - Fragmentation of management and implementation across and within ministries (with a lack of complementarity and coordination)
  - Lack of actions aimed at enhancing HRM in research organisations
  - Overlooked potential of science diplomacy
  - Lack of prioritisation and consideration of comparative advantages (at national and organisational levels)

(Črnigoj et al., 2025)

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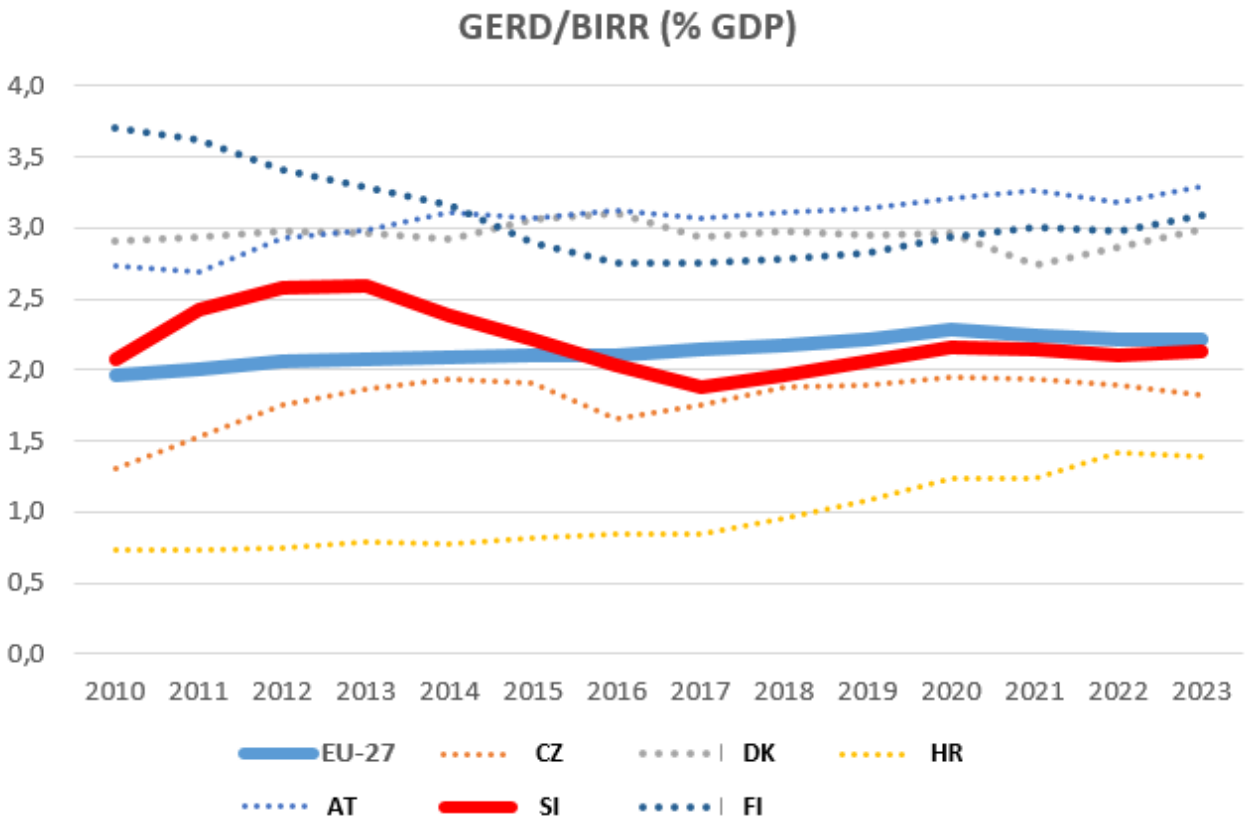
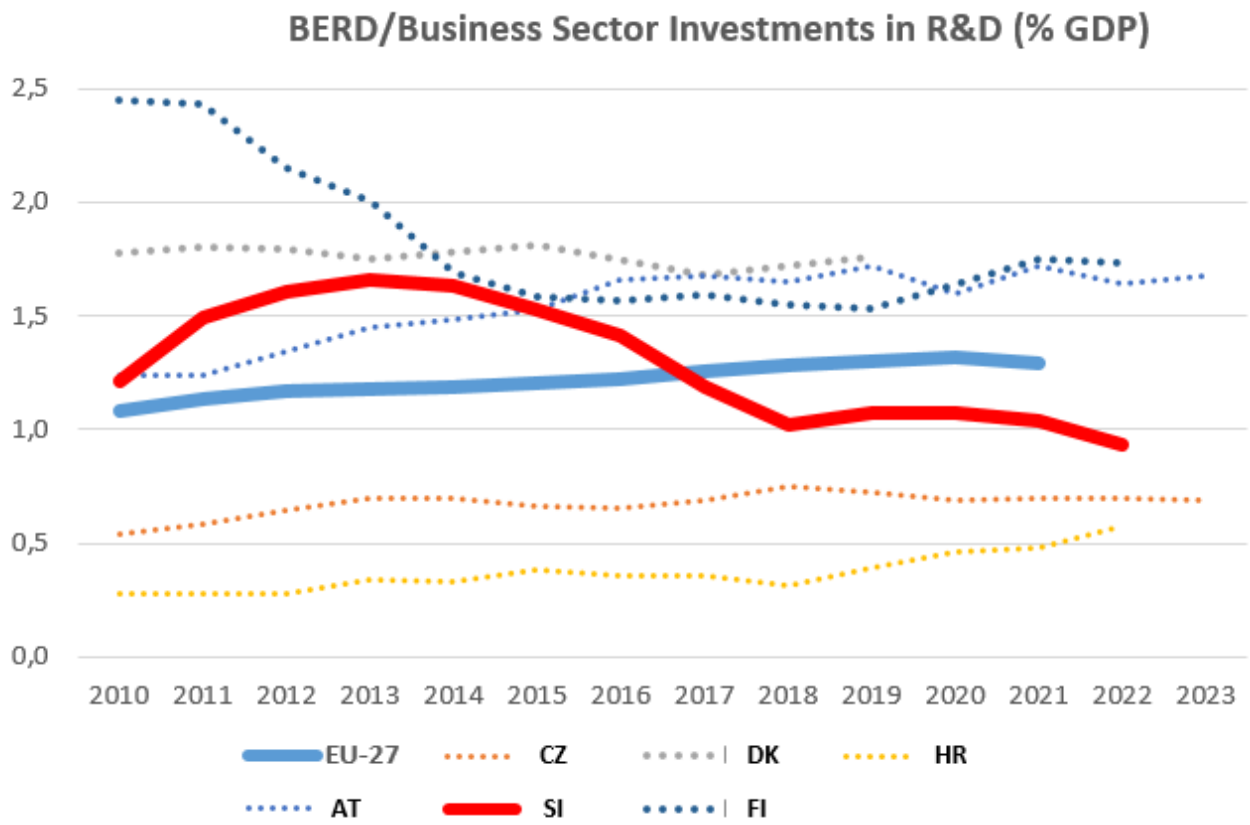
CRUNCHING THE NUMBERS

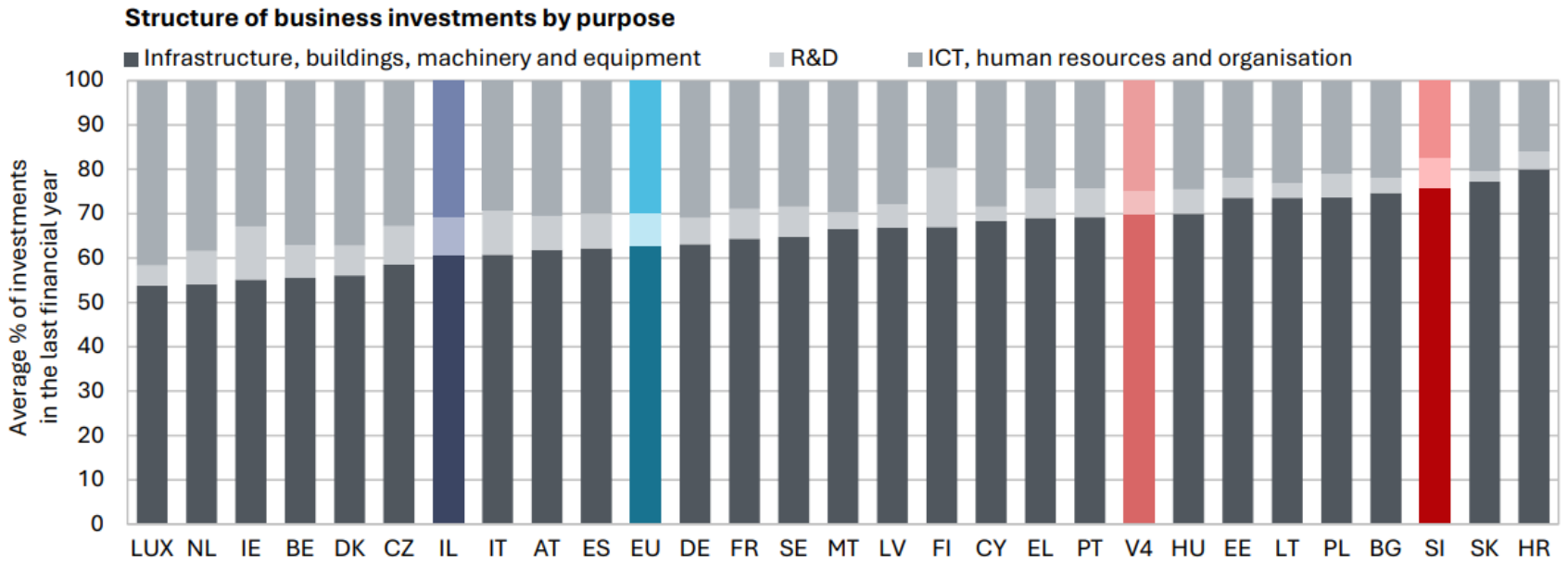
R&D Investments in Slovenia compared to Selected Countries (I)



