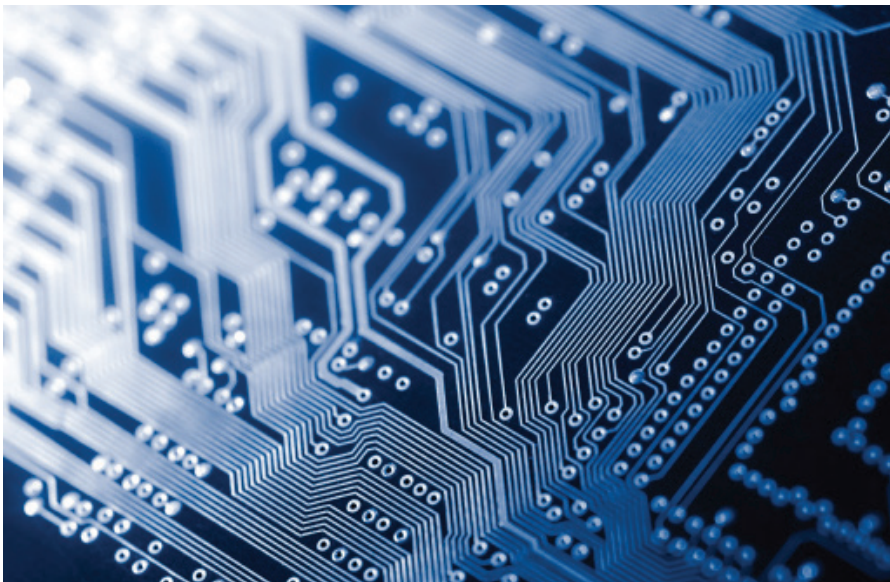


# Electronics & Electrical Components Industry in **SLOVAKIA**



# Electronics & Electrical Components Industry in Slovakia

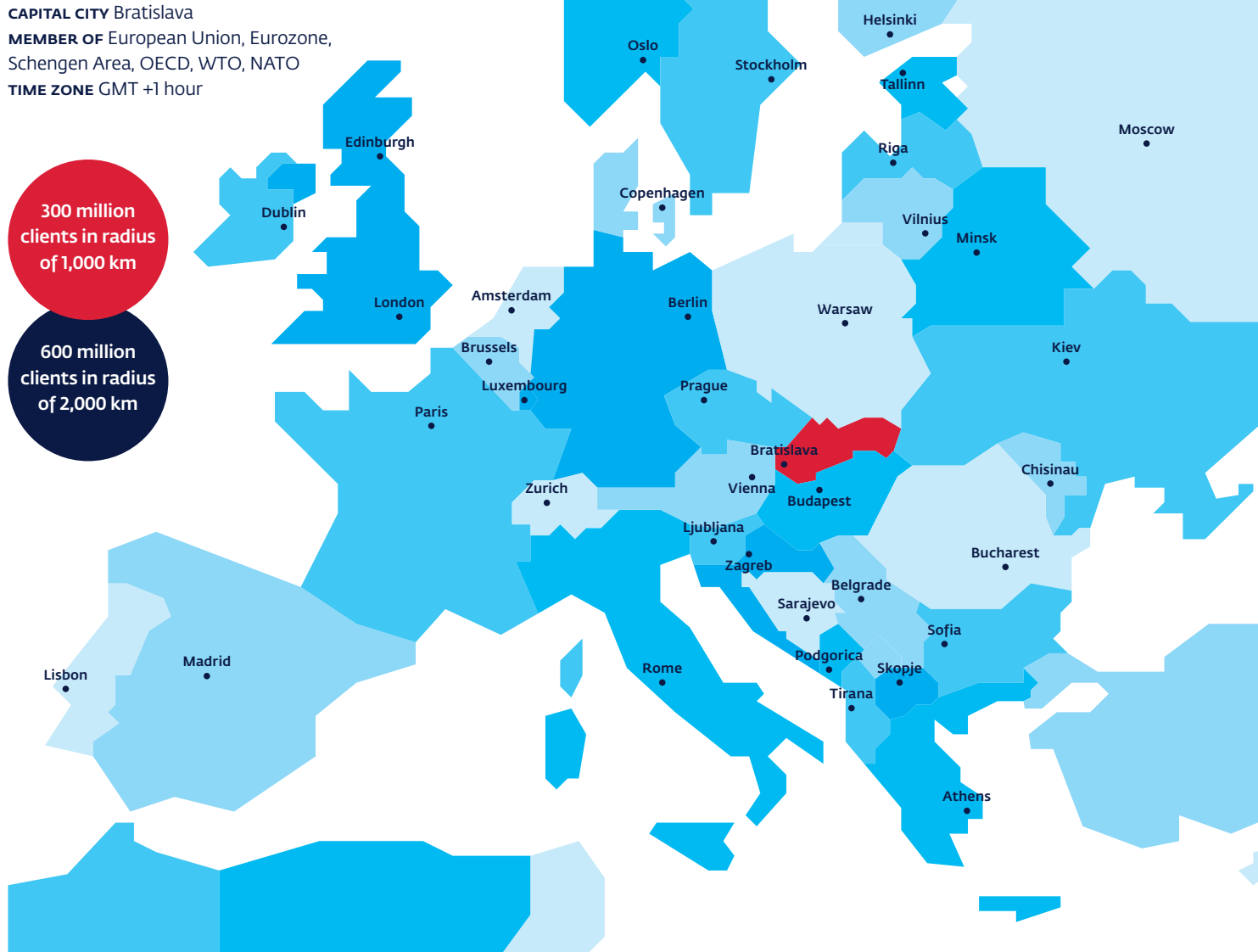
This publication is designed to introduce Slovakia's dynamically growing electronics & electrical components industry (EECI). Herein introduced facts & figures serve to demonstrate sector strengths and to illustrate why Slovakia is an ideal location for doing business in this industry.



