INTEGRATED POLICYMAKING IN THE AREA OF RDI: SLOVAKIA

Final Conference

2025-04-11

European Commission

European Commission

AGENDA

9:00-9:30 *Registration & Breakfast*

9:30-9:40 *Welcome & Opening Remarks*

9:40-10:00 *Keynote Speech on Robotisation in Slovakia*

10:00-10:30 *Presentation on Key Project Deliverables (D3 Focus)*

10:30-10:50 *Coffee Break*

10:50-11:50 *Panel Discussion: Is Robotisation a Horizontal Priority for Slovakia?*

11:50-12:00 *Closing remarks*

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Welcome & Opening Remarks

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Keynote Speech on Robotisation in Slovakia

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Presentation on Key Project Deliverables

General objective of the project

The **general objective** of this service contract is to contribute to institutional, administrative and growth-sustaining structural reforms in Slovakia, in line with Article 3 of the TSI Regulation. The **specific objective** of this service contract is:

- to assist national authorities in improving their capacity to design, develop and implement reforms;
- to assist national authorities in improving their capacity to prepare, amend, implement and revise recovery and resilience plans under Regulation (EU) 2021/241, in line with Article 4 of the TSI Regulation.

Technical Support Instrument

Supporting reforms in 27 Member States

The Technical Support Instrument (TSI) is the EU's main instrument for providing tailor-made technical expertise to Member States to support the design and implementation of reforms. It is a demand-driven tool that does not require co-financing and plays a key role in enhancing the resilience of Member States' economies and societies. The TSI contributes to sustainable, inclusive growth and supports recovery from the COVID-19 crisis.

Covers all stages of the reform process: preparation, design, development, and implementation

Encompasses a broad range of policy areas, including climate action, digital transition, and health

Offers strategic and legal advice, analytical support, capacity building, and on-the-ground expertise

Supports the preparation and implementation of national Recovery and Resilience Plans (RRPs)

PPMI

- Leading European research and policy analysis centre based in Lithuania
- Policy analysis, evaluation services and public management consulting to EU institutions/agencies
- 100+ full-time researchers, data scientists and consultants across 23 countries.
- A part of Kantar Public Group from July 2023, which was renamed to Verian Group

Relevant experience from the "Roadmap for the integration of the Lithuanian industry into European value chains“ project

One stop shop source for company and technology data in EU and globally

PPMI data scientists created the RDI database, go-to source for technology data to European Commission

Led a large FWC Supporting assessment and monitoring of industrial research, innovation, and technologies for DG RTD

Industrial Performance Assessment: Approach to Data Collection

- Company information
- Products, trademarks
- Technologies
- Real-time data updates
- Size, age, turnover
- Patent data
- Industrial and value chain positioning
- AI-powered search

Company data from Milda.ai

- Social media (LinkedIn, Facebook, Twitter)
- Company websites
- LLM & NLP techniques
- PATSTAT

Data sources

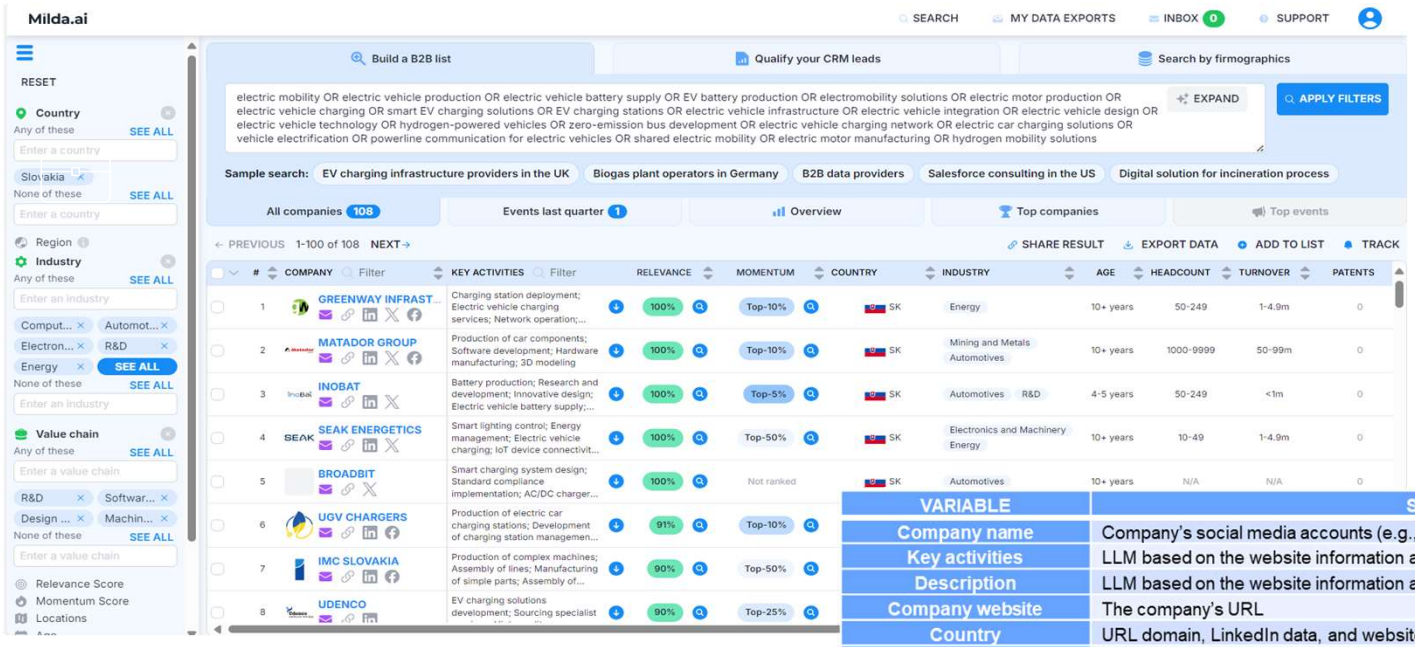
- Researchers' names
- Institutional affiliation
- Contact information
- Publications

