

# BIG SCIENCE SLOVENIA

Gospodarska  
zbornica  
Slovenije   
Chamber of Commerce  
and Industry of Slovenia



REPUBLIC OF SLOVENIA  
MINISTRY OF EDUCATION, SCIENCE  
AND YOUTH



## Slovenia punches above its weight in science

- Leading roles at CERN's ATLAS experiment
- Breakthroughs in quantum science and photonics
- Innovations in medicine and antimicrobial resistance
- Award-winning artificial intelligence research
- Groundbreaking genomics and life sciences
- Growing presence in global space exploration

**Small country in size, but with global impact.**

**Slovenian companies and researchers are helping shape the future of physics, medicine, artificial intelligence, quantum technologies and space exploration.**



## Slovenia's Vision for Science-Driven Competitiveness

The first joint presentation of the Slovenian high-tech industry at BSBF 2026 marks an important milestone in strengthening Slovenia's position within the international Big Science ecosystem. This showcase reflects the deep knowledge, innovation and technological excellence that characterize both Slovenian companies and our research institutions.

At the Chamber of Commerce and Industry of Slovenia (CCIS), we are deeply committed to bringing researchers and industry closer together. We firmly believe that strategic cooperation between science and business is essential for creating higher added value, accelerating innovation, and enhancing competitiveness. The most significant breakthroughs invariably emerge at the intersection of scientific excellence and industrial capability. By fostering dialogue, collaboration, and technology transfer, we help create a vibrant environment where new ideas evolve into practical solutions, successful products, and sustainable economic growth.

A key role in this effort is played by the ScienceTech Group, operating within CCIS as Slovenia's only dedicated platform that brings together industry, researchers, universities, research institutes and Big Science stakeholders. Together with the Ministry of Education, Science and Youth of the Republic of Slovenia and ILO CERN we have built an exemplary partnership that helps Slovenian organizations access valuable new opportunities in international scientific projects.

I am proud that this brochure showcases Slovenian capabilities and our ambitions to contribute to the technologies shaping our future. I cordially invite you to reach out, connect with us, and explore new opportunities for successful collaboration.



**Vesna Nahtigal**

Director General

Chamber of Commerce and Industry of Slovenia

## Finding the Right Partners for Big Science

Big Science projects rely on a vast array of distinct skills and cutting-edge technologies. Identifying the right partners is not always easy, particularly when a project demands highly specialized knowledge or solutions that cannot be found off the shelf.

Slovenian companies offer a range of expertise that may be useful to international research infrastructures and their projects. Our industrial capabilities span advanced engineering, high-end electronics, software, precision systems, and other specialized technologies. Furthermore, a significant number of these organizations drive their own research and development, giving them the ability to adapt existing technologies or engineer entirely new solutions tailored to specific requirements.

This brochure highlights a selection of Slovenian companies and their distinct capabilities. I encourage you to look beyond the company names and explore the unique competencies they offer. You may discover the exact expertise required for your current project or for a challenge you are preparing to address.

From the perspective of ScienceTech at the Chamber of Commerce and Industry of Slovenia, we see immense potential to build stronger and more lasting relationships between Slovenian industry and the international Big Science community. These partnerships work best when both sides engage early in the process, ensuring a mutual understanding of project needs and enabling the co-development of optimal solutions.

Our long-term ambition is to help Slovenian companies deeply integrate into the international scientific network and to make it easier for potential partners to discover their capabilities. This is a long-term effort, built through personal engagement, open communication, and successful cooperation.

I trust this brochure will serve as a starting point for new conversations and partnerships. If you identify a company whose expertise matches your needs, please get in touch. We will be glad to help you make the connection.



**Elvis Janežič**

ScienceTech, Chamber of Commerce and Industry of Slovenia and CEO, Instrumentation technologies d.o.o.

## Small country – Big Science

Throughout its history Slovenia has acknowledged the role research infrastructures (RI) play in developing a modern, open, well-connected and internationally recognized research and innovation system. As the global interconnection of science has increased, so too have the societal challenges that need to be addressed by delivering state-of-the-art knowledge and science-based solutions. Large international RIs and massive scale research initiatives, known also as Big Science, generate fundamental discovery, ranging from the smallest particles of our being to the depths of outer space. Such discovery is at the heart of humanity's endeavour to better understand the physical space we inhabit and the social processes that have lead progress through the ages.

