Grant Agreement No: 101057511

EURO-LABS

EUROpean Laboratories for Accelerator Based Science

HORIZON-INFRA-2021-SERV-01-07 Project EURO-LABS

DELIVERABLE REPORT

WEBSITE READY

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Abstract:

The EURO-LABS website was launched in October 2022.It can be found at the following address: https://web.infn.it/EURO-LABS/.

The EUROpean Laboratories for Accelerator Based Science (EURO-LABS) project has received funding from the Horizon Europe programme dedicated to Research Infrastructure (RI) services advancing frontier knowledge under Grant Agreement no. 101057511. EURO-LABS began in September 2022 and will run for 4 years.

Delivery Slip

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Approved by	Navin Alahari [Scientific Coordinator]	GANIL	28/02/2023

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Executive summary

This report outlines the scope and structure of the EURO-LABS public website (https://web.infn.it/EURO-LABS/)

1. INTRODUCTION

The EURO-LABS public website describes the project activities, objectives and results and the transnational access (TA) to Research Infrastructures (RI), core activity of the project.
The main purpose of the website is to provide information on the TA to the RIs and how to apply for it. Information concerns both the scientific aspects as well as the economic support that is offered. The website also describes the Virtual Access (VA) activities, mainly dedicated to providing support to the experiments, which are offered by the project. Moreover, dedicated sections describe the service improvement activities aiming at enhancing the quality of the access offered at several RIs, data management and training activities.
The site also provides information on events (meetings, talks, conferences) and job opportunities related to the project. All Deliverables without confidential content will also be made available on the site.

2. SCOPE

A brief analysis of the scope of the website and of the information needs of the users has been carried out before starting the website design phase and was shared with the members of the Steering Committee. The results of this analysis are detailed in the following table:

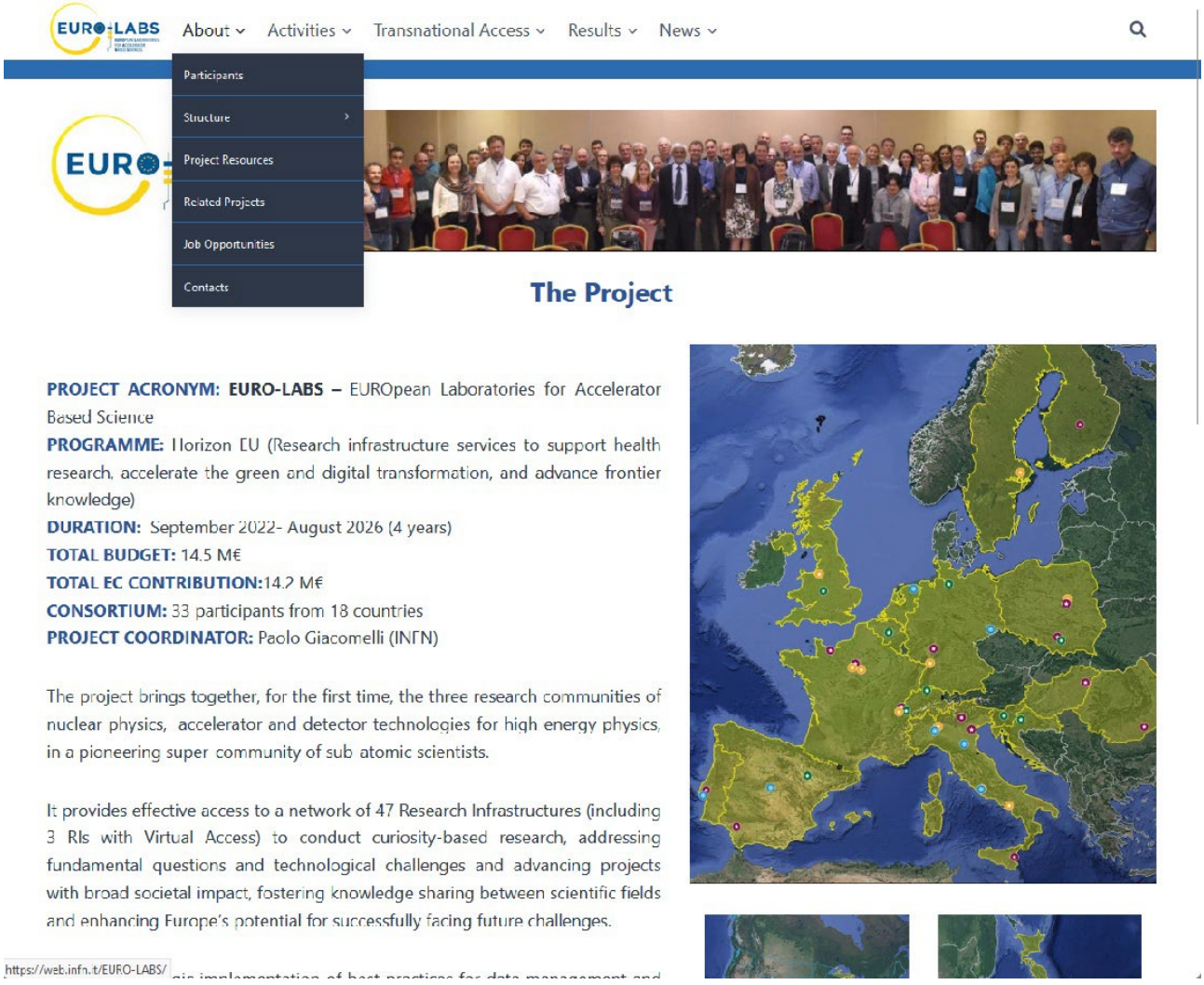
Target groups	Information needs	Channels/platforms	Outcome
Project participants, Steering committee, Management Team	project information; updates on results and workplan	Website, mailing lists, project repository, project meetings	Visibility of the project, Successful completion and project results, increasing cooperation, diversity
Researchers, Nuclear Physics-Accelerators-Detectors scientific and technical communities	Type of beam/services offered by Facilities, access support, opportunities to collaborate	Website, mailing lists, project repository, project meetings	Knowledge sharing, closer collaborations, support to TA
Young researchers	training, learning by doing experiences and job opportunities	Website, Research Institutional channels	Training, attracting young generations to science careers
Funding agencies & decision makers	Project results, impact	Website, ECAS portal	Support to funding for fundamental research
Public	Societal impact	website, facilities presentation videos	Support and conveying the importance for/of research, attracting young generations to science careers

