

CERIC

Central European
Research Infrastructure
Consortium

CERIC-ERIC

Large research infrastructures' technology, knowledge and service transfer to industry, key aspects

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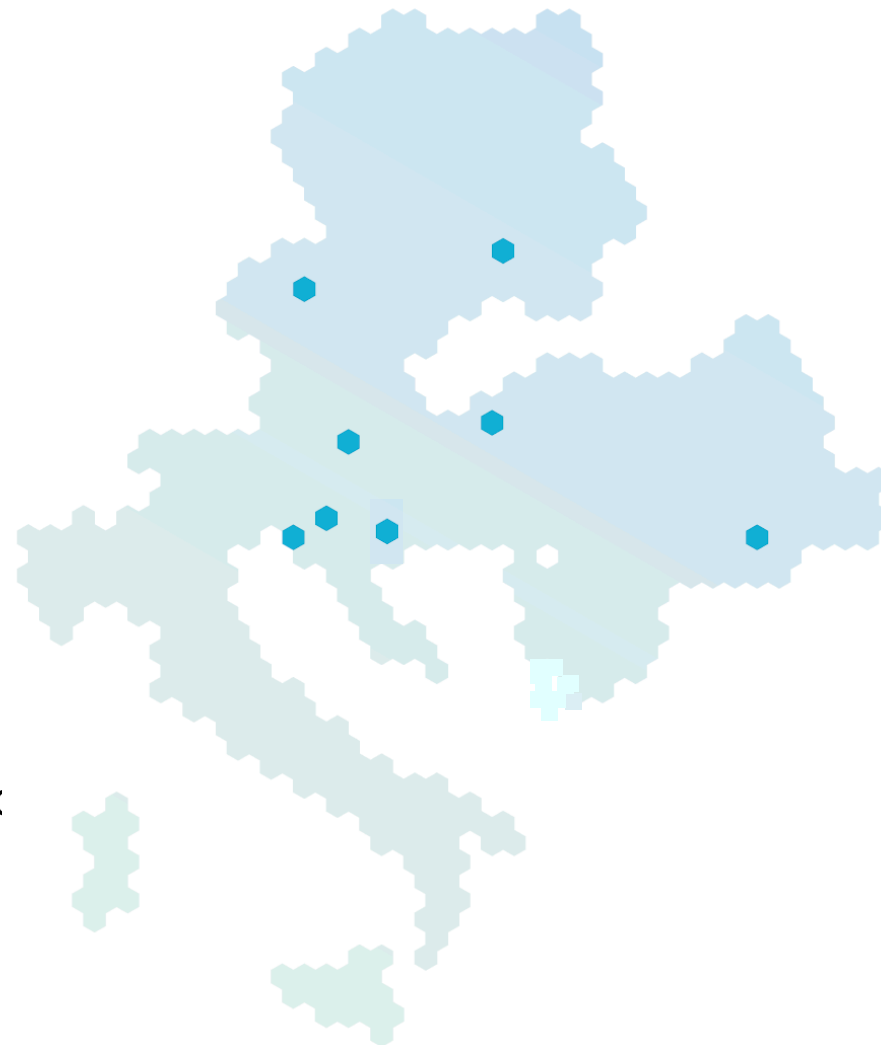
A distributed Research Infrastructure, with a single entry point to nearly 50 complementary instruments and techniques for multidisciplinary research in all fields of **advanced materials, biomaterials and nanotechnology**



Austria, Czech R, Croatia, Hungary, Italy, Poland, Romania, Slovenia and soon **Serbia** have included their best available laboratory, allowing them to be open for international open access

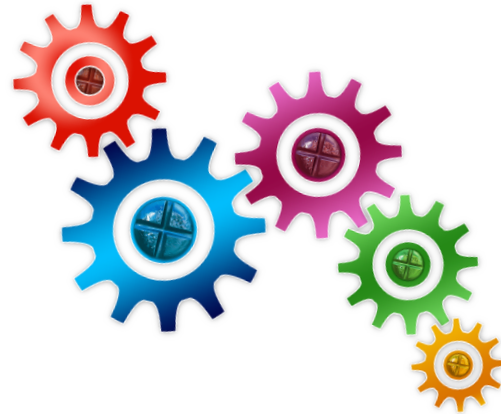


CERIC operation is supported by each Country investing in its laboratory and in joint excellence



