



Swedish-Slovenian Exchange of Experiences in Regional Development, Innovation and Smart Specialisation

September 21, 2026

Jožef Stefan Institute (JSI)

Knowledge in motion, a future in the making



Name of the Institute



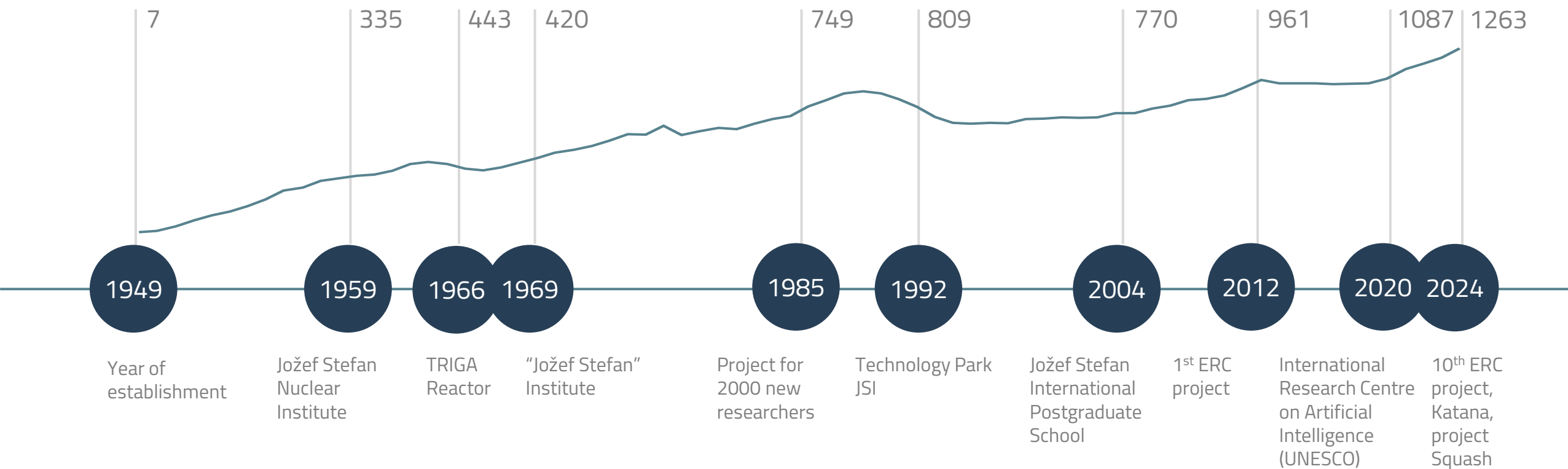
The Jožef Stefan Institute is named after Jožef Stefan, a notable physicist and the only Slovenian to have a physical law named in his honor – the Stefan–Boltzmann law of blackbody radiation.

Jožef Stefan
1835–1893



History

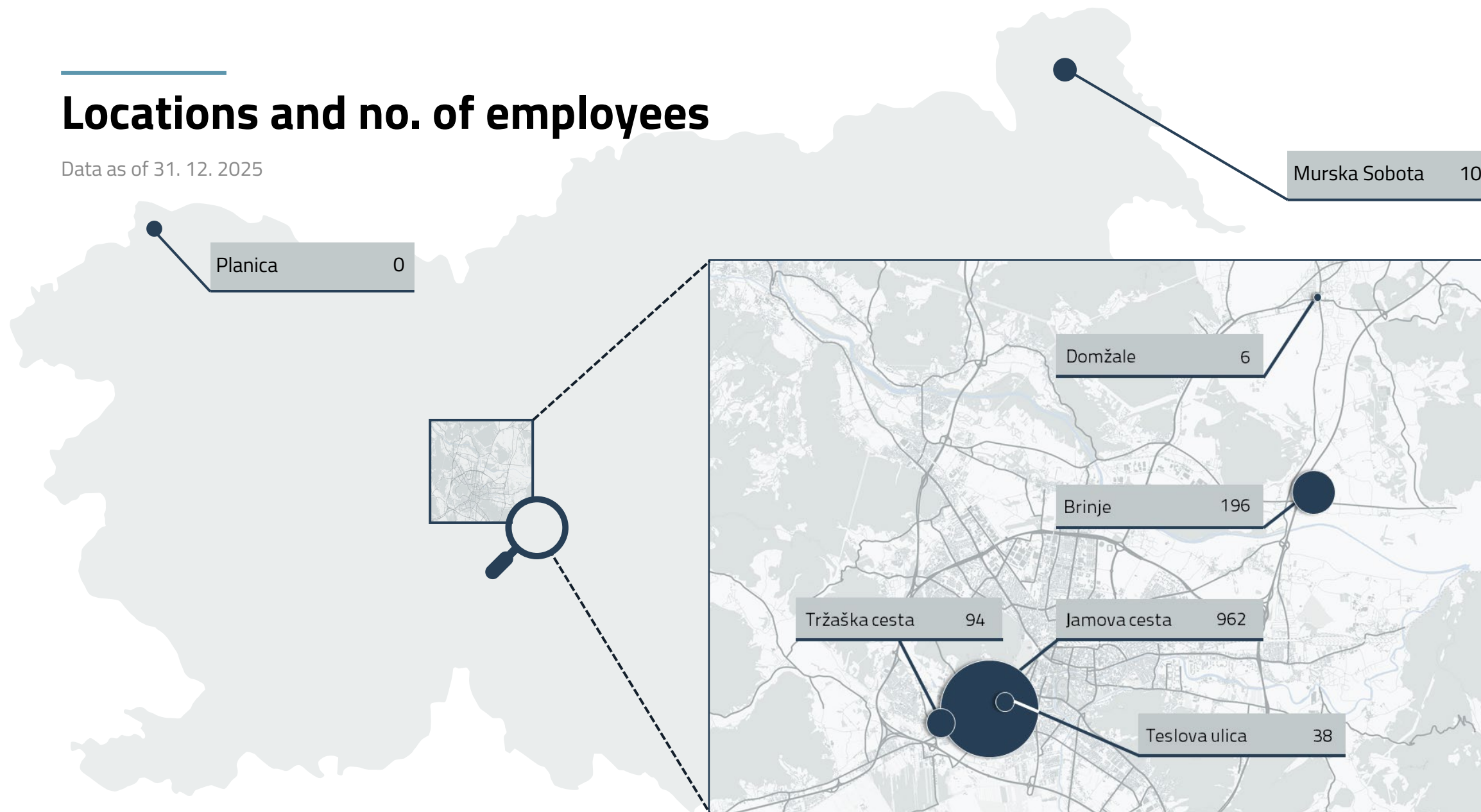
Institute milestones and growth in the number of employees