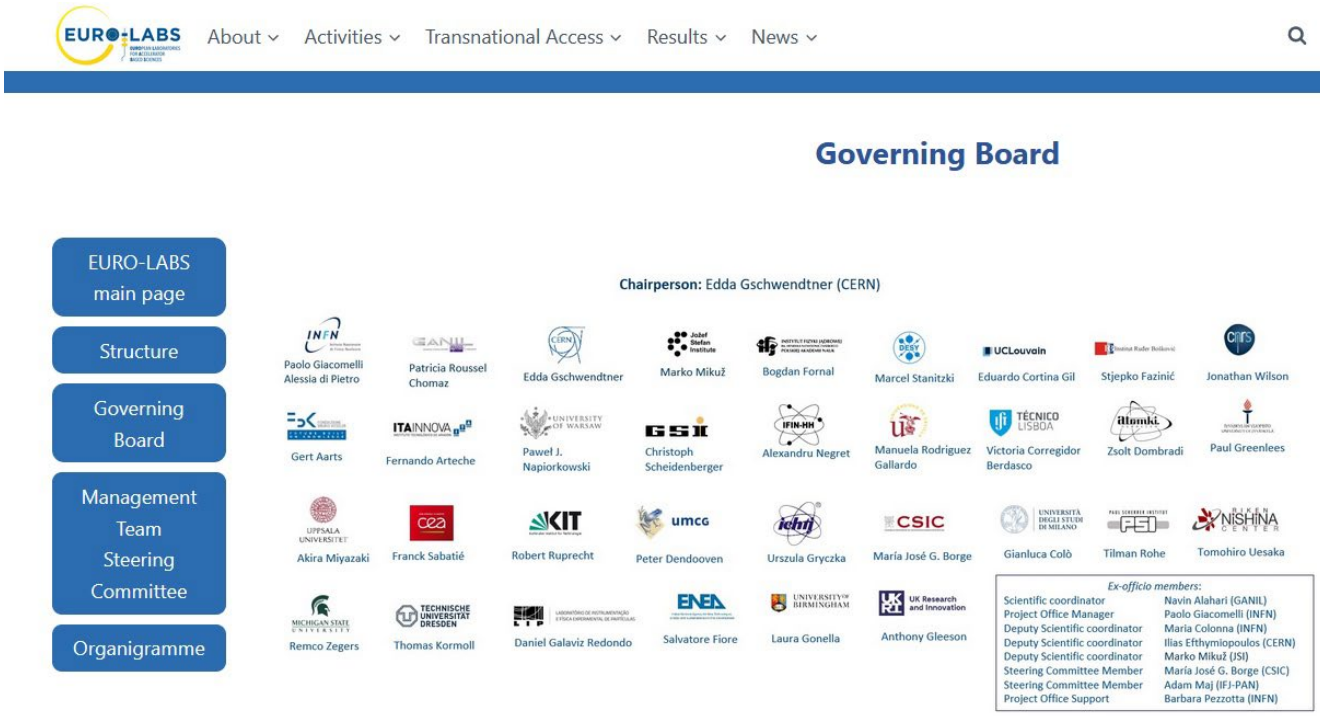
3. WEBSITE STRUCTURE AND CONTENT

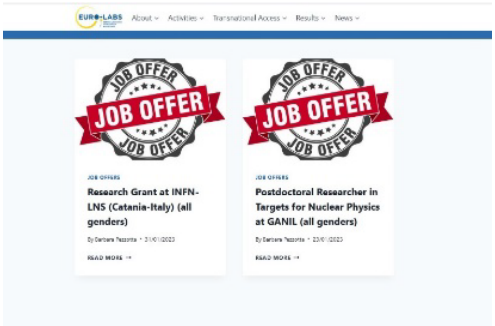
3.1. HOME PAGE

The Home page of the website gives an overview of the project, briefly describing the programme, its duration, the total budget and the EC contribution, the network, goals and impact.

The page menu (*About*) leads to information about the structure and organization of the project: Participants, Structure (composition of the Governing Board, Management Team, Steering Committee, Organigramme). In the menu there are also Project resources, Related Projects, and Job Opportunities sections.

