TOURR | nuclear research reactors

Towards Optimized Use of Research Reactors in Europe

>> STRATEGY

The TOURR project is a response to the challenge of coordinating the optimization of the exploitation of available research reactors in Europe. Therefore, its primary objective is to develop an overall strategy for research reactors in Europe and prepare the ground for its implementation. This strategy is linked with the following processes:

1. **Assessment of the current status of the European research reactors fleet**
2. **Estimation of future needs**
3. **Plan for the upgrade of the research reactor fleet**
4. **Plan to maintain the fleet**
5. **Developing tools for optimal use of the research reactors fleet**
6. **Rising awareness of decision makers and the public on the role of research reactors**

All the above presented objectives, tackle multiple challenges and underline the urgent need of a European strategy for research reactors which represents the main objective of this proposal. We expect that the implementation of the TOURR project will help to contribute to strengthen Europe's competitive advantage over other countries.

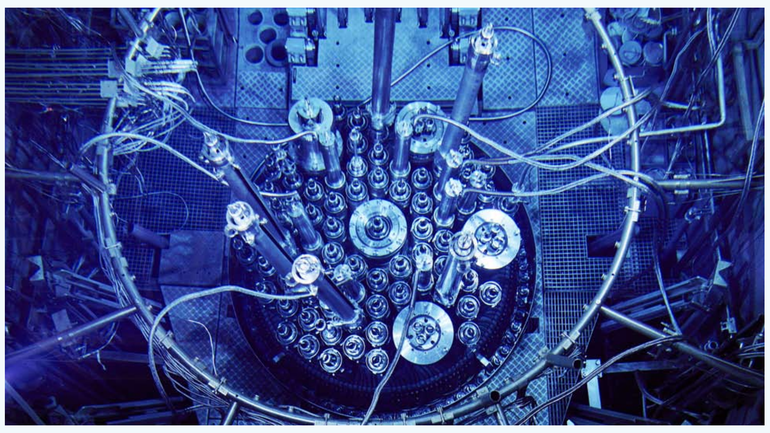
>> APPLICATIONS OF RESEARCH REACTORS

Nuclear research reactors can have an impact on several different domains:

EDUCATION & TRAINING – Research reactors primary use was related to education, training and technological experiments necessary to develop commercial power reactors.

STUDIES ON MATERIALS – Neutron beams extracted from the core soon became a powerful tool to study matter and so high performance research reactors devoted solely to beam experiments have been constructed. Irradiation capability of reactors found more and more applications in producing new materials and changing material properties.

HEALTH – Production of medical radioisotopes enabled development of new diagnosis and treatment techniques. Nowadays, millions of patients each month benefit from nuclear medicine.



BR2 research reactor at SCK CEN, Mol, Belgium
Source: SCK CEN. Used by permission

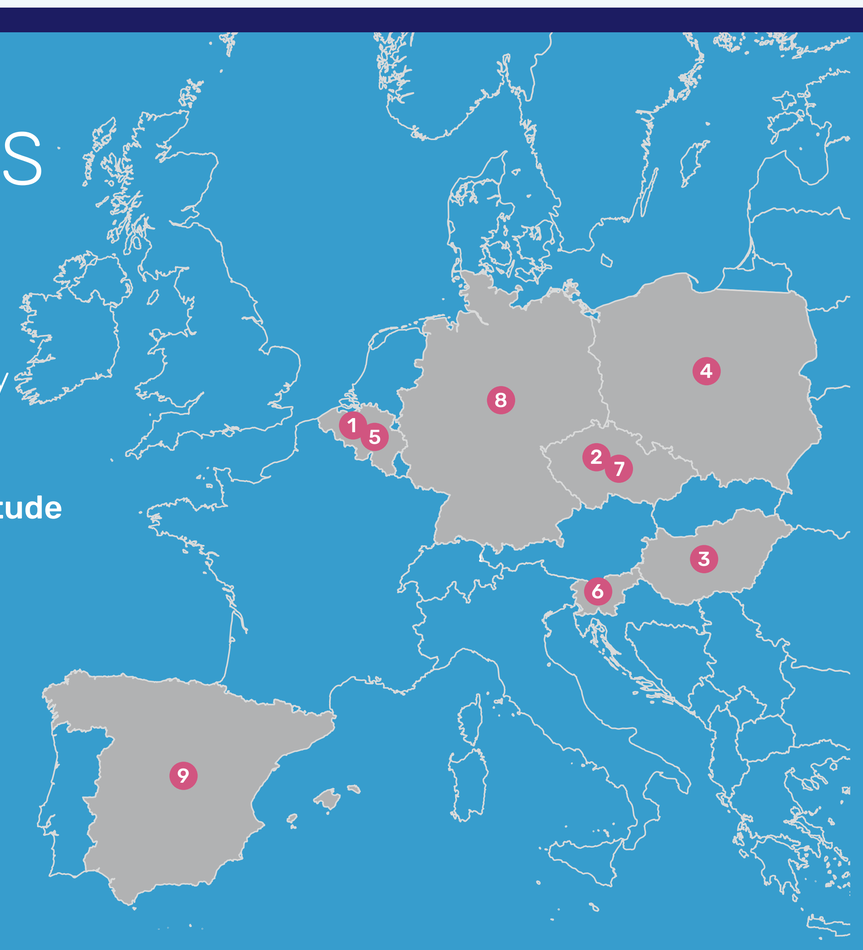
>> ORGANISATION OF THE WORK

The work plan is structured into five work packages (WPs)

- **WP1** – Inventory of RR (Research Reactor) fleet – led by JOŽEF STEFAN INSTITUTE, is aimed at collecting and updating the information on the European research reactor fleet and on their plans in the period 2020-2030. Furthermore, it is supposed to perform RR gap analyses in the areas of science & technology, medical matters and education & training.
- **WP2** – Assessment of needs and opportunities to support supply of medical radioisotopes – led by NARODOWE CENTRUM BADAN JADROWYCH, assesses the needs and opportunities for the contribution of RR to the medical domains including radioisotope production.
- **WP3** – Tools for optimized use of European research reactors – led by EUROPEAN NUCLEAR EDUCATION NETWORK, will result in a Strategy for optimized use of European RR and a set of tools supporting the implementation of the strategy.
- **WP4** – Dissemination and outreach – led by EVALION, will disseminate the project results to various audiences. It is also aimed at networking and raising awareness on the role of RR in research in today's society.
- **WP5** – Project management – led by EUROPEAN NUCLEAR EDUCATION NETWORK, the consortium leader, deals with coordination and consortium management activities, monitoring the progress of the other WPs, financial management and preparation of reports and reviews.

>> PROJECT PARTNERS

1. **European Nuclear Education Network** (ENEN) Belgium
2. **Centrum Vyzkumu Rez sro** (CVR) Czechia
3. **Energiatudomanyi Kutatokozpont** (EK) Hungary
4. **Narodowe Centrum Badan Jadrowych** (NCBJ) Poland
5. **Studiecentrum Voor Kernenergie / Centre D'etude De L'energie Nucleaire** (SCK CEN) Belgium
6. **Jožef Stefan Institute** (JSI) Slovenia
7. **Evalion sro** (EVALION) Czechia
8. **Universitaet Stuttgart** (USTUTT) Germany
9. **Centro De Investigaciones Energeticas, Medioambientales Y Tecnologicas-Ciemat** (CIEMAT) Spain



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PROJECT WEBPAGE
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