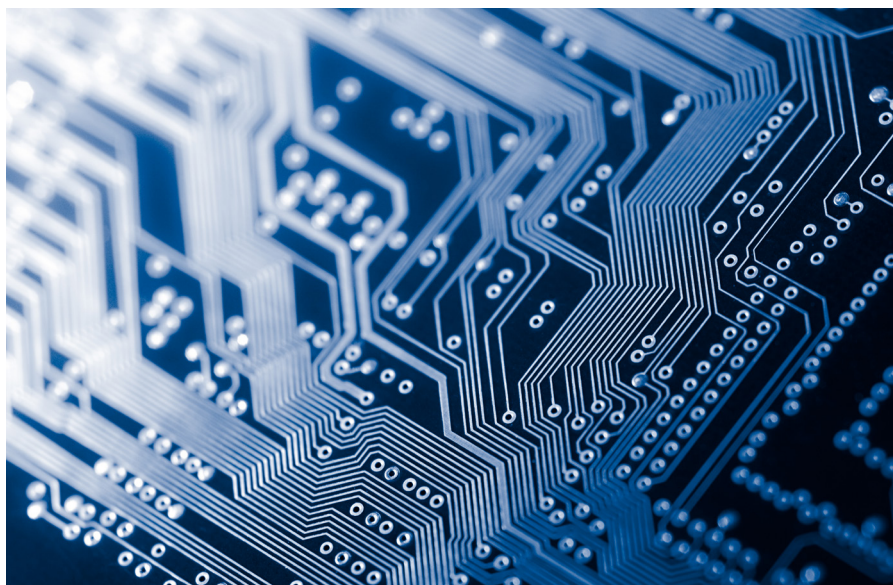


Electronics & Electrical Components Industry in **SLOVAKIA**



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 km²

POPULATION 5.4 million

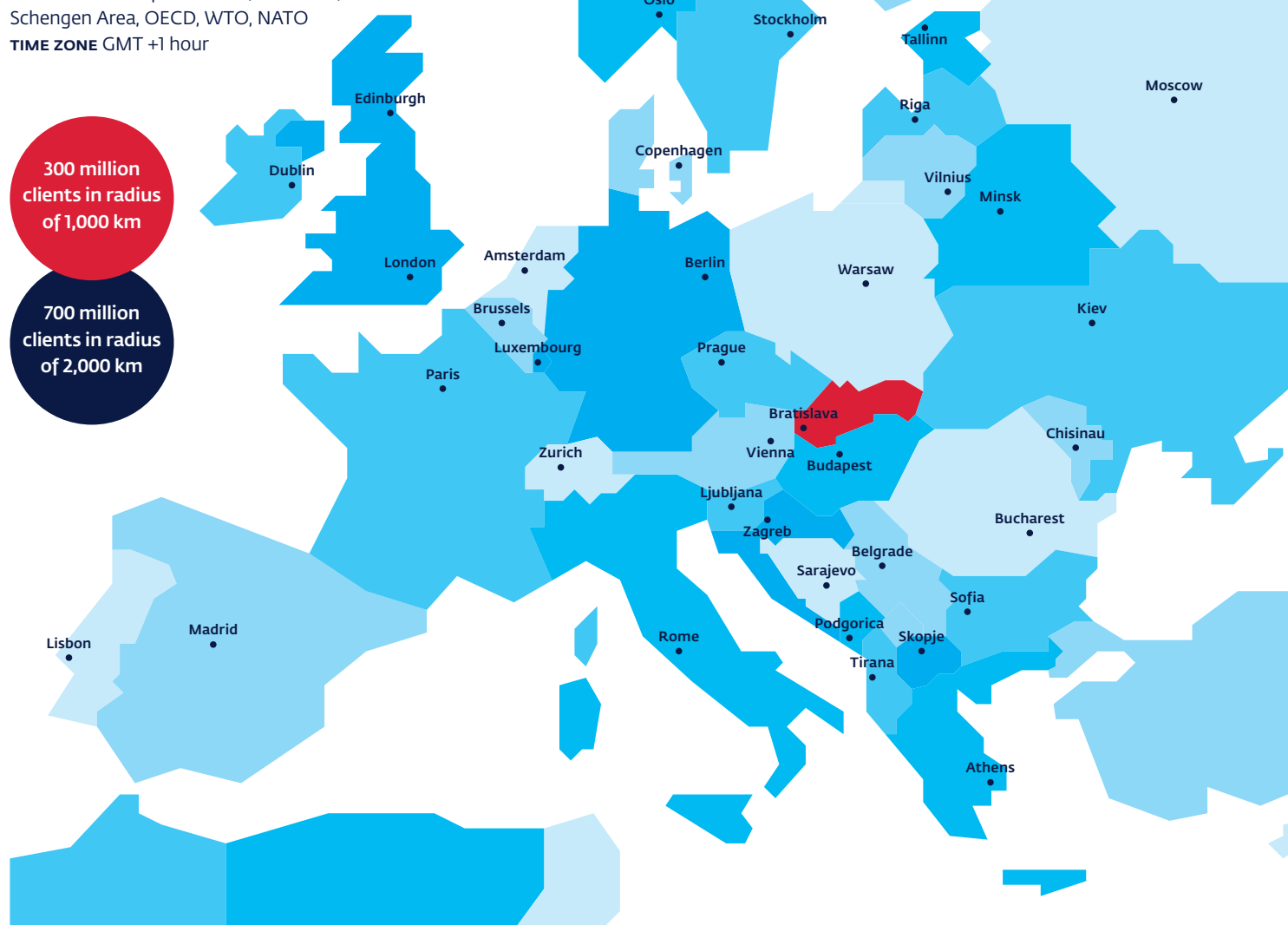
