



Central European
Research Infrastructure
Consortium



The CERIC-ERIC Research Infrastructure

What are Research Infrastructures?

“Research Infrastructures are facilities, resources and services that are used by the research communities to conduct research and foster innovation in their fields”
-Definition by the European Commission



Synchrotrons and
Free Electron Lasers
e.g. DESY & XFEL



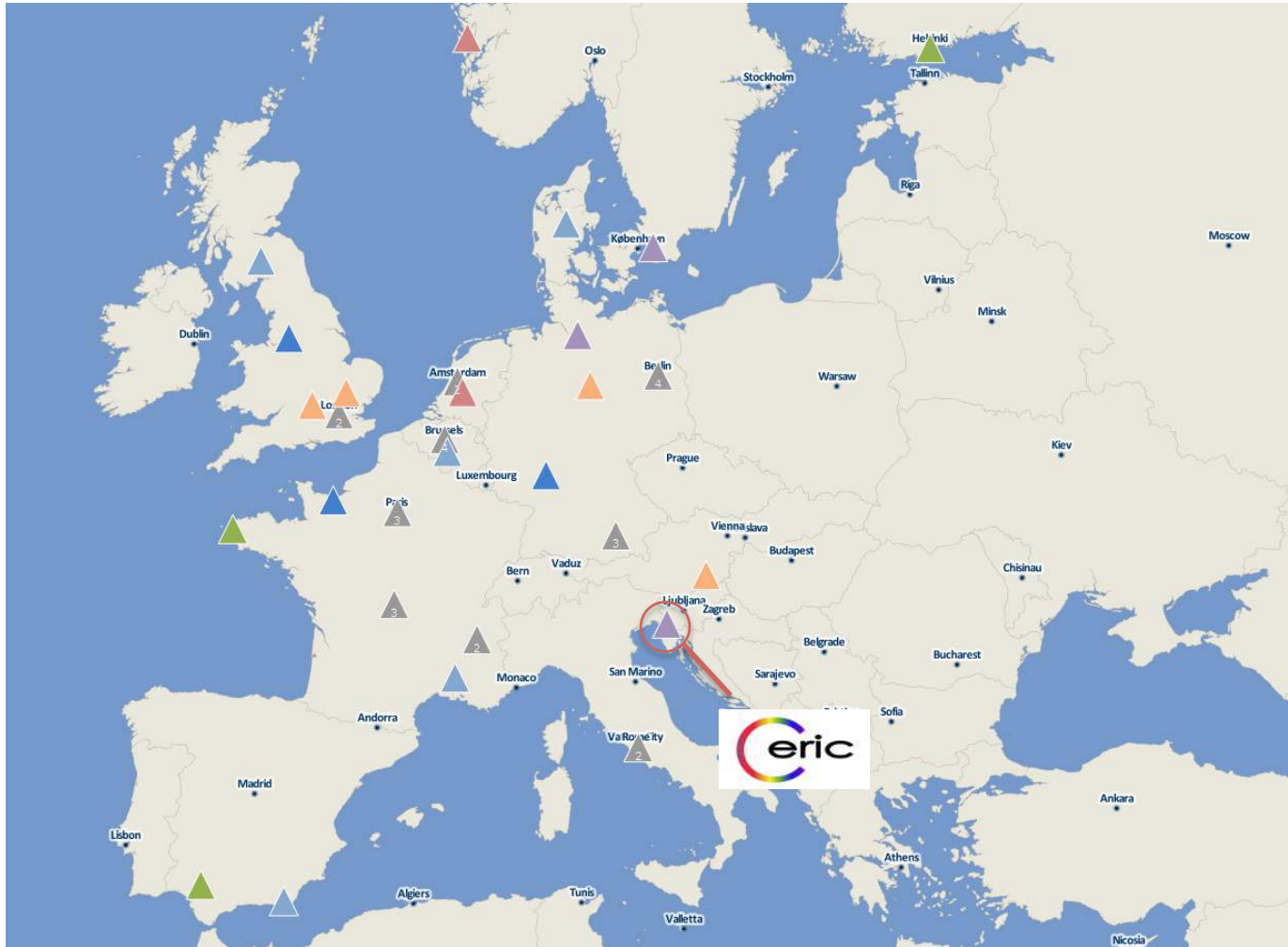
Neutron Sources
e.g.
FRM II Research
Reactor



Supercomputing
networks
e.g. PRACE



Where are European Research Infrastructures?