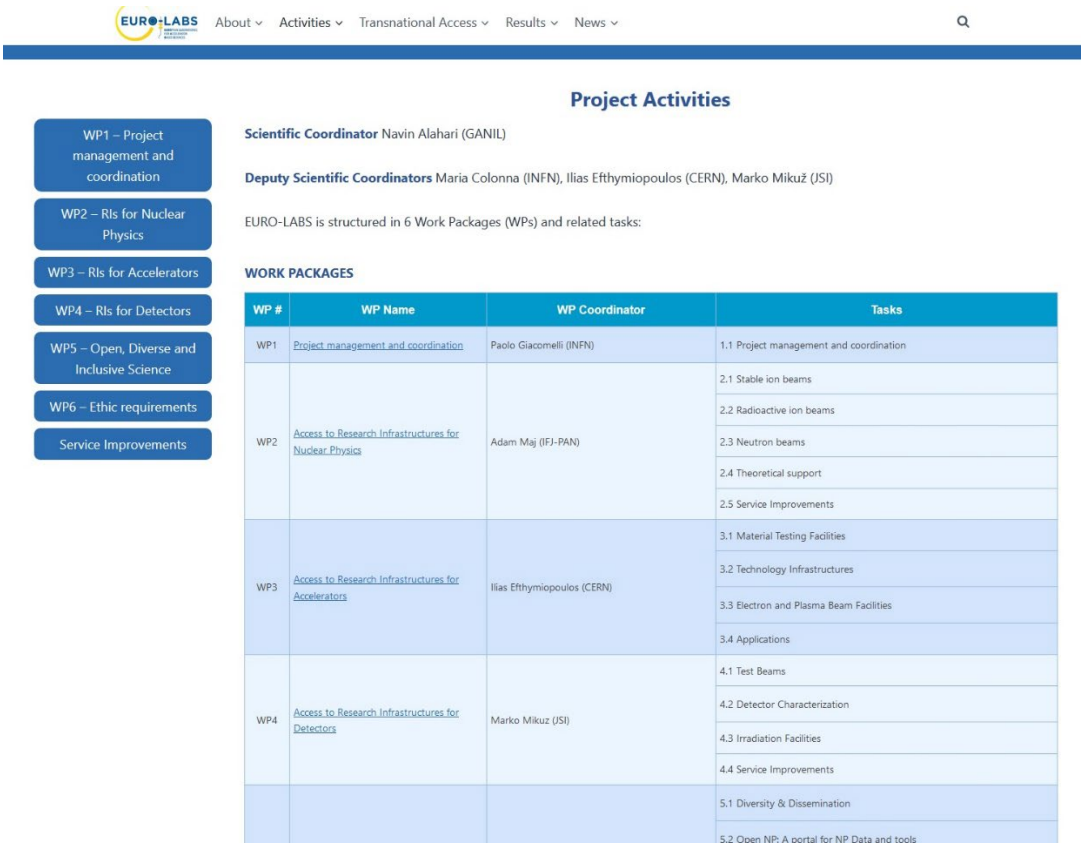




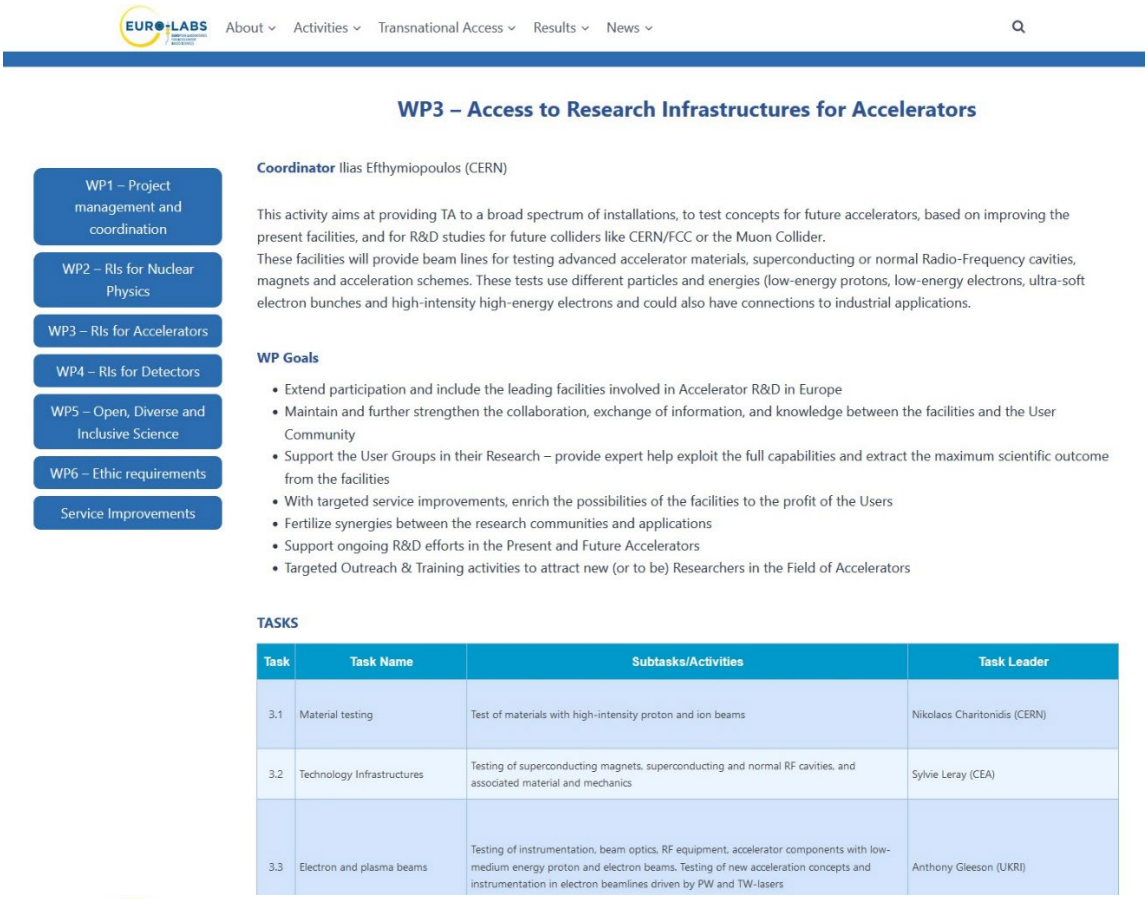


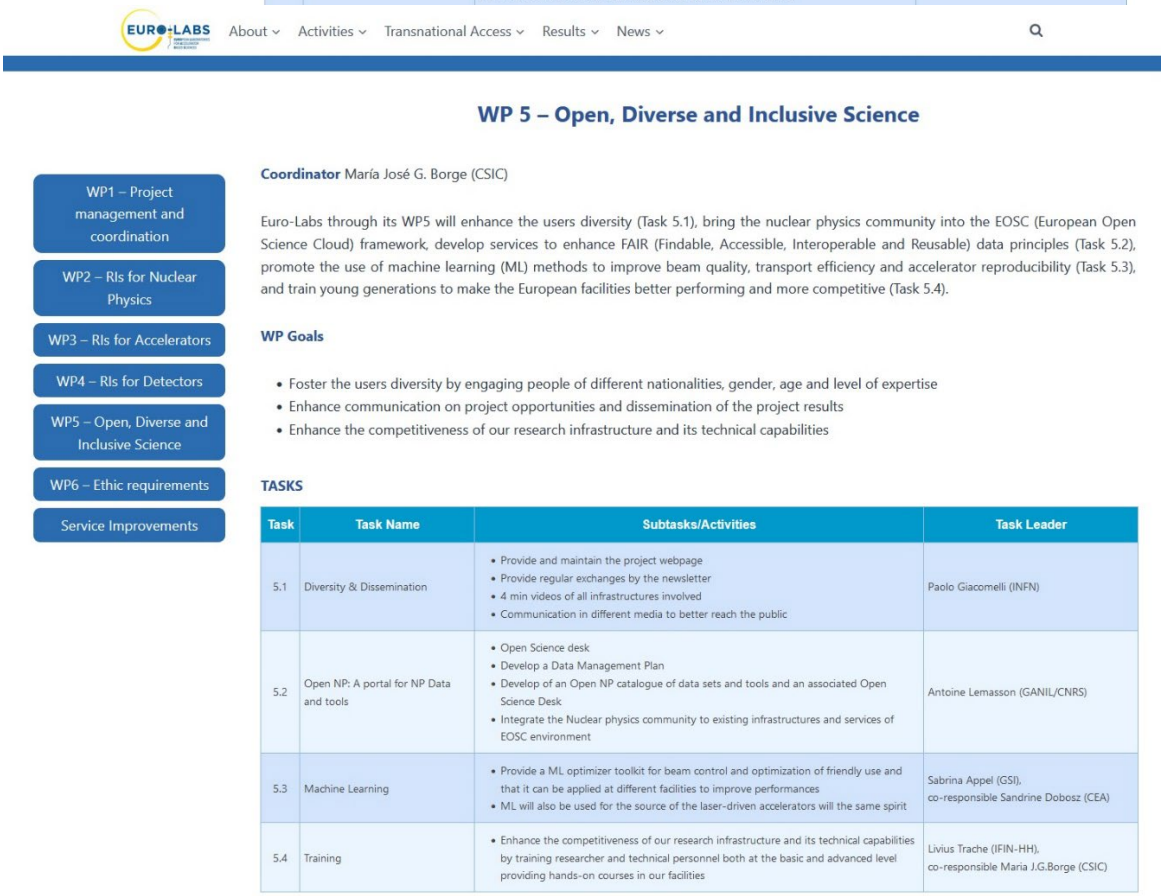
3.2 ACTIVITIES

All the Work Packages are described in the Activities section. The first page shows the list of the Work Packages and related tasks, including WP coordinators. Also on the page are the names of the scientific coordinators of the project.



Each WP has a dedicated page, describing aims, tasks, deliverables and milestones. The names of the Task Leaders are also indicated.


About
Activities
Transnational Access
Results
News
WP3 – Access to Research Infrastructures for Accelerators
WP1 – Project management and coordination
WP2 – RIs for Nuclear Physics
WP3 – RIs for Accelerators
WP4 – RIs for Detectors
WP5 – Open, Diverse and Inclusive Science
WP6 – Ethic requirements
Service Improvements
Coordinator Ilias Efthymiopoulos (CERN)
This activity aims at providing TA to a broad spectrum of installations, to test concepts for future accelerators, based on improving the present facilities, and for R&D studies for future colliders like CERN/FCC or the Muon Collider.
These facilities will provide beam lines for testing advanced accelerator materials, superconducting or normal Radio-Frequency cavities, magnets and acceleration schemes. These tests use different particles and energies (low-energy protons, low-energy electrons, ultra-soft electron bunches and high-intensity high-energy electrons and could also have connections to industrial applications.
WP Goals
Extend participation and include the leading facilities involved in Accelerator R&D in Europe
Maintain and further strengthen the collaboration, exchange of information, and knowledge between the facilities and the User Community
Support the User Groups in their Research – provide expert help exploit the full capabilities and extract the maximum scientific outcome from the facilities
With targeted service improvements, enrich the possibilities of the facilities to the profit of the Users
Fertilize synergies between the research communities and applications
Support ongoing R&D efforts in the Present and Future Accelerators
Targeted Outreach & Training activities to attract new (or to be) Researchers in the Field of Accelerators
TASKS
Task
Task Name
Subtasks/Activities
Task Leader
3.1
Material testing
Test of materials with high-intensity proton and ion beams
Nikolaos Charitonidis (CERN)
3.2
Technology Infrastructures
Testing of superconducting magnets, superconducting and normal RF cavities, and associated material and mechanics
Sylvie Leray (CEA)
3.3
Electron and plasma beams
Testing of instrumentation, beam optics, RF equipment, accelerator components with low-medium energy proton and electron beams. Testing of new acceleration concepts and instrumentation in electron beamlines driven by PW and TW-lasers
Anthony Gleeson (UKRI)


