

Pharmaceutical & Life Sciences Sector in **SLOVAKIA**



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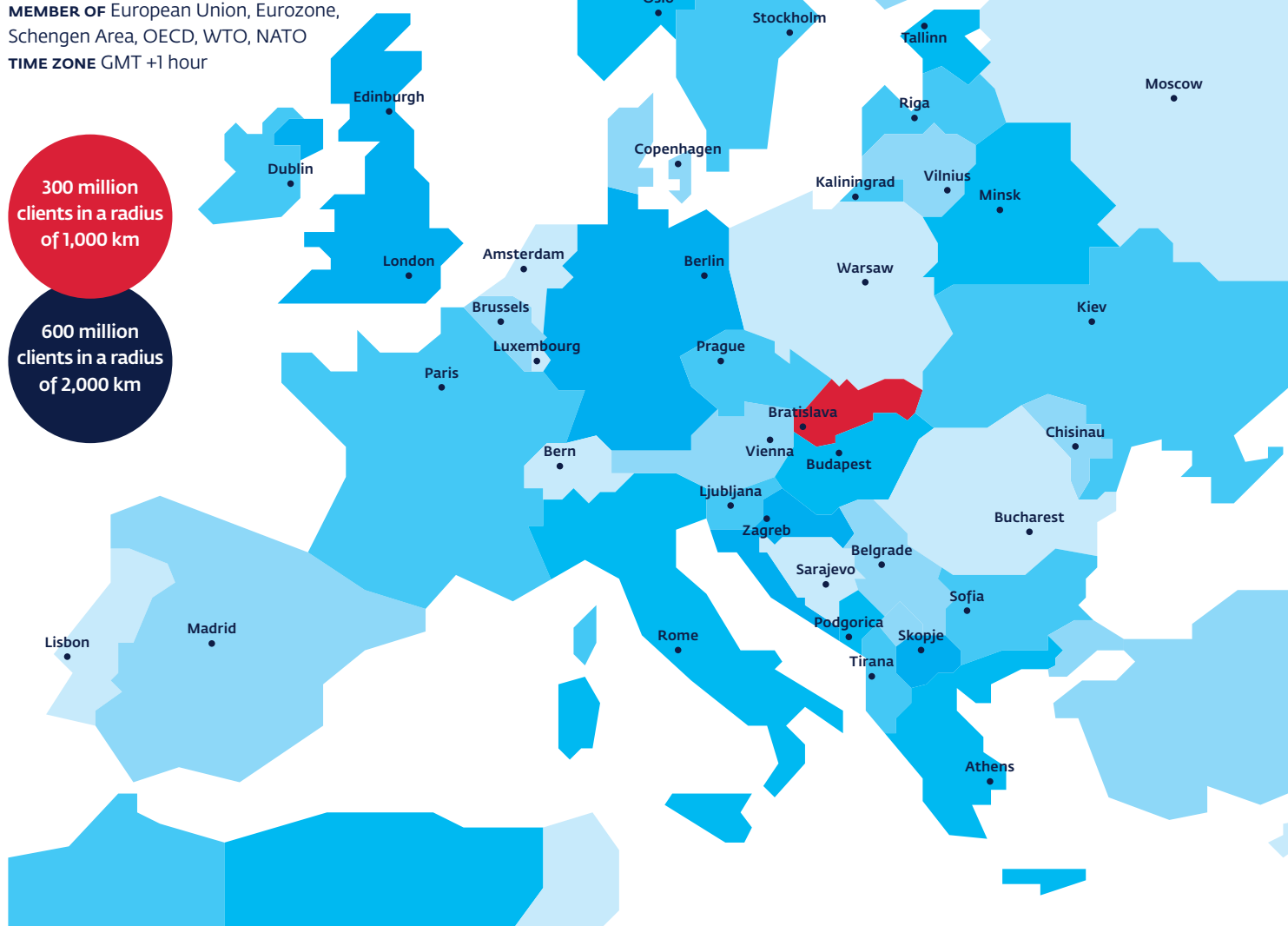
The purpose of this publication is to present the opportunities that Slovakia has to offer to potential investors from the pharmaceutical & life sciences sector. It includes facts and figures for all major subcategories of this segment and serves as an introduction to why Slovakia should be a preferred location for your pharmaceutical and healthcare business.



