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Demonstration of innovative forms of storage and their successful operation and integration into innovative energy system and grid architectures

D7.1: First Communication, Dissemination and Exploitation Plan including project identity and website report

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The Advanced Grid Interfaces for innovative STorage INtegration (AGISTIN) project has received funding from the European's Union Horizon Europe research and innovation programme under grant agreement N°101096197

AGISTIN
Advanced Grid Interfaces for innovative STorage INtegration

Version history

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V0.1	*31-05-2023*	*FIRST DRAFT – EPRI/EASE*
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Executive Summary

AGISTIN is a Horizon Europe project (2023-2026) that will enable industrial grid users to rapidly deploy renewables through advanced integration of innovative energy storage technologies at the interface with the grid.

The project is divided into seven work packages (WP) with WP7 entitled "Dissemination, Communication and Exploitation". WP7 is structured into 2 tasks: task 7.1: Dissemination and Communication Actions; task 7.2: Exploitation and Business Plan Rollout.

The D7.1 'First Communication, Dissemination and Exploitation Plan including project identity and website report' is part of task 7.1. This deliverable presents a detailed Communication and Dissemination Master Plan and plan of exploitation to maximise the impact of the project results for its entire duration and beyond its lifetime.

This deliverable is divided into four chapters: Communication and Dissemination Plan; Communication tools and actions; Exploitation Plan, and WP7 Plan.

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Abbreviations and Acronyms

Abbreviations and Acronyms	
AGI	Advanced Grid Interface
CAPE	Capital Expenditure
DCE	Dissemination, Communication and Exploitation
DSO	Distribution System Operator
EC	European Commission
ER	Exploitable Results
IP	Intellectual Property
IPR	Intellectual Property Rights
KER	Key Exploitable Result
KPI	Key performance Indicators
OPEX	Operational expenditure
PM	Person Month
PR	Press Release
PV	Photovoltaic
ROI	Return on Investment
SME	Small-Medium Enterprise
SWOT	Strengths, Weaknesses, Opportunities and Threats
TRL	Technology Readiness Level
TSO	Transmission System Operator
WP	Work Package

Introduction

The WP7 "Dissemination, Communication and Exploitation" supports the project in communicating its activity and results to the target audience using multiple communication tools, and to enable the transfer of knowledge to the society, thus making use of the tools and methodologies developed.
The objectives of the WP7 are:

- Promote the dissemination and visibility of the results and findings to a wide range of stakeholders through presentations at webinars, technical conferences, publications, project website, social media and newsletters;
- Maximise the communication of project results and findings through exchanges with stakeholders that can be interested in implementing and utilising the project's findings, such as industry representatives, technology suppliers and regional, national and EU authorities;
- Achieve optimum knowledge management of the project's findings, including appropriate IPR;
- Facilitate technology transfer and implementation of the project's results and findings to interested stakeholders in view of accelerating their exploitation;
- Engage proactively in Communication and Dissemination activities with similar projects and initiatives to create synergies and collaborations between EU-funded programmes and other actions.

The measures to maximise AGISTIN's impact are divided into

- Communication activities aimed to promote the AGISTIN action, raise awareness and communicate beyond the project's internal and external communities to wider audiences, including the media and the general public.
- Dissemination activities, i.e. promoting the AGISTIN results, aimed to raise interest among stakeholders, securing early adoption of the results by the relevant industry and research communities.
- Exploitation activities aimed at the utilisation of results in further research activities other than those covered by the action concerned, and in developing, creating and marketing products and processes, in creating and providing services, and in standardisation activities.

This document consists of a Communication, Dissemination and Exploitation (DCE) plan with various integrated measures to maximise the impact of the project.
The plan outlined in this document focuses on the period from the beginning of the project (M1) until its end (M42).
Regarding the Communication and Dissemination, different communication tools (advertising, direct marketing, digital marketing and public relations) and actions (website, press release, events, social media, video) will be used to support the WP objectives, engage with the selected target audiences and meet the proposed key performance indicators (KPIs).
The stakeholder groups targeted in this plan include the research community, Transmission System Operators (TSOs) and Distribution System Operators (DSOs), regulatory agencies and the

industrial sector.

Regarding the Exploitation plan, it specifies the project's results and describes the strategy to enhance the successful harnessing of them. Its main aim is to provide a roadmap to capture and identify the concrete value of all the key outputs and ensure the sustainability of the project through the anticipation of risks, early identification of mitigation measures, and the definition of a market approach.

Such plan corresponds to the first draft of the exploitation roadmap. It contains the overall layout that will be used as a tool to collect all the relevant information that will be included in the final version of the exploitation roadmap.

To achieve an effective exploitation of the project's outcomes, intellectual property elements will be considered and managed throughout the development of the project. Intellectual Property (IP) management will set the framework that defines how the results should be leveraged and promoted.

An intermediate version of the DCE Plan will be submitted in M24 with the actions and outcomes to date. The final version of the exploitation roadmap (D7.3), to be submitted in M42, will include the intellectual property rights (IPR) report, which is closely linked to the D1.2 Data Management plan. The final Communication and Dissemination report will be delivered in M48.

1 Communication and Dissemination Plan

The communication and dissemination plan consists of a group on integrated and interrelated activities targeted to specific audiences aiming at raising awareness for project activity and securing early adoption of the results by relevant stakeholders.

1.1 Objectives

The main objectives of the communication and dissemination plan are:

I. Fostering public awareness and engagement;
II. Promoting scientific excellence and innovation, addressing the scientific & technical sectors and the transfer to industry;
III. Contributing to knowledge exchange and encouraging students and scientists to evolve in that sector through technology transfer;
IV. Creating market demand for the AGISTIN solutions as well as enhancing its exploitation potential;
V. Achieving optimum knowledge management, including appropriate handling of IPR; implementation and exploitation of the obtained results;
VI. Contribute to build Europe's reputation on R&D&I.

