

# INTEGRATED POLICYMAKING IN THE AREA OF RDI: SLOVAKIA

Final Conference

2025-04-11

## **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*



# Welcome & Opening Remarks





# Keynote Speech on Robotisation in Slovakia



# 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)





- 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



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



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

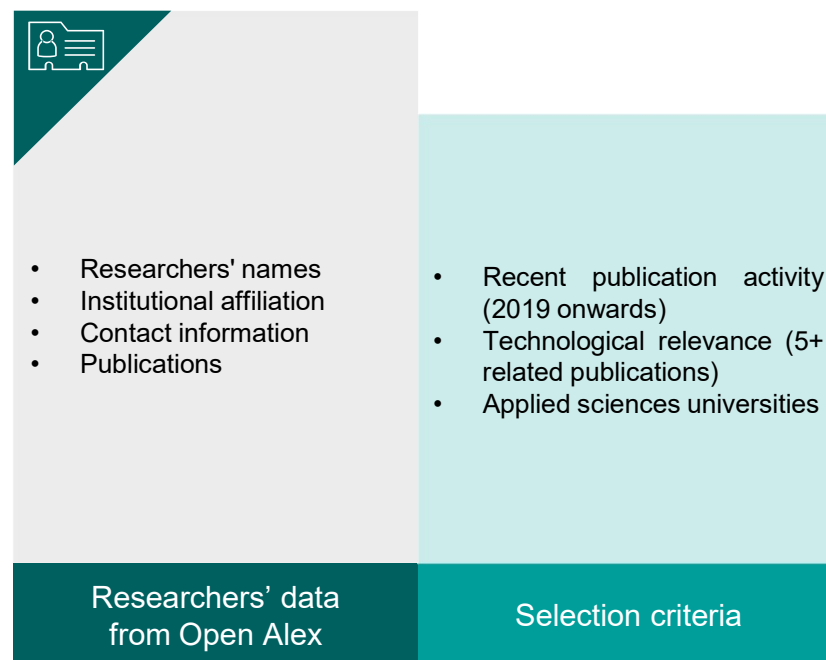
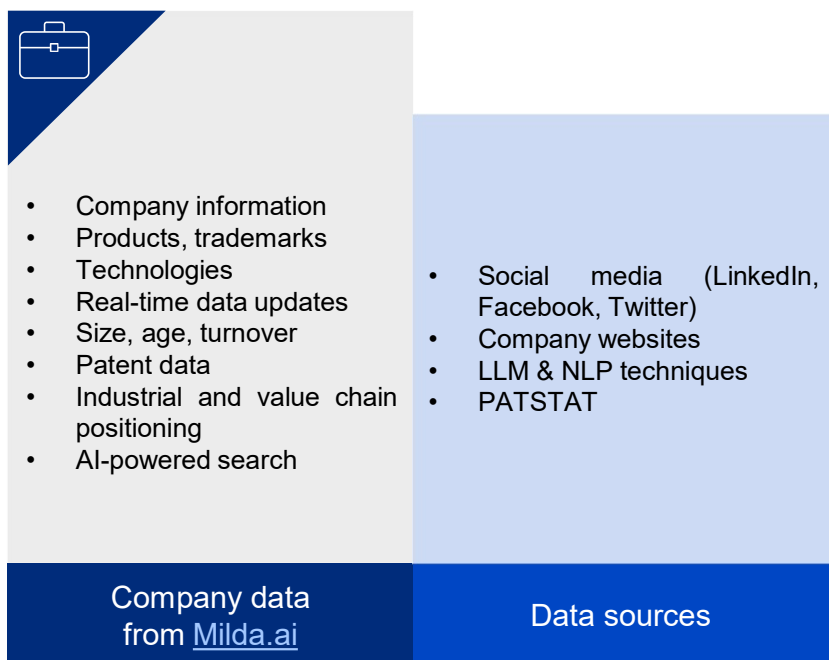


Led a large FWC Supporting assessment and monitoring of industrial research, innovation, and technologies for DG RTD





# Industrial Performance Assessment: Approach to Data Collection



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

Milda.ai

SEARCHMY DATA EXPORTSINBOX0SUPPORT

Build a B2B listQualify your CRM leadsSearch by firmographics

electric mobility OR electric vehicle production OR electric vehicle battery supply OR EV battery production OR electromobility solutions OR electric motor production OR electric vehicle charging OR smart EV charging solutions OR EV charging stations OR electric vehicle infrastructure OR electric vehicle integration OR electric vehicle design OR electric vehicle technology OR hydrogen-powered vehicles OR zero-emission bus development OR electric vehicle charging network OR electric car charging solutions OR vehicle electrification OR powerline communication for electric vehicles OR shared electric mobility OR electric motor manufacturing OR hydrogen mobility solutionsEXPANDAPPLY FILTERS

Sample search: EV charging infrastructure providers in the UKBiogas plant operators in GermanyB2B data providersSalesforce consulting in the USDigital solution for incineration process