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

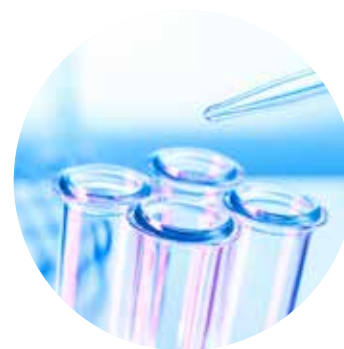
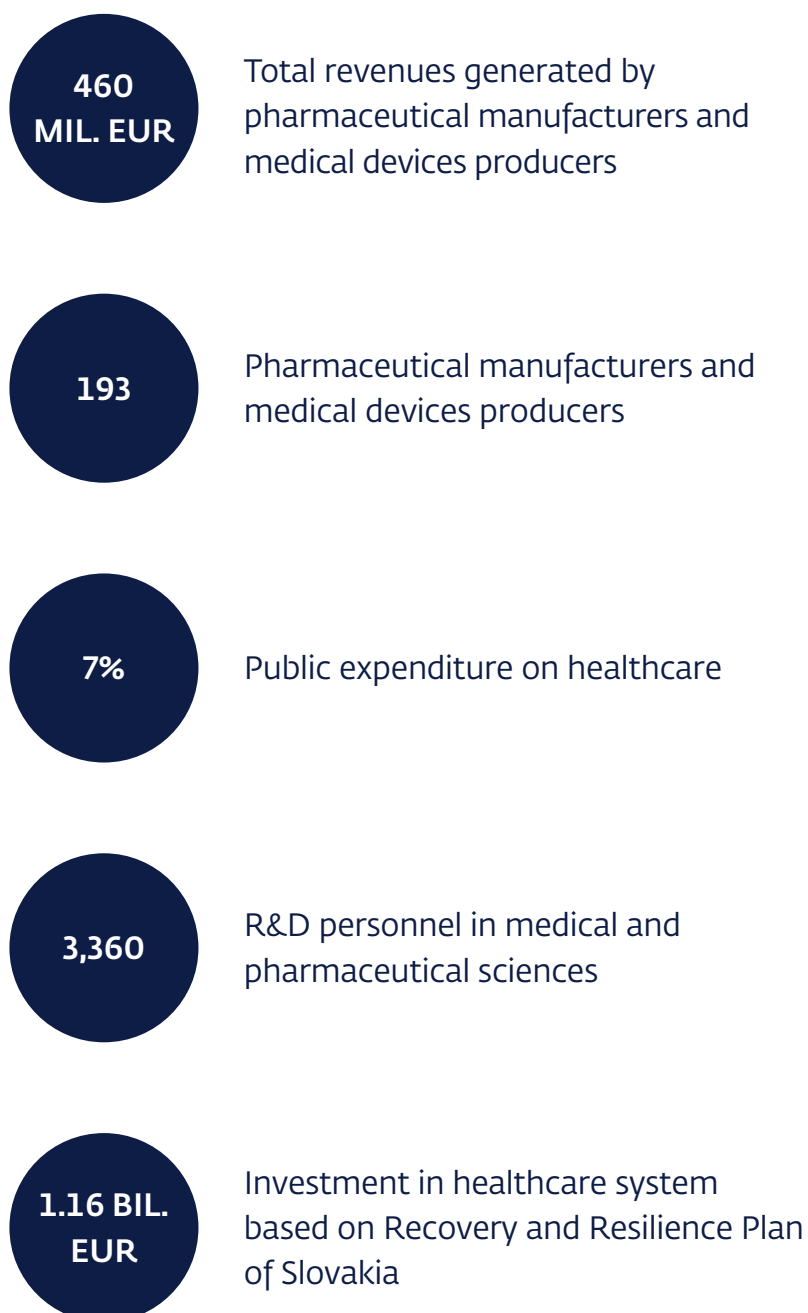
300 million clients in a radius of 1,000 km

600 million clients in a radius of 2,000 km



Healthcare & Life Sciences in Slovakia — Key Facts

The Life Sciences sector in Slovakia is represented mainly by the production of pharmaceuticals, medical devices and cosmetics. Although this sector accounts for a relatively small share on the entire industrial production, it offers great potential for new investors.



Top 10 Reasons to Invest in H&L Sector in Slovakia

- 1 Strong R&D focus on life sciences sector — presence of large international companies performing R&D
- 2 Constantly evolving research and academic infrastructure
- 3 Significant achievements in applied research
- 4 Strong local pharmaceutical sector and supplier network
- 5 Qualified and cost-effective workforce with high education level
- 6 Political and economic stability
- 7 EURO currency as one of the few in CEE
- 8 Fastest growing Eurozone member within the last 10 years
- 9 Flat income tax rate
- 10 Attractive investment incentives

Source: Finstat 2021 (data for 2020), Yearbook of Science and Technology 2020 (data for 2019), Recovery and Resilience Plan of Slovakia (2021)

Pharmaceutical Production in Slovakia

The large scale production of drugs is one of the youngest sectors in Slovak manufacturing. The history of the pharmaceutical industry in Slovakia dates back to the 1950s, when 3 large state-owned companies were established in Slovenská Ľupča, Šarišské Michaľany and Hlohovec.



Today, all of the Slovak pharmaceutical companies are owned by private investors, typically providing contract manufacturing for major global companies.

LIST OF MAJOR PHARMACEUTICAL PRODUCERS IN SLOVAKIA

COMPANY NAME	LOCATION	CORE PRODUCTION	SALES REVENUE (MIL. EUR)	EMPLOYEES
Saneca Pharmaceuticals	Hlohovec	active pharmaceutical ingredients, opiates, cosmetic products	61.5	768
HBM Pharma	Martin	sterile liquids and tablets	36.8	384
Hameln rds	Modra	production & development of active pharmaceutical ingredients	23.1	115
Biotika	Slovenská Ľupča	active pharmaceutical ingredients	17.6	235
Imuna Pharm	Šarišské Michaľany	immuno preparations, blood substitutes, allergen preparations	13.7	214
Unimed Pharma	Bratislava	eye drops and tablets	12.5	71
Innopharma*	Dunajská Streda	vitamins, minerals supplements	12.4	117
Pharmagal Bio	Nitra	veterinary imunological medicaments	8.5	39
Generica	Piešťany	vitamins, minerals, supplements	6.7	51
Farmácia Martin	Martin	pharmaceutical preparations	4.6	44
VULM	Bratislava	food supplements, ointments, creams, drops, solutions	4.5	49
Mikrochem	Pezinok	active pharmaceutical ingredients	3.9	56
Panacea	Žilina	medical devices and first-aid kits	3.7	42
Galvex	Banská Bystrica	tablets, suppositories, solutions, medical devices, topical preparations	3.7	49
Pharmagal	Nitra	antibiotics and chemotherapeutics, antioocidials, antiflatulents, immuno preparations, hormones	3.6	53