CAPITAL CITY Bratislava

MEMBER OF European Union, Eurozone, Schengen Area, OECD, WTO, NATO

TIME ZONE GMT +1 hour

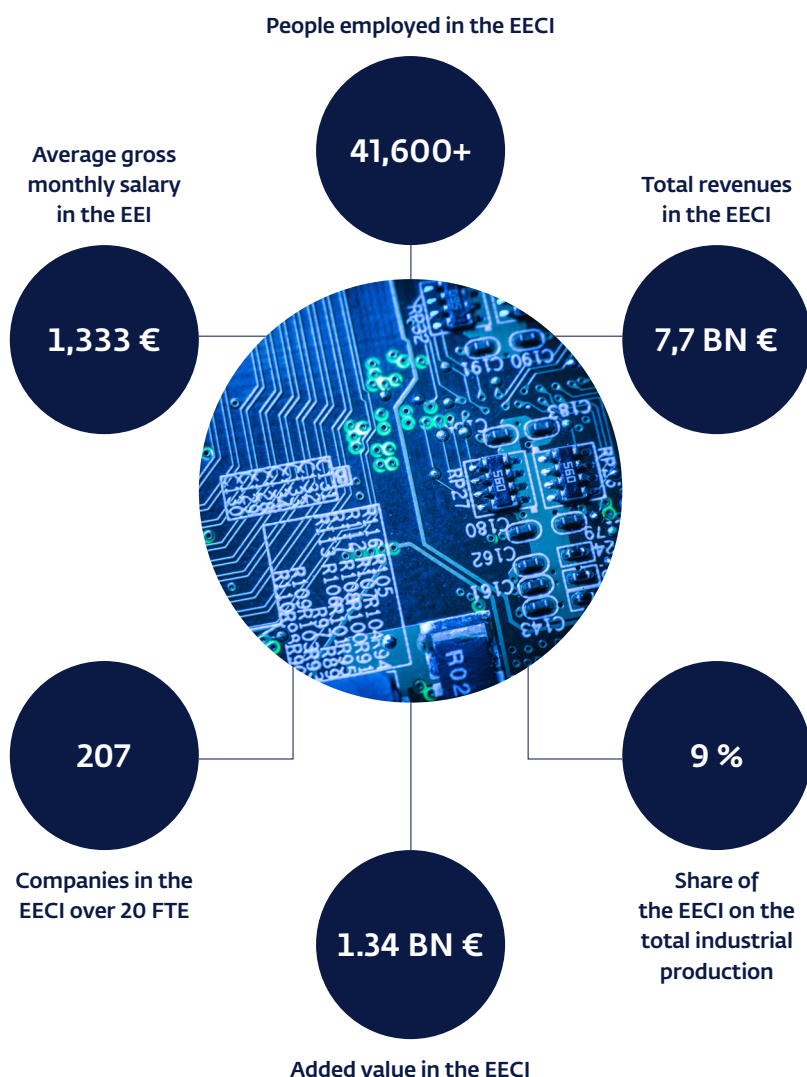
300 million
clients in radius
of 1,000 km

