PANTERA
Pan European Technology Energy Research Approach

Work Package 1
Project coordination and management

Deliverable D1.7
Project progress report

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Table of contents

Abbreviations

CSA	*Coordination and Support Action*
Del	*Deliverable*
DER	Distributed Energy Resource
DG ENER	*Directorate General Energy*
DOA	*Description of Action*
EERA	*European Energy Research Alliance*
EIRIE	*European Interconnection for Research Innovation & Entrepreneurship*
ENTSO-E	*European Network of Transmission System Operators for Electricity*
ERA SES	*European Research Area Smart Energy Systems*
ETIP SNET	*European Technology & Innovation Platform for Smart Networks for the Energy Transition*
EU	*European Union*
EUSEW	*European Union Sustainable Energy Week*
GA	*Grant Agreement*
IEA	*International Energy Agency*
IEC	*International Electrotechnical Commission*
IES	*Integrated Energy System*
ISO	*Independent System Operator*
ISGAN	*International Smart Grid Action Network*
JRC	*Joint Research Centre*
KPI	*Key Performance Indicators*
MS	*Milestones*
NECP	*National energy and climate plans*
PC	Project Coordinator
PO	*Project Officer*
R&D	*Research & Development*
R&I	*Research & Innovation*
RICAP	*R&I status and Continuous gAP analysis*
S3P or RIS3	*Smart Specialization Platform*
SG	*Smart Grids*
SWOT	*Strengths, weaknesses, opportunities and threads*

TCP   *Technology Collaboration Programmes*

T&D   *Transmission & Distribution*

WG   *Working Group*

WP   *Work Package*

WT   *Working Team*

Executive Summary

The purpose of the Technical Report 2 document is to provide a detailed description of the status of PANTERA project from M18 to M36, the work completed as well as the activities planned for the next period.

During the third project year, substantial technical, scientific and dissemination activities have been initiated with very good progress achieved, completing all deliverables and milestones foreseen for this period. This notable progress has been achieved thanks to the active involvement of all PANTERA partners in the project & foreseen activities, their close collaboration, and the efficiency of the established by the consortium monitoring and management procedures. The work plan has been structured to allow a logical progression of the needed activities, to closely follow the objectives, and aligned with the methodology proposed in the Description of Action. For improved coordination and coherence, the activities of the PANTERA project have been categorized under the main three functions of the project: the platform, the regional desks and the working teams while keeping the structure of WPs and the foreseen efforts as described in the Grant Agreement.

To this effect all work packages continued their activities constantly contributing to these three functions as follows, in addition to the coordination responsibilities that WP1 has undertaken, led by the team of the Coordinator:

- EIRIE(PANTERA) platform: WP2, WP3, WP7, WP8, WP5

- PANTERA Regional Desks: WP2, WP4, WP6, WP5

- PANTERA Working Teams: WP2, WP3

The adaption of this approach has constantly being evaluated to make sure that the targeted objectives of the PANTERA project are addressed, aiming to achieve a working environment through which the effort put in raising the activities of the low activity countries to a direction of being more sustainable, is constantly enriched through the adapted mode of working.

As already indicated, the above identified important functional activities are the basis of the Pantera Process constantly supported by the activities of all work packages during the course of the project and complemented with external support where needed to substantiate their long-term sustainable future. To this effect working relations have been pursued and grown to a satisfactory level with the following:

- JRC and DG Ener have agreed to a formula of supporting the operation of the interactive multifunctional platform by hosting it on their servers and provide a service contract through the services of DG Ener to support and operate the platform following the completion of the PANTERA project. This activity is being unfolded during the last months and the EIRIE platform as it is called now is up and running (www.eirie.eu)

- The S3P smart specialisation platform operated by the Commission has welcomed working relations with the PANTERA consortium to build and operate 6+1 Regional Desks that cover adequately all countries that are classified as low activity countries. The content that will be hosted under the Regional Desks corner in EIRIE platform is under development by the partners.

- ETIP SNET through the activities of Working Group 5 that has joined forces with the PANTERA consortium to organise and operate an appropriate number of Working Teams capable of addressing important themes that will constantly feed information and knowledge to the interactive multifunctional platform. The outcome of these working Teams are reformulated into content, tools, functionalities and knowledge for the EIRIE platform

The core of this document, describes the overall status of the PANTERA project, including the progress achieved through the deliverables and milestones foreseen within the 18-36M of the project, and the main results achieved under technical, scientific and dissemination & communication perspectives. The progress achieved towards the projects' objectives are also discussed in detail with reference to individual Work Packages (WPs), which have been active during this first review period.

In M36 of the project, all PANTERA WPs are active. In detail, 22 deliverables have been submitted out of the 39 deliverables in total that are foreseen. As for the milestones' status, 7 have been achieved in line with what was expected in this reporting period covered by this report. As for dissemination and communication activities, the PANTERA project was present outreaching several international scientific events, engaging to a good level on networking and dissemination core activities.

Based on the extensive surveys and interactive sessions of the previous reporting period, partners started designing the functionalities and tools that need to be provided by the envisioned EIRIE platform creating knowledge. Through this process, they fine-tune and further enhance the envisaged functionalities of the previous reporting period, so as to ensure the development of a multi-functional platform that offers a wealth of services to the EU Smart Energy Systems R&I stakeholders and can potentially be established as a central reference point and one-stop-shop for knowledge and information at EU level. Regarding the connection with other owners' platforms, projects and other initiatives (ETIP-SNET, BRIDGE, EXPERA, ASSET and EDDIE) that would feed EIRIE, partners have made a good progress in integrating them with EIRIE.

Moreover, this document also describes the activities planned for the next project year, including the deliverables and milestones foreseen for this period.

Finally, a critical assessment of the project progress is presented, by describing the risks already identified during the months 18-36 of the project and those foreseen for the next period, with corresponding status and corrective actions taken and/or proposed. The progress of each WP and the effective activity of the related WP team with reference to this project period is also assessed against a series of internal Key Performance Indicators, by considering both technical and organizational aspects. The activity recorded reveal positive results which are encouraging and pave the way forward.

1 Introduction

The main objective of PANTERA project is to deliver a multi-dimensional platform of pan European status and influence capable of leveraging coherence and trust as a pull towards enhanced R&I in energy systems centred around an integrated grid active and responsive. This platform developed (as described in more detail in section 2.3.2), along the lines of the concept shown in Fig.1, can work for Local Energy Systems in an integrated PAN European Smart Grid with specific emphasis on the low spending countries. This platform brings together the attractiveness of successful partnerships being national, regional or European building through them the will for enhanced adaption to areas and partnerships that can broaden active participation for mutual benefit. From the beginning the element of sustainable presence of the collaborative platform strongly influenced the design and approach that was adapted.
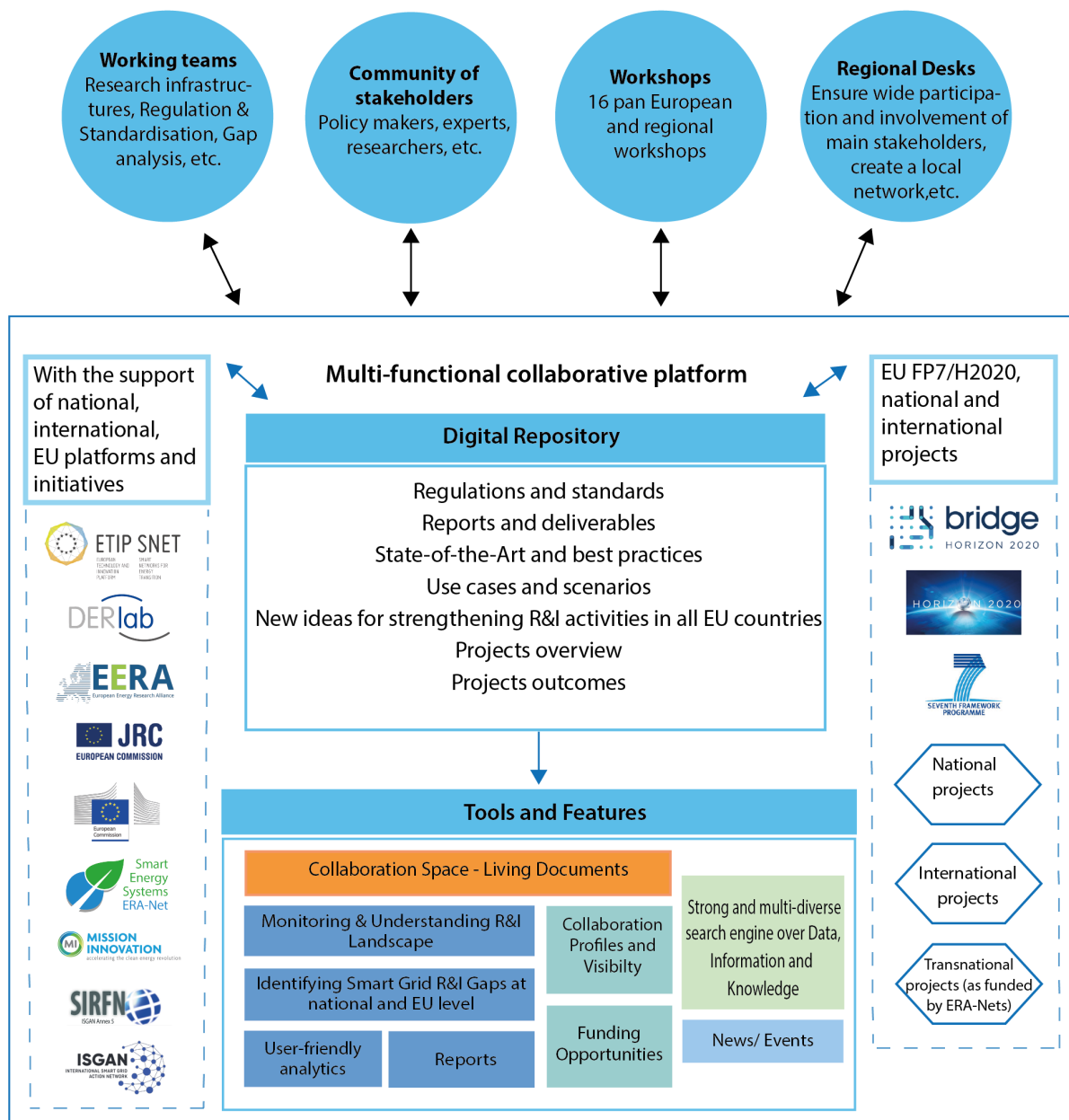

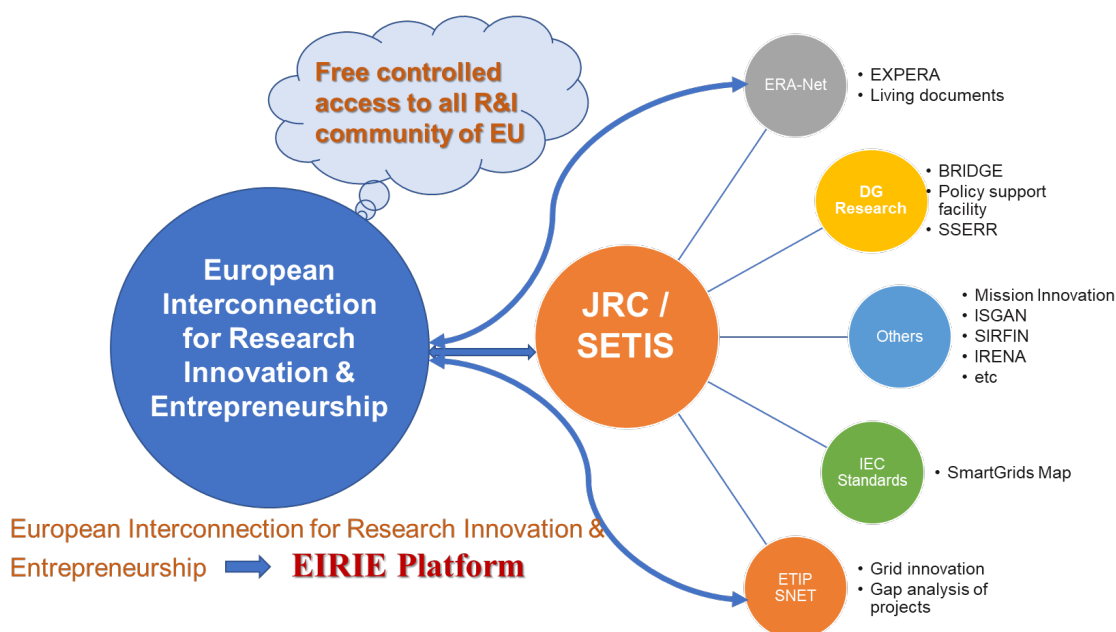*Figure 1 PANTERA proposed collaborative platform*

Figure 2 EIRIE and the other initiatives

Through the collaborative work of the consortium, the EIRIE platform was developed with the support of the external contractor BILBOMATICA, integrating data from different platforms, associations and projects to connect the R&I community of EU to enhance collaboration, wider interest and use on the project results, avoid duplication and lost euros, strengthen the participation of all Member States in support of the fifth pillar of the Energy Union (RIC) and energy transition.

At the same time in order to boost impact and engage stakeholders and users, the PANTERA project is acting through the established PANTERA regional desks and the PANTERA workshops.

The project comprises eight work packages (WP), each of them with a specific measurable objective, as indicated below:

1. Ensure an efficient and smooth coordination of the scientific, organizational and technical activities of the project, as well as its overall administration, covering overall project coordination, organizational, scientific and technical management, administrative, financial and contractual management, quality control procedures, data control and managing risk **(WP1)**

2. Identify and establish communication links with R&I stakeholders active in the fields of smart grids, storage and local energy systems including policy makers, standardisation bodies and experts in both research and academia representing the EU-28 energy system **(WP2).**

3. Develop an innovative top-down and bottom-up approach for effectively identifying the key challenges in accelerating R&I activities in low spending countries **(WP3).**

4. Formalize a governance structure capable of delivering targeted objectives that will bring under the same umbrella all active entities / stakeholders in the field of smart grids / storage and local energy systems to leverage synergies and maximize benefits **(WP6).**

5. Develop enhanced knowledge-sharing mechanisms that help identify, discuss and structure the key R&I challenges **(WP3,4,8).**

6. Build a pan-European multi-functional collaborative platform through which dedicated tools will facilitate the collection of real data / results from on-going projects, build a useful shareable data repository (a virtual stakeholders hub, termed as ViSor-Hub will be developed), capable of supporting case studies of exploitable results, scenario building and local energy system analysis accessible by all interested stakeholders **(WP4,6,7,8).**

7. Organise dedicated workshops which facilitate exchanges of experience and capacities between members of R&I community in collaboration with already on-going activities aiming to wider participation, strengthen objectives and extent impact of achieved results **(WP5).**

8. Develop working groups/teams consisting of stakeholders depending on evolving R&I needs and topics identified in the project for generating results, reports, white papers and offer support where needed **(WP6).**

The mid progress report covering M18-M36 of the project, is a cornerstone document for monitoring the project activities and evaluating the progress achieved towards the technical, scientific and dissemination objectives foreseen for this time period in accordance with the Description of Action (DoA) and some of them detailed above.

At the end of the month 36, all PANTERA WPs are active. Very good progress has been achieved thanks to the active involvement of all PANTERA partners in the project and foreseen activities, their close collaboration, and the efficient monitoring and management procedures established by the consortium. To this effect, the work plan has been structured to allow a logical progression of the needed activities, and has closely followed the objectives and methodology proposed in the DoA of the project. For improved coordination and coherence of the project the activities have been categorized under the main three outcomes of the project: the platform, the regional desks and the working teams.

Until the month 36, 22 deliverables have been submitted out of the 39 deliverables foreseen for the duration of the project. As for the milestones' status, 7 have been achieved that is totally aligned with what was expected for this reporting period. As for dissemination and communication activities, the PANTERA project was present outreaching several international scientific events, engaging to a good level on networking activities and dissemination of core activities even under the pandemic restrictions that were prevailing. The project website and different social media channels have also been active and engaging, sharing all the project's latest news and achievements, with the stakeholders and general public. It is expected that all these aforementioned activities will be further strengthened since these will be organized having the EIRIE platform in the center. It is important to underline the mere fact that Interacting and getting feedback from stakeholders is a key process of the PANTERA project.

The coordination and management activities, as well as most of technical activities, proceeded on time without any significant issues. As for dissemination and communication activities, PANTERA project has established a very satisfactory presence at national and EU level as will be presented in this document.

Plans for the next time period of the project will focus in continuing current activities within the WPs and keep them unfolding. In detail, focus will be given to the deliverables that will be submitted and the identified milestones to be achieved. Of course, as already mentioned, partners will make sure that deliverables' content will feed the EIRIE platform and be a significant part of the info, data and knowledge creation for sharing out with the respective stakeholders throughout the EU with specific emphasis on the low activity countries.

This Mid Progress Report is designed in content to compliment the following:

- The Grant Agreement (GA) including its Annexes, and in particular the Annex 1: Description of Action;

- All the deliverables and related Amendments released during the period [M18-M36];

- All tangible results of PANTERA project stemming from the activities such as the ones related to the Platform, Regional Desks and Working Teams

- The PANTERA website (http://PANTERA-project.eu/), and PANTERA social media platforms (LinkedIn, Twitter, and ResearchGate) with reference to all aspects related to dissemination and communication activities

- The EIRIE platform (www.eirie.eu) and its content

1.1 Purpose and scope of this Document

This Technical Report, falls within the scope of WP1 dedicated to the Coordination and Project Management, and describes the progress achieved by the PANTERA project during the months 18-36 of operation. The main objectives of this report are described below:

- Describing the overall status of the project at the end of M36, including the status of deliverables and milestones;

- Describing in detail the progress achieved under individual WPs;

- Describing the activities planned for the months ahead, including the deliverables and milestones foreseen till the end of the project;

- Presenting a critical assessment of the project progress with reference to the timeline 18-36, through the identification of risks for each WP, with related status and planned mitigation measures;

- Assessing the progress of each WP and the effective activity of the related WP team against a series of internal Key Performance Indicators (KPIs), by considering both technical and organizational aspects.

1.2 Structure of the Document

In the following, the progress of PANTERA project and results achieved within 18-36months are described in Section 2. The activities planned for the next time horizon i.e. month 36-42 are discussed in Section 3. Finally, the critical assessment of the project progress with reference to the timeline 18-36 is presented in Section 4. Conclusions and outlook can be found in Section 5.

2 Progress of PANTERA project and results achieved from M18-M36

2.1 Overall status of the PANTERA project.

In month 36 all PANTERA WPs are active. The detailed PANTERA GANTT Chart with related details of the project is shown in Figure 3.
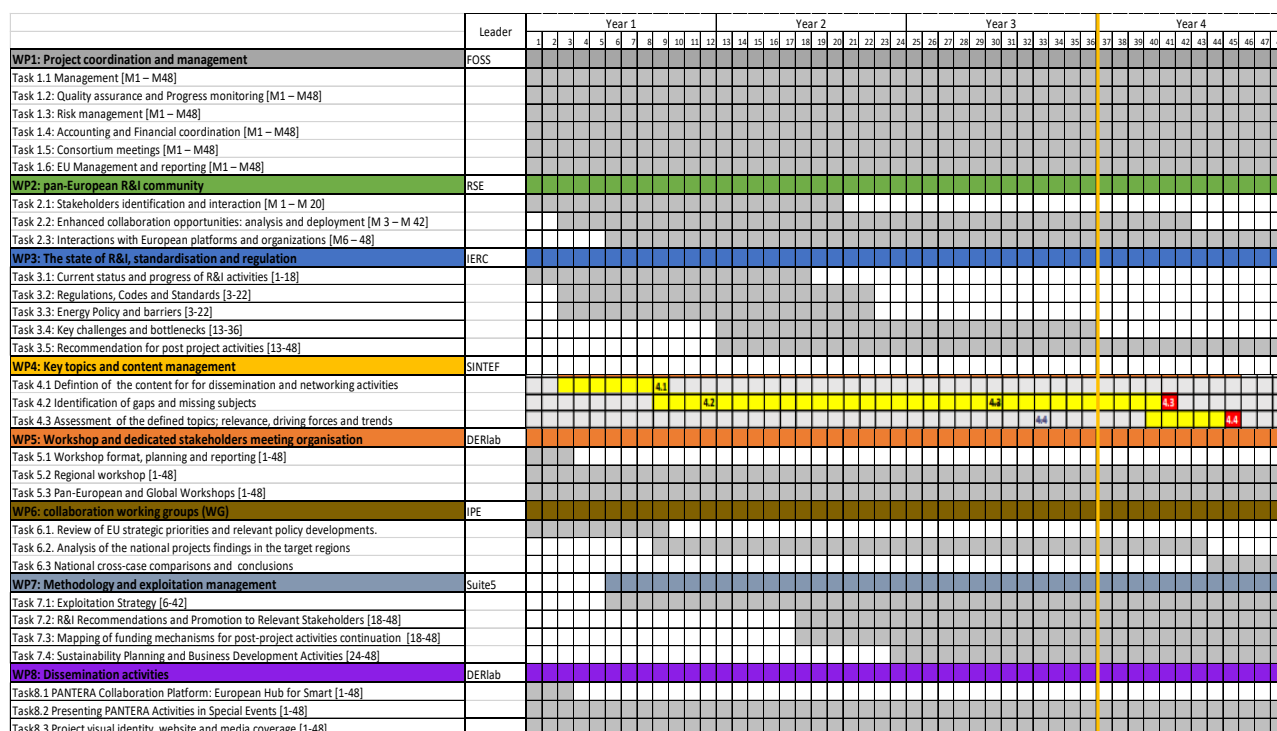

Figure 3 The PANTERA GANTT Chart

With specific reference to the time horizon of M18-M36, 7 deliverables have been submitted (see Table 1 for more details) and 4 more milestones have been achieved (Table 2 for details) making a total of 22 deliverables and 7 milestones.

Table 1: *List of deliverables released between M18-M36*

no	Deliverable number	Deliverable title	WP/Lead Beneficiary	Type/Dissemination Level	Due date (in months)
1	D2.3	1st Report on interactions with European platforms and organizations	WP2/RSE	Report/public	M24
2	D3.2	Report on RCS in EU-28	WP3/IERC	Report/public	M24
3	D3.3	Report on community energy policy and barriers	WP3/IERC	Report/public	M24
4	D4.2	Identification of gaps and missing subjects.	WP4/SINTEF	Report/public	M21
5	D5.2	Report on the outcomes of regional Workshops (intermediary)	WP5/DERlab	Report/public	M24
6	D5.4	Report on the outcomes of Pan-European and Global Workshops (intermediary).	WP5/DERlab	Report/public	M24
7	D6.3	Consolidated summary report of desk activities in the target regions.	WP6/IPE	Report/public	M22/M43

Deliverable: Technical Report 2 Revision / Status: final

Table 2: List of milestones achieved within M18-M36.

no	Milestone number	Milestone name	Related work package	Due date (in month)	Means of verification
1	M1	Analysis of the possibilities to involve organizations, especially from the targeted countries.	WP2/T2.1	M30 (M36)	Figures and analysis about the stakeholders' participation to the PANTERA workshops, EIRIE platform and reported outcome from the interview process.
2	M2	Analysis of the interaction with European platforms and organizations	WP2/T 2.3	M36	Advisory board members' interviews report.
3	M3	Key challenges in R&I activities in Low spending countries - Quantifying the key challenges and providing the way of possible solution	WP3/WP4	M36	Finding the R&I priorities by the countries based on their NECPs information included in the drafted report.
4	M4	Identify gaps and missing links – Detailed analysis for firm action by the consortium	WP4	M33	Web-interviews with selected stakeholders and drafted report

All deliverables were submitted in due time and no delays were mentioned. Regarding M1, a 6month delay has been noticed mainly due to the pandemic that affected the workshops' time plan. For this reason, the analysis has been delayed as collectively decided by the partners to capture not only the feedback coming from the workshops but also the active interaction with the EIRIE platform and the outcome of the interviews with the selected stakeholders that have been concluded at M33.

All 4 completed milestones have been reported as complete in the ECAS system and individual reports were drafted indicating the actions completed that render the corresponding milestone as complete. The individual drafted reports were made available to the Project Officer for his independent evaluation.

No Amendments were requested to the Grant Agreement within M18-M36.

2.2 Progress under the coordination and project management perspective.

2.2.1 Progress achieved under WP1

The coordination and management of the PANTERA project is covered by WP1, which aims to ensure a successful completion of the project goals on time, within the limits defined by the budgetary framework, and adequate quality in line with the European standards.

WP1, led by FOSS and supported by all partners where relevant, consists of six tasks, which are:

- **Task 1.1: Management**

This task focuses on the

- o Work plan overview and work programme overview for each single WP
- o Coordination of each WP Leader and supervision of each WP activity
- o Schedule and deadline supervision
- o Contract implementation and adherence to Consortium Agreements
- o Control of the project outputs and the impacts
- o Respect of due dates timely

More details on task 1.1 and the different conducted activities can be found in the D1.1[1]

- **Task 1.2: Quality assurance and Progress monitoring**

This task focuses on the

- o Quality assurance plan established (kick-off meeting) and the quality manager that was selected by the partners
- o Internal quality of the project: reporting, documentation control, etc
- o Project quality evaluation and evaluation of results
- o Progress monitoring through the performance indicators set (KPIs)

More details on task 1.2 and the different activities can be found in the D1.4[2].

- **Task 1.3: Risk management**

This task addresses all issues related to anticipated risks. Risk identification and management is a continuous process and is performed throughout the entire project.

As a result, risk identification and management began by establishing key project targets and by making an initial identification of the key risk factors and their respective risk events within D1.2. Moreover, this task conducted an assessment and identification of the relevant management methods and tools that will be utilized to mitigate risk.

The key objectives of this task are:

- o Review the essential project targets and establish the context of risk management
- o Early identification of the key risk factors and risk events
- o Establishing methods, tools and project specific work program ISO/IEC 31010:2009, Risk management - Risk assessment techniques and ISO 31000:2009, Risk management - Principles and guidelines to be followed during risk identification and management. Based on the above the coordinator addressed the following:
    - Risk management analysis that was completed within the first 4 weeks of the project together with mitigating actions that needed to be enforced depending on the results of the risk analysis.
    - Drafted a Risk Managing Activity plan addressing all identified risks and corresponding mitigating factors.

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[1] *https://pantera-platform.eu/wp-content/uploads/2019/07/D1.1-Project-guidelines.pdf*
[2] *https://pantera-platform.eu/wp-content/uploads/2019/07/D1.4-Quality-Assurance-Plan.pdf*

More details on task 1.3 can be found in the D1.2[3].

- **Task 1.4: Accounting and Financial coordination**

This task focuses on the

  o Budget review and cash flow management

  o Financial management and payments

This task also focuses on the coordination and monitoring activities for the preparation of the periodic technical and financial reports delivered at the end of the second reporting period, as well as on the preparation of the second review meeting (RV2) with the EC, which will be organized in M36.

- **Task 1.5: Consortium meetings**

Coordination of all project meetings and Coordination of meeting minutes/ decision registers is under this task. The meeting plan is formed as follows:

Partners of the project pursue virtual meetings regularly to have the appropriate interaction and the completeness of activities within the project as physical meetings were cancelled due to the Covid-19 pandemic. Analytical minutes and reporting were uploaded in the ONLYOFFICE shared repository:

- **Physical meetings:**

From M18-M36 all of the physical meetings related to the project management were stalled due to the pandemic.

- **Virtual meetings:**

46 different teleconferences as Consortium Meetings have been launched within this time interval for coordinating the work in progress among the partners. The intensity of the meetings is high in order to overcome the inability for physical meetings by splitting content into three different regular meetings under the three trajectories of the project: platform, regional desks and Working Teams.

  o We continue to be engaged to a monthly meeting (GENA) since the kick off of the project until today that would cover also the platform developments.

  o We are having bi-weekly virtual meetings on regional desks.

  o We are having bi-weekly virtual meetings on working teams' activities and progress.