Locations and no. of employees

Data as of 31. 12. 2025

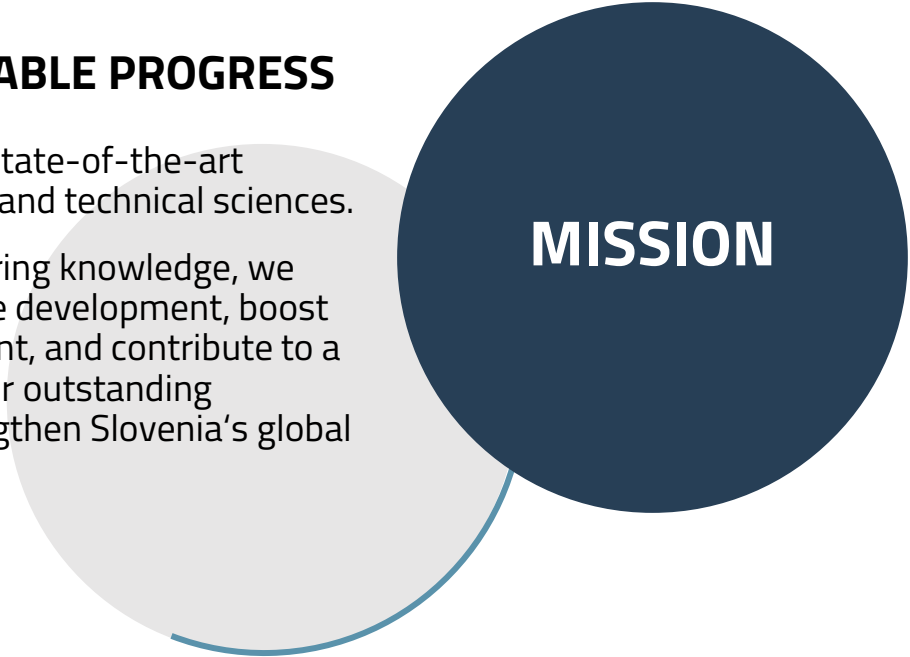




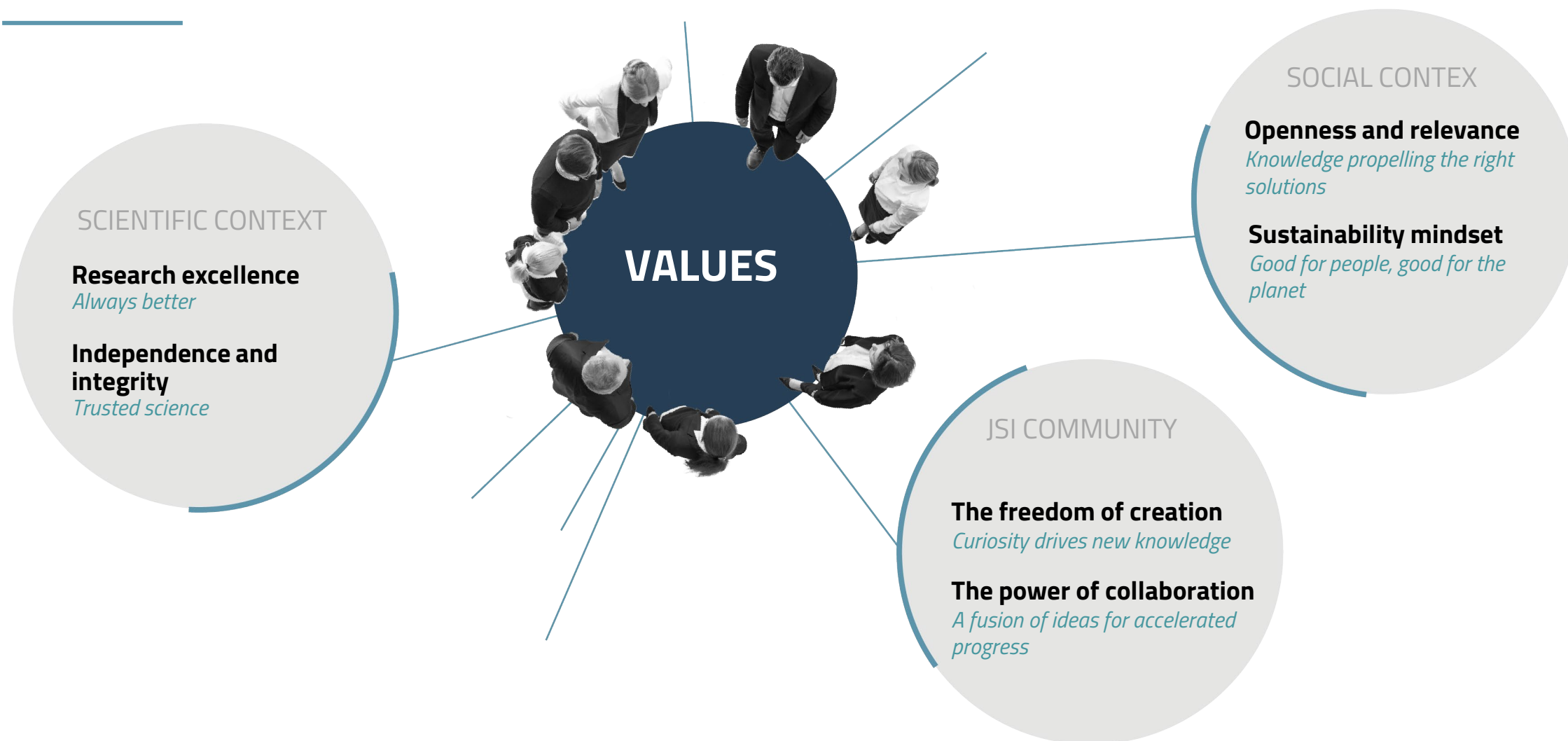
SCIENCE FOR SUSTAINABLE PROGRESS

We generate and consolidate state-of-the-art knowledge in natural sciences and technical sciences.

By disseminating and transferring knowledge, we help drive society's sustainable development, boost economic progress, foster talent, and contribute to a better overall quality of life. Our outstanding achievements in science strengthen Slovenia's global recognition.



