



# LEAPS

League of European  
Accelerator-based  
Photon Sources

## *Panel discussion*

# *Impact and implementation of ESAPS2022*

### *Moderator:*

Mirjam van Daalen (Head of Communications of PSI)

### *Panelists:*

**Christoph Quitmann**, Director/Head of Division Project LightHouse, RI-research Instruments

**Peter Wenzel-Constabel**, Vice-chair of ESFRI

**Jochen Wosnitza**, Chair of ARIE; Director of the HZDR High Magnetic Field Laboratory

**Kristina Edström**, Coordinator of BATTERY 2030+; Professor of Inorganic Chemistry, Uppsala University

**Lenny Rivkin**, LEAPS chair; Deputy Director of PSI





# ANALYTICAL RESEARCH INFRASTRUCTURES IN EUROPE

A network of high-level facilities that provide instruments and services to enable European researchers to address the Missions of Horizon Europe.



[arie-eu.org](http://arie-eu.org)



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Jochen Wosnitza • ARIE Chair

Dresden High Magnetic Field Laboratory • EMFL-HLD @ HZDR

# ARIE: HUB OF SEVEN NETWORKS



e-DREAM was formed to promote cooperation between European-level advanced electron microscopy infrastructure providers, collaborative research and transnational user programmes.



The EMFL develops and operates world class high magnetic field facilities for excellent research by in-house and external users.



Led by the University of Manchester, Inspire is a European Research Project that aims to provide a world-leading integrating activity for European research in Proton Beam Therapy (PBT).



Laserlab-Europe understands itself as the central place in Europe where new developments in laser research take place in a flexible and coordinated fashion.



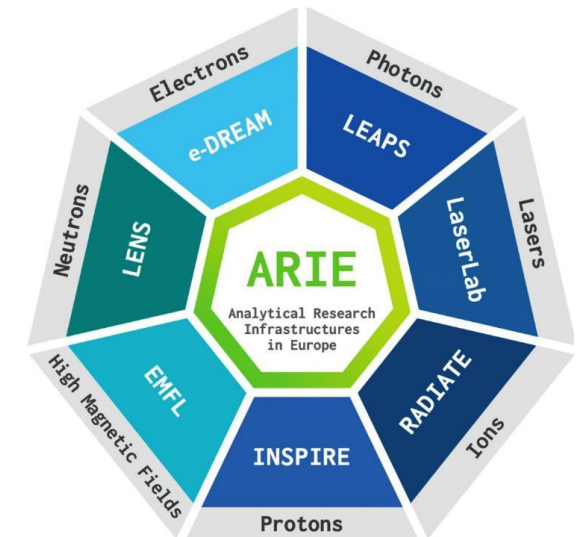
LEAPS is a strategic consortium working to ensure and promote the quality and impact of the fundamental, applied and industrial research carried out at Synchrotron Radiation and Free Electron Laser user facilities in Europe.