About
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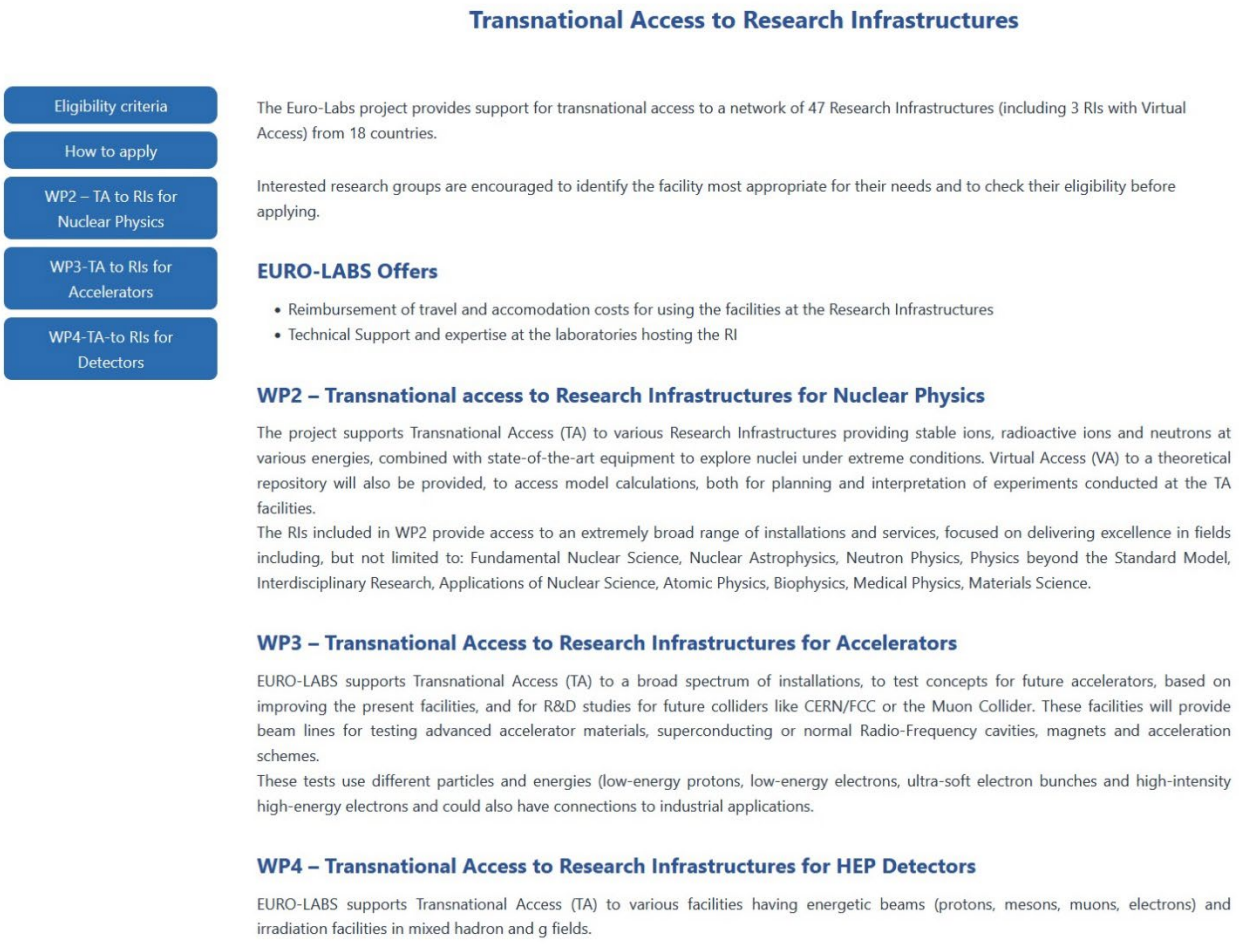
WP 5 – Open, Diverse and Inclusive Science
WP1 – Project management and coordination
WP2 – RIs for Nuclear Physics
WP3 – RIs for Accelerators
WP4 – RIs for Detectors
WP5 – Open, Diverse and Inclusive Science
WP6 – Ethic requirements
Service Improvements
Coordinator María José G. Borge (CSIC)
Euro-Labs through its WP5 will enhance the users diversity (Task 5.1), bring the nuclear physics community into the EOSC (European Open Science Cloud) framework, develop services to enhance FAIR (Findable, Accessible, Interoperable and Reusable) data principles (Task 5.2), promote the use of machine learning (ML) methods to improve beam quality, transport efficiency and accelerator reproducibility (Task 5.3), and train young generations to make the European facilities better performing and more competitive (Task 5.4).
WP Goals
Foster the users diversity by engaging people of different nationalities, gender, age and level of expertise
Enhance communication on project opportunities and dissemination of the project results
Enhance the competitiveness of our research infrastructure and its technical capabilities
TASKS
Task
Task Name
Subtasks/Activities
Task Leader
5.1
Diversity & Dissemination
Provide and maintain the project webpage
Provide regular exchanges by the newsletter
4 min videos of all infrastructures involved
Communication in different media to better reach the public
Paolo Giacomelli (INFN)
5.2
Open NP: A portal for NP Data and tools
Open Science desk
Develop a Data Management Plan
Develop of an Open NP catalogue of data sets and tools and an associated Open Science Desk
Integrate the Nuclear physics community to existing infrastructures and services of EOSC environment
Antoine Lemasson (GANIL/CNRS)
5.3
Machine Learning
Provide a ML optimizer toolkit for beam control and optimization of friendly use and that it can be applied at different facilities to improve performances
ML will also be used for the source of the laser-driven accelerators will the same spirit
Sabrina Appel (GSI),
co-responsible Sandrine Dobosz (CEA)
5.4
Training
Enhance the competitiveness of our research infrastructure and its technical capabilities by training researcher and technical personnel both at the basic and advanced level providing hands-on courses in our facilities
Livius Trache (IFIN-HH),
co-responsible Maria J.G.Borge (CSIC)

