

The largest Slovenian scientific research institute in this part of Europe

1000 employees, 420 ongoing international projects

Key Enabling Technologies Technology Center (KET TC)

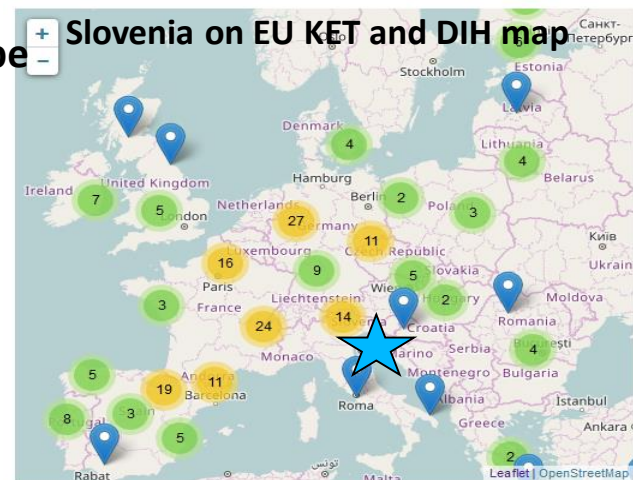
DIH / National coordinator of the Enterprise Europe Network

300 companies served with technical expertise/year

100 companies served with A2F and other innovation support

Basic and applied research in all KET areas:

Micro and nanoelectronics, nanotechnology, industrial biotechnology, advanced materials, photonics, and advanced manufacturing technologies



<https://ec.europa.eu/growth/tools-databases/kets-tools/kets-tc/map>

ELECTRONICS AND INFORMATION TECHNOLOGIES

- E1 Automation, Biocybernetics and Robotics
- E2 Systems and Control
- E3 Artificial Intelligence
- E5 Open Computer Systems and Networks
- E6 Communication Systems
- E7 Computer Systems
- E8 Knowledge Technologies
- E9 Intelligent Systems

PHYSICS AND NUCLEAR TECHNOLOGY

- F1 Theoretical Physics
- F2 Low and Medium Energy Physics
- F3 Thin Films and Surfaces
- F4 Surface Engineering and Optoelectronics
- F5 Solid State Physics
- F7 Complex Matter
- F8 Reactor Physics
- F9 Experimental Particle Physics
- R4 Nuclear Engineering

CHEMISTRY, BIOCHEMISTRY, NEW MATERIALS AND ENVIRONMENTAL SCIENCE

- K1 Inorganic Chemistry and Technology
- K3 Physical and Organic Chemistry
- K5 Electronic Ceramics
- K6 Engineering Ceramics
- K7 Nanostructured Materials
- K8 Synthesis of Materials
- K9 Advanced Materials
- B1 Biochemistry and Molecular Biology
- B2 Molecular and Biomedical Sciences
- B3 Biotechnology
- O2 Environmental Sciences

Digital innovation competences = approx. 1/3 of income

TRL 1- 8 → specific focus TRL 4+

RIS3 Centres: Smart Cities and Communities & SI_ ndustry 4.0 - Smart Factories

Our services in KET / DI Funnel (TRL 1-8)

Micro and nano electronics, smart system integration
 Sensors, actuators, MEMS, NEMS, RF
 Photonics, electronic and optical functional materials
 Broadband and other communication networks (e.g. 5G)
 Cyber physical systems (e.g. embedded systems)
 Robotics and autonomous systems
 Internet of Things (e.g. connected devices, sensors and actuators networks)
 Artificial Intelligence and cognitive systems
 Location based technologies (e.g. GPS, GIS, in-house localization)
 Interaction technologies (e.g. human-machine Interaction, motion recognition and language technologies)
 Advanced or High performance computing
 Data mining, big data, database management
 Simulation and modelling
 Gamification
 Software as a service and service architectures
 Cloud computing
 ICT management, logistics and business systems

DIH / TTO competences

- IPR valuation/ creation / protection
- Stand-up --> Start-up (awareness raising, tech and market assesments, business model, value proposition)
- International partner match, brokerage events, company visits
- A2F (access to information, oportunities identification, project proposals)

- Spin-out
- Licence
- CCR
- Scale-up

Results

Technical competences

TRL 1-3
 Public calls

TRL 3-6
 PoC, Seed

TRL 6-8
 Seed, VC, KET vaucher,

A2F with support of networks: Enterprise Europe Network / Business support / PRO TT network

Active participation and cocreation of the networks, databases, forums, steering and advisory groups, working groups, sector groups, matchmaking events, spin-out pitch competitions and number of other events

Jožef Stefan Institute, KET spin-outs and SME support by 3 networks

EEN network of SMEs + 2 x S3I DI centres
(international matchmaking, A2F, SME growth, DI hubs)



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



FlexHex,
alternative to dedicated jigs and fixtures in production

<http://flexhex-robot.com/>

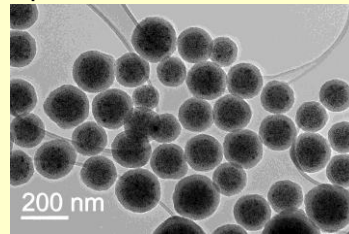
Business support networks
(A2F, mentoring, sector specific)

RGA,
Research Genetics and Agrochemistry
<http://rga.si/>



Nanos Scientifcae,
nanotechnology solutions based on magnetic nanoparticle clusters – magnetic nanobeads – iNANOvative™ platform.