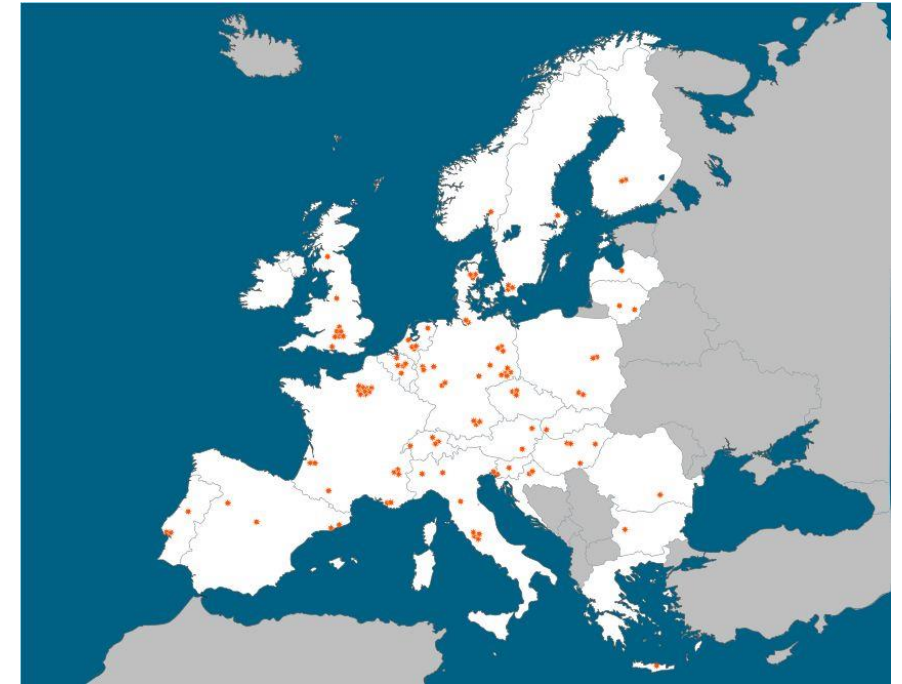
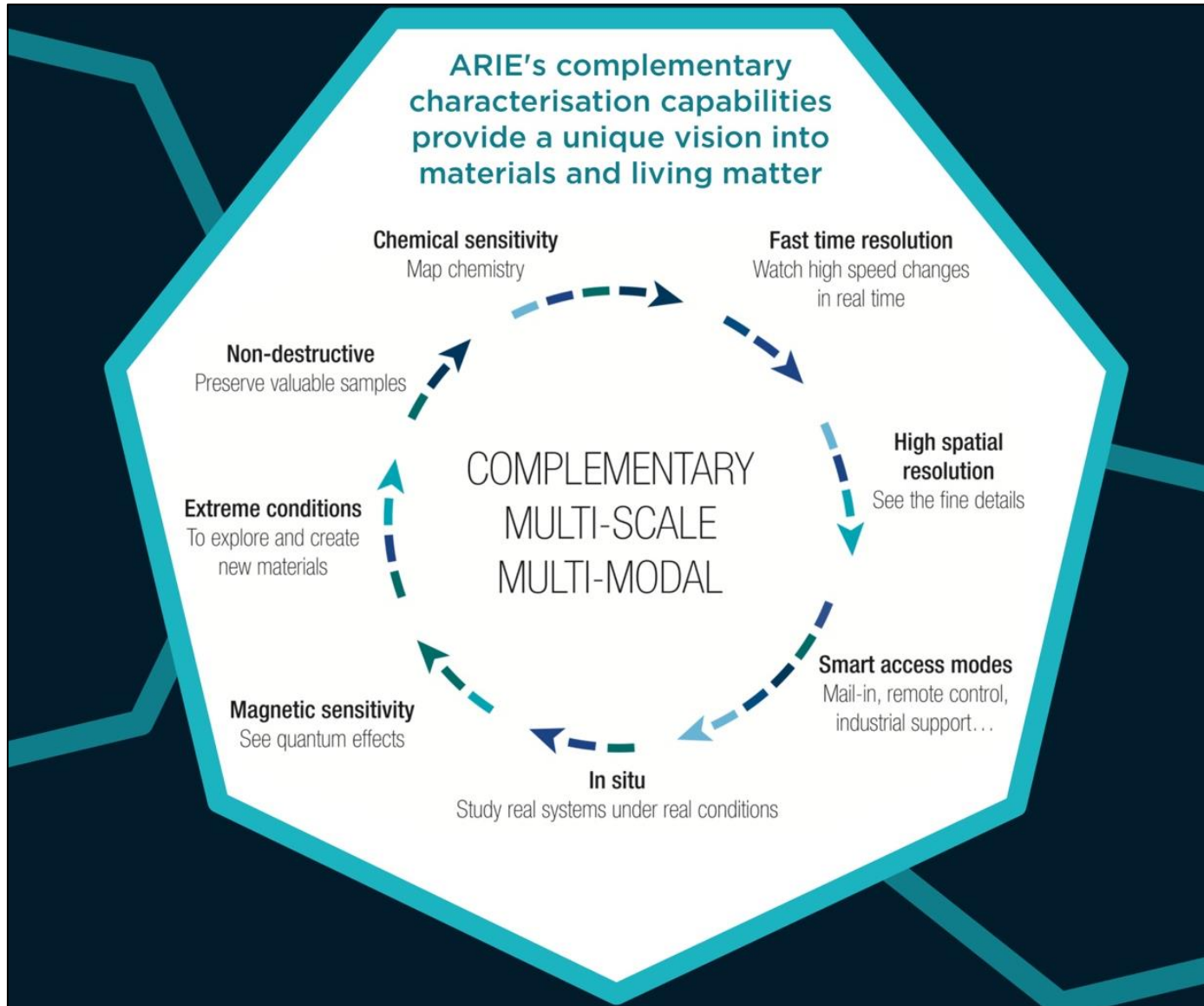
LENS is a not-for-profit consortium working to promote cooperation between European-level neutron infrastructure providers offering transnational user programs to external researchers.