Source: FinStat 2021, Data for 2020

*Data for 9 months

Top Players of the Slovak Pharmaceutical Industry



SANECA PHARMACEUTICALS

Slovakia's largest pharmaceutical company specializing in opiate development and the manufacture of APIs as well as liquid, semi-solid and solid finished dosage forms.



HBM PHARMA

A partner for contract manufacturing of pharmaceutical products in the field of production of injectables in ampoules, production of bulk tablets, packaging of tablets and quality control.



BIOTIKA

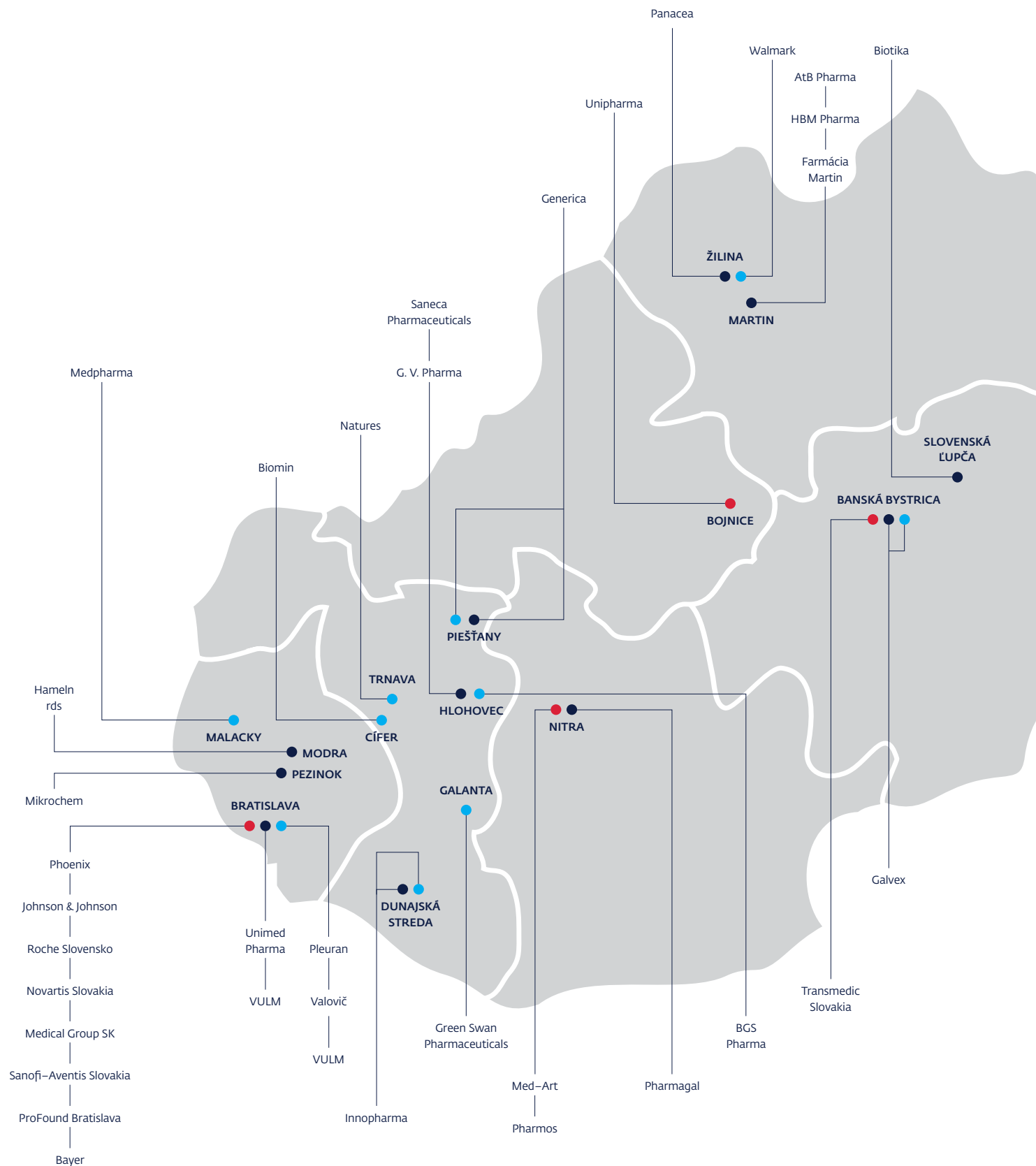
Biotika is well known as a reliable manufacturer of high-quality pharmaceutical preparations for human as well as veterinary application.