STRUCTURE:
Participating Country
(member)
Representing Entity
Partner Facilities

Structural investigation, analysis, synthesis and imaging of materials and biomaterials down to nano-scale, **using photon, electron, neutron and ion based techniques, and preparation facilities in structural biology, photolithography and materials preparation.**



- ✓ Neutron research beamlines in Budapest
- ✓ Synchrotron radiation beamlines in Trieste
- ✓ Laboratory scattering facility in Graz
- ✓ Tandem accelerator facility in Zagreb
- ✓ Surface science laboratory in Prague
- ✓ Electron spin resonance and electron microscopy in Bucharest
- ✓ Nuclear magnetic resonance facility in Ljubljana
- ✓ Support Laboratories In Trieste :
 - ✓ NanoInnovation Laboratory
 - ✓ Structural Biology Laboratory

- **Single entry point** for multi-technique approach: **unique at world level**;
- Possibility to ask for **several instruments** in a single proposal;
- **Non proprietary research**;
- **Free and open access** based on **external peer evaluation**;
- Access to **support laboratories**;
- **Mobility support** for 2 users per measurement;
- **Support** in proposals preparation;
- **Awards** to the best publications;
- **Dissemination** of research impact to the community.
- About **150 Users/year** from **over 40 Countries**

Open Access (2 calls per year)