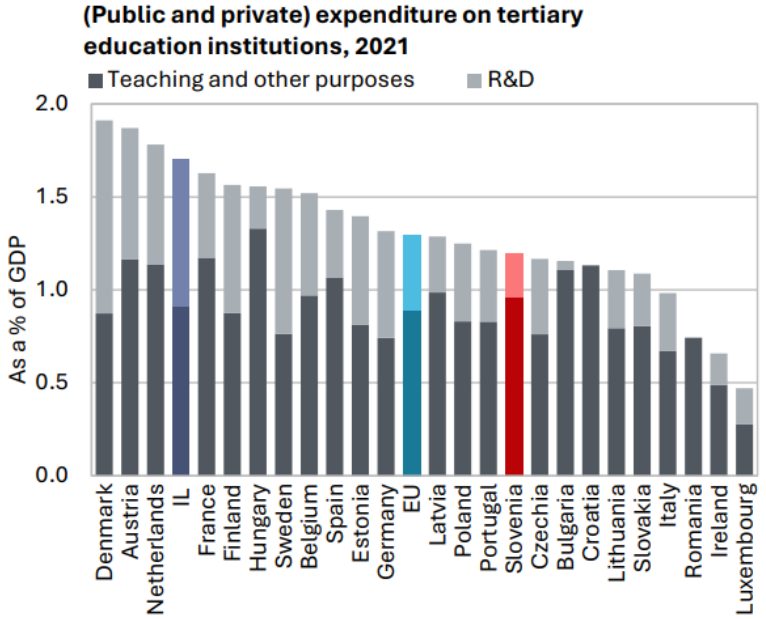


Source: Eurostat, 2025

R&D Investments in Slovenia compared to Selected Countries (II)



Sources: Eurostat (2025) and EIB (2024); calculations by IMAD.



Source: UMAR, 2025

Foreign investors consistently recognize Slovenia as a strategic location for their R&D (Jaklič & Koleša, 2024).

R&D Employees in Slovenia Compared to Selected Countries

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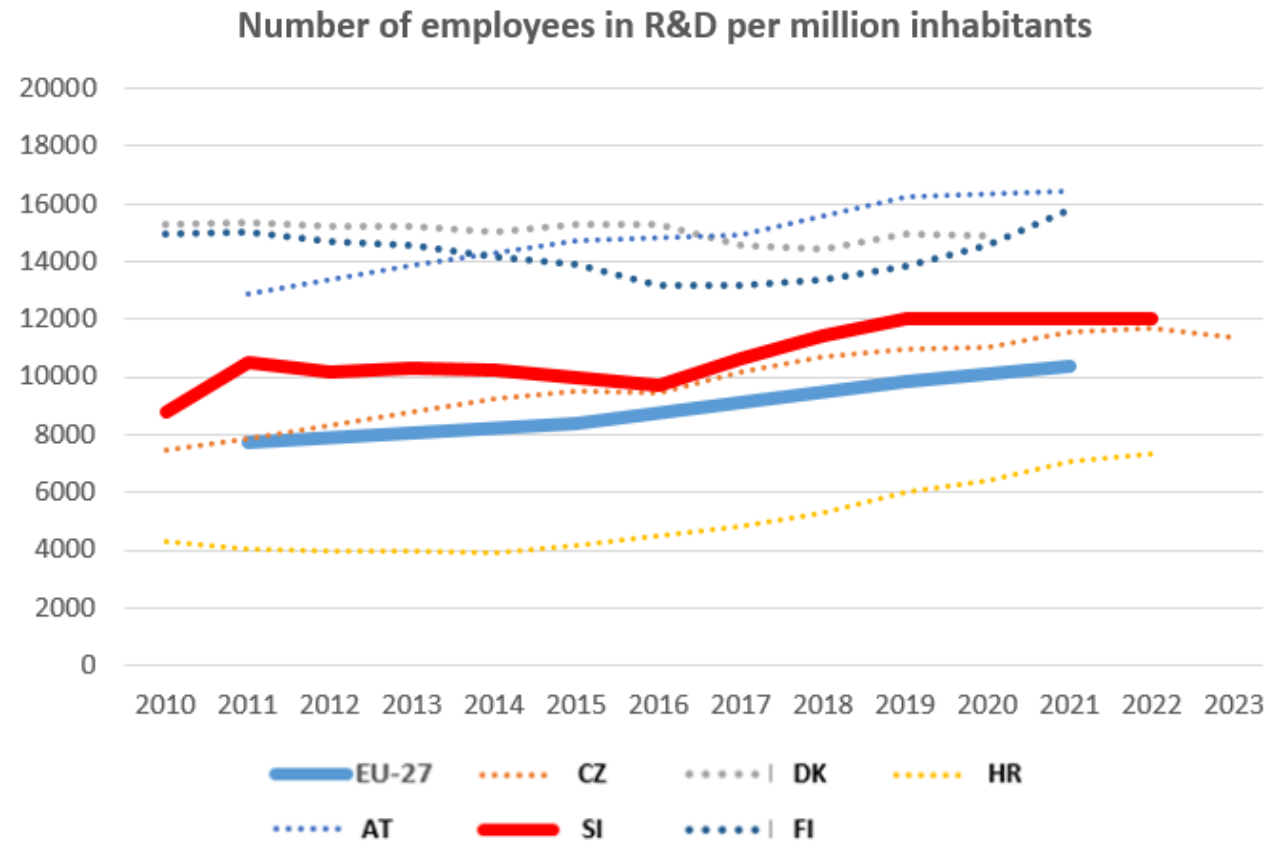