The RADIATE project is working to structure the European Research Area of ion technology application by strengthening the cooperation between European ion beam infrastructures.



# ARIE IS AN EUROPEAN ASSET



About 120 research infrastructures  
Unique photon, X-ray, electron,  
neutron, ion and proton beam and  
high magnetic field facilities  
available to researchers.



# ARIE

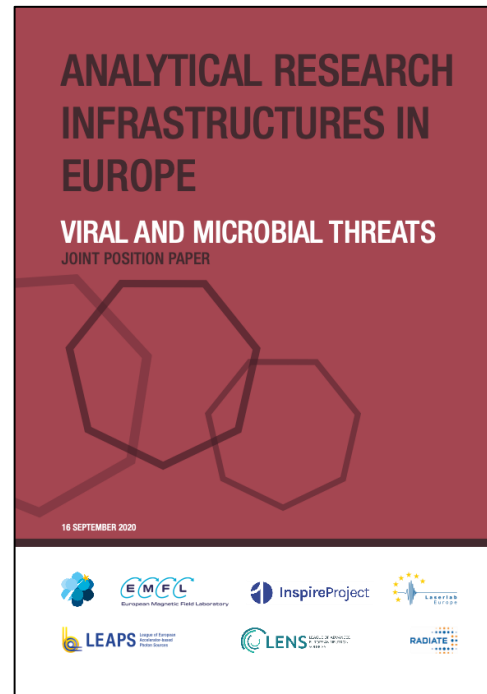
- 7 RI networks of scientific and technological excellence
  - Support growing research community across Europe
  - Bridge scientific disciplines, academia and industry
  - Science and technology enabler
- Position papers