Advisory board activities and planning:

Under WP1, the task of managing the activities with the advisory board members is also included. The advisory board members below were invited and engaged to actively contribute to the PANTERA process objectives. A dedicated collaboration space and a newsletter was circulated for facilitating the work and the interaction of the advisory board members with the project consortium during the previous reporting period. Nevertheless, the related activities were re designed according to the holding context and the project needs taking also in consideration the pandemic situation.

Table 3 Advisory board members

a/a	Name	Surname	organisation
1	Mario	Dionisio	BRIDGE and DG Energy
2	Joao	Pecas Locas	INESC Porto

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[3] https://pantera-platform.eu/wp-content/uploads/2019/07/D1.2-Risk-management-report.pdf

3	Michael	Huebner	ERA-NET SES
4	Gianluca	Fulli	JRC
5	Luciano	Martini	EERA JP for SG
6	Maria Elisa	Gil Bardaji	EERA JP Energy Storage
7	Norela	Constantinescu	ENTSO-E
8	Henry	Donchev	Ministry of Energy of Bulgaria, Expert in International Cooperation Directorate
9	Nikos	Hadjinikolaou	Cyprus
10	Johan	Driesen	European University Association
11	Maher	Chebbo	Digital Europe or ESMIG
12	Jochen	Kreusel	T&D Europe
13	Nikos	Hatziargyriou	DSO & EDSO4SG, Greece
14	Brian	Azzopardi	University of Malta
15	Lisa	Ryan	ESIPP lecturer in energy economics,School of Economics,Energy Institute,UCD,

Along these lines, PANTERA partners have decided to perform a series of interviews (3 interviews per Advisory Board member) with the AB members so that they are encouraged to get involved in the PANTERA process under the constant guidance and encouragement of the PANTERA consortium. This interaction of the AB members will make them adequately conversant with the EIRIE platform its functionalities, the knowledge wealth and the collaboration capabilities that brings together the stakeholders of low activity countries with the rest of Europe. Getting the AB members conversant with the PANTERA process will give them the right inside to allow them to have a personal opinion on the targeted objectives and hence, help the PANTERA consortium through their mature opinion.

To achieve the above, three structured interviews for each AB member has been designed to take place from M36 to the end of the project. Three different questionnaires have been set up as a guide for each dialogue with the AB members. The questionnaire for each dialogue is split into three different sections, each focusing on the main trajectories of the PANTERA process: the EIRIE platform, the regional desks, the knowledge creation (working teams).

The first dialogue - interview will seek an initial reaction on the PANTERA actions put in place i.e. regional activity, knowledge creation through team work, collaboration work through the EIRIE platform and what recommendations can be made on how the PANTERA process can be utilized to maximize impact to the R&I community and especially to the countries that have been left behind.

The second dialogue - interview can concentrate on the architecture of the EIRIE platform, the set up adapted, connectivity with other sources of data, information and knowledge and walk through the set-out functionalities to evaluate together the degree of usefulness and responsiveness in meeting the needs and serve appropriately the R&I community.

The third dialogue - interview will focus on the vision for the future of the PANTERA process (and especially the EIRIE platform) and how this shall be linked and serve the Green Deal goals of leaving no one behind. A good starting point in this dialogue is describing the arrangements made for hosting the EIRIE platform within EUROPA and JRC Smart Energy systems and be supported by the service contract put in place by DG Energy.

Through this exercise the views of the AB members will be carefully harnessed and transferred into a publishable opinion article that can go public through the channels of the EIRIE platform. Of course, the consent of the AB members will be sought prior to any opinion going public. At the end of the whole process, the views of the AB members can form a compiled review document that can be published as an independent opinion of experts on the work conducted through the set up "PANTERA process".

The first series has already been performed through the months of November to December 2021 and January 2022, having the following main outcomes:

- All advisory members interviewed so far have been well informed about PANTERA project and its objectives through the different dissemination channels of the project but also through the strong presence of the PANTERA project in different events and workshops at both local and EU level. This is a really good indication that PANTERA has raised the recognition of its endeavours at a good and desirable level. It was rather conclusive from the interviews conducted that AB members are aware of the rich activities of PANTERA and it was evident that they consider them of high quality, responding to the real needs of the R&I community of EU.

- At the same time, the bottom up approach of the PANTERA process with the regional desks' establishment seems to be well welcomed by the advisory members that they find this a good approach for supporting especially the lagging countries to build collaborations and bring to the forefront the competitive advantage of the well selected regions. It is appreciated by the AB members that the regional desk activities at country and regional level will mobilize support to common issues and this will have a further impact and offer adequate visibility through the dedicated regional corner of the EIRIE platform.

- Having said this, it is really important that the EIRIE platform will be formally presented through these bottom up activities to the regional stakeholders -including not only R&I members but also industry- in order to generate interest that can further strengthen the process with their active contribution.

- It is worth mentioning that advisory board members were interested into the functionalities and content of the EIRIE platform and to get informed on how this can play a constructive role in strengthening the contribution of countries in meeting the R&I objectives of EU and their respective countries in line with their national energy transition strategy.

- Based on this initial introduction into the activities and capabilities of EIRIE, the AB members promised to visit more regularly the EIRIE platform and be more active and contributing. Through this closer interaction, they agreed to connect again in about 5 to 6 months to discuss the functionalities and content of the EIRIE platform that will grow by then and elaborate on how this can play a constructive role in strengthening the contribution of the low activity countries in meeting their national R&I objectives and those of the EU in line with the energy transition strategy.

- **Task 1.6: EU Management and reporting**

This task focuses on the:

- Regular update (by email to project officer)

- Discussion of criticalities and problems with EU

- Grant reporting (progress, interim and final reports)

- Amendments filing

- Deliverable reporting to EU

It has to be mentioned that the PANTERA partners would table shortly a formal application for a 6month extension to the agreed duration of four years due to the following important reasons:

- As covid-19 pandemic has stalled physical interaction and networking activities i.e. regional workshops and closely working with stakeholders within the regional desks' activity, this planned extension of time will hopefully offer the opportunity for more physical interaction that will support the PANTERA partners to be more proactive in networking and engaging activities especially within the low spending countries.

- The different platforms' integration is moving slower than it was initially planned due to technicalities and other institutional coordination issues with third parties. So, these months would be beneficial for having more time in validating and promoting at the same time the cooperation of EIRIE with the other platforms

- These additional 6 months will be used wisely by the PANTERA consortium in generating more content, thus advancing further the capabilities and the visibility of the EIRIE platform within the R&I community, hence giving it more life and enhancing the much-wanted sustainable future of EIRIE.

2.3 Progress towards the overall objectives.

In the following points, the overall status of the scientific activities carried out by the PANTERA Consortium and the progress achieved under individual active technical WPs from M18 until M36 are presented.

2.3.1 The PANTERA Process

Through a careful evaluation of the targeted objectives of the PANTERA project aiming to achieve a working environment through which the effort put in raising the activities of the low activity countries to a direction of being more sustainable, a conscious decision has been taken by the consortium, to develop the PANTERA process by introducing the following main functions:

- Design, develop, populate and operate a multifunctional, interactive platform (EIRIE)

- Develop and operate a representative number of Regional Desks

- Organize and run an appropriate number of Working Teams covering important areas that can be a constant source of information and knowledge to the multifunctional platform

Hence, irrespective of the targeted objectives of each and every work package, the PANTERA project has amalgamated into the above three main functions constituting the PANTERA process.

The above identified important functional activities will be constantly supported by the work of all work packages during the course of the project and complemented with external support where needed to substantiate their long-term sustainable future. To this effect working relations have been pursued and grown to a satisfactory level with the following:

- JRC and DG Ener have agreed to a formula of supporting the operation of the interactive

multifunctional platform by hosting it on their servers and provide a service contract through the services of DG Ener to support and operate the platform following the completion of the PANTERA project.

- The S3P smart specialisation platform operated by the Commission has welcomed working relations with the PANTERA consortium to build and operate 6+1 Regional Desks that cover adequately all countries that are classified as low activity countries.

- ETIP SNET through the activities of Working Group 5 has joined forces with the PANTERA consortium to organise and operate an appropriate number of Working Teams capable of addressing important themes that will constantly feed information and knowledge to the interactive multifunctional platform.

2.3.2 EIRIE (PANTERA Platform)

As indicated above the content and functionalities of the developed EIRIE platform are enriched with work coming through the work of all the Work Packages of the PANTERA project and details of this work will be presented in the respective chapters of this period report. However, the overall architecture of the EIRIE platform and related important features are introduced in this section. As already indicated, EIRIE has been developed to be an interactive multi-functional platform that is up and running during this reporting period and it aims at connecting the R&I community of EU to enhance collaboration, strengthen the participation of all Member States in support of the Energy Transition and improve the participation of low-spending countries in R&I activities in the area of Smart Energy Systems.

To this end, it offers a bundle of services and functionalities towards ensuring that EIRIE is established as a central reference point of knowledge, aiming to take on board the existing entities and activities in Europe, expanding on them to capitalise on synergies and bring in the interests of low spending R&I countries.

EIRIE integrates with the most popular platforms in the area of Smart Energy Systems, such as the Smart Electricity Systems and Interoperability Platform of the Joint Research Centre of the European Commission, the Knowledge Sharing Platform of ETIP-SNET, the BRIDGE portal, the EXPERA platform of ERANET Smart Energy Systems, the Mission Innovation Platform, the EU Research Results Platform (CORDIS), the DERlab Research Infrastructures database and the ASSET platform offering training material in the area of smart grids, to offer a wealth of services and functionalities that span 4 distinct, but also interrelated areas, as follows:

- Project Evaluation and Reporting Services, involving simple analytics and visualizations over aggregated project-relevant data, giving a quick snapshot about the status quo of R&I activities per member state, technology type, involved stakeholders, etc. EIRIE will also offer access to Project Evaluation results with regards to their Maturity Index. Finally, EIRIE will offer services for getting access to R&I Facilities and Infrastructures for validating research results.

- Stakeholder Community Building, with emphasis given on the operation of 6+1 Regional Desks, towards fostering discussion and collaboration between regional stakeholders and increasing awareness on regional activities towards increasing R&I funding in the area of Smart Energy Systems

- Sustainability and Collaboration Services towards knowledge co-creation, through living/ online collaborative documents that capture the joint know how of the PANTERA community

- Data Search Services, capitalizing on a strong and versatile search engine (classic filtering and list-based results), complemented with Data Linking functions towards facilitating discovery and identification of relevant information that might be of interest to the EIRIE community stakeholders.

- Additional Services, including:

- o Matchmaking Services for fostering and enhancing collaboration between R&I stakeholders and reinforcing participation of low-spending countries in funded activities,

- o Training Services, for educating stakeholders on Smart Grids R&I relevant topics, through tertiary (reports, best practices) and vocational (webinars) education,

- o News and Events services, for keeping the EIRIE community members up to date with relevant information and events of their interest.

The development of the interactive multifunctional platform EIRIE (European Interconnection for Research Innovation & Entrepreneurship) has progressed well during the last 18 months and has gone live towards the end of July 2021 giving access to all R&I stakeholders in the EU as visioned. Connectivity with other platforms as indicated in the visionary schematic below has progressed well and valuable data, information and knowledge is already flowing among the connected platforms: CORDIS, JRC, ETIP SNET, DERlab, Mission Innovation, EXPERA and ASSET.
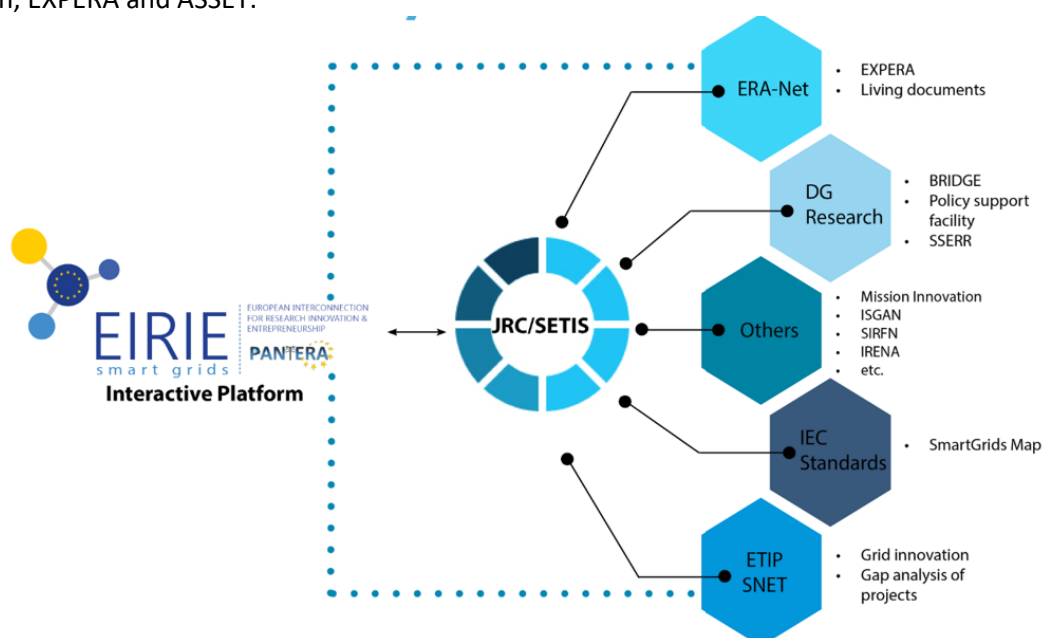
Figure 4 EIRIE platform connecting Europe

Following extensive discussions with JRC final agreement was reached for EIRIE to be hosted on the Smart Energy System servers of JRC. This agreement brings EIRIE within the Smart Energy System applications of JRC and together grow into seamless means supporting the R&I community of Europe. Among the applications that already exist in the Smart Energy System area of JRC are the following:

Moreover, the major issue of sustainability of the EIRIE platform has been addressed. Agreement was reached with DG Ener to extend the support to the EIRIE platform beyond the PANTERA project through a dedicated Service contract to can take over from the PANTERA consortium on completion of the 4-year contract.

Over the past 18 months, we worked hard as the consortium of PANTERA to pass on the following benefits coming through the EIRIE platform to all Europeans:

- An easy access to information on potential funding and consortium building

- A central point for collaborating on the issues relevant for the energy sector.
- An active role in the community and a support in providing input to European policies.

How can EIRIE play this bridging role?
- EIRIE will help bridge the gaps that currently exist in the energy field in Europe between Member States, by bringing together the attractiveness of successful partnerships being national, regional or European.
- EIRIE will act as the meeting point of all actors active in the fields of smart grids, storage and local energy systems in R&I from all Europe and will contribute to the achievements of the envisioned carbon-free system of 2050.

For EIRIE to be able to offer the above services, careful design issues have been addressed using the expert services of the hired contractor BILBOMATICA offering the following vision that made the above possible:
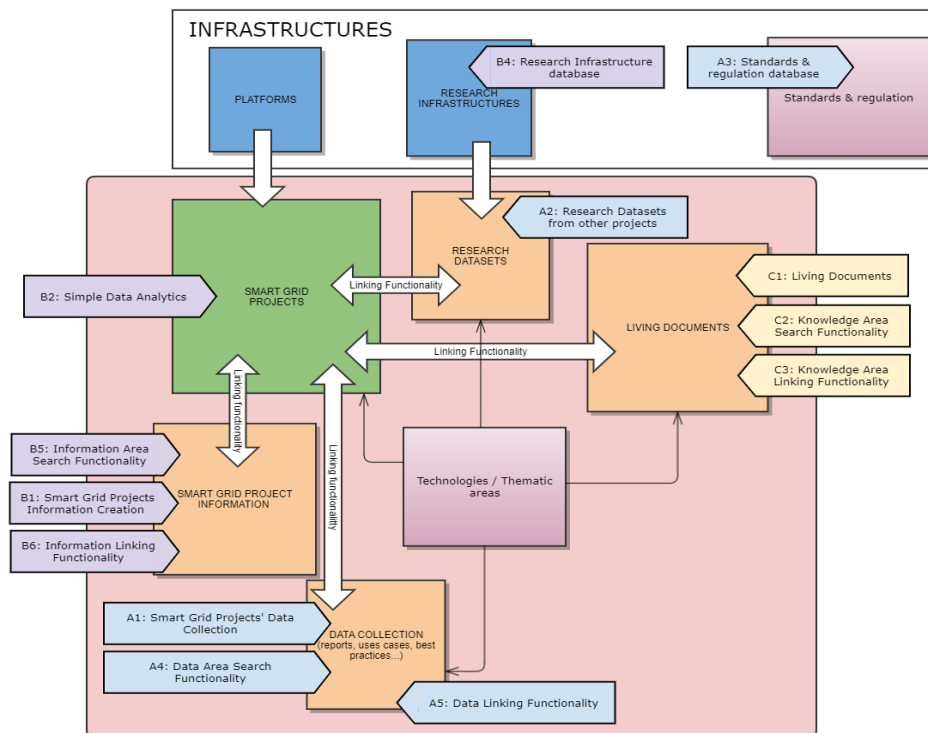
Managing data, information and knowledge is critical to the functioning of the EIRIE platform that promises to be the single point of reference for project reporting, data harnessing and managing, information and knowledge repository with advance features for storing and retrieving for giving advance services to all R&I community of Europe.

For this reason, we have given careful attention to the EIRIE data model to be smartly structured and universally understood via a taxonomy that is agreed with the wider circle of stakeholders.

The agreed data model is presented in the following schematic indicating distinctly the areas that are critical in building a repository that is flexible, expandable and rich in content to meet the needs of stakeholders throughout Europe.
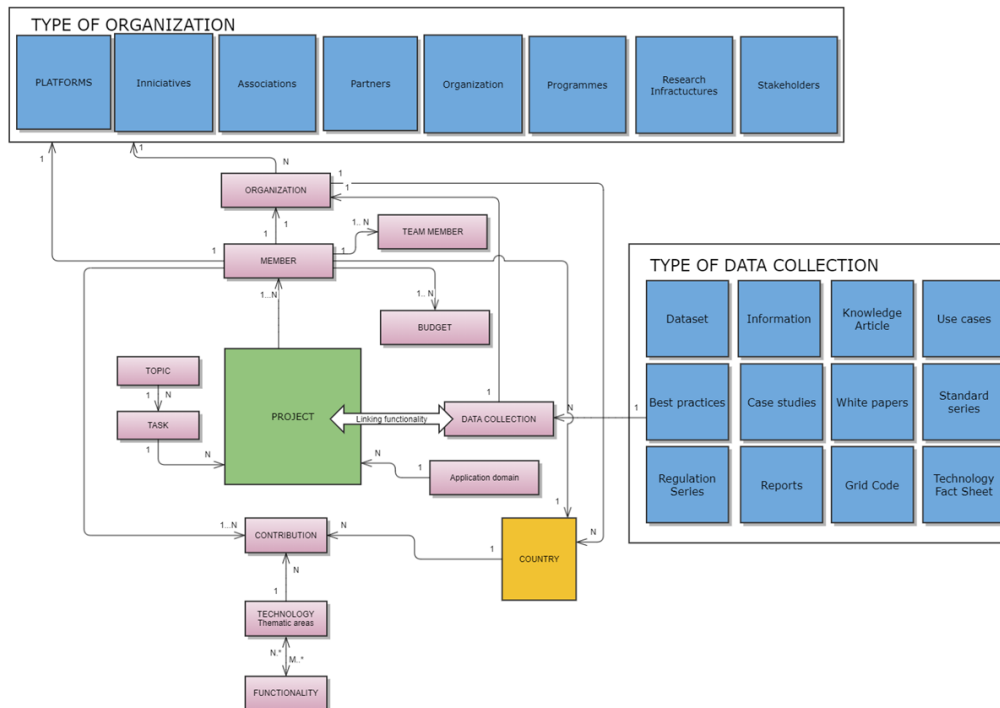
To build this open data base and being accessible to other sources of data, information and knowledge, we needed to develop with the support of BILBOMATICA this universal connectivity which is depicted in the schematic below:
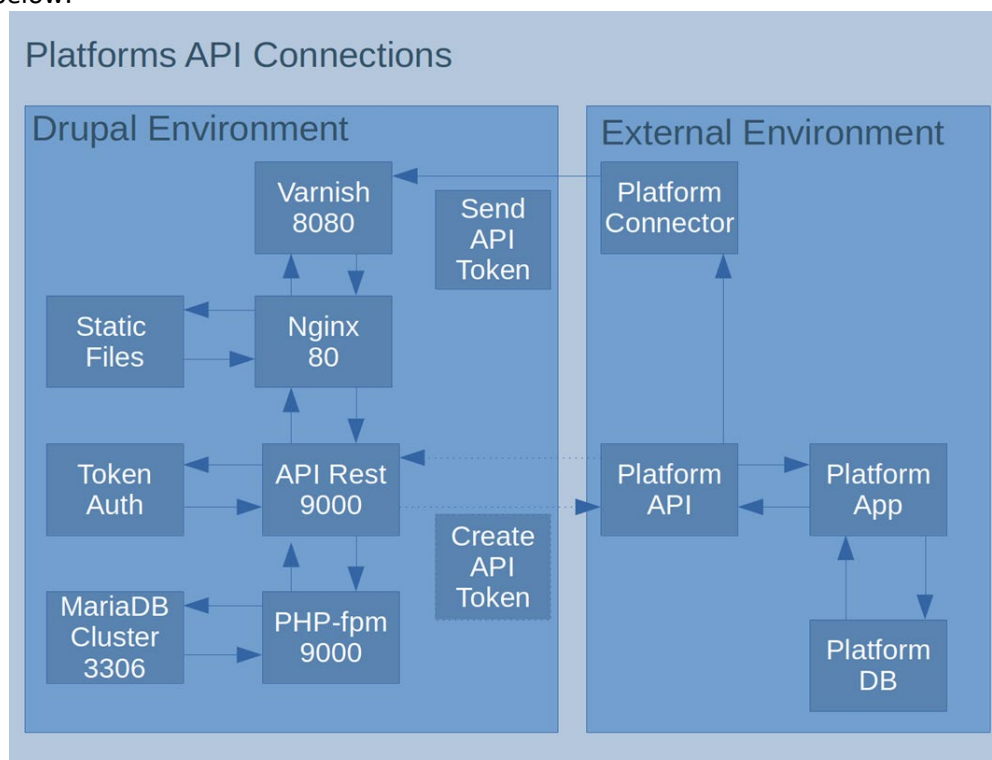
The developed solutions, can safely connect the platforms throughout Europe using a tailored made Restful Web Service API following the requirements of the technical services of JRC. In short this application depicted above offers the following connection capabilities that have been used successfully with the platforms that connectivity has been secured:

- For the access to the Drupal data from other systems, we are implementing a Restful Web Service API.

- This Technology permits access from practically every language and services. It becomes a bridge between different platforms and applications
- Drupal 9 has a way to expose endpoints to manage the Drupal content types.

As from July 2021 the EIRIE platform is live

The welcome page below gives the message that EIRIE is here to support and accessible by all R&I community of Europe.

It is EIRIE's vision to create, through this multi-functional collaborative platform, a reference operational point to unify European activity, incentivize further investments in smart grids and support access to exploitable results that will enable further cooperation and bridge the existing gaps.

Login and Roles

A lot of importance was given in developing the platform on the login approach and the roles of users to achieve the security in access and data management required. The roles identified as required and were implemented till today are the following:
- Login through EU-Login in the following link:
  https://ses.jrc.ec.europa.eu/eirie

- **Roles :** Different Roles to manage the content.

  o Role1: Users from other platforms we integrate with

  o Role2: PANTERA project Users / Platform users / Partners

  o Role3: External users split into the following groups (i.e. 'EU Research Community')

  o Role4: Content Manager

Deliverable: Technical Report 2 Revision / Status: final

o   Role5: Platform Administrator (Super User)

o   Role6: Anonymous user

Search tool

EIRIE offers a strong and versatile search engine (classic filtering and list-based results will be featured). Through this functionality one can search and find fine-grained and targeted information available in the EIRIE platform and referring to project-related results, like project deliverables, reports, best practices, use cases, regulations, standards and grid codes.

In line with the vision requirements of the PANTERA project, the EIRE platform was developed with a strong search tool equipped with the following components:

- Area of selection: projects, organizations and data collections

- Quick access to : "research infrastructures" and "standards and regulations";

- Advanced search forms for each category

- Faceted searches

- Paginated lists

News, events and newsletter

The News section aims to inform users about recent EIRIE publications or upcoming workshops/conferences. EIRIE selects information provided in the News section according to its relevance to the EIRIE. EIRIE welcomes

suggestions to insert a particular news (event, publication) through a dedicated filling form:

Title/Summary

Description

Tags

From
dd/mm/yyyy

To
dd/mm/yyyy

SEARCH

EIRIE FUNCTIONALITY: NEWS,EVENTS AND NEWSLETTER.

FILTERS

RESULT LIST

Newsletter subscription.

Jan-22   14

2.3.2.1 Education and training

We are in the midst of the energy transition, meaning **technological solutions are changing fast**. This, together with the need to offer **lifelong education** and **vocational training** to practitioners at all levels, in order to keep the quality of offered services to the highest degree possible, explain the necessity to build the appropriate educational and training material and make it accessible to all.

To this effect the EIRIE platform is already collaborating with two projects offering worthwhile educational and training material to make it accessible to all users of the EIRIE platform:

1. *ASSET project*

2. *EDDIE project*

More will be added as they are made available and accessible.

PANTERA education/training

The EIRIE platform hosts more than 30 education/training courses

Enlit Europe   01/01/2022   16
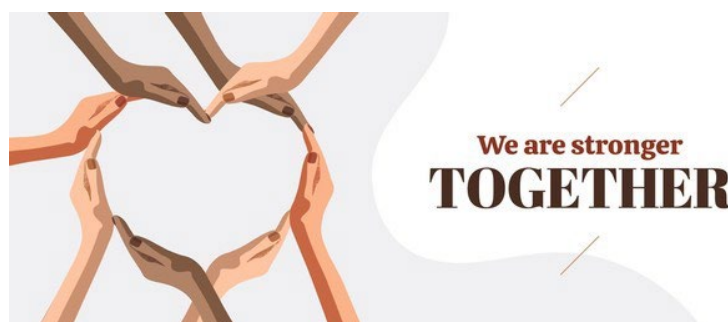
2.3.2.2 Data Analytics Tools and Functionalities

A. Heat map

In the heat maps below, you can view a selection of the distribution of Smart Grid/ Smart Energy Systems projects awarded across the EU through National, Regional and EU programmes.

Apart from the visualization of aggregated project data, the map offers you an interactive environment that allows for further drilling in and analysing the project-related information available in EIRIE with the use of a wide variety of filters (e.g. maturity level, application domain, technology deployed, etc).

Through the map you will also be able to further analyse project-related information with the use of dedicated bar diagrams appropriately correlating pairs of data elements such as:

- Number of projects per technology deployed in each country

- Number of projects per stakeholder type in each country

- Funding amount per technology deployed in each country

- Funding amount per stakeholder type in each country

Heatmap visualizations offer an alternative analysis means for visualizing the aforementioned data and demonstrating key figures for each country (number of projects, funding), while allowing for further analysis through the utilization and combination of a variety of filtering criteria.