2-step access procedure





Large research infrastructures: what industry expects

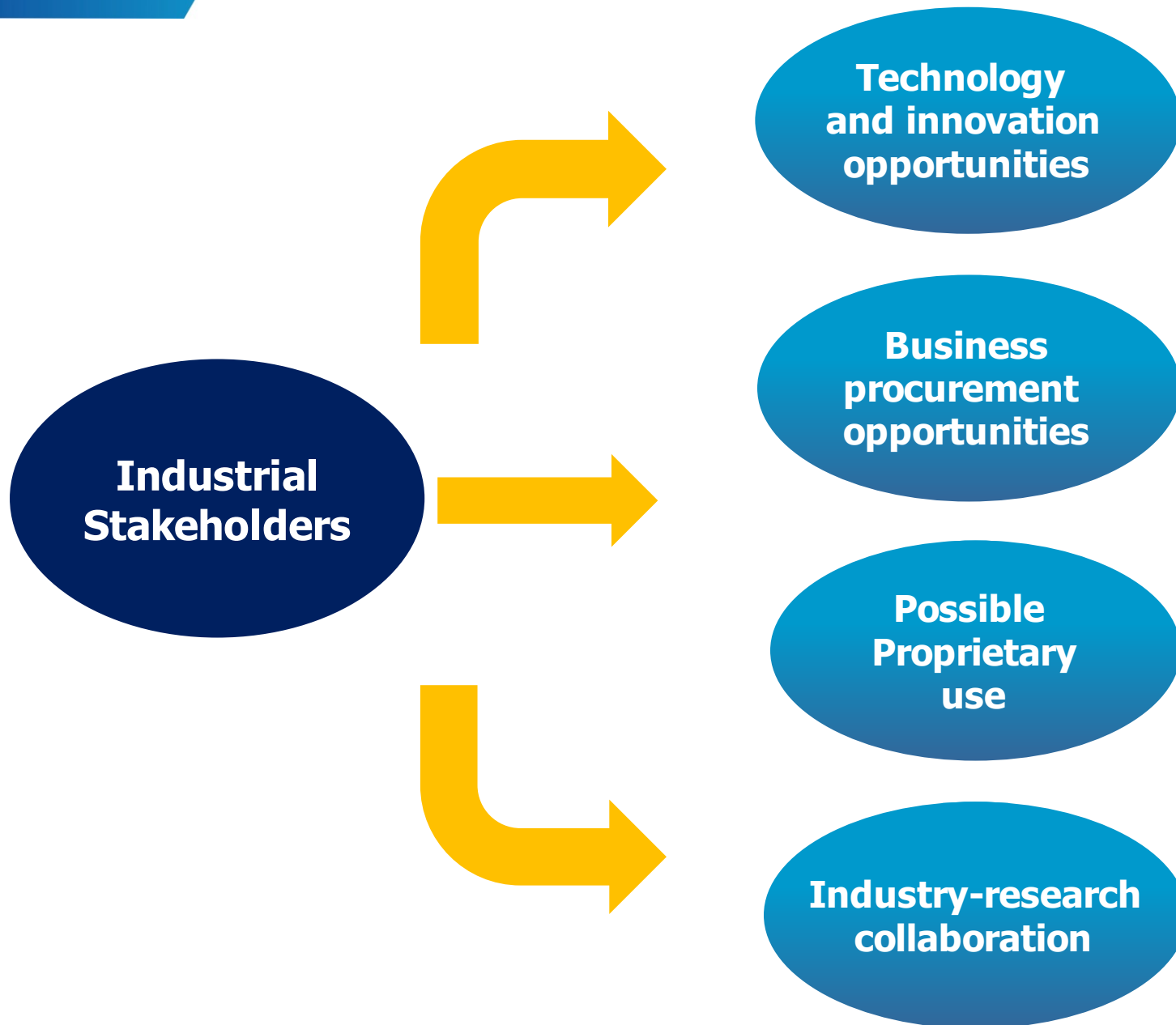
RI-Industry innovation

Main factors with a high potential to support R&D and innovation according to industry:

- **Increasing collaboration and outsourcing opportunities with the public sectors: 62,2%**
- **Improving access to public research centers, laboratories and infrastructures: 52,4%**