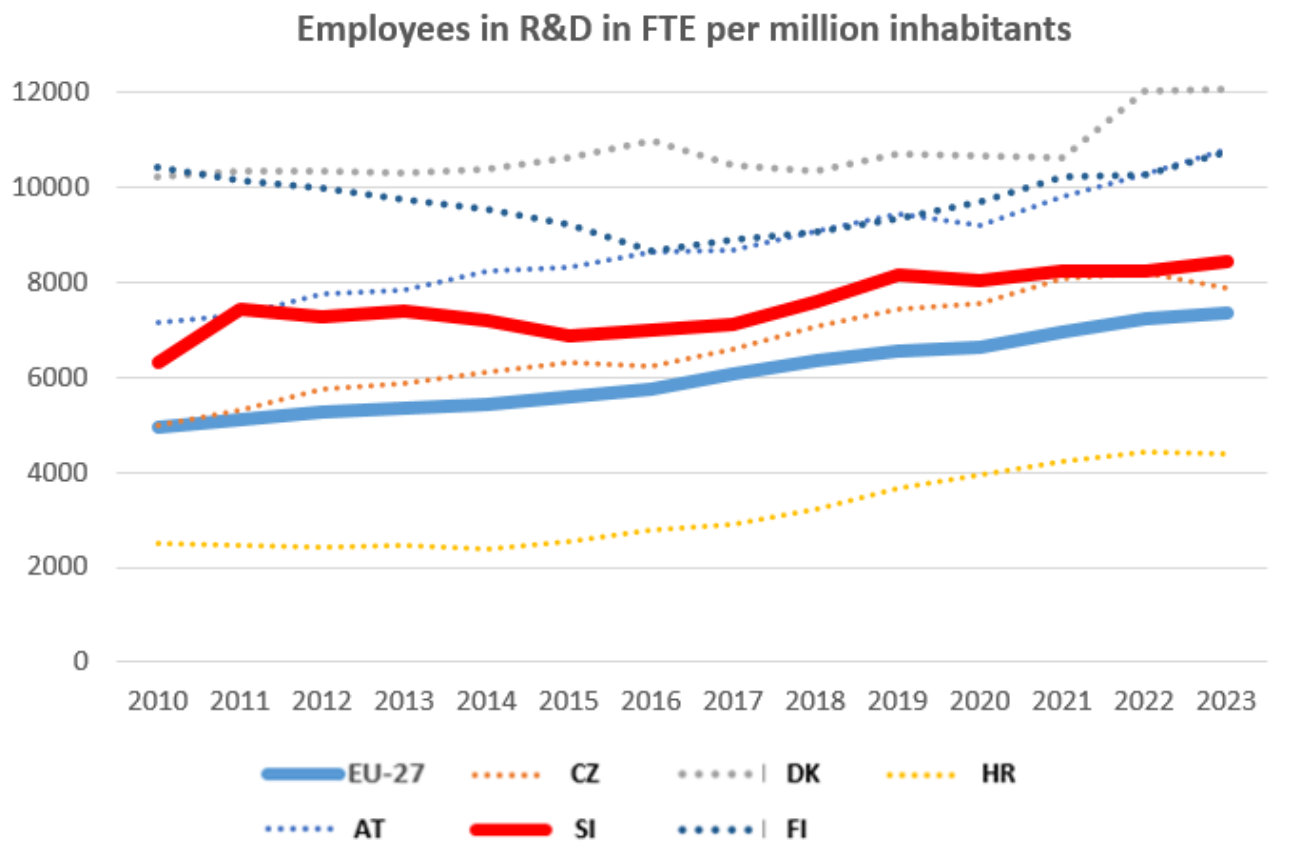

Source: Eurostat, 2025

Researchers in Slovenia Compared to Selected Countries

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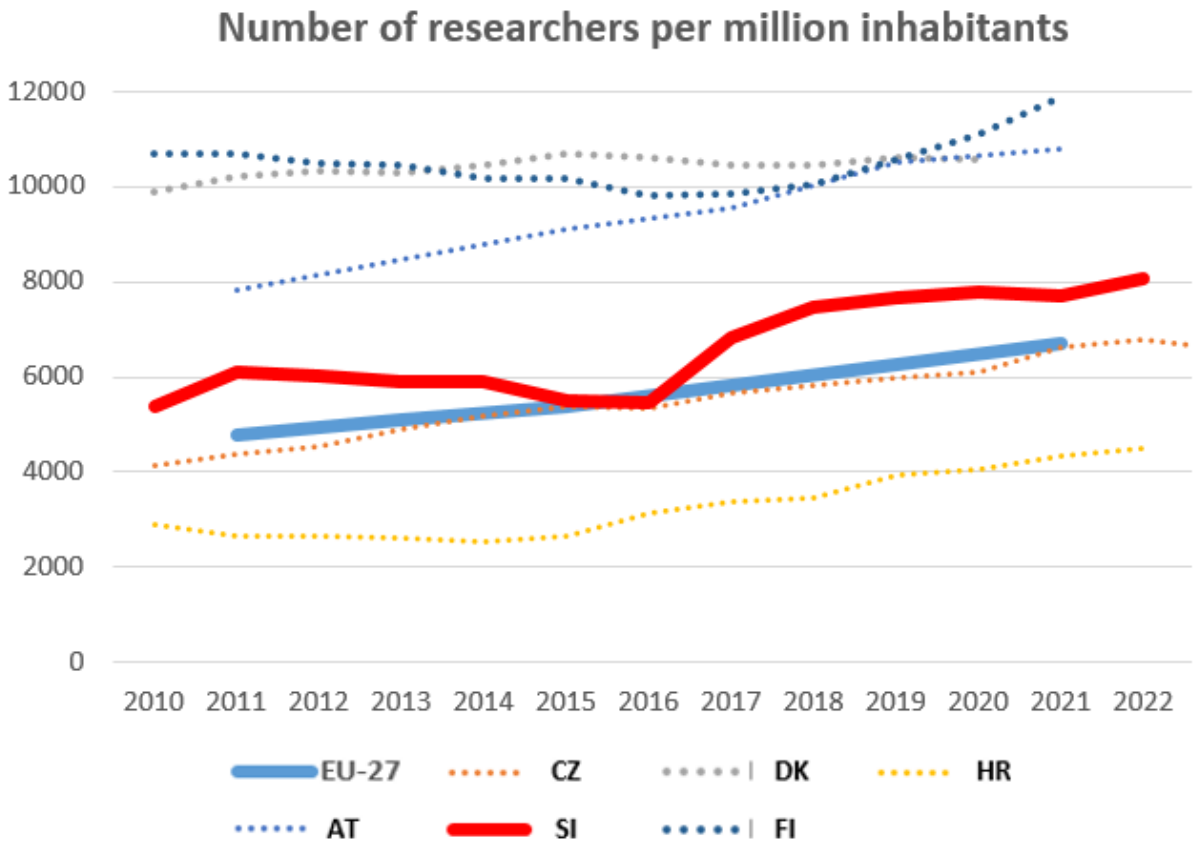
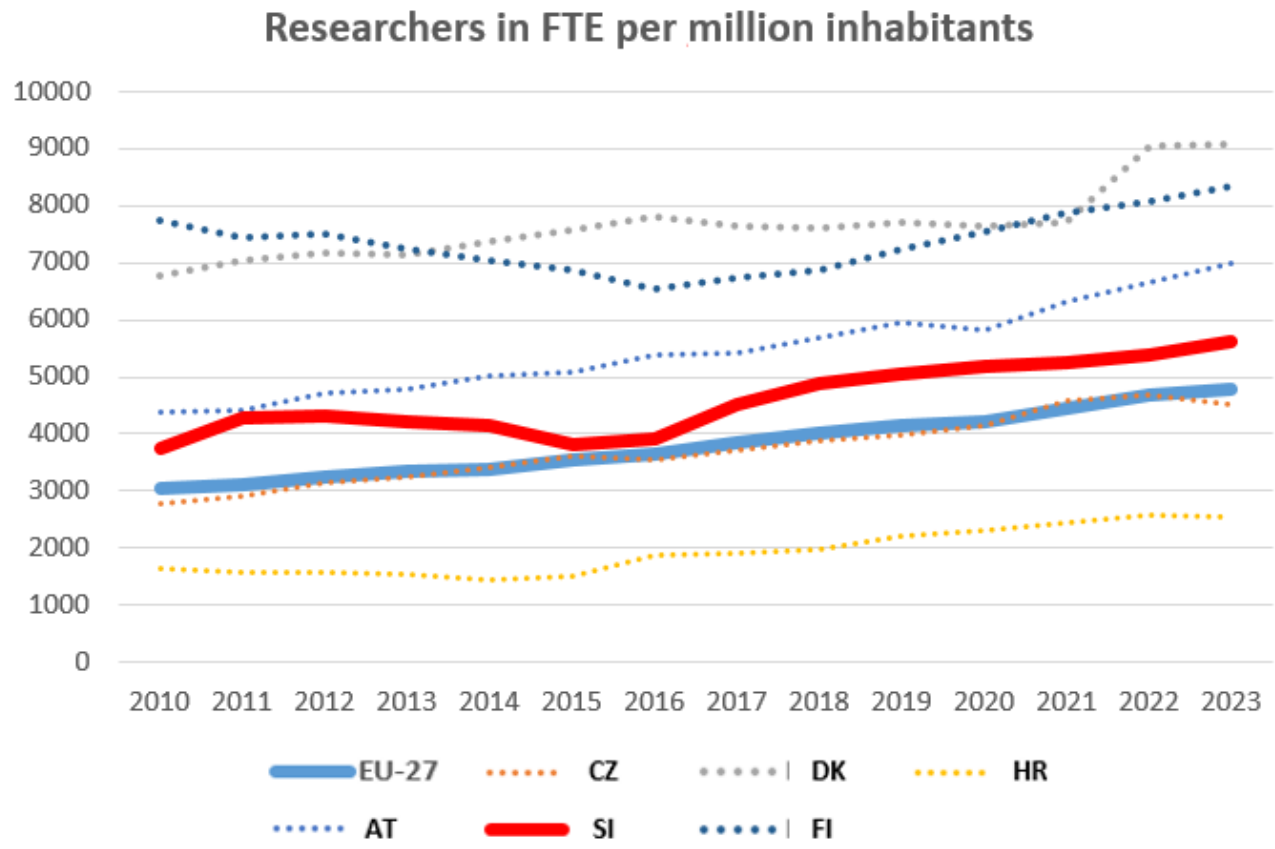




Source: Eurostat, 2025

Structure of Researchers in Slovenia

Structure of Researchers in Slovenia by Sector

Sector	All persons	Researchers	All persons	Researchers
	Number		FTE	
All	25.863	17.587	17.879	11.893
Business sector	15.143	8.843	11.268	6.689
Government sector	3.961	3.038	3.040	2.246
Higher education sector	6.424	5.459	3.394	2.831
Private non-profit sector	335	248	177	128

Source: Weindorfer, 2024

Researcher structure based on employment in public and private sectos differs from that in the majority of EU-27 (Udovič et al., 2025).