Researchers' data from Open Alex

- Recent publication activity (2019 onwards)
- Technological relevance (5+ related publications)
- Applied sciences universities

Selection criteria

Approach to Data Collection: company data collection with Milda.ai



VARIABLE	SOURCE
Company name	Company's social media accounts (e.g., LinkedIn, Facebook, Twitter) OR landing page
Key activities	LLM based on the website information about products and services
Description	LLM based on the website information about products and services
Company website	The company's URL
Country	URL domain, LinkedIn data, and website information predicted by LLMs
Locations	Company's website
Patents	PATSTAT
Industries	LinkedIn data AND website information predicted by LLM
Age	LinkedIn data AND website information predicted by LLM
Headcount	LinkedIn data AND website information predicted by LLM
Turnover	Company's website information predicted by LLM
Total number of products	Company's website
Value chain positions	LLM

Validation with experts

- Regular check-ins with VAIA
- Monthly progress reports and meetings
- Systematic and ad hoc communication

Internal validation

- Stakeholder workshops for deliverable feedback
- Validation of preliminary findings by experts
- Final conference sharing project outcomes

External validation

Workshop | 7 Feb 2025 | VAIA, Bratislava

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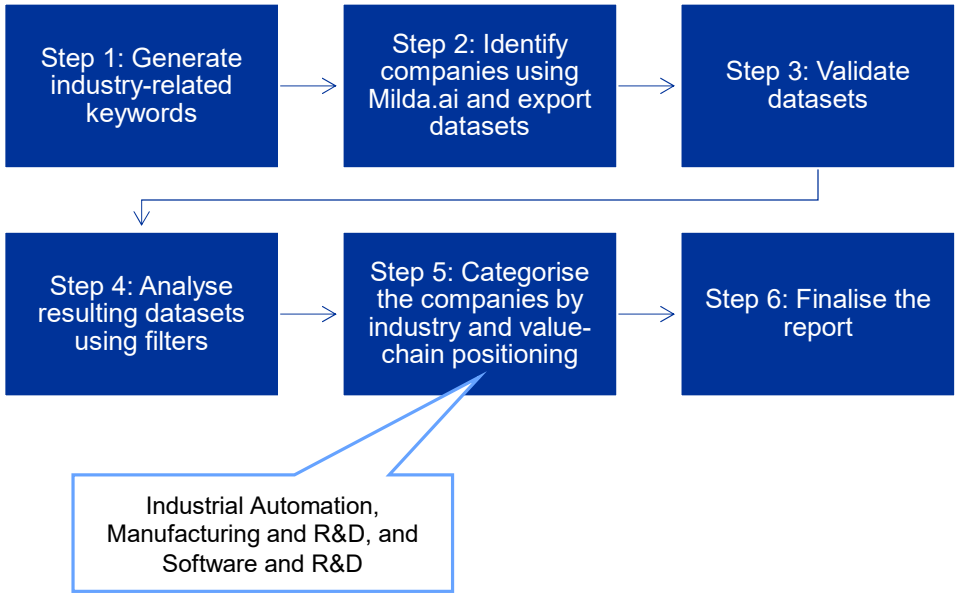
D3: Horizontal Pilot

Extensive report on the Slovak industrial automation & robotisation ecosystem

Objective & Methodological Approach

- **Main Objective:** Assess Slovakia's **Industrial Automation and Robotisation ecosystem**, identify growth areas, and position its performance within the regional Visegrád context.
- **Data source:** Milda.ai identified 2,463 Slovak companies using keywords based on expert research and AI input (ChatGPT).
- Analysis: Companies were assessed by size, age, industry, and operations.

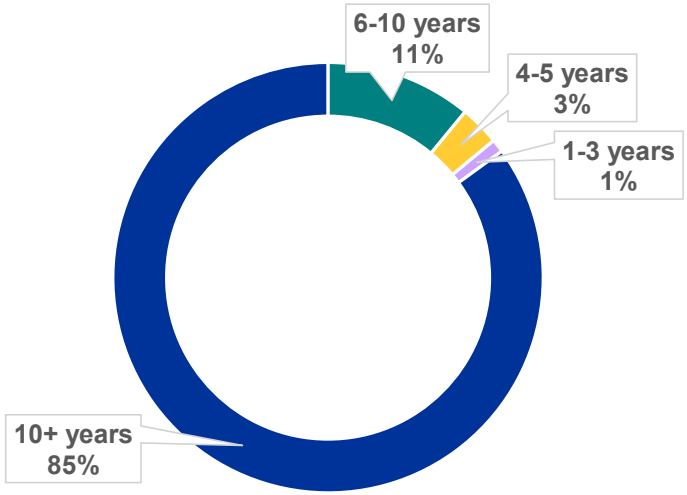
Data-driven approach to industry scoping