MISSION





GUIDING VISION

CUTTING-EDGE SCIENCE AT THE INTERSECTION OF DISCOVERY AND INNOVATION

We are a global hub for interdisciplinary research and breakthrough technologies in natural sciences and technical sciences.

Guided by our curiosity, openness, using advanced research approaches, and by applying science to economic and social challenges, we co-create sustainable solutions. We contribute to a resilient future that is rich in new knowledge and talent, healthy for people, in harmony with nature, and safe for all.

VISION

SCIENTIFIC CONTEX

Global hub for cutting-edge sciences

We co-create groundbreaking solutions in the fields of clean energy, advanced materials, quantum and smart systems, and artificial intelligence, with a special emphasis on their impact on the environment, health, and food.

Our ambition is to become a global hub for interdisciplinary research and breakthrough technologies, connecting global networks and promoting the sustainable progress of society.

SOCIAL CONTEX

Open, reliable, unifying

We are a reliable partner to educational institutions, the business community, decision-makers, and the general public.

We actively contribute to sustainable development by addressing key social challenges, fostering new generations of scientists, and transferring knowledge from global networks to Slovenia. We engage the public in dialogue about the future, help shape social orientations, and strengthen scientific culture and trust in science and innovation.

JSI COMMUNITY

Attractive interdisciplinary community

We are creating a strong identity of an international, interdisciplinary, and diverse community of scientific departments, centres, and support units that act in a harmonized, agile, and transparent manner.

Our vision is to create a contemporary, creative, inclusive, and safe environment that promotes collaboration, enables cutting-edge research and development opportunities for all employees. Together we create a better JSI every day, making it a place where employees enjoy coming to work and that attracts the best young talents from Slovenia and the world.

The Institute in numbers

Data collected on 31. 12. 2025

1,306

employees

906

researchers

90,885

€m of planned revenue

Data for 2025

250

faculty members
lecturing at ->

1,234

published articles

705

projects

21,600+

visitors

49

various higher-education
institutions

46

research programmes

66,404

citations

3,182

media releases

Data for 2000–2025

877

young researchers

126

awards

924

doctoral theses

270

invention disclosures

336

patent applications

*Since the establishment
of the ERC*

14

ERC projects



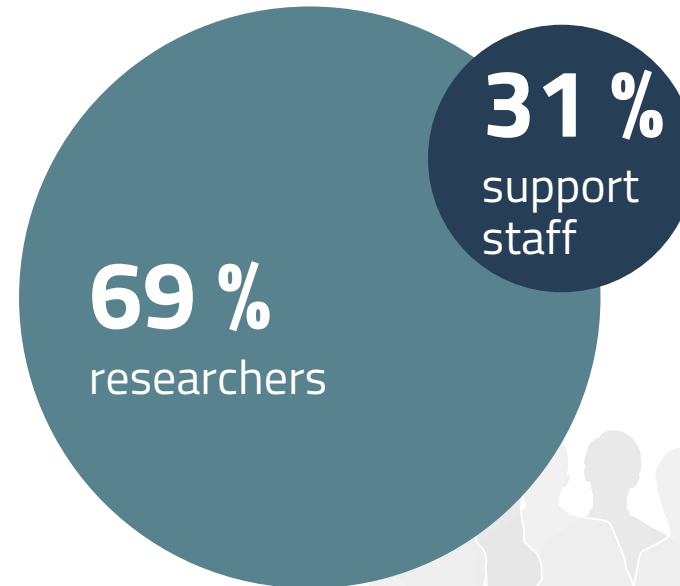
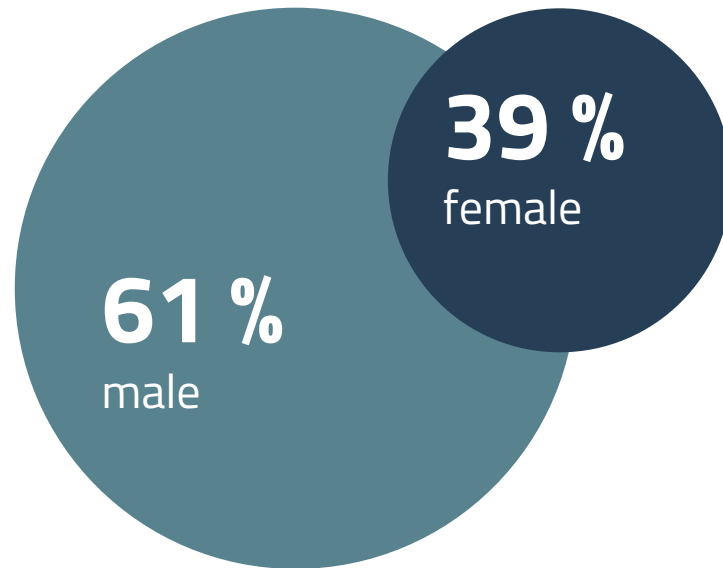
Staff