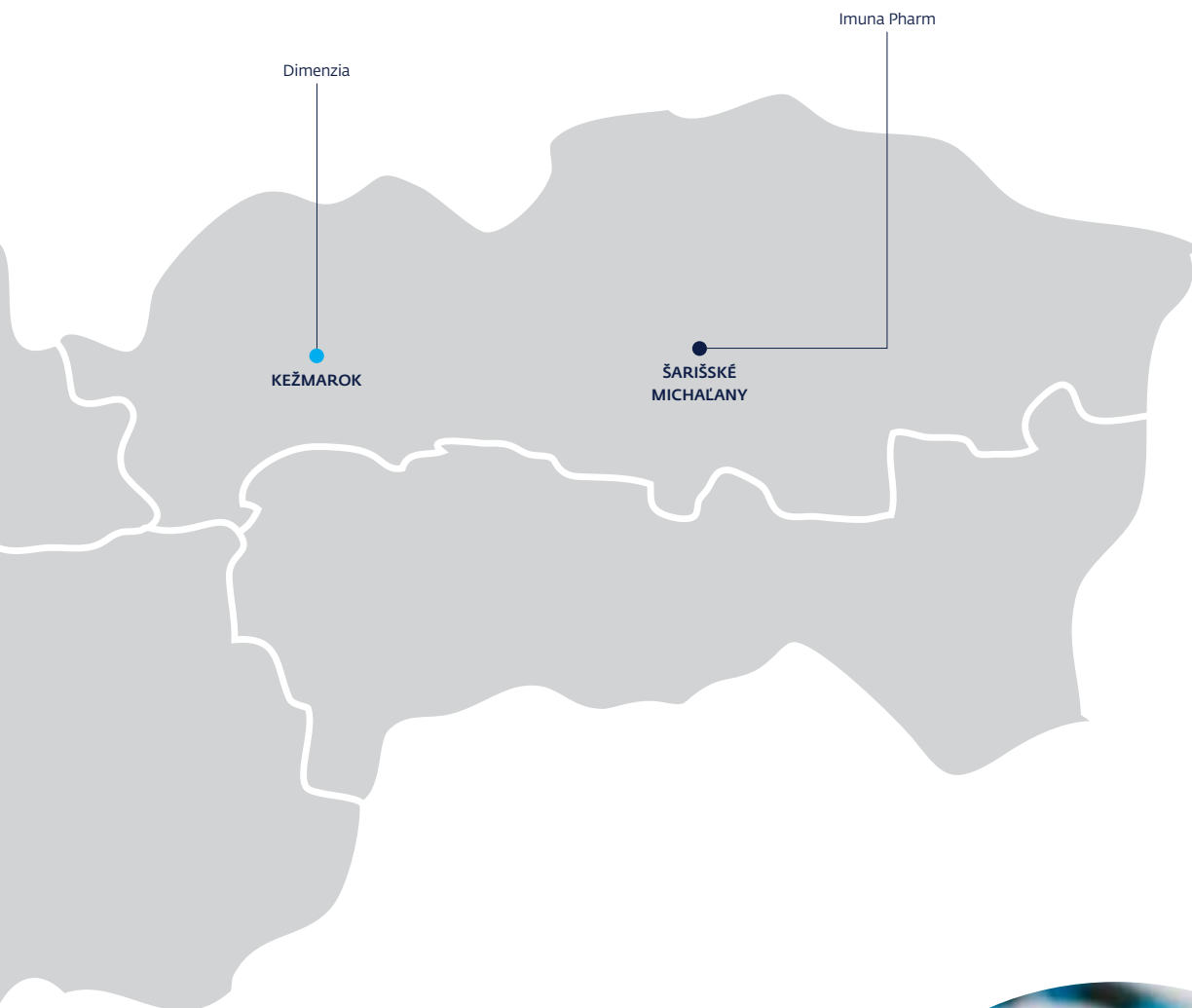


UNIMED PHARMA

Slovak pharmaceutical company focused on development and production of generic ophthalmologic products.

Map of Major Pharmaceutical Producers, Distributors & Producers of Vitamins, Minerals & Supplements in Slovakia





-
- pharmaceutical producers
 - distributors of drugs & healthcare products
 - producers of vitamins, minerals & supplements

MAJOR DISTRIBUTORS OF DRUGS & HEALTHCARE PRODUCTS IN SLOVAKIA

COMPANY NAME	LOCATION	CORE ACTIVITY	SALES REVENUE (MIL. EUR)	EMPLOYEES
Phoenix Zdravotnícke Zásobovanie	Bratislava	distribution of pharmaceutical drugs & products	682.0	459
Unipharma	Bojnice	distribution of pharmaceutical drugs & products	513.8	685
Med–Art	Nitra	distribution of pharmaceutical & veterinary drugs and products	369.9	479
Johnson & Johnson	Bratislava	distribution of pharmaceutical drugs & cosmetic products	119.4	80
Novartis Slovakia	Bratislava	distribution of pharmaceutical drugs & products	111.6	141
Medical Group SK	Bratislava	distribution of pharmaceutical drugs & products	109.5	53
Sanofi–Aventis Slovakia	Bratislava	distribution of pharmaceutical drugs, food supplements & cosmetic products	92.3	100
ProFound Bratislava	Bratislava	distribution of pharmaceutical drugs & products	91.8	11
Bayer	Bratislava	distribution of pharmaceutical drugs & products	77.5	89
Roche Slovensko	Bratislava	distribution of pharmaceutical drugs, food supplements & medical cosmetics	76.4	117
Pharmos	Nitra	distribution of pharmaceutical drugs & products	58.0	112