<http://www.nanos-sci.com/>

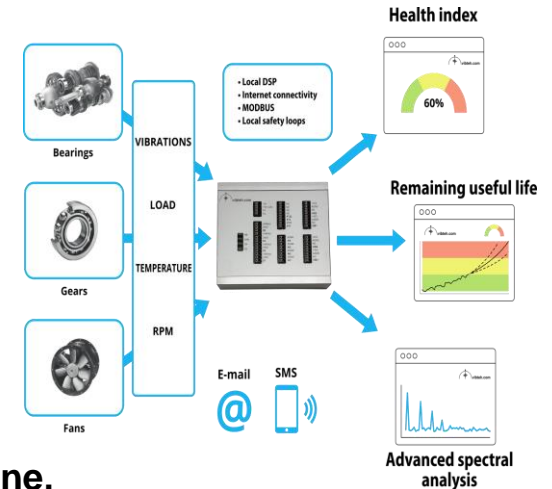


Particulars,
Advanced Measurement Systems. Transient Current Technique (TCT) apparatus for studies of various semiconductor devices and materials.
<http://www.particulars.si/>



Network of all Slovenian PROs (KET TT support, funding, IPR, A2F, licencing, outreach)

Vibteh,
on-line condition monitoring system, that accurately predict remaining life of your system <http://vibteh.com/>



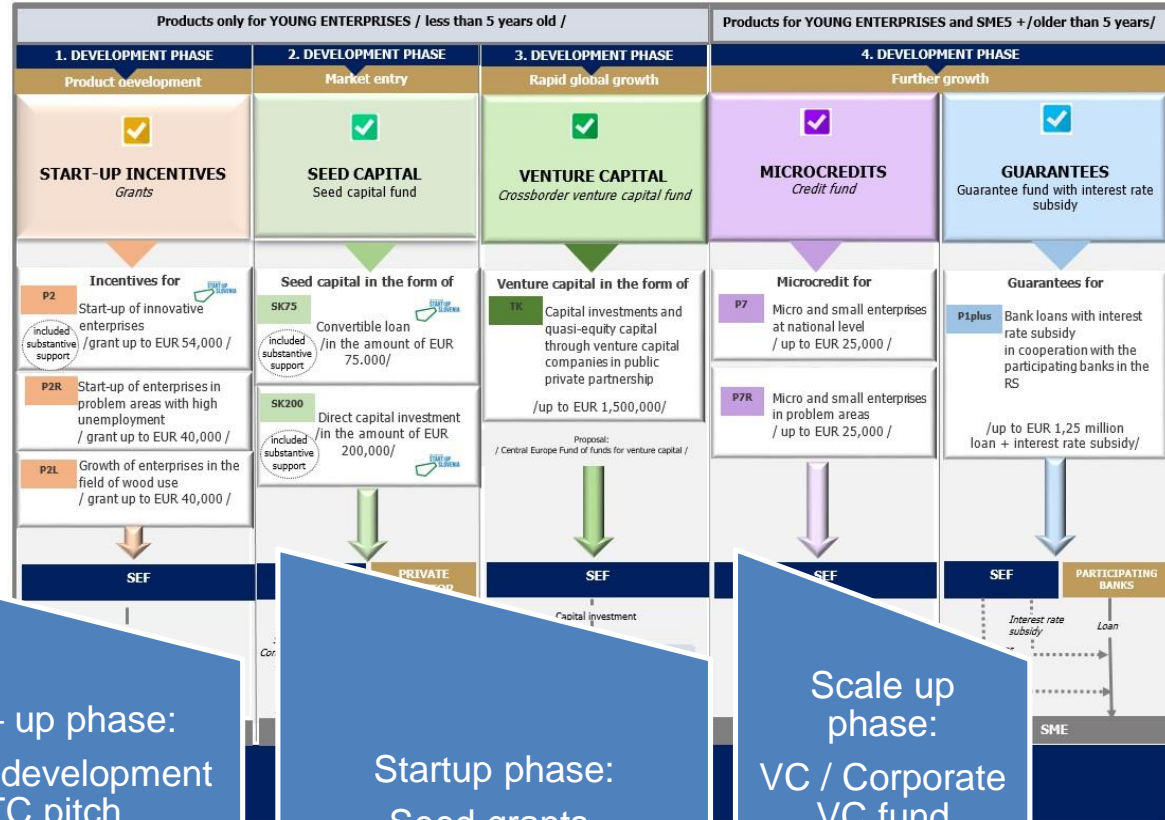
InoVine,
Use of magnetic nanoparticles for sparkling wine production
<http://www.ino-vine.com/>



KET Spin-out access to finance & network support Slovene enterprise fund

Plasmadis,

Plasma reactor optimization by Laser
Optic Catalytic Sensor (LOCS)



Research & development phase /
KET: plasma technologies / PhD studies

Stand – up phase:
Business development / ITTC pitch competitions / entrepreneurs mentoring

Startup phase:
Seed grants, Industrial partners

Scale up phase:
VC / Corporate VC fund (smart money, partners)

Network support: Slovenian network of TTOs (KTT project), EEN, SBRA, S3I centres: Smart cities & Factories of the future (50+ member enterprise companies) VC funds (ITTC: licencing & spin-out international conference & pitch competitions).

Thank you!

Jožef Stefan Institute

www.ijs.si

CTT - Center for Technology Transfer and Innovation

tehnologije.ijs.si

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