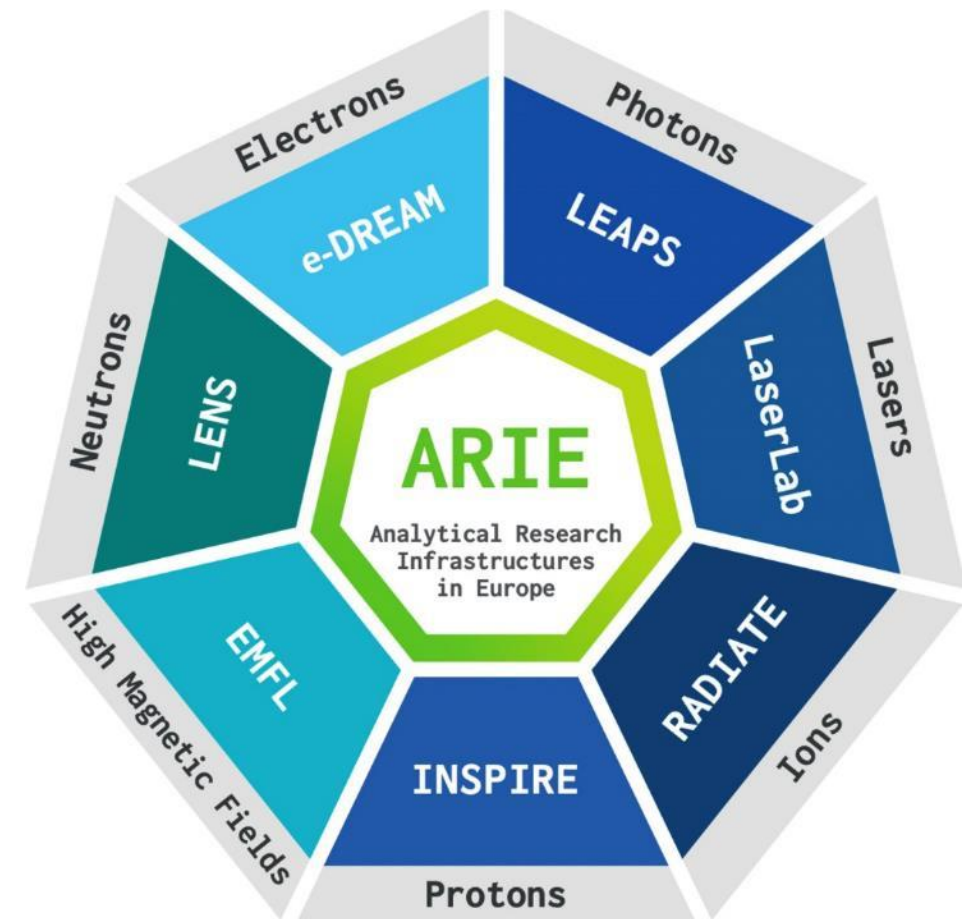
ARIE kickoff: 21.02.2020 in Brussels



[doi.org/10.5281/zenodo.4049768](https://doi.org/10.5281/zenodo.4049768)

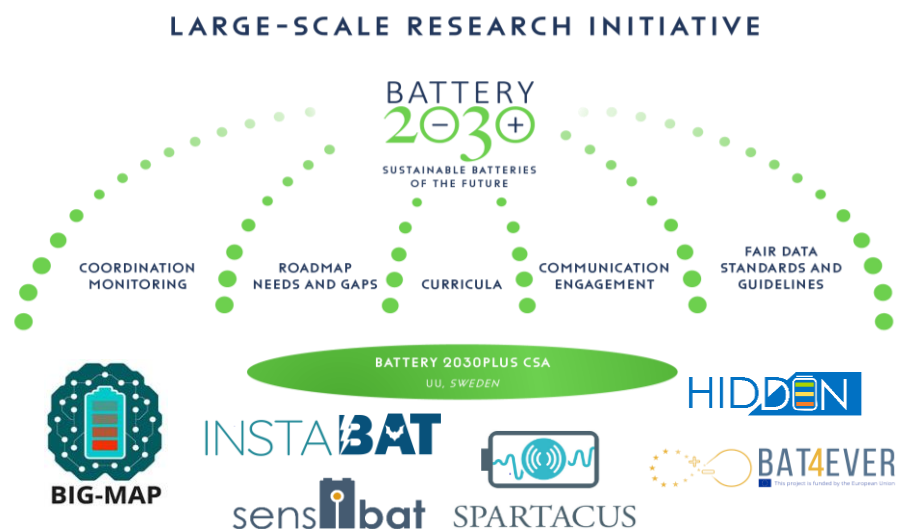


[doi.org/10.5281/zenodo.4049719](https://doi.org/10.5281/zenodo.4049719)



# BATTERY 2030+ - a large scale research initiative

Coordinator: Kristina Edström, Uppsala University, Sweden



102 organisations (Academia, RTOs and industry) from 24 countries in Europe:  
ESRF, ILL and Solei directly within the project BIG-MAP



Long-term  
roadmap

Reinvent the way we invent the batteries of the future:

Accelerate the process to find new battery materials and battery concepts

A closed loop with modeling (machine learning and AI) hand in hand with high-through-put experiments

[www.battery2030.eu](http://www.battery2030.eu)