SLOVAK PRODUCERS OF VITAMINS, MINERALS & SUPPLEMENTS

COMPANY NAME	LOCATION	CORE PRODUCTION	SALES REVENUE (MIL. EUR)	EMPLOYEES
Pleuran	Bratislava	immunity care (Imunoglukan), vitamins	12.5	92
Innopharma*	Dunajská Streda	vitamins, minerals, supplements	12.4	117
Generica	Piešťany	vitamins, minerals supplements	6.7	51
VULM	Bratislava	food supplements, ointments, creams, drops, solutions	4.5	49
GALVEX	Banská Bystrica	minerals, food supplements, creams	3.6	49
Biomín	Cífer	minerals & calcium produced from egg shells	3.3	26
Green — Swan Pharmaceuticals	Galanta	vitamins, medicaments	2.1	18
Dimenzia	Kežmarok	production and development of food supplements	1.9	11
Medpharma	Malacky	vitamins, minerals, natural cosmetics	1.7	2
Natures	Trnava	immunity care (Betaglucan), vitamins, creams	1.3	5
BGS Pharma	Hlohovec	vitamins, minerals	0.6	2
Valovič	Bratislava	natural herb drops, teas, cosmetics	0.1	2

Source: FinStat 2021, Data for 2020

*Data for 9 months

Production of Medical Devices

The production of medical devices has a long history in Slovakia, particularly in the area of orthopedic and stomatological equipment. Before 1989, companies such as Chirana or Protetika had a strong position in the Czechoslovak market.

In the recent years, Slovakia has become an increasingly attractive investment destination for companies producing single use medical equipment. Most of the medical equipment produced in Slovakia is designated for foreign markets, with the exception of Protetika products. Medical devices and instruments are sold either directly by a production company, or by local distributors.

PRODUCERS OF MEDICAL DEVICES & DENTAL INSTRUMENTS

COMPANY NAME	LOCATION	CORE PRODUCTION	SALES REVENUE (MIL. EUR)	EMPLOYEES
Unomedical	Michalovce	single use medical equipment	96.0	912
Medline Assembly Slovakia	Bánovce nad Bebravou	single use surgical equipment	28.6	185
Chirana T.Injecta	Stará Turá	single use injection devices	26.3	45
Chirana Medical	Stará Turá	stomatological systems	23.3	226
Biometrix	Šamorín	medical devices for intensive medicine, cardiology and surgery rooms	16.0	150
Protetika	Bratislava	orthopedic and prosthetic equipment	15.3	210
Injecta	Stará Turá	single use injection devices	12.6	261
Europin	Trenčianske Stankovce	needles and cannulas	10.1	176
Diplomat Dental	Piešťany	dental units, stools and lights	9.3	154
Ferno Slovakia	Bošáca	transport medical equipment	6.8	47
Neoprot	Bratislava	orthopedic, prosthetic equipment	6.5	75
OrtoproPlus	Košice	orthopedic, prosthetic equipment	6.0	98
Seisa Europe	Bratislava	medical components and sub implants for cardiology, urology	5.0	248
Stirilab	Ružomberok	diagnostic devices and laboratory equipment	3.2	38
Podotech	Senec	orthopedic and prosthetic equipment	3.1	32
Stomadent SK	Lackovce	equipment for dental surgery	1.8	19
Chirana	Stará Turá	critical care ventilation products	1.8	N/A

Source: FinStat 2021, Data for 2020

Notable Slovak Medical Devices & Dental Instruments Producers



PROTETIKA

Producer of a wide range of medical aids and orthopedic footwear owning 26 retail shops throughout Slovakia, Protetika represents more than 90 years of orthopedic tradition.

CHIRANA

Development & production of anaesthesia units, breathing units, patient monitoring systems for intensive care, built on tradition of fine mechanics in Stará Turá. Together with Chirana Medical, a.s. it belongs to Chirana Holding, which dates back to 1935 and is an important player in the development and manufacture of respirators and anesthetic devices.



NEOPROT

Product portfolio ranges from bandages to prosthesis and orthoses for limbs, body and head. All the products are manufactured using the latest unique digital technologies.

DIPLOMAT DENTAL

Over 60 years of experience in designing and manufacturing of dental solutions. The product portfolio includes high quality dental units, stools, and lights.



ORTOPROPLUS

Manufacture of orthopedic and prosthetic products. In addition to prosthesis and orthoses, the product portfolio includes also wheelchairs and orthopedic footwear.

Production of Cosmetics in Slovakia



With an increased penetration of both local and global brands of cosmetic products, Slovak consumers have gained access to a greater assortment of goods.

The influence of ascension into the European Union has fueled consumer desire for variety in terms of price, function, composition and appeal. New brands and products that put an emphasis on innovation and quality are well accepted in the Slovak cosmetics market.