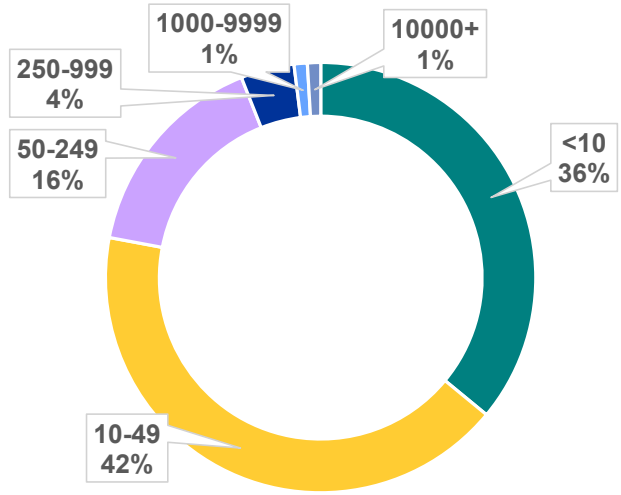


The ecosystem is dominated by mature small and medium-sized companies

Established players dominate the market. Potential challenges to scaling up.

Analysed companies by age and headcount

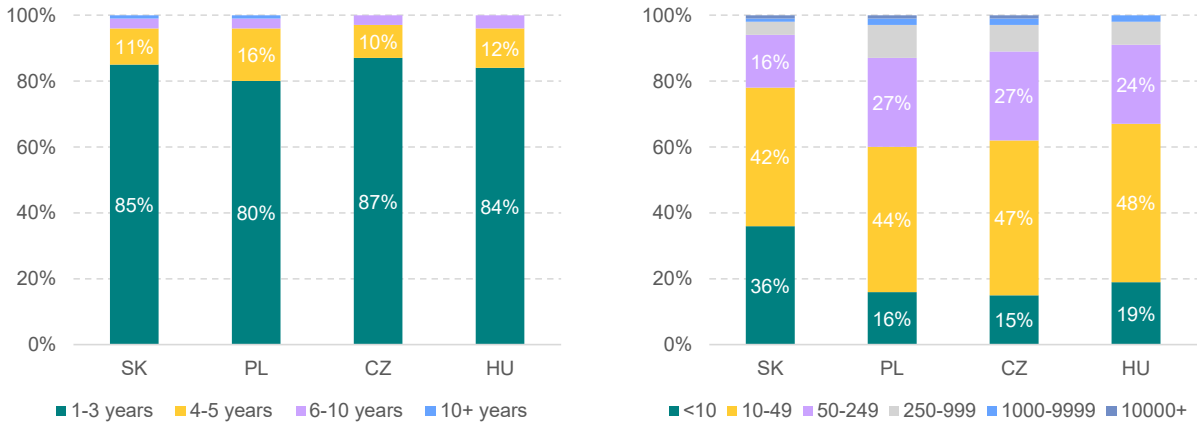




Slovakia in Visegrád context

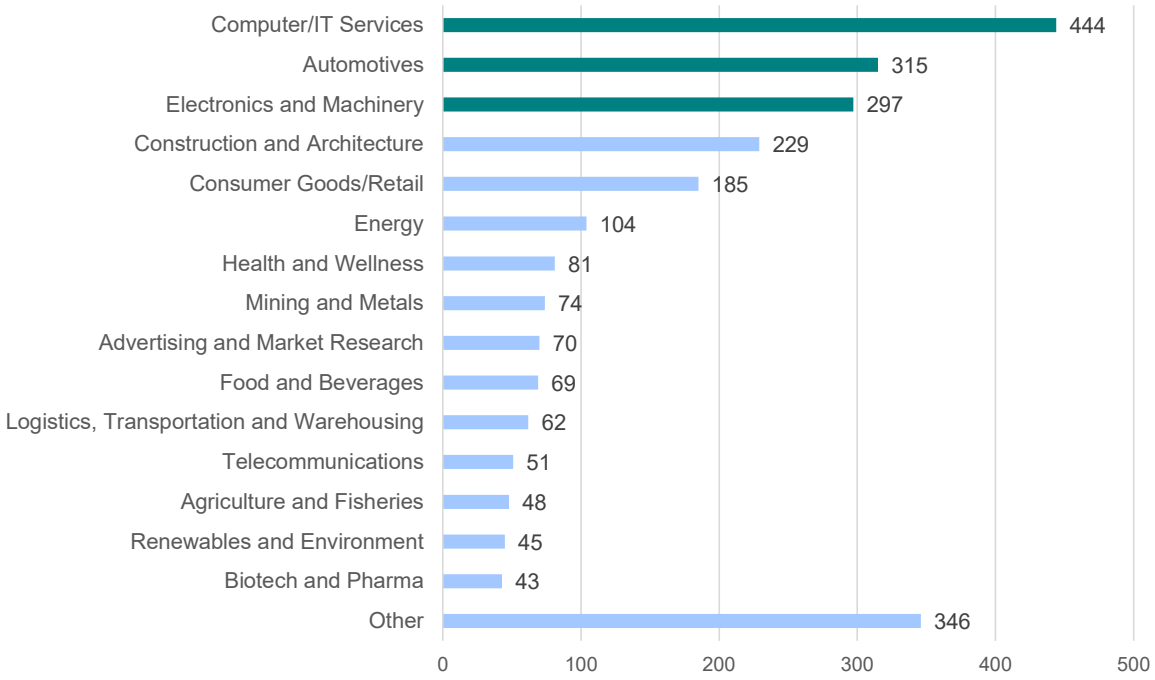
Visegrád region is dominated by mature SMEs