700 million
clients in radius
of 2,000 km



Overview of the Electronics & Electrical Components Industry in Slovakia

The Electronics & Electrical Components Industry (EECI) is 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). Ongoing shift towards e-mobility is creating whole new opportunities for all electrical components suppliers. 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 2022



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

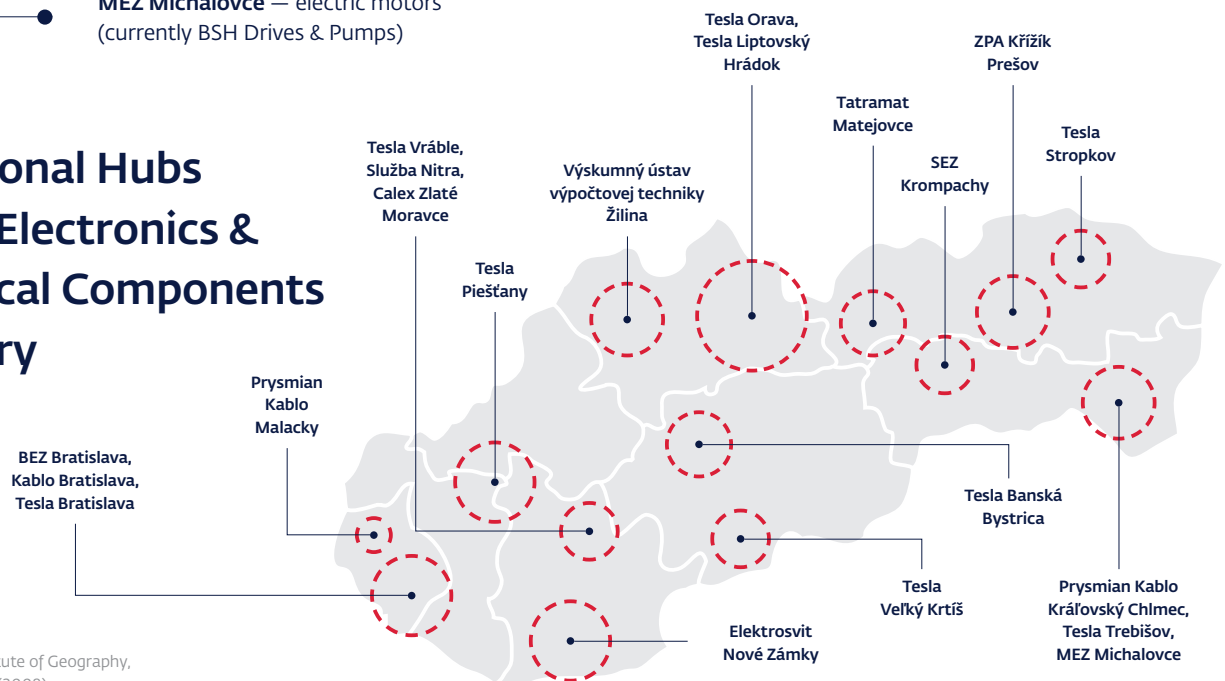


Traditional labour intensive
production in the 60s



Current production using
modern technologies

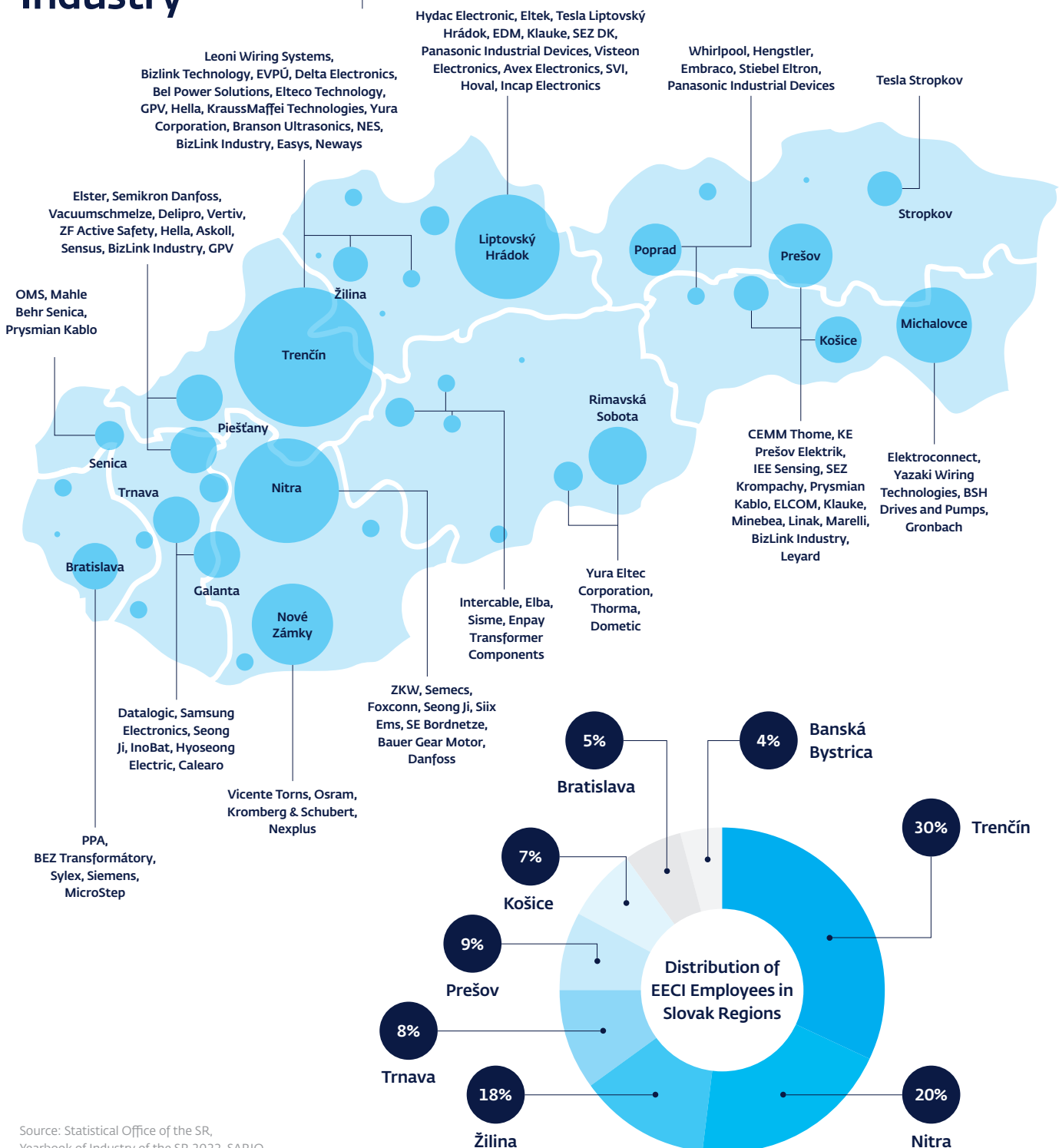
Traditional Hubs of the Electronics & Electrical Components Industry



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 historically a strong tradition in this sector, others have been shaped by new global players and their suppliers coming to the region (e.g. Minebea in Košice). Significant number of EECI companies are connected to the automotive industry supplier network.



Source: Statistical Office of the SR, Yearbook of Industry of the SR 2022, SARIO

Electronics & Electrical Components Industry in Line with the Automotive Industry



New Volvo Cars facility with production capacity of 250 ths. purely electric vehicles per year will start operation in 2026 in Košice

Slovakia is even currently the biggest car producer (per capita) in the world. In addition to 4 OEMs already established in Slovakia (Volkswagen, Kia, Stellantis, Jaguar Land Rover), Volvo Cars has recently announced new production facility to be opened in Košice in 2026. Slovakia is well known also for its dense network of more than 350 automotive suppliers.