<http://www.esfri.eu/maps-ris>



The Mission of CERIC

*“CERIC is a research infrastructure integrating and providing open access to the **best facilities in Central and Eastern Europe** to help science and industry advance in the fields of **materials, biomaterials and nanotechnology**. It enables the delivery of innovative solutions to societal challenges in the fields of energy, health, food and cultural heritage.”*



The mission in reality

- CERIC is a **distributed** Research Infrastructure with nodes in **seven Central-Eastern European** countries.
- CERIC offers physical **open access, free of charge** to more than **44 different** state-of-the-art instruments.
- The access is granted on the basis of **scientific excellence only**.
- CERIC has the legal form of a **European Research Infrastructure Consortium (ERIC)**



What is an ERIC

A **European Research Infrastructure Consortium (ERIC)** is a full **legal entity** under Union law.

Its purpose is to establish and operate a **Research Infrastructure** on a non-economic basis

It must have at least one **EU Member State** and two other countries, either **EU Member States** or **Associated Countries** as members. Third countries or intergovernmental organisations may become members or observers without voting rights.

Council Regulation (EC) No 723/2009



The case of CERIC

- CERIC has 7 members: **Austria, Czech Republic, Hungary, Italy, Poland, Romania and Slovenia.**
- **Croatia and Serbia are currently observers**
- Implemented by the EU Commission Decision in June 2014.
- Each Member and Observer offers one high quality **Partner Facility** through a **Representing Entity**, appointed by Member States.
- The Partner Facilities are evaluated by **international peer review** and must **complement the overall Infrastructure**
- The statutory seat is in **Trieste/Italy**

Where is CERIC located?



The Partner Facilities:



Austria
SAXS and
Light Scattering
at
TU Graz and
Elettra/Trieste



Croatia
Ion Beam Analysis
e.g. PIXE
at
Ruder-Bosovic
Institute/Zagreb



Czech Republic
XPS/XPD
FESEM
Facilities
at
Charles University Prague
and
Elettra/Trieste



Hungary
10 beamlines
e.g. SANS
at
Budapest
Neutron
Center

The partner facilities:



Italy
14 beamlines
e.g. XAFS
Elettra
Sinchrotrone
Trieste



Poland
e.g. PEEM
Solaris
Synchrotron
Krakow



Romania
TEM and
EPR facilities
at the
National Institute
for
Material Physics
Bucharest



Slovenia
NMR Center
of the
National Institute
for
Chemistry/
Ljubljana

Open access in CERIC: How does it work?



2 calls per year

Deadline: March and September



Funding for users

CERIC covers travel and accomodation
for two researchers per experiment

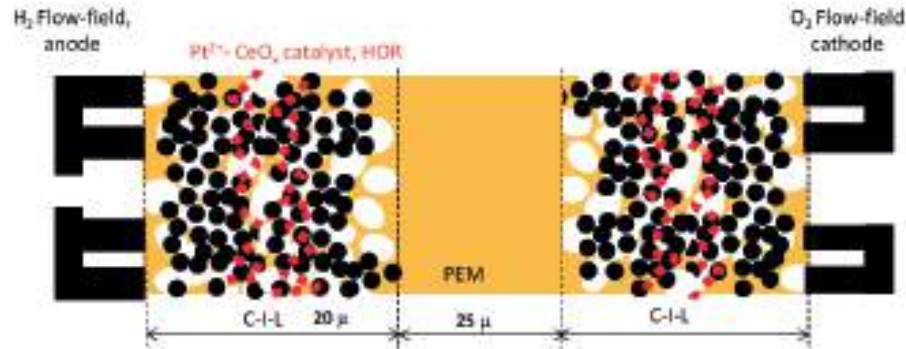


CERIC Internal Research

CERIC currently carries out **four** internal research projects with the acronyms **CEROP**, **DYNA CHIRO**, **RENEWALS** and **MAG ALCHEMI**.

All projects involve **several partner facilities** and contain significant **instrumentation development**.