Analysed Visegrád companies by age and headcount



Value chain positioning

Key industries leading innovation are Computer/IT, Automotive, and Electronics and Machinery



18% Computer/IT Services

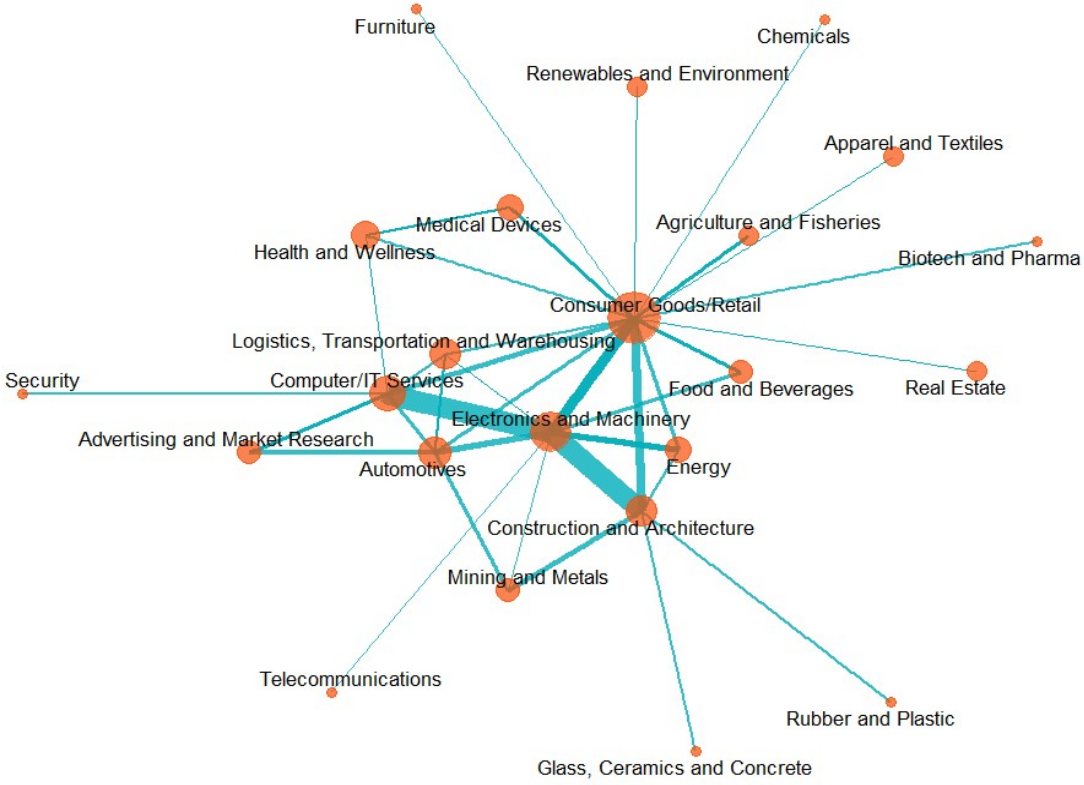
13% Automotives

12% Electronics and Machinery

Value chain positioning

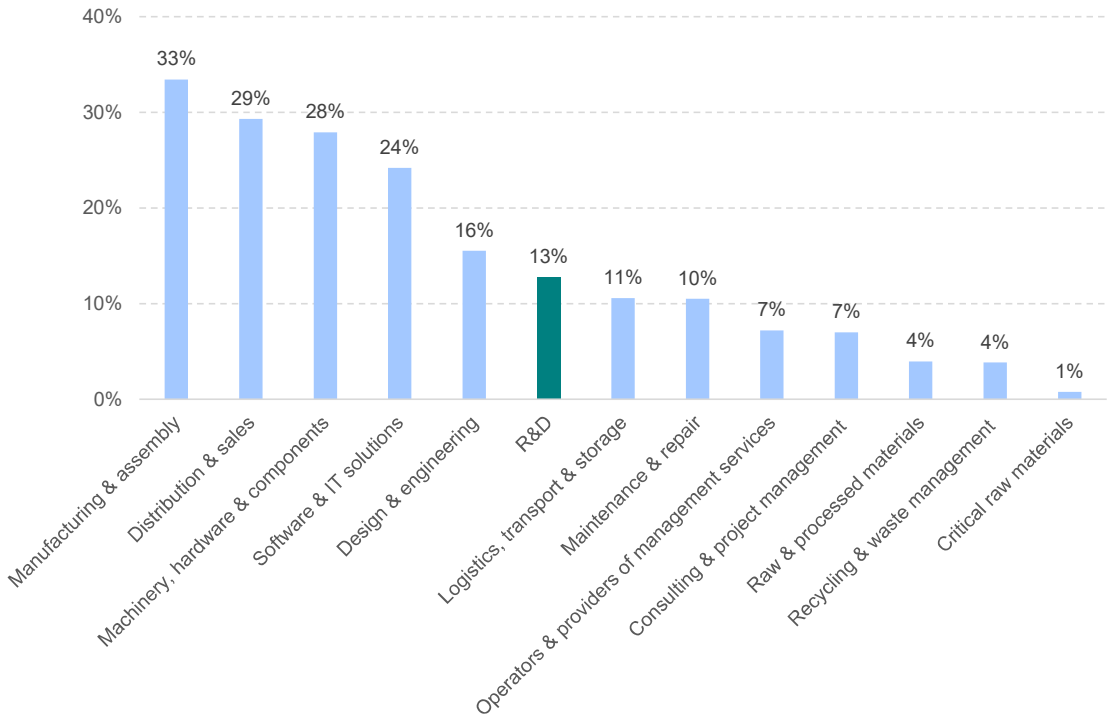
Industrial connectivity within the ecosystem