All companies108Events last quarter1OverviewTop companiesTop events

PREVIOUS1-100 of 108NEXTSHARE RESULTEXPORT DATAADD TO LISTTRACK

|  | # | COMPANY              | Filter | KEY ACTIVITIES   | Filter | RELEVANCE | MOMENTUM   | COUNTRY | INDUSTRY                        | AGE       | HEADCOUNT | TURNOVER | PATENTS |
|--|---|----------------------|--------|--|--------|-----------|------------|---------|---------------------------------|-----------|-----------|----------|---------|
|  | 1 | GREENWAY INFRASTR... |        | Charging station deployment; Electric vehicle charging services; Network operation;...               |        | 100%      | Top-10%    | SK      | Energy                          | 10+ years | 50-249    | 1-4.9m   | 0       |
|  | 2 | MATADOR GROUP        |        | Production of car components; Software development; Hardware manufacturing; 3D modeling              |        | 100%      | Top-10%    | SK      | Mining and MetalsAutomotives    | 10+ years | 1000-9999 | 50-99m   | 0       |
|  | 3 | INOBAT               |        | Battery production; Research and development; Innovative design; Electric vehicle battery supply;... |        | 100%      | Top-5%     | SK      | AutomotivesR&D                  | 4-5 years | 50-249    | <1m      | 0       |
|  | 4 | SEAK ENERGETICS      |        | Smart lighting control; Energy management; Electric vehicle charging; IoT device connectiv...        |        | 100%      | Top-50%    | SK      | Electronics and MachineryEnergy | 10+ years | 10-49     | 1-4.9m   | 0       |
|  | 5 | BROADBIT             |        | Smart charging system design; Standard compliance implementation; AC/DC charger...                   |        | 100%      | Not ranked | SK      | Automotives                     | 10+ years | N/A       | N/A      | 0       |
|  | 6 | UGV CHARGERS         |        | Production of electric car charging stations; Development of charging station managemen...           |        | 91%       | Top-10%    |         |                                 |           |           |          |         |
|  | 7 | IMC SLOVAKIA         |        | Production of complex machines; Assembly of lines; Manufacturing of simple parts; Assembly of...     |        | 90%       | Top-50%    |         |                                 |           |           |          |         |
|  | 8 | UDENCO               |        | EV charging solutions development; Sourcing specialist   |        | 90%       | Top-25%    |         |                                 |           |           |          |         |