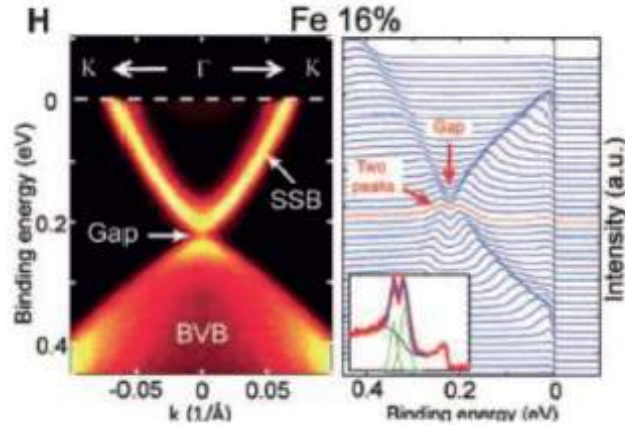
Next to producing **excellent science** the **development and integration** of the CERIC Partner Facilities is the main goal of the internal research program.



The project aims at developing *in-operando* experimental methods to study the process of **heterogeneous catalysis** under realistic conditions.

This will enable a deeper insight into catalysis and will help designing **more efficient catalysts**.

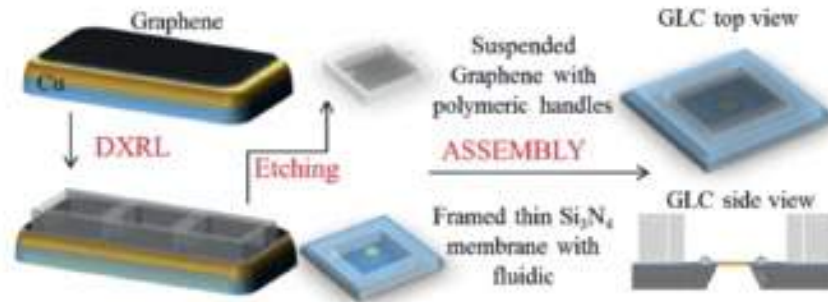
Project Dyna Chiro



This project focuses on the development and construction of special synchrotron suitable instrumentation to investigate the chiral and dynamic properties of matter.

The results of these investigation have a range of applications from synthesis of new polymers to drug design.

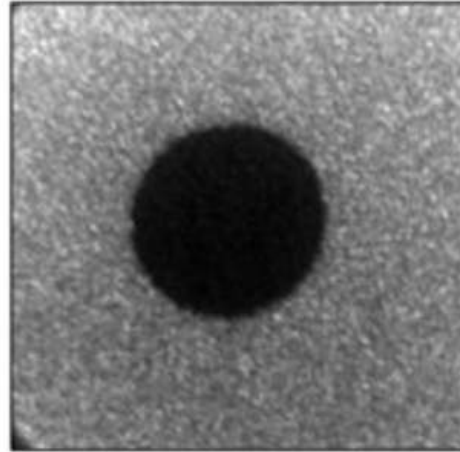
Project RENEWALS



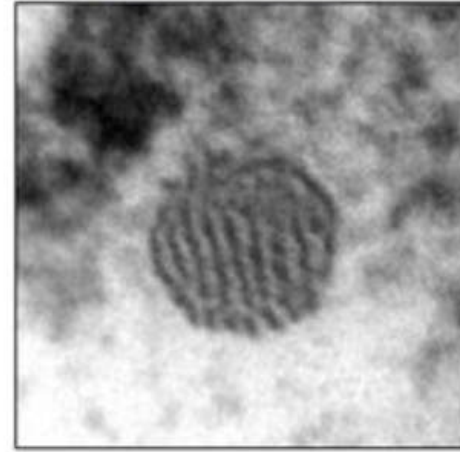
RENEWALS addresses the growing issue of possible **physiological and toxic** effects of **nanoparticles**. Basis of the project is the development of a **graphene-based** multi method sample cell to study **T(t)he** interactions between **nanoparticles** and **human cells**.