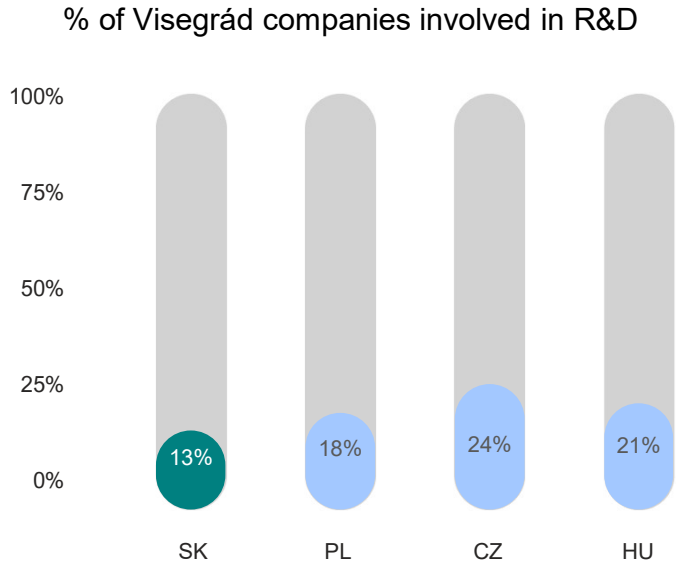
- Consumer Goods/Retail – central driver of technology adoption
- Electronics & Machinery – leading innovation and R&D
- Computer/IT Services – enabler of digital transformation
- Security (incl. Defence) – connector for cross-sector innovation
- Biotech & Pharma, and Renewables - growth sectors with innovation potential



Value chain positioning

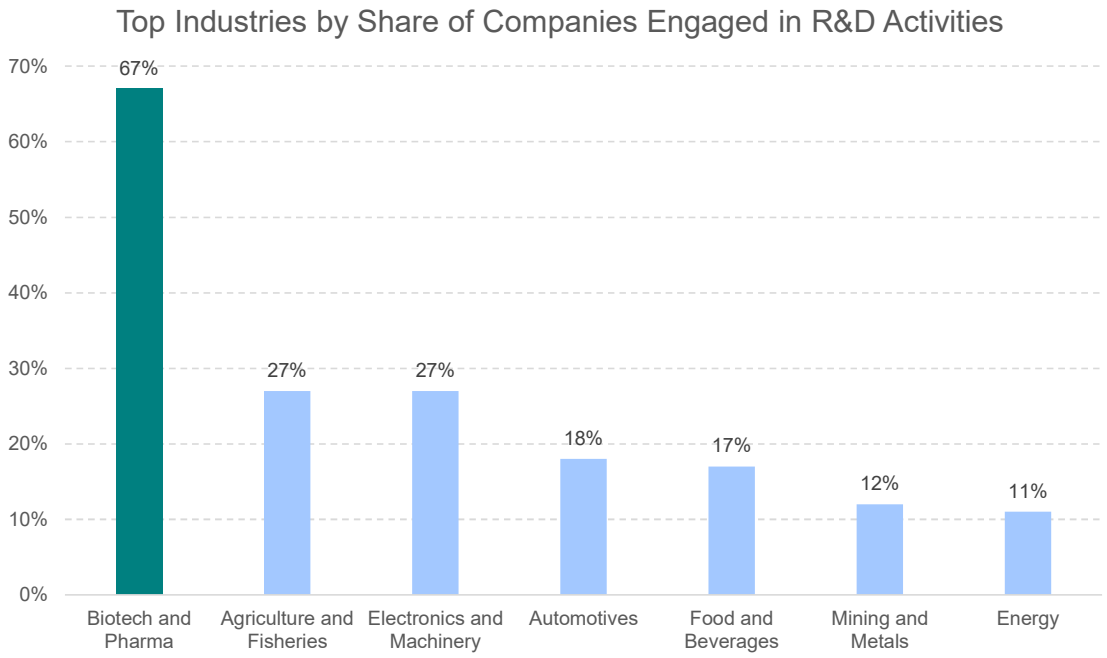
Enhancing Slovakia's innovation performance through increased R&D participation





Value chain positioning

Biotech and Pharma is an industry with growth potential and the highest share of involvement in R&D



High value-added clusters

High value-added clusters

291

Manufacturing and R&D

185

Industrial automation

64

Software developing and R&D

High value-added clusters

The main contribution of this report: identifying multifaceted clusters driving automation, digitalisation, and innovation

