



LUCIA BOGDANYOVA, 14 JUNE 2021

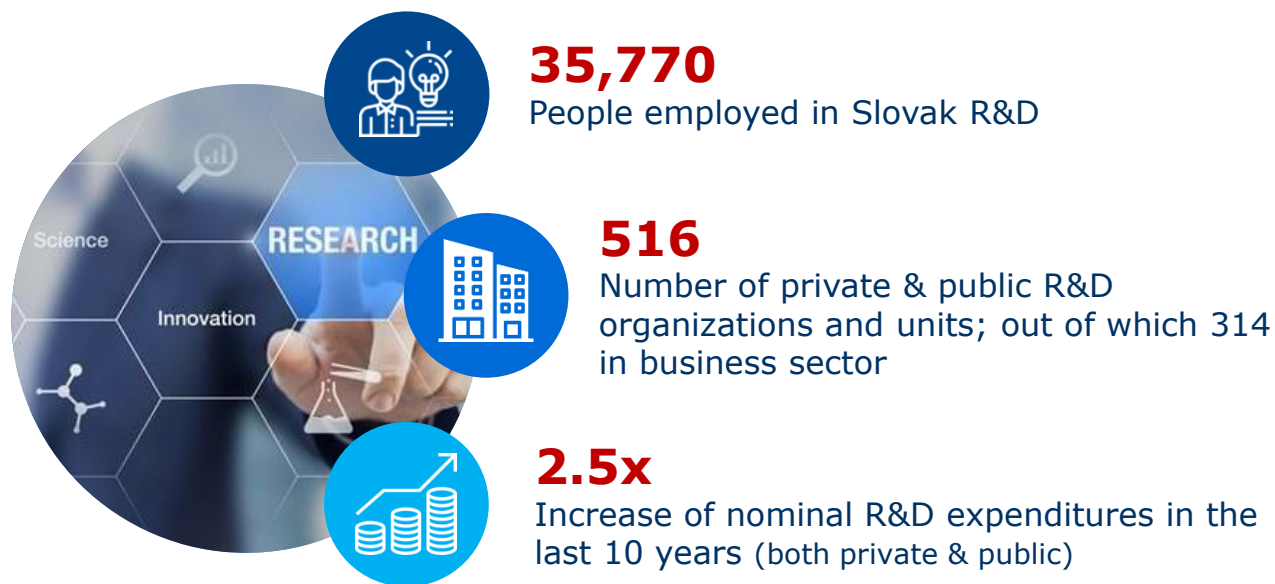
# SLOVAK R&D AND INNOVATION POTENTIAL



## RESEARCH & DEVELOPMENT & INNOVATION IN SLOVAKIA

### KEY FIGURES

DESPITE BEING VIEWED AS AN INDUSTRIAL PRODUCTION POWERHOUSE, **SLOVAKIA SEES ITS FUTURE MAINLY IN HIGH VALUE-ADDED PROJECTS AND INVESTMENTS, ESPECIALLY IN R&D AND INNOVATION OPERATIONS.**




### REASONS TO SET UP AN R&D FACILITY IN SLOVAKIA

- Talented & skilled personnel at affordable costs
- Established cooperation between industries and domestic universities
- Attractive incentives and special tax regimes for R&D activities
- Presence of foreign R&D centers and technology clusters
- Dedicated national R&D specialisation strategy (RIS3)



## KEY REASONS WHY TO SET UP AN R&D FACILITY IN SLOVAKIA

- Diverse pool of **ACCESSIBLE R&D PERSONNEL** at **AFFORDABLE COSTS**
- **36 UNIVERSITIES** providing **QUALIFIED GRADUATES** with **MULTIDISCIPLINARY SKILL-SET**
- **HISTORICALLY STRONG TRADITION** in engineering and industrial research
- Attractive **R&D INCENTIVES** and **SPECIAL R&D TAX REGIMES**
- Dedicated national **R&D SPECIALIZATION STRATEGY** (RIS3) & growing R&D expenditures
- Broad existing both public and private **R&D AND INNOVATION INFRASTRUCTURE & NETWORK**
- Established **COOPERATION** between industries and domestic universities
- Safe investment environment: **POLITICAL & ECONOMIC STABILITY**
- **HIGH QUALITY OF LIFE** in regional capitals & their ability to attract skilled people from other regions and even from abroad
- **DYNAMICALLY GROWING REAL ESTATE MARKET**: Large selection of modern & affordable offices
- **POSITIVE TRACK RECORD** & examples of **SUCCESS STORIES** of established R&D centers