3.3 TRANSNATIONAL ACCESS

The section on Transnational access is very important not only for the information on the facilities, but also for providing the details and procedure on how to apply for it. The first page summarizes the support given by the project and what kind of installations and services are provided by the RIs of each pillar. It also gives a shortcut to the TA pages for WP2, WP3 and WP4.

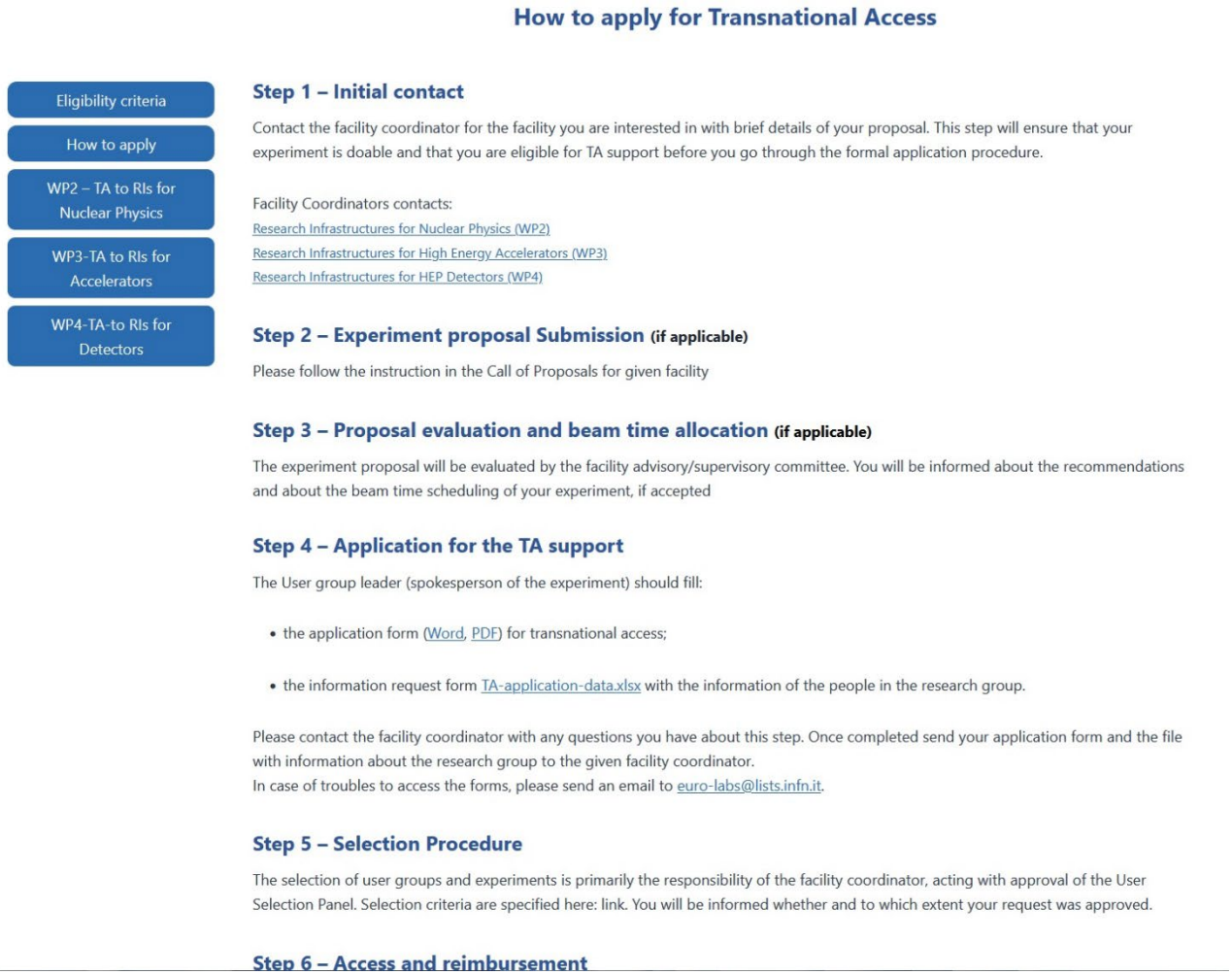


3.3.1 Eligibility Criteria

This page outlines the eligibility criteria for TA, according to the Art.18 of the Annex 5 of the Horizon Europe Grant Agreement (HE Access to research infrastructure), with a link redirecting directly to the article.