Limited internationalisation: In 2017, researchers with Slovenian citizenship accounted for 94% of all researchers in Slovenia, while in 2023, they accounted for 96% of all researchers in Slovenia (Udovič et al., 2025).

There is a need for more detailed data on researchers' career paths (e.g., speed of promotion, cross-sectoral and cross-disciplinary mobility, international collaboration etc.) (Črnigoj et al., 2025; Udovič et al., 2025).

Slovenia‘s R&D&I Rankings: GII

- Slovenia ranks **35th** among 139 countries on **GII 2025** (**22nd** among 39 European countries)

Highest Rankings

Slovenia ranks highest in Infrastructure (20th), Human capital and research (26th) and Knowledge and technology outputs (27th).

Lowest Rankings

Slovenia ranks lowest in Market sophistication (63rd), Creative outputs (53rd) and Institutions (48th).

Human capital and research

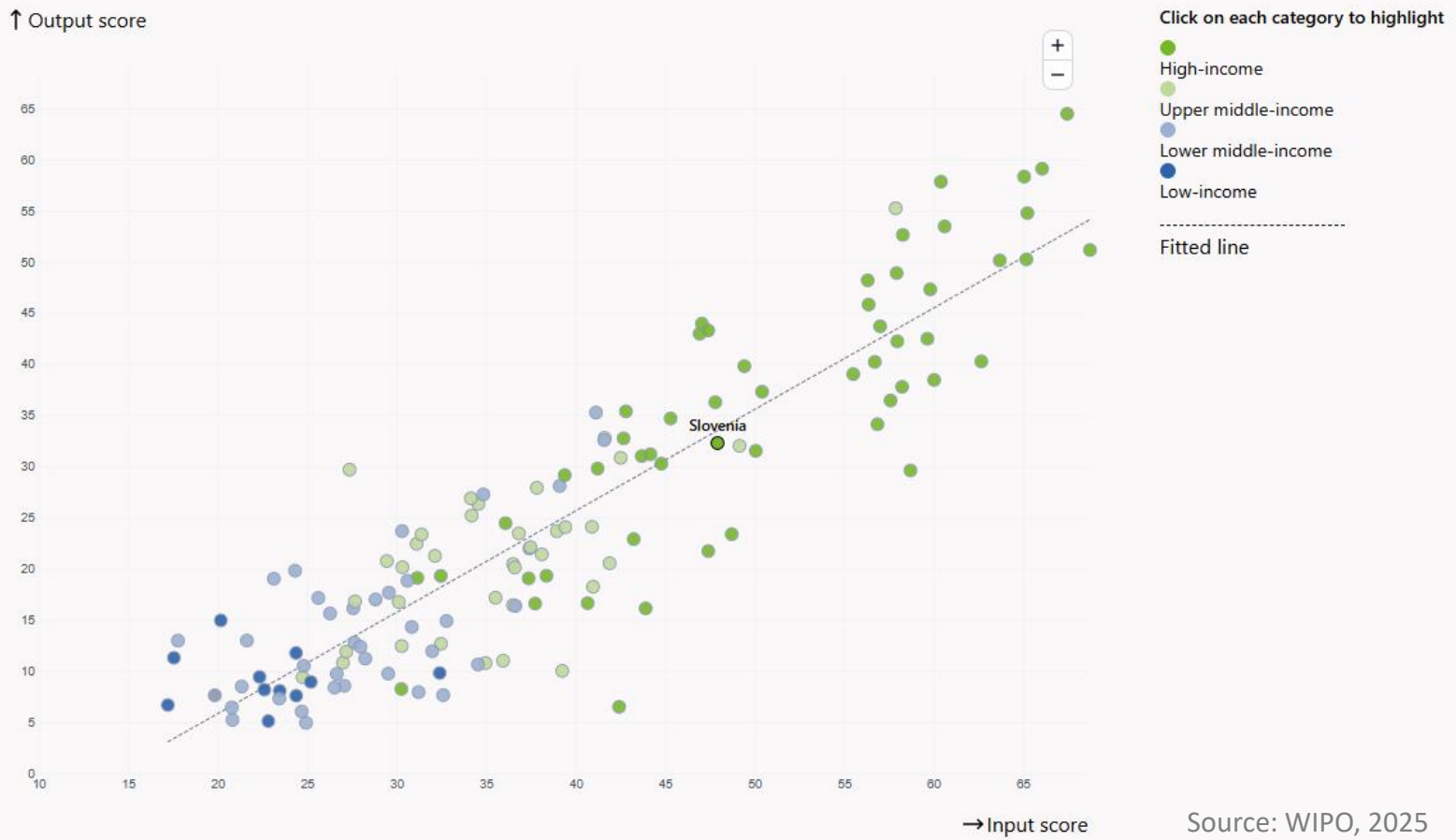
Top 10 | Score: 59.30

Slovenia | Score: 48.11

High-income | Score: 45.45

Europe | Score: 44.67

> Relationship between innovation inputs and outputs



Source: WIPO, 2025

Slovenia‘s R&D&I Rankings: EIS

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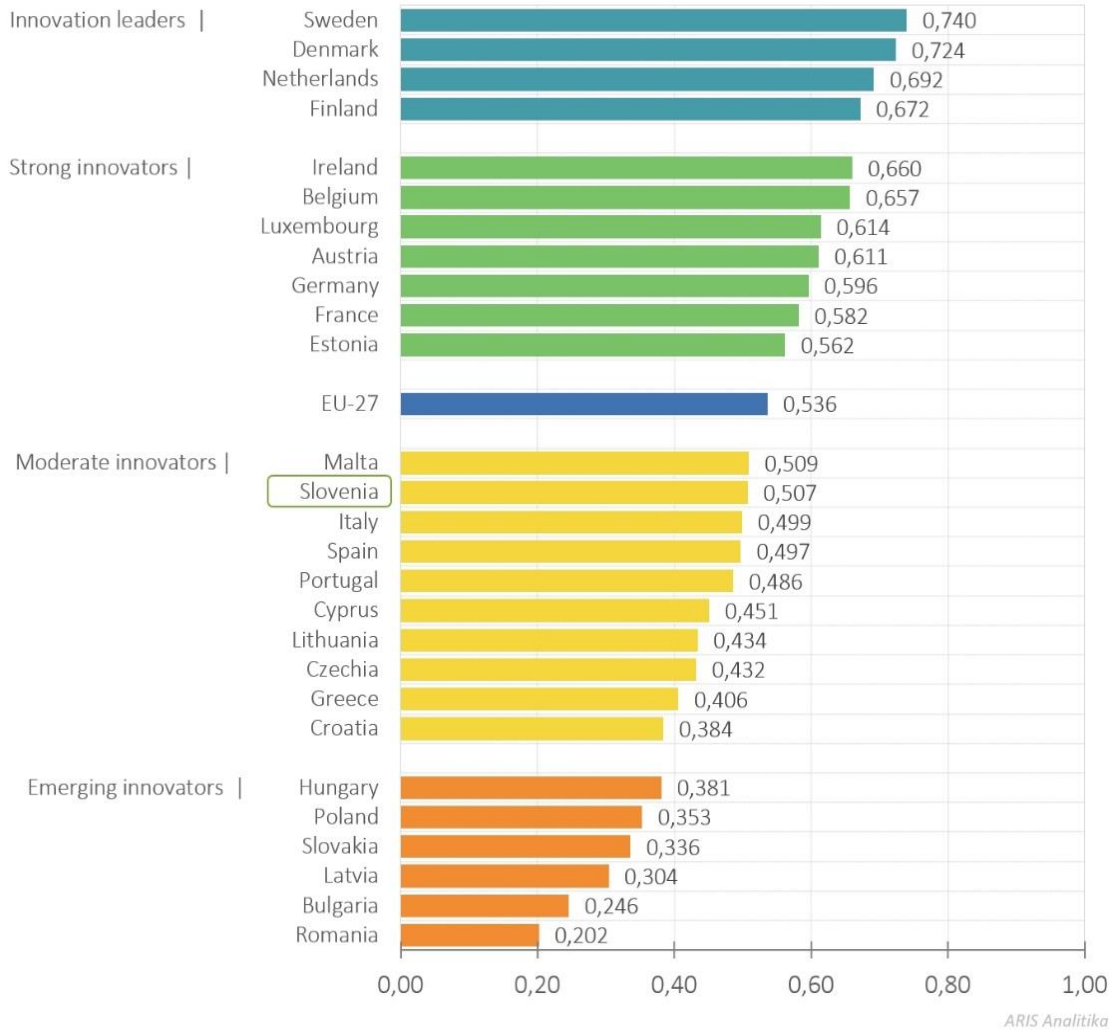
Summary Innovation Index According to EIS in 2025