**TOTAL AREA** 49,035 km<sup>2</sup>  
**POPULATION** 5.4 million  
**CAPITAL CITY** Bratislava  
**MEMBER OF** European Union, Eurozone, Schengen Area, OECD, WTO, NATO  
**TIME ZONE** GMT +1 hour

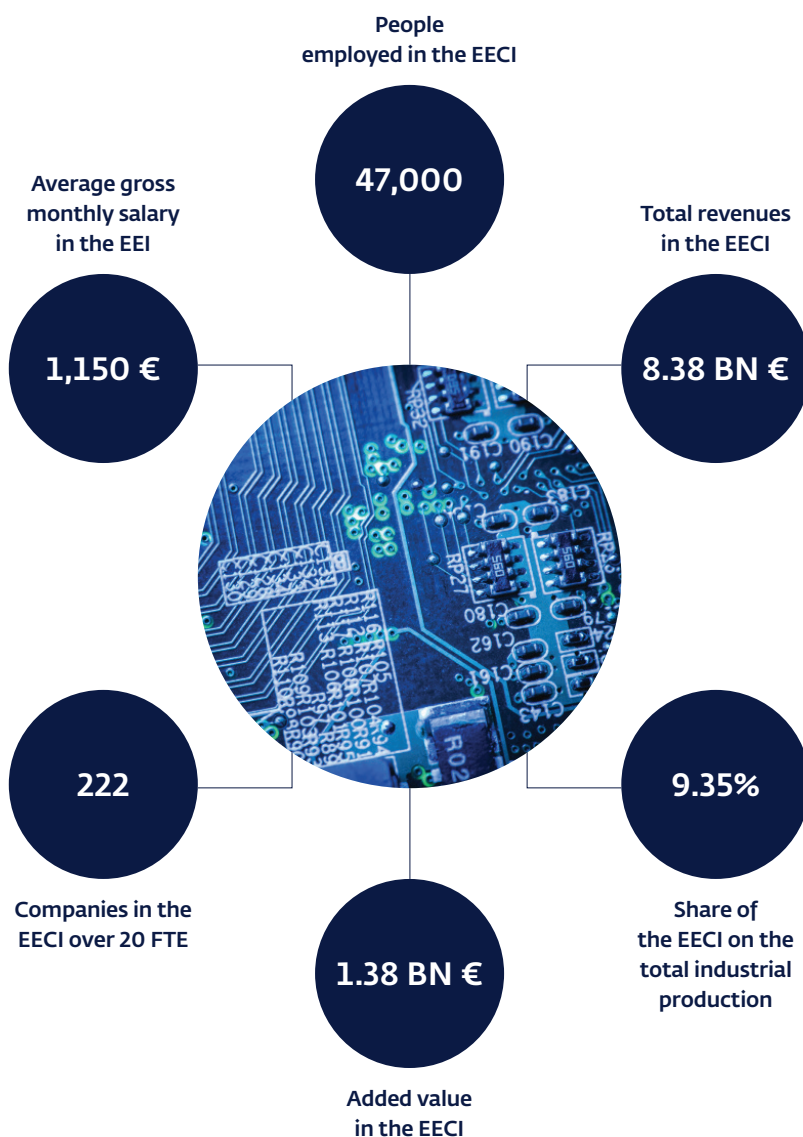
300 million clients in radius of 1,000 km