The dominant position of the automotive industry shapes also the electronics & electrical components sector. In order to meet modern safety and fuel economy requirements, OEMs need to cooperate closely with their electronics suppliers. Thanks to this fact companies linked to car production record excellent results. As a result, some of the companies are able to achieve double-digit growth rates every year.

E-Mobility

Ongoing shift of automotive industry towards the e-mobility is fundamentally changing several key industries in Slovakia, including 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, EFB-Elektronik, Yura Eltec Corporation, TFC Cables Assemblies, KE Prešov Elektrik, CRT Electronic, Panasonic Industrial Devices, Mkm, SIIX EMS, Služba Nitra, MTA, CEMM THOME, IEE Sensing, Vacuumschmelze, ZF Active Safety, Visteon Electronics, Marelli, Intercable, Bizlink Technology, Robert Bosch Production, Elektroconnect, BizLink Industry

EXTERIOR & INTERIOR LIGHTS
OSRAM, SEC, CEMM THOME, Služba Nitra, ZKW, Hella Slovakia Lighting, LPH Vranov nad Topľou

ANTENNAS
Calearo

Examples of Producers from the E-Mobility Sector



CHARGING STATIONS
MSM Group, Delta Electronics, GreenWay Infrastructure, ejoin



CAR BATTERY & BATTERY PARTS
Panasonic Industrial Devices, Webasto Convertibles, Intercable, Nexplus

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	1,648	736	LCD modules and LED screens
Foxconn Slovakia	Taiwan	Nitra	972	1,260	LCD and OLED TVs and printed circuit boards
Panasonic Industrial Devices Slovakia	Japan	Trstená, Stará Ľubovňa	496	2,361	control boards, chargers, speakers, sensors
ZKW Slovakia	Austria	Krušovce	396	2,236	headlights for cars, trucks, motorcycles
HELLA Slovakia Lighting	Germany	Kočovce	367	3,293	lighting systems
Embraco Slovakia	Japan	Spišská Nová Ves	313*	2,275*	compressors for household appliances
WHIRLPOOL Slovakia	USA	Poprad	286*	1,228*	household appliances
Visteon Electronics Slovakia	USA	Námestovo	246	580	electronic dashboards
Vertiv Slovakia	USA	Nové Mesto nad Váhom	231	1,199	air conditions and power systems
Prysmian Kablo	Italy	Bratislava, Veľké Leváre, Záborské	196	356	optical fibers and telecommunication cables
BSH Drives and Pumps	Germany	Michalovce	162	803	electric motors for household appliances
ZF Active Safety Slovakia	Germany	Nové Mesto nad Váhom	152	416	automotive safety systems
INTERCABLE	Italy	Kriváň	143	813	cable systems for automotive
Semikron Danfoss	Germany	Vrbové	130	692	power semiconductor modules
GPV Slovakia (Nova)	Denmark	Nová Dubnica	128	562	printed circuit boards
Vicente Torns Slovakia	Spain	Veľké Kosihy	127	120	electrical wires
Siemens	Germany	Bratislava	123	577	various electrical components
NEXPLUS SK	South Korea	Šurany	122	202	battery components for automotive
Delta Electronics (Slovakia)	Taiwan	Dubnica nad Váhom	118	555	power supplies, rectifiers, inverters
Elster	Germany	Stará Turá	115	577	electronic meters
BizLink Industry Slovakia	Germany	Stará Turá, Ilava, Jaklovce	97	902	electrical wires and wire harnesses
LEONI Wiring Systems Slovakia	Germany	Trenčín, Ilava, Dubnica nad Váhom	94	1184	whole cable systems, e-mobility development
KraussMaffei Technologies	Germany	Sučany	91	473	electrical cabinets, reactive processing machines
Eltek	Taiwan	Liptovský Hrádok	84	647	backup power source devices
LEYARD EUROPE	China	Záborské	83	224	LCD and LED screens
DATALOGIC SLOVAKIA	Italy	Zavar	82	226	barcode scanners, printed circuit boards
HYDAC Electronic	Germany	Tvrdošín	80	477	electrical components for automotive
Minebea Slovakia	Japan	Košice	81	508	electrical components for automotive
SIIX EMS Slovakia	Japan	Nitra	62	301	circuit boards for automotive

