VIPERLAB

FULLY CONNECTED **VI**RTUAL AND **P**HYSICAL P**ER**OVSKITE PHOTOVOLTAICS **LAB**

D 3.7

Catalogue of services and policies

in the VIPERLAB portal

DELIVERABLE REPORT

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FULLY CONNECTED VIRTUAL AND PHYSICAL PEROVSKITE PHOTOVOLTAICS LAB VIPERLAB

DELIVERABLE

D 3.7 CATALOGUE OF SERVICIES AND POLICIES IN THE VIPERLAB PORTAL

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DISCLAIMER

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EXECUTIVE SUMMARY

VIPERLAB project has set the goal to stimulate European academic and industrial researchers to work together on the research and development of the next generation of solar cell technology. To fulfil this, several joint research, transnational access, and networking activities are now in progress in VIPERLAB, all aiming at consolidating the efforts of the perovskite community. For the visibility of VIEPERLAB's actions, as well as to support the transnational access and networking activities, we have created different yet complimentary platforms dedicated to several purposes: project website (PWS), a knowledge exchange platform (KEP), one entry platform for proposal submission (GATE), and platform for virtual infrastructures (VAPO). In this report we present a catalogue of services and policies of these four VIPERLAB platforms.

1. INTRODUCTION

The VIPERLAB website/webpage is the portal where anyone will be able to view general information and updates about the project. More detailed and specialised information about VIPERLAB and partners, including perovskite technology, open access output generated within the VIPERLAB project, description of VIPERLAB infrastructure(s), contacts and educational content will be provided on the VIPERLAB knowledge exchange platform (KEP). VIPERLAB Virtual Access Portal (VAPo) is the platform created to provide researchers world-wide the opportunity to access research infrastructures virtually and to give access to openly available resources such as databases, realtime data, or simulation platforms. On the VIPERLAB-GATE, users in and outside of Europe can submit their experiment proposals and gain access to one of the VIPERLAB infrastructures.

2. VIPERLAB WEB SITE (PWS)

The VIPERLAB website is the main landing/take off web area for all communication and dissemination activities. It manages and proposes the link between all the other platforms (GATE, KEP, VAPo), and thus with the support from the KEP and VAPo it will be the most important online repository for the project's technical/scientific content. The project website will be mainly used as a central communication platform providing a very efficient communication and with high-level link to other web-based platforms with a more dedicated scope.

The VIPERLAB Project web site (PWS) serves as the main gateway to resources and information to a wide range of web users including infrastructures' users, academia and scientific communities, industry, stakeholders, audiences at large, media, citizens, as well as the project partners. It acts as a public and open-access repository system since most of the communication tactics will aim to drive traffic to the project web site for its very efficient communication impact, but it will also serve as the landing/take off platform assuring a very efficient management of any other more specialized technical/scientific information offered to the web users by all other platforms of the project (KEP, VAPo, GATE).

The main goal and objectives of VIPERLAB PWS are to:

- Inform and raise awareness about VIPERLAB consortium, project, and its objectives to create wide-spread visibility of the project scope of work and goals.
- Spread information on technological breakthroughs, methods, and results for educating and stimulating further research or exchange knowledge.



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- Disseminate project information and data on industrial applicability and exploitability of the results to the market stakeholders and industry.
- Establish two-way communication with relevant market stakeholders to create favourable conditions for wider uptake towards the end of the project.

The project web site (PWS) platform <u>https://www.viperlab.eu/</u> is structured as follows:

• About us

- Goals and objective
- Consortium (15 partners)
- Description of each member of the consortium with details of infrastructures available for VIPERLAB and key person involved in the project

• Apply for access

- Procedures: Proposals, Drafting, submission & evaluation, Terms & Conditions The user/user group declares to accept the following:
 - i. With respect to the submission of proposals within VIPERLAB project, the Selection Panel has the right to evaluate and rank the users' proposals as they view best fitting the established evaluation criteria
 - ii. The decisions of the Selection Panel are final and non-negotiable. Inquiries or disputes surrounding the decisions of the committees will not in any way be considered
 - iii. By submitting an application or any request or by entering the premises of any VIPERLAB Access Provider, the user/user groups agree to the present Terms and Conditions as stated above
 - iv. The user/user groups confirm and certify that all information provided to VIPERELAB is true and accurate, and that they undertake to respect all VIPERLAB, EC and national rules and regulations, also in point of safety rules
 - v. The user declares that none of the user group members is individually involved in providing access in the frame of the VIPERLAB project