600 million clients in radius of 2,000 km



# Overview of the Electronics & Electrical Components Industry in Slovakia

The Electronics & Electrical Components Industry (EECI) can be considered as one of the main pillars of Slovak economy. Current situation on the market reflects both — traditional electronics manufacturing (power generators, telephones, radios, etc.) and new trends especially connected to the growing automotive industry in Slovakia (electric motors, microelectronics, sensors). The EECI is one of the strongest contributors to the country's GDP, plays a significant role in the industrial output and is also one of the biggest employers in the country.



\*Only companies with more than 20 employees included.  
Source: Statistical Office of the Slovak Republic, Yearbook of Industry of the SR 2019



## Top 10 Reasons to Invest in Slovakia

- 1 Strategic location in Europe with great export potential
- 2 Political & economic stability
- 3 Euro currency as one of a few in the CEE
- 4 CEE leader in labour productivity
- 5 Cost-effective, skilled and educated labour force
- 6 Excellent multilingual skills
- 7 One of the most open economies in the world
- 8 Great potential for R&D and innovation
- 9 Developed & steadily growing infrastructure network
- 10 Attractive investment incentives

# When History Creates Strong Companies — Over 120 Years of Experience

- 1893 — **Helios** — telephones, dynamos, motors (the first electronics company established in Žilina)
- 1902 — **BEZ Transformátory** — transformers (company still in operation)
- 1947 — **Křížík Prešov** — electricity meters (currently Křížík GBI)
- 1949 — **SEZ Krompachy** — switches, sockets, circuit breaks (still in operation)
- 1950 — **Tatramat Poprad** — boilers, ovens (still in operation)
- 1950 — **Tesla Liptovský Hrádok** — telecommunication devices (still in operation)
- 1955 — **Služba Nitra** — fuse boxes, lighting for automotive industry (still in operation)
- 1960 — **Tesla Stropkov** — telephones, home communication systems (still in operation)
- 1975 — **MEZ Michalovce** — electric motors (currently BSH Drives & Pumps)