| 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



CONSULTING  
ASSOCIATES

PPMi

Part of the  
Verian Group

VAIA  
ASSOCIATION  
OF  
INNOVATION

Workshop | 7 Feb 2025 | VAIA, Bratislava



# 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.

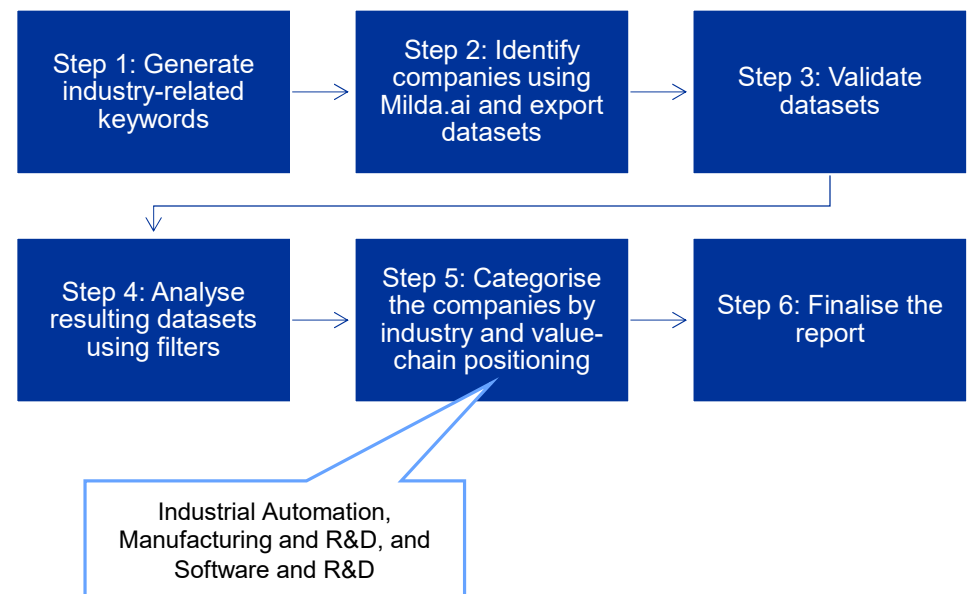
Multiplex iDX



EVPU<sup>®</sup>

ENVIRO<sup>3</sup>CARE

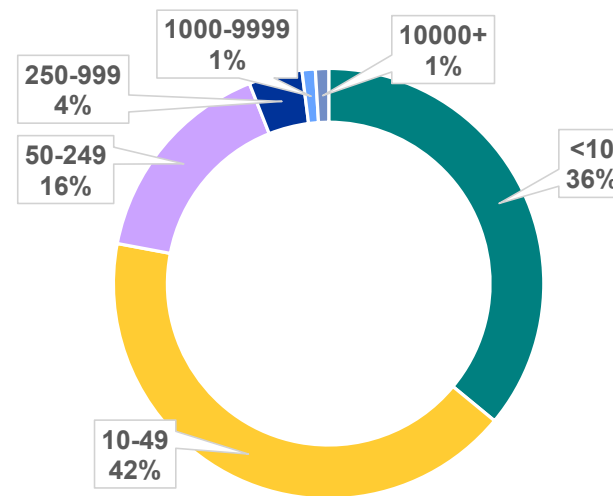
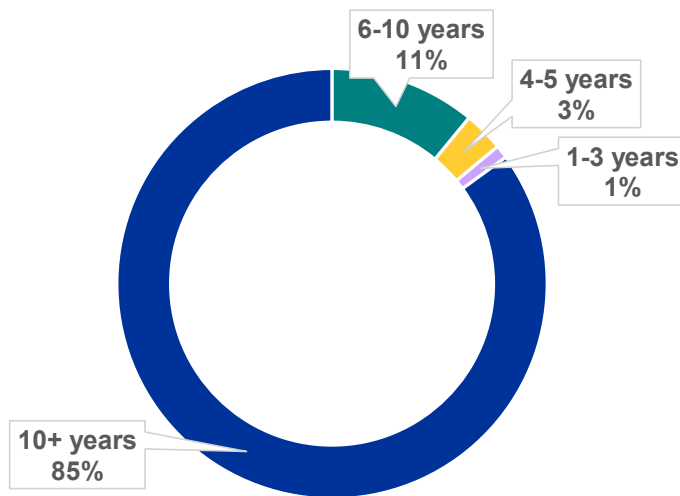
## *Data-driven approach to industry scoping*



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

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

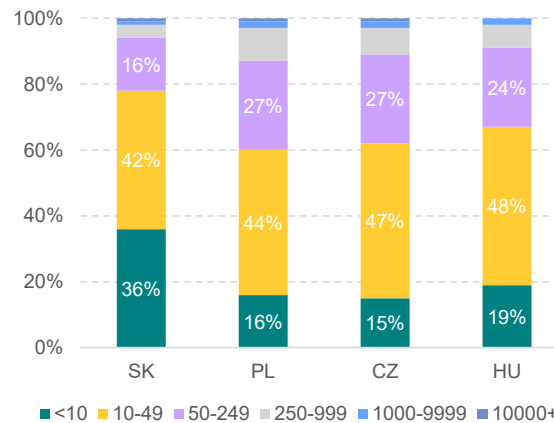
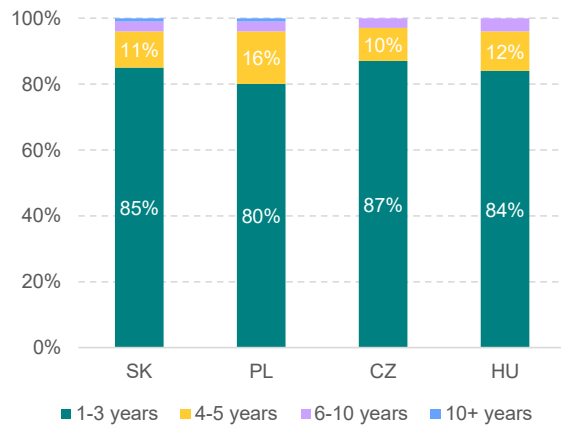
*Analysed companies by age and headcount*