Twitter: 2030battery

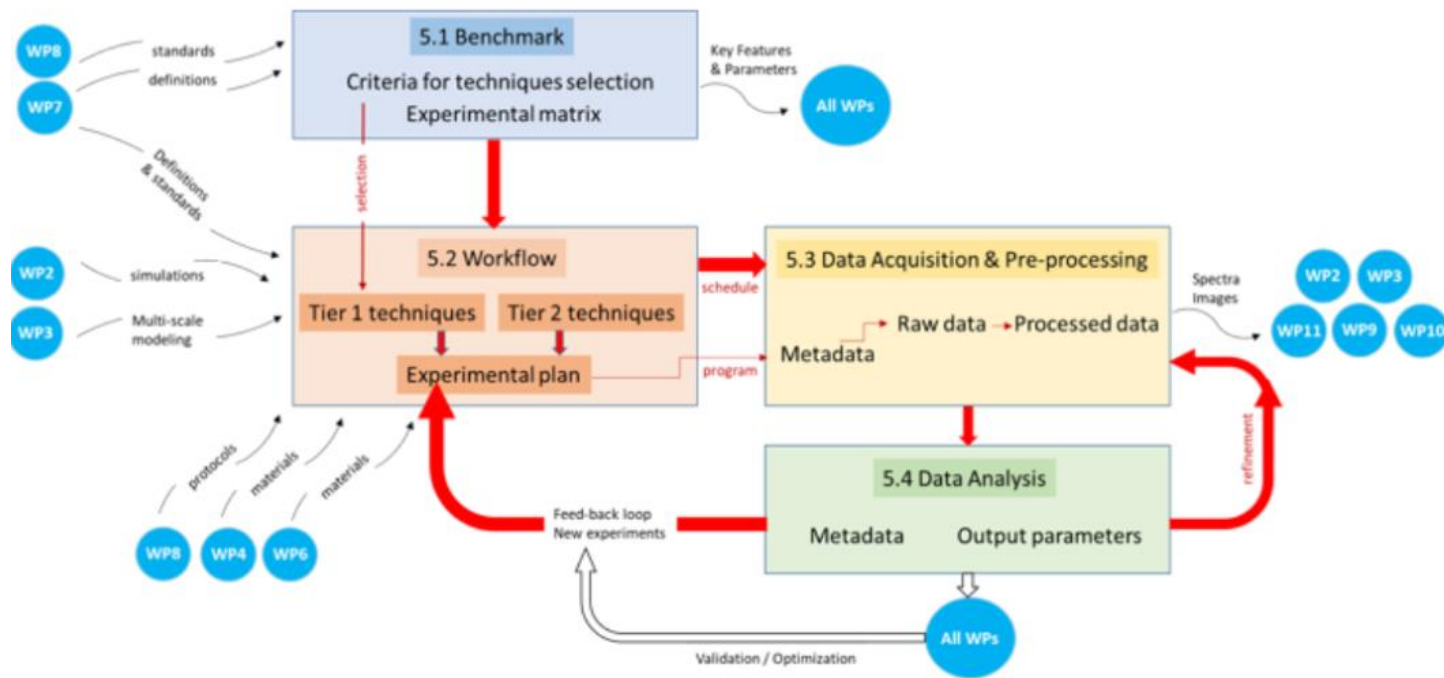


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 957213.

# What we have and what we need



**Building competence in handling workflows from experiments to deliver to modeling**



We need to:

Have a long-term targeted challenge driven access!

Build an ecosystem between the scientists at synchrotrons and the battery community for both experiments and data handling