Manufacturing and R&D

Industrial automation

Software developing and R&D

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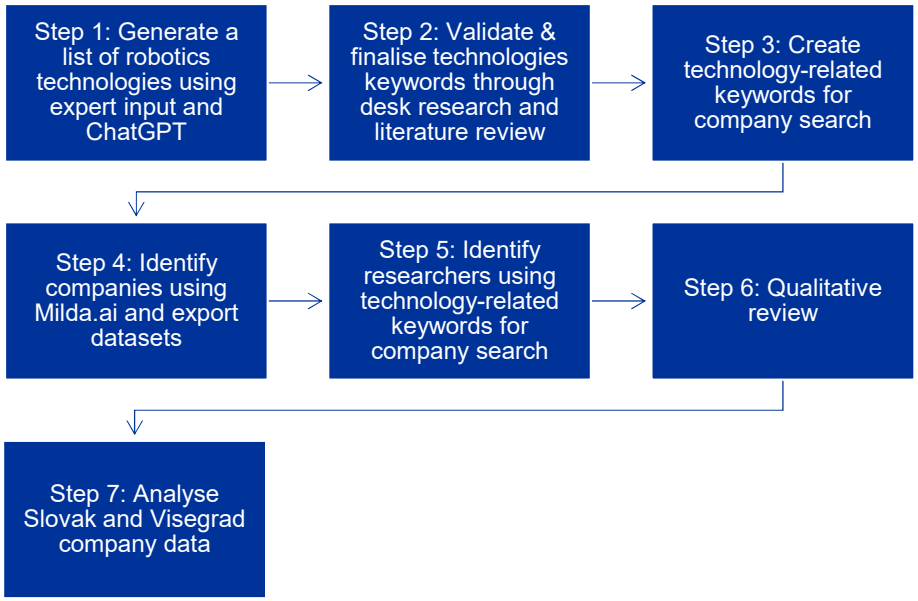
D3: Vertical Pilot

Vertical industry pilot of robotisation in Slovakia

Objective & Methodological Approach

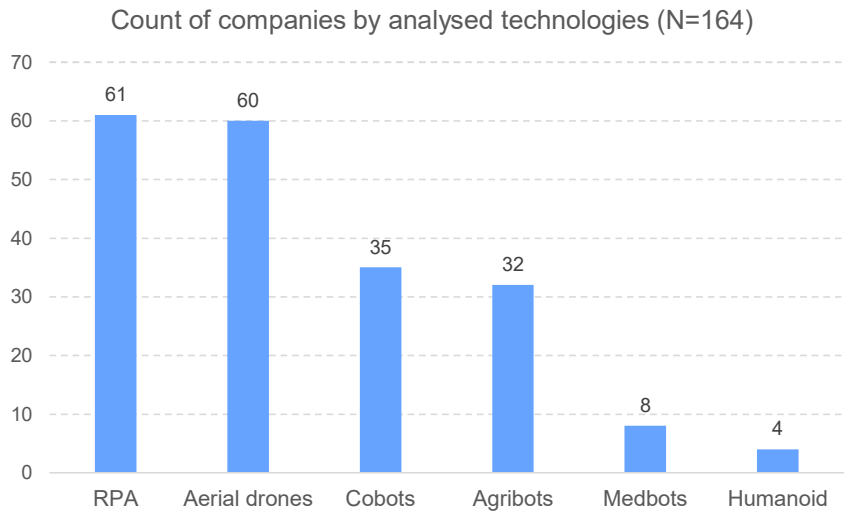
- **Main Objective:** Identify Slovakia's strategic positioning in **preselected** **cutting-edge robotic technologies**.
- **Data source:** Milda.ai identified 165 Slovak companies using keywords based on expert research and AI input (ChatGPT); 147 researchers were identified using OpenAlex.
- **Analysis:** Companies were assessed by size, age, industry, and operations; researchers were analysed based on their technology-related publication count.

Expert-driven approach to industry scoping



Overview of identified Slovak companies in robotics

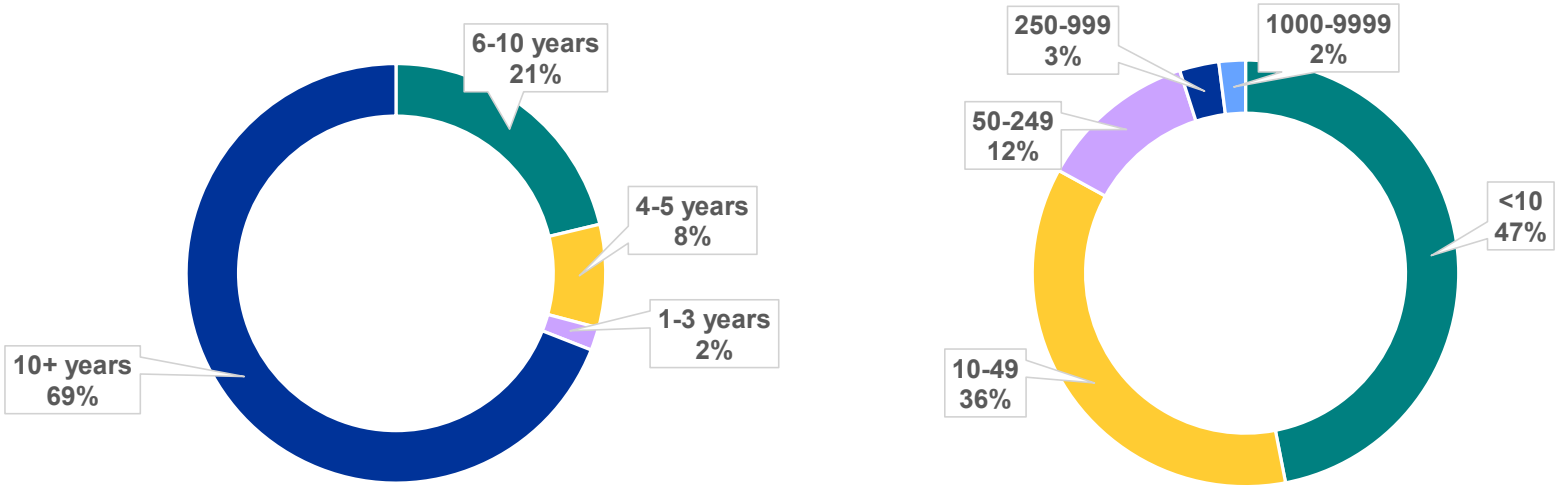
- Robotic Process Automation
- Aerial Drones
- Collaborative Robots
- Agricultural Robots
- Medical Robots
- Humanoid Robots