*Data for 2021 (last available)

Source: Finstat (2023), Financial statements of the particular companies (2022)

Qualified, Productive & Cost-Effective Labour Force

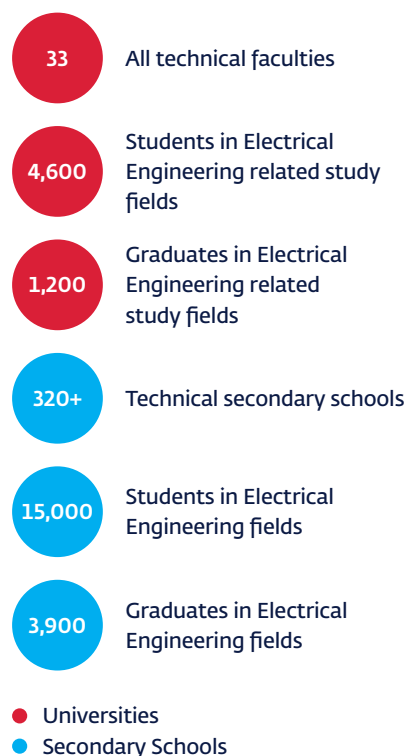
For investors active in electronics & electrical components industry, availability of skilled workforce is a key factor for location selection. Slovak labour force offers outstanding level of productivity and qualification, while still remaining cost-competitive on regional as well as European levels.

More than
1,600 companies
and 8,600 students
joined the dual
education in
2021

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.	1,600	1,600	1,600	1,400	1,400	1,600	1,200	1,100
	Max.	1,900	1,900	1,900	1,800	1,800	1,900	1,500	1,400
Electrical Operative	Min.	1,500	1,400	1,500	1,300	1,300	1,500	1,300	1,200
	Max.	1,800	1,700	2,000	1,700	1,700	2,000	1,500	1,400
Production Operative	Min.	950	950	950	1,000	1,000	950	950	850
	Max.	1,350	1,350	1,350	1,400	1,400	1,350	1,200	1,150
Electrical Design Engineer	Min.	1,600	1,700	2,300	1,700	1,700	2,300	1,500	1,400
	Max.	2,500	2,200	2,600	2,200	2,200	2,600	2,000	1,800
Production Manager	Min.	3,300	3,000	3,500	2,800	2,800	3,500	2,800	2,500
	Max.	4,500	4,000	4,000	4,000	4,000	4,000	3,800	3,500

Source: Institute of Education Information & Prognosis of Slovakia for the Academic Year 2022/2023, Grafton Slovakia, 2023

Growing R&D & Innovation Network

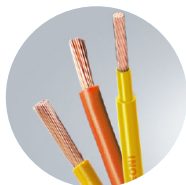
Highly qualified workforce at affordable costs, presence of technology cluster and established cooperation between companies and domestic universities motivate companies to establish their R&D divisions in Slovakia.

R&D SUCCESS STORIES IN ELECTRONICS & ELECTRICAL COMPONENTS INDUSTRY



OSRAM

Household & automotive lighting



LEONI

Cable harnesses & switches



GPV

Circuit boards & related products



ELCOM

Cash registers & industrial PCs



MICROSTEP

Smart plasma cutting CNC machines



BSH Drives and Pumps

Electric motors and pumps

EECI R&D PLATFORMS RUN BY THE UNIVERSITIES

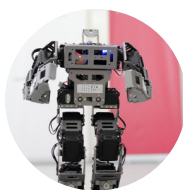


TECHNICOM SCIENCE PARK Technical University of Košice

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 goal 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 INCENTIVES IN SLOVAKIA

- additional 10% for medium-sized enterprises
- additional 20% for small and micro-sized enterprises

INDUSTRIAL PRODUCTION

Minimum conditions (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 a minimum increase in the production volume or turnover by at least 15%

Direct forms of aid are also available, different conditions apply.