# Slovakia in Visegrád context

*Visegrád region is dominated by mature SMEs*

*Analysed Visegrád companies by age and headcount*

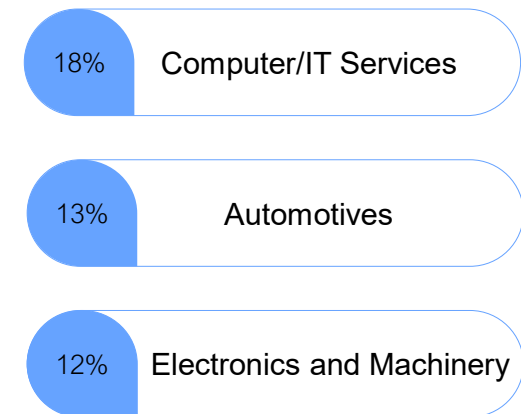
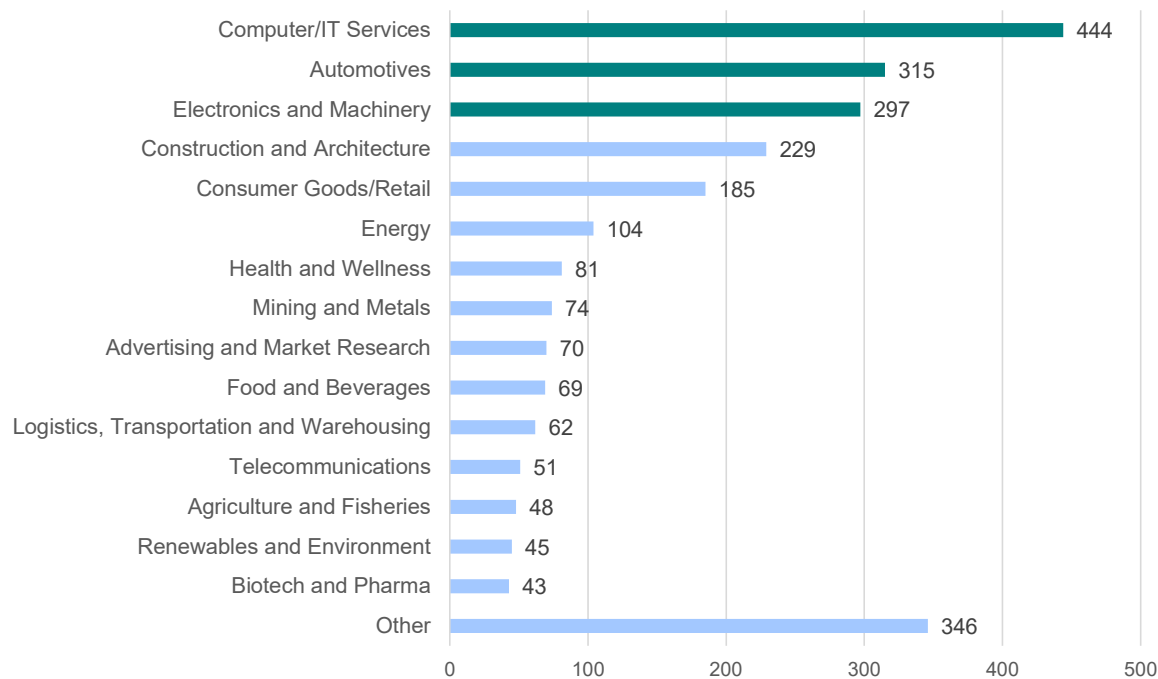


Powered by Bing  
© Microsoft, OpenStreetMap



# Value chain positioning

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





# Value chain positioning

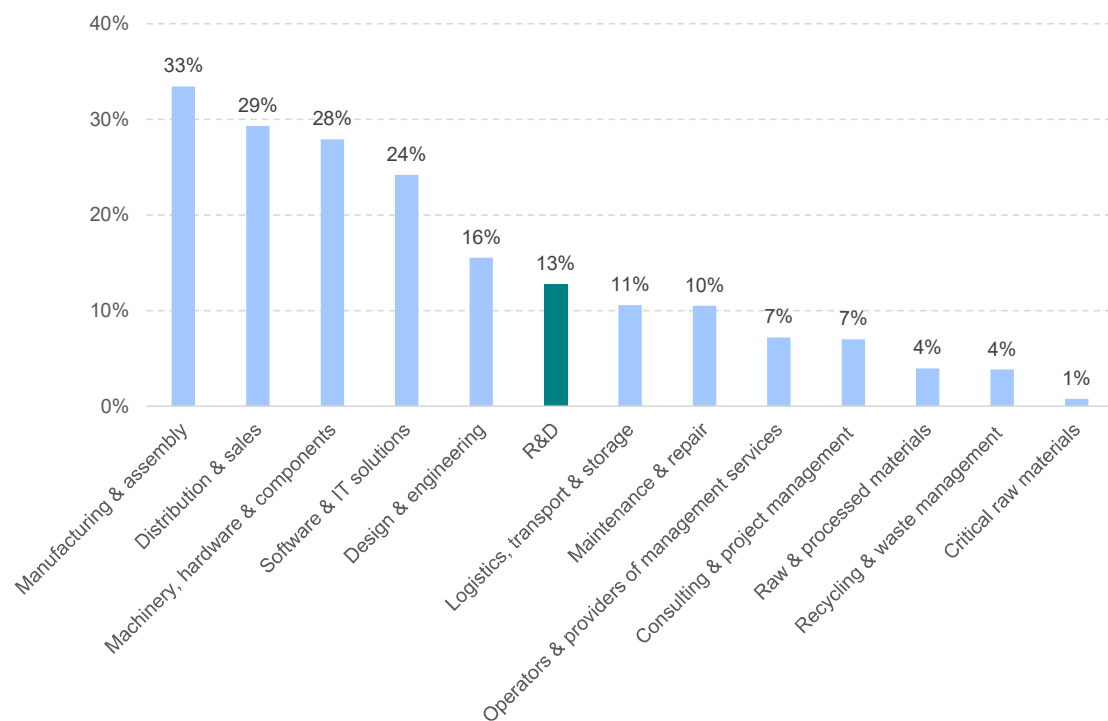
*Industrial connectivity within the ecosystem*