Participation in European/international RIs has always been one of the key strategic priorities for Slovenia as is manifested through the objective on excellent and internationally competitive RI of the Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30). Measures to associate to European/international RIs and build national infrastructure capacities in accordance with the country's sectoral strategic priorities have been adopted and consequently Slovenia is actively involved in almost 30 international and European RIs, spanning all scientific areas from social to natural sciences, physics and astronomy, environment, digital, computing as well as health and food.

Not all fall into the category of Big Science, that is why in recent years Slovenia has been rapidly developing its approach to cooperation in and with some of the globally most renowned massive scale research initiatives. In June 2025, Slovenia became the 25th full member of the European Organization for Nuclear Research (CERN) and has through it solidified decades of cooperation of its research organisations at the forefront of particle physics. Just half a year earlier in 2025, Slovenia also became a full member of the European Space Agency (ESA). This significant milestone was understood as a reward for the country's successful and rapid establishment of a promising and dynamic space sector, which includes more than 40 companies, research organisations and four public universities. Slovenia is also among the founding members of the Facility for Antiproton and Ion Research in Europe (FAIR), where Slovenian knowledge and expertise is engaged in developing and producing beam diagnostics and control systems

for the accelerators, and the Cherenkov Telescope Array Observatory (CTAO ERIC), engaging deeply in software systems, data handling, and high-tech observatory construction. As an EU Member State, Slovenia is also a formal member of ITER, where several Slovenian researchers (primarily through the Slovenia Fusion Association) and industry experts have been contributing to its development over the years.

For Slovenia, one of the advantages of Big Science is in the role it plays in facilitating cooperation between industry and academia as well as providing opportunities for local industry to capitalise on its potentials. Accordingly, processes relating to Big Science are always done based on the quadruple-helix approach, tightly involving academic institutions (research institutes and universities), industry, communities and the government.

The advantage of Big Science is that it not only creates state-of-the-art knowledge in research and innovation, but that it presents a business opportunity for national industry and business, regardless of their scale. The success of Big Science endeavours, like any large and complex system, is defined by the effectiveness of its every part, and it is particularly these niche areas that present a business opportunity for Slovenian industry. That is why we are proud that they are presenting their knowledge, expertise and experiences for the first time at this year's Big Science Business Forum and will continue to support their further integration into some of the most complex, diverse and advanced value chains in the world.



**Dr Rok Strašek**

State Secretary, Member of the CERN Council  
Ministry of Education, Science and Youth of  
Slovenia

**Rok Hrovatin**

Strategic Business Development Adviser

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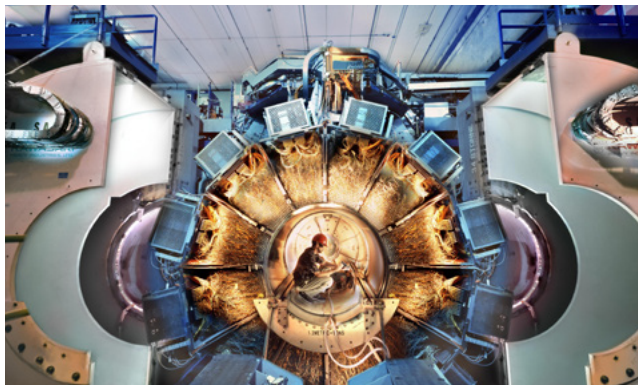
**Systems Engineering for the World's Most Complex Scientific and Medical Projects.**

25 years and 400+ projects with complex systems working for ITER, ESA, ESS.

ISO-certified quality (9001, 13485, 62304).

**About the company:**

Cosylab's leading-edge expertise, software, and electronics enable organisations to make scientific breakthroughs, deliver state-of-the-art cancer treatments, develop healthcare innovations and bring clean fusion energy to the world.





### Products / Services:

- Systems Engineering & Project Management;
- Specialised Systems and Custom Solutions;
- Hardware Specification and Integration;
- Control Systems Software and High-level application Development.

### Latest projects:

- United Kingdom Atomic Energy Authority (UKAEA);
- International Thermonuclear Experimental Reactor (ITER);
- SLAC National Accelerator Laboratory;
- Facility for Antiproton and Ion Research (FAIR);
- European Space Agency (ESA).

### Target partners:

- Big Science organisations;
- medical device and radiation therapy manufacturers;
- fusion energy organizations.