Projects funded heat map with size of bubble indicating the relative number of projects funded

Deliverable: Technical Report 2 Revision / Status: final
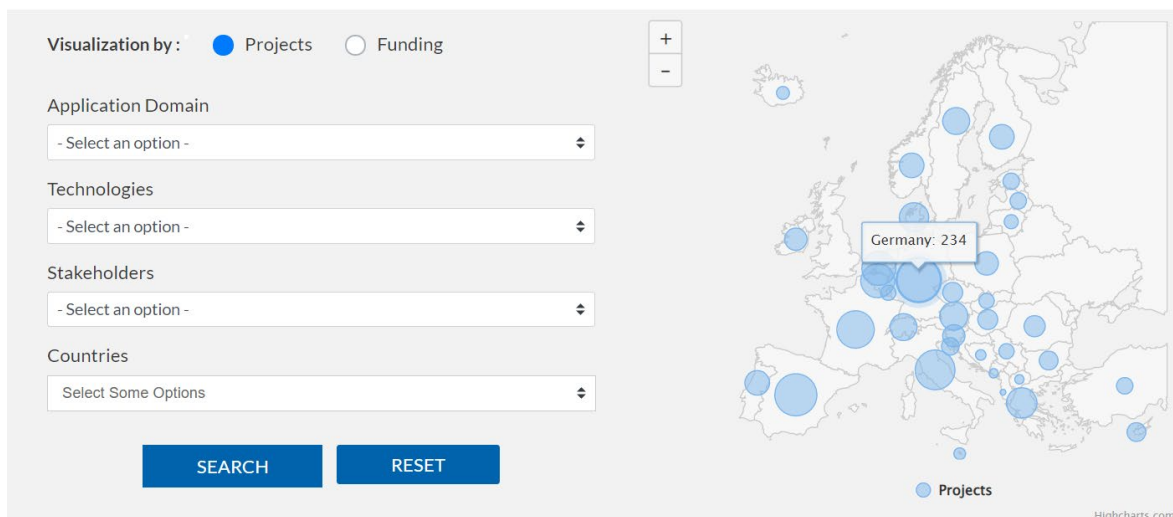
Funding heat map with size of bubble indicating the relative funding received by stakeholders of the specific country for projects

B. System Maturity quantification tool and evaluation of R&I needs of the smart grid

Power Grids of the future, embracing the integrated approach with high penetration of renewables and emerging technologies with advanced operational functionalities, is of paramount importance for meeting the European Union (EU) targets of sustainability and energy transition. As such, an analysis approach for assessing progress in developing major functionalities of the smart grid is needed to be well established and adopted. This way not only the next steps of development shall be better defined but also the needs of the system will be better identified.

A solid methodology for quantification of the maturity level of the functionalities of the smart grid paradigm as they are defined in the European Technology and Innovation Platform Smart Networks for Energy Transition (ETIPSNET) roadmap has been defined. The first step of the process, is the evaluation of the advancement of the technologies, then the level of the maturity of the functionalities that will support the integrated grid of the future and lastly the smart grid system readiness as a whole. Through this evaluation, progress made so far can be evaluated, the needs for future research can be identified and hence, the funding of the European Commission (EC) has a quantified direction to go. **Based on this methodology a tool has been developed that can be utilized by all users through the EIRIE platform.** T**he intention is making it available accessible by the R&I community for evaluation, quantification and building useful reports.**

Three metrics are used to evaluate the smart grid system maturity quantification. In figure 5, the three metrics that are used, are shortly presented.
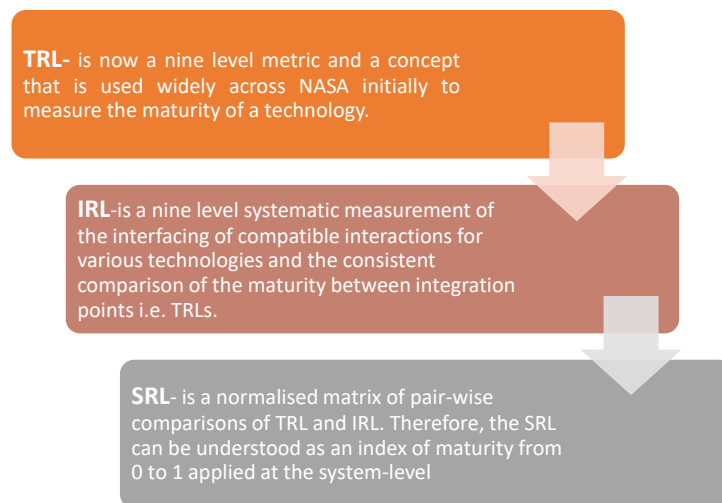
Figure 5 The three metrics formulation for the System maturity quantification tool

The process entails that the first metric, TRL, is assigned using inputs from subject matter experts providing feedback for their project. The second metric IRL is assigned using standard tables/matrixes developed by ETIP_SNET experts of the smart grid regime and the remaining metric, SRL, is computed by applying the designed evaluation method taking under consideration both TRL and IRL.

The R&I Roadmap 2020-2030 of ETIP SNET is focused on RD&I activities in smart electricity grids, interconnected with heat and gas systems covering also storage and conversion technologies. In specific, the ETIP SNET R&I Roadmap 2020-2030, together with its four planned detailed Implementation Plans 2021-2024, 2023-2026, 2025-2028 and 2027- 2030, addresses the framework in which the European energy system shall develop on the road to achieving the goal of full decarbonization by 2050. In particular, it focuses on the intermediate step of 2030, identifying the system functionalities to be developed and considers the related tasks that need to be solved during the next decade to enable the functionalities and to prepare for the further steps toward 2040 and 2050. So, twelve functionalities are introduced as building blocks of the future smart grid and are shown in the Table below.

Table 4 The Functionalities of the R&I Roadmap 2020-2030 of ETIP

N°	Functionalities
F1	Cooperation Between System Operators
F2	Cross Sector Integration
F3	Integrating the subsidiary principle – the customer at the center at the heart of the integrated Energy System
F4	Pan-European wholesale markets
F5	Integrating local markets (enabling citizen involvement)
F6	Integrating digitalization services (including data privacy, cybersecurity)
F7	Upgraded electricity networks, integrated components and systems
F8	Energy system business (includes models, regulatory)

F9	Simulation tools for electricity and energy systems (Software)
F10	Integrating flexibility in generation, demand, conversion and storage technologies
F11	Efficient heating and cooling for buildings and industries in view of system integration of flexibilities
F12	Efficient carbon-neutral liquid fuels & electricity for transport in view of system integration of flexibilities

The development of these functionalities serving the energy system of 2030 is a decisive need calling for research, small-scale pilots, large-scale demonstrations and deployment of products and services leading to replication and scaling-up to realize real-world implementation. As can be appreciated, the real system is composed of technologies and interconnected sub-systems communicating and delivering the functionalities of the grid. Projects deliver these developments and thus the evolution of technologies, solutions and systems are the valuable deliverable of projects that respond to calls for contribution. This linking chain of evolution is of critical importance to clarify since on this sequence and interdependence we can develop the sound methodology that can be universal and responsive starting from the evaluation of project results and leading to sound quantification of research needs. Hence, what is of critical importance is keeping track of technologies / solutions / systems advancement since through this, the quantification of the maturity of functionalities can be deduced following a universal approach and thus the whole smart grid system readiness can be evaluated. As can be appreciated topics and sub-topics, referred also in the Roadmap of ETIPSNET, are the starting point in forming the content of calls through which projects spring but they do not contribute in any way to the development / maturity of technologies / solutions / systems which form the real world of the interconnected grid.

In consequence, as the maturity of these functionalities are quantified, the research needs and thus related research topics and funding schemes can be decided to support the emergence of more projects that will target further development of technologies / solutions / systems. In other words, research topics are the result of the identification of the R&I needs for required technical advancements for specific technologies / solutions / systems thus clarifying the process forward. **Fig. 6 in the next, shows the diagram of the process described and highlight the role that the system maturity quantification tool has to play.**

To sum up this tool that is made available to be openly used by the R&I community within the EIRIE platform is to have as input the results of the R&I projects of the EU. The main contribution of this process can be summarized as follows:

- Enhances the TRL index tackling all the weaknesses that this index currently exhibits,

- Provides a solid process on how the integrated system readiness can be quantified

- Provides feedback on the implementation plan and Roadmap of ETIPSNET to define the priorities, tasks and topics for the EU calls

It would be possible to perform sensitivity analysis on the TRLs and IRLs within the system of interest to evaluate the SRL system projection due to an increase in one or more of the constituent technologies or integrations. A projection of the SRL maturity based on selected technologies can lead to an optimisation of SRL evolution based on resources allocation hence facilitating decisions to be made at the EU level.
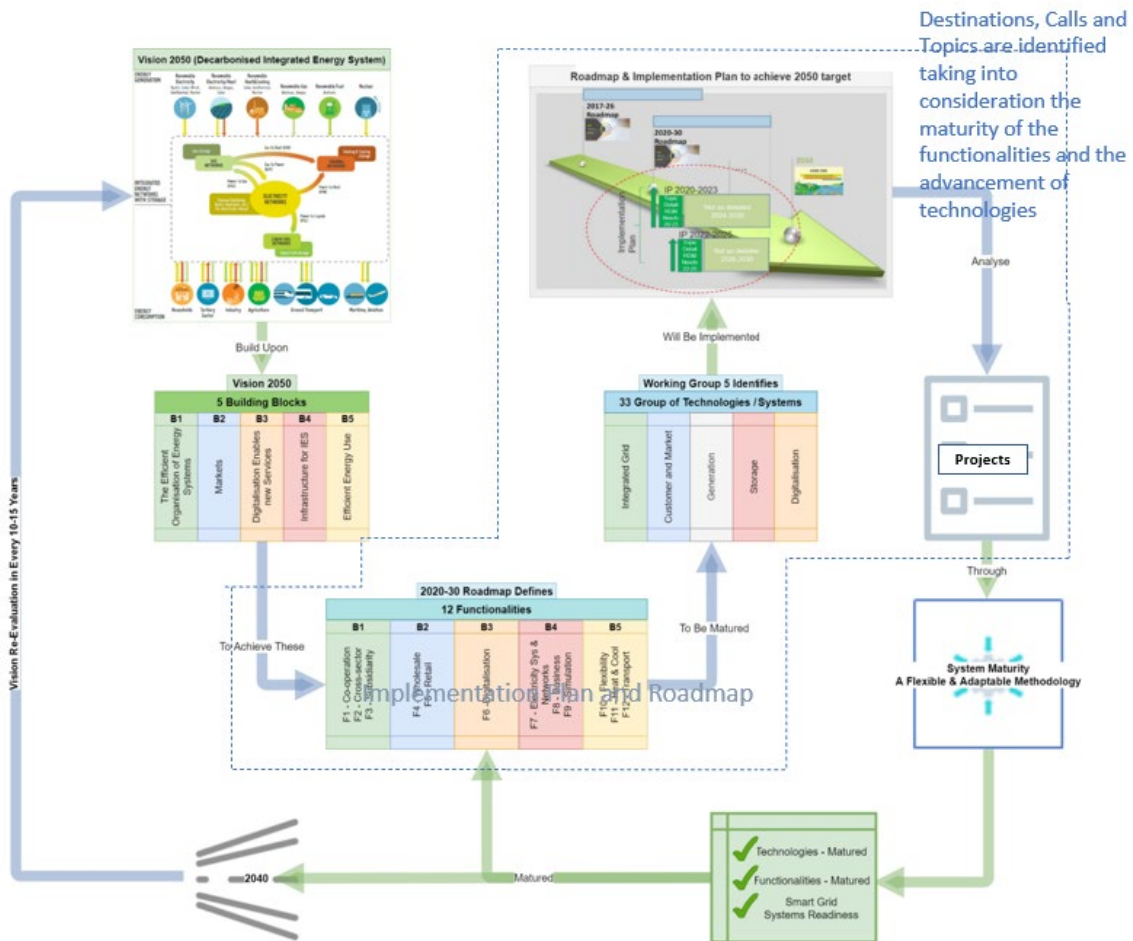
Figure 6 The need of the proposed methodology supporting the ETIP SNET vision

C. Knowledge Creation and Confluence collaboration space

Confluence

It is EIRIE's vision to create, through the planned multi-functional collaborative platform, this reference operational point to unify European activity, incentivize further investments in smart grids and support access to exploitable results that can spark further work and cooperation capable of bridging the existing gaps. To achieve this, the solutions of JRC within Confluence have been used by the PANTERA consortium to develop the working environment through which all collaboration work and knowledge creation can flourish. A short description of the developed designs to facilitate this envisioned workspace is presented in the paragraphs below.

Confluence is a team workspace where knowledge and collaboration meet. Dynamic pages give the EIRIE platform users a place to create, capture, and collaborate on any project or idea. Spaces help stakeholders to structure, organize, and share work, so every team member has visibility into institutional knowledge and access to the information they need to do their best work.

EIRIE - European Interconnection for Research, Innovation and Entrepreneurship

Blog
Boards

SPACE SHORTCUTS
JIRA - EIRIE

PAGE TREE
- EIRIE project space
- Regional corner collaboration
- Matchmaking tool
- JRC
- BRIDGE
- ETIPSNET
- ETIPs forum
- Living documents

Space tools «

Pages

EIRIE - European Interconnection for Research, Innovation and Entrepreneurship Home

Created by Butler Confluence STUDIO user, last modified by PSARA Kyriaki on Nov 10, 2021

Edit Save for later Watching Share

1.1. ABOUT EIRIE

It is EIRIE's vision to create, through the planned multi-functional collaborative platform, this reference operational point to unify European activity, incentivize further investments in smart grids and support access to exploitable results that can spark further work and cooperation capable of bridging the existing gaps.

Confluence is a team workspace where knowledge and collaboration meet. Dynamic pages give your team a place to create, capture, and collaborate on any project or idea. Spaces help your team structure, organize, and share work, so every team member has visibility into institutional knowledge and access to the information they need to do their best work.

The **following links** provide an overview of the key features of Confluence and explain its basic and advanced usage as a knowledge management tool and a collaborative environment. If you still have a question that has not been answered, write and tell us about it.

- EIRIE Confluence How To
  - EIRIE Confluence User's Guide
  - EIRIE Confluence Administrator's Guide
    - EIRIE Groups
    - Confluence Restrictions

1.2. USEFUL LINKS

Maturity index tool

This tool is based on a methodology for quantification of the maturity level of the functionalities of the smart grid paradigm as they are defined in the European Technology and Innovation Platform Smart Networks for Energy Transition (ETIPSNET) roadmap. The first step is the evaluation of the **advancement of the technologies**, then the **level of the maturity of the** functionalities that will support the integrated grid of the future and lastly the **smart grid system readiness** as a whole. Through this evaluation, progress made so far can be evaluated, the needs for future research can be identified and the funding of the European Commission (EC) has a quantified direction to go. This methodology is part of the EIRIE platform of the EC hosted by Joint Research Centre (JRC) and is validated through the extensive data base of European Horizon2020 projects.

To access the maturity index tool follow the link here.

Questionnaire

Say something about Inycom's questionnaire...

1.3. EIRIE SPACE ARCHITECTURE

ⓘ ARCHITECTURE → Say something here...

Confluence is for teams of any size and type, from those with mission-critical, high-stakes projects that need rigor behind their practices, to those that are looking for a space to build team culture and engage with one another in a more open and authentic way.

All content lives in *pages* – living documents created on EIRIE Confluence site. Various different types of pages can be created such as project plans, meeting notes, troubleshooting guides, policies, and more. Confluence comes bundled with templates that can be used as a basis for almost any kind of content. In case none of the existing templates can be used for a specific type of content you want to create, a blank page can be used and adjusted accordingly.

Pages are stored in *spaces* – workspaces where teams can collaborate on work and keep all content organized. All EIRIE content is grouped together in the same space. Each space comes with an overview (or homepage) and a blog, so it's easy to share updates and announcements with your whole team.

Space content is organized with a hierarchical *page tree* that makes finding work quick and easy. Pages are nested under related pages in order to organize pages in just about any way. The following figure represents the page tree of the EIRIE confluence space.

EIRIE working pages

| EIRIE project space | Regional corner collaboration | Matchmaking tool | JRC | BRIDGE | ETIPSNET | ETIPs forum | Living documents |

Desk1 | Desk2 | Desk3 | Desk4 | Desk5 | Desk6 | Best practice rest of Europe

Latvia, Estonia, Lithuania — Greece, Bulgaria, Romania — Malta, Cyprus — Poland, Slovakia, Czech Republic — Italy, Croatia, Hungary — Ireland, Portugal

WG1, WG2, WG3, WG4 | TF1, TF2, TF3 | WG1, WG2, WG3, WG4, WG5 | Governing Board | ExCo | National stakeholders coordination group

LEGEND
- Collaboration page
- Child page
- Parent page

Page restrictions allow confluence users to control who can view and/or edit individual pages in a space. Project managers can add restrictions for individuals or for confluence groups. The following is a mapping of the pages to their restricted groups:

- **Regional corner collaboration** (p.eirie.latvia, p.eirie.estonia, p.eirie.lithuania, p.eirie.greece, p.eirie.Bulgaria, p.eirie.romania, p.eirie.malta, p.eirie.cyprus, p.eirie.poland, p.eirie.slovakia, p.eirie.czech.republic, p.eirie.italy, p.eirie.croatia, , p.eirie.hungary, p.eirie.ireland, p.eirie.portugal, p.eirie.best.practises.rest.of.eu, p.eirie.confluence.managers)
  * Best practise rest of the world (p.eirie.best.practises.rest.of.eu, p.eirie.confluence.managers)
  * Desk 1 (p.eirie.latvia, p.eirie.estonia, p.eirie.lithuania, p.eirie.confluence.managers)
    * Latvia (p.eirie.latvia, p.eirie.confluence.managers)
    * Estonia (p.eirie.estonia, p.eirie.confluence.managers)
    * Lithuania (p.eirie.lithuania, p.eirie.confluence.managers)
  * Desk 2 (p.eirie.greece, p.eirie.Bulgaria, p.eirie.romania, p.eirie.confluence.managers)
    * Greece (p.eirie.greece, p.eirie.confluence.managers)
    * Bulgaria (p.eirie.Bulgaria, p.eirie.confluence.managers)
    * Romania (p.eirie.romania, p.eirie.confluence.managers)
  * Desk 3 (p.eirie.malta, p.eirie.cyprus, p.eirie.confluence.managers)
    * Malta (p.eirie.malta, p.eirie.confluence.managers)
    * Cyprus (p.eirie.cyprus, p.eirie.confluence.managers)
  * Desk 4 (p.eirie.poland, p.eirie.slovakia, p.eirie.czech.republic, p.eirie.confluence.managers)
    * Poland (p.eirie.poland, p.eirie.confluence.managers)
    * Slovakia (p.eirie.slovakia, p.eirie.confluence.managers)
    * Czech Republic (p.eirie.czech.republic, p.eirie.confluence.managers)
  * Desk 5 (p.eirie.italy, p.eirie.croatia, p.eirie.hungary, p.eirie.confluence.managers)
    * Italy (p.eirie.italy, p.eirie.confluence.managers)
    * Croatia (p.eirie.croatia, p.eirie.confluence.managers)
    * Hungary (p.eirie.hungary, p.eirie.confluence.managers)
  * Desk 6 (p.eirie.ireland, p.eirie.portgal, p.eirie.confluence.managers)
    * Ireland (p.eirie.Ireland, p.eirie.confluence.managers)
    * Portugal (p.eirie.portugal, p.eirie.confluence.managers)
  * Best practise rest of the world (p.eirie.best.practise.rest.of.eu, p.eirie.confluence.managers)
- **Matchmaking tool**
- **JRC** (p.eirie.JRC , p.eirie.confluence.managers)
- **BRIDGE** (p.eirie.bridge.wg1, p.eirie.bridge.wg2, p.eirie.bridge.wg3, p.eirie.bridge.wg4, p.eirie.bridge.tf1, p.eirie.bridge.tf2, p.eirie.bridge.tf3, p.eirie.confluence.managers)
  * BRIDGE WG1 (p.eirie.bridge.wg1, p.eirie.confluence.managers)
  * BRIDGE WG2 (p.eirie. bridge.wg2, p.eirie.confluence.managers)
  * BRIDGE WG3 (p.eirie. bridge.wg3, p.eirie.confluence.managers)
  * BRIDGE WG4 (p.eirie.bridge.wg4, p.eirie.confluence.managers)
  * BRIDGE TF1 (p.eirie.bridge.tf1, p.eirie.confluence.managers)
  * BRIDGE TF2 (p.eirie. bridge.tf2, p.eirie.confluence.managers)
  * BRIDGE TF3 (p.eirie.bridge.tf3, p.eirie.confluence.managers)
- **ETIPSNET** (p.eirie.etip.snet.wg1, p.eirie.etip.snet.wg2, p.eirie.etip.snet.wg3, p.eirie.etip.snet.wg4, p.eirie.etip.snet.wg5, p.eirie.etip.snet.governing.board, p.eirie.etip.snet.exco, p.eirie.etip.snet.nscg, p.eirie.confluence.managers)
  * Governing Board (p.eirie.etip.snet.governing.board, p.eirie.confluence.managers)
  * ExCo (p.eirie.etip.snet.exco, p.eirie.confluence.managers)
  * ETIPSNET WG1 (p.eirie.etip.snet.wg1, p.eirie.confluence.managers)

- * ETIPSNET WG2 (p.eirie.etip.snet.wg2, p.eirie.confluence.managers)
- * ETIPSNET WG3 (p.eirie.etip.snet.wg3, p.eirie.confluence.managers)
- * ETIPSNET WG4 (p.eirie.etip.snet.wg4, p.eirie.confluence.managers)
- * ETIPSNET WG5 (p.eirie.etip.snet.wg5, p.eirie.confluence.managers)
- * National stakeholders coordination group (p.eirie.etip.snet.nscg, p.eirie.confluence.managers)
- **ETIPS forum** (p.eirie.etip.snet.etips.forum, p.eirie.confluence.managers)
- **Living Documents**

To facilitate the work within Confluence, use is made of the Confluence environment of JRC. The CITnet service provides a collaborative space for developers at EC, it promotes the Open Source development process and knowledge sharing principles. Services include Butler, Jira, Confluence, SVN, Bamboo, Nexus, BigPicture, Sonarqube, FishEye, TEMPO, Bitbucket, Zephyr, Callendar, and Jira Agile.

CITnet Butler

CITnet Butler is a tool written by CITnet team for the IT project managers (PM). Butler allows us to create the project *EIRIE - European Interconnection for Research, Innovation and Entrepreneurship*. Additionally, through Butler we are able to add/remove plugins associated with the project such as the confluence space and a JIRA project.

Summary

Name	EIRIE - European Interconnection for Research, Innovation and Entrepreneurship
Description	EIRIE's vision is to become a reference operational point to unify European activity, incentivize further investments in smart grids and support access to key exploitable results.
	The EIRIE web platform is financed through a H2020 project (Pantera project) and it's maintenance is carried out by the JRC through an Administrative Arrangement with DG ENER.
	This Confluence space will be used for creating and managing knowledge that will be uploaded to the EIRIE portal.
Lead	barbomo - BARBONI Marcello
Key	EIRIE
Creation date	20.10.2021 13:37 EEST
Creator	barbomo - BARBONI Marcello
Organisation	JRC
Jira project	ENABLED
Confluence space	ENABLED
Bitbucket project	NONE +
Subversion repository	NONE +

The Butler service also allows project managers to manage project users, by adding/removing users, adding user to a specific group, and changing users permissions in CITnet.

Add a new project member ✕

User* [Select a new member ▾]

If you cannot find the user in the list,
please add one beforehand and come back in this screen

Groups* ☐ p.eirie.bridge.tf3
☐ p.eirie.bridge.tf1
☐ p.eirie.confluence.managers
☐ p.eirie.bridge.tf2
☐ p.eirie.greece
☐ p.eirie.croatia
☐ p.eirie.estonia
☐ p.eirie.ireland
☐ p.eirie.slovakia
☐ p.eirie.etip.snet.wg2
☐ p.eirie.etip.snet.wg3
☐ p.eirie.etip.snet.wg4

☐ Add another   **Add member**   Close

Finally, project managers can manage project groups through the Butler services by changing user membership and creating custom security.

Groups of project EIRIE

🔍 filter...

Group name ▲	
p.eirie.best.practices.rest.of.eu	🗑
p.eirie.bridge.tf1	🗑
p.eirie.bridge.tf2	🗑
p.eirie.bridge.tf3	🗑
p.eirie.bridge.wg1	🗑
p.eirie.bridge.wg2	🗑
p.eirie.bridge.wg3	🗑
p.eirie.bridge.wg4	🗑
p.eirie.bulgaria	🗑
p.eirie.confluence.managers	🗑

1 2 3 4

Project summary   Add a group   Export

For each new project, there are three default groups already created, namely, p.eirie.project.managers, p.eirie.developers and p.eirie.users. For the first type of group, p.eirie.project.managers, all users are able to manage the project/users/groups/plugins in CITnet, manage content, and create content. For the second group, p.eirie.developers, are able to manage content and create content. Whereas for the last group, p.eirie.users, users are only able to create content.

GROUP	JIRA	Confluence

p.eirie.developers	Read/write		Read/write	
p.eirie.project.managers	Read/write/admin		Read/write/admin	
p.eirie.users	Read/write		Read/write	

| ALL | View | Pages | | | | Blog | | Comments | | Attachments | | Restrictions | Mail | Space | | |
		Delete Own	Add	Export	Delete	Add	Delete	Add	Delete	Add	Delete	Add/Delete	Delete	Export	Admin
p.<projectKey>.developers	✔	✔	✔	✔	✔	✔	✔	✔	✘	✔	✔	✔	✘	✘	✘
p.<projectKey>.project.managers	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✘	✔	✔
p.<projectKey>.users	✔	✔	✔	✘	✘	✔	✘	✔	✘	✔	✘	✘	✘	✘	✘

The security of each CITnet project can be customized beyond the 3 default groups provided. This is done through the Butler service by creating a new project group and adding users into it. Then this group can be used in any CITnet application for example by giving permission only to a specific group in a specific page in Confluence. By taking into consideration the structure of the EIRIE platform the following groups were created according to the collaboration needs of the participants:

- p.eirie.confluence.managers
- p.eirie. best.practises.rest.of.eu
- p.eirie.regional.corner.collaboration
- p.eirie.latvia
- p.eirie.estonia
- p.eirie.ithuania
- p.eirie.greece
- p.eirie.bulgaria
- p.eirie.romania
- p.eirie.malta
- p.eirie.cyprus
- p.eirie.poland
- p.eirie.slovakia
- p.eirie.czech.republic
- p.eirie.italy
- p.eirie.croatia
- p.eirie.hungary
- p.eirie.Iceland
- p.eirie.portugal
- p.eirie.jrc
- p.eirie.bridge.wg1
- p.eirie.bridge.wg2
- p.eirie.bridge.wg3
- p.eirie.bridge.wg4
- p.eirie.bridge.tf1
- p.eirie.bridge.tf2
- p.eirie.bridge.tf3
- p.eirie.etip.snet.wg1
- p.eirie.etip.snet.wg2
- p.eirie.etip.snet.wg3

- p.eirie.etip.snet.wg4
- p.eirie.etip.snet.wg5
- p.eirie.etip.snet.governing.board
- p.eirie.etip.snet.exco
- p.eirie.etip.snet.nscg
- p.eirie.etip.snet.etips.forum

2.3.3 6+1 Regional Desks

PANTERA 6+1 approach is an inherent part of PANTERA process which aims at strengthening national participation rate in smart grid investments by making national stakeholders' needs and expectations more visible on the European arena. It is a place for raising discussions with national decision-makers, sharing experience and challenges in research and innovation, inviting local stakeholders to interact more actively with PANTERA and other EU-level initiatives. Thus, it is a key opportunity for attaining PANTERA ambition of creating a true pan-European R&I community.

As already established within the previous reporting period, PANTERA 6+1 approach includes six PANTERA Regional Desks committed to target countries which appear to have a lower rate of smart grid investment and one best-practice Desk elaborating on gathering and systemizing good experience in projects and R&I governance from more successful countries (Figure 7). The term "Regional" describes the way the work is organized within the consortium rather than geographical division, it stresses the intention of PANTERA to be closer to the local stakeholders and adapt to the local processes and cultures. Selected PANTERA partners are responsible for the host country and for the closer, so called associated, countries.

PANTERA 6+1

DESK 1 Responsible partner – IPE	DESK 2 Responsible partner – TUS	DESK 3 Responsible partner – FOSS, S5
Latvia **Estonia** **Lithuania**	**Bulgaria** **Romania** **Greece**	**Cyprus** **Malta**
DESK 4 Responsible partner – DERlab	DESK 5 Responsible partner – RSE	DESK 6 Responsible partner – UCC-IERC, NUID-UCD
Poland **Slovakia** **Czech Republic**	**Hungary** **Croatia** **Italy**	**Ireland** **Portugal**

BEST PRACTICE DESK

Responsible partner – SINTEF

Figure 7 the PANTERA Regional Desks

Current status and results achieved in the coordinated regional work is reported under WP6. A special place in the EIRIE platform called regional corner shall include all insights of activities under WP6 hosting also collaboration potential among regional stakeholders.