- 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

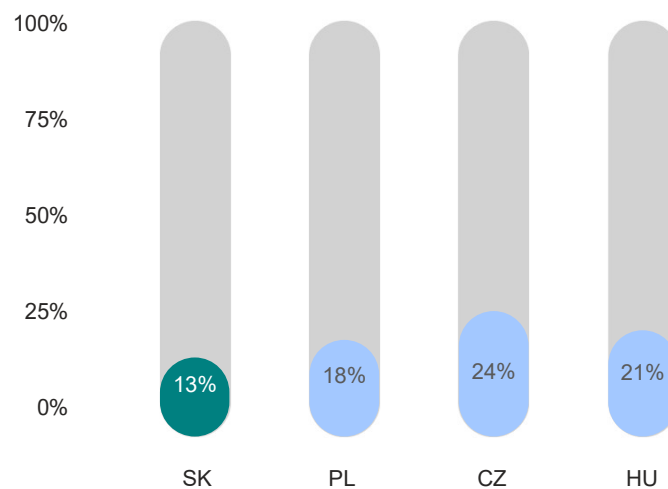


# Value chain positioning

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

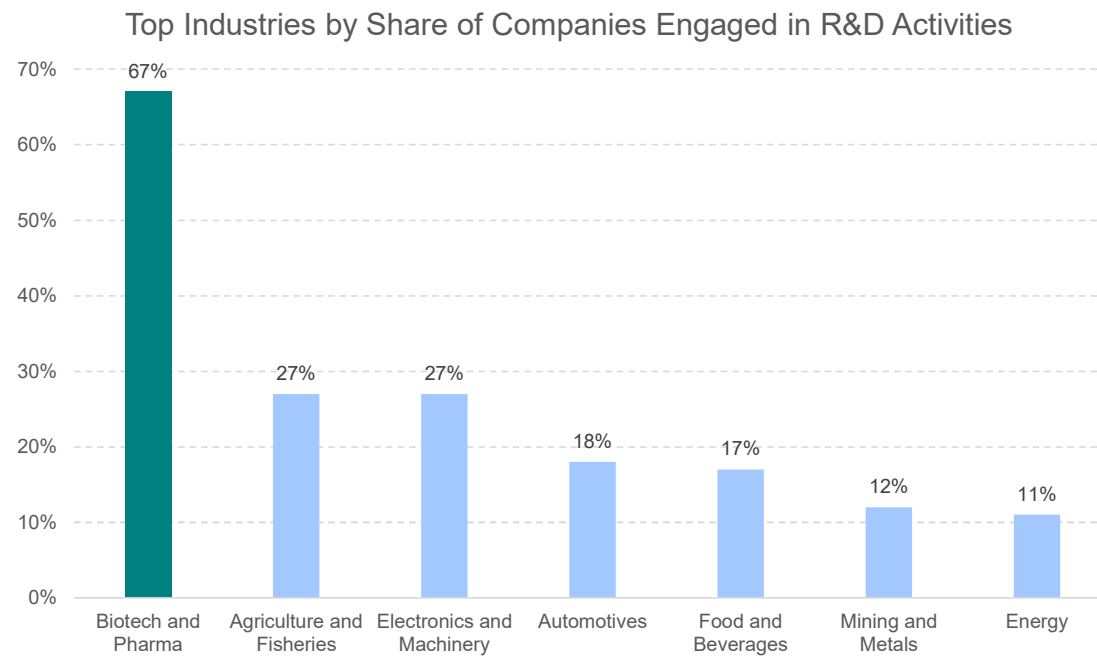


% of Visegrád companies involved in R&D



# 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

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## Industrial automation

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## Software developing and R&D

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# D3: Vertical Pilot

*Vertical industry pilot of robotisation in Slovakia*

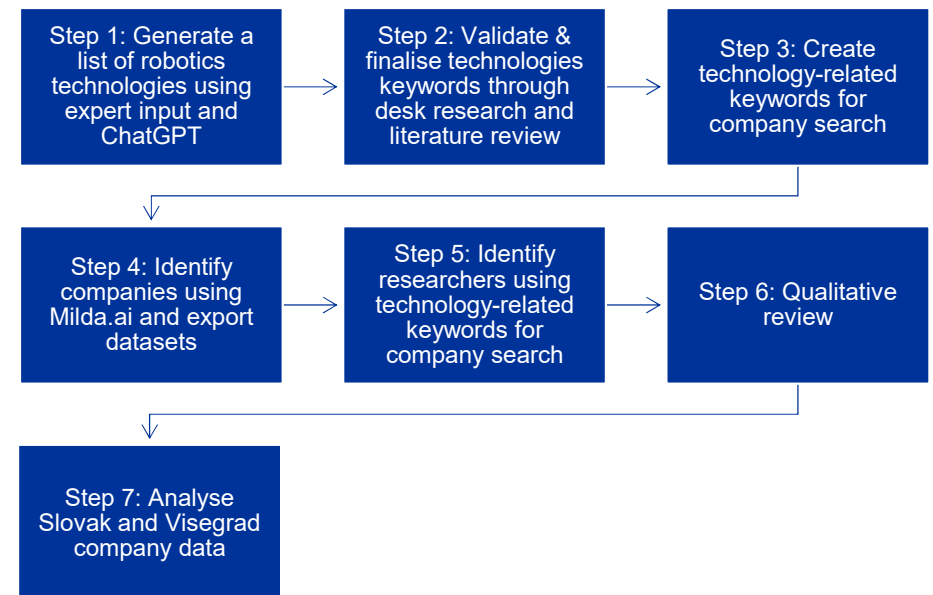


# Objective & Methodological Approach

- **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.