Scores for Selected EIS Indicators in 2025

Indicator	Performance indexed to the EU in 2025	Rank among EU Member States
SUMMARY INNOVATION INDEX	**94.7**	**13**
Human resources	**121.1**	**9**
New doctorate graduates	100.0	9
Population with tertiary education	94.3	17
Population involved in lifelong learning	173.8	6
Attractive research systems	**105.3**	**13**
International scientific co-publications	165.7	10
Scientific publications among the top 10% most cited	67.7	17
Foreign doctorate students as a % of all doctorate students	105.6	17
Finance and support	**71.5**	**16**
R&D expenditure in the public sector	86.7	12
Venture capital expenditures	27.3	21
Direct and indirect government support of business R&D	84.3	9
Firm investments	**65.0**	**16**
R&D expenditure in the business sector	98.6	8
Non-R&D innovation expenditures	32.0	25
Innovation expenditures per person employed	52.8	18
Linkages	**130.1**	**12**
Innovative SMEs collaborating with others	97.5	13
Public-private co-publications	243.3	10
Job-to-job mobility of HRST	110.4	11

Source: European Commission, 2025

EIS Indicators for Slovenia Pertaining to Research Careers (2021–2024)

	2021	2022	2023	2024	Change
1.1.1 New doctorate graduates	100,0	86,9	100,0	100,0	0,0
1.1.2 Population with tertiary education	130,1	92,5	95,8	86,9	-43,2
1.1.3 Population involved in lifelong learning	104,0	175,0	192,8	160,1	56,1
1.2.1 International scientific co-publications	128,7	164,0	153,0	152,0	23,3
1.2.2 Scientific publications among the top 10 % most cited	75,7	75,3	80,0	76,4	0,7
1.2.3 Foreign doctorate students as a % of all doctorate students	51,8	86,8	88,9	96,7	44,8

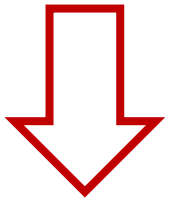
Emerging innovators (below 70 % of the EU average)
Moderate innovators (between 70 % and 100 % of the EU average)
Strong innovators (between 100 % and 125 % of the EU average)
Innovation leaders (above 125 % of the EU average)

Sources: EIS 2021–2024; Črnigoj et al., 2025

Challenges pertaining to international mobility, research excellence and impact.

Implications of R&D&I Macro Data

- Challenges related to **science-industry collaboration.**
- Challenges related to **transfer of knowledge into practice** (e.g., commercialization of innovations, diffusion of innovations into the society).
- Challenges pertaining to **efficiency of the R&D&I system.**



- While researchers are some of the key contributors to innovation and development, their **competencies are underused.**

(Bučar & Brečko, 2024; Črnigoj et al., 2025; Jaklič et al., 2026)

CONTRIBUTORS TO THE CHALLENGES AND INNEFFICIENCIES ACCORDING TO THE LITERATURE REVIEW

General Challenges in Research Careers

- Employment instability and precarity – particularly at the early career stages (PhD, postdoc) and for female researchers
- The highly competitive „publish or perish“ academic culture
- High-pressure work environments and excessive workloads hindering work-life ballance
- Difficulties in international and cross-sectoral mobility
- Difficulties in managing diverse career paths
  - Poor career planning
  - Absence of a clear reward system for top researchers
  - Adopting to new evaluation criteria (also to the additional bureaucratic burden)
- Gender and minority inequalities

(Udovič et al., 2025)

WHAT DO THE RESEARCHERS IN SLOVENIA REPORT?

Researchers' Feedback on the Slovenian R&D&I Ecosystem

(Consultation with 31 R&D&I Ecosystem Stakeholders on 28. 1. 2025)

Positives:

- Stable funding and employment security for junior researchers (the **‚Young Researchers' scheme**, also junior researchers being included in core research programmes)
- Capacity building and networking activities (**mentorships**, mobility etc.)
- Activities promoting reputable image of science and scientific careers
- Academic freedom
- Flexible work hours
- Opportunities for interdisciplinary, cross-sectoral and international **collaboration** (policy-, project-, mobility-wise; **complementary schemes** a good practice)
- Flexible criteria for career progression, including qualitative measures as habilitation criteria

Negatives:

- **Unstable project-based funding** (funding bodies not respecting the announced timelines for calls and reviews, short deadlines, incompatibility of projects)
- **Poor HRM**
- **Bureacracy** related to project proposals and lack of flexibility in implementation (applies also to mobility demands)
- **Work overload** due to researchers performing teaching, professional and administrative tasks
- Barries in cross-organisational and cross-sectoral mobility and collaboration
- Lack of interdisciplinary collaboration
- Lack of a strategic approach to research infrastructures (also issues related to dual use)

(Udovič et al., 2025)

Researchers' Feedback on the Slovenian R&D&I Ecosystem

(Survey between 19. 5. 2025 and 15. 6. 2025; 1000 Respondents)

- **The attractiveness of the Slovenian research landscape and the career development opportunities within the research system are generally assessed slightly negatively.** Organization of the sabbatical year and the financial conditions for research receive the lowest scores (the first particularly among interdisciplinary researchers or researchers from smaller research organisations, the second more so among female researchers, natural scientists, and those employed at public research organizations).
- **The assessment of factors affecting the research career paths based on personal experience is even lower than the overall assessment.** Respondents rate funding (in)stability, the hiring system, career development, portability of titles between research institutions, and transitions to and from the private sector poorly. They rate only access to literature/resources as highly positive.
- **When assessing the attractiveness of career development conditions for researchers in Slovenia in general, several factors are rated positively;** including opportunities for lifelong education and learning, opportunities for various forms of international mobility, elements ensuring social security for researchers, measures for young researchers, generating benefits for society and science, a supportive environment for personal growth, and a pleasant environment for living and family life**.**
- **Differences in the assessment of the attractiveness of career conditions in general and for the respondent's specific case are very small.** Individuals are somewhat more critical, based on personal experience, regarding conditions for international exchanges, mobility, and sabbatical year; overall, they are somewhat more critical of financial compensation. Younger researchers and researchers in the medical and biomedical fields are particularly critical (see Appendix II for detailed results).

(Udovič et al., 2025)

Researchers‘ Feedback on the Slovenian R&D&I Ecosystem

(Survey between 19. 5. 2025 and 15. 6. 2025; 1000 Respondents)

- **Additional criticism:**
  - A lack of systematic institutional and organizational support for the career development of researchers (especially after the expiration of “Young Researcher” status)
  - Inadequate system for evaluating the performance and rewarding researchers
  - Rigid requirements regarding international mobility and mentorship for advancement in one‘s career
  - High administrative burden (also due to insufficient investment in the development of professional staff)
  - Bottlenecks that hinder collaboration with the business sector (which respondents are otherwise largely in favor of)
  - Research projects not being linked to national priorities

(Udovič et al., 2025)

Challenges Related to Research Careers Identified During the 2025 ReZrIS30 Evaluation

- **Barriers at the level of framework conditions:**
  - Unstable (often project-based) funding
  - Suboptimal implementation of project calls:
    - Rigid call conditions and inflexibility regarding project implementation
    - Lack of coherence among projects (in terms of content and timing)
    - Delays in the review process and in notifying applicants of the outcome of their project proposals
  - Rigid pay system and limitations on performance-based rewards (especially in the public sector)
  - Promotion system tied to quantitative indicators and not adapted to the diverse career paths of researchers
  - Lack of systematic incentives and rewards for interdisciplinary research
  - Outdated research infrastructure (insufficient investment in modernization and upgrades of extant as well as insufficient investment in new infrastructure, insufficient promotion of research infrastructure and access to it, etc.)
  - Insufficient promotion of the country as a location with prospects for R&D career development
  - Systemic barriers to international mobility (challenges in maintaining social rights due to mobility—e.g., recording of total length of service and a unified pension fund; an unregulated reintegration system; focus on project-based collaboration; language barriers; rigid conditions regarding the implementation of mobility—requiring a non-return period for mobility; complex and lengthy administrative procedures for obtaining residence permits and visas; insufficient recognition of work performed abroad – especially that outside EU)
  - Systemic barriers to cross-sectoral mobility (e.g., lack of alignment of performance indicators) and a lack of incentives for science-industry collaboration