Revisions to Terms of User Agreement VIPERLAB consortium may revise at any time the terms of this Agreement without notice

- Infrastructure catalogue
 All infrastructures -> specific infrastructure -> link to the infrastructure in KEP
- GATE VIPERLAB Access. Link to GATE

• Joint Research & Networking activity

The platform proposes a brief description of Joint Research Activity (JRA) and Networking Activity (NA) by leaving to the specialised platform (KEP, VAPo) a deeper description.

- Media
 - News
 - Documents
 - Events

An involved team is regularly improving the platform to include more efficient link to KEP & VAPo.





To summarize, these are the services and policies currently offered by VIPERLAB-PWS:

Services	Policies
i. Description of the projectii. Description of the submission procedureiii. Infrastructure catalogue	Privacy policy of VIPERLAB-PWS https://www.viperlab.eu/privacy.html https://www.enea.it/en/note-legali

3. KEP - KNOWLEDGE EXCHANGE PLATFORM

The VIPERLAB Knowledge Exchange Platform (KEP) is based on a very deep implementation of CHEETAH KEP (https://www.cheetah-exchange.eu/), by including new tools and improved procedures. The VIPERLAB KEP platform has been developed, based on an SQL-structured Query Language and Dynamic Database Management System (RDBMS), and it is integrated into the project website to complement it with information more easily managed and proposed by technical/scientific personnel resources.

It is based on a Content Management System (CMS) Platform and offers opportunities to easily create and upload web content. The use of standard and customized web pages. and dynamic links with all available information (organization, expert info, infrastructure, equipment, PV technologies and RTD topics, documents, files, photos, etc) makes time saving and effective the communication and the info uploading.

However, this platform runs independently, to avoid that the VIPERLAB Website would slow down. VIPERLAB KEP mainly focusses on using tools and procedures to foster discussion, disseminate information, create databases, and offer educational content to scientist, students, stakeholder more than the generic and static communication left on the Project Web Site, where a specialized C&D team optimizes the impact of communication for the general public. The two teams working on KEP & PWS are integrated in the same organization and this allows an effective interface to optimize the sharing and specialization choices of the two platforms

The detailed description and access procedures to all infrastructures offered via VIPERLAB as well as information on ongoing and finalized user projects is available on KEP. Content disseminated via the KEP platform include on-line courses and webinars of tasks NA2.4.

Dynamic benchmarking is used to monitor the intensity in knowledge exchange as well as its impact within the VIPERLAB Consortium and on external users. This will provide useful indications about which main topics are addressed to the R&I and Industry community.

To avoid the proliferation of personal data repositories, KEP Platform operates as the login-platform for both KEP and VAPo, ant it is the only platform within PWS, KEP, VAPo, GATE offers the project members personal information and contacts,

VIPERLAB Knowledge Exchange Platform <u>https://www.viperlab-kep.eu/</u> has the following content:

• Description of the project

- Goal & Objectives
- VIPERLAB Consortium
- Associated Organizations
- VIPERLAB Scientists/Experts
- VIPERLAB Advisor Board
- Details on the submission procedure and infrastructures
 - Apply for access



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- Infrastructures catalogue
- Scientists/Experts
- Learning
 - Courses & schools
 - Webinars
 - PV Accademy
- Events

Conferences, Workshops, Technical meetings

- News
- Viperlab Newsletter
- Viperlab subscription (KEP, mailing list, newsletter, etc)
- Login

A unified platform to register in

- VIPERLAB-KEP Knowledge Exchange Platform
- VIPELAB-VAPo Virtual Access Point Platform

Possibility to subscribe to the News mailing list and Newsletter

On request: deletion of user accounts and personal user data

Specific account

Required fields: Email, Title, First Name, Surname, Gender, Nationality, Professional network (mandatory to register on VAPO platform), Partnership, Organisation short name, Type organization, Main area of business, Your Role, Town, Country.