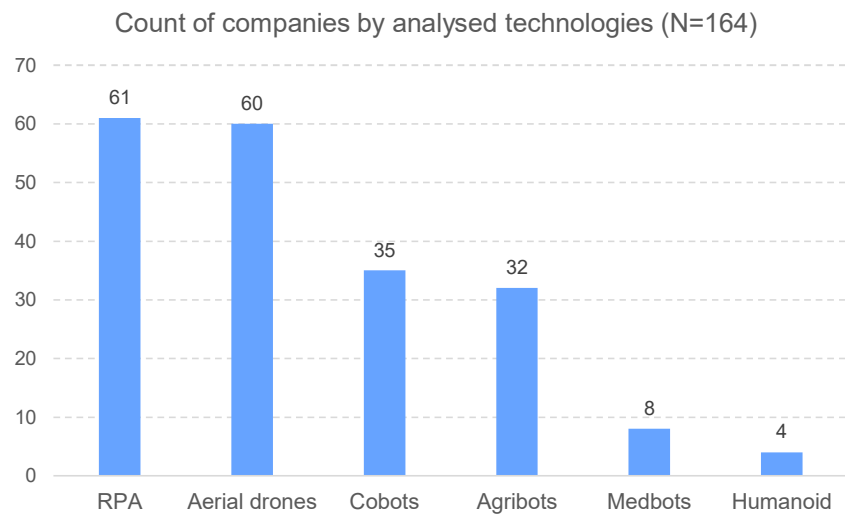


## *Expert-driven approach to industry scoping*



# Overview of identified Slovak companies in robotics

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

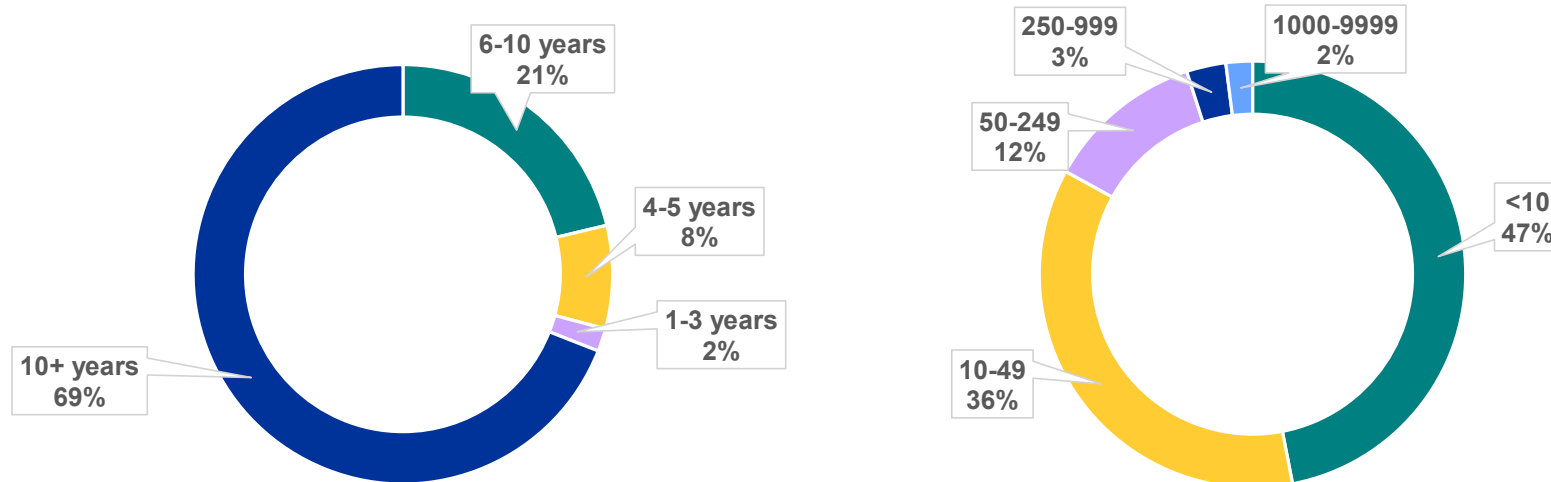




# The analysed companies are predominantly mature small and medium-sized

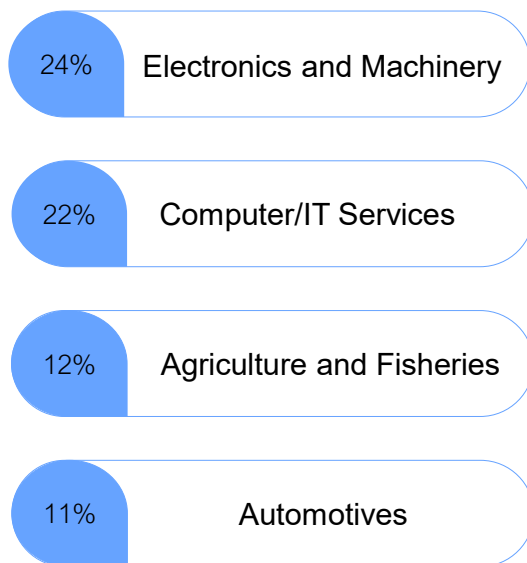