## Teja Čadež Širca

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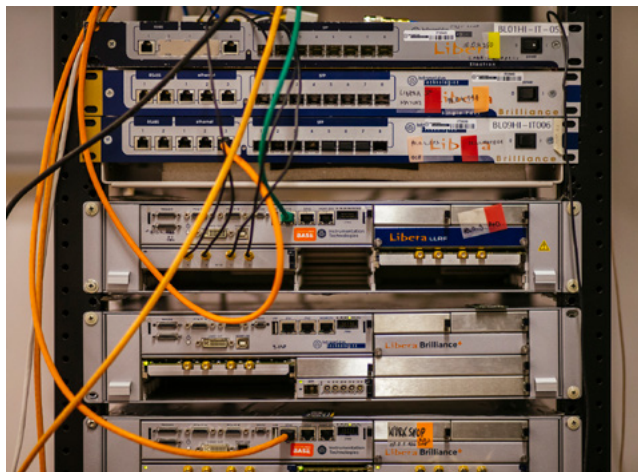


Beam diagnostics, RF control and DAQ expertise.

From research requirements to reliable systems.

## About the company:

Instrumentation Technologies is a high-tech company specializing in instruments for high-speed signal acquisition and data processing, SDR and FPGA engineering solutions, and advanced system design services.





### Products / Services:

- Beam diagnostics and RF control systems;
- High-speed DAQ, SDR and FPGA engineering;
- Signal generation, distribution and timing; Neutron diagnostics and flux monitoring systems; Precision RF control for atomic quantum platforms.

### Latest projects:

- SOLEIL II – BPM electronics for 220 beam position monitors;
- Diamond-II – beam loss monitoring electronics and detectors;
- FAIR – beam diagnostics for Slovenia's in-kind contribution;
- EuPRAXIA@SPARC\_LAB – X-band LLRF development and validation;
- CEA – industrialisation of neutron flux monitoring instrumentation.

### Target partners:

- Big Science organisations and research institutes, with a focus on particle accelerators, nuclear research, space and quantum technologies.

## Duško Odić

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Largest Slovenian research institute.

Cooperation with companies of all sizes.

Professional conduct with industry through acknowledgement of IP.

## About the Institute:

Research at the Jožef Stefan Institute covers physics, energy, bio/chemistry, materials, and information technologies. Many innovations from the Institute help companies gain a competitive edge.



Photo: RIC archive



Photo: Marjan Verč

### Products / Services:

- Short-term research for quick, targeted solutions;
- Larger, joint development of breakthrough solutions;
- Licensing of IP for direct use of our technologies;
- Joint national and international R&D projects.

### Latest projects:

- TRIGA Mark II Reactor research covering nuclear physics, fusion, and medical physics;
- Tandetron accelerator research covering particle physics, molecular imaging and characterization;
- Biocybernetics and space research investigating effects of space conditions on humans;
- Artificial Intelligence research covering data analysis and visualization, and communication between devices;
- Quantum technologies research covering quantum materials, entanglement, and magnetism.

### Target partners:

- Large, medium-sized, or small companies for contract or collaborative research as well as licensing opportunities;
- Other research organizations for joint research projects.

**MALI-E-TIKO d.o.o.**

**MALI-E-TIKO**

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Over 35 years of expertise in metal processing.  
We deliver single pieces or full production runs.  
Custom-engineered precision components.

**About the company:**

Development-focused manufacturer specializing in precision metalworking, delivering complete solutions, high quality and fast response. We already collaborate with Big Science companies.





### **Products / Services:**

- Cooperation with the customer already during development;
- Comprehensive sheet metal processing;
- CNC milling and turning ;
- Welding of all material types;
- All types of surface finishing.

### **Latest projects:**

- FAIR (Facility for Antiproton and Ion Research);
- Elettra - Sincrotrone Trieste S.C.p.A., Elettra 2.0 upgrade;
- CPM Elettronica, CPM Bronson - a portable anti-drone rifle-style radio frequency jammer.

### **Target partners:**

Big Science organisations and suppliers of systems for big science or other fields of high tech instruments, which needs a reliable partner for mechanical components of their systems.

## Medius, custom SW & AI



### Bojan Miličić

Sales Director | Data & AI solutions  
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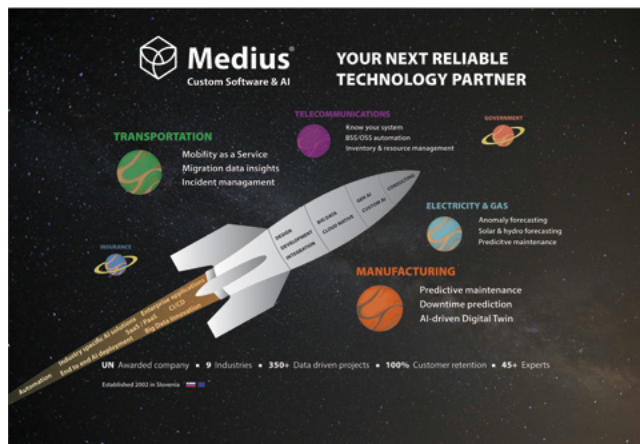
Your next technology partner!

