



# LEAPS

League of European  
Accelerator-based  
Photon Sources

LEAPS Roadmap

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WG3 lead

## Update from RDB #53 (2024-11-21)

- Added value of a LEAPS technology roadmap
  - **Sustain and enhance European leadership in SR and FEL technologies and European resilience**
    - Joint developments with industry
      - Example: LEAPS-INNOV: blazed grating based on e-beam lithography
    - Pooling ideas and expert knowledge
  - **Grow European market for specialized technologies**
    - Jointly develop standardised components
    - Collaborate with industrial suppliers at an early stage
  - **Enhance user experience and make use of beamtime more effective**
    - Faster learning curve at beamlines
    - Faster experiments i.e., better use of beamtime through improved endstations and diagnostics.
    - Standardised FAIR data management
    - Bringing FELs from “technique development” for experts to science application drive machines for non-expert users.

## Update from RDB #53 (2024-11-21)

- Added value of a LEAPS technology roadmap (cont.)
  - **Greening of RIs**
    - Permanent magnets (together with accelerator community)
    - Virtual machines for experiment preparation
    - Faster experiments; i.e., better use of beamtime through improved, standardised, ... endstations and diagnostics.



## Capturing technologies: the spreadsheet

LEAPS roadmap, update 2025
Name of the LEAPS SG, WG or facility providing input:
Name of the contact person:
E-mail address of the contact person:
Role in LEAPS:
* for SG1 and SG2, please fill-in with <u>key enabling technologies</u> needed to address societal challenges, in particular those targeted at the LEAPS Block Grant document. If you identify other(s) not listed there please indicate it.
TECHNOLOGY* 1
Name of the LEAPS technology pillar or other (see sheet 'Technological Roadmaps-2022'):
Name of the technology (max 60 characters):
Added value of the joint development within LEAPS:
Expected number of months/years to develop it:
Does it depend on the development of any other technology? Which?
Short description (max 300 characters):
LEAPS technology pillar
<b>Overall description of the LEAPS technology pillar (max 1500 characters)</b> Include advances with respect to the previous roadmap and link those as much as possible with other projects either EU as LEAPS-INNOV , internal as DIGITAL LEAPS, or national.

LEAPS Transversal Activities
LEAPS Activities
User Services and Assessment
Help Desk
Website
User support
Standardized performance metrics
Socio-economic impact
Training Education Outreach
LEAPS Graduate School
E- teaching
LEAPS European Competence Centres
Schools and Workshops
Career development for technical and management staff
Industry and Innovation
Strategic Engagement and Coordination
Training, business development and marketing
Targeted support for SME Innovation
Innovation-Led Research Partnerships to Foster Industrial Competitiveness
Technology Valorisation and Entrepreneurship
Innovate procurement to support leadership of European enterprises

Live version available as [WG3 Google spreadsheet](#)

## Timelines

- Feedback (the spreadsheet) should be sent 2025-01-10 (Friday).
  - I tried to push back against this (citing lack of time to consult with facilities, Christmas holidays), but no.
  - Feedback was that capturing input at the WG-level would be sufficient.
- A “small group” that will be tasked with combining this input to build a first draft.
- There should be opportunity for us to review this draft and offer suggestions/improvements.
- Final document will need GA approval
- Deadline is some point in 2025-09.

## Existing resources from which to draw

- Existing roadmap document(s)
  - Available from LEAPS webpage
- Data strategy paper
- The FAIR data for ML roadmap document
- Facility feedback (as possible)

## Next steps

- We have a mailing list: <[leaps-it-roadmap@desy.de](mailto:leaps-it-roadmap@desy.de)>
  - Please join
  - Switch to this list for further communication?
- Organise meeting to
  - Coordinate activity?
  - Do actual writing?
- Next RDB meeting: a week on Thursday (2024-12-19)
  - We should have something to show at that meeting.
- Try to complete the document during the first week on January: 2025-01-06/2024-01-10.

# Thanks!