Key facts  
why to choose  
Slovakia as your  
next investment  
destination

„Slovak technical employees are very experienced and apt – if encountered a technical problem, they provide re-design solution to R&D colleagues in Germany – and standardly these solutions are implemented. “

**Radoslav Pastorak**, *General Manager*

**MinebeaMitsumi**  
*Passion to Create Value through Difference*

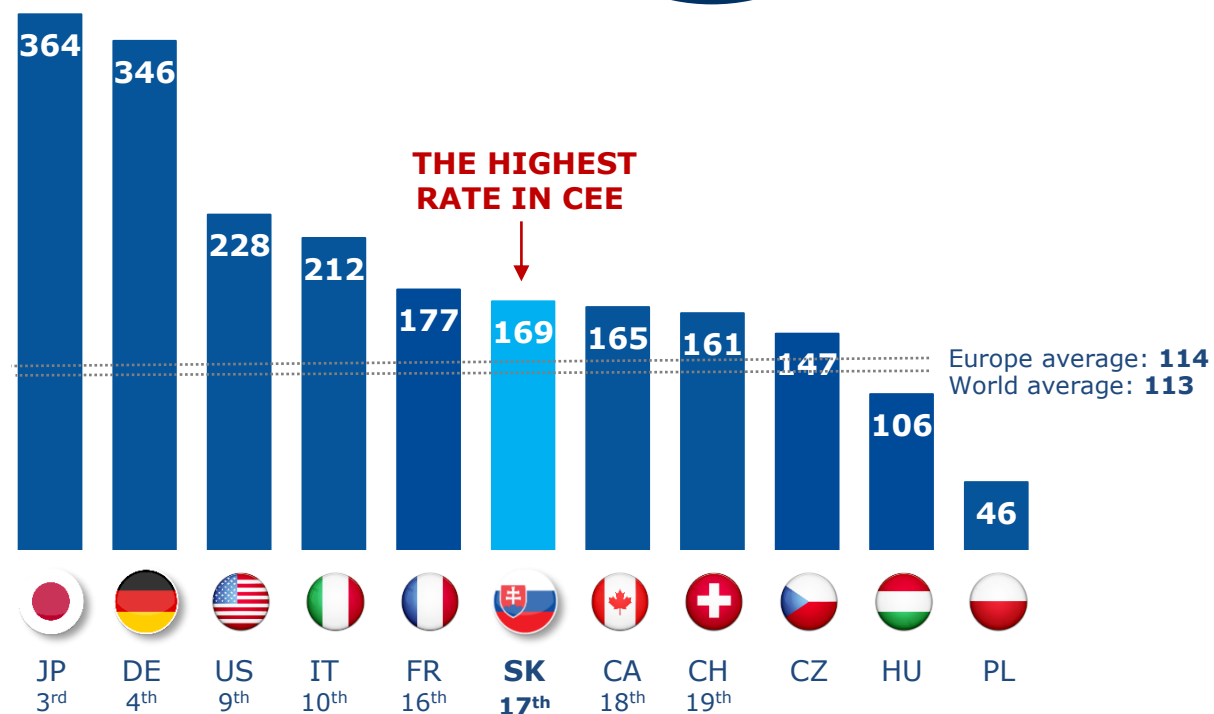
## AMONG WORLD LEADERS IN AUTOMATION

SLOVAKIA BELONGS TO **TOP 17** COUNTRIES WITH **THE HIGHEST NUMBER OF INSTALLED ROBOTS IN THE MANUFACTURING INDUSTRIES** PER 10,000 EMPLOYEES.

- There were **169 robots per 10,000 workers** in 2019, according to International Federation of Robotics.
- The number of robots used in Slovak companies has **increased to 214%** compared to 2015 figures.
- **Car and electrical engineering** industries remain to be leaders in implementing robotic devices.
- Robots are mostly implemented in **handling, welding, painting, metal industry, logistics** and as **service robots**.