## Example of Successful Transformation — BEZ Transformátory

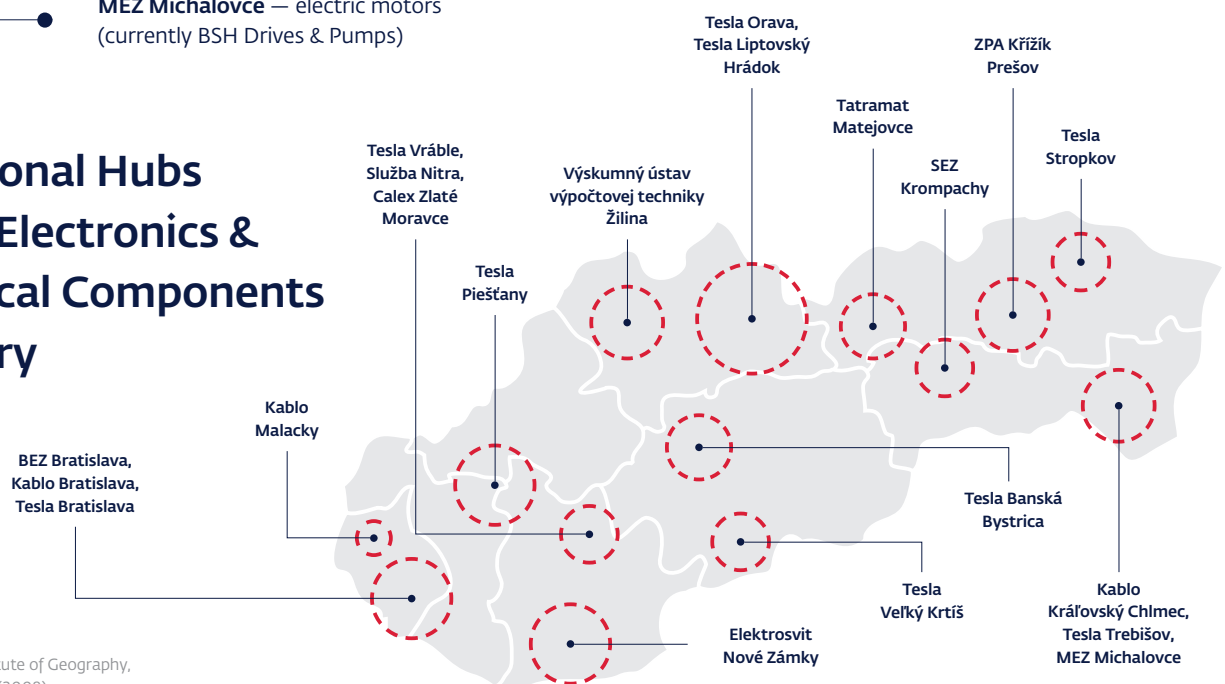


Traditional labour intensive production in the 60s



Current production using modern technologies

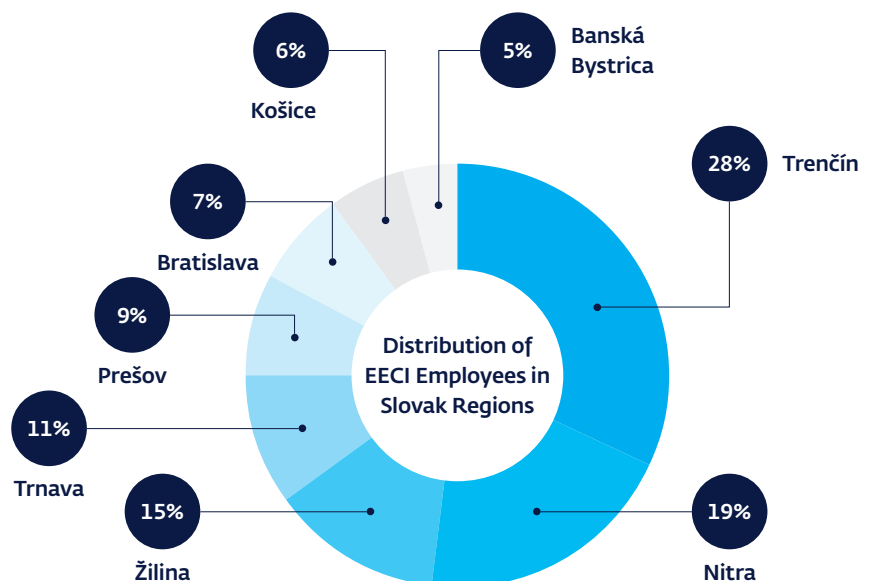
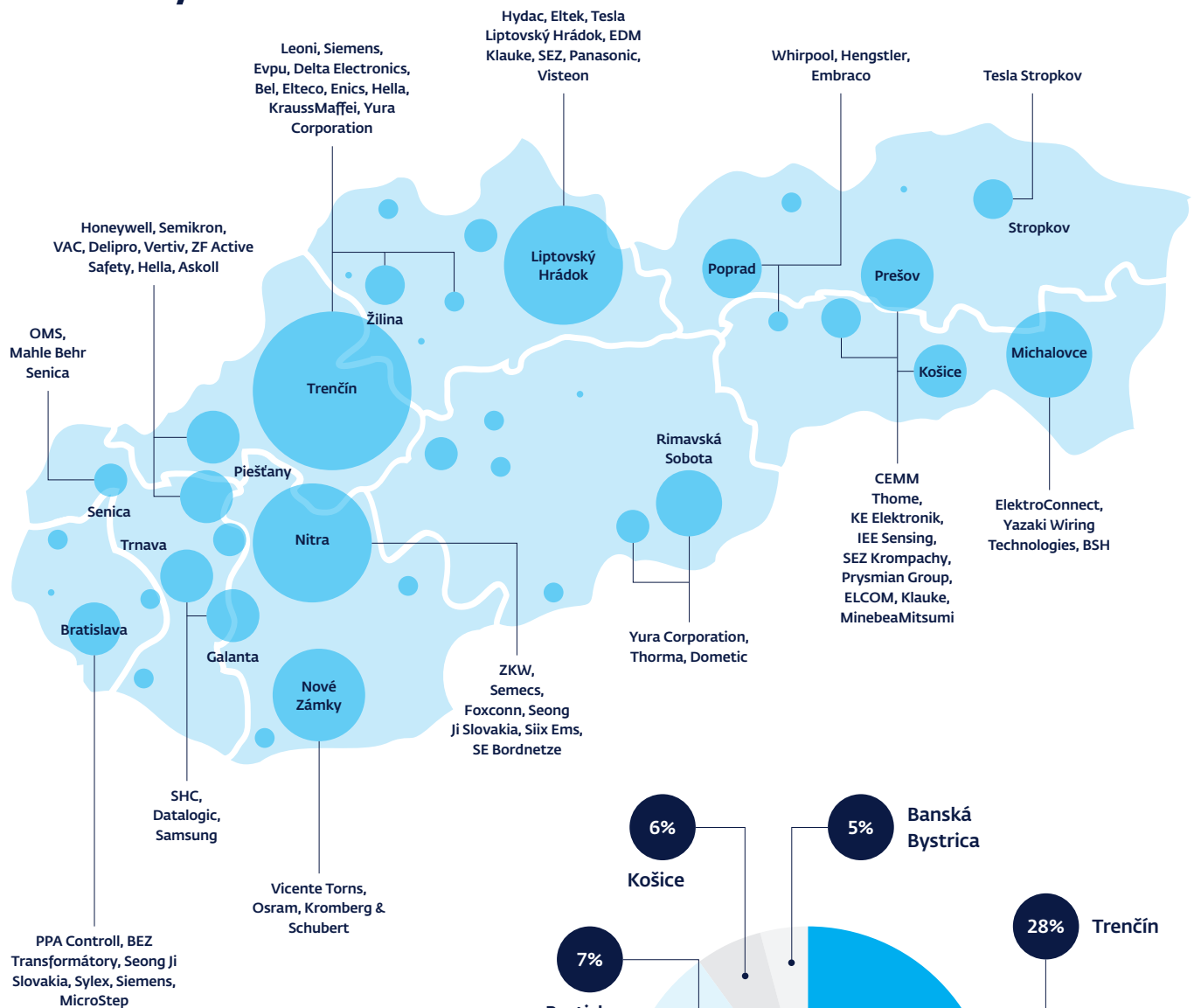
## Traditional Hubs of the Electronics & Electrical Components Industry