MAJOR COSMETICS PRODUCERS IN SLOVAKIA

COMPANY NAME	LOCATION	CORE PRODUCTION	SALES REVENUE (MIL. EUR)	EMPLOYEES
GSK Consumer Healthcare Levice (GlaxoSmithKline)	Levice	personal care cosmetic production	156.0	510
Saneca Pharmaceuticals	Hlohovec	pharmaceutical products, hand & foot creams, body lotions, toothpaste	61.5	768
Herba Drug	Smižany	cosmetics, detergents	5.0	72
Calendula	Nová Ľubovňa	cosmetics, nutrition supplements, essential oils	2.6	30
Leon Global	Pezinok	cosmetics, detergents	1.2	5
Vitaprodukt	Poprad	teeth whitening products	1.2	7
Dulcia Natural	Bratislava	natural cosmetics	0.9	N/A
Ponio	Zvolen	natural cosmetics	0.4	4

Source: SARIO research, Finstat 2021, Data for 2020

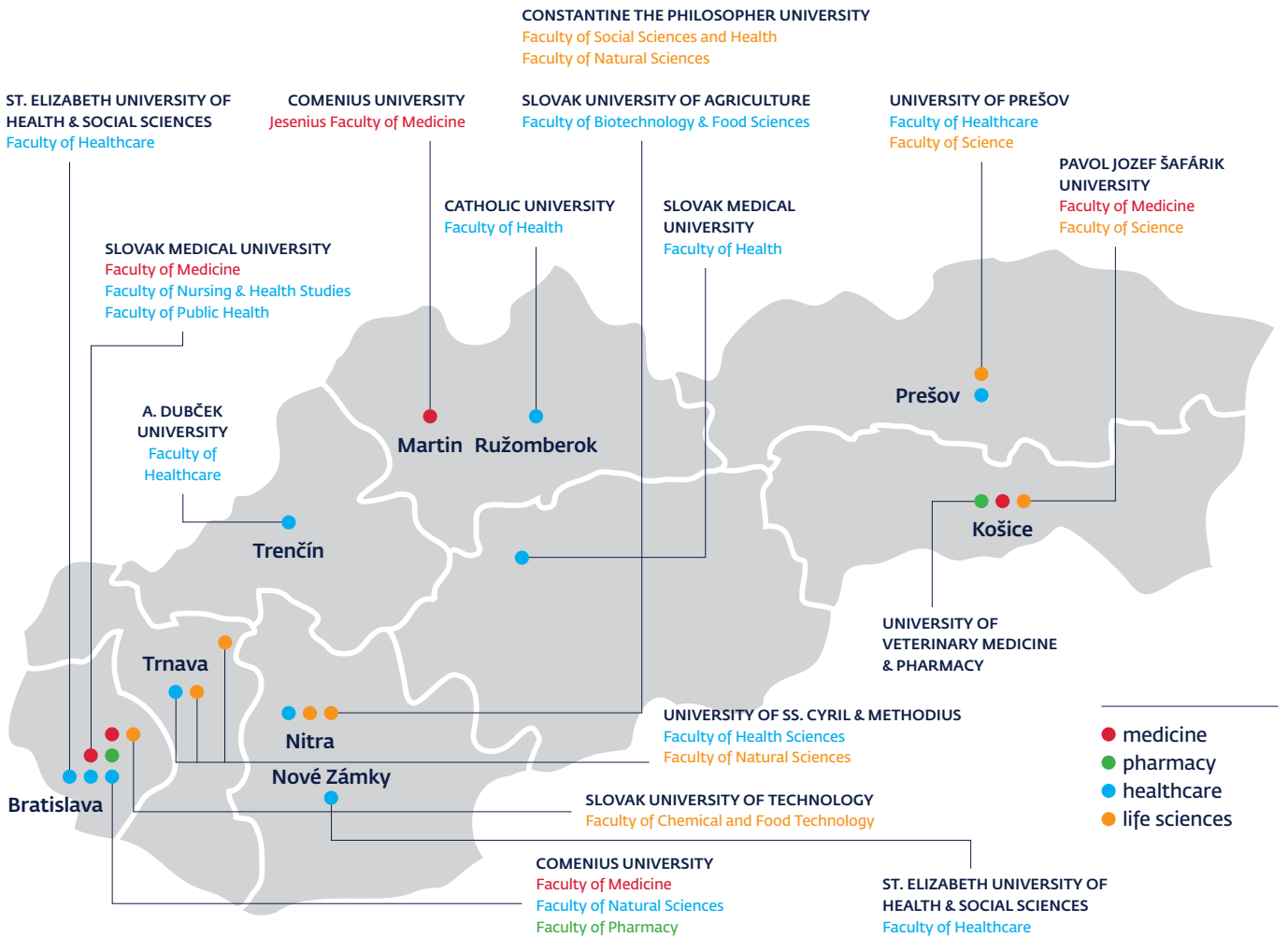
5,036
yearly graduates

25,668 enrolled
students in related
study fields



Labour Force & Education in Life Sciences

Companies active in Healthcare & Lifesciences are highly dependent on a skilled workforce. Slovak labour force with a medical and pharmaceutical background represents a combination of cost-effectiveness and high education levels and thus ensures competitiveness and high added value.