SLOVAKIA IS  
THE WORLD'S  
17TH LARGEST  
ROBOT  
MARKET

IFR  
International  
Federation of  
*Robotics*





# SLOVAKIA HAS DIVERSIFIED MANUFACTURING SECTOR WITH HIGH-TECH INDUSTRIES

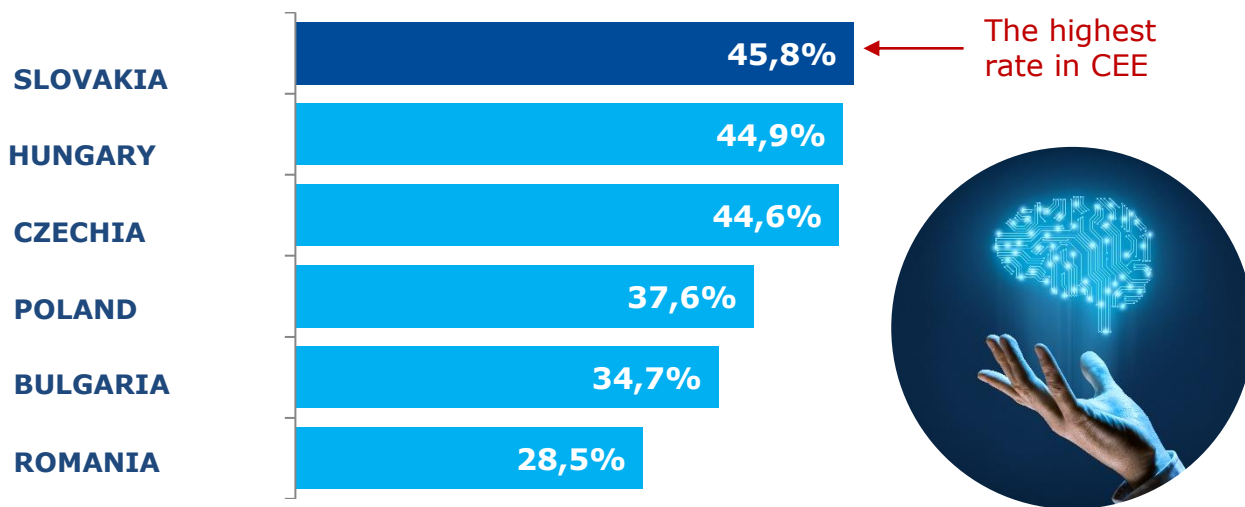
MORE THAN **4/5 OF TOTAL  
MANUFACTURING OUTPUT** VALUE  
IN SLOVAKIA IS CREATED BY **6  
PRODUCTION SECTORS**



## THE HIGHEST PROPORTION OF HIGHER ADDED-VALUE JOBS IN CEE

THE EMPLOYMENT IN **HIGH- AND MEDIUM-HIGH TECHNOLOGY MANUFACTURING SECTORS AND IN KNOWLEDGE-INTENSIVE SERVICES** AS A SHARE OF TOTAL EMPLOYMENT IS THE HIGHEST IN THE REGION.