Business–research infrastructures collaborations are nowadays viewed as key factors in bringing R&D results to companies

RIIs- Impacts on industry



RIs-Industry key aspects

ECOSYSTEM

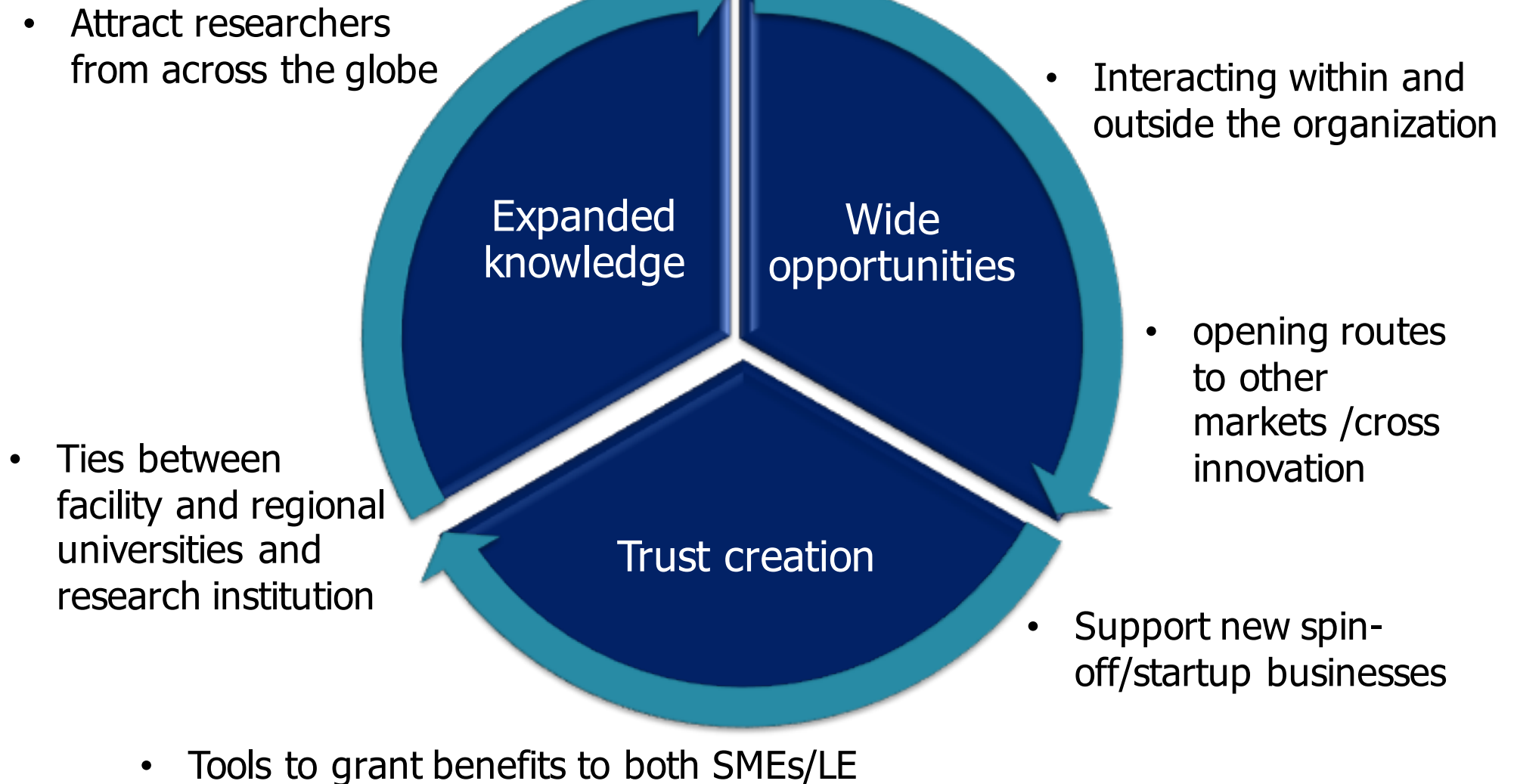
***FOCUSING ON THE BENEFITS TO
INDUSTRY AND THE CHANGES IN
INDUSTRY THINKING AND
BEHAVIOUR AS A RESULT, NOT ON
REVENUES***