To summarize, these are the services and policies currently offered by VIPERLAB-KEP:

Ser	vices	Policies
i. ii. iv. v. vi. Exper vii. and/o viii.	Project description Submission procedure description Infrastructure catalogue Learning Communication Contact with organizations, Infrastructures, rts Create a single account for KEP and/or VAPO r news mailing list and/or newsletter Subscribe to news mailing list and/or	Privacy policy of VIPERLAB-KEP https://www.viperlab-kep.eu/privacy.asp
newsl ix.	Deletion of user accounts and un-subscription	

In comparison to other VIPERLAB platforms, VIPERLAB-KEP covers several specific possibilities:

- I. A dedicated section is proposed for the management of events and webinars offering a complete catalogue of tools for the: Communication & dissemination of the information about the event.
- II. Registration procedure with automatic management of registration deadline and online messages.
- III. Detailed technical information for speakers and participants (for the online events).
- IV. Access to the event output (video, slides, documents, etc) offering different right to access depending on the communications needs for each event and the confidentially of proposed



information (web user/Public | Registered User on KEP platform | Associated Partners | EERA-PV member | Project Members | customized and Restricted list of users).

		VIPE	fui Erlab	LY CONNEC PEROVSK Knowle	TED VI RTUA ITE PHOTOV(edge E xchang	L and PHYS DLTAIC LAB ;e P ortal	SICAL	
the Pro	ject 🔻	Infrastructures V	Technologies 🔻	Research 🔻	Networking v	Learning v	Events	News
home > webinars						highlights	in this page	
Webinar About Based on the fruitful continuing to offer o organization, particul W Comprehensiv W A presentation expertise By collecting and pro courses named VIPEF	to access T results and n-line in-dep arly students e information n on several posing the v RLAB Virtual	Technical info Contacts experiences of <u>SOPHi@W</u> oth training and discussion and resarchers at their ea n and transfer of knowldeg outstanding technical-sci whole set of lectures as Academy courses.	ebinar the internal e-lea is to all VIPERLAB membe rly stage of their career or e on different R&D topic co ientific results highlightin complete "virtual" course	rning platform of 7FF rs by targeted course 1: oncering Joint Resear g the potential in u s in PV organized by	D-SOPHIA project and <u>CH</u> s/seminaries open, on re ch Activities tilizing the infrastructur v topics in dedicated spectrum	IEETAH webinar Plat equest, to any interes re/technique/scientif ecific web CHEETAH	form , VIPERLAR ted external univ ic protocols and KEPT-PV offers	3-KEP platform i versity or research I sharing commor new set of on-lin
Search	binars Fraunho Start da	ofer & EPFL/CSEM Resear Ite Nov, 30 th 2022	ch Infrastructures for the	Peroskite PV				
Transford Transf	H2020 V cover th devices FRAUN	VIPERLAB Project offers fre e whole innovation/value of and modules. Today we pre HOEER Solar Cell Manufact	ee access to the state-of-t chain from material prepara esent two very relevant VII	he-art perovskite EU ation to characterizat PRLAB research Infasi	infrastructures that ion of perovskite tructures:			

Figure 1. Screenshot of the VIPERLAB-KEP page dedicated to events.

A new release a of the KEP is planned to being finalized and running end of December 2022 and will propose new and advanced features:

- Optimized pages with the description of the infrastructures, including detailed description of the laboratories and equipment.
- Improved Expert profiles; with associated keywords (PV Technologies, PV RTD tags and Equipment).
- Advanced access to technical and scientific documentation including different access rights as above ((web user/Public | Registered User on KEP platform | Associated Partners | EERA-PV member | Project Members | customized and Restricted list of users)
- contact requests by Innovative management and ticketing procedures to evaluate statistics and effectiveness in satisfying.

4. VAPo - VIRTUAL ACCESS PORTAL

VAPo provides a single access online platform to providers of VIPERLAB virtual infrastructures and external users and stakeholders. The platform facilitates exchanging and using databases on characteristics and performance of different perovskite materials and devices and on modelling and





simulation results together with data analysis tools. Besides, details on virtual (VA) infrastructure access are provided on this platform.