Source: UPJS, Institute of Geography, Faculty of Science (2008)

# Today's Regional Distribution of the Electronics & Electrical Components Industry

Electrical engineering companies are located across whole Slovakia. Some regions have had a historically strong tradition in this sector. Others have been shaped by new global players and their suppliers coming to the region (e.g. MinebeaMitsumi in Košice). Significant feature of many EEI companies is their connection to the automotive industry supplier network.



Source: Statistical Office of the SR, Yearbook of Industry of the SR 2019, SARJO

# Electronics & Electrical Components Industry in Line with the Automotive Industry



**Slovakia is the biggest car producer (per capita) in the world. Beside 4 OEMs in the country (Volkswagen, Kia Motors, PSA Peugeot Citroën, Jaguar Land Rover) a huge part of this success comes from more than 350 automotive suppliers.**

The dominant position of the car manufacturing industry shapes also the electronics & electrical components sector. It would not be possible for automobiles to meet modern safety and fuel economy requirements without sophisticated electronic components. Thanks to this fact companies linked to automobile production record excellent results. As a result, some of the companies are able to achieve double-digit growth rates every year.

## E-Mobility

**Currently, growth of e-mobility sector has begun to fundamentally change the outlook of several key industries such as automotive and EECI.**

Slovakia as a major world car manufacturer, is focusing on the technological transformation of the concerned industries. Therefore, the major efforts to transform Slovakia into the electromobility hub of the central Europe had been taken by both, public and private sectors. Some of the Slovak companies have already successfully adapted to these trends due to their high technology and innovation potential.



Source: SARIO

### Examples of EECI Suppliers to Automotive

**WIRING HARNESSES & ELECTRONIC COMPONENTS**  
Mahle Behr, Leoni, SE Bordnetze, Calearo, Yazaki, Kromberg & Schubert, Prettl Electrical Systems, JOHRAmont, Yura Corporation, TFC cables, KE Prešov Elektrik, CRT Electronic, Panasonic Industrial Devices, Mkem, SIIX EMS, Služba Nitra, MTA, CEMM THOME, IEE Sensing, Vacuumschmelze, ZF Active Safety, Visteon

**EXTERIOR & INTERIOR LIGHTS**  
OSRAM, SEC, CEMM THOME, Služba Nitra, ZKW, Hella Innenleuchten, Hella Front Lighting, Hella Signal Lighting