2.3.4 Working Teams

In close cooperation with ETIP SNET working group 5 that is currently operating with wider experts that can feed into the PANTERA platform much wanted data, information and knowledge (see Fig.6).

➢ Work closely with DERlab in populating the platform with all the information related to research infrastructure, regulations and standards that are much needed for effective R&I activity in the targeted countries.

➢ Working on R&D needs in identifying progress made in the technologies, systems and solutions in support of the energy transition. This work is organised so as to be in full coordination with experts of ETIP SNET and the consortium of the supporting service contract that is currently SPRING, aiming to formalize procedures, populate data and results from wider sources of information. High level objective of this work is the evolution into maturity indices for technologies, systems and solutions that can be made available for wider use through the planned multifunctional platform.

➢ Generate innovation support for the market uptake of projects in full coordination with the services offered by DG RTD and support the scalability and replicability work of BRIDGE for raising the impact of R&I work in Europe.

➢ Be close to international activity in the field of smart grids, storage and local energy systems by working closely through WT5 with the international activities of ETIP SNET and the affiliated activities of Mission Innovation, ISGAN etc.

Domain	Working Teams				
System	WT1: Research Infrastructure	WT2: Regulation & Standardization			WT5: Global & European Research and Innovation Community
Technology			WT3: R&I Needs Mapping & Evaluation	WT4: Innovation support to the market uptake	
Market					
Society					

Figure 8The working teams' visualization

Work in progress and results achieved through the Team Work are reported in many sections of this report since team work is a collective effort and all members of the consortium are actively contributing.

2.4 Overall status of the PANTERA activities carried out within 18-36 M of the project.

2.4.1 Progress achieved under WP2

The objective of WP2 is to identify and establish communication links and then close interactions with R&I stakeholders active in the fields of smart grids, storage and local energy systems (research organizations, utilities, industry associations, academia) that belong to the project "targeted" countries. These are the European countries that, according to the JRC report "Smart grid projects outlook 2017"[4] are spending less funds in R&I in the energy domain considering per capita values.

WP2 breaks down in 3 different tasks:

o Task 2.1 "Stakeholders identification and interaction" (M1-M20)

o Task 2.2 "Enhanced collaboration opportunities: analysis and deployment" (M3-M42)

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[4] Flavia Gangale, Julija Vasiljevska, Catalin Felix Covrig, Anna Mengolini, Gianluca Fulli, "Smart grid projects outlook 2017", Joint Research Centre, 2017

o Task 2.3 "Interactions with European platform and organizations" (M6-M48)

During the time interval 18-36 months of the project, **Task 2.1 "Stakeholders identification and interaction"** further proceeded in the process of identifying stakeholders relevant to the project activities. This activity was exploited in organising workshops where the identified stakeholders have been invited and follow the interview process, that is described in more detail within WP4.

Moreover, the collection of replies through the PANTERA stakeholder's questionnaire proceeded giving the further hints on the most relevant barriers perceived by the R&I actors in developing innovation projects and in the most valuable outcomes that they are expecting from the PANTERA project (for more details see fig 7).

Task 2.1 has formally ended its activities in month 20, however due to the importance of the activity of contacting stakeholders from target countries, this activity continues within the work of other tasks of WP2 and will proceed till the end of the project.
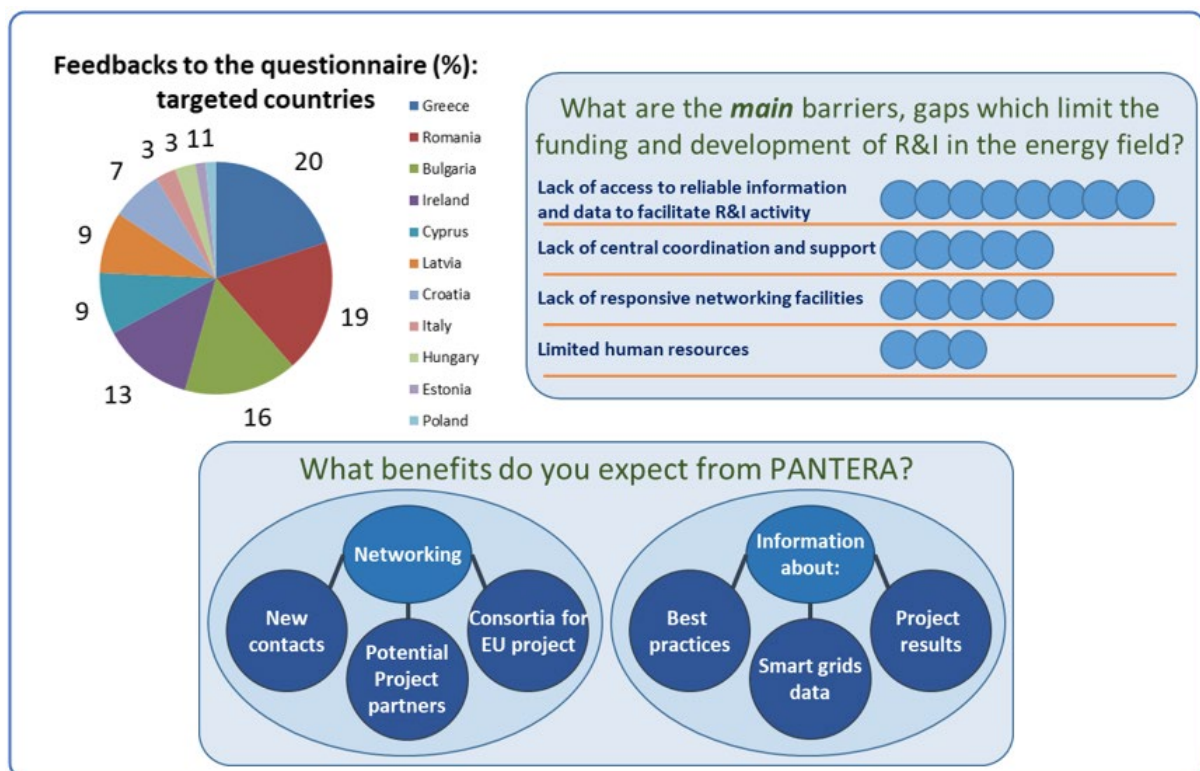
Figure 9 Example of results from the "stakeholder questionnaire"

Task 2.2 Enhanced collaboration opportunities: analysis and deployment and Task 2.3 Interactions with European platform and organizations

The work under this task allowed the PANTERA project to:

❖ Establish good collaboration links with European and International organizations
❖ Develop collaboration between other platforms and the EIRIE platform to secure content that ensures engagement and interaction with stakeholders at pan-European level.
❖ Gather updated information from the global smart grids research and innovation field
❖ Promote the activities of the PANTERA project

This was possible thanks to the deep involvement of PANTERA partners in several relevant international initiatives such as: Mission Innovation, the International Smart Grid Action Networks (ISGAN), ETIP SNET and

EERA Joint Programme on Smart Grids.
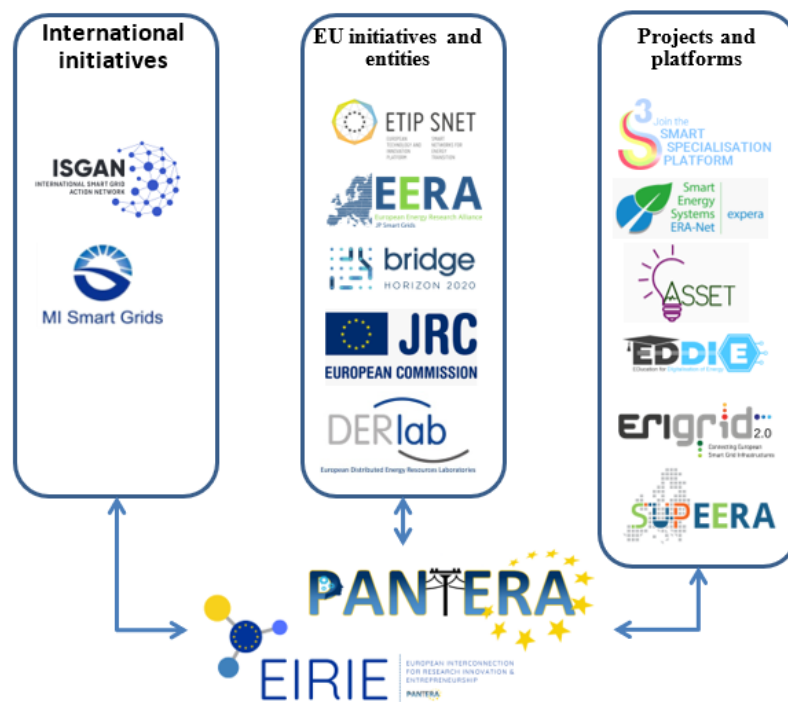
Figure 10 Summary of the initiatives with which PANTERA has established collaborations

In particular, concerning the ETIP SNET, close collaboration has been established with its Working Group - WG 5 "Innovation implementation in the business environment". Through this collaboration PANTERA partners supported the ETIP SNET's regional workshops and within WG5 periodic meetings, PANTERA regularly gives an update about the international relations that it is monitoring (MI, ISGAN, EERA JP SG) benefiting in the process by collecting feedback from WG 5 members. In summary the activities achieved are the following:

The collaboration and support to the ETIP SNET goes beyond the collaboration with WG5 and considers also the following activities performed within the PANTERA Working Team 3:

- ❖ Provision of technologies and functionalities classification to secure a unified categorization under the EIRIE platform
- ❖ Development of a methodology of matching other platforms categorization to EIRIE classification to secure the seamless collaboration with other initiatives in the future.
- ❖ Secure that the classification is adaptive, flexible and up to date and that corresponds to the updated needs of the R&I community
- ❖ Maturity index methodology development to quantify the progress and evaluate the R&I needs at each point in time based on the achieved evolution of technologies, systems and solutions.

Finally, regarding the interaction with ETIP SNET/BRIDGE it is important to note the agreement reached between the two entities, for collaboration on generated data / information / knowledge handling, thus enabling the EIRIE platform to share also ETIP SNET's and BRIDGE's projects' data / information / knowledge and to be able to offer structured information through shared search functionalities and tools.

The individual members of the EU R&I community are also in the scope of the work performed in this task. In fact, establishing a high number of good connections was instrumental in the launching phase of the EIRIE platform. In this view, a campaign to periodically release tweets has been set up and the most important news from the international initiatives and other content of interest e.g. projects. To this effect the most relevant news from the international activities with which PANTERA is collaborating are summarized and

posted on twitter through the PANTERA project account.

Figure 11 Example of tweets about news from international initiatives posted through the PANTERA account

As far as collaborations with other platforms and projects are concerned, data and content that are useful and within the objectives of PANTERA will be hosted in the EIRIE Platform. It has been agreed to host within EIRIE data and information related to:

- ❖ research infrastructure through the collaboration with the project ERIGRID 2, JRC and DERlab. To this effect agreement was reached to develop a common repository hosted on the EIRIE platform and serving the whole R&I community of the EU.
- ❖ training and education (through the collaboration with the projects ASSET and EDDIE)
- ❖ standards related material (together with DERlab)

The link established with Mission Innovation (MI), especially with the MI Innovation Challenge 1 on Smart Grids allowed to put the basis for connecting EIRIE with the SGIA platform (www.mi-sgiaplatform.net). The two platforms are complementary and will benefit from a mutual exchange having SGIA a global scope and being more oriented to collect and made available through a semantic search engine selected documents such as national energy policies and strategies, roadmaps, position papers and best practices; whereas the EIRIE platform has focus at European level and it will especially gather results and case studies form European R&D projects and related activities. Considering these aspects, a collaboration between these two initiatives is expected to highly enhance the potentialities of both platforms.

Finally, it should be pointed out that international collaborations give the possibility to the PANTERA project to collect and share relevant and updated material from several initiatives thus helping to make the EIRIE platform a reference point, a *one stop shop* in the smart grid domain where a user could find all the relevant information about smart grids, storage and local energy systems. This in turn would accelerate the growing interest from local stakeholders.

The activities briefly reported above are reported with more details in the deliverable *D2.3 - 1st Report on interactions with European platforms and organizations*[5].

The following milestones were reached:

❖ M1 Analysis of the interaction with European platforms and organizations

Active participation of representatives in the Advisory Board, planned activities and feedbacks received through the planned work of PANTERA

❖ M2 Analysis of the interaction with European platforms and organizations

Active participation of representatives in the Advisory Board, planned activities and feedbacks received through the planned work of PANTERA

2.4.2 Progress achieved under WP3

The objective of WP3 is to identify the current state and progress of the R&I, regulations and relevant standardisation activities in the areas of smart grid and then develop an efficient process to address the key challenges at national and EU level and recommend for post project activities.

WP3 breaks down in the following different tasks:

o   T3.1- Current status and progress of R&I activities [M1 – M18] – develop a process to address the R&I status and needs at national level;

o   T3.2- Regulations, Codes and Standards [M3 – M22] – identify the regulations, grid codes and technology standards;

o   T3.3-Energy Policy and barriers [M3 – M22] - Identify the national and EU energy policies and barriers (at community level) related to smart grids, storage and local energy systems;

o   T3.4- Key challenges and bottlenecks [M13 – M38] - develop an efficient process to address the key challenges and bottlenecks;

o   T3.5- Recommendation for post project activities [M13 – M48] - develop a roadmap for post project activities.

With the aims of this coordinated action for setting up a European forum, International Energy Research Centre (IERC) is leading this WP3 and with participants working together to identify the current status and progress of the R&I activities in the field of smart grids, storage and local energy systems at the national and EU level towards the development of decarbonised European smart grid network.

During the time interval 18-36 months of the project the following were achieved per task:

•   T3.1: This Task has been completed in M18 according to the planned timeline. The deliverable report (D3.1) has also been submitted. One of the key outcomes of this task is that the PANTERA team has developed the RICAP technical process (R&I status and Continuous gAP analysis), where an attempt has been made to develop a universal methodology by linking the past to the present and future plan to achieve the target based on the ETIP SNET vision 2050. RICAP administrative process is also structured to perform the required administrative task to communicate with relevant stakeholders, collect project information and share the outcomes to EU and PANTERA platform. The PANTERA recommends how the proposed technology classification can be linked to the FUNCTIONALITY of the ETIP SNET 2020-2030 roadmap. A case study for Ireland was given as an example to demonstrate the R&I status based on the technology classification, mapping with FUNCTIONALITY under the RICAP process. A final recommendation is made to implement the proposed RICAP process in future R&I status analysis towards the achievement of a decarbonised EU smart grid network.

•   T3.2: This Task has also been completed in M22 according to the planned timeline. The deliverable

report (D3.2) has also been submitted. The network/grid codes, regulations and standards that technically fit the smart grid solutions have been reviewed. This task has also identified the mapping process to link the regulation, grid codes with the FUNCTIONALITY as defined in the ETIP SNET roadmap.

- T3.3: This Task has also been completed in M22 according to the planned timeline. The deliverable report (D3.3) has also been submitted. Meeting the EU and national target to decarbonise the smart grid network as well as empowering energy citizens as prioritised in the NECP, this task has focused on the national energy policy for the countries of low R&I activities. Special focus is being given on the consumers' empowerment, their participation in the local energy market and integration into the wholesale energy market. NECPs have been reviewed to identify the gaps and provided the recommendation for the implementation and deployment of smart grid technologies (PANTERA Technology classification, as identified in the PANTERA RICAP process) and to align with the ETIP SNET 2030 roadmap as seen in Fig. 6.

- T3.4: This task is developing an efficient process to identify the key challenges and bottlenecks for the (i) technological solutions, (ii) regulation, standards and (iii) policy gaps related to smart grids, flexibility/storage and local energy systems to empowering the energy citizen, at national and EU level. More specifically, this task is identifying the "enablers" of citizens' empowerment in the energy transition, e.g., demand response, DERs, RES, energy storage systems, local markets, communication, and energy management and automation systems; tracing the barriers back to the gaps; investigating to what extent each of the barriers hinders the citizens' engagement in each member state. This task is ongoing and will deliver the outcomes in Feb 2022.

- T3.5: In the framework of this action, based on the best practice examples and by developing the solutions for the existing technologies, PANTERA (during the project lifetime) and later (by and beyond 2020) will be recommending the required emerging technologies to keep the exploitation of smart grid technologies for decarbonizing electricity in the energy roadmap 2050. The sustainability of the PANTERA platform (as post-project activity) to serve the purpose will also be outlined. The task is also ongoing and will deliver the outcomes in Dec 2022.

The following deliverables have been released under the above activities:

D3.1: Report on current status and progress in R&I activities: Technology [IERC, R, PU, M18]

D3.2 Report on RCS in EU-28 [IERC, R, PU, M22]

D3.3. Report on community energy policy and barriers [IERC, R, PU, M24]

WP3 through constant coordination work has contributed extensively in the following fields in support of the objectives of the PANTERA Process:

• Participated in all the discussions of the consortium in developing and approving the specifications for the multifunctional platform.

• Having the main objective to serve the PANTERA platform, work under WP3 has developed the PANTERA RICAP process (both administrative and technical) to identify the current R&I status and needs to meet the national and EU target on decarbonisation of smart grid network. This will constantly feed-in information and knowledge in the platform that will be highly beneficial to the broader R&I community.

• The RICAP process is highly contributing to the work of Working Team 3 with the results broadly used by ETIP SNET and BRIDGE.

• The network/grid codes, regulations and standards for smart grid solutions have been reviewed and a

mapping process to link the regulation, grid codes with the FUNCTIONALITY as defined in the ETIP SNET roadmap has been developed.

• The policy barriers in relation to empowering energy citizens and their active participation in the local and wholesale energy market have been reviewed at the national level, gaps have been identified and possible recommendations are being made.

• The sustainability of the PANTERA platform (as post-project activity) to serve the purpose is also being outlined.

2.4.3 Progress achieved under WP4 "Key topics and content management"

The objective of WP4 is to identify the way and topics for dissemination and networking activities within the project, which is consisting of setting up a forum, event organization, virtual meetings, establishing collaborative working spaces and social media. WP4 is led by SINTEF Energi AS.

The activity breaks down into three different tasks:

- o **T4.1**: Definition of the content for dissemination and networking activities [M3-M9]

- o **T4.2:** Identification of gaps and missing subjects [M9-M41]

- o **T4.3:** Assessment of the defined topics; relevance, driving forces and trends [M40-M45]

During the time interval 18-36 months of the project the following were achieved per task

T4.2: Identification of gaps and missing subjects

The process of identification of gaps and barriers included two parallel work streams during the reporting period. It starts with reference to the Pan-European Political landscape, defining the main R&I priorities and political targets for the Member States. The Pan-European regulatory landscape has been constantly changing during the recent years, focusing on the long-term goals of decarbonising the power sector.

Figure 12 Two work streams in T4.2 activity

The project was further divided into two parallel streams:
• The upper stream was essentially dedicated to the technical domain of Smart Grids, storage and distributed generation. This process starts with an assessment of the National Energy and Climate Plans (NECPs) in the target countries, based on the PANTERA's taxonomy of technologies in order to identify national technical priorities. These priorities are further mapped towards national projects in the target countries. The outcomes are used for the identification of the R&I gaps.
• The parallel lower stream has a broader holistic nature based on direct interaction with stakeholder structures around both technical and non-technical areas. The interactions are made as semi-formal interviews, where the topics are modified according to any changes in the technical stream. This stream results in the definition of the main barriers and gaps whenever it is possible. These conclusions are deliberately not-country specific. This has been done in order to meet the requirements of GDPR and avoid tracing the answers. More importantly, the information about gaps and barriers will be used as input to the

main outcome of the PANTERA project - the European Interconnection for Research Innovation & Entrepreneurship platform (EIRIE).

At the time of writing the activity has head about 30 interactions with stakeholders from 13 target countries, representing various stakeholder groups.
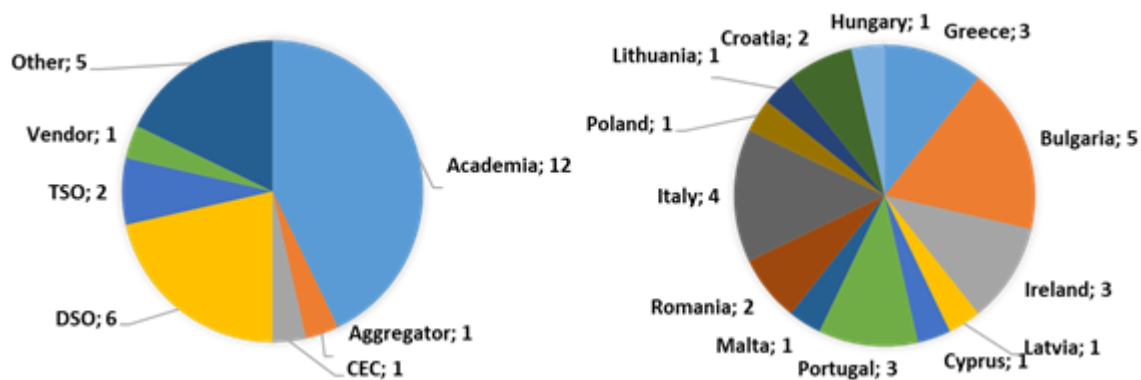
Figure 13 Status for interaction with the stakeholders from the target countries

Some of the hypothesis, developed after the interviews, were tested in case studies.

The activity has identified several technical and none-technical barriers for more activities in the area of Smart Grids, storage and distributed generation. Priorities of implementation of Smart Grid technologies were mapped for the target countries. The preliminary results were presented to selection of stakeholders from three target countries Latvia, Romania and Ireland as formal close-up of M4 milestone.

The following deliverables have been released under the above activities:

- **D4.1: Content and topics for dissemination and networking activities**[6]

- **D4.2: Identification of gaps and missing subjects** [7]

- **D4.2.2. "The 2nd report on Identification of Gaps and Missing Subjects"**[8] which was released at M21

The following milestones were reached:

MS4 "Identify gaps and missing links: Detailed analysis for firm action by the Consortium" at M33 (closed at M34) The close-up is documented by a Memo.

Having the main outcomes to serve the PANTERA process Following the objectives of the DoW, the activity has identified several topics, which are critical for increasing of Smart Grid activities in the target countries both in technical and none-technical areas. This input has been used in other activities, as for example in WP6, where best applicable practices were identified. In addition, this input clarifies the focus areas for interaction of stakeholders at EIRIE platform. Development and testing of the RICAP process on the target countries will be used for the development of a new interactive tool for the EIRIE platform.

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[6]   *https://pantera-platform.eu/wp-content/uploads/2020/01/D4.1-Content-and-topics-for-dissemination-and-networking-activities.pdf*

[7]   *https://pantera-platform.eu/wp-content/uploads/2020/07/D4.2_1st-Report-on-Identification-of-Gaps-and-Missing-Subjects.pdf*

[8] *https://pantera-platform.eu/wp-content/uploads/2020/10/D4.2.2-October-2020.pdf*

2.4.4 Progress achieved under WP5

The objective of WP5 is to organize workshops and interactive meetings with stakeholders beyond the steering committee and working groups members. Thus, reaching a wider range of stakeholders and initiatives through these actions. WP5 is led by DERlab and supported by all project partners.

WP5 breaks down in three different tasks:

- Task 5.1: Workshop format, planning and reporting [M1-M6]
- Task 5.2: Regional Workshops [M1-M48]
- Task 5.3: Pan-European and Global Workshops [M1-M48]

During the time interval 18-36 months of the project the following were achieved per task.

Task 5.2: Regional Workshops

The PANTERA consortium organised 6 regional workshops, webinars and events during the second period of the project. A list of regional events is presented below:

1. PANTERA Regional Workshop, "Energy transition through optimal use of the rich Renewable Energy Resources of the Mediterranean basin", online, MedPower 2020, 10 & 11 November 2020
2. Smart Grid Research Data PANTERA nano-workshop, online, 22 February 2021
3. IERC Annual Conference "Post-Pandemic Charge Towards our 2030 Targets", online, 27-29 April 2021
4. "The key role of the R&I unified approach across EU for boosting smart grids investments: The EIRIE platform" nano workshop at the 5th Cretan Energy Conference, online & Crete (GR), 9 July 2021
5. "Regional Research and Innovation activities for Smart Grids, Energy Storage and Local Energy Systems" nano-workshop, Varna, Bulgaria, 3 August 2021.
6. PANTERA & SUPEERA joint nano-workshop: "Boosting the R&I activity on Smart Grid (SG) Technologies" at the 6th International Conference on Smart and Sustainable Technologies – SpliTech 2021, Split and Bol (HR) and online, 10 September 2021
7. CINELDI Webinar "Barrierer for forskning og demonstrasjon innen Smart Grids og introduksjon av beste praksis: EU-prosjektet PANTERA og kunnskapsdelingsplattformen EIRIE", 3 November 2021

Task 5.3: Pan-European and Global Workshops

The PANTERA consortium organised 5 pan-European and global workshops, webinars and events during the second period of the project. A list of Pan-European events is presented below:

1. DERlab/ERIGrid 2.0/PANTERA Webinar "Remote Testing & EIRIE Platform", online, 8 March 2021
2. Trends, opportunities and choices in designing a cyber-resilient EPES infrastructure" EnergyShield workshop, online, 15 April 2021
3. The EU Sustainable Energy Week (EUSEW) 2021, online, 25-29 October 2021
4. 15th SET Plan conference, Hybrid (Bled Slovenia & online), 25-26 November 2021
5. Enlit Europe 2021: Digital EU Projects Zone & physical presence, Milan (IT), 30 November – 2 December 2021

Summary for the PANTERA workshops, webinars and events are available on the PANTERA website under the following link: https://pantera-platform.eu/events/

The following deliverables have been released under the above activities:

- D5.2: Report on the outcomes of regional workshops (Intermediary) [Month 24]

- D5.4: Report on the outcomes of pan-European and global workshops (Intermediary) [Month 24]

- D5.3: Report on the outcomes of regional workshops (final) & D5.5: Report on the outcomes of Pan-European and Global workshops (final) are going to be submitted in the next period of the project.

The deliverables for WP5 are publicly available on the PANTERA website under the following link: *https://pantera-platform.eu/resources/*

The PANTERA workshops, webinars and events supported the PANTERA consortium to introduce the EIRIE platform to the R&I community. Furthermore, it helped to get feedback on the EIRIE platform and the PANTERA process, which helped in updating and improve the EIRIE platform and the PANTERA process.

The COVID-19 has reduced the number of participants in the PANTERA workshops physically, but using the state-of-the-art technology the PANTERA consortium managed to engage the stakeholders via online platforms to participate in the PANTERA workshops, webinars and events.

2.4.5 Progress achieved under WP6

The objective of WP6 is to provide organisational support in order to establish regional stakeholder desks in the target regions, as vehicles to ensure wide participation and involvement of market actors and stakeholders throughout the project and to create local networks. WP6 is led by IPE (Institute of Physical Energetics).

WP6 breaks down in three different tasks.

- Task 6.1. Review of EU strategic priorities and relevant policy developments. [M1-M9]

- Task 6.2. Analysis of the national projects, findings in the target regions. [M8-M43]

- Task 6.3. National cross-case comparisons and conclusions. [M44-M48]

During the time interval 18-36 months of the project the following were achieved per task. Note that All WP6 tasks' activities form a core of regional dimension and are fully aligned with Desks timeline.

Task 6.2. Analysis of the national projects, findings in the target regions.

Task 6.2 mainly focuses on establishing and continuously guiding the activities of Regional Desks, including:

- engaging stakeholders to interact with PANTERA;

- inviting stakeholders to participate in PANTERA interviews conducted within WP4;

- identifying local events and supporting organisation of dedicated workshops;

- advertising PANTERA through local channels;

- identifying and creating country specific case studies.

The above-mentioned activities will create a basement for further work within Task 6.3.

Moreover, a dedicated stakeholder survey was developed and performed within this task aiming at uncovering specific needs of national stakeholders. The results were incorporated in the first version of D6.3 report "Consolidated Summary Report of Desk Activities in the Target Regions" and presented in the paper "Research and Innovation Supporting Energy Transition: Challenges for Wider Participation of Lagging Countries" presented during PowerTech 2021 conference.