Number of employees by gender and area of activity

Total

1,306

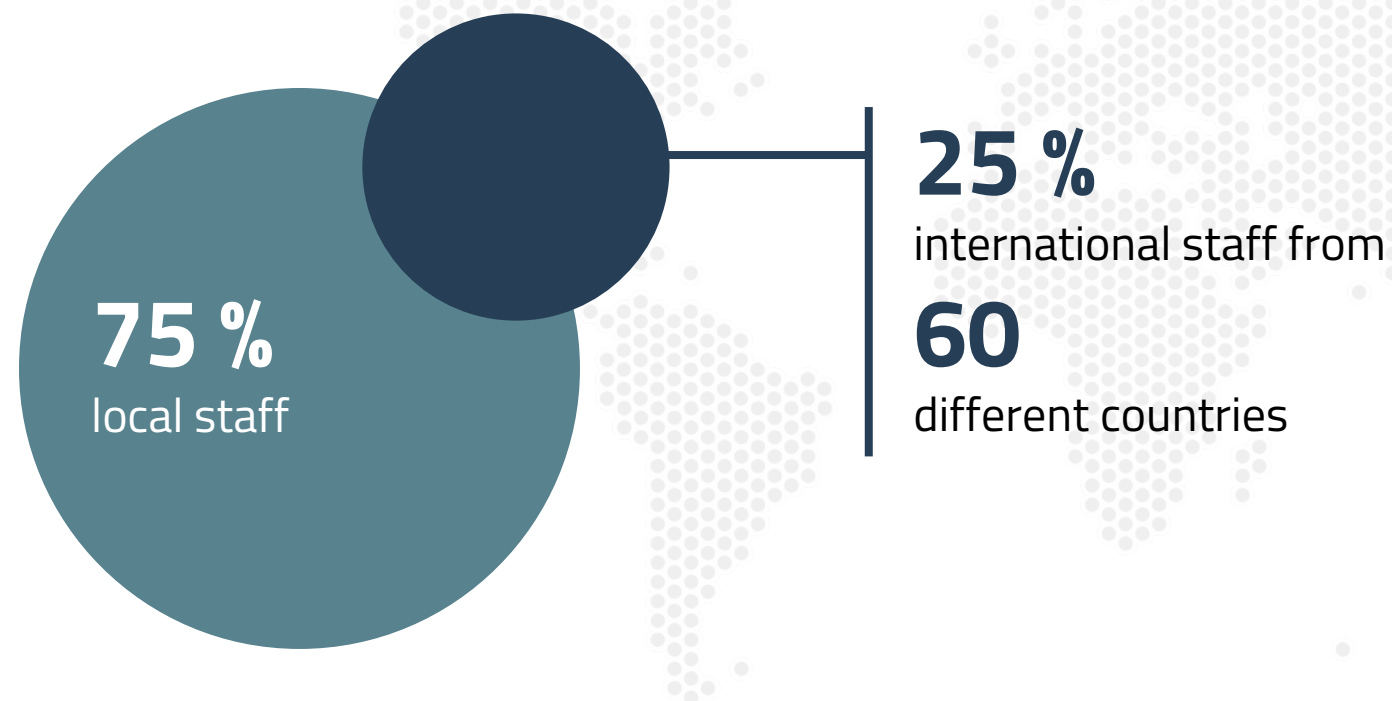
employees





Staff

Number of researchers by country of origin



Total

906

researchers



Main areas of research

JSI departments divided into areas



Electronics and Information Technologies

- Automation, biocybernetics and robotics
- Systems and control
- Artificial intelligence
- Open systems and networks
- Communication systems
- Computer systems
- Knowledge technologies
- Intelligent systems

8

departments

Physics, nuclear engineering and energy

- Theoretical physics
- Low and medium energy physics
- Thin films and surfaces
- Surface technology
- Solid State Physics
- Gas electronics
- Complex matter
- Reactor physics
- Experimental particle physics
- Reactor technology

10

departments

Chemistry, biochemistry, materials and environment

- Biochemistry, molecular and structural biology
- Molecular and Biomedical Sciences
- Biotechnology
- Inorganic chemistry and technology
- Physical and organic chemistry
- Electronic ceramics
- Nanostructured materials
- Synthesis of materials
- Advanced materials
- Environmental sciences
- Extreme Conditions Chemistry Laboratory