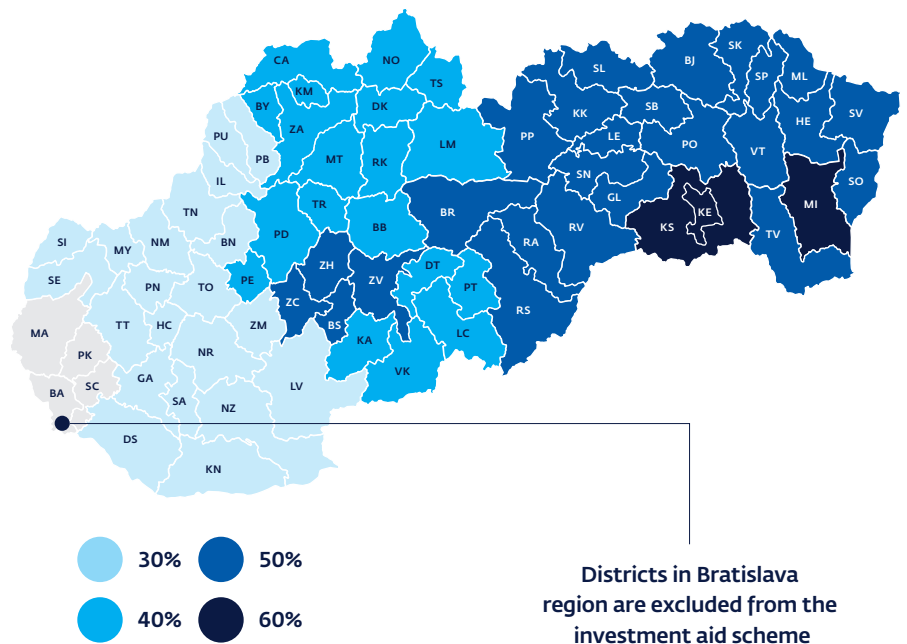
TECHNOLOGY CENTRES

- Minimum investment of 50 ths. EUR on fixed assets in all regions
- Minimum of 5 newly created jobs
- Minimum 1.7 fold of average salary in the district paid to new employees

SHARED SERVICES CENTRES

- Minimum of 10 newly created jobs
- Min 1.5 fold of average salary in the district paid to new employees

Minimum conditions for SMEs are in principle lowered by half. Please contact us at invest@sario.sk for more information.



ELIGIBLE PROJECTS

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

- Industrial production
- 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**
- Total wage costs of all new employees calculated over a period of 2 years

FORMS OF INVESTMENT INCENTIVES

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

Districts in Bratislava region are excluded from the investment aid scheme

Positive regional contribution of a new investment projects shall be concluded based on these categories — investment location, number of jobs created, average gross monthly salary of new employees, expected added value and possible qualification of a project respecting definition of a priority area.





AIM INVESTMENT AWARDS DUBAI 2022

CEE & TURKEY REGION
Best Investment Promotion
Agency in 2022



SARIO Profile

Slovak Investment and 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 Ministry of Economy of the Slovak Republic.

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
- assistance with Industry 4.0 solutions and R&D implementation

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
- online database of business opportunities
- export Training Centre
- subcontracting assistance

03 INNOVATION SOURCING

- matching local tech companies with the operations of large companies that plan to implement innovative solutions to streamline and optimize their processes
- focused mostly on Industry 4.0 solutions such as digitalization, intelligent automation, and robotics as well as advanced and complex IT solutions for various industries
- based on a database of more than 300 local tech companies which is constantly updated and expanded

04 SLOVAK SPACE OFFICE

FOR SLOVAK ENTITIES

- tailor-made sector entry consultancy
- startup creation through hackathons and incubation programs
- cooperation opportunities through matchmaking events
- internationalization of the Slovak space companies and research institutions

FOR FOREIGN PARTNERS

- customized search for local partners
- assistance with establishing branch in Slovakia
- cooperation on space industry events

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

SARIO | Slovak Investment and Trade Development Agency

Mlynské nivy 44/b | 821 09 Bratislava | Slovakia

 **GPS +48°08'39.8", +17°08'24.2"**

invest@sario.sk | trade@sario.sk | www.sario.sk

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