Additionally, Task 6.2 included an overview of target countries' specific situation in the frame of the fifth pillar of the Energy Union (Research, Innovation and Competitiveness) and set 2020/2030 targets in order to identify existing gaps between the current and the desired situation. Thus, country profiles launched in Task 6.1 were updated.

Finally, activities are ongoing to improve the country representation on the EIRIE platform.

The following deliverables have been released under the above activities:

- D6.3 Consolidated Summary Report of Desk Activities in the Target Regions (first version) (M??)

As already indicated, the main outcomes of the WP aim to serve the PANTERA process and enrich the EIRIE platform:

- development and launching PANTERA 6+1 approach;

- identifying, coordinating and monitoring of Desks' activities linked to WP6 objectives;

- supporting other WPs objectives by including relevant tasks in Desks' activities, i.e. interview monitoring and identification of relevant events with following workshop organisation and monitoring progress made with these dimensions

- developing concept and improving country/regions representation on the EIRIE platform.

2.4.6   Progress achieved under WP7

The objective of WP7 is to deliver a concrete methodology and plan for the future sustainability of the PANTERA platform, beyond the duration of the project. In this sense the WP will deliver a robust exploitation strategy for the PANTERA platform, while analyzing future costs for the operation and expansion of the Platform and identifying possible financing mechanisms and instruments at European and Regional level to cover any financing gaps. WP7 is led by Suite5.

WP7 breaks down in 4 different tasks:

- **Task 7.1 Exploitation Strategy** (M6 - M42)

- **Task7.2 R&I Recommendations for future Smart Grids and Promotion to Relevant   Stakeholders** (M18 - M48)

- **Task 7.3 Mapping of funding mechanisms for post-project activities continuation** (M18 - M48)

- **Task 7.4 Sustainability Planning and Business Development Activities** (M24 - M48)

During the time interval 18-36 months of the project the following were achieved per task.

Task 7.1 Exploitation Strategy

The PANTERA/ EIRIE platform has been accepted by DG Ener / BRIDGE, JRC and ETIP SNET as the reference platform and one-stop-shop for acquiring information about R&I projects, standards and grid codes relevant to Smart Energy Systems, creating new knowledge, while enabling further services for the promotion of R&I activities at EU and regional level (with a focus on low-performing countries).

During the reporting period, the task further elaborated on coordinating with JRC for ensuring the sustainable post-project hosting and operation of the platform in the infrastructures and under the auspices of JRC, also considering support and resources to be provided by the SPRING project, which is expected to take over the content population and maintenance of the EIRIE platform after the end of the PANTERA project.

Capitalizing on the resources of SPRING project, will ensure:

- The enrichment of the platform's content;

- The integration with additional content platforms, mainly reaching out to regional and national repositories of projects and relevant documentation;

- The extension of the platform's functionality with additional features and services, which will be implemented by SPRING project.

Moreover, in the previous technical reporting document, it was highlighted that the integration with other platforms is of crucial importance. With regards to this objective, the integration with CORDIS (population of the projects database), DERLab (Database of Smart Grid Research Infrastructure and Smart Grid Standards) and the ASSET project (educational material) has been completed. Apart from that, there are ongoing processes towards the integration with the EXPERA platform of the ERA-NET Smart Energy Systems (Projects database), EDDIE project (Research Infrastructure/ Educational Material), BRIDGE Repositories (Use Cases), JRC Systems (Smart Grid Projects Database/ Map, DYNAMO application data, Research Infrastructures database) and Mission Innovation Platform (Projects and other relevant documentation).

Task 7.2 R&I Recommendations for future Smart Grids and Promotion to Relevant Stakeholders

During the reporting period the task elaborated on setting up the methodological approach for the definition of future R&I priorities and research areas in Smart Energy Systems. To this end, an initial approach has been defined that is jointly utilizing (i) the work performed for the development of the System Readiness Level (SRL) indicator, which refers to the maturity of a variety of smart grid technologies in terms of their readiness to integrate to the energy system, (ii) the work performed in ETIP-SNET WG5 Working Teams for the definition of future research topics and contribution to the ETIP-SNET Implementation Roadmap, and (iii) the NECPs of the member states that are addressed through the PANTERA project and the priorities they have set in terms of R&I for the years to come.

Task 7.3 Mapping of funding mechanisms for post-project activities continuation

During the reporting period, this task launched a preliminary desk research, to progressively identify available and suitable funding mechanisms at EU/ regional/ national level, that can effectively cover the financing needs of the PANTERA/EIRIE platform operation for the post-project period, as part of the overall PANTERA's sustainability planning activities.

Task 7.4 Sustainability Planning and Business Development Activities

During this task, the elaboration on the different roles involved in the operation and maintenance of the PANTERA/EIRIE platform took place. Also, the task launched the coordination activities with the Regional Desk leaders, as well as the Working Teams chairs and participants, towards jointly defining the required activities to be performed in the post-project period and perform the, as detailed as possible, quantification of the required resources and associated costs. The results derived from the aforementioned analysis will serve as input for Task 7.3, in order for the required financial resources to be appropriately matched to the respective financing mechanisms in European, Regional and National level.

- No deliverables have been released during the time interval 18-36 months. All WP7 deliverables are projected to be released during the next reporting period.

As already indicated, the main outcomes of the WP aim to serve the PANTERA process and enrich the EIRIE platform: .

- Defining of the sustainable operation of the PANTERA/ EIRIE platform in the period after the completion of the project.

- Supporting the sustainable continuation of content creation, content population, Regional Desks operation and Working Teams functioning through detailed planning of the relevant activities, the thorough allocation of respective roles and responsibilities, the definition of the financing needs and the identification of the financing sources for the post-project period.

2.4.7 WP8: Progress towards the dissemination objectives.

The **objective** of WP8 is to communicate and disseminate project activities to facilitate the flow and exchange of information to the stakeholders and broader audience, and also within the platform. This work package deals with two different types of activities:

- Dissemination activities, aiming at disseminating the PANTERA project outcomes and achieving the highest possible impact and visibility of its work.

- Communication activities, aiming at reinforcing the interaction between stakeholders and initiatives related to smart grids development

WP8 is led by DERlab and supported by all project partners to increase PANTERA's reach and impact among the R&I community in the energy field in Europe.

WP8 is organized in three different tasks that run continuously throughout the project:

- **Task 8.1. PANTERA Collaboration Platform: Pan-European Hub for Smart Grids [M1-M48]**

- **Task 8.2. Presenting PANTERA Activities in Special Events [M1-M48]**

- **Task 8.3. Project visual identity, website and media coverage[M1-M48]**

Within M18-36, the following progress has been achieved per task:

Task 8.1. PANTERA Collaboration Platform: Pan-European Hub for Smart Grids

This task is about the creation of the interactive multi-functional platform that stands for European Interconnection for Research Innovation & Entrepreneurship, which was officially launched in July 2021.

The key objective of the EIRIE platform is to connect and bring together the European Union's Research & Innovation community in one place, to enable collaboration, increase wider interest and give access to all the resources needed to play an active role within the European research community. The EIRIE platform aims at strengthening the participation of all Member States in support of the fifth pillar of the Energy Union (Research, Innovation and Competitiveness) and energy transition mentioned in *"A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy"*.

The platform users will get an easy access to information on potential funding and consortium building, projects data collection (results and outcomes, best practices, reports and deliverables, etc.), references to standards and regulations, all of these searchable via an easy-to-use search tool, to help bridging the gaps that currently exist in the energy field in Europe between Member States.

Furthermore, to ensure the success and sustainability of the platform, the PANTERA consortium is working closely with JRC (EC Joint Research Centre), under the guidance of DG Energy of the European Commission,

to develop EIRIE as a linked extension of their Smart Energy Systems platform. The platform will also be serving the needs of ETIP SNET (ETIP Smart Networks for Energy Transition) and be in close collaboration with well-known platforms in Europe such as the ERA-Net SES (ERA-Net Smart Energy Systems), DERlab and Mission Innovation.

Task 8.2. Presenting PANTERA Activities in Special Events

This task is about increasing the awareness about PANTERA and disseminating the results by supporting and encouraging the active participation of project partners in relevant European events. For this purpose, the project partners are informed about relevant events within the European framework, promoting PANTERA's presence in the selected events and informing the stakeholders about them. The information obtained in each of these events will be reported, followed up and acted upon.

In 2020-2021, many events and conferences shifted from physical to online and progressively hybrid events. PANTERA partners adapted to the situation and took part to relevant events to promote PANTERA, either through online/hybrid workshops or by organizing a virtual booth and taking part to sessions in order to interact with relevant participants.

Below, the events to which PANTERA partners took part in order to disseminate the project results and raise awareness about the project can be found:

- EUSEW (EU Sustainable Energy Week) 2020, 22-26 June 2020 (Virtual presence and online workshop)

- MedPower 2020 (Mediterranean Conference on Power Generation, Transmission , Distribution and Energy Conversion), 9-12 November 2020 (Virtual presence and online workshop)

- *"Trends, opportunities and choices in designing a cyber-resilient EPES infrastructure", EnergyShield workshop*, online, 15 April 2021 (Presentation of PANTERA and EIRIE platform)

- *IERC Annual Conference "Post-Pandemic Charge Towards our 2030 Targets"*, online, 27-29 April 2021 (Presentation of PANTERA and EIRIE platform)

- 5th Cretan Energy Conference 2021, 8-10 July 2021, Hybrid (Physical and online presence, hybrid workshop)

- SpliTech 2021 (International conference on smart and sustainable technologies), Hybrid (Physical and online presence, hybrid workshop)

- *The EU Sustainable Energy Week (EUSEW) 2021*, 25-29 October 2021, online (Virtual presence with an online booth)

- Webinar for CINELDI research centre (representatives from academia, DSOs and vendors) "Barrierer for forskning og demonstrasjon innen Smart Grids og introduksjon av beste praksis: EU-prosjektet PANTERA og kunnskapsdelingsplattformen EIRIE", 3 November 2021 (Presentation of PANTERA and EIRIE platform)

- SETPlan conference 2021, 24-25 November 2021, Hybrid (Virtual presence as online exhibitor)

- Enlit Europe, online (all year) & physical, 30 November-2 December 2021 (Virtual booth and presence in the digital EU project zone, physical booth in the EU project zone at the physical event in Milan)

Task 8.3. Project visual identity, website and media coverage

This task is about developing a project visual identity to present the external identity of the project in a consistent way. The identity consists of a project logo, general guidelines, as well as a presentation template,

a document template and a project brochure/flyer. This task also includes the creation and maintenance of the public project website, suitable for different levels of interest and expertise. To ensure dissemination of the project activities and results to the wide public, several activities are performed including: press release issuing, promotion in important European energy publications, project website, conference websites and promotion, social media (e.g. dedicated professional LinkedIn account, Twitter, Facebook, YouTube channel), DERlab public activity report and dedicated newsletter.

To summarize the activities undertaken under WP8, and make them more visible, the project website has been set up and running since month 3 of the project and is regularly updated with project news and relevant information. In particular, all workshops are announced and the outcomes are uploaded as well on the website, including the presenters' slides, the workshop summary and links to watch the workshop on demand. Social media channels (Facebook, Twitter, LinkedIn, Research Gate and YouTube) have been set up and are managed by WP8 leader DERlab, with the collaboration of all project partners. Regular updates are made to engage the audience increase interaction. Internal communication channels such as emails, Slack tool, Microsoft Teams tool and OnlyOffice platform are also used to ensure a smooth internal communication.

PANTERA has also been promoted in the DERlab Public Activity Report 2018-2020, which is available online and has been sent to the DERlab members network. The project will also be featured extensively (over 10 pages) in the DERlab Public Activity Report 2020-2021 (entitled *"Pan-European collaboration & the role of remote testing in the recovery plan"*), to promote the project achievements so far, in particular the EIRIE platform.

PANTERA was also featured (2 pages) in the summer 2021 edition of European Energy Innovation Magazine (EEI magazine), which was widely promoted to a relevant audience on their website and social media channels. The feature included a presentation of the project, the mission, objectives and achievements, as well as the EIRIE platform. The main objectives of this activity was to announce the launch of the EIRIE platform.

PANTERA has also been presented in many scientific (online and/or hybrid) events and conferences (see a list of the main events in task 8.2) by project partners, which allowed key interactions with stakeholders and gathering relevant feedback on the promoted solutions of the project and the EIRIE platform.

In order to keep track of the promoted work of the PANTERA project, through correct and effective communication channels and targeting the right audience, we have been monitoring different sets of Key Performance Indicators (KPIs). The KPI visualization of PANTERA's activities is presented in details in Annex 1. Furthermore, support is provided to all WPs regarding dissemination material, promotion, etc.

Deliverables

No deliverables have been released during the time interval covered in this report.

Contribution to the PANTERA process

WP8, through constant coordination work, has contributed extensively in the following fields in support of the objectives of the PANTERA process:

- Has played a leading role in all the discussions of the consortium in developing and approving the specifications for the EIRIE platform. After the launch of the EIRIE platform, activities in WP8 have also contributed to feeding content and updating news and events on the platform.

- As indicated above, the main objective of WP8 is to communicate and disseminate project activities to facilitate the flow and exchange of information to the stakeholders and broader audience, utilizing

the capabilities of the platform as well and for this reason the activities in this important objective of the project are continuous with a lot of tangible results such as:

o Support and alignment of the EC with PANTERA's objectives. The platform will be hosted by the EC and will be known under the name EIRIE – European Interconnection for Research Innovation & Entrepreneurship.

o The project visual identity and dissemination material, public website and social media channels have been contributing to a strong and consistent image of the PANTERA project.

o Interactions and engagement with the stakeholders through mailing campaigns, social media posts, website articles, newsletters, webinars and workshops have been enriching the work done through the regional desks and complementing their efforts in activating stakeholders in the PANTERA process.

o Project awareness, promotion and interactions with stakeholders have been facilitated through PANTERA's online presence, as well as in events and conferences.

In the next table the contribution of each individual package against the overall objectives of the project is summarized.

Table 5 The WPs contribution against the overall project's objectives.

Objectives	WP2	WP3	WP4	WP5	WP6	WP7	WP8
Identify and establish communication links with R&I stakeholders active in the fields of smart grids, storage and local energy systems including policy makers, standardisation bodies and experts in both research and academia representing the EU-28 energy system	Deep involvement of PANTERA partners in several relevant international initiatives such as: **Mission Innovation**, the **International Smart Grid Action Networks** (ISGAN), **ETIP SNET** and **EERA Joint Programme on Smart Grids.**						
Develop an		The **RICAP**					

Deliverable: Technical Report 2 Revision / Status: final

innovative top-down and bottom-up approach for effectively identifying the key challenges in accelerating R&I activities in low spending countries		**process** establishment **The network/grid codes, regulations and standards for smart grid** analysis The **policy barriers** in relation to empowering energy citizens and their active participation analysis					
Formalize a governance structure capable of delivering targeted objectives that will bring under the same umbrella all active entities / stakeholders in the field of smart grids / storage and local energy systems to leverage synergies and maximize benefits					**PANTERA 6+1 approach in regional activity**		
Develop enhanced knowledge-sharing		The **RICAP process**	**Several topics** identification critical for				The **EIRIE platform** promotion and

mechanisms that help identify, discuss and structure the key R&I challenges			**increasing of Smart Grid activities** in the target countries				support
Build a pan-European multi-functional collaborative platform through which dedicated tools will facilitate the collection of real data / results from on-going projects, build a useful shareable data repository (a virtual stakeholders hub, termed as ViSor-Hub will be developed), capable of supporting case studies of exploitable results, scenario building and local energy system analysis accessible by all interested stakeholders	Collaboration area facilitated further through Confluence	Confluence area of **knowledge creation**. The **system maturity identification** tool. **Data base** creation for shareable data and info	**Content creation** through the topics of interest		The **EIRIE regional corner** creation and operation	Supporting the sustainable continuation of **content creation**	The **Heat map** project data analytics
members of R&I community in collaboration with already				**Workshops** and engaging events			

on-going activities aiming to wider participation, strengthen objectives and extent impact of achieved results				organization continuation			
Develop working groups/teams consisting of stakeholders depending on evolving R&I needs and topics identified in the project for generating results, reports, white papers and offer support where needed					**PANTERA 6+1 approach** and the **EIRIE Regional corner**		

3 Activities planned for the fourth year of the project (M36-M48)

The detailed PANTERA GANTT Chart with reference to the activities planned including the deliverables and milestones foreseen is shown in Figure 1.

The activities planned for next year (36-48) of the PANTERA project will focus on:

- The EIRIE platform to be fully connected with the identified platforms/initiatives/projects. Pending work on completing connectivity with the platforms: Mission innovation, BRIDGE, EDDIE, EXPERA, EPRI and JRC.

- Work of Working Teams and Regional activities will continue as intense as possible, aiming to enrich in content the EIRIE platform.
    - o The Working Teams will continue their regular meetings and targeted work for producing material for the platform covering their specific fields.
    - o Regional activities will intensify towards the strengthening of the regional desks and collaboration with the stakeholders of the Member States with low R&I activity and producing material for the platform.

- All relevant content including functionalities and planned tools within EIRIE shall be implemented. These include as a minimum the following:

Research Infrastructure database	DERlab Research Infrastructure Database JRC Smart Grid inventory ERIGrid 2.0
Standards database	DERlab Standards & Grid code database Excel file with linking standards with ETIP SNET technology
System Maturity Quantification Tool	Tool for calculating maturity within the confluence area
Webinar	1 h webinar describing the processs of the projects going through the maturity tool assesement
Static content	1)static content in the RICAP process explaining in steps the process 2)vizualization of the results in the RICAP process tab

static content questionnaires (TBD)	1) results from the assessment of selected exploitable results of projects (within the relevant project pages) and relevant documentation/ visualization (as attachments) 2) at a later stage we will assess the possibility of adding the questionnaire in the EIRIE platform (to be discussed and agreed with SPRING representatives as an extension of the platform)
static content	Information from international initiatives (ISGAN, MI, EERA, ...)

- Organization of the planned regional workshops and related events for EIRIE promotion. These include as a minimum the following: RIGA, EUSEW, IEEE smart cities Cyprus, MELECON 2022 in Sicily, MEDPOWER in Malta

The expected progress in submitting planned Deliverables and reaching identified Milestones due during this coming semester are detailed in the section below.

4 Planned Deliverables and Milestones in months 36 to 48

Table 6: List of deliverables released within M36-M48

Deliverable	Deliverable title	WP/Lead Beneficiary	Type/Dissemination Level	Due date
D1.6	Project progress reports	WP1/ FOSS	R/ PU	48
D2.2	Report on Enhanced collaboration opportunities	WP2/ UCD	R/ PU	42
D2.4	Final report on the interaction with the European platforms and	WP2/ RSE	R/ PU	48
D3.4	Initial report on key challenges and	WP3/ IERC	R/ PU	38
D3.5	Roadmap to 2030	WP3/ IERC	R/ PU	46
D4.3	Final report on Identification of gaps and missing subjects	WP4/SINTEF	R/ PU	41
D4.4	Assessment of the defined topics; relevance, driving forces and trends	WP4/SINTEF	R/ PU	45
D5.3	Report on the outcomes of regional Workshops (final)	WP5/ DERlab	R/ PU	48
D5.5	Report on the outcomes of Pan-European and	WP5/DERlab	R/ PU	48

	Global Workshops (final)			
D6.4	Catalogue of potential solutions to overcome acceptance barriers for each country	WP6/IPE	R/ PU	48
D6.5	Consolidated summary report on desk activities in the target regions - Final	WP6/IPE	R/ PU	43
D7.1	Exploitation Strategy and Plan	WP7/ Suite5	R/CO	42
D7.2	Report on the promotion of Key Mid-term R&I Priorities for Smart Grids	WP7/ Suite5	R/ PU	48
D7.3	Report on Appropriate Funding Instruments to ensure Project Sustainability	WP7/ Suite5	R/ PU	42
D7.4	Sustainability and Business Development Plan	WP7/ Suite5	R/CO	42
D7.5	Report on Preliminary Business Development Activities	WP7/ Suite5	R/ PU	48
D8.3	PANTERA Collaboration Platform: European Hub for Smart Grids	WP8 DERlab	R/ PU	48
D8.4	Report on Dissemination and communication Activities	WP8 DERlab	R/ PU	48

All milestones of the project have been completed within the second reporting period.

5 Critical assessment of the project progress

5.1 Risks identified and/or foreseen with related mitigation measures

The foreseen risks as identified under the GA are presented in the following table.

Table 7 The foreseen risks for the PANTERA project

Description of risk (indicate level of likelihood: Low/Medium/High)	WPs	Proposed risk-mitigation measures
Losing critical staff or partners at crucial points of the project (Low)	WP1	The consortium has enough diversity and expertise to replace them by other qualified partners within the same organization or

		within the consortium. Also, DERlab can find one of its members to replace.
WPs resources not well balanced (Low)	WP1	Monitoring of the work and reallocation of resources in other WPs where necessary
Unexpected delays in delivering the project deliverables (Medium)	WP1	Related WP leaders and task leaders will be supported by other resources to produce deliverables on time
European entities do not respond positively (low)	WP2	The active participation of the EC will be tactfully engaged to spur interest and support.
Lack of information and/or co-operation from key stakeholders (Medium)	WP3	There is a plethora of information freely available. In addition, the relevant partner(s) have a wide and well-established network so alternative stakeholders can be found, if necessary
Not cover adequately the needs of stakeholders (low)	WP4	The planned actions and the formal operation of the Advisory Board will offer the mechanisms to identify the problem early and take appropriate action.
Workshops are not well attended and do not offer the planned impact (medium)	WP5	The consortium will utilise the experience gained by members of the Advisory Board especially ETIP SNET who is operating 4 regional workshops every year and build on this experience with quality control throughout.
Working groups fall low in activity and fail to deliver planned results (low)	WP6	The consortium considers the functioning of thematic working groups as pivotal in the work of PANTERA. Strong and continuous support will be offered with regular feedback control for appropriate corrective actions.
Stakeholders are not engaging in exploitation activities (Low)	WP7	Activities will be designed in a user-friendly manner so as to maximize engagement from all stakeholders. The partners' own networks are quite extended to secure full subscription in the exploitation events.
Project outputs are not effectively disseminated thus lessening the likelihood of market rollout (Low)	WP8	Partners are experienced in web based and scientific dissemination methods (articles, conferences). Partners are experienced in other methods of dissemination (workshops, industry events/organizations, targets publications). The responsible partner has a large amount of experience in the area especially from the viewpoint of technology transfer.
Failure or difficulty in establishing the PANTERA Collaboration Platform (low)	WP8	The operation of a collaborative platform is critical in the success of PANTERA and for this reason plans are in place to respond in all possible obstacles. Current activity in this direction by stakeholders especially JRC / SETIS will be utilised and extended.

The possible unforeseen risks identified for M36 until the end of the project with corresponding corrective actions are presented in Table 6.

Table 8: List of unforeseen risks identified with corresponding corrective actions

Risk/Associated WP	Status	Corrective actions taken	Corrective actions proposed
Low interest from stakeholders /WP4, WP2, WP7	Difficulties in involving relevant stakeholders into interactions.	Explaining added value of the interaction, raising status of PANTERA as initiative.	Same as corrective actions taken
Cancellation of workshops due to COVID-19 pandemic/WP5, WP6	Due to COVID-19 pandemic the PANTERA consortium decided to shift and cancel some of the workshops	The Riga workshop has been shifted from 2020 to March 2022. One Pan-European workshop has been hosted online as virtual workshop, instead of organizing it physically.	Mini and virtual workshops will be organized when opportunities arise and according to the needs of the project. Also the EIRIE platform can host webinars and other activities that compensate the cancellation of physical events.
The EIRIE platform costs more than planned/WP8	According to the GA, the PANTERA consortium estimated the cost for the PANTERA platform around 120,000 €. The lowest priced offer submitted in the PANTERA tender was higher.	The PANTERA consortium decided to shift the un-used travel budget (due to COVID-19 pandemic) and cancelled workshops to fund the extra costs needed for the platform. The PO approved the proposed re-allocation.	Same action will be adopted for any additional cost that will incur. Also, agreement was reached with the SPRING project to cover probable additional costs.

5.2 Impact and Progress in relation to the internal Key Performance Indicators

The list of the ad hoc indicators as defined in the GA have been enriched as follows:

- More indicators have been added to address the project's needs.

- These indicators are re-distributed following the three main functions of the project and not under the objectives as initially defined. This was decided as an important step forward in giving a more coherent approach to the work of the PANTERA project and following the three enriched areas of work: platform, regional desks and workshops. This change is fully aligned with the objectives while it offers an improved monitoring process of the actual related activities and an improved working environment with the stakeholders.

Based on these assumptions, the following table is presented which was developed in *D8.1 Dissemination, communication and cooperation plan*[9] and shows the KPIs that were chosen to monitor the performance of the project's social media channels and newsletters.

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[9]   *https://pantera-platform.eu/wp-content/uploads/2020/07/D8.1.Dissemination-communication-and-cooperation-plan.pdf*

PANTERA activities on social media seek the following impacts:

- make the project visible online, disseminating news about project activities and achievements;
- Attract stakeholders who want to share their opinion and views and collaborate with PANTERA
- ensure effective reporting of events;
- support the project networking

Table 9 The indicators list for monitoring the project and measures to be taken

Ad-hoc indicator	Target	Actual performance
Number of newsletters	≥ 4 per year	8(compared to 3 in the previous reporting period)
Newsletter subscriptions	>100	197(compared to 114)
Number of tweets	> 50 per year	68 (compared to 60)
Number of Twitter followers	> 100	531(compared to 90)
Number of LinkedIn followers	> 50	166(compared to 62)
Target number of events in which PANTERA is presented	≥ 4 per year	10 (compared to 8)

Overall improvements	Reasons/measures for improvements
Higher number of newsletter subscriptions following workshops	It is easier to attract newsletter subscribers once they have attended a PANTERA workshop and understand the project. Thanks to the registration forms online, the participants can always choose to subscribe to the newsletter as well.
Important increase in the number of followers/subscribers of our social media channels	Increased activity on the social media channels, especially Twitter and LinkedIn. More interactions have taken place with other projects, stakeholders, etc.
PANTERA was presented in more events	As the events took place online or in a hybrid way, a virtual presence is easier to secure and therefore more events could be virtually attended.

Overall shortcomings	Reasons for shortcomings appearing	Actions to be taken to address shortcomings
At the beginning of the pandemic, there was a risk of lower activity due to the cancellation of many events and the inability to organise workshops.	No physical events could take place because of the COVID situation,	The events and conferences adapted themselves and so did the PANTERA consortium, by taking part in online events and organizing online workshops and events,

In the Annex, more KPIs and analysis of the performance of the PANTERA site and the dissemination channels are presented.

5.3 **Update of the plan for exploitation and dissemination of result**

Based on the recommendation of the Project Officer (PO), the PANTERA process will be presented and communicated in energy related brokerage events too. Potential operators, industries and academic/research institutes that are active in the field of smart grids, storage and local energy systems are attending since they look to this kind of events for potential collaboration in R&I initiatives. It could be interesting to promote the multifunctional collaborative platform and PANTERA project itself, in order to increase the number of involved stakeholders.

So, the dissemination plan is updated accordingly and partners are monitoring the potential broker events where PANTERA will participate in the remaining period of the project.

6. Discussion and Conclusions

The main objective of this deliverable is to present the progress of the PANTERA project within the period of M18 to M36 of implementation. The main challenge is to present not only the progress made based on the expected deliverables, milestones or outcomes but also highlight the impact that this CSA project has managed to achieve by meeting the set objectives.

Based on this fundamental need, the management (WP1) of the project has continued its activities by introducing the PANTERA process that has three main "arms". Through them, the process -as a whole- impacts and promotes the designed activities in favour of the low spending countries for leveraging the R&I smart grids investments.