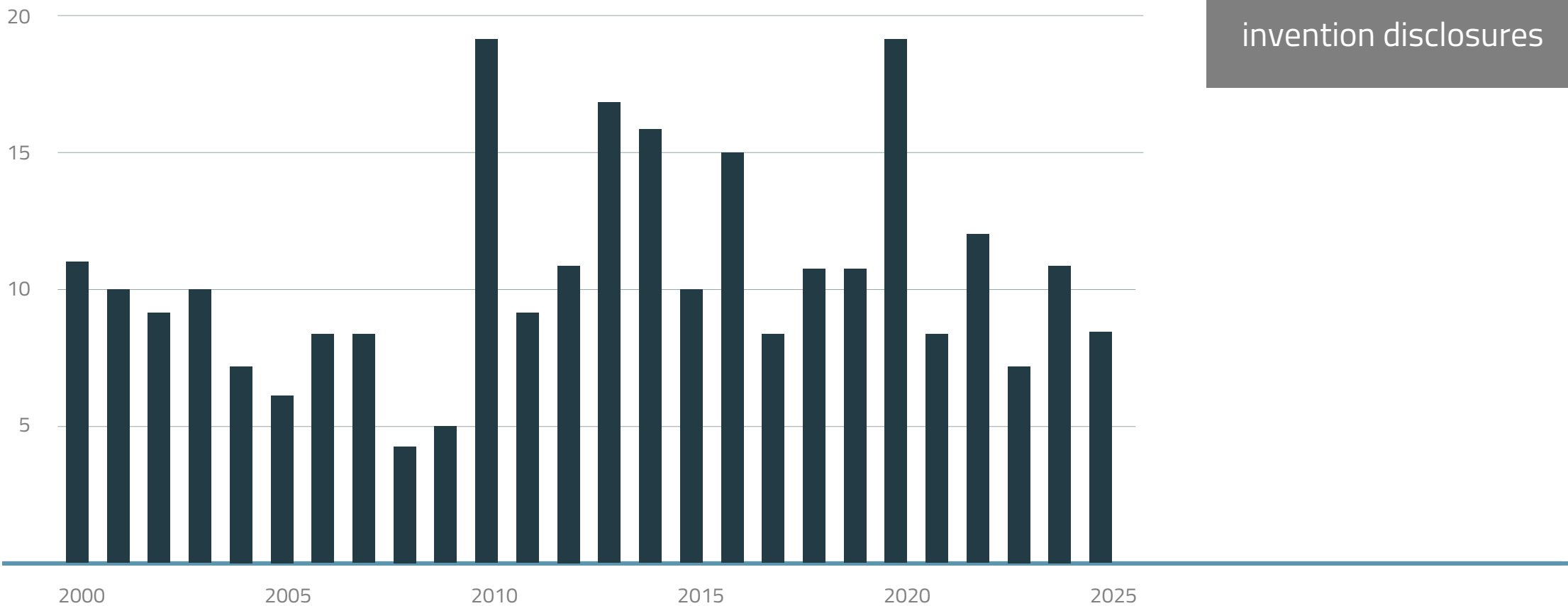
11

departments



Inventions

Number of invention disclosures

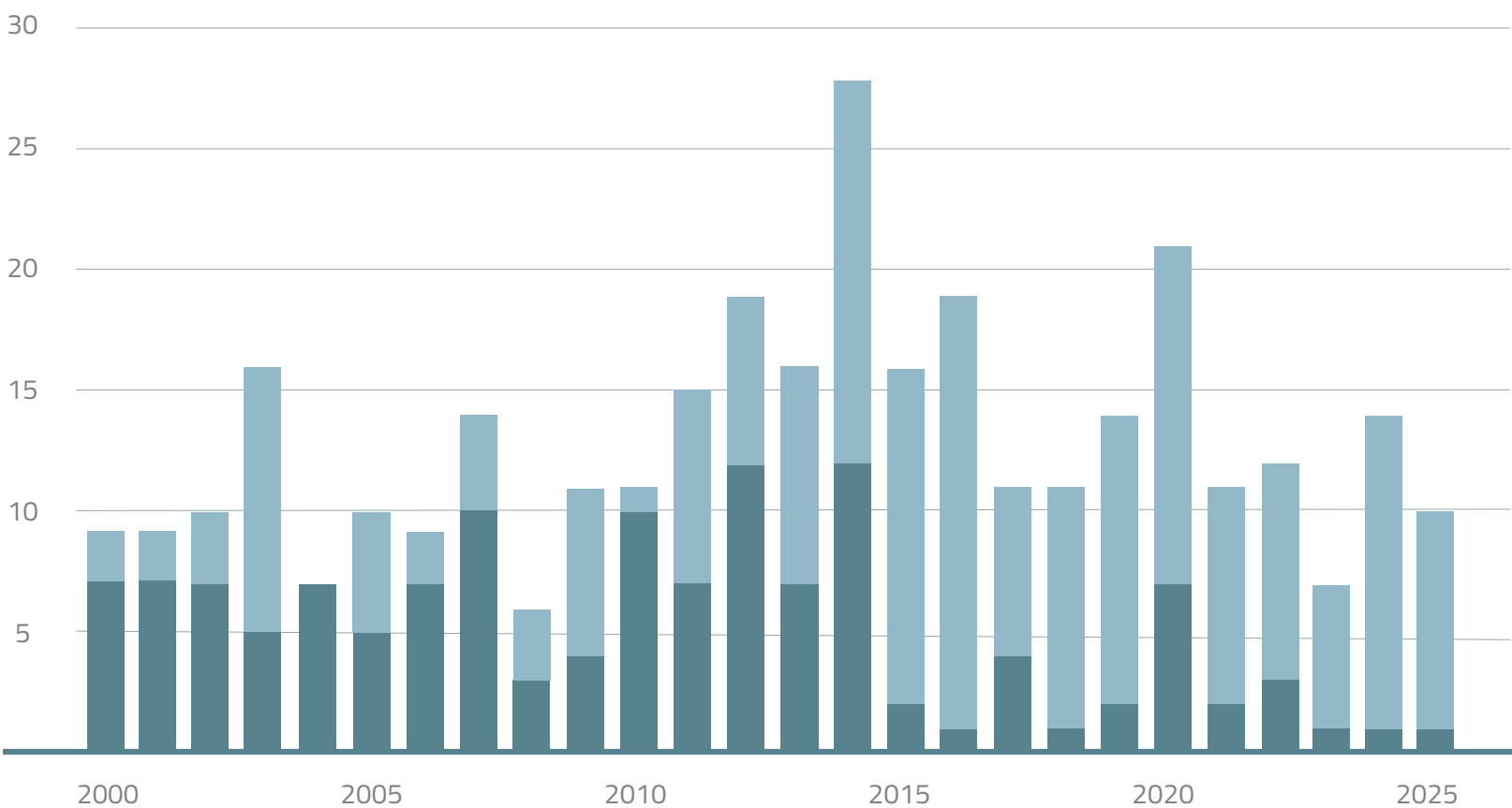


Total
270
invention disclosures



Patents

Number of patent applications



Total
336
patent applications

135

SLO

201

Abroad



JSI's selected spin-outs

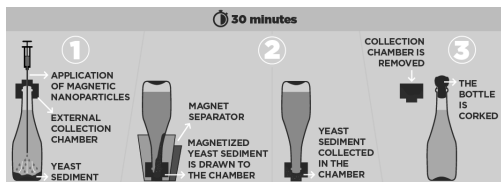
Plasmadis

Plasma reactor optimization by
Laser Optic Catalytic Sensor (LOCS)
<http://www.plasmadis.com/>



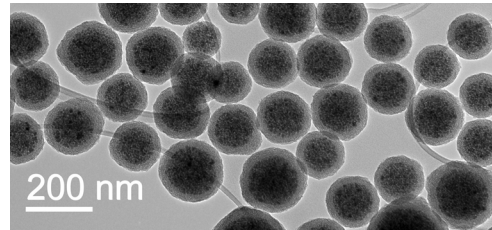
InoVine

Rapid separation of yeast sediment
from sparkling wine.
<http://www.ino-vine.com/>



Nanos Scientifcae

Nanotechnology solutions based on
magnetic nanoparticle clusters –
magnetic nanobeads –
iNANOvative™ platform.
<http://www.nanos-sci.com/>



Infinite

Toxicity testing of materials
Novel sensorial cellular devices for
personal diagnostics. Science-based
animal alternatives.
<http://infinite-biotech.com/>

Atom Quantum Labs

Designing cold neutral atoms
Quantum Computers.
<https://atomql.com/>



Particulars

Transient Current Technique (TCT)
apparatus for studies of various
semiconductor devices and
materials.
<http://particulars.si/>



FlexHex

Robotic hexapods for the
automotive industry
<http://flexhex-robot.com/>



Genuine Technologies

Synthetic bioceramic powder-like
material based on calcium tri-silicate
with high bioactivity.
<https://www.gen-tech.si/>



Comparison with the rest of the world

Jožef Stefan Institute (JSI) // Max Planck Institute (MPG) // French National Centre for Scientific Research (CNRS)



Employees

		population	Number of employees	Number of employees as % of population
JSI	Slovenia	2.13 m	1,306	0.06 %
MPG	Germany	84.08 m	26,000	0.03 %
CNRS	France	69.08 m	35,000	0.05 %

Revenue

		Annual revenue	Annual income per employee
JSI	Slovenia	95 € m	73,439 €
MPG	Germany	2,698 € m	103,769 €
CNRS	France	3,974 € m	113,543 €



Public cooperation

Number of visitors to JSI events organised for different groups and number of visitors to the Nuclear Technology Training Centre

Total of more than
21,600+
visitors

Events

Colloquia	1,200
Gallery	9,500
School visits	1,010
Days of Jožef Stefan	1,000
Open Day	2,000