The main objectives of VAPo platform are:

- Creation of a single entry-point online platform for easy virtual access to the project's databases, simulation, and data analysis tools.
- Improvement of the access to knowledge-based resources of the project (databases, archives, structured scientific information, simulation software, etc.).
- Through networking activities (NA) in VIPERLAB, create visibility for knowledge-based resources of the project and actively pursue and solicitate the use of these resources by external scientists.
- Support scientific communities in their access to knowledge-based resources of the VIPERLAB project and guide them to other web-based resources.
- Ensure that data collected and generated under the TNA, JRA and NA activities are collected in the projects "meta-database" and made available to internal and external users of VIPERLAB.
- Create a meta-database, VIPERDAT, including valuable information related to characterization, stabilization, ageing, environmental... depending on Perovskite PV device configuration.

Specifically, VAPo mainly provides access to this information:

- Contact information and usage details of the virtual infrastructures offered in the project.
- Access to GATE which is the platform designed to manage user proposals for access of infrastructures, physical and virtual.
- A list of all approved, ongoing and finalized projects at VIPERLAB infrastructures.. Upon decision of VIPERLAB external users, also all data and reports/publications related to their project will be made available through VAPo/KEP.
- Access to the VIPERLAB meta-database "VIPERDAT", which captures a description and experimental outcomes of samples and devices investigated at VIPERLAB facilities.

Regarding the scheme of VAPo platform, <u>http://www.viperlab-vapo.eu/</u>, it is currently divided in these sections:



To summarize, these are the services and policies currently offered by VIPERLAB-VAPo:

Services F	Policies
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Submi	ission procedure description	
i.	Virtual Infrastructure catalogue	
ii. Simulation tools available		Privacy policy of VIPERLAB-VAPO
iii.	VIPERDAT	
iv.	Table of experiments already granted in	
VIPEF	RLAB project	

It should be noted that this platform is now under development to better support the users of the VIPERLAB project. To this end, work is now underway to incorporate access to the VIPERDAT metadatabase and information on the options available in terms of simulation software for modelling perovskite-based solar photovoltaic devices.

5. GATE - GENERAL ACCESS TOOL TO THE EXPERIMENTAL INFRASTRUCTURE OF HELMHOLTZ-ZENTRUM BERLIN (HZB)

On the VIPERLAB-GATE, users in and outside of Europe can submit their experiment proposals and gain access to one of the VIPERLAB infrastructures. By implementing physical and virtual instruments across Europe from 13 VIPERLAB partners on the VIPERLAB-GATE, we have created a barrier-free environment for proposal authors, instrument scientists and external reviewers, allowing for transparent and documented proposal submission, evaluation and granting as well as planning, execution, and reporting of experiments.

The proposers will find more about the call, VIPERLAB-GATE platform and VIPERLAB infrastructures as follows:

- on the www.viperlab.eu webpage and VIPERLAB's Knowledge Exchange Platform (KEP) the call is announced.
- also there, potential users are invited to learn about the types of infrastructures, host institutions, instrument scientists, and experiment possibilities.
- contact details of the instrument scientists are also provided for users to discuss about their ideas of experiment/proposals.
- after choosing the instrument, the user is suggested to access the VIPERLAB-GATE link for a proposal submission.

https://www.helmholtz-berlin.de/pubbin/hzbgate?MID=4;NJOB=start

Specific account: Required fields: Email, Name Surname, Birthday (Day, Month, Year), Place of birth, Citizenship, Gender, Status (experienced researcher, post-Doctoral researcher, Post-Graduate, Technician, Undergraduate), scientific preference(s) (Chemistry, Engineering Industry, Material Sciences, Others, Physics) Organisation/Institute, Department, ZIP/City, Country, Phone, Info mail (yes/no), Acknowledgement: Privacy Policy of VIPERLAB-GATE.

List of infrastructures is a commonly shared document by <u>Viperlab website</u>, <u>KEP webpage</u> and <u>GATE-VIPERLAB platform</u>.