All work packages and their activities are contributing to these three arms as detailed below, in addition to the coordination responsibilities that WP1 has undertaken, led by the team of the Coordinator:

- PANTERA platform: WP2, WP3, WP7, WP8, WP5
- PANTERA Regional Desks: WP2, WP4, WP6, WP5
- PANTERA Working Teams: WP2, WP3

Under this approach, all deliverables, milestones and foreseen outcomes have been successfully completed whereas any risk (foreseen or unforeseen) has been effectively addressed. The fulfilling performance of the project is seen also through the metrics of KPIs that are continuously tracked.

The main success stories of this project- that also secures its sustainability-in relation to the identified needs amalgamated through the adapted process are the following:

- Development and launch of the EIRIE interactive multifunctional platform under the auspices of DG ENER and its initiatives that will re-enforce its winning character of being a single point of reference for the whole R&I community and hosted by the JRC. Development work has matured to a functional platform already delivering valuable services to the R&I community of Europe.

- Strengthen and develop further the regional desks and related regional activities in cooperation with RIS3 Smart Specialization Platform of the Commission cooperation and connected local stakeholders under the continuous guidance and support of the partners of the PANTERA project.

- Provide support and engage energy experts of ETIP SNET to continuously nurture the Working Teams' activities as a means of supporting the R&I Community of Europe and the targeted interactive and multifunctional platform with exploitable knowledge, information and data.

7 Annex

7.1 List of Figures

7.2 List of Tables

7.3 Annex 1- PANTERA KPIs general visualisation

7.3.1 Overall improvements and shortcomings

The website and social media channels are regularly updated and have grown in terms of followers.	The website is regularly updated with events, workshops, news and resources (approved public deliverables, published papers, workshop presentations and agendas, project promotional materials, etc.) Due to the COVID situation, adjustments had to be made especially regarding workshop and promotion (switch from physical conferences and workshops to online and progressively hybrid). Thanks to the organisation of online workshops and online promotion (EUSEW, Enlit conferences, etc.). the project website and social media channels continue to be regularly updated and have grown in terms of audience, especially the Twitter channel. The Youtube channel has been also more used as all videos of the workshops have been uploaded in the channel.
Analytics	In terms of analytics, we can see an important increase in terms of users on the website and page views (number of pages the users visit) from 2019 to 2020 (+116%).
International audience	Following the promotion of regional workshops, analytics show a lot of users come from the targeted regions (Latvia, Greece, Bulgaria, etc.). The working language of the website is English, but it is the ambition to attract stakeholders with other languages as well especially in the targeted regions, therefore links to publications from our partners in other languages can be found on the website as well.
Increased online presence of the project and promotion of the EIRIE platform	PANTERA has been widely promoted in many different online events, which enabled more visibility and interactions with the stakeholders, as well as promotion of the EIRIE platform and dissemination of the project results.

Overall shortcomings	Reasons for shortcomings appearing	Actions to be taken to address shortcomings
Analytics – Bounce rate. Through the monitoring of the website	PANTERA can be associated with other brands, names that are not	There is not one particular solution to this, as the

analytics on Google Analytics, we have noticed a high bounce rate (the percentage of visitors to a particular website who navigate away from the site after viewing only one page). Most websites will see bounce rates fall somewhere between 26% and 70%, having 40% as an average. PANTERA's average bounce rate in 2019 was 56% and 45% in 2020. From March 2021 onwards, the bounce rate dramatically increased (to 2-15% in comparison with 40% on average). The bounce rate in 2021 was also much lower (at around 11%), which is a great improvement.	related at all to the project. We can speculate one of the reasons for the high bounce rate is this, as users come to the PANTERA website expecting another website, they will leave the website without visiting any other page. However, as indicated the bounce rate significantly decreased in 2021, which is a positive sign.	website is properly functioning. As the bounce rate has decreased since last year, we can suppose with PANTERA's awareness rising, the right audience is being more and more targeted.

7.3.2 Website analytics

Number of website visitors per year (2020 and 2021)

Number of users on the website in 2020(monthly view)
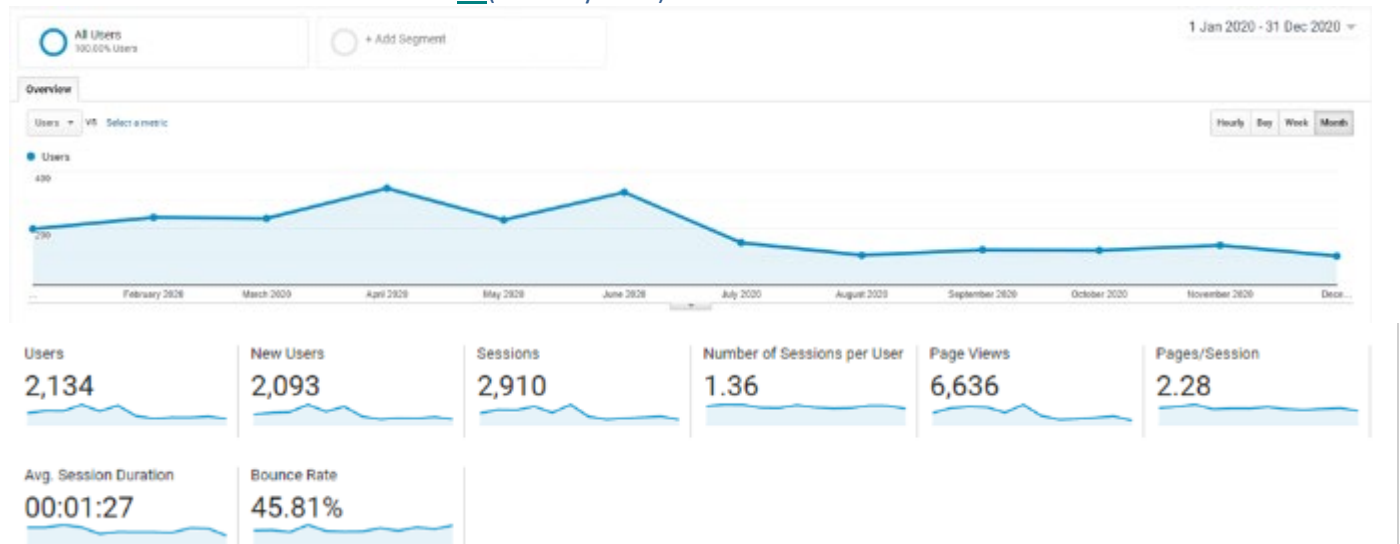
In 2020, the number of visitors on the PANTERA website increased from 985 to 2134, compared to 2019, i.e. an increase of 117 %. The number of sessions (+91%) and number of page views (+89%) also increased. The bounce rate has slightly improved as it went down by 11%.

Number of users on the website in 2021 (monthly view)
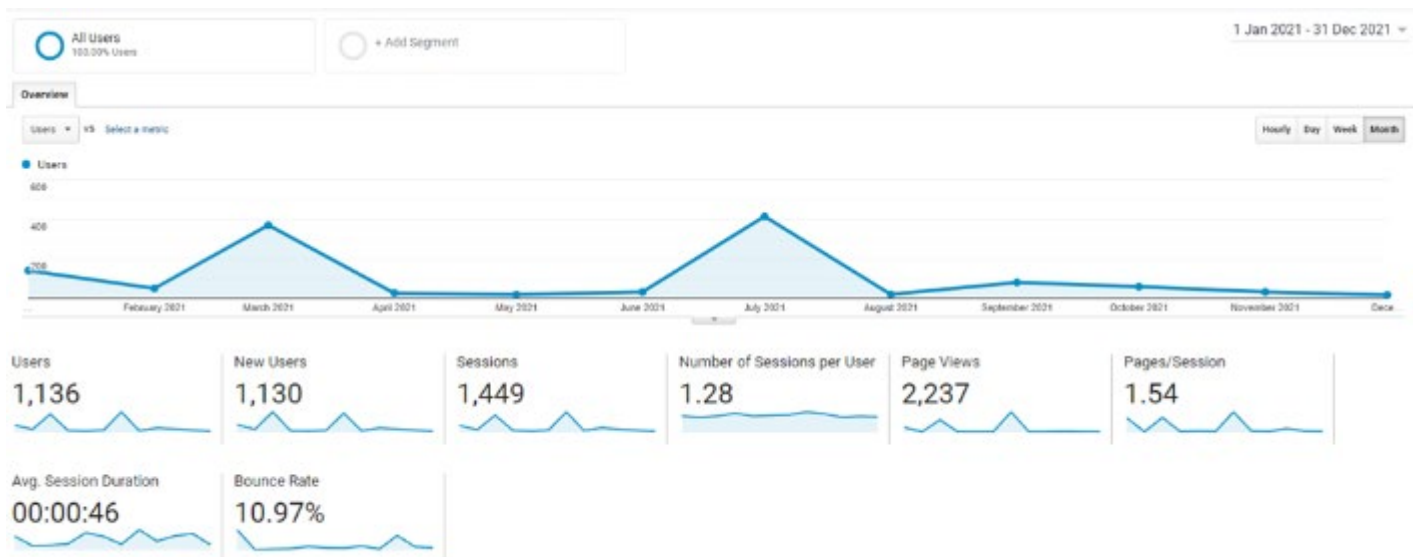
In 2021, the number of visitors on the PANTERA website decreased from 2134 to 1136, compared to 2012. Even though there is a decrease, this can be considered positive when correlated with the bounce rate, which greatly decreased (from 45% to 10%). Indeed, a low bounce rate means that the users coming of the website did not leave it right after coming on it, which could mean the users are the right target of the project and found on the website what they were looking for.

Top 10 languages of the users in 2020

Language	Users	% Users
1. en-us	1,082	50.58%
2. en-gb	226	10.57%
3. es-es	81	3.79%
4. it-it	73	3.41%
5. fr-fr	46	2.15%
6. zh-cn	46	2.15%
7. de	44	2.06%
8. de-de	44	2.06%
9. el-gr	43	2.01%
10. bg-bg	34	1.59%

Top 10 countries of the users in 2020

Country		Users	% Users
1. United States		464	21.65%
2. Spain		115	5.37%
3. Germany		111	5.18%
4. Greece		108	5.04%
5. Latvia		108	5.04%
6. Italy		101	4.71%
7. Belgium		84	3.92%
8. China		80	3.73%
9. Bulgaria		78	3.64%
10. Romania		77	3.59%

Top 10 languages of the users in 2021

Language		Users	% Users
1. en-us		445	39.17%
2. en-gb		231	20.33%
3. es-es		47	4.14%
4. zh-cn		43	3.79%
5. de		24	2.11%
6. fr		24	2.11%
7. de-de		23	2.02%
8. fr-fr		18	1.58%
9. en		17	1.50%
10. es		16	1.41%

Top 10 countries of the users in 2021

Country		Users	% Users
1. United States		85	7.44%
2. China		72	6.30%
3. Spain		63	5.51%
4. Germany		46	4.02%
5. Ireland		40	3.50%
6. Greece		34	2.97%
7. Japan		34	2.97%
8. India		32	2.80%
9. United Kingdom		31	2.71%
10. Bulgaria		27	2.36%

7.3.3 Number of users on the website and user countries per trimester

1 June 2020 – 31 August 2020

Users	New Users	Sessions	Number of Sessions per User	Page Views	Pages/Session
554	527	738	1.33	1,664	2.25

Avg. Session Duration	Bounce Rate
00:01:14	41.46%

Country	
1.	United States
2.	Bulgaria
3.	Ireland
4.	Germany
5.	France
6.	Belgium
7.	Norway
8.	Spain
9.	United Kingdom
10.	Greece

1 September 2020 – 30 November 2020

Users	New Users	Sessions	Number of Sessions per User	Page Views	Pages/Session
362	346	488	1.35	1,050	2.15

Avg. Session Duration	Bounce Rate
00:01:27	47.75%

Deliverable: Technical Report 2 Revision / Status: final

Country
1. 🇺🇸 United States
2. 🇨🇳 China
3. 🇪🇸 Spain
4. 🇮🇹 Italy
5. 🇩🇪 Germany
6. 🇨🇾 Cyprus
7. 🇬🇧 United Kingdom
8. 🇧🇬 Bulgaria
9. 🇧🇪 Belgium
10. 🇬🇷 Greece

1 December 2020 – 28 February 2021

Users	New Users	Sessions	Number of Sessions per User	Page Views	Pages/Session
285	270	321	1.13	481	1.50

Avg. Session Duration	Bounce Rate
00:01:03	48.60%
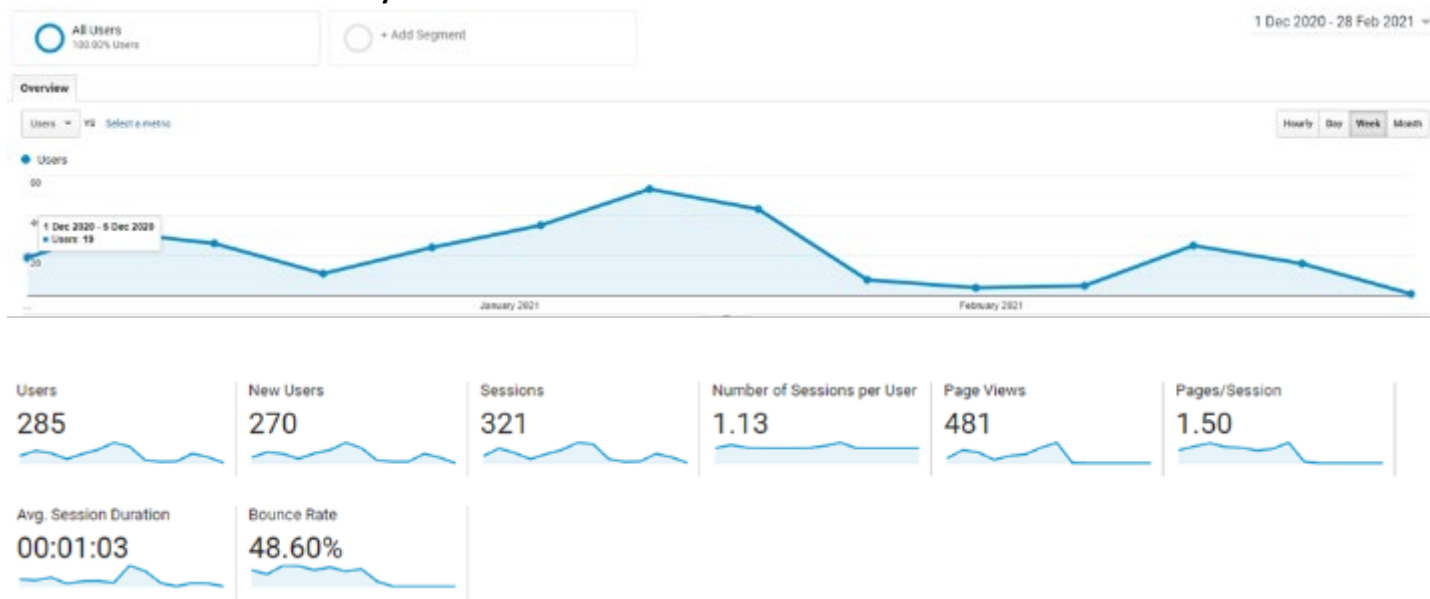
Country
1. 🇨🇳 China
2. 🇺🇸 United States
3. 🇩🇪 Germany
4. 🇮🇪 Ireland
5. 🇵🇰 Pakistan
6. 🇦🇪 United Arab Emirates
7. 🇪🇸 Spain
8. 🇧🇬 Bulgaria
9. 🇮🇹 Italy
10. 🇫🇷 France

1 March 2021- 31 May 2021

Country

	Country
1.	United States
2.	Spain
3.	Japan
4.	(not set)
5.	Ireland
6.	United Kingdom
7.	India
8.	Bangladesh
9.	Brazil
10.	China
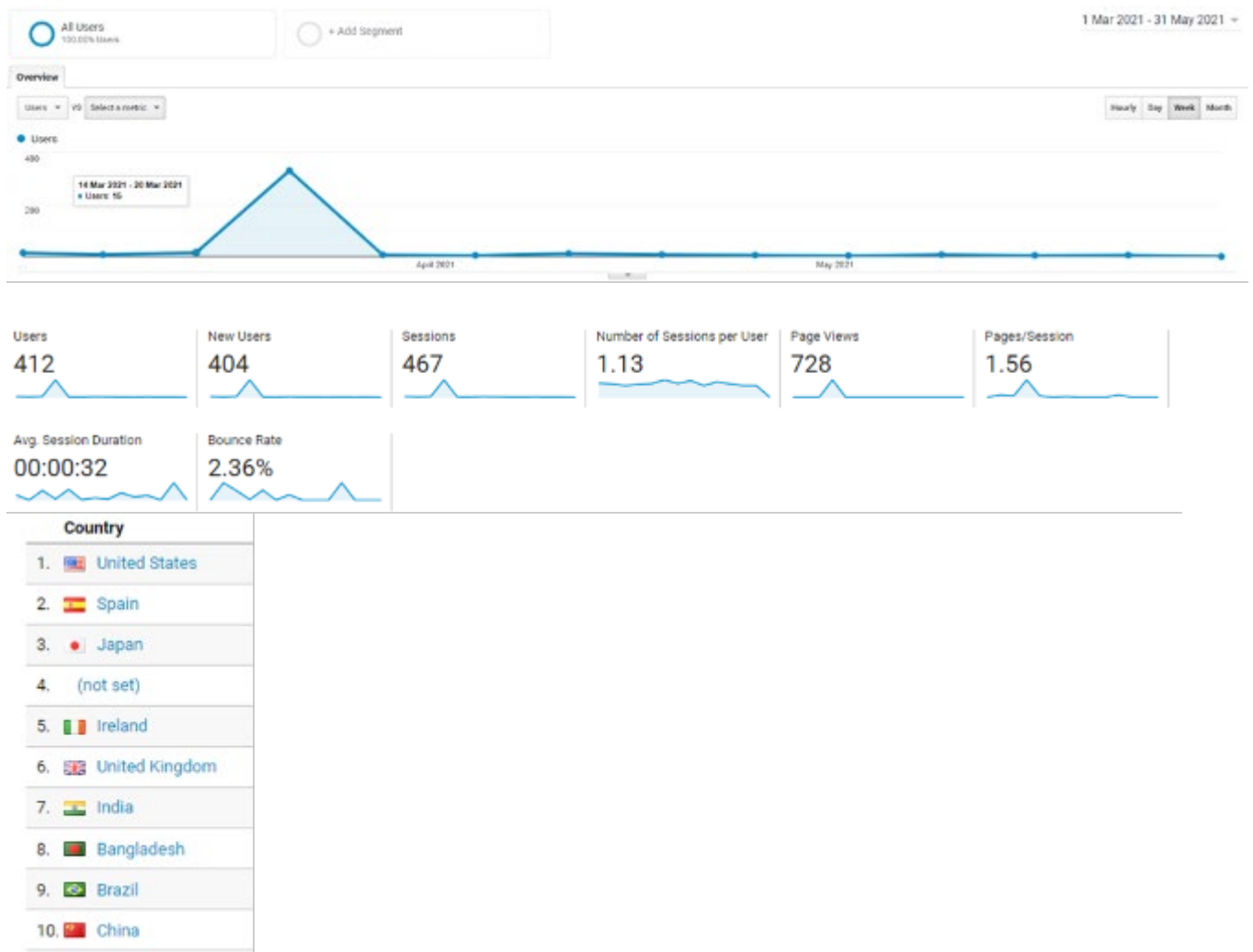
1 June 2021 - 31 August 2021
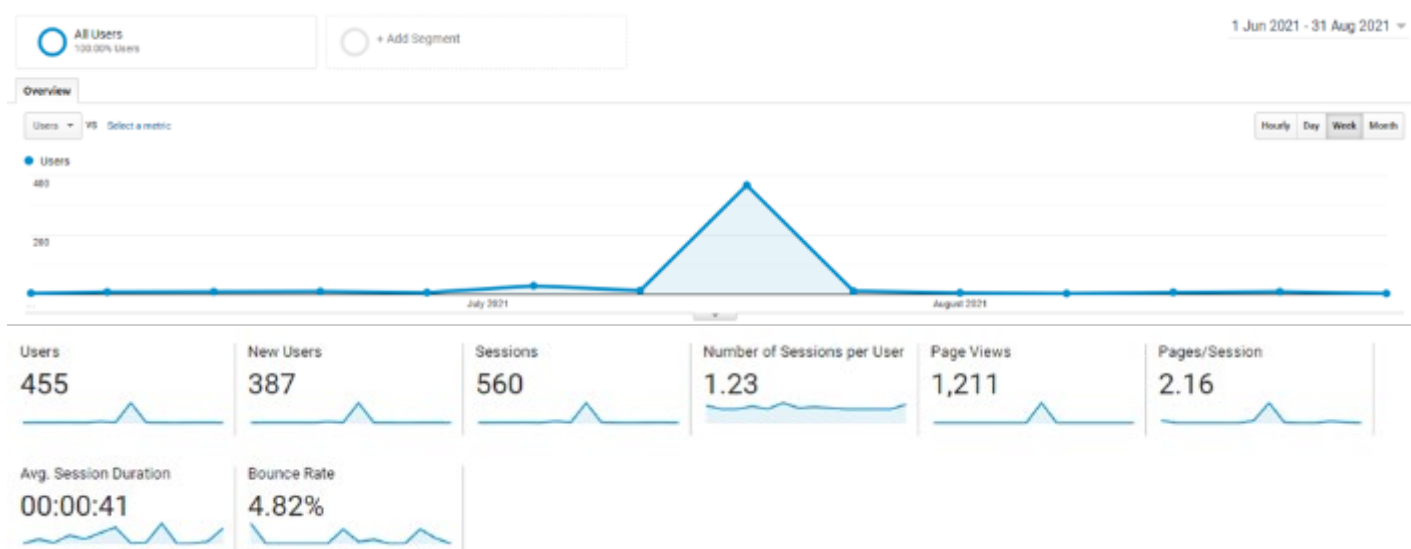
	Country
1.	🇺🇸 United States
2.	🇪🇸 Spain
3.	🇨🇳 China
4.	🇮🇳 India
5.	🇯🇵 Japan
6.	🇬🇧 United Kingdom
7.	🇵🇭 Philippines
8.	🇩🇪 Germany
9.	🇧🇷 Brazil
10.	🇲🇽 Mexico

1 September 2021 - 31 December 2021

Users	New Users	Sessions	Number of Sessions per User	Page Views	Pages/Session
177	162	215	1.21	33	0.15

Avg. Session Duration	Bounce Rate
00:01:08	14.42%
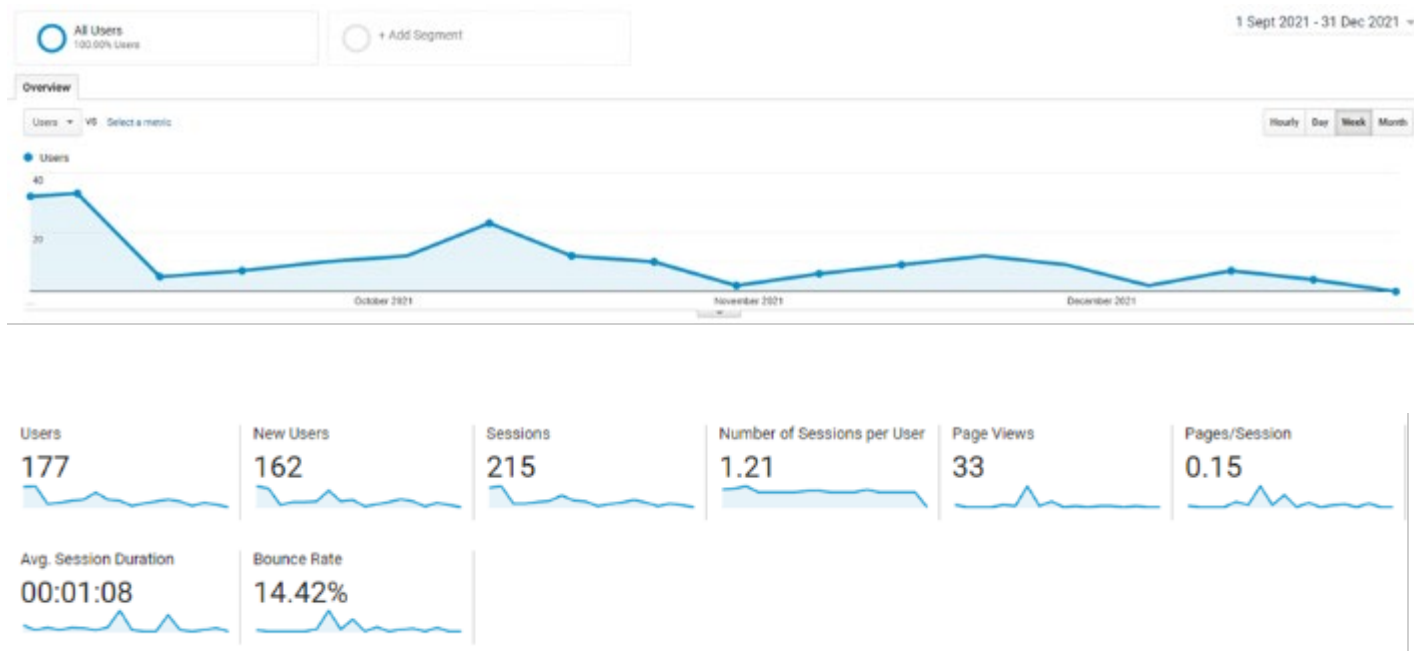
	Country
1.	🇨🇳 China
2.	🇩🇪 Germany
3.	🇪🇸 Spain
4.	🇬🇷 Greece
5.	🇧🇬 Bulgaria
6.	🇨🇾 Cyprus
7.	🇧🇪 Belgium
8.	🇭🇷 Croatia
9.	🇮🇪 Ireland
10.	🇮🇹 Italy

7.3.4 Newsletter analytics

Current audience

PANTERA ⌄

Your audience has **198** contacts. **194** of these are subscribers.

November, 2021 (1)

✉	Meet us at the SET Plan conference and Enlit event!	Sent	33.5% Opens	3.1% Clicks

Regular · PANTERA

Sent Wed, November 24th 11:26 AM to 193 recipients by you

October, 2021 (1)

✉	Join PANTERA at the EU Sustainable Energy Week 2021!	Sent	30.5% Opens	3.2% Clicks

Regular · PANTERA

Sent Wed, October 20th 5:03 PM to 196 recipients by you

September, 2021 (1)

✉	Don't miss PANTERA and SUPEERA joint workshop: "Boosting the R&I activity on Smart Grid Technologies"	Sent	29.2% Opens	5.2% Clicks

Regular · PANTERA

Sent Mon, September 6th 5:21 PM to 194 recipients by you

July, 2021 (2)

PANTERA July newsletter workshop video
Regular · PANTERA

Sent   28.1% Opens   4.2% Clicks

Sent Tue, July 27th 2:45 PM to 196 recipients by you

PANTERA July newsletter AB
Regular · PANTERA

Sent   32.5% Opens   8.9% Clicks

Sent Mon, July 5th 6:25 PM to 200 recipients by you

February, 2021 (1)

PANTERA February 2021 | Smart Grid Research Data Workshop | Remote testing & EIRIE Platform: DERlab/ ERIGRID 2.0/ PANTERA Webinar
Regular · PANTERA

Sent   39.2% Opens   11.7% Clicks

Sent Tue, February 16th 11:43 AM to 174 recipients by you

August, 2020 (1)

PANTERA August 2020
Regular · PANTERA

Sent   41.5% Opens   5.7% Clicks

Sent Wed, August 26th, 2020 5:05 PM to 161 recipients by you

June, 2020 (1)

PANTERA June 2020 | Pan-European virtual workshop
Regular · PANTERA

Sent   41.9% Opens   11.6% Clicks

Sent Tue, June 16th, 2020 1:12 PM to 130 recipients by you

7.3.5 Social media analytics

Twitter

PANTERA has an official Twitter account (@PanteraPlatform). Currently, the account has 547 followers, including: researchers from international universities, H2020 projects, research organizations and industries from the energy field, EU actors and stakeholders, etc.