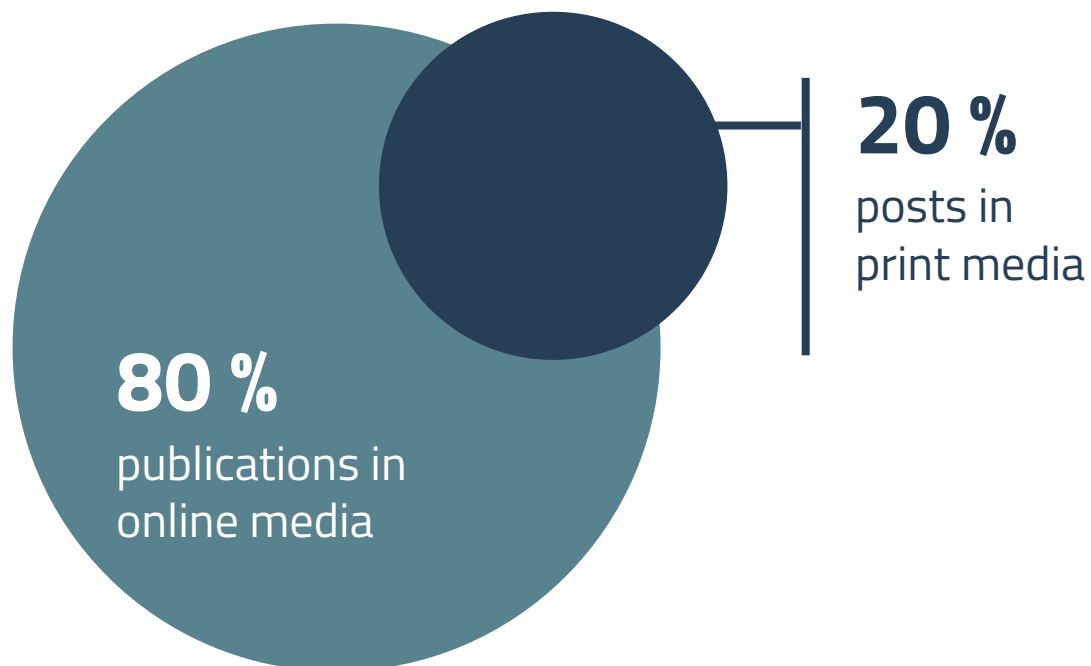
Nuclear Technology Training Centre	6,940
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Appearances in the media

Incidences of the Jožef Stefan Institute and the director appearing in print and online media



Total

3,182

media releases

Media that wrote
the most on these
topics:

1. [gorenjskiglas.si](#)
2. [rtvslo.si](#)
3. [sta.si](#)
4. [telex.si](#)
5. [Delo](#)

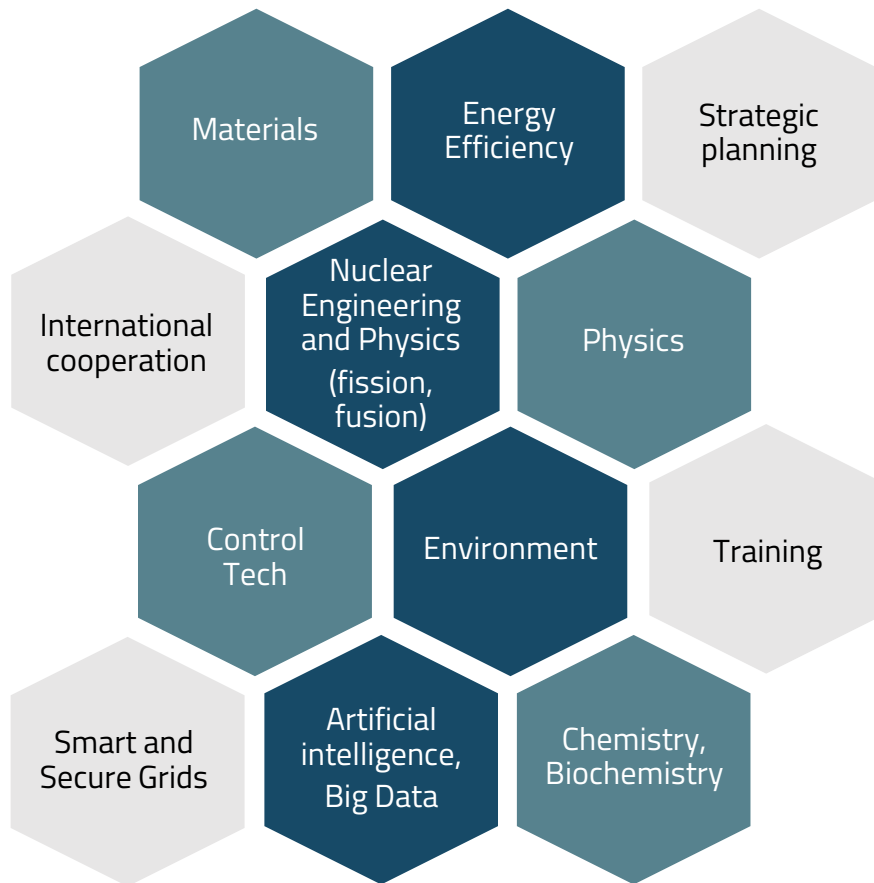
Authors who wrote
the most on these
topics:

1. [STA](#)
2. [Saša Senica](#)
3. [S. S.](#)
4. [Nina Slaček](#)
5. [A. I.](#)





Jožef Stefan Institute and energy research



Ideal for energy research:

- Developed through **bottom-up actions (curiosity)**
- Internationally renowned

Strengthening through Top-Down:

- Strategic guidance and long-term financing (.gov and .com) needed



Nuclear roles of Jožef Stefan Institute

Research on nuclear physics, technologies and safety

▪ Reactor Physics	F8	<i>fission, fusion</i>
▪ Reactor Engineering	R4	<i>fission, fusion</i>
▪ TRIGA research reactor		
▪ Low and Medium Energy Physics	F2	<i>fusion, radiation protection</i>
▪ Surface Engineering and Optoelectronics	F4	<i>fusion</i>
▪ Nanostructured Materials	K7	<i>fusion</i>
▪ Environmental Sciences	O2	<i>radio chemistry, radiation protection</i>





Nuclear roles of Jožef Stefan Institute

Technical and Scientific Support to the Regulatory Body

- Nuclear safety
- Radiation protection

Higher Education

- Nuclear Engineering (M.Sc., Ph.D.) @ University of Ljubljana



UNIVERZA V LJUBLJANI
University of Ljubljana



Support to licensing:
strong focus in the past.
With time, focus was shifting
towards research (curiosity)