*Established players dominate the market. Potential challenges to scaling up.*

*Analysed companies by age and headcount*

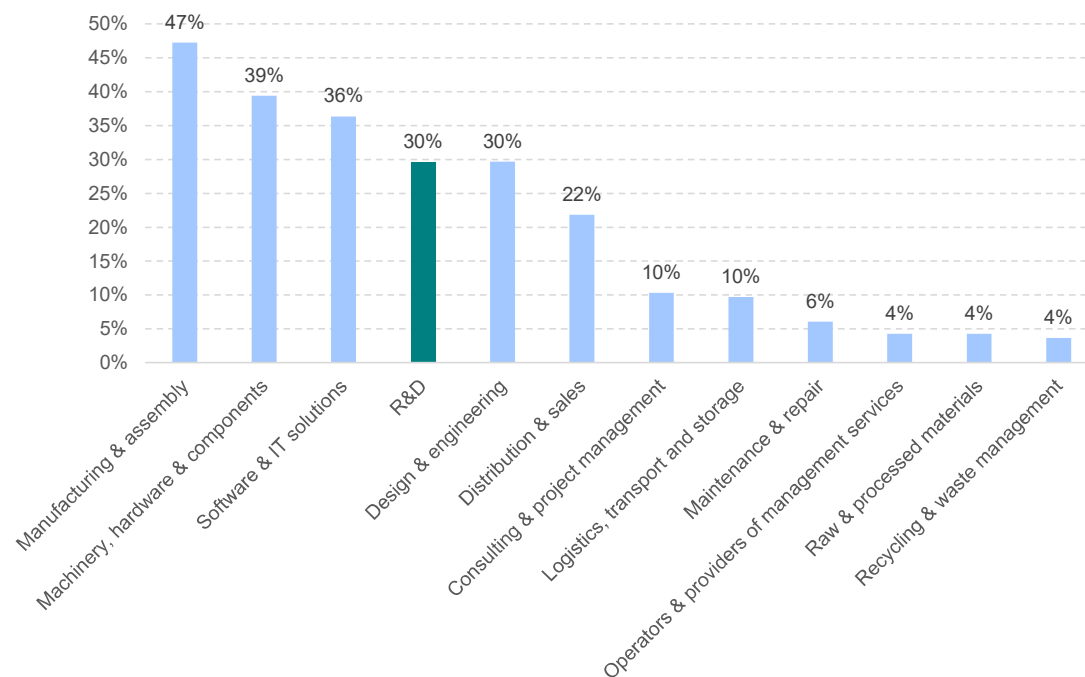


# Value chain positioning

## Key industries

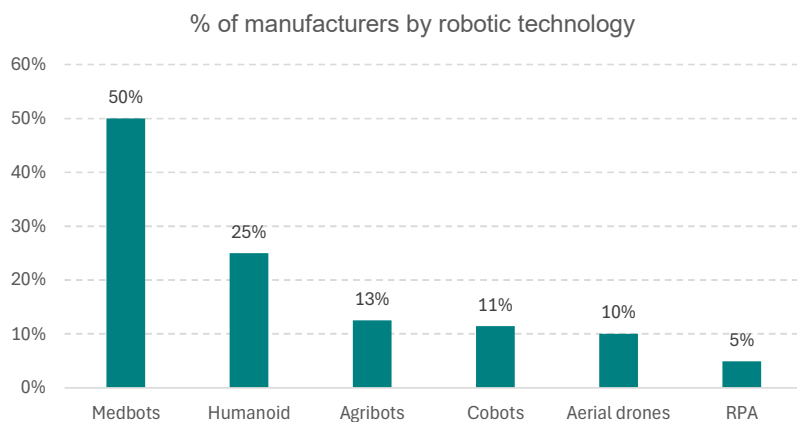
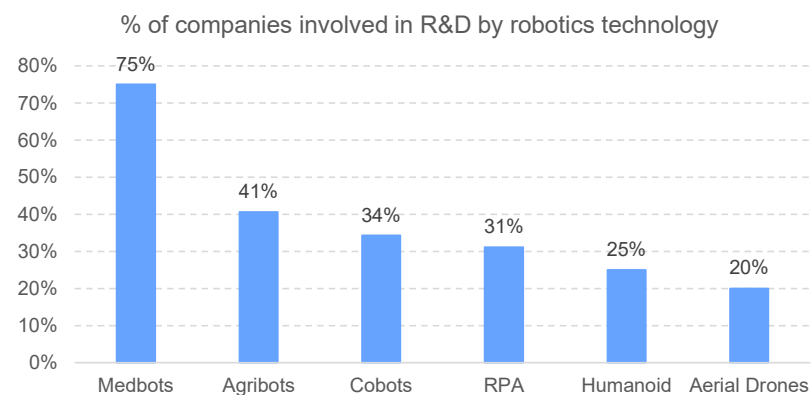