Impressions: Number of times users saw a tweet on Twitter
Engagement: Number of times a user has interacted with a tweet (like, click, retweet, etc.)
Engagement rate: Engagement/impressions x 100

Impressions, Engagement and Engagement Rate
1 June 2020 – 31 August 2020

Your Tweets earned **7.6K impressions** over this **91 day** period

YOUR TWEETS
During this 91 day period, you earned **84 impressions** per day.

Tweets	Top Tweets	Tweets and replies	Promoted		Impressions	Engagements	Engagement rate

	Impressions	Engagements	Engagement rate
PANTERA EIRIE Platform @PanteraPlatform · 27 Aug 2020 📤 PANTERA #newsletter is out! Don't miss out on the latest project news and opportunities, have a look at this issue and make sure to keep up with what is following by subscribing here pantera-platform.eu/newsletter ➡ pantera-platform.eu/resources/ #H2020 #Horizon2020 #EU #Energy #GreenDeal pic.twitter.com/3BjBePC2xl View Tweet activity	1,079	25	2.3%
PANTERA EIRIE Platform @PanteraPlatform · 11 Aug 2020 💡 Did you miss our first Pan-European #virtual #workshop back in June? Check out our website to find the workshop outcomes, presentations and the full workshop video so you are up to date with PANTERA! ➡ bit.ly/3kBfbhK #H2020 #Horizon2020 #EU #project #research pic.twitter.com/ZegmDLvRhe View Tweet activity	1,611	31	1.9%
PANTERA EIRIE Platform @PanteraPlatform · 27 Jul 2020 👀Have a look at the new deliverables just uploaded on the #PANTERA website! PANTERA is willing to create a platform to unify #Research & #Innovation efforts in the #Energy field in Europe and we want to let you in the whole process ➡Visit us pantera-platform.eu pic.twitter.com/m4HYKEgKg8 View Tweet activity	737	19	2.6%

PANTERA EIRIE Platform @PanteraPlatform · 24 Jun 2020 Impressive numbers after 3 hours of #virtualworkshop! We'd like to thank our contributors for their interesting presentations and support and all our participants who contributed to a lively and interactive discussion. ⬛Details to follow #H2020 #energy #sustainable #EU #Europe pic.twitter.com/1LoS7FsYaf View Tweet activity	1,533	38	2.5%
PANTERA EIRIE Platform @PanteraPlatform · 23 Jun 2020 D-1! Take part in our #digital #EnergyDay for our first Pan-European workshop "For widening R&I activities in the EU in support of the energy transition"! Don't miss it, more info and registration are this way ➡ bit.ly/3evubdE #EUSEW @euenergyweek #H2020 #Horizon2020 pic.twitter.com/elLea6djlJ View Tweet activity	371	8	2.2%
PANTERA EIRIE Platform @PanteraPlatform · 18 Jun 2020 PANTERA's goal is to bring together ALL the R&I community across #Europe. Have a look at this interesting article "Facilitating research and innovation for energy transition" published in Lithuanian #energy journal ENERGETIKA. ➡ bit.ly/2YPotfQ ▣ pantera-platform.eu/resources/ pic.twitter.com/Z5jPwzbaKV View Tweet activity	875	14	1.6%
PANTERA EIRIE Platform @PanteraPlatform · 17 Jun 2020 🔔Only 1 week left until PANTERA's first #PanEuropean virtual #workshop "For widening R&I activities in the EU in support of the energy transition"! Register now if you haven't already! ➡ bit.ly/2AJvXZU	576	9	1.6%
PANTERA EIRIE Platform @PanteraPlatform · 16 Jun 2020 📣 PANTERA #newsletter is out! Don't miss out on the latest project news and upcoming #panEuropean workshop in June! Have a look at this issue bit.ly/30UizN0 and make sure to keep up with what is following by subscribing ➡ pantera-platform.eu/newsletter/ pic.twitter.com/H7UTSQZXL7 View Tweet activity	880	21	2.4%
PANTERA EIRIE Platform @PanteraPlatform · 8 Jun 2020 🔔 Secure your place now for the first #PanEuropean #PANTERA Virtual Workshop, as part of @euenergyweek #EUSEW 2020 Energy Days! 📅24 June Read more and register now ➡ bit.ly/30mOF3J #H2020 #energyweek #energyday #climatechange #renewableenergy #sustainableenergy pic.twitter.com/rZGYY3I1d2 View Tweet activity	1,666	43	2.6%

Impressions, Engagement and Engagement rate

1 September 2020 – 30 November 2020

Your Tweets earned **15.9K impressions** over this **91 day** period

YOUR TWEETS
During this 91 day period, you earned **175 impressions** per day.

Tweets	Top Tweets	Tweets and replies	Promoted	Impressions	Engagements	Engagement rate
PANTERA EIRIE Platform @PanteraPlatform · 30 Nov 2020 #Thoughtoftheday : #Collaboration between @IEA_ISGAN and platforms aiming at the same objectives such as #PANTERA's #EIRIE platform, will provide better knowledge on the most relevant topics deserving the utmost attention to reach a #lowcarbon and #energyefficient Europe. pic.twitter.com/zU9zz5yN93 View Tweet activity				525	17	3.2%
PANTERA EIRIE Platform @PanteraPlatform · 26 Nov 2020 We are collaborating with #energytransition projects such as #H2020 @Project_Asset on a taxonomy to cover holistically the evaluation of projects to build useful information and knowledge bit.ly/39IODOa #collab #energy #research #innovation #smartgrids #storage #EU pic.twitter.com/8oejjVl8nO View Tweet activity				780	22	2.8%
PANTERA EIRIE Platform @PanteraPlatform · 26 Nov 2020 #Collabs are 🔑: We are happy to announce the start of what will be a great and fruitful collaboration with @Project_Asset twitter.com/Project_Asset/... View Tweet activity				407	10	2.5%
PANTERA EIRIE Platform @PanteraPlatform · 24 Nov 2020 We joined the #onlineworkshop of @NEEMO_project "Examining Transport Energy Pathways in the #Mediterranean". After analyzing related policies and infrastructure progress in the #Mediterranean, #EIRIE presented how it will support the lifting of barriers towards #energytransition twitter.com/NEEMO_project/... View Tweet activity				397	8	2.0%

PANTERA EIRIE Platform @PanteraPlatform · 17 Nov 2020 Who is @IEA_ISGAN? International Smart Grid Action Network, a IEA TCP (#Technology #Collaboration Programme) and a CEM (#clean #energy ministerial) work stream, is a platform to support governments to accelerate development and deployment of #smarter and cleaner #electricitygrids pic.twitter.com/RnBpcWAMWc View Tweet activity	411	14	3.4%
PANTERA EIRIE Platform @PanteraPlatform · 12 Nov 2020 🎬And that's a wrap! #Thankyou to all the contributors and participants who made our #virtual session at #MedPower2020 a success! We will continue within #PANTERA and with #EIRIE platform to identify and support the #energytransition needs with a unified #European R&I community pic.twitter.com/624vbwSLl8 View Tweet activity	2,211	54	2.4%
PANTERA EIRIE Platform @PanteraPlatform · 10 Nov 2020 Happening #live right now ➡️ PANTERA #online regional #workshop "Energy transition through optimal use of the rich Renewable Energy Resources of the Mediterranean basin" at #MedPower2020 #H2020 #Horizon2020 #EUproject #cleanenergy #renewable #smartgrids #platform #collaboration pic.twitter.com/tfVEe1N7eL View Tweet activity	1,201	22	1.8%
PANTERA EIRIE Platform @PanteraPlatform · 9 Nov 2020 Meet EIRIE... ᴇᴜ European 🔗 Interconnection for 🔒 Research 🆕 Innovation 🔜 & Entrepreneurship ...the perfect name for the upcoming #PANTERA platform! Read more about #EIRIE here➡️ bit.ly/3eT130Z and don't forget to join us tomorrow at #MedPower2020 #Staytuned View Tweet activity	637	18	2.8%
PANTERA EIRIE Platform @PanteraPlatform · 4 Nov 2020 🔔 Don't forget to register and join #PANTERA's upcoming virtual regional #workshop at #MedPower2020! We'll be joined by #H2020 @INTER_PLAN project and #Navigant/#SWECO to update us about their latest achievements! 🗓️ 10&11 November 📍 Online (obviously) ➡️ bit.ly/2JBO6wR pic.twitter.com/YdlMdWrntj View Tweet activity	472	13	2.8%
PANTERA EIRIE Platform @PanteraPlatform · 2 Nov 2020 Congratulations to @ERIGrid for their amazing work! twitter.com/ERIGrid/status... View Tweet activity	260	6	2.3%

PANTERA EIRIE Platform @PanteraPlatform · 4 Nov 2020 🔔Don't forget to register and join #PANTERA's upcoming virtual regional #workshop at #MedPower2020! We'll be joined by #H2020 @INTER_PLAN project and #Navigant/#SWECO to update us about their latest achievements! 📅10&11 November 📍Online (obviously) 🔗bit.ly/2JBO6wR pic.twitter.com/YdIMdWrntj View Tweet activity	472	13	2.8%
PANTERA EIRIE Platform @PanteraPlatform · 2 Nov 2020 Congratulations to @ERIGrid for their amazing work! twitter.com/ERIGrid/status… View Tweet activity	260	6	2.3%
PANTERA EIRIE Platform @PanteraPlatform · 29 Oct 2020 Join @PanteraPlatform at #MedPower2020 ! #H2020 #Horizon2020 #project #europe #EU #cleanenergy #RES #Energytransition #energyresources twitter.com/suite5eu/statu… View Tweet activity	503	12	2.4%
PANTERA EIRIE Platform @PanteraPlatform · 28 Oct 2020 🔔SAVE THE DATE Join #PANTERA in the upcoming virtual workshop "#energytransition through optimal use of the rich #RES of the Mediterranean basin" at #MEDPOWER2020 📅10-11 November 🌐 Online event Register 🔗medpower2020.org #H2020 #EU #Workshop #MEDPOWER #cleanenergy pic.twitter.com/PKAodQ2cGB View Tweet activity	1,725	26	1.5%

PANTERA EIRIE Platform @PanteraPlatform · 21 Oct 2020	620	7	1.1%
Thank you for replying to our #poll!			
As it turns out, a majority of the respondents believe physical events/conferences are more effective than #online events, but it is also not an overwhelming majority (55%).			
twitter.com/PanteraPlatfor...			
#youropinion #onlinevsphysical #event			
pic.twitter.com/I1lgcjUvFM			
View Tweet activity			
PANTERA EIRIE Platform @PanteraPlatform · 19 Oct 2020	632	11	1.7%
#SAVETHEDATE In @Enlit_Europe framework and in #collab with @ETIPSNET – the #workshop "POWER GRIDS BETWEEN INCREASED CHALLENGES AND INCREASED EXPECTATIONS: Actively linking emerging #technologies and #markets" will take place online Oct 22, 14.30-16.30.			
bit.ly/31jyeF2 pic.twitter.com/O7m2zCiUdS			
View Tweet activity			
PANTERA EIRIE Platform @PanteraPlatform · 15 Oct 2020	185	2	1.1%
At #MI5 on Sep. 23, @MICleanEnergyRD member countries agreed on the second phase of MI 2.0 — A more mission-oriented approach to accelerate the deployment of #cleanenergy solutions having a big impact against #climatechange.			
bit.ly/2SCt0iV pic.twitter.com/V0O1RxEMev			
View Tweet activity			
PANTERA EIRIE Platform @PanteraPlatform · 13 Oct 2020	273	17	6.2%
The @PanteraPlatform team would like to know your opinion on this. Are virtual conferences/events as effective as physical events? #Poll #YourOpinion #online			
View Tweet activity			
PANTERA EIRIE Platform @PanteraPlatform · 7 Oct 2020	866	25	2.9%
Don't miss @ERIGrid's 1st call for #free access to leading #smartgrid and #energysystems labs in #Europe! A great opportunity to perform your own experimental #research!			
bit.ly/2HVMBIT			
APPLY UNTIL 31 DECEMBER!			
#powersystem #testing #h2020 #horizon2020 #labtesting pic.twitter.com/sU05cFcRbY			
View Tweet activity			
PANTERA EIRIE Platform @PanteraPlatform · 24 Sep 2020	318	9	2.8%
TIP OF THE DAY			
In just a few clicks, find all #funding & #tender opportunities related to the #GreenDeal here bit.ly/330xkyF			
#Horizon2020 offers a large variety of funding opportunities for #research and #innovation activities to all #EU countries. pic.twitter.com/KIDa8G3A2Z			
View Tweet activity			
PANTERA EIRIE Platform @PanteraPlatform · 22 Sep 2020	869	23	2.6%
SAVE THE DATE			
Join us on 10-11 November for the workshop #EnergyTransition through optimal use of the rich #RES of the #Mediterranean basin" within the #MEDPOWER conference. The #PANTERA process will be unfolded supporting the R&I #community for #smartgrids EU cv pic.twitter.com/w6gQz8AUmL			
View Tweet activity			

Deliverable: Technical Report 2 Revision / Status: final

	Impressions	Engagements	Engagement rate
PANTERA EIRIE Platform @PanteraPlatform · 15 Sep 2020 #Screenshots of our 1st EU #reviewmeeting held today on Sept. 15, with Mario Dionisio from @EU_Commission and our external reviewer Amelia Alvarez. Many thanks to all project partners for their work and looking forward to the work ahead of us for unifying the #EU R&I community. pic.twitter.com/6OfBYgEGxX View Tweet activity	1,654	86	5.2%
PANTERA EIRIE Platform @PanteraPlatform · 14 Sep 2020 The 11th Clean Energy Ministerial and the 5th #MissionInnovation Ministerial will take place virtually on 22 (CEM11) & 23 (MI-5) Sept. MI-5 will be a crucial moment for members to make decisions on the second phase of MI discussing future activities. → bit.ly/2ZBAE0Z pic.twitter.com/q7acxdlzD4 View Tweet activity	249	6	2.4%
PANTERA EIRIE Platform @PanteraPlatform · 7 Sep 2020 Check out the European Research & Innovation Days, taking place (virtually) on 22-24 September, to join the discussion on how R&I will benefit the future of Europe! Find out how to participate: research-innovation-days.ec.europa.eu/how #RiDaysEU #EU #Europe #Research #Innovation #EUcommission pic.twitter.com/nLztiOGVGw View Tweet activity	585	15	2.6%
PANTERA EIRIE Platform @PanteraPlatform · 3 Sep 2020 #Collaboration, especially inter-projects, is key to share knowledge and benefit from each other's experience. @PanteraPlatform sees the added value for the R&I #community in #Europe. That's why we've joined forces with @ERIGrid to explore cooperation possibilities. #staytuned pic.twitter.com/tSYCOcKrup View Tweet activity	903	20	2.2%
PANTERA EIRIE Platform @PanteraPlatform · 1 Sep 2020 Top #EU priorities are the fight against #climatechange	607	9	1.5%
PANTERA EIRIE Platform @PanteraPlatform · 3 Sep 2020 #Collaboration, especially inter-projects, is key to share knowledge and benefit from each other's experience. @PanteraPlatform sees the added value for the R&I #community in #Europe. That's why we've joined forces with @ERIGrid to explore cooperation possibilities. #staytuned pic.twitter.com/tSYCOcKrup View Tweet activity	903	20	2.2%
PANTERA EIRIE Platform @PanteraPlatform · 1 Sep 2020 Top #EU priorities are the fight against #climatechange and being #climateneutral by 2050. #EUGreenDeal call will mobilise #research and #innovation for a #sustainable transition "leaving nobody behind", very similar to what PANTERA is targeting. bit.ly/34RZYDx pic.twitter.com/ytG4FXZeVK View Tweet activity	607	9	1.5%

Impressions, Engagement and Engagement rate

Deliverable: Technical Report 2 Revision / Status: final

1 December 2020 – 28 February 2021

Your Tweets earned **9.5K impressions** over this **92 day** period

YOUR TWEETS
During this 92 day period, you earned **104 impressions** per day.

		Impressions	Engagements	Engagement rate
Tweets Top Tweets Tweets and replies Promoted				
PANTERA EIRIE Platform @PanteraPlatform · Mar 1 🔔One week left till the "Remote Testing & EIRIE Platform" #webinar, co-organised by #PANTERA, @ERIGrid and #DERIab! 🗓8 March 2021 🕘 9:30-11:30 CET It's this way to secure your place➡bit.ly/2PqmGwZ #remotetesting #H2020 #online #EIRIE #research #knowledge #lab pic.twitter.com/POMkxi7hCh View Tweet activity		519	18	3.5%
PANTERA EIRIE Platform @PanteraPlatform · Feb 24 Thank you for joining our Smart Grid Research Data #PANTERA #workshop! Special thanks to @UCD_EI for bringing this together, and to our great speakers @elenimangina, @jimmerz50, Stephen Donoghue and @VenizelosE! Available🖼 on our website! #EIRIE #researchdata #data #smartgrids pic.twitter.com/gyekrT17si View Tweet activity		1,815	38	2.1%
PANTERA EIRIE Platform @PanteraPlatform · Feb 16 📢 #PANTERA February #newsletter is out! Don't miss out on the latest project news and opportunities 💡Interesting #workshops are happening soon! ➡bit.ly/3rWVFyR Subscribe➡pantera-platform.eu/newsletter/ #smartgrids #energy #H2020 #Horizon2020 #Europe #Europeanproject #news pic.twitter.com/KilyjCnN4O View Tweet activity		294	13	4.4%

PANTERA EIRIE Platform @PanteraPlatform · Feb 11 Counting days till the next #PANTERA #nano workshop, 11 to be exact! 👥 Smart Grid Research Data #workshop - "How to share #researchdata, ensure #GDPR compliance, reduce the risk of divulging potential innovation insights." 📅🕐22 Feb. 15:00-16:30 CET ➡️ bit.ly/3d9Budb pic.twitter.com/VwcmvupOsF View Tweet activity	1,427 46 3.2%
PANTERA EIRIE Platform @PanteraPlatform · Feb 3 #EIRIE is establishing a good link with @IEA_ISGAN_. Expanding #cooperation opportunities with international organizations and stakeholders is a common goal of both initiatives to foster the deployment of Smart Grid solutions! #Staytuned for more 📲 #WeAreEIRIE #collaboration pic.twitter.com/Ehf4Gq6Ftm View Tweet activity	309 7 2.3%
PANTERA EIRIE Platform @PanteraPlatform · Jan 13 💡#Didyouknow? According to a recent #PANTERA survey, #EU #energy stakeholders face multiple difficulties in applying for #projectfunding; from appropriate #partnersearch to understanding how #project proposals are evaluated. Learn more in our new report➡️ bit.ly/2LwDYXx pic.twitter.com/L6sf0Gmgc6 View Tweet activity	669 12 1.8%
PANTERA EIRIE Platform @PanteraPlatform · Dec 3 📲 We will soon be launching EIRIE platform (European Interconnection for #Research #Innovation & #Entrepreneurship), in the meantime let us present you with our #hashtag #WeAreEIRIE. It's an easy way to reach us and all the posts related to the #platform! pic.twitter.com/N2qk2jVUOP View Tweet activity	1,490 14 0.9%
PANTERA EIRIE Platform @PanteraPlatform · 1 Dec 2020 Have you heard of the Smart Grids Innovation Accelerator (SGIA) #Platform developed within @MICleanEnergyRD? ➡️A innovative tool to accelerate the #smartgrids deployment through implementation of clean and #sustainableenergy #technologies very relevant to PANTERA/EIRIE scope. pic.twitter.com/MPtSbmIMPJ View Tweet activity	1,269 46 3.6%

Impressions, Engagement and Engagement rate
1 March 2021- 31 May 2021

Your Tweets earned **9.8K impressions** over this **91 day** period

YOUR TWEETS
During this 91 day period, you earned **108 impressions** per day.

		Impressions	Engagements	Engagement rate
Tweets Top Tweets Tweets and replies Promoted				
PANTERA EIRIE Platform @PanteraPlatform · May 27 #Registernow and be part of Innovating to Net Zero Summit on 2 June, THE #cleanenergy innovation #event of 2021, during which @MICleanEnergyRD 2.0 will be launched. The #Summit will include the launch of the first #MI #Missions on power, shipping and hydrogen. #MissionInnovation pic.twitter.com/LpNvaC0Fkv View Tweet activity		1,158	16	1.4%
PANTERA EIRIE Platform @PanteraPlatform · May 3 ⚡At the last @IEA_ISGAN ExCo (16-18 March) the new Annex 9 on "Flexibility Markets - development and implementation" dedicated to all aspects of #marketdesign for #powersystem #flexibility was launched! Have a look → bit.ly/31WFXZP #ISGAN #SmartGrids #energy pic.twitter.com/s4ntD2Sk1y View Tweet activity		326	7	2.1%
PANTERA EIRIE Platform @PanteraPlatform · Apr 26 🔗#Interprojects collaboration is 🔑 to enable and increase #cooperation between institutions, industries, universities. Thanks @smagrinet for including us on your website! 💡Learn more about Smagrinet's services to tackle the #smartgrid #energytransition. ▬bit.ly/3xigEzI pic.twitter.com/csBllqh92S View Tweet activity		568	16	2.8%
PANTERA EIRIE Platform @PanteraPlatform · Apr 21 PANTERA will be presented at @IERC_Info's annual #conference "Post-Pandemic Charge Towards our 2030 Targets" on 28 April. @skkhadem will present #PANTERA activities and the #EIRIE platform. 🗓 27-29 April 2021		545	14	2.6%

PANTERA EIRIE Platform @PanteraPlatform · Apr 19 ⊕ Discover the "Smart Grid Innovation Accelerator" #SGIA platform! Promoting the transition to a cleaner #energy system is a goal shared by many international initiatives, such as @MICleanEnergyRD on a global level and PANTERA with #EIRIE on a #EU scale. → bit.ly/3dLkA2Y pic.twitter.com/OlvOWWrMoe View Tweet activity	1,241	25	2.0%
PANTERA EIRIE Platform @PanteraPlatform · Apr 15 🔍 Workshops are a great way to interact with you and learn more about your insights and issues related to #smartgrids R&D in #Europe! Find all PANTERA workshops outcomes, including a summary, questions asked to our #experts and interesting #stats! → pantera-platform.eu/resources/ pic.twitter.com/GBq2lmBOCB View Tweet activity	332	8	2.4%
PANTERA EIRIE Platform @PanteraPlatform · Mar 30 💡 Very interesting article on @energypress_gr written by #PANTERA's project coordinator @VenizelosE about how #EIRIE platform will support #Research & #Innovation for a smoother energy transition in the EU. 🔗 bit.ly/3dkC7ii #WeAreEirie #energy #EU #H2020 #smartgrids pic.twitter.com/5csld2Ro21 View Tweet activity	1,000	32	3.2%
PANTERA EIRIE Platform @PanteraPlatform · Mar 23 Don't miss @EnergyShield_ 's online workshop "Trends, opportunities and choices in designing a cyber resilient EPES infrastructure". PANTERA's coordinator @VenizelosE will explain how to bridge the gap between EPES and #cybersecurity 📅 15 April → bit.ly/3vUvtnG pic.twitter.com/5TzBu1Utev	627	19	3.0%
PANTERA EIRIE Platform @PanteraPlatform · Mar 9 Did you miss the "Remote Testing & EIRIE Platform" #webinar jointly organised by @PanteraPlatform, @ERIGrid and #DERlab, which was held yesterday? We got you covered! Find the full workshop and all the slides here → bit.ly/38ofl7G #smartenergy #smartgrids #energy pic.twitter.com/YKJlcDuV9e View Tweet activity	570	20	3.5%
PANTERA EIRIE Platform @PanteraPlatform · Mar 4 💡 What are the #PANTERA Regional Desks? How can you be an active member of #Europe's #Research & #Innovation #smartgrids, #storage and local #energy systems community? Learn more about the Desks and take a few minutes to respond to our survey here → bit.ly/3beYNAM pic.twitter.com/dx2LDXygl3 View Tweet activity	609	16	2.6%

Impressions, Engagement and Engagement rate
1 June 2021 - 31 August 2021

Your Tweets earned **7.6K impressions** over this **91 day** period

YOUR TWEETS
During this 91 day period, you earned **84 impressions** per day.

Tweets	Top Tweets	Tweets and replies	Promoted	Impressions	Engagements	Engagement rate
PANTERA EIRIE Platform @PanteraPlatform · Jul 27 ⚡Did you miss the last PANTERA nano #workshop (9 July at the 5th Cretan Energy Conference) and EIRIE #platform demo? Stream it now→youtube.com/watch?v=eQ_4Vk... More info→bit.ly/2TCc2p8 EIRIE platform→ses.jrc.ec.europa.eu/eirie/en #H2020 #HorizonEU #EU #Europe #energy pic.twitter.com/cRO7e4hugR View Tweet activity				361	27	7.5%
PANTERA EIRIE Platform @PanteraPlatform · Jul 20 💡How can you use the #EIRIE platform to help your #research? Find out more by watching a demo of the platform during PANTERA's last workshop on July, 9, at the 5th Cretan Energy conference. This way→bit.ly/2VWMTpX #WeAreEIRIE #energy #EU #smartgrids #H2020 View Tweet activity				258	5	1.9%
PANTERA EIRIE Platform @PanteraPlatform · Jul 13 Did you miss the #PANTERA nano-#workshop at the 5th Cretan Energy Conference & #EIRIE #Platform live demo? We got you covered! Find the workshop record on YouTube: youtu.be/eQ_4VkgpR5M?t=... #H2020 #smartgrid #EU #energytransition #EnergyStorage View Tweet activity				599	18	3.0%

PANTERA EIRIE Platform @PanteraPlatform · Jul 7	421	9	2.1%

📕 PANTERA #newsletter is out! Don't miss out on the latest #projectnews, especially the upcoming #workshop and a #livedemo of the #EIRIE platform!
Have a look at this issue ➡ bit.ly/3dMXhqf and make sure to keep up by subscribing ➡ bit.ly/3qYsHiX

#H2020 #energy pic.twitter.com/r5NIEqDLI1

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jul 6	575	22	3.8%

⊙#EIRIE platform is live!
@PanteraPlatform in #collab with the @EU_Commission and important stakeholders have developed #EIRIE, THE meeting point of #research & #innovation actors in the #energy field of #Europe.
More info ➡ bit.ly/2VbpqB8
EIRIE ➡ bit.ly/3dP08iB pic.twitter.com/rWlDORmk5u

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jul 5	649	10	1.5%

PANTERA is in the #digital #EUprojectszone of @Enlit_Europe and will be in the physical EU projects zone at the #Enlit event, taking place on 30 November - 2 December 2021 in Milan, Italy!
➡ bit.ly/3xl1sRZ

#EU #H2020 #EUproject #Enlit #EnlitEurope #digital #platform pic.twitter.com/Ii7EXGwGrB

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jun 28	337	8	2.4%

🖱Have you registered yet?

Our hybrid workshop taking place on July 9 is a great opportunity to witness live the #EIRIE platform and all its tools and functionalities!

It's this way ➡ bit.ly/3zyoDtO
or via @euagenda this way ➡ bit.ly/35TG0HQ
pic.twitter.com/xXeMB4MrmE

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jun 25	443	11	2.5%

The EIRIE platform is coming 🔲

🎯 Our goal: To bring together the #Research & #Innovation community in #EU in one place.

🌐 How: An #interactive multifunctional #platform, in collaboration with major EU stakeholders.

#staytuned #WeAreEIRIE #H2020 #HorizonEurope #Europe #energy pic.twitter.com/jdEvcZguma

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jun 21	855	23	2.7%

📗 Read our article in the Summer 2021 edition of @EuroEnergyInn magazine available now #online!

More on our vision for the #EIRIE #platform to become a reference point for the #EU R&I community 🔲 bit.ly/3iY1omV

#H2020 #Horizon2020 #EUproject #publication #energy pic.twitter.com/wb6GaKCKxz

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jun 17	626	6	1.0%

Don't miss @giafulli's (@EU_Commission's #JRC) intervention on the #EU's #digital and #energy ambitions and challenges in @PanteraPlatform workshop at #CEC2021!