3.3.2 How to apply

In this page interested users can find operational guidelines on how to apply for TA and can download the application forms.



How to apply for Transnational Access

Eligibility criteria

How to apply

WP2 – TA to RIs for Nuclear Physics

WP3-TA to RIs for Accelerators

WP4-TA-to RIs for Detectors

Step 1 – Initial contact

Contact the facility coordinator for the facility you are interested in with brief details of your proposal. This step will ensure that your experiment is doable and that you are eligible for TA support before you go through the formal application procedure.

Facility Coordinators contacts:
Research Infrastructures for Nuclear Physics (WP2)
Research Infrastructures for High Energy Accelerators (WP3)
Research Infrastructures for HEP Detectors (WP4)

Step 2 – Experiment proposal Submission (if applicable)

Please follow the instruction in the Call of Proposals for given facility

Step 3 – Proposal evaluation and beam time allocation (if applicable)

The experiment proposal will be evaluated by the facility advisory/supervisory committee. You will be informed about the recommendations and about the beam time scheduling of your experiment, if accepted

Step 4 – Application for the TA support

The User group leader (spokesperson of the experiment) should fill:

- the application form (Word, PDF) for transnational access;
- the information request form TA-application-data.xlsx with the information of the people in the research group.

Please contact the facility coordinator with any questions you have about this step. Once completed send your application form and the file with information about the research group to the given facility coordinator.
In case of troubles to access the forms, please send an email to euro-labs@lists.infn.it.

Step 5 – Selection Procedure

The selection of user groups and experiments is primarily the responsibility of the facility coordinator, acting with approval of the User Selection Panel. Selection criteria are specified here: link. You will be informed whether and to which extent your request was approved.

Step 6 – Access and reimbursement

Applications can be sent to the Facility Coordinators contacts listed on the following pages.

3.3.3 Facilities offering Transnational Access (WP2-Nuclear Physics; WP3-Accelerators; WP4-Detectors)

A dedicated page for each pillar provides information on the research infrastructures:

Type of access, type of beam or service provided, links to the access provider and/or to the facility, country, facility coordinator contact.