**ANALYZING AND SUPPORT AN ENTIRE ECOSYSTEM THAT
CONTRIBUTES TO INDUSTRY DEVELOPMENT AND CREATION OF
NEW BUSINESSES THOROUGH TECHNOLOGY AND KNOWLEDGE
TRANSFER, AND SERVICES**

RIs-Industry key aspects

ECOSYSTEM: 3 Pillars

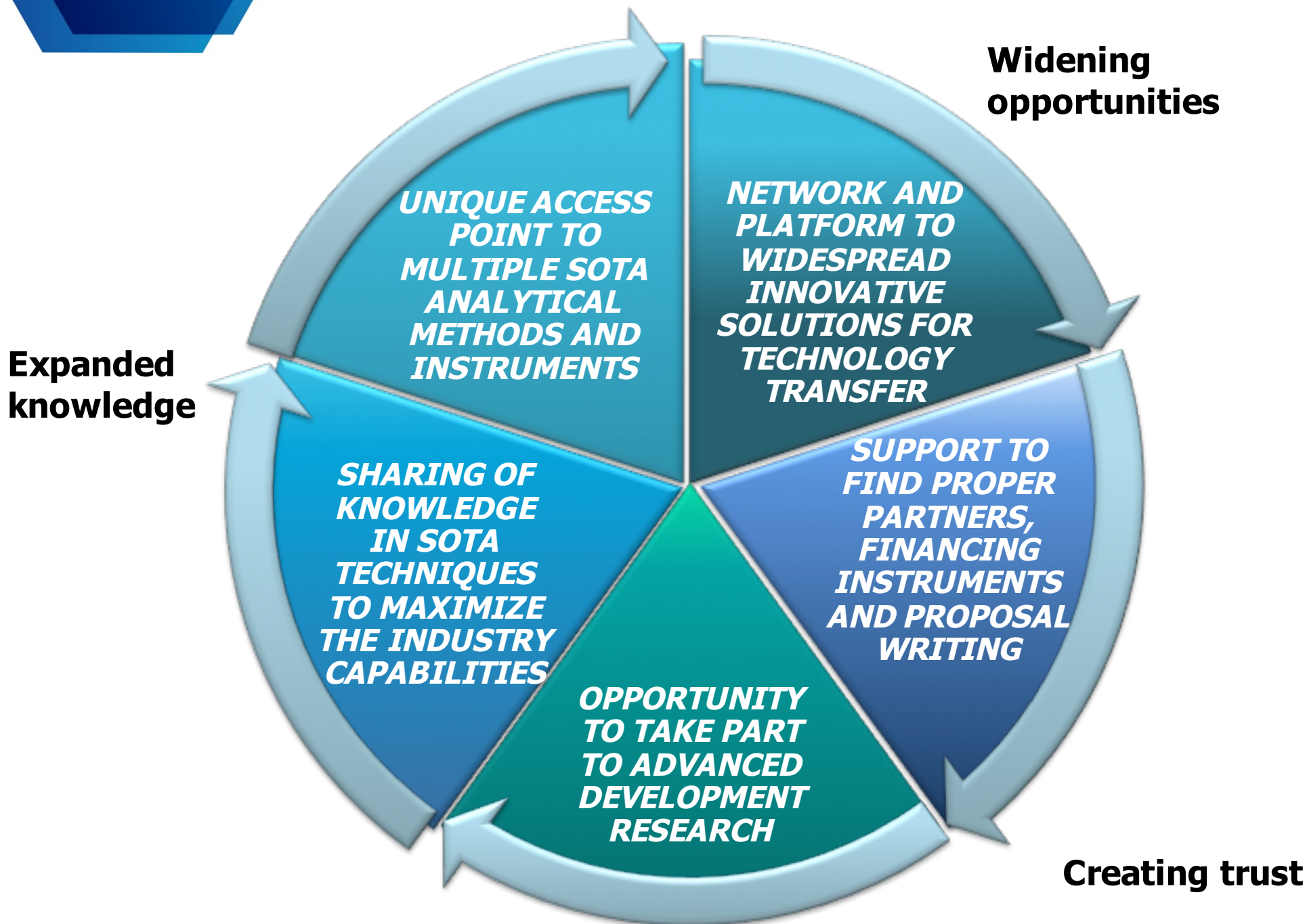




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Model with industry

Commercial Access: Holistic view



CERIC collaborates with industry, contributing to science-driven innovation.

Services for commercial users are offered on market-based conditions and include:

- **Research and Development (R&D)**, through:
 - **Access to instrumentation**
 - **Contract research**
 - **Joint application for projects**
- **Training**
- **Spin-off and start-up support**
- **Innovations' marketplace**



Fields of application:
chemical,
medicine and

diagnostics, optics, electronics
and informatics, micro- and
nano-technologies and high-tech
materials, environment,
energy, food and cultural
heritage



Commercial Access

Sectors and Solutions

Automotive and Aerospace | Metal/Metallurgy | Optoelectronics | Environmental | Cultural Heritage | Textile | Paint and Coatings Energy | Chemical | Pharmaceutical, Medical and Biotech | Food |

Metal/Metallurgy

The continuing drive for and nano-manufacturin intelligent multi-functior for metal industry. CERI grades of metals and all Main beamlines, instrum TOF, PGAA, NAA, PEEM

Examples of potential solutions:

MICROSTRUCTURES CHARACTERISATION AND BEHAVIOUR OF METALS



COMPOSITION AND STRUCTURES/MICROSTRUCTURES OF ALLOYS



DEFECTS AND DAMAGES



CERIC-Industry key aspects

Wider knowledge and Trust giving the chance to industry to access with different kind of services and conditions according to their needs and to the type of company (LE, SME)