🗓 9 July 2021
📍 Online & Crete
🔲 bit.ly/3zyoDtO pic.twitter.com/3DGWKxHjfb

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jun 16	452	14	3.1%

⚡ We're joining the 5th Cretan Energy Conference as silver partners to present #EIRIE in a #livedemo in our workshop "The key role of the R&I unified approach across EU for boosting smart grids investments: The EIRIE platform"!
Join us #online or in Crete 🔲 bit.ly/3xpzRyH pic.twitter.com/CL4KKvkL54

View Tweet activity

PANTERA EIRIE Platform @PanteraPlatform · Jun 14	511	11	2.2%

At #CEM12MI6 took place the MI IC1 final event. IC1 members' efforts will continue in the new MI 2.0 phase. The IC1 #SGIA platform aimed at facilitating R&I #collaboration will be further developed and linked with other platforms such as #EIRIE. Watch it🔲 cem12mi6chile.com pic.twitter.com/lsqdsNA9by

View Tweet activity

Deliverable: Technical Report 2 Revision / Status: final

Impressions, Engagement and Engagement rate
1 September 2021 - 31 December 2021

September-November

Your Tweets earned **3.3K impressions** over this **91 day** period

YOUR TWEETS
During this 91 day period, you earned **37 impressions** per day.

December

Your Tweets earned **547 impressions** over this **31 day** period

YOUR TWEETS
During this 31 day period, you earned **18 impressions** per day

	Impressions	Engagements	Engagement rate
Tweets Top Tweets Tweets and replies Promoted			
PANTERA EIRIE Platform @PanteraPlatform · Dec 14 Don't miss the "Large-scale storage integration and strategies to support market uptake of innovative solutions" workshop, organised by @EERA_SET JP SG and @OSMOSEProject. Today 14 December 2021 2pm Join bit.ly/3GHd3z5 #workshop #H2020 #EERA #smartgrids #energy View Tweet activity	149	6	4.0%
PANTERA EIRIE Platform @PanteraPlatform · Dec 2 Meet our #PANTERA team today at @Enlit_Europe in the #EUprojectzone Stand 12.EU13! Learn more about the #EIRIE platform and how we are planning to bring in one place the #research and #innovation community in the #energy field in #Europe! #H2020 #EnlitEurope #horizon2020 pic.twitter.com/EWKFJLeS6F View Tweet activity	203	18	8.9%

PANTERA EIRIE Platform @PanteraPlatform · Nov 25 🌐@COP26: learn more about @MICleanEnergyRD's new launched #Missions and be inspired by the #GreenPoweredFuture Mission's new Joint Roadmap of Global Innovation Priorities! Read more about it on the #EIRIE platform ➡ bit.ly/3r9kryQ #COP26 #MI #cleanenergy #innovation pic.twitter.com/eI2GWG1rtv View Tweet activity	135	7	5.2%
PANTERA EIRIE Platform @PanteraPlatform · Nov 24 PANTERA #newsletter is out! Don't miss out on the latest project news and opportunities, especially our presence at the @SETPlan_eu and @Enlit_Europe events! Check it out ➡ bit.ly/3CPF9po Subscribe ➡ bit.ly/3vzkrYR #H2020 #EUSEW2021 #EU #energy #subscribe pic.twitter.com/9FHVvTglqt View Tweet activity	136	5	3.7%
PANTERA EIRIE Platform @PanteraPlatform · Nov 23 ⚡PANTERA is exhibiting virtually at the 15th @SETPlan_eu #conference, taking place on 25-26 November 2021! Register now and join us virtually to interact with us and learn more about us ➡ bit.ly/3nKktLt #H2020 #Horizon2020 #SETPlan2021 #energy #greentransition pic.twitter.com/F8ktQo7vHQ View Tweet activity	94	8	8.5%
PANTERA EIRIE Platform @PanteraPlatform · Nov 16 In addition to our virtual booth in the #EUprojectzone on the @Enlit_Europe platform (check us out ➡ bit.ly/3HtxNM7), we will be present on site Stand 12.EU13 at the Enlit physical event! More info ➡ bit.ly/3qHvDCp 📅 30 November - 2 December 2021 📍 Milan View Tweet activity	113	9	8.0%
PANTERA EIRIE Platform @PanteraPlatform · Nov 3 We are happy to announce that in addition to being present in Enlit's digital EU project zone, PANTERA will also take part in the @Enlit_Europe physical event. 📅 30 November-2 December 2021 📍 Milan, Italy Come and meet us on Stand 12.EU13 ➡ bit.ly/3GLccOO #enliteurope pic.twitter.com/G9PKx6wIOS View Tweet activity	265	5	1.9%
PANTERA EIRIE Platform @PanteraPlatform · Oct 21 📰PANTERA newsletter is out! Don't miss out on the latest project news and opportunities, especially our presence at the EU Sustainable Energy Week 2021 next week! Check it out ➡ bit.ly/3jjvssn Subscribe ➡ bit.ly/3vzkrYR #H2020 #EUSEW2021 #EU #energy #networking pic.twitter.com/Jhlzh5lV2K View Tweet activity	655	33	5.0%

		509	19	3.7%

PANTERA EIRIE Platform @PanteraPlatform · Oct 18
We are delighted to be part of #EUSEW2021 virtual #NetworkingVillage, happening from 25 to 29 October! Join us and visit our virtual stand, learn more about the project latest news and interact with the project partners.

More info ➡ bit.ly/3j8LGED pic.twitter.com/Dx5zDzNyNZ

View Tweet activity

		110	2	1.8%

PANTERA EIRIE Platform @PanteraPlatform · Oct 14
#Publication: "Development of Network Codes to Facilitate the #EnergyTransition", provides a review of regulations, codes and standards in the #EU conducted by PANTERA and published within the #IcSmartGrid2021 #conference.

All PANTERA publications ➡ bit.ly/3BHaTgS pic.twitter.com/Wgh4DJwO2V

View Tweet activity

		108	3	2.8%

PANTERA EIRIE Platform @PanteraPlatform · Oct 11
Check out @IEA_ISGAN's #AnnualReport 2020. This challenging year didn't stop the effectiveness of ISGAN's activities; government reps and grid key stakeholders continued their work towards global #cleanenergy and #climate goals.
Read the report here → bit.ly/2X0a6rQ

View Tweet activity

		458	13	2.8%

PANTERA EIRIE Platform @PanteraPlatform · Sep 15
⚡We are proud to be part of #EUSEW2021 Energy Fair! Join us at the Networking Village from 25 to 29 October 👉 and stay tuned for the event updates
👉 eusew.eu
#EUGreenDeal #EnergyFair #NetworkingVillage #EUSEW #energy #renewable #PANTERA #H2020 #Horizon2020 pic.twitter.com/0AracqXd5R

View Tweet activity

		141	7	5.0%

PANTERA EIRIE Platform @PanteraPlatform · Sep 7
📢Have you secured your place yet? Only 3 days left! It's this way ➡ pantera-platform.eu/dont-miss-pant…

#H2020 #horizon2020 #workshop #PANTERA #SUPEERA #smartgrids #research #innovation @SpliTechConf

View Tweet activity

		348	18	5.2%

PANTERA EIRIE Platform @PanteraPlatform · Sep 2
Don't miss #PANTERA & #SUPEERA joint workshop: "Boosting the R&I activity on Smart Grid Technologies".

📅 10 September 2021
🕘 from 9:15 to 10:45 & 14:00 to 15:30 CEST
📍 @SpliTechConf, online & physical (Split and Bol, Croatia)

More info ➡ bit.ly/3jyNt6F pic.twitter.com/As1u9tUHMB

View Tweet activity

Deliverable: Technical Report 2 Revision / Status: final

LinkedIn

PANTERA EIRIE Platform

#H2020 EU-funded PANTERA aims to bring the EU #energy community in one place, via EIRIE, a multifunctional R&I platform!
Research · **179 followers**

Number of visitors in 2020

(March-June 2020)

(June-September 2020)

Aggregate desktop and mobile traffic   On ⬤

August 2020
○ Desktop and mobile: 18 ▲29% previous month

Page views

25
20
15
10
5
0
Jun 30   Jul 31   Aug 31   Sep 29

◯ Desktop and mobile
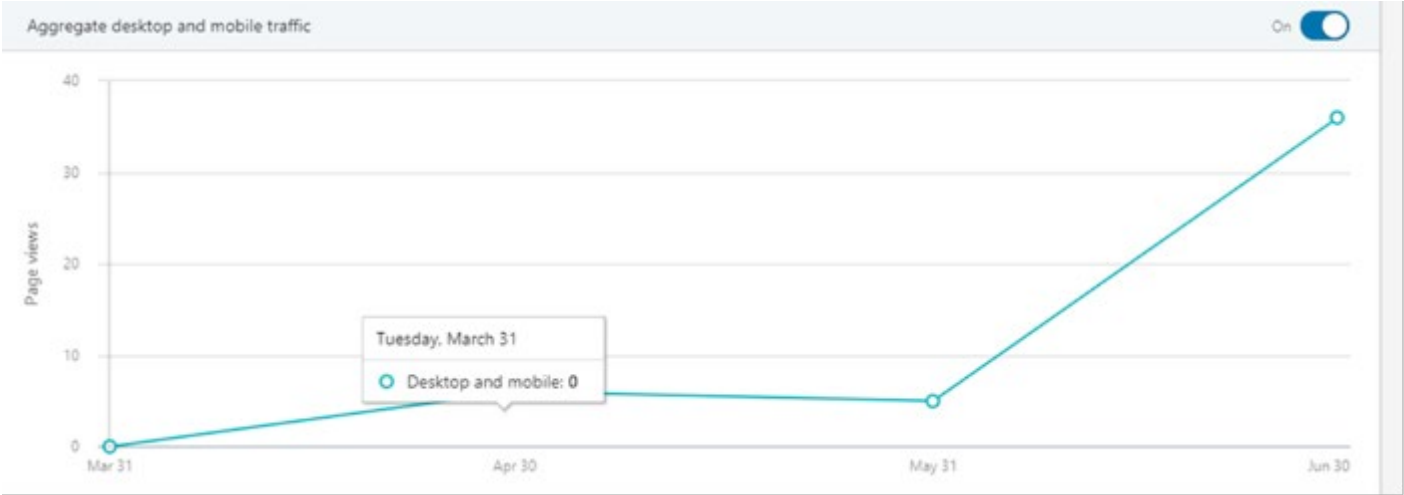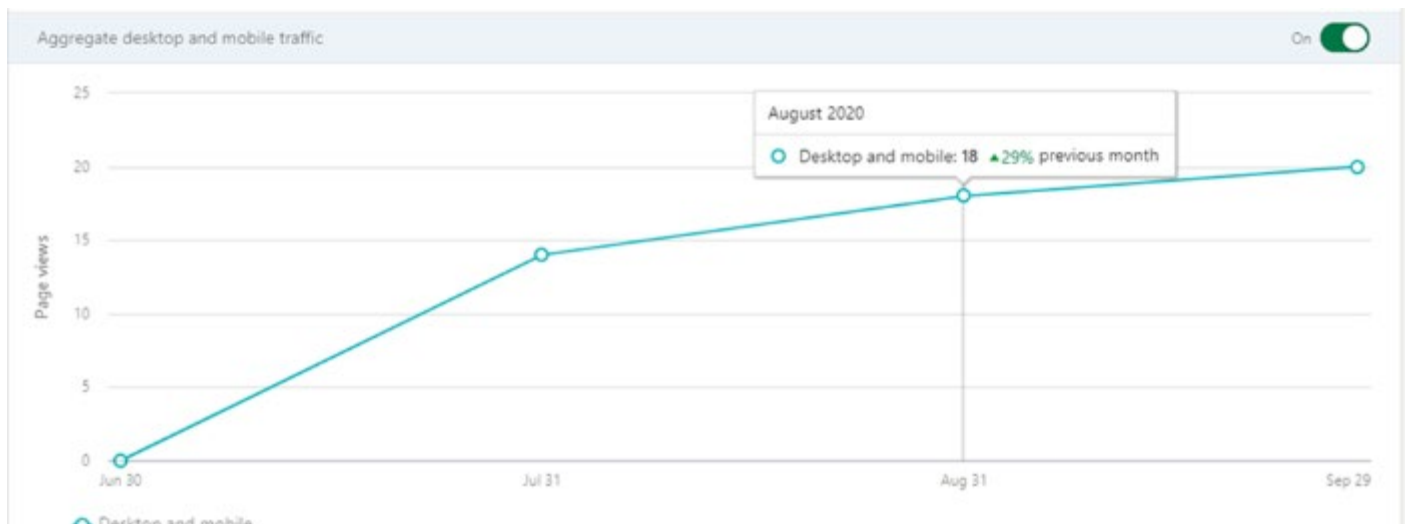
Visitor metrics ❓   Time range: Oct 1, 2020 - Dec 30, 2020 ▼   Page: All Pages ▼   Metric: Page views ▼

Aggregate desktop and mobile traffic   On ⬤

Page views

12
10
8
6
4
2
0
Oct 1   Oct 8   Oct 15   Oct 22   Oct 29   Nov 5   Nov 12   Nov 19   Nov 26   Dec 3   Dec 10   Dec 17   Dec 24

○ Desktop and mobile
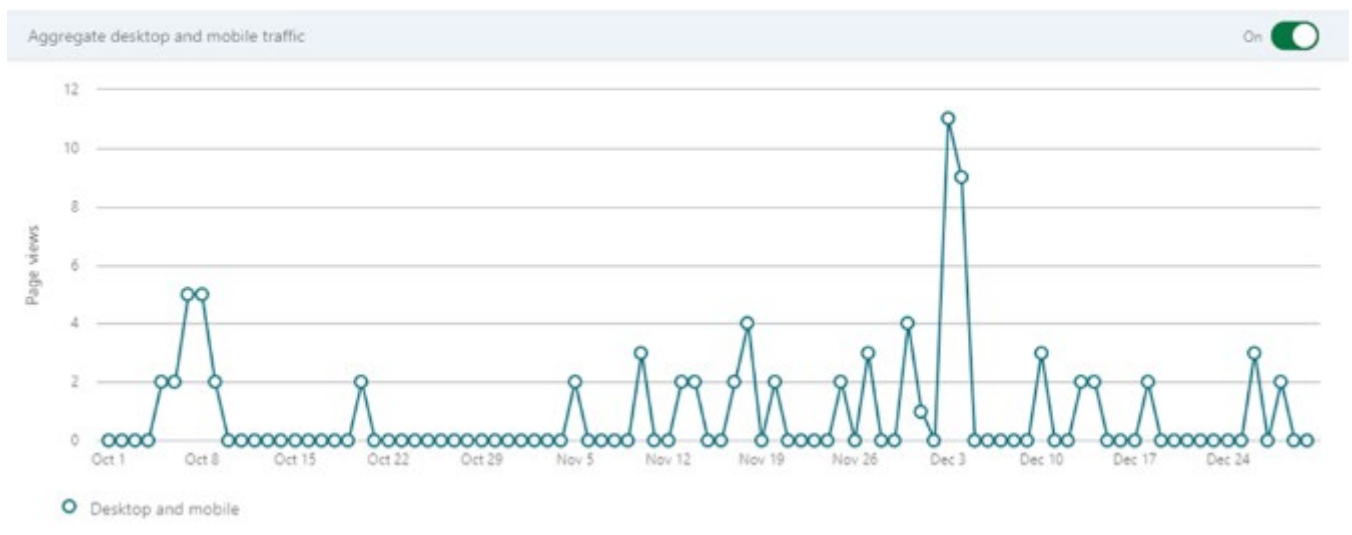
Top Job functions and locations in 2020

Visitor demographics ❓   Time range: Mar 31, 2020 - Jun 30, 2020 ▼   Data for: Job function ▼

Top job functions

	Visitors	% of Visitors	
Operations	18		39.13%
Program and Project Management	8		17.39%
Education	6		13.04%
Consulting	3		6.52%
Entrepreneurship	3		6.52%
Business Development	2		4.35%
Engineering	2		4.35%
Finance	2		4.35%
Research	2		4.35%

Deliverable: Technical Report 2 Revision / Status: final

Visitor demographics ⊘   Time range: Jun 30, 2020 - Sep 29, 2020 ▾   Data for: Job function ▾

Top job functions

	Visitors	% of Visitors
Operations	11	21.57%
Research	10	19.61%
Education	9	17.65%
Engineering	6	11.76%
Legal	4	7.84%
Program and Project Management	4	7.84%
Business Development	2	3.92%
Consulting	2	3.92%
Sales	2	3.92%
Media and Communication	1	1.96%
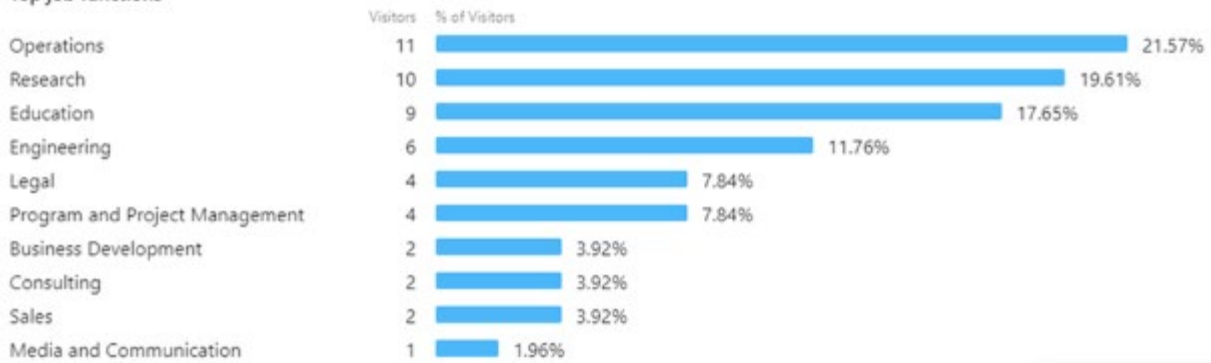
Visitor demographics ⊘   Time range: Oct 1, 2020 - Dec 30, 2020 ▾   Data for: Job function ▾

Top job functions

	Visitors	% of Visitors
Education	13	18.57%
Engineering	13	18.57%
Operations	11	15.71%
Business Development	8	11.43%
Program and Project Management	7	10%
Research	7	10%
Consulting	6	8.57%
Administrative	5	7.14%
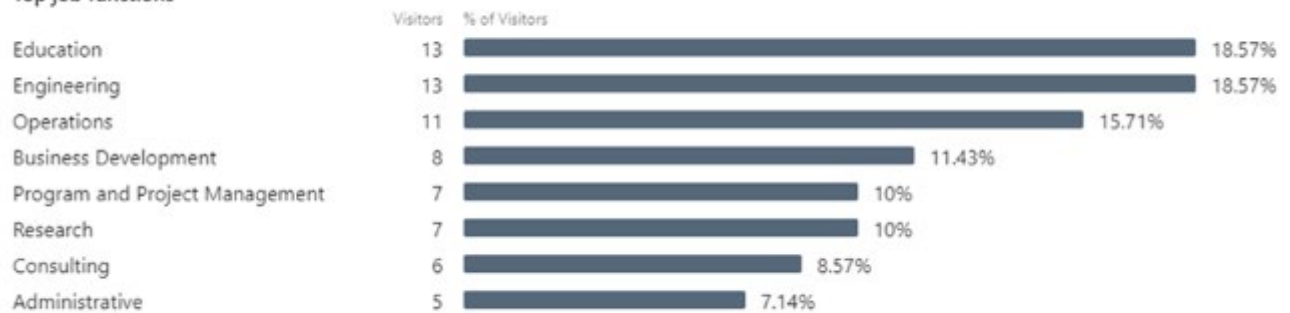
Visitor metrics ⊘   Time range: Dec 31, 2020 - Nov 19, 2021 ▾   Page: All Pages ▾   Metric: Page views ▾

Aggregate desktop and mobile traffic   On ◉

○ Desktop and mobile

Top Job functions and locations in 2021

Deliverable: Technical Report 2 Revision / Status: final

Visitor demographics ⓘ   Time range: Dec 31, 2020 - Nov 19, 2021 ▾   Data for: Job function ▾

Top job functions

	Visitors	% of Visitors
Operations	68	23.53%
Engineering	40	13.84%
Education	25	8.65%
Research	25	8.65%
Business Development	22	7.61%
Media and Communication	18	6.23%
Administrative	17	5.88%
Information Technology	14	4.84%
Sales	11	3.81%
Marketing	10	3.46%
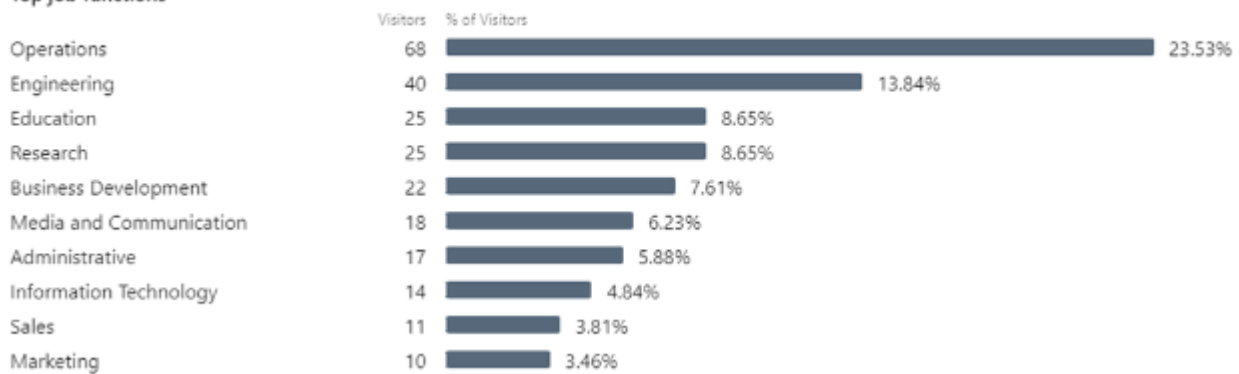
Facebook

Reach, post clicks and Engagement (Likes, comments, shares) in 2020

Reach: Organic/Paid ▾   Post clicks   Reactions, comments & shares ⓘ ▾

Date	Post			Reach	Post clicks		Action
03/12/2020 12:44	We will soon be launching EIRIE platform (European Interconnection	▭	🌐	316	8 / 12	▪	Boost post
09/11/2020 17:54	Meet EIRIE... EU European Interconnection for Research	▭	🌐	263	8 / 9	▪	Boost post
04/11/2020 17:57	Join the #PANTERA consortium in the upcoming virtual regional #workshop	🔗	🌐	23	2 / 6	▪	Boost post
22/09/2020 18:50	#Screenshots of our first EU #reviewmeeting held on September	▭	🌐	448	46 / 23	▬	Boost post
27/08/2020 12:57	PANTERA #newsletter is out! Don't miss out on the latest project	▭	🌐	277	9 / 9	▪	Boost post
11/08/2020 17:58	Did you miss our first Pan-European #virtual #workshop back in	▭	🌐	27	0 / 1	▏	Boost post
18/06/2020 18:20	PANTERA's goal is to bring together ALL the R&I community across	▭	🌐	207	4 / 9	▪	Boost post
17/06/2020 16:42	Only 1 week left until PANTERA's first #PanEuropean virtual #workshop	🔗	🌐	34	2 / 9	▪	Boost post
16/06/2020 18:10	PANTERA #newsletter is out! Don't miss out on the latest project	▭	🌐	248	12 / 9	▪	Boost post
08/06/2020 16:45	Secure your place now for the first Pan-European PANTERA Workshop,	🔗	🌐	191	9 / 13	▪	Boost post

Deliverable: Technical Report 2 Revision / Status: final

Reach, post clicks and Engagement (Likes, comments, shares) in 2021

			▨ Reach: Organic/Paid ▾		▨ Post clicks	▨ Reactions, comments & shares ⓘ ▾		

Published	Post	Type	Targeting	Reach		Engagement		Promote
25/11/2021 12:38	🌐 COP26 - UN Climate Change Conference: learn more about	▥	🌐	108	▨	3 6	▮ ▮	**Boost post**
24/11/2021 11:45	📤 PANTERA newsletter is out! Don't miss out on the latest project news	▥	🌐	68	▨	3 5	▮ ▮	**Boost post**
23/11/2021 18:46	⚡ PANTERA is exhibiting virtually at the 15th SET Plan conference, taking	𝒮	🌐	71	▨	0 5	▮ ▮	**Boost post**
16/11/2021 12:14	In addition to our virtual booth in the #EUprojectzone on the Enlit Europe	𝒮	🌐	101	▨	3 6	▮ ▮	**Boost post**
03/11/2021 13:39	We are happy to announce that in addition to being present in Enlit	𝒮	🌐	70	▨	1 8	▮ ▮	**Boost post**
21/10/2021 11:54	📤 PANTERA newsletter is out! Don't miss out on the latest project news	▥	🌐	164	▨	2 11	▮ ▮	**Boost post**
18/10/2021 11:52	We are delighted to be part of #EUSEW2021 virtual Networking	▥	🌐	239	▨	11 8	▮ ▮	**Boost post**
14/10/2021 12:37	Publication: "Development of Network Codes to Facilitate the	▥	🌐	187	▨	2 6	▮ ▮	**Boost post**
15/09/2021 10:08	⚡ We are proud to be part of #EUSEW2021 Energy Fair! Join us at	▥	🌐	161	▨	0 3	▮ ▮	**Boost post**
08/09/2021 11:55	Mission Innovation's Green Powered Future Mission's aim is to empower	𝒮	🌐	80	▨	1 8	▮ ▮	Boost post
02/09/2021 12:12	Don't miss #PANTERA & #SUPEERA joint workshop: "Boosting the R&I	𝒮	🌐	102	▨	4 2	▮ ▮	**Boost post**
27/07/2021 16:32	⚡ Did you miss the last PANTERA nano #workshop (9 July at the 5th	▥	🌐	30	▨	1 5	▮ ▮	**Boost post**

Date		Post			Reach		Engagement		
20/07/2021 16:25		💡🤔 How can you use the #EIRIE platform to help your #research? Find	⬚	🌐	265	▭	6 6	▮ ▮	Boost post
07/07/2021 10:35		📤 PANTERA newsletter is out! Don't miss out on the latest project news	▦	🌐	96	▯	11 3	▮ ▮	Boost post
06/07/2021 12:22		🔵 The #EIRIE platform is live now! Within the Pantera EIRIE Platform	▦	🌐	198	▭	5 11	▮ ▮	Boost post
05/07/2021 18:21		PANTERA is in the #digital #EUprojectszone of Enlit Europe and	⬚	🌐	263	▭	2 7	▮ ▮	Boost post
25/06/2021 14:10		The EIRIE platform is coming 📘 🎯 Our goal: To bring together the	▦	🌐	50	▯	2 3	▮ ▮	Boost post
21/06/2021 18:11		📗 Read our article in the Summer 2021 edition of European Energy	🔗	🌐	76	▯	4 6	▮ ▮	Boost post
17/06/2021 12:26		Don't miss Gianluca Fulli's (European Commission's JRC) intervention on	⬚	🌐	162	▭	3 6	▮ ▮	Boost post
17/06/2021 12:24		We're joining the 5th Cretan Energy Conference as silver partners to	🔗	🌐	45	▯	14 7	▮ ▮	Boost post
14/06/2021 15:28		At #CEM12MI6 took place the MI IC1 final event. IC1 members' efforts will	⬚	🌐	22	▯	1 2	▯ ▯	Boost post
21/04/2021 12:24		PANTERA will be presented at IERC (International Energy Research	🔗	🌐	91	▯	1 5	▮ ▮	Boost post
04/03/2021 14:14		💡 What are the PANTERA Regional Desks about? How can you be an	⬚	🌐	349	▭	6 6	▮ ▮	Boost post
16/02/2021 12:58		📤 PANTERA February newsletter is out! Don't miss out on the latest	🔗	🌐	72	▯	5 9	▮ ▮	Boost post
11/02/2021 18:05		Counting the days until the next #PANTERA workshop, 11 to be exact!	🔗	🌐	19	▯	0 5	▮ ▮	Boost post
13/01/2021 16:26		💡Did you know? According to a recent PANTERA survey, EU energy	⬚	🌐	170	▭	7 5	▮ ▮	Boost post