The analysed companies are predominantly mature small and medium-sized

Established players dominate the market. Potential challenges to scaling up.

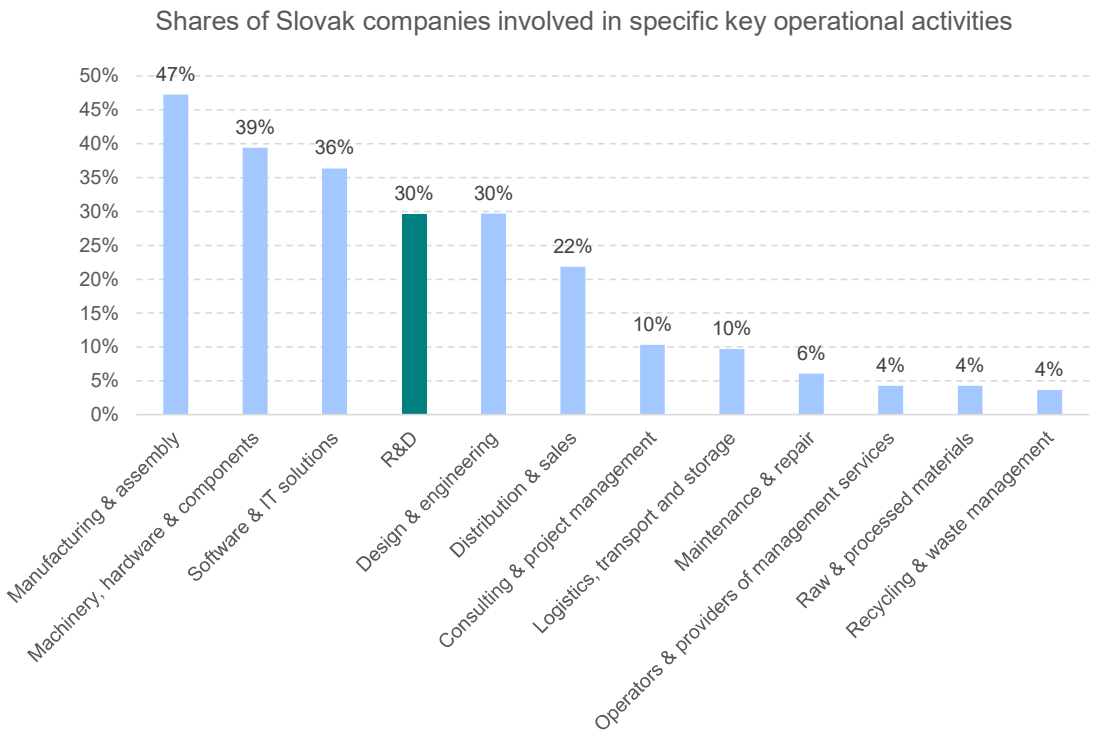
Analysed companies by age and headcount



Value chain positioning

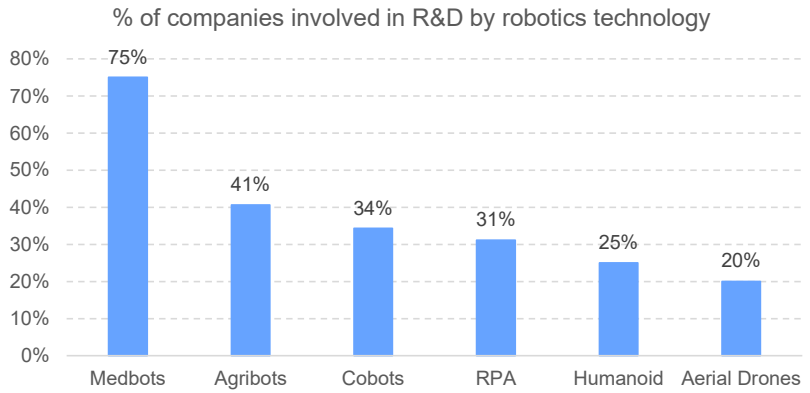
Key industries

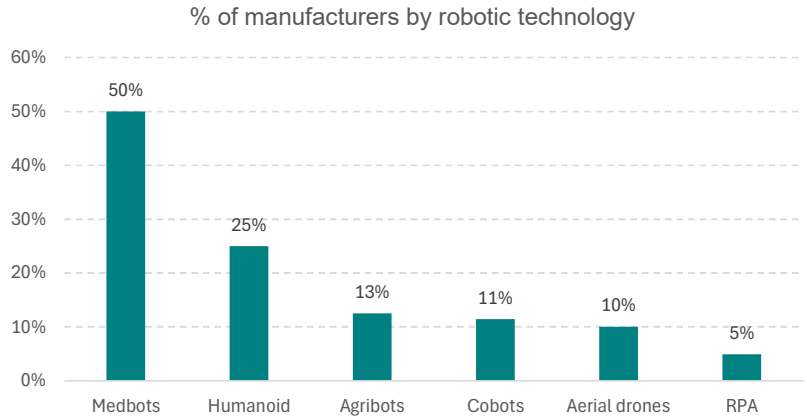
- 24% Electronics and Machinery
- 22% Computer/IT Services
- 12% Agriculture and Fisheries
- 11% Automotives

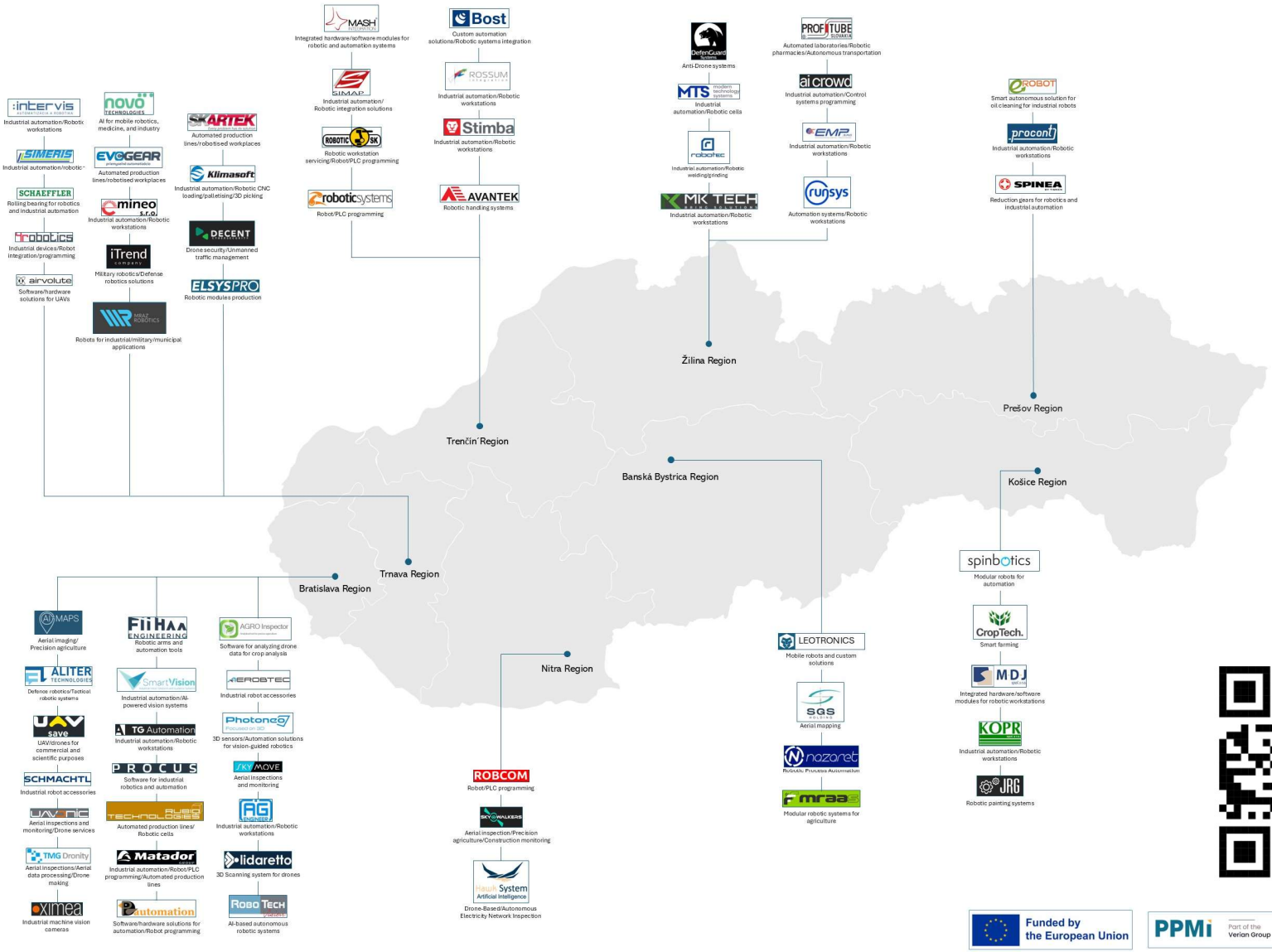


Overview of the Slovak positioning within the cutting-edge robotics technologies

Cutting-edge technology	No of Slovak companies	No of Slovak researchers
Robotic Process Automation	61	14
Aerial Drones	60	67
Collaborative Robots	35	70
Agricultural Robotics	32	7
Medical Robotics	8	25
Humanoid Robotics	4	65







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Coffee break (10:30-10:50)

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Panel Discussion: Is Robotisation a Horizontal Priority for Slovakia?

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Conclusions and general Q&A

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Thank you for your participation!

Thank you

This presentation was produced with the financial assistance of the European Union. Its content is the sole responsibility of the author(s). The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

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