Source: Slovak Centre for Scientific and Technical Information, 2021

Average Salaries in the Pharmaceutical Industry



Salaries in the Pharmaceutical industry do not differ in a significant way from region to region. What counts more is the experience and local competition of the employees with a pharmaceutical background.

POSITION	MARKET MEDIAN (EUR/MONTH)				MIN. REQUIRED ACADEMIC DEGREE
	GROSS SALARY LEVELS		TOTAL EMPLOYER'S COSTS		
	min	max	min	max	
Pharmaceutical Technician	733	833	991	1,127	secondary school
Quality Control Analyst	733	850	991	1,149	secondary school
Pharmacist	1,167	1,333	1,577	1,803	university
Responsible Pharmacist	1,333	1,533	1,803	2,073	university
Product Manager	2,000	2,367	2,704	3,200	university

POSITION	MARKET SALARY LEADERS HIGH-END (EUR/MONTH)				MIN. REQUIRED ACADEMIC DEGREE
	GROSS SALARY LEVELS		TOTAL EMPLOYER'S COSTS		
	min	max	min	max	
Pharmaceutical Technician	833	967	1,127	1,307	secondary school
Quality Control Analyst	900	1,033	1,217	1,397	secondary school
Pharmacist	1,300	1,483	1,758	2,005	university
Responsible Pharmacist	1,600	2,033	2,163	2,749	university
Product Manager	2,467	3,033	3,335	4,101	university

Source: Balanced HR, 2021

Healthcare & Pharmaceutical Innovations



TRISOMY TEST

Team of Slovak researchers invented a non-invasive Down syndrome diagnosis for pregnant women.

MEDICAL 3D PRINTING

Biomedical Engineering promotes 3D printing in medicine. The implant was already used on a patient after serious skull damage.



MULTIPLEXDX

Biotech innovative company performing personalized molecular diagnostics. MultiplexDX's high quality solutions refer to the most precise sequencing analysis, the simplest and gel-free sequencing protocol, the simplest FISH protocol, the most stable and specific FISH probes, the most accurate cancer profiling and biomarker quantification. Furthermore, MultiplexDX developed LAMP-testing solution (COVID-19 diagnostic test) which achieves an accuracy approaching PCR test.

Innovative company developing glycan-based, accurate and non-invasive tests for cancer diagnostics. Portfolio of products and solutions consists of glycodecode deciphering done by analysis of glycan changes on specific proteins.

GLYCANOSTICS



HIGHCHEM

HighChem develops and offers software for the interpretation, management and processing of mass spectral and chromatographic data in the area of small molecules. In addition to desktop solutions, HighChem develops library and cloud systems, and builds large data collections of fragmentation knowledge, experimental spectra and organism specific biochemical data used in modern pharmaceutical applications.

MENTEGRAM

Mentegram, focused on mental health solutions, provides a cloud-based assessment and patient engagement platform that is accessed through a web dashboard and mobile apps by healthcare professionals and patients. Clinicians are able to conduct digital patient screenings, automatic scoring and reporting, track treatment plans digitally and seamlessly process information for reimbursement claims in real time.





Laboratories and Providers of Laboratory Diagnostics

Slovak laboratories are accredited according to the international standards for medical laboratories in the following fields — clinical biochemistry, hematology, immunology, medical genetics and clinical microbiology. Implementation of the latest technology and know-how, information technologies and full automation into diagnostic processes, have increased their competitiveness to the level of other global players in the same field.

TOP PROVIDERS OF LABORATORY DIAGNOSTICS

COMPANY NAME	LOCATION	SALES REVENUE (MIL. EUR)	MARKET SHARE
Medirex	Pezinok	83.4	39.1%
Unilabs Slovensko	Martin	74.6	35.0%
Synlab Slovakia	Bratislava	17.4	8.2%
Klinická biochémia	Žilina	15.7	7.4%
Cytopathos	Bratislava	7.6	3.6%
Analyticko-diagnostické laboratórium a ambulancie	Prešov	4.7	2.2%
Laboratóriá Piešťany	Piešťany	3.8	1.8%
AnalytX	Bratislava	3.7	1.7%
Ria laboratórium	Košice	2.5	1.2%

Source: FinStat 2021, data for 2020

Slovakia's R&D Potential in the Healthcare & Pharmaceutical Industry

Science parks and research centers play an important role in the national innovation system by stimulating the cooperation between the academic and business environments and enabling a swift knowledge transfer.



UNIVERSITY SCIENCE PARK FOR BIOMEDICINE

- cooperation between the Slovak Academy of Sciences and the universities
- capacity of 500 researchers



CENTER FOR BIOMEDICINE OF THE CITY OF MARTIN

- research facility of the Jessenius Faculty of Medicine
- focus on neurosciences, oncology, respirology & molecular medicine



UNIVERSITY MEDICAL SCIENCE PARK IN KOŠICE

- common project of the local universities
- integration of biomedical research throughout Eastern Slovakia



COMENIUS UNIVERSITY IN BRATISLAVA SCIENCE PARK

Focus on biomedicine, biotechnology, enviro-medical and societal challenges of the 21st century in matters of bioethics, law and socio-economic rights.