Project MAG-ALCHEMI

LEEM



XMCD-PEEM



The MAG-ALCHEMI project aims at developing new concepts to **control the local magnetic anisotropy** in thin films through chemistry. The planned research will focus on systems of increasing complexity, spanning from simple **ferromagnetic layers** to **ferromagnetic-antiferromagnetic** multilayers grown on a variety of single crystal supports



CERIC Industrial Liaison and Technology Transfer

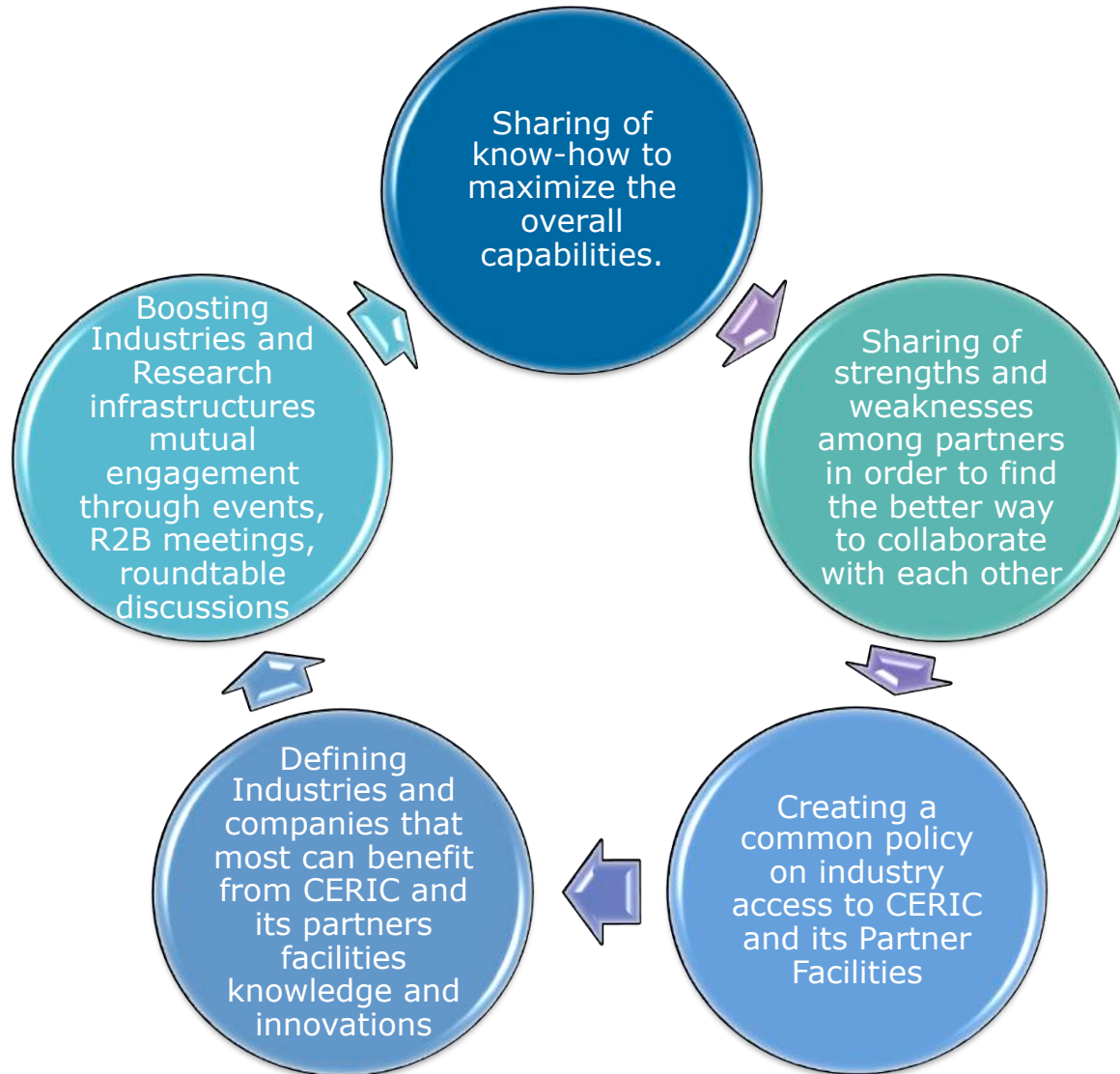
CERIC-ERIC may carry out **limited economic activities**, provided that they are closely related to its principal task and that they do not jeopardize its achievement.

CERIC supports **innovation** through its services to customers from **local and international** industries.

These services include access to available facilities, consultancy, TT and strategic collaboration agreements.

CERIC stimulates the start of **spin-off companies** also involving different Partner Facilities and aiming at the international market.

CERIC- ILO Current Activities





Thanks for your attention