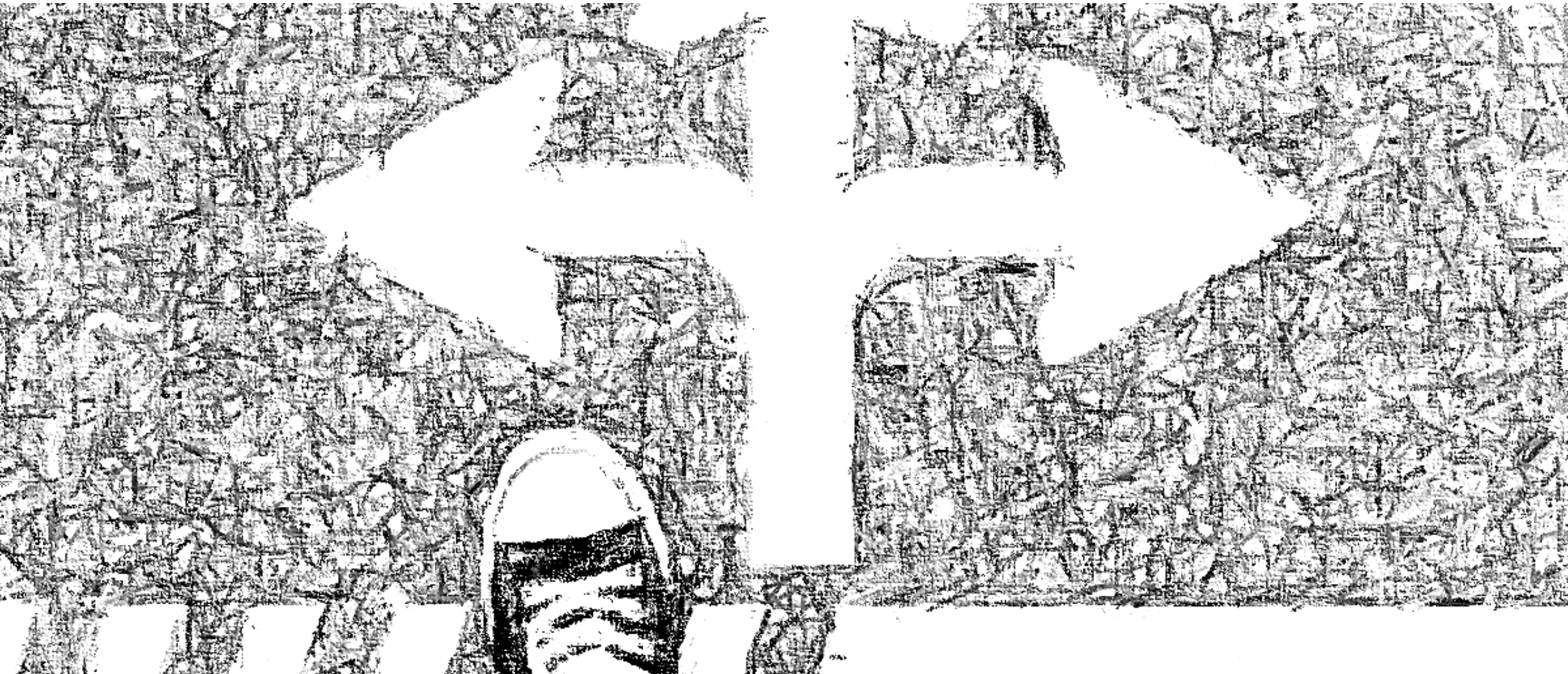
- **Barriers at the level of research organizations:**
  - Lower job security (fixed-term or part-time contracts with researchers – also part-time positions) and limited opportunities for advancement
  - Lack of career path plans at the institutional level (focus on the initial phase and neglect of subsequent phases, project-based employment)
  - Underutilization of legal options for rewarding researchers and other staff
  - Challenging management of diverse career paths
  - Staff shortages and the burden on researchers from professional and administrative tasks
  - Lack of competencies for project applications and management (including taking on a coordinating role)
  - Organizational barriers to international mobility (lack of organizational support for immigration and emigration—similar to secondments; difficulties in substituting mobility participants during their absence—also due to lack of staff at the organizational level; underutilization of mobility funds; insufficient collaboration between institutions—including project-based collaboration)
  - Organizational barriers to cross-sectoral mobility (in some disciplines, insufficient links with the industry, unsuitable promotion criteria, lack of organizational incentives for such cooperation)
  - Lack of interdisciplinarity (at the level of research groups, in terms of inter-institutional cooperation, etc.)
  - Low rankings of research institutions on international scales and the associated lack of prestige (there are significant differences among organizations in this regard)

Persistent issues!

(Črnigoj et al., 2025)

Slides prepared for the „Shaping the Future of Research Careers: From Policy to Implementation“ conference organised by the Ministry of Higher Education, Science and Innovation of the Republic of Slovenia.

WAY FORWARD



SPECIFIC RECOMMENDATIONS FOR POLICYMAKERS

- Better align actions and funding with national priorities, comparative advantages and high potential areas of the R&D&I ecosystem (also when planning research and technology infrastructures)
- Strengthen inter-ministerial cooperation and commitment to set objectives
- Strengthen continuity of activities
- Secure stable funding and competitive salaries for researchers, as well as increase the number and value of calls for proposals and approved funding schemes for early-career researchers
- Strengthen bridge funding to support researchers between projects
- Strengthen internationalisation efforts (promote Slovenia as an attractive R&D&I location – based on comparative advantages and focused on areas with biggest potential; build long-term partnerships in priority areas, better employ science diplomacy; support development of internationally competitive doctoral programs and research teams)
- Provide systemic support for cross-sectoral collaboration (taking into consideration RO evaluation criteria, habiltation criteria and differences between disciplines)
- Invest in managment skills and competencies of professional staff
- Systematically monitor research career paths in more detail (build a national database) to flexibly address needs, opportunities, and challenges
- Provide a sufficently flexible framework to support diversity of research career paths
- Plan activities that facilitate transitions between career development phases (at all career stages)
- Include HRM aspects in external evaluation of research institutions within the framework of stable funding
- Initiate discussion on revamping and standardizing the promotion system within KOsRIS and at universities (also in connection with engagement in the business sector)
- Support ROs in implementation of the sabbatical year
- Reintroduce training for young researchers on intellectual property, entrepreneurship, and soft skills for engaging with society – including science and media communication (for knowledge transfer into practice), enhance the young researchers program and reintroduce the young researhers in industry program

(Črnigoj et al., 2025; Udovič et al., 2025)

GENERAL RECOMMENDATIONS FOR POLICYMAKERS

- Slovenia needs a more focused, coordinated, and effectively implemented strategic innovation policy—not just more funding. Slovenia is underperforming in terms of efficiency: The same R&D&I results could be achieved with 25-30 % lower investments. In terms of research system, the same level of competitiveness could be achieved with a 20 % worse research system. **Improving the efficiency of investments, innovation activities, and outcomes is needed.**
- Particular emphasis should also be placed on the **actual implementation of measures already adopted**, as the gap between the normative level and practice represents one of the key limiting factors in the career development of researchers and their research.