Long-term funding stability for you

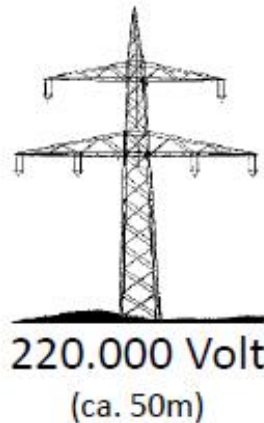
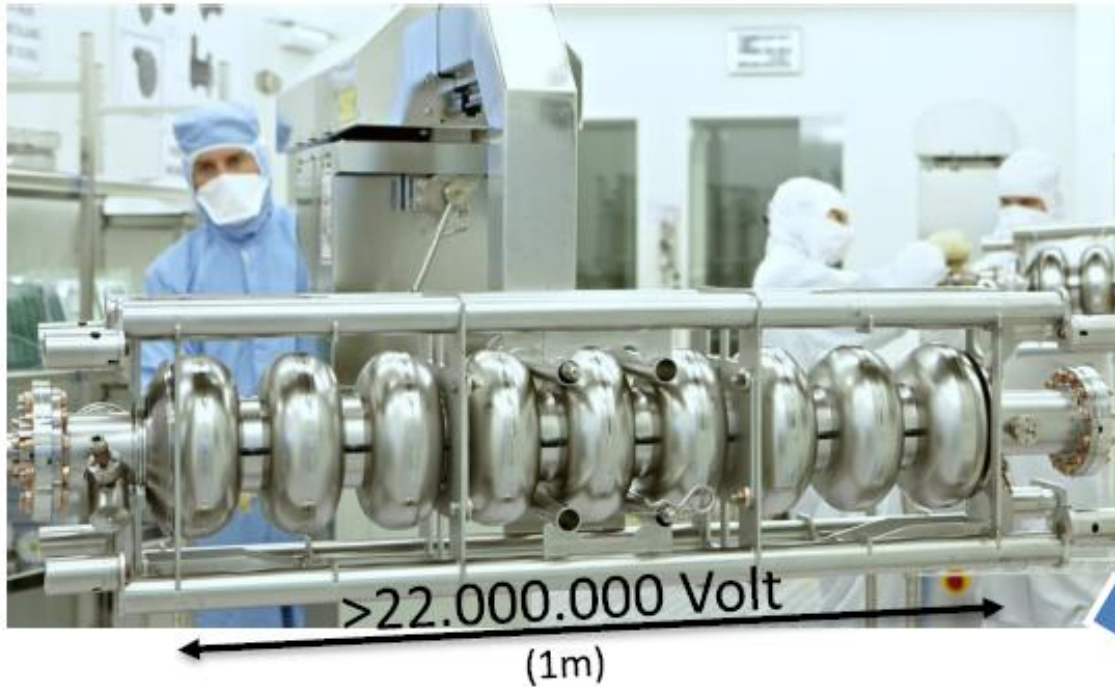
**We are envisage to take a future role in “animating” the full European battery research eco-system through the battery partnership**



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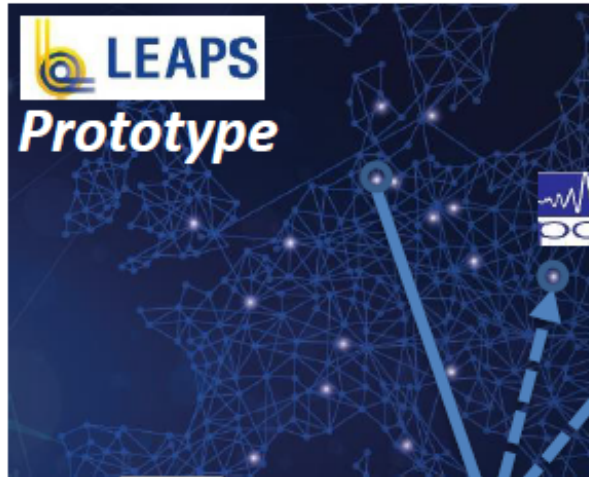


# Where do I come from?



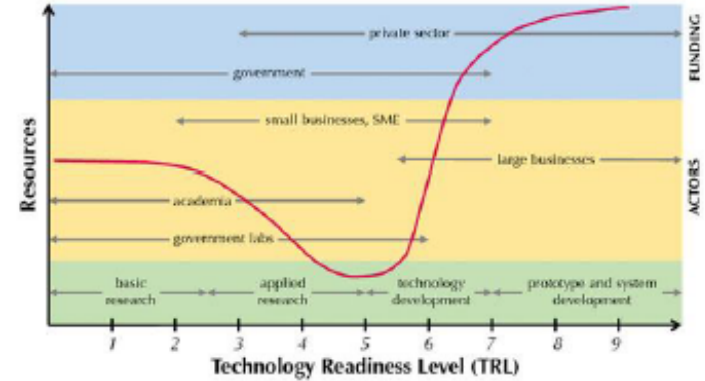


# The Ecosystem of Research Infrastructures



## What we have in EU:

- World-leading industry supplying research infrastructures (LEAPS, LENS, ITER, FAIR, ELI, ..., national institutes)
- Realistic plans for staying on top
- Excellent trained staff
- Willingness for collaboration



## What we need:

- Diversity in facilities  
→ competition
- Flexible procurement  
→ innovation
- Sustainable financing  
→ long-term planning