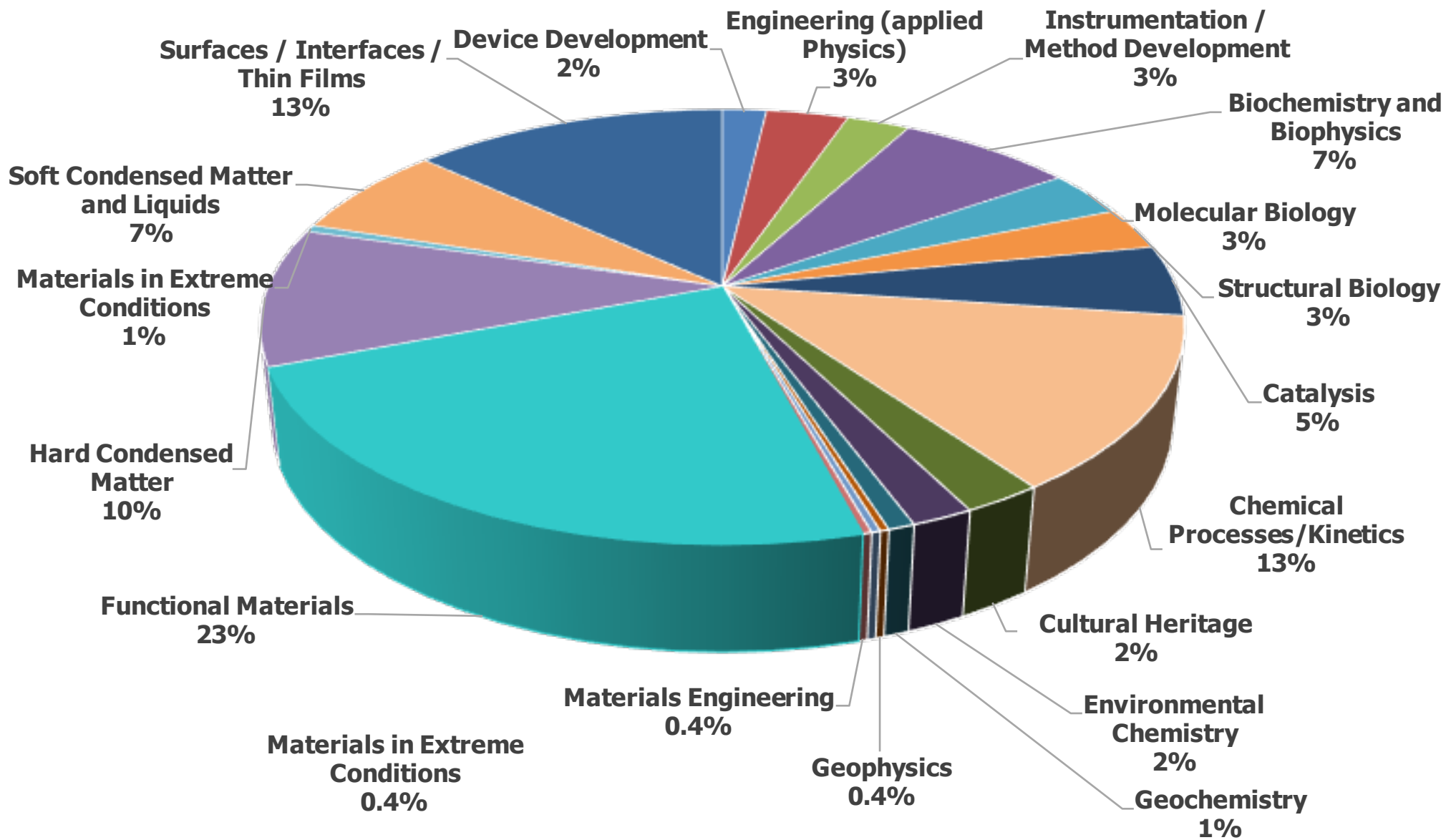
Multinational: intrinsic advantage of being a multinational consortium. SMEs usually tend to go local

Transversal and cross fertilization effect. CERIC network relates to the different part of the value chain of several sectors and enhance multisectoriality



CERIC-Industry key aspects

Fields of Applications of CERIC users



RESEARCH PROJECT CONTRACT RESEARCH

New detecting system. We proposed a complete new solution for a specific company on new detecting system for their quality and process control. One of our PFs takes charge of the entire project. **New technology will be created that can be introduced to the market.**

Other stakeholders of the sector value chain to be involved in order to offer a complete solution

CERIC also provides them with **new knowledge that the company will evaluate to use in other fields of its business**

ANALYTICAL SERVICE

Targeted analytical services for new APIs of a pharmaceutical company. CERIC acts as a coordinator of the project. Apart from the analytical services, **new knowledge on how to interpret some analytical data.**

Repeated collaboration due to the complementary knowledge we can offer

INDUSTRIAL PhDs TRAINING

Training and workshops on the opportunities for industrial researchers **in order to enhance their knowledge on CERIC solutions**