(Jaklič et al., 2026; Udovič et al., 2025)

RECOMMENDATIONS FOR RESEARCH ORGANISATIONS

- Develop professional services and staff supporting researchers (also exchange good practices across organisations)
- Strengthen HRM practices (develop clear career paths for diverse types of careers, strengthen mentorship schemes and networking opportunities for researchers)
- Develop predictable career models
- Introduce HRM practices that ensure opportunities for a sabbatical year
- Provide incentives and skill-building opportunities for cross-sectoral, interdisciplinary and international collaboration (mobility as an opportunity for long-term partnerships)
- Strengthen skills needed for societal and economic impact (science-industry collaboration, science-society collaboration, commercialisation etc.)
- Provide systematic support for different types of mobility and develop targeted measures for the return and reintegration of researchers

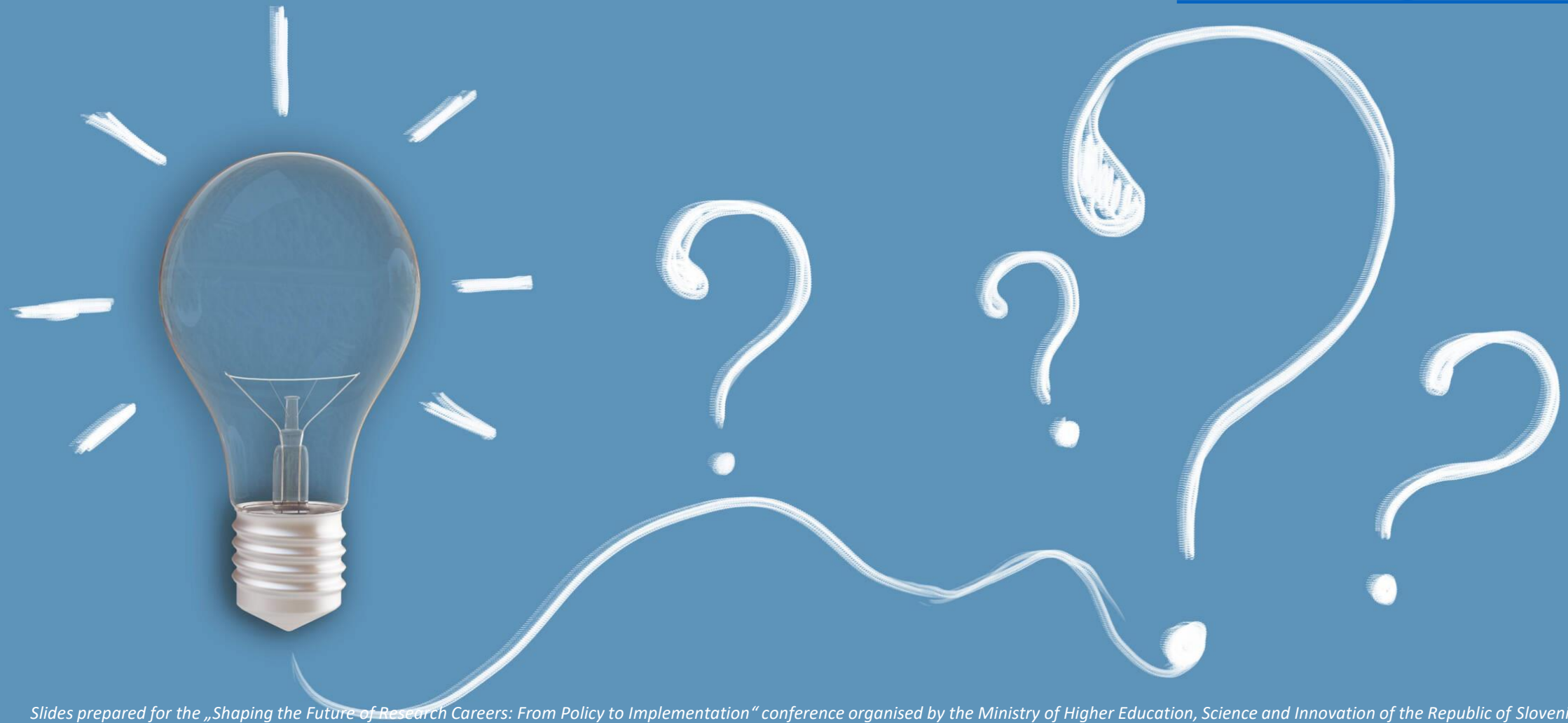
(Črnigoj et al., Udovič et al., 2025)

RECOMMENDATIONS FOR RESEARCHERS

Be proactive in both co-developing and implementing actions at national and organisational levels.

QUESTIONS?

Contact information: iris.kolesa@fdv.uni-lj.si



Slides prepared for the „Shaping the Future of Research Careers: From Policy to Implementation“ conference organised by the Ministry of Higher Education, Science and Innovation of the Republic of Slovenia.

APPENDIX: LINKS TO REPORTS

- Boštjan Udovič, Iris Koleša, Klemen Koman, Nika Murovec, Tjaša Bartolj (2025). Stanje in razvoj kariernega sistema raziskovalk in raziskovalcev v Sloveniji glede na priporočila Sveta Evropske unije in OECD: 1. poročilo *[The state of play and development of the research career system in Slovenia according to the recommendations of the Council of the European Union and the OECD: 1st report].* Available in Slovenian at: https://www.fdv.uni-lj.si/docs/default-source/cmo/projekti/prvo-poro%C4%8Dilo-crp.pdf?sfvrsn=0.
- Boštjan Udovič, Tjaša Bartolj, Klemen Koman, Nika Murovec, Iris Koleša, Maja Bučar (2025). Stanje in razvoj kariernega sistema raziskovalk in raziskovalcev v Sloveniji glede na priporočila Sveta Evropske unije in OECD: 2. poročilo (Karierne poti raziskovalk in raziskovalcev v Sloveniji: izzivi, dileme in odprta vprašanja) *[The state of play and development of the research career system in Slovenia according to the recommendations of the Council of the European Union and the OECD: 2nd report (Career paths of researchers in Slovenia: challenges, dilemmas and open questions)].* Available in Slovenian at : https://www.fdv.uni-lj.si/docs/default-source/cppr-doc/drugo-poro%C4%8Dilo-crp.pdf?sfvrsn=0.
- Boštjan Udovič, Klemen Koman, Nika Murovec, Tjaša Bartolj, Iris Koleša, Maja Bučar (2026). Stanje in razvoj kariernega sistema raziskovalk in raziskovalcev v Sloveniji glede na priporočila Sveta Evropske unije in OECD: 3. poročilo (Mednarodna primerjalna analiza sistema zaposlovanja ter kariernih poti raziskovalk in raziskovalcev v izbranih državah: Avstrija, Češka, Danska, Finska, Hrvaška) *[The state of play and development of the research career system in Slovenia according to the recommendations of the Council of the European Union and the OECD: 3rd report (International comparison of the employment system and career paths of researchers in selected countries: Austria, the Czech Republic, Denmark, Finland, and Croatia)].*

This research was part of „The state of play and development of the research career system in Slovenia according to the recommendations of the Council of the European Union and the OECD“ target research program (CRP V5-24059) funded by the Ministry of Higher Education, Science and Innovation of Republic of Slovenia (MVZI) and the Slovenian Research Agency (ARIS).

APPENDIX I: LINKS TO REPORTS

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**Project V5-2283, funded by MVZI and ARIS.*

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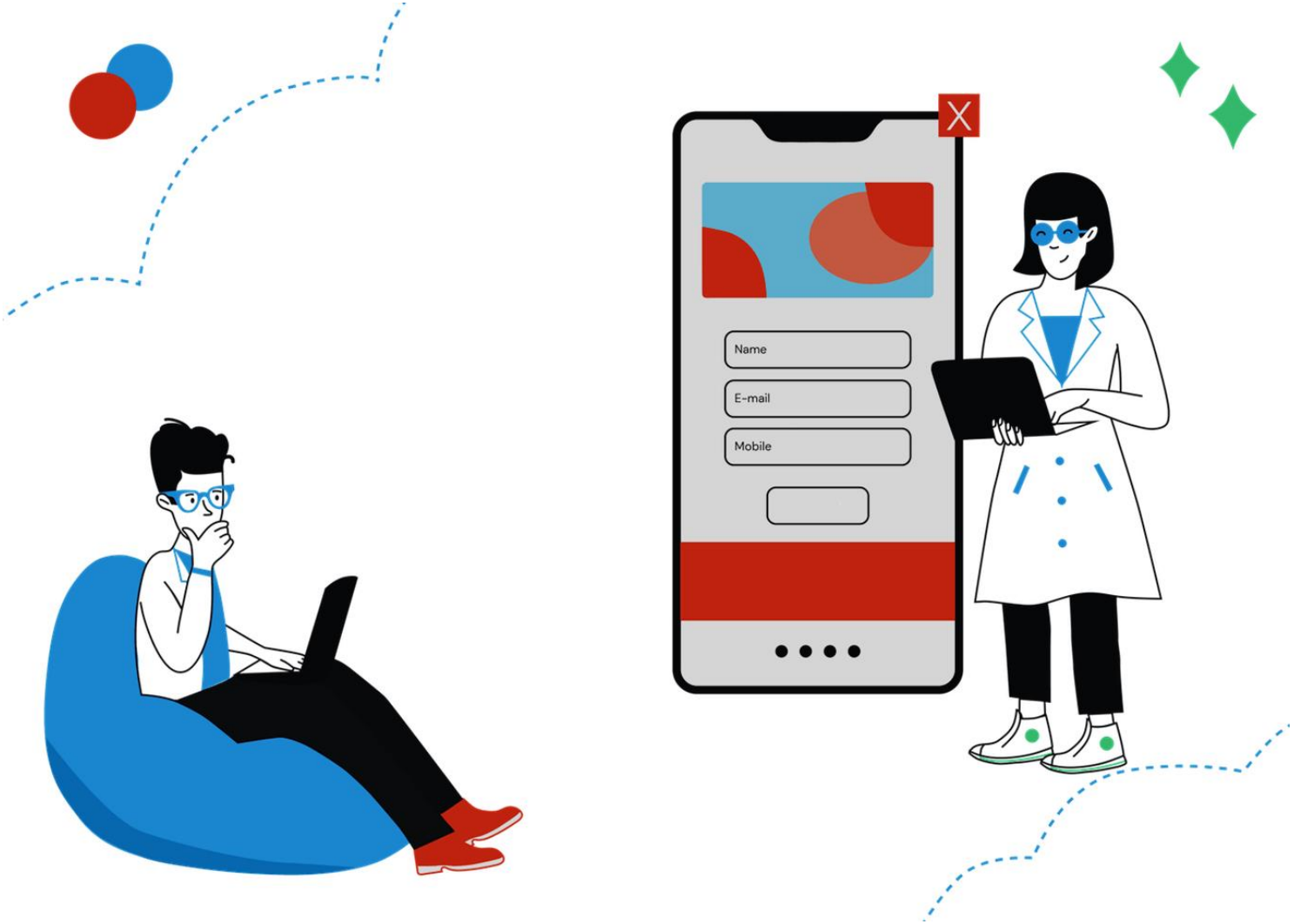
APPENDIX II: SELECTED SURVEY RESULTS