**ANTENNAS**  
Calearo

### Examples of Producers from the E-Mobility Sector



**CHARGING STATIONS**  
MSM Group, Delta Electronics, Greenway



**CAR BATTERY & BATTERY PARTS**  
Nemak, Panasonic Industrial Devices, U.S. Steel

## THE LARGEST ELECTRONICS & ELECTRICAL COMPONENTS INDUSTRY COMPANIES IN SLOVAKIA (BY REVENUES)

COMPANY NAME	COUNTRY OF ORIGIN	LOCATION	REVENUES (MIL. EUR)	NUMBER OF FTEs	CORE BUSINESS
Samsung Electronics Slovakia	South Korea	Galanta	1,440	1,260	LCD moduls and LED screens
Foxconn Slovakia	Taiwan	Nitra	1,205	1,545	LCD and OLED TVs and printed circuit boards
ZKW Slovakia	Austria	Krušovce	291	2,365	headlights for cars, trucks, motorcycles
Whirlpool Slovakia	USA	Poprad	260	1,226	household appliances
Panasonic Industrial Devices Slovakia	Japan	Trstená	250	1,758	control boards, chargers, speakers, sensors
Visteon Electronics Slovakia	USA	Námestovo	214	558	electronic dashboards
Leoni Slovakia	Germany	Trenčín	193	2,343	whole cable systems, e-mobility development
BSH Drives and Pumps	Germany	Michalovce	186 <sup>°</sup>	846 <sup>°</sup>	electric motors for household appliances
Vertiv Slovakia	USA	Nové Mesto nad Váhom	177 <sup>°</sup>	1,193 <sup>°</sup>	air conditions and power systems
ZF Active Safety Slovakia	Germany	Nové Mesto nad Váhom	157	582	automotive safety systems
Elster	Germany	Stará Turá	127	842	electronic meters
PPA Controll	Slovak Republic	Bratislava	116	800	installation of electrical systems, distribution equipment
Semikron	Germany	Vrbové	111	612	power semiconductor modules
Datalogic Slovakia	Italy	Zavar	101	282	barcode scanners, printed circuit boards
Enics Slovakia	Switzerland	Nová Dubnica	101	604	printed circuit boards
KraussMaffei Technologies	Germany	Sučany	90 <sup>°</sup>	520 <sup>°</sup>	electrical cabinets, reactive processing machines
OSRAM	Germany	Nové Zámky	89 <sup>°</sup>	958 <sup>°</sup>	light bulbs, special light sources and accessories
Delta Electronics	Taiwan	Dubnica n. Váhom	86	553	power supplies, rectifiers, inverters
Shin Heung Precision Slovakia	South Korea	Šaľa	75	261	metal stampings and components for LCD screens
Vicente Tornis Slovakia	Spain	Veľké Kosihy	68	113	electrical wires
PPA Energo	Slovak Republic	Bratislava	63	513	installation of electrical systems
Eltek	Taiwan	Liptovský Hrádok	58	587	backup power source devices
SIIX EMS	Japan	Nitra	56	313	printed circuit boards
ABB	Switzerland	Bratislava	55 <sup>°</sup>	163 <sup>°</sup>	transformers, microprocessor
Dometic	Sweden	Filakovo	43	167	motorhome appliances
OMS	Slovak Republic	Dojč	34	468	industrial luminaires
Seong Ji Slovakia	South Korea	Bratislava	27	84	fitting components to printed circuit boards

<sup>°</sup>Data for 2018 (last available)

Source: Finstat (2020), Financial statements of the particular companies (2019)

# Qualified, Productive & Cost-Effective Labour Force

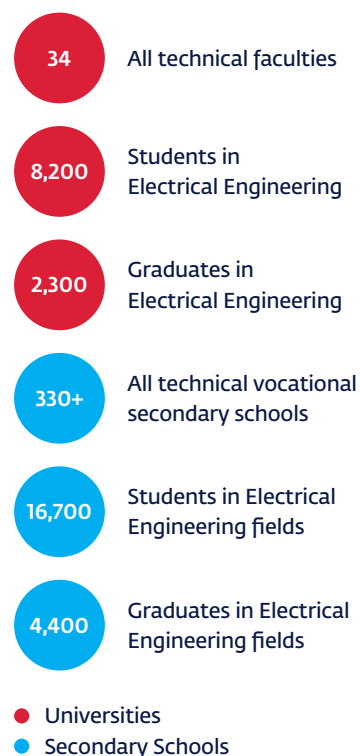
For investors active in electronics & electrical components industry, availability of skilled workforce is a key factor for location selection. Slovak labour force offers outstanding level of productivity and qualification, while still remaining cost-competitive on regional as well as European levels.

**More than 680 companies and 5,800 students joined the dual education in 2019**

## DUAL EDUCATION

The Slovak Government has fully implemented a new dual education framework facilitating combination of theoretical education in schools and practical training in companies. The companies joining the new scheme have the advantage of not only benefiting from a prepared and qualified labor force, but also from the possibility to utilize a related tax relief and other financial benefits.