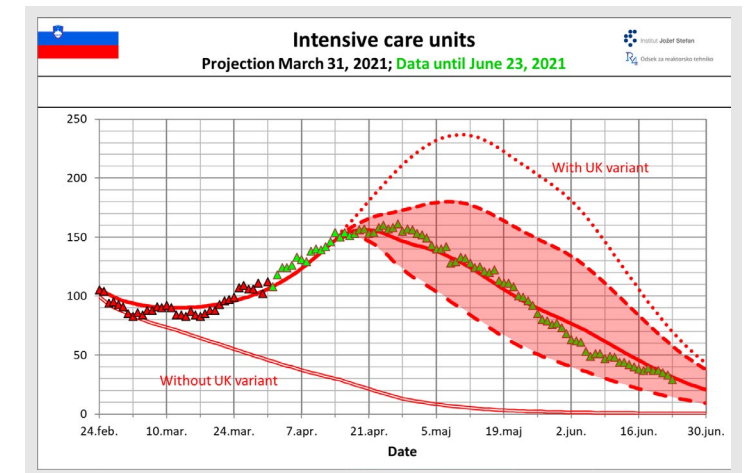
Nuclear roles of Jožef Stefan Institute

Professional Training

- Milan Čopič Nuclear Training Centre (ICJT)

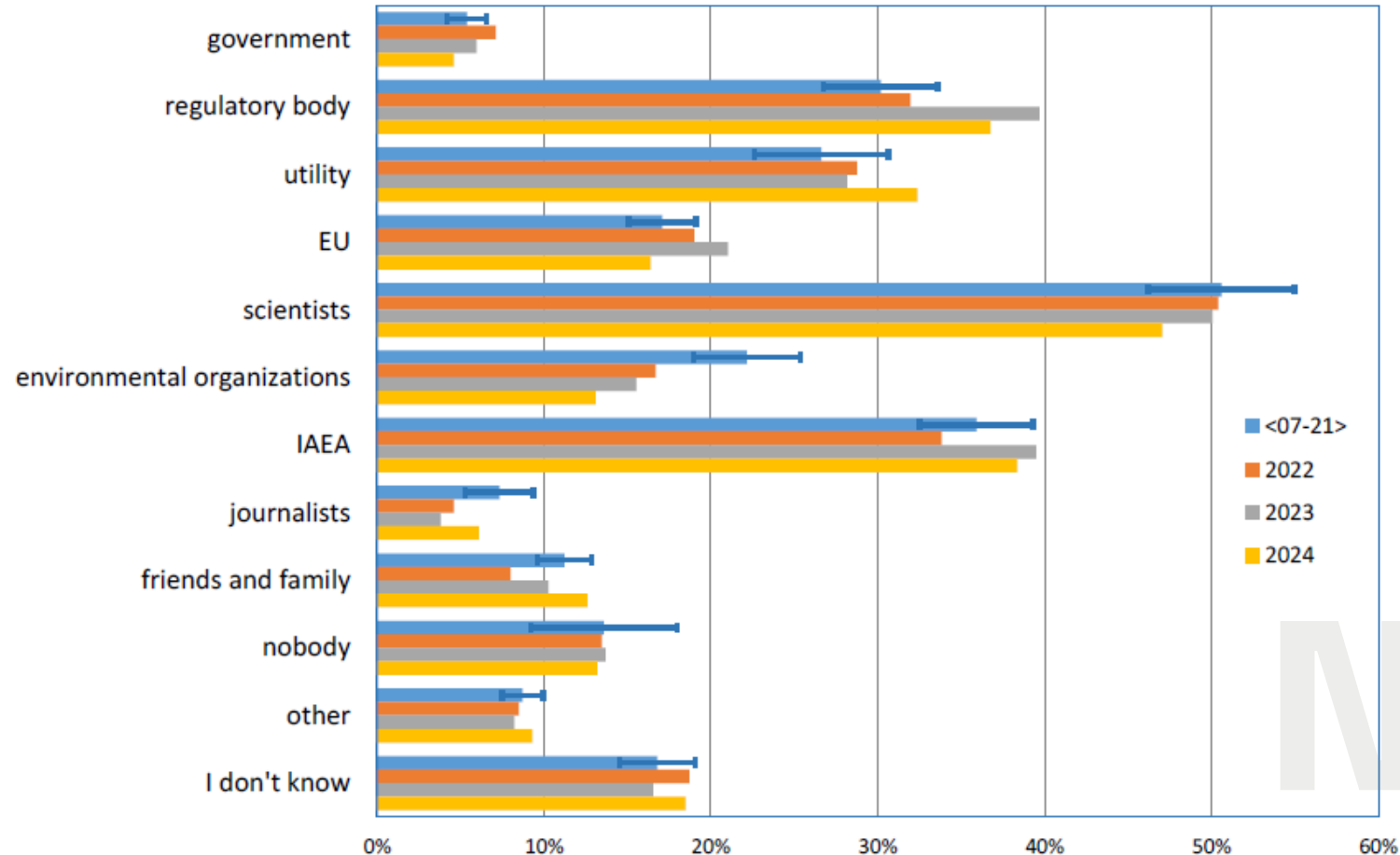
Communication of Science

- Primary and high school pupils: ICJT & TRIGA
- Mainstream media: senior and junior researchers
- COVID19





Public opinion about nuclear energy – poll 2024



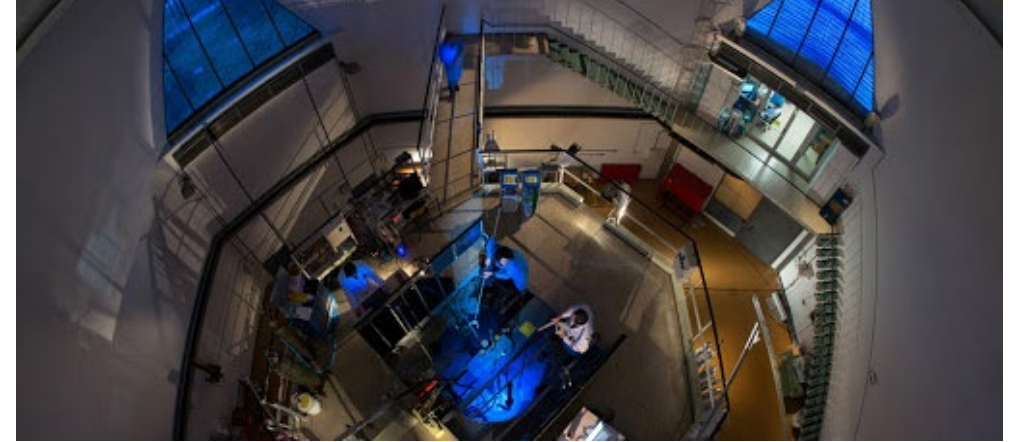
Which 3 of the following would you trust to give information about nuclear safety?