To summarize, these are the services and policies currently offered by GATE platform:



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Serv	rices	Policies
i.	Create user account and storage of personal user	
	data	
ii.	Create referee account and storage of personal	
	referee data	
iii.	Proposal submission and storage of detailed	
	proposal information	Privacy policy of VIPERI AB-GATE
iv.	Proposal assignment (to referees)	
v.	Proposal evaluation (referee has access to	link
	proposal information but not to personal user	
	data)	
vi.	Collect and store reports of granted proposals	
vii.	User Manual	
viii.	On request: deletion of user accounts and	
	personal user data	

6. RESUMING TABLE

To graphically summarize the interaction between the four VIPERLAB platforms, the following scheme and table is proposed:



Figure 2 - Scheme of the interconnections between the four VIPERLAB platforms.

A dedicated webpage on the PWS containing the above scheme and table below will be soon created aiming at guiding the web users through the various platform used in VIPERLAB.





Resuming table of the four VIPERLAB platforms

	Platforms			
	<u>PWS</u>	<u>KEP</u>	VAPO	GATE
Access	Free	Free/restricted	Free/restricted	Restricted
Details about Project and Consortium partners	Yes	Yes + Scientists/Experts + Advisor Board	No	No
Details about proposal submission	<u>Yes</u> <u>video tutorial</u>	<u>Yes</u>	<u>Yes</u>	No Yes: Specific details about the registration and submission on GATE (<u>user</u> manual)
Infrastructure Catalogue	<u>Yes</u>	Yes There are some mismatches with PWS and GATE lists	Yes Only related to Virtual infrastructures	No Links to WPS and KEP. In the restricted area there is a <u>pdf</u> document
Terms & conditions	Yes	Yes	No	No
News	<u>Yes</u>	<u>Yes</u>	No	No
Courses & Schools	No	Yes	No	No
Webinar	No	Yes	No	No
Events	No	<u>Yes</u>	No	No
Login	No	Yes Dedicated webpage Provide access also to VAPO and to subscribe to mailing list and newsletter	Yes Shares the same login access with KEP	Yes It is the main webpage
News mailing list	No	Yes Subscription	No	No
Newsletter	No	Yes Subscription	No	No
Privacy policies	Yes <u>Privacy</u> <u>Legal notice</u>	Yes <u>Privacy Policy</u>	Yes	Yes <u>Privacy Policy of</u> <u>VIPERLAB-</u> <u>GATE</u>
Contacts	info@viperlab.e <u>u</u> webmaster@vi perlab.eu	info@viperlab.eu webmaster@viper lab.eu	ezugasti@cener.c om	<u>gate-</u> help@helmholtz- berlin.de





	Interconnections				
Direct link to PWS	-	Yes	Yes	No	
Direct link to KEP	No	-	Yes	No	
Direct link to VAPO	No	No	-	No	
Direct link to GATE	No/ <u>Yes</u>	No/ <u>Yes</u>	Yes	-	
	<u>PWS</u>	<u>KEP</u>	VAPO	<u>GATE</u>	





7 CONCLUSIONS

In this report the catalogue of services and policies offered by the VIPERLAB platforms (PWS, KEP, VAPo, GATE) are described. For each platform a specific role has been designated based on the target audience. To this aim, the task of menage of each platform has been assigned to team of experts with appropriate skills ranging from general dissemination purposes up to specific expertise on a particular experimental set up.

The VIPERLAB principal website/webpage (PWS) is the portal where anyone will be able to view general information and updates about the project. Therefore, the team that menages the website is specialised in communication and dissemination activities. More detailed information about VIPERLAB project is provided on the VIPERLAB knowledge exchange platform (KEP). Where is also possible to have more specific information about partners, perovskite technology, infrastructures and their contacts, and educational content. For this reason, KEP is managed by a team of experts with more specific expertise on Perovskite technology and dissemination skills. VIPERLAB Virtual Access Portal (VAPo) is the platform created to provide researchers world-wide the opportunity to access research infrastructures virtually and to give access to openly available resources such as databases, real-time data, or simulation platforms. So, the team must direct and address users versus virtual infrastructure and also to GATE. On the VIPERLAB-GATE, users in and outside of Europe can submit their experiment proposals and gain access to one of the VIPERLAB infrastructures. Therefore, its team must manage the submission and evaluation process of proposals.

In the future, further improvements will be made on the platforms to make them more efficient and trying to avoid overlaps.