## EECI Related Education in Slovakia



## AVERAGE GROSS MONTHLY SALARY IN THE EECI (SELECTED POSITIONS/EUR)

POSITION		BRATISLAVA	TRNAVA	NITRA	TRENČÍN	ŽILINA	BANSKÁ BYSTRICA	KOŠICE	PREŠOV
CNC Operative	Min.	1,000	700	1,000	850	850	800	750	700
	Max.	1,400	1,000	1,300	1,200	1,200	1,100	1,000	950
Electrical Operative	Min.	1,100	950	1,200	950	950	950	1,000	900
	Max.	1,600	1,400	1,600	1,400	1,400	1,400	1,400	1,300
Production Operative	Min.	900	750	850	750	750	700	650	600
	Max.	1,100	1,000	1,000	950	950	850	950	850
Electrical Design Engineer	Min.	1,400	1,400	1,400	1,300	1,200	1,200	1,200	1,100
	Max.	2,100	2,000	2,000	1,900	1,900	1,700	1,800	1,700
Production Manager	Min.	3,000	2,700	2,800	2,300	2,300	2,500	2,500	2,300
	Max.	4,200	3,700	4,000	3,600	3,600	3,500	3,500	3,300

Source: Institute of Education Information & Prognosis of Slovakia for the Academic Year 2018/2019  
Grafton Recruitment, Salary Guide 2019, Association of the Electrical Engineering of the Slovak republic; State Institute of the Vocational Education, 2020



## Growing R&D & Innovation Network

Highly qualified workforce at affordable costs, presence of technology cluster and established cooperation between companies and domestic universities motivate companies to establish their R&D divisions in Slovakia.

### R&D SUCCESS STORIES IN ELECTRONICS & ELECTRICAL COMPONENTS INDUSTRY



#### OSRAM

Household & automotive lighting



#### LEONI

Cable harnesses & switches



#### ENICS

Circuit boards & related products



#### ELCOM

Cash registers & industrial PCs



#### MICROSTEP

Smart plasma cutting CNC machines



#### BSH

Drives & pumps

### ECCI R&D PLATFORMS RUN BY THE UNIVERSITIES



#### TECHNICOM SCIENCE PARK Technical University of Košice

Science park focused on research of electrical engineering, automation and control systems.

Working on various projects:

- engineering and certification lab for innovation in electronics
- UWB sensor technologies
- design of electro-mechanical actuator systems



#### THE NATIONAL ROBOTICS CENTER Slovak University of Technology in Bratislava

Center focused on research, support and development of robotics.

Working on various projects:

- mobile and service robotics
- industrial and medical robotics
- intelligent control methods

## Electronics & Electrical Components Industry Platform



### The Association of Electrotechnical Industry of the Slovak Republic (ZEP SR)

- headquartered in Bratislava
- established 1991
- brings together 100 companies in the fields of electrical engineering, electronics, information and communication technologies
- members employ more than 14 000 people

#### ZEP activities

The aims of the association include supporting research activities in Slovakia by networking companies with technical universities and help to enhance a mutual cooperation.

## The Slovak Academy of Sciences



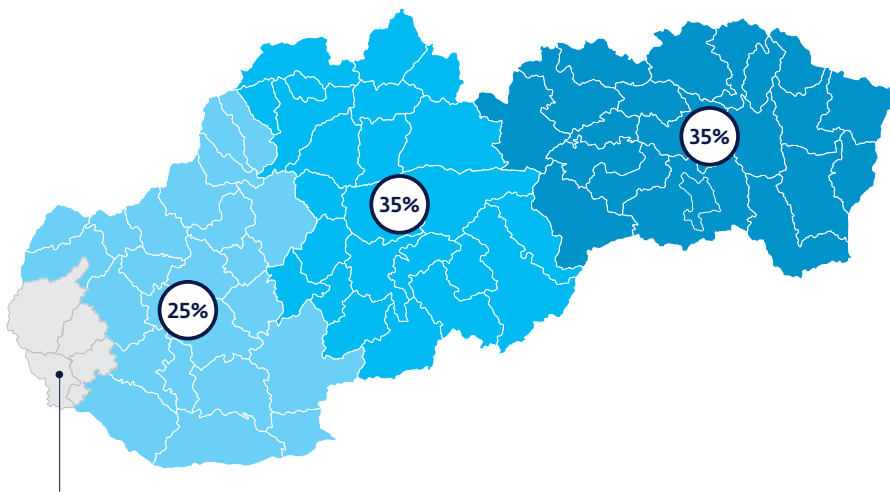
### The Institute of Electrical Engineering is currently focused on:

- physics and technology at nanoscale
- III-V compound semiconductors
- microelectronic sensors and detectors
- applied superconductivity & much more

# Investment Incentives

The primary role of the investment incentives is to motivate investors to place their new projects in regions with higher unemployment and to attract projects with higher added value.