### Higher added-value jobs as a % of total employment



### SIGNIFICANT GROWTH OF ADDED VALUE AND PRODUCTION OUTPUT IN SLOVAKIA

**2<sup>nd</sup>**  
highest  
in OECD

**Annual avg growth of  
value added in manufacturing**  
(2010-2018 = 8.7%)

**QUALITATIVE  
GROWTH**








**15%**

**Change in the volume  
of manufacturing  
output since 2015**

**QUANTITATIVE  
GROWTH**

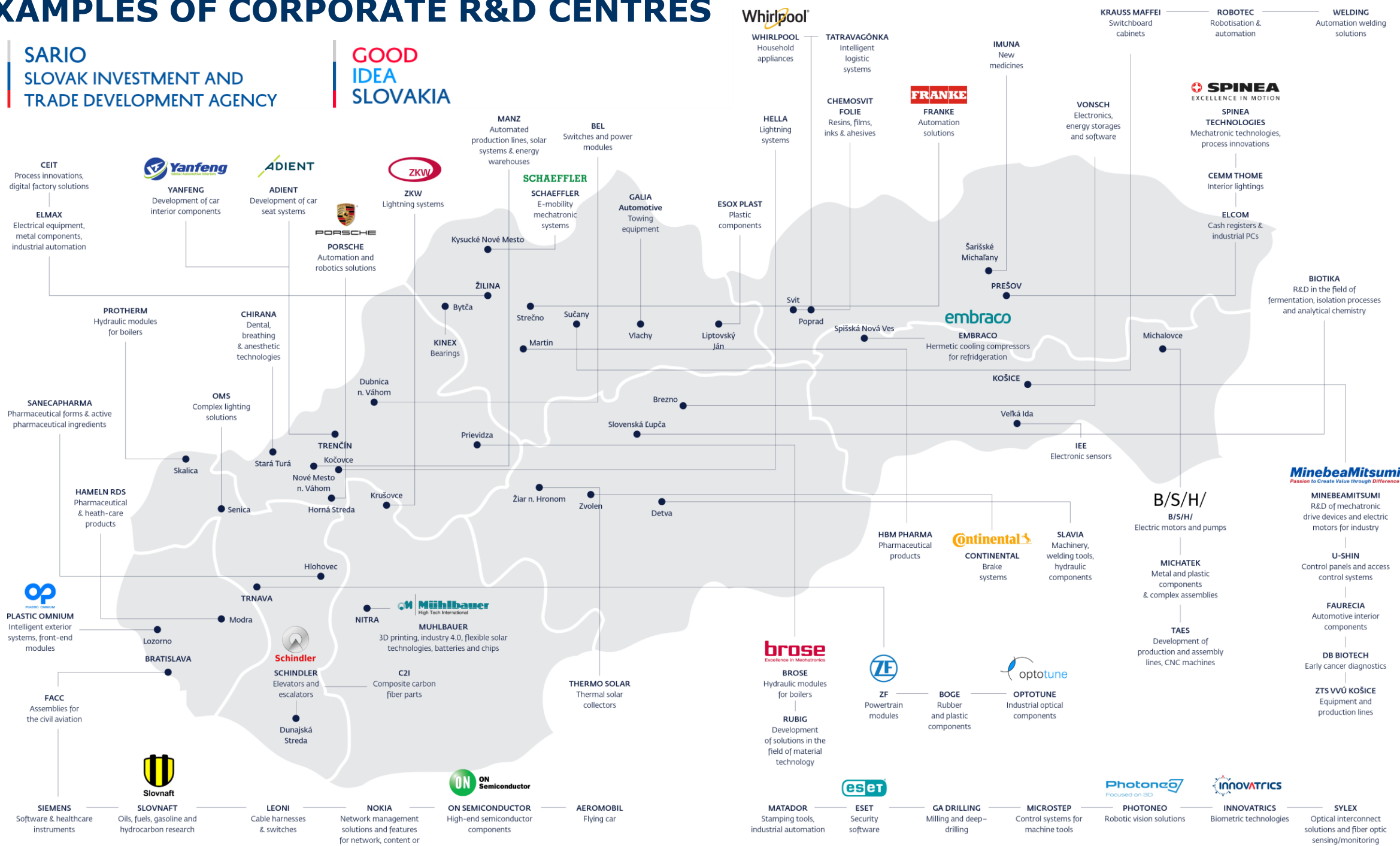
## ESTABLISHED COMPANIES MOVING UP THE VALUE CHAIN

EXAMPLES OF COMPANIES WHICH EXTENDED THEIR SLOVAK MANUFACTURING FOOTPRINT WITH SERVICES AND ENGINEERING:

DIVISION	NUMBER OF EMPLOYEES IN THE DIVISION			
	 Production of compressors	 Lightnings	 Automotive components	 Automotive components
 <b>Research &amp; Development</b>	30	35	500	140
 <b>Shared Services Centre</b>	110	190	900	120
 <b>Manufacturing Site</b>	2,200	920	2,600	1,000

## Whirlpool®

GOOD  
IDEA  
SLOVAKIA







# INNOVATION SERVICES

## SARIO INNOVATION SERVICES - BASICS

### WHAT IS IT?

Matching of Slovak technology companies with major corporates at home and abroad

### FOR WHOM?

- **BIG COMPANIES** seeking to modernize and improve the efficiency of their operations and processes
- **SLOVAK TECHNOLOGY COMPANIES** (or research institutes) that are able to supply, integrate and maintain these solutions

### FOCUS



#### INDUSTRIAL PRODUCTION

- Automation
- Predictive maintenance
- SMART factories (etc.)



#### TECHNOLOGY / R&D CENTERS

- Design
- Tooling
- Prototyping/Testing (etc.)



#### IT & BUSINESS SERVICE CENTERS

- Automation software
- Big Data & Artificial Intelligence
- Cybersecurity (etc.)

## SARIO INNOVATION SERVICES - REASONING

### WHY ARE WE DOING IT?

1. **Scaling of Slovak businesses** through corporate structures of major clients at home and abroad
2. **More procurement competences** of major Slovakia-based international corporates in this field
3. **Increased interest in Industry 4.0**, due to pressure from competitors
4. **Rising inflow** of capital-intense investments to Slovakia

### WHY SARIO?

1. **Close contact** with incoming and expanding investors
2. **Direct outreach** to the Slovak business environment
3. **Long-term experience** with cooperation and sourcing events
4. **Expertise** in investment aid consultancy (new scheme focused more on Industry 4.0)



## SARIO INNOVATION SERVICES – STEP BY STEP

**1**

Identification of  
**priority areas of  
interest or  
problems** of a  
client



**2**

A tailor-made  
list of the  
Slovak  
technology  
companies  
(longlist)



**3**

Joint selection  
process with a  
client (short-  
listing)



**4**

Organization of a **moderated  
"pitching event"** with the  
participation of the client and  
selected technology companies



**5**

Facilitation of the  
follow-up  
**communication  
and cooperation**

## KEY FIGURES, SINCE SEPTEMBER 2017

27

### Innovation events

(co)organized by SARIO. During its busiest period, between March-May 2018, SARIO held 5 events.