Nuclear

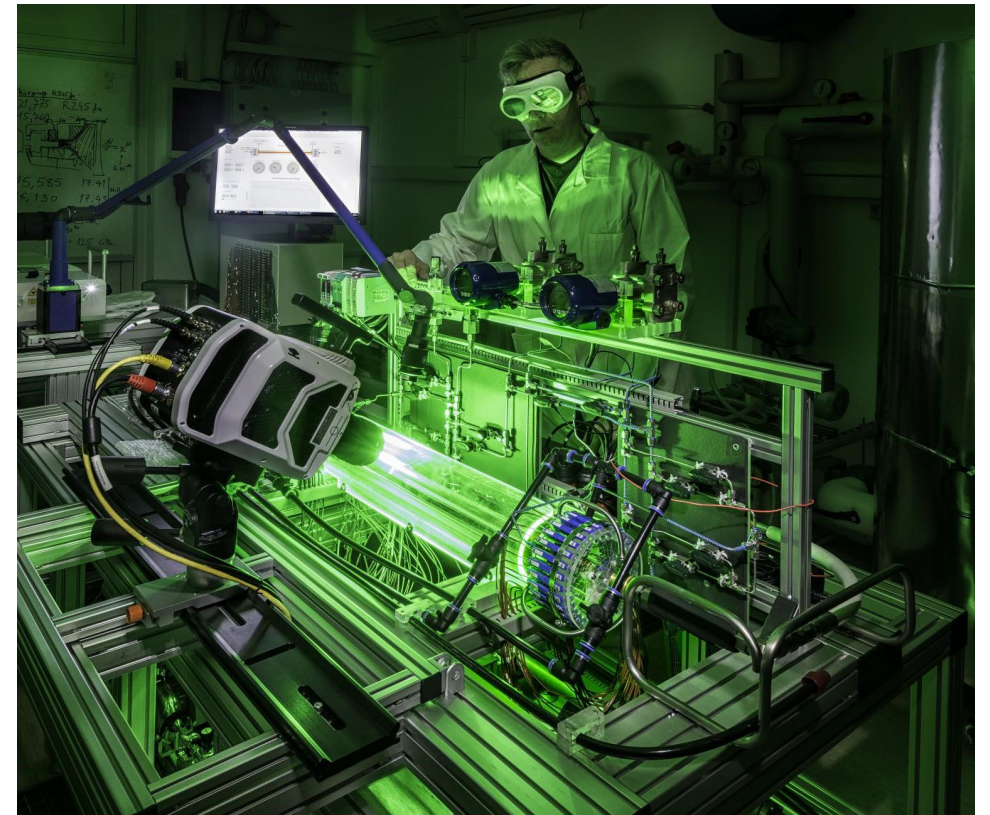
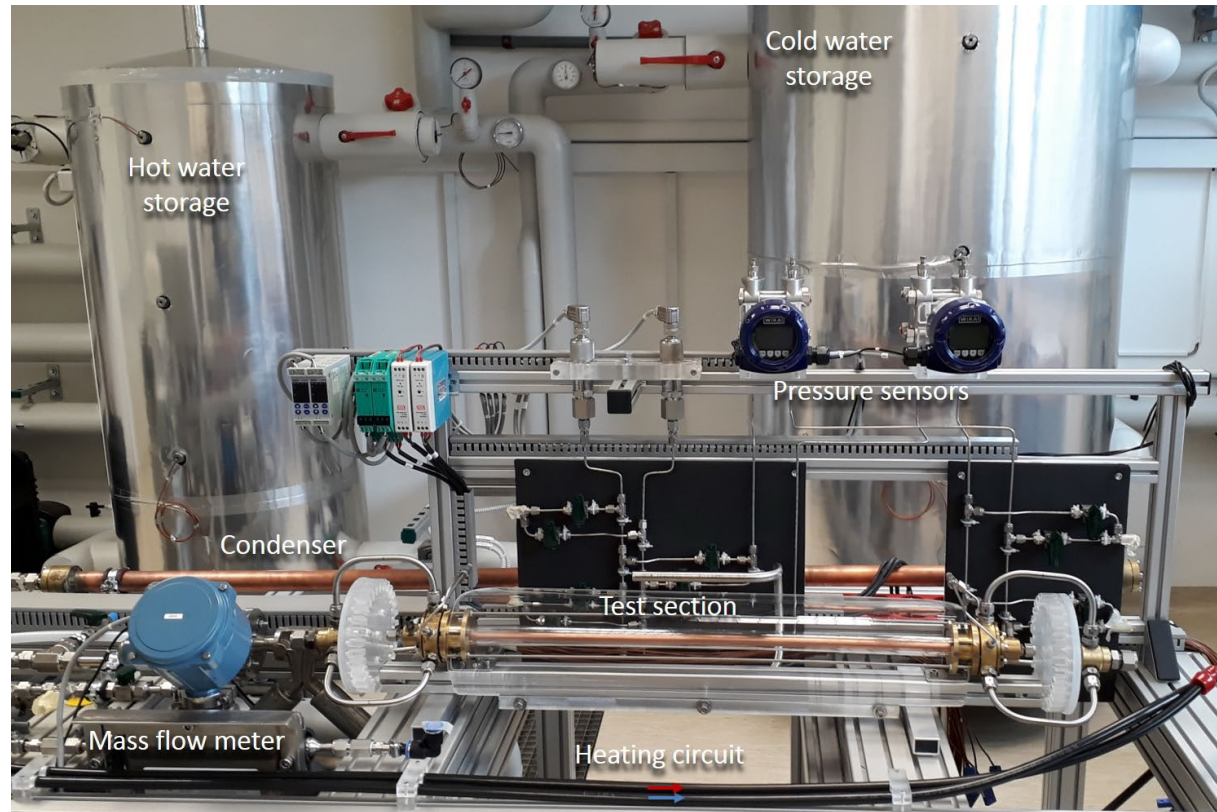


TRIGA Mark II @ Jožef Stefan Institute





THELMA Thermal-Hydraulics Experimental Laboratory for Multiphase Applications



Thank you for your attention

Prof. Dr. Leon Cizelj, Director (CEO)

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Slovenia

<https://www.ijs.si/>