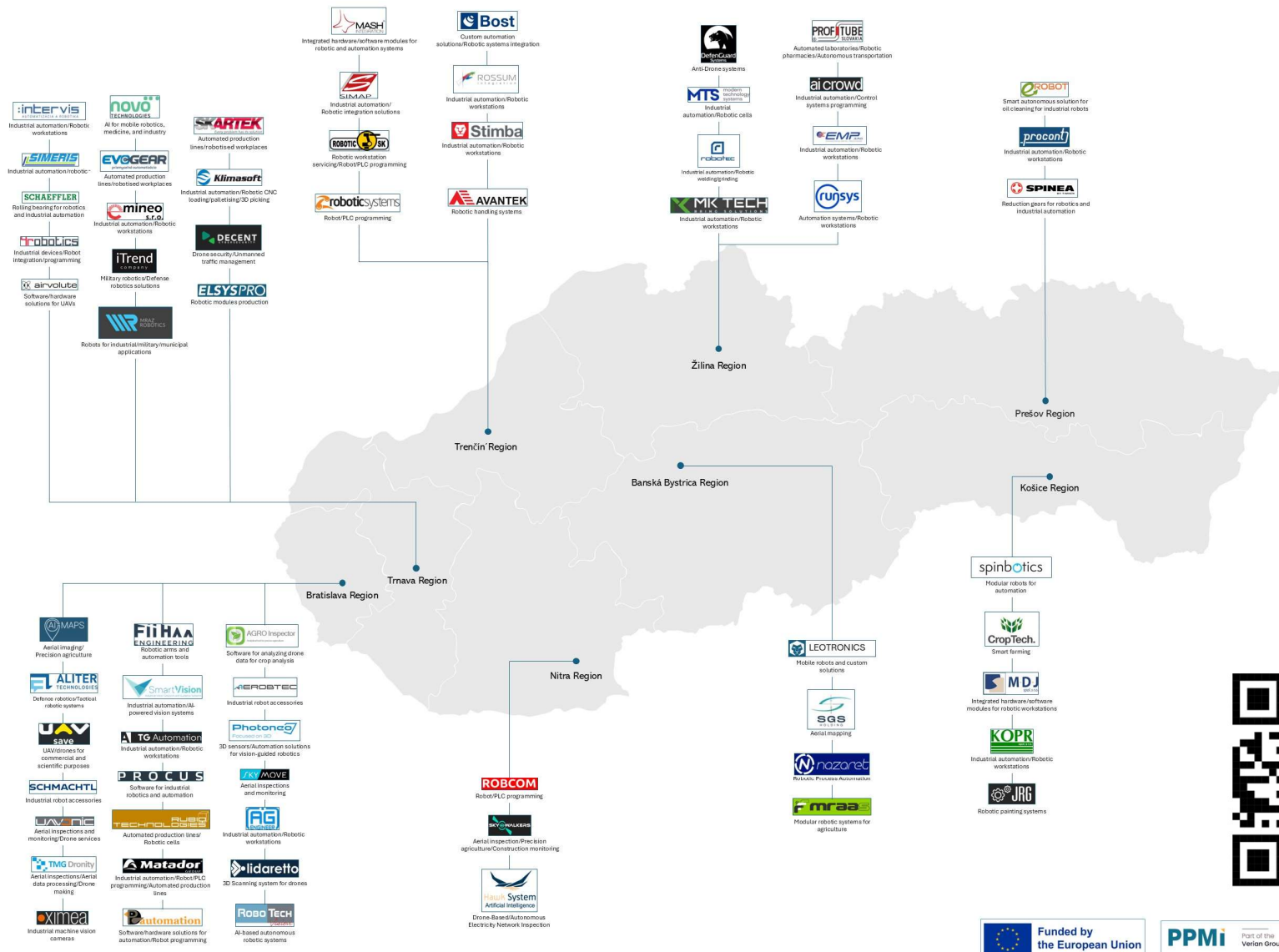
Shares of Slovak companies involved in specific key operational activities



# 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                       |





Coffee break (10:30-10:50)





# Panel Discussion: Is Robotisation a Horizontal Priority for Slovakia?





# Conclusions and general Q&A



Thank you for your participation!



# Thank you



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