28

### Major clients involved

as direct audience to these presentations

86

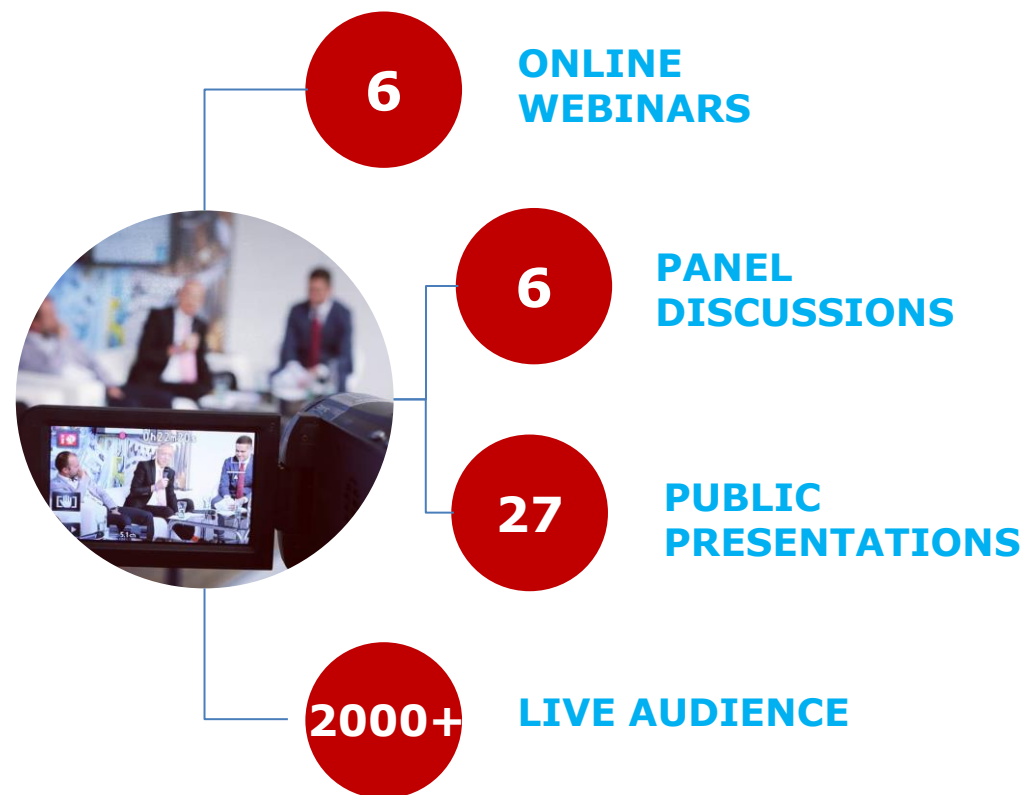
### Involved Slovak companies/institutes

several companies presented on multiple occasions

162

### Shortlisted presentations of Slovak companies

in front of international corporations





## CATEGORIZATION OF POSSIBLE AREAS OF INTEREST



Augmented /  
Virtual Reality  
(AR/VR)



Big Data



Predictive  
maintenance



Automation /  
Digitization /  
Robotization of the  
production process



Cybersecurity  
solutions



Single-purpose  
machines and  
devices



Artificial  
intelligence



Cloud for Smart  
Industry



Software solutions  
of various kinds

# SARIO SLOVAK INVESTMENT AND TRADE DEVELOPMENT AGENCY

## **SARIO**

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**SARIO - YOUR  
ONE STOP SHOP  
FOR INVESTMENT  
& TRADE IN  
SLOVAKIA**

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## USEFUL LINKS

### GENERAL:

- [Slovak Centre of Scientific and Technical Information \(SCSTI\)](#)
- [Slovak Organization for Research and Development activities \(SOVVA\)](#)
- [Central information portal for research, development and innovation \(CIP VVI\)](#)
- [Automotive Industry Association of the Slovak Republic \(AIA SR\)](#)
- [Slovak Academy of Sciences \(SAS\)](#)
- [Slovak Innovation and Energy Agency \(SIEA\)](#)
- [Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic for the Structural Funds of EU](#)

### UNIVERSITIES:

- [Slovak University of Technology in Bratislava](#)
- [University of Zilina](#)
- [Technical University of Košice](#)