Attractiveness of the Slovenian Research Environment: GENERAL

(1 = I completely disagree, 5 = I completely agree)

	n	x̄	s
○ I believe that the Slovenian research environment **is attractive** to researchers.	886	2,9	0,9
○ I believe that researchers in Slovenia have **good conditions** for conducting research.	882	3,0	1,0
○ I believe that researchers in Slovenia have **good financial conditions** for conducting research.	878	2,4	1,0
○ I believe that researchers in Slovenia have **good conditions** for conducting research **content-wise** (e.g., funded projects and programs address current societal challenges, access to relevant resources and infrastructure is provided, networking and collaboration are encouraged, research freedom is guaranteed, etc.).	874	3,1	1,0
○ I believe that **the sabbatical year** for teaching staff/researchers is well-organized.	800	2,3	1,0
○ I believe that **research work is higly regarded** in Slovenian society.	883	2,9	1,0
○ I believe that the **research profession is reputable** in Slovenian society.	884	2,9	1,1

Source: Udovič et al., 2025

No major differences by type of institution or discipline.

More favourable evaluations among professional staff, male respondents and respondents younger than 31 years.

Financial conditions more favourably evaluated by professional staff, University employees, those younger than 40 years and male researchers.

The Attractiveness of the Slovenian Research Environment: Career Paths (GENERAL)

(1 = I completely disagree, 5 = I completely agree)

	n	x̄	s
○ I feel that, as a researcher in Slovenia, I have **stable funding**.	811	2,4	1,1
○ I feel that I have **good access to materials and literature**.	817	4,0	0,9
○ I feel that **the staffing system** (including promotion and remuneration) in the research sector **is encouraging and stimulating**.	806	2,4	1,0
○ I feel that there is **a clear system for the career development** of researchers **in public research organizations** in Slovenia.	793	2,5	1,0
○ Research titles can be easily **transferred between research institutions** (portability).	670	2,8	1,0
○ I believe that **transitioning to and from the business sector** is well-managed and benefits the researcher.	682	2,3	0,8
○ I believe that researchers have **sufficient administrative and professional support** in their work.	806	2,6	1,1

Source: Udovič et al., 2025

More In-Depth Analysis

- **STABLE FUNDING SYSTEM**
  - 58% of respondents agree that the system is NOT APPROPRIATE,
  - 20% consider it to be APPROPRIATE.
- **ACCESS TO RESOURCES/LITERATURE**
  - 7% of respondents agree that access is POOR or NON-EXISTENT,
  - 80% believe it is GOOD or EXCELLENT (of which 24% of respondents rate it as EXCELLENT).
- **HRM**
  - 57% of respondents agree that the human resources management system is POOR or NON-EXISTENT,
  - 21% believe it is GOOD or EXCELLENT.
  - *More favourable evaluations among male researchers, older than 40 years; professional staff; social scientists and tech representatives; no major differences by type of institution (a bit more favourable evaluations among University staff).
- **'PORTABILITY'**
  - 33% of respondents believe this is IMPOSSIBLE,
  - while 20% believe it is POSSIBLE.
  - *FACT: Transfer of titles (portability) is not possible/planned.
- **TRANSITION TO and FROM THE PRIVATE SECTOR**
  - 4% of respondents agree that the system is ADEQUATE,
  - 55% that it is INADEQUATE.

Source: Udovič et al., 2025

Factors of Research Career Attractiveness: GENERAL and for OWN CAREER

(1 = I completely disagree, 5 = I completely agree)

	OWN CAREER		GENERAL	
	$\bar{x}$	s	$\bar{x}$	s
○ Financial compensation (personal income)	2,9	1,1	2,6	1,0
○ Opportunities for lifelong education and learning	4,0	0,9	4,0	0,8
○ A supportive environment for personal growth	3,6	1,1	3,5	0,9
○ A pleasant environment for living and family life	3,6	1,2	3,4	1,2
○ Opportunities for international exchange	3,8	1,0	4,0	0,8
○ Opportunities for a sabbatical year	2,5	1,2	2,7	1,1
○ Creating benefits for science	3,7	1,0	3,7	0,8
○ Creating benefits for society	3,7	1,0	3,6	0,9
○ "Protected" status during sick leave or maternity leave	3,9	1,1	3,9	1,0
○ Inclusion in European mobility schemes	3,6	1,0	3,9	0,8
○ Young Researchers Initiative	3,5	1,2	3,7	1,0
○ Other MVZI measures in support of building an independent research career (e.g., promoting mobility between the academic and business sectors, ensuring equal opportunities, promoting open science, etc.).	3,1	1,0	3,1	0,9

Source: Udovič et al., 2025

Views about factors of career system attractiveness

(1 = I completely disagree, 5 = I completely agree)

		$\bar{x}$	s
EVALUATION OF AND AWARDS FOR RESEARCHERS	○ I believe that evaluation of researchers' performance is appropriate.	2,5	0,9
	○ I believe that rewarding of high-quality researchers is appropriate.	2,4	1,0
	○ I believe that rewarding high-quality researchers should primarily be financial.	3,4	1,0
MOBILITY	○ I believe that mobility, e.g., as required for habilitation, is an obstacle to career development.	3,2	1,2
REPORTING/ ADMINISTRATION	○ I believe that the administrative burden in research work is manageable.	1,9	0,9
	○ I believe that we have sufficient support from professional services in applying for and managing projects.	2,5	1,1
COLLABORATION WITH THE INDUSTRY	○ I believe that ARIS requires excessive contributions from companies for applied projects.	3,5	1,0
	○ I believe that collaboration with the business sector benefits researchers in the evaluation of their work.	3,4	1,0
	○ I believe that companies investing in public sector research should receive a greater tax deduction.	3,8	0,9

Source: Udovič et al., 2025

Views about the Young Researcher Scheme

(1 = I completely disagree, 5 = I completely agree)

	$\bar{x}$*	s*
○ It seems to me that young researchers (YR) have no trouble transitioning from YR status to full-fledged researcher status.	2,5	1,1
○ It seems to me that the career development of researchers after they earn their PhDs is left entirely up to them.	3,9	0,9
○ It seems to me that the YR mentoring program is well organised.	3,0	1,1

Source: Udovič et al., 2025

Results of Hypotheses Testing

- H1: **Structural factors** (lack of systemic and/or institutional support, gaps between calls for proposals, difficulties in transitioning to the private sector, complex portability of academic titles, etc.) are key barriers to the development of research careers for female and male researchers in Slovenia. CONFIRMED
- H2: Perceptions of key barriers and opportunities for the development of research careers (as well as for conducting research) **vary across disciplines**. CONFIRMED
- H3: When assessing the conditions and factors for research career development (own and general), **researchers at the beginning of their career tend to be more critical** than the more experienced researchers. REJECTED
- H4: **Gender** has an impact on assessment of the conditions and factors for research career development (own and general). PARTIALLY CONFIRMED
- H5: Researchers are **more critical of the conditions for the development of their own career paths** than in their assessment of the general state of conditions for the development of research career paths. CONFIRMED

(Udovič et al., 2025)