Elite senior engineers solving complex software.

Sustainable tech paired with custom AI solutions.

### About the company:

Award-winning Medius builds custom AI & complex software. Trusted by Volvo & Novartis, we boast a 100% client return rate across 350+ projects. Deloitte Impact Star & GoDigital winner.



### **Products / Services:**

- Industry-specific SW solutions;
- End-to-end AI deployment;
- Real-time data analytics;
- Big Data Innovation;
- AI-driven Insights;
- GenAI deployment.

### **Latest projects:**

- Incident Report Management for Railways;
- AI-Powered Big Data Platform for Large Solar Power Plants;
- Hybrid technologies: Factories of the future for green transition;
- AI-driven Digital Twin (DT) solutions for Industry 4.0;
- Analysis of mobility patterns using mobile data.

### **Target partners:**

- Big Science organization;
- Industry;
- System integrators.

## Uroš Primožič

CEO

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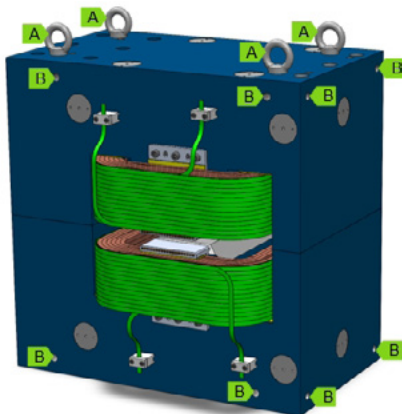
Mechanical, control system and magnetic design.

Custom engineering company.

## About the company:

Sintey offers mechanical, control system and magnetic design including assembly and precision test measurements. With experienced personnel and production capabilities the company offers a complete turnkey solutions.





### Products / Services:

- Large-scale frames, structures and motion systems;
- Design, manufacturing, assembly and qualification of magnetic devices;
- Supply of turn key solutions and devices;
- Custom made solutions for in-vacuum systems of synchrotron storage rings;

### Latest projects:

- CERN - HL-LHC magnets and Cryodipole cold masses;
- ALBA - IVU undulator;
- DESY - CanDi-Basis Dipole;
- DESY - Quadrupole R & D.

### Target partners:

- Big Science organizations;
- Science integrators for industry, health and medicine.



## Tara Brus

Co-owner and Sales Manager

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Precision parts for Big Science, built for mission-critical applications.

More than machining. We solve problems. Flexible partner for complex projects.

Advanced materials. Complex geometries.

## About the company:

ZustAl delivers high precision 3- and 5- axis CNC machining, EDM, welded and assembled components for Big Science, space, pharma, and other demanding high-tech applications.





### **Products / Services:**

- 3- and 5-axis CNC milling;
- EDM wire erosion;
- TIG, MIG/MAG and laser welding;
- UHV and advanced material parts;
- Assembly and project coordination;
- Development and engineering support.

### **Latest projects:**

- CERN - Supply of a Structural Assembly of the EUROSIG Magnet;
- European XFEL phaseshifter parts;
- CBeta aluminium supports, Cornell;
- Vacuum parts for Kyma undulators;
- Space sector components for AIRWORKS and Skylabs.

### **Target partners:**

- Big Science organisations, research institutes and high tech system integrators seeking a reliable partner for precision components, assemblies and complex manufacturing projects.

## Facts about Slovenia

**Official name:** Republic of Slovenia

**Capital city:** Ljubljana

**Surface area:** 20.273 km<sup>2</sup>

**Population:** 2,133,852 (October 2025)

**Currency:** Euro

**Language:** Slovenian, in specific regions also Hungarian and Italian

**Religion:** Catholic (60,1%), Protestant (1,3%), Orthodox (0,9%), Muslim (2,4%), Other (0,3%)

**International calling code:** +386

**Time Zone:** GMTUTC +1

**A member of the EU** since 1 May 2004

Adopted the **Euro (€)** as a national currency on 1 January 2007

**A Schengen area member state** since 21 December 2007

A member of the **OECD** since July 2010



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