## MAXIMUM REGIONAL INTENSITIES OF INVESTMENT AID IN SLOVAKIA for SMEs additional 10 to 20 %



Bratislava region excluded

### INDUSTRY

Minimum investment amount, number of newly created jobs and share of new technology are subject to the unemployment rate in the selected district and forms of aid required.

If applying for income tax relief, the following criteria have to be met in regards to particular districts category:

- 3 mil. EUR and 60% share of new technology
- 1.5 mil. EUR and 50% share of new technology
- 0.75 mil. EUR and 40% share of new technology
- 0.1 mil. EUR and 30% share of new technology
- Expansion includes minimum increase in the production volume or turnover by at least 5%

Other forms of aid are subject to different requirements.

### TECHNOLOGY CENTERS

- Minimum investment of 100 ths. EUR on fixed assets in all regions
- Minimum of 10 newly created jobs
- Minimum 1.7 fold of average salary in the district paid to new employees\*\*

### SHARED SERVICES CENTERS

- Minimum of 25 newly created jobs
- Min 1.5 fold of average salary in the district paid to new employees\*\*

\*Conditions differ for projects from 'Priority areas'. Please contact us at [invest@sario.sk](mailto:invest@sario.sk) for more information.

\*\*Condition is considered automatically fulfilled for years 2021 and 2022.



### ELIGIBLE PROJECTS

The Act on Investment Aid divides the projects which may be supported into four categories:

- Industry
- Technology Centers
- Combined Projects of Industrial Production and Technology Center
- Shared Services Centers

### ELIGIBLE COSTS

- Costs of land acquisition
- Costs of buildings acquisition & construction
- Costs of new technological equipment and machinery acquisition
- Intangible long-term assets — licences, patents, etc.
- Rent of new land/building

### OR

- Wage costs of new employees for the period of 2 years

### FORMS OF INVESTMENT INCENTIVES

- Tax relief
- Cash grant
- Contributions for the newly created jobs
- Rent/Sale of real estate for a discounted price



## AIM INVESTMENT AWARDS DUBAI 2017

CEE & TURKEY REGION  
Best Investment Promotion Agency in 2016



# SARIO Profile

Slovak Investment & Trade Development Agency (SARIO) is a governmental investment and trade promotion agency of the Slovak Republic. The agency was established in 2001 and it operates under the Slovak Ministry of Economy.

## 01 INVESTMENT SERVICES

### FOR POTENTIAL INVESTORS

- investment environment overview
- assistance with investment projects implementation
- starting a business consultancy
- sector and regional analyses
- investment incentives consultancy
- site location & suitable real estate consultancy

### FOR ESTABLISHED INVESTORS

- identification of local suppliers, service providers
- assistance with expansion preparation and execution
- relocation assistance, work/stay permits
- business networking

## 02 FOREIGN TRADE SERVICES

### IF YOU ARE LOOKING FOR

- Slovak supplier or sub-contractor
- information about Slovak export/trade environment
- sourcing opportunities
- forming a joint venture, production cooperation or other forms of partnership with a Slovak partner

### SERVICES FOR EXPORTERS

- information on foreign territories
- customized search for foreign partners
- on-line database of business opportunities
- export Training Centre
- subcontracting assistance

## 03 INNOVATION SERVICES

- supporting business development of Slovak innovative technology companies by connecting them to SARIO's major clients — large investors established in Slovakia in order to innovate their technological processes
- the service is not limited to the borders of Slovakia, it focuses mainly on — industry, product development, service sector
- the service also aims to direct venture funds to Slovak technology companies open to capital investments

## 04 DIVERSIFICATION SERVICES

- supporting diversification of Slovak companies towards high-tech areas with significant growth potential
- focus on, but not limited to: space industry, aviation industry, and innovative mobility
- include consultancy for companies regarding the potential and possibilities of entering the new sectors as well as creation of new business and R&D cooperation opportunities on the national and international level

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**SARIO IS YOUR ONE STOP SHOP FOR INVESTMENT & TRADE IN SLOVAKIA.  
TALK TO US TODAY!**

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