Transnational Access

Eligibility criteria

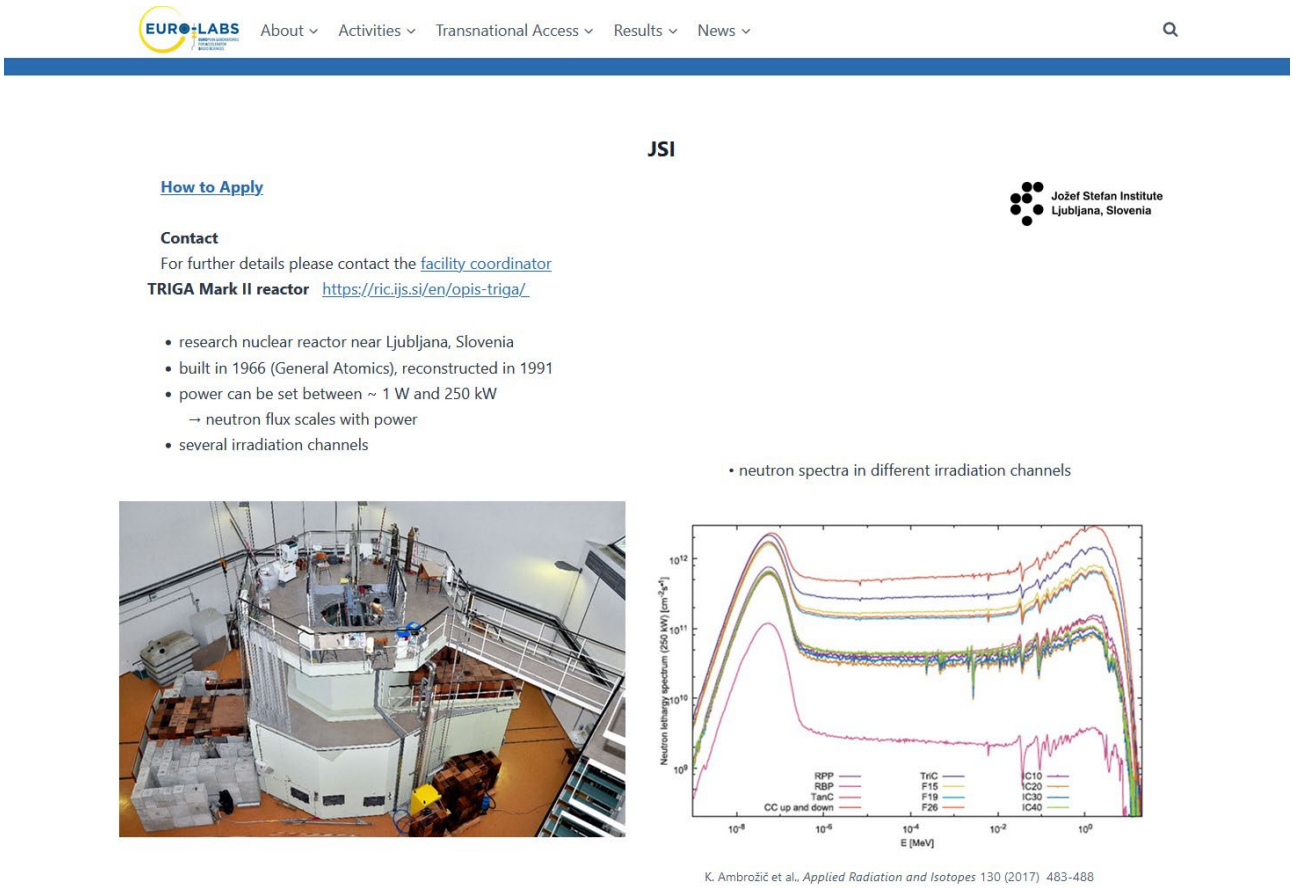
How to apply

WP2 – Transnational access to Research Infrastructures for Nuclear Physics

This activity aims at providing Transnational (TA) Access to various Research Infrastructures providing stable ions, radioactive ions and neutrons at various energies, combined with state-of-the-art equipment to explore nuclei under extreme conditions. Virtual access (VA) to a theoretical repository will also be provided, to access model calculations, both for planning and interpretation of experiments conducted at the TA facilities.

Type of access	Type of beams / Theory support	Access provider	Infrastructure	Country	Facility Coordinator Contact
TA	Stable ions, Radioactive ions and neutron beams	INFN	LNL Legnaro	Italy	Tommaso Marchi
TA	Stable ions, Radioactive ions and neutron beams	INFN	LNS Catania	Italy	Alessia Di Pietro
TA	Stable ions, Radioactive ions and neutron beams	GANIL	GANIL-SPIRAL2	France	Emmanuel Clement
TA	Stable ions, Radioactive ions and neutron beams	IJCLab	ALTO	France	Jonathan Wilson
TA	Stable ions and Radioactive ion beams	GSI	GSI/FAIR	Germany	Yvonne Leifels
TA	Radioactive ion beams	CERN	ISOLDE	International Organisation	Sean Freeman
TA	Neutron beams	CERN	n-TOF	International Organisation	Alberto Mengoni
TA	Stable ions and Radioactive ion beams	U. Jyväskylä	JYFL	Finland	Paul Greenlees
TA	Stable Ion beams	U. Warsaw	NLC-SLCJ	Poland	Paweł Napiorkowski
TA	Stable Ion beams	IFJ PAN	NLC-CCB	Poland	Maria Kmiecik, Adam Maj
TA	Stable Ion beams	IFIN-HH	Tandem	Romania	Constantin Mihai
TA	Stable Ion and neutron beams	USE	CLEAR	Spain	Joaquin Gomez Camacho
TA	Stable Ion and neutron beams	ATOMKI	CLEAR	Hungary	Sandor Biri
TA	Stable Ions	IST	CLEAR	Portugal	Victoria Corregidor Berdasco
TA	Theory support	ECT*	ECT*	Italy	Gert Aarts
VA	Theory support	IFJ PAN	Theo4Exp/MeanField4Exp	Poland	Jerzy Dudek Piotr Bednarczyk
VA	Theory support	USE	Theo4Exp/Reaction4Exp	Spain	Manuela Rodriguez Gallardo

When there is no link describing the structure, some specific pages have been prepared on the site in collaboration with the Facility Coordinators (work in progress) e.g. https://web.infn.it/EURO-LABS/jsi-triga-ii/.



3.4 RESULTS

This section shows all the project results. On the main page both Deliverables and Milestones are sorted by timelines for their completion. Deliverables and Milestones are also listed separately in the dedicated pages.
As they are reached, related reports and documents are stored in a dedicated repository (Owncloud INFN). All the documents without confidential content are available from links on the pages of this section.

Project Results

Deliverables

Milestones

Deliverables are additional outputs (e.g. information, special report, a technical diagram brochure, list, a software milestone or other building block of the project) that must be produced at a given moment during the action. Deliverable reports will be written and publicly accessible from this page and the deliverables page.

Milestones are control points in the project that help to chart progress. They may correspond to the completion of a key deliverable, allowing the next phase of the work to begin or be needed at intermediary points. Throughout the project, milestones or checkpoints indicate the success of the project's progress. The full list of milestones is available on this page as well on the milestones page, including reports where relevant.

YEAR 1 (Sept 2022 – Aug 2023)

DELIVERABLES

D#	Deliverable Name	WP	Task	Due month	Delivery date (expected/actual)	Status	Comments
D1.2	Website ready	WP1	1.1	6	28 Feb 2023		
D5.7	Data Management Plan	WP5	5.2	6	28 Feb 2023	Achieved	Data Management Plan
D6.1	Ethics – OEI – Requirement No. 1	WP6	6.1	6	28 Feb 2023		Confidential

MILESTONES

MS#	Milestone Name	WP	Task	Planned Delivery month	Delivery date (expected/actual)	Status	Comments
MS1	Consortium Agreement signed	WP1	1.1	1		Achieved	
MS13	Production of a report to define the state of the art in the field (targets for NP) and collect the requests from the community	WP2	2.5	3	12 Dec 2022	Achieved	Report on the state of the art of target activities for Nuclear Physics
MS2	Preparation of calls for submission of proposals to stable beam access facilities completed	WP2	2.1	6	28 Feb 2023		

3.5 NEWS

This section shows project news, events (e.g. annual meetings), talks and publications.