UNIVERSITY SCIENCE PARK TECHNICOM IN KOŠICE

Cooperation of the universities in Prešov and Košice focused on application of innovations and cooperation of the academic and business environments.



RESEARCH CENTER AGROBIOTECH IN NITRA

Regional competence center for agrobiolology, agroecology, biotechnologies and bioenergetics.



UNIVERSITY SCIENCE PARK CAMBO IN TRNAVA

Research park of the Slovak Technical University focused on the field of material research based on ion & plasma technologies.



RIS3 — National R&D Specialization Strategy

Biomedicine & biotechnology are one of the three priorities of the R&D strategy of the Slovak Republic.

Biomedicine and biotechnology focus on new diagnostic and therapeutic approaches for cancer, heart disease, blood vessels and brain, endocrine and metabolic disorders, infectious diseases and allergies, pharmacological and industrial biotechnologies.

Almost 2,000 researchers work in the segment and they publish more than one fourth of all Slovak publications in international scientific journals. The results are used in the field of the diagnostic, prevention and therapy of diseases in cooperation with three medical faculties.

Slovak Academy of Sciences

Slovak Academy of Sciences (SAS) is a public research institution established in 1942, which undertakes autonomous non–university scientific research in Slovakia which is primarily funded from public finances.

The research is highly systematic and concentrated which allows it to be connected to global trends in the development of human knowledge. The perspectives gained from research undertaken at the SAS are based on evidence and are qualitatively comparable to research undertaken abroad.

The SAS consists of 69 organizations. The Academy publishes 57 scientific and professional journals and 8 yearbooks. SAS organizations are actively involved in higher education. As external educational institutions, SAS organizations participate in the implementation of PhD study programs at 11 universities. In 2019 SAS organizations had a total of 483 PhD students. In addition, the employees of the SAS acted as supervisors for 112 PhD students at universities. There are 2 major research cities of the SAS — Bratislava and Košice.

In 2019 SAS organizations submitted 9 new patent proceedings in Slovakia and one internationally (PCT). Based on the patent registrations from previous years, there were granted 7 patents in Slovakia and 3 patents abroad.

SAS INSTITUTES UNDER THE SECTION LIFE SCIENCE, CHEMICAL, MEDICAL & ENVIRONMENTAL SCIENCES

MEDICAL SCIENCES

Biomedical Research Center SAS

- Cancer Research Institute
- Institute for Clinical and Translational Research
- Institute of Experimental Endocrinology
- Institute of Neurobiology
- Institute of Virology

Centre of Experimental Medicine SAS

Institute of Neuroimmunology

BIOLOGICAL AND CHEMICAL SCIENCES

Centre of Biosciences SAS

- Institute of Chemistry
- Institute of Inorganic Chemistry
- Institute of Molecular Biology
- Institute of Zoology
- Polymer Institute

AGRICULTURAL AND VETERINARY SCIENCES

- Institute of Forest Ecology
- Institute of Landscape Ecology
- Institute of Parasitology
- Plant Science and Biodiversity Center SAS

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
- additional 10% for investment projects carried out in regions included in Just Transition Plan

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 minimum increase in the production volume or turnover by at least 15%

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

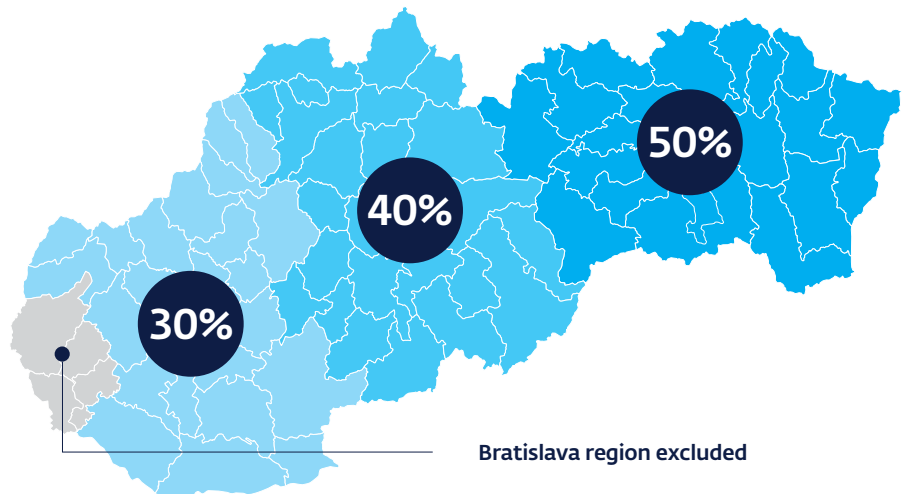
TECHNOLOGY CENTERS

- 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

*In case of Technology centers or Shared Services Centers, conditions differ for projects from 'Priority areas'. 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

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 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
- 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
- on-line 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 DIVERSIFICATION ACTIVITIES

- aimed at supporting diversification of the Slovak economy towards high-tech areas with significant growth potential
- systematic building of a knowledge base about these sectors with an aim of increasing their visibility and attractiveness for prospective investors
- focused mainly on such sectors as space, aviation, smart & green mobility, medtech, greentech, gaming, smart cities, data centers, and the hydrogen economy



CONTENT
ADVISOR

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

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