The main stages for the DCE measures of AGISTIN's results are:

- Identify and engage key stakeholders by providing information and awareness about the AGISTIN ecosystem.
- Share insights and outcomes with all interest groups through channels and tools maximising dissemination.
- Fit the solutions to the problems/needs of the end-users and the partners responsible for their exploitation.
- Exchange information based on the needs of key stakeholders and end-users, defining an exploitation strategy and replication of the project results.

1.2 Target Groups

AGISTIN will target seven main audience groups:
a) Technology providers
b) Industrial grid users
c) Grid operators
d) Policy makers and public bodies
e) Research & Scientific communities
f) Media & journalists
g) Society at large

In the below table are presented the main stakeholder groups, and why does the project aim at

reaching each one of them.

Table 1 Dissemination, exploitation and communication (DEC) target groups of involved stakeholders

Stakeholder groups	Organisations, companies, individuals	Goal
Technology providers	Energy storage providers, power electronics (e.g., inverter) and integration controls providers, electrolysis providers, pump drive providers.	Mobilisation of the sector's interest. Recommendations for improvements of the AGISTIN technology. Ensure collaborative market outreach.
Industrial grid users	Electrolysis operators, large pumping facilities, heavy duty EV charging operators, data centre operators, irrigation communities.	Relate project findings from demonstrations, business case and LCA activities to inform future investment decisions.
Grid operators	Transmission and distribution system operators (TSOs and DSOs)	Develop guidance and recommendations for system operators that informs the development of network codes and qualification criteria for grid services.
Policy makers and public bodies	EU Institutions; National governments, Regional/local authorities/regulators.	Influencing new regulations and policies for the innovative storage solution value chains at EU and national level. Adaptation of grid connection codes and incentives to optimally exploit the capabilities of combined grid coupling of storage, load, and generation. Contributing to a sustainable EU future.
Research & scientific communities	Universities and research institutions; Research associations/networks	Mutual learning; Enhancement of R&D; Knowledge spill-over; Validation and improvement of results
Media & journalists	Relevant media networks and projects	Informing civil society and citizens about the results, new sustainable technologies, and their role in the energy transition.
Society at large	Citizens, NGOs, associations, civil society	

1.3 Key Messages

For each group, a tailored set of messages were defined which consider the context in which they operate, their specific needs and how the project can address them.

Table 2 Key messages that will be delivered to each stakeholder

Stakeholder groups	Message
Technology providers	Advances on the state of the art of the technologies being subjected to innovation. Project use cases and demonstrations.
Industrial grid users	Project findings from demonstrations, business case and LCA activities.
Grid operators	Main findings and results regarding the development of network codes and qualification criteria for grid services.
Policy makers and public bodies	Policy recommendations for AGISTIN outcomes promotion.

Research & scientific communities	Scientific publications, reports or deliverables resulted from the project that will contribute to mutual learning, advance the state of the art and further scientific development in the areas of energy storage, renewable energy, green hydrogen, grid operation.
Media & journalists	Beginning of project activities, its aim and expected results. The results of the project, their impact on society, economy and science and their role in energy transition.
Society at large	

Each stakeholder group will be targeted through privileged communication tools and channels that are detailed in the following sub-chapter.

2 Communication tools and actions

The marketing communication tools are a set of diversified tactics to effectively communicate with an audience. Therefore, we will be using four of these tools in this project: advertising, digital marketing, public relations, and direct marketing.
Each tool includes possible actions, meet specific objectives and are targeted-oriented, as summarised in the table below and they both play a role in our communication and dissemination efforts.

Table 3 Summary of the tools and actions used in the project, the objectives and audience each one serves.

Communication Tool	Action	Objective	Target audience
Advertising	Logo, brochure, poster, roll-up	Objectives I and VI	All groups
	Videos	Objectives I, II, IV and VI	All groups
Digital Marketing	Website	All	All groups
	Social Media	All	General public, industry, policy makers & public bodies
Direct Marketing	Newsletters	Objectives II, III, IV, V and VI	Scientific community, policy makers, industry
Public Relations	Press Releases	Objectives I and VI	General public, media
	Events	All	Scientific community, policy makers, industry

2.1 Advertising

2.1.1 Project Brand Identity

The visual identity contributes to deliver consistent visuals that will unify the brand's messaging, helping with delivering a consistent communication and increasing recognition across channels. The visual brand identity consists of an identity manual, presenting the project logo, the logo colours, colours variations and the fonts.

Several communication materials were designed from the visual identity to advertise the project, they are listed and explained individually in the following sub-chapters. Evidence of all the materials is kept in the Appendix section 7.1 Project Brand Identity and is also available for download on the project website (1).

2.1.2 Logo

The logo is composed of a pictogram and lettering. The pictogram represents the advanced grid interface, the central part of the project, from where the other elements (renewable energy, industrial loads and storage) flow. The hexagonal architecture is a representation of energy storage. The lettering is an acronym of the project name, with the first "i" linking with the icon used in the centre of the pictogram.
Each colour has also a purpose. The purple colour is associated with system operation, orange with batteries charging, blue represents the network grid and yellow the renewable energy.
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Figure 1 Project Logo

Nunito font was chosen as the project font because is a well-balanced sans-serif typeface superfamily.

As part of the brand a library of brand icons and elements were also developed to outline project scope and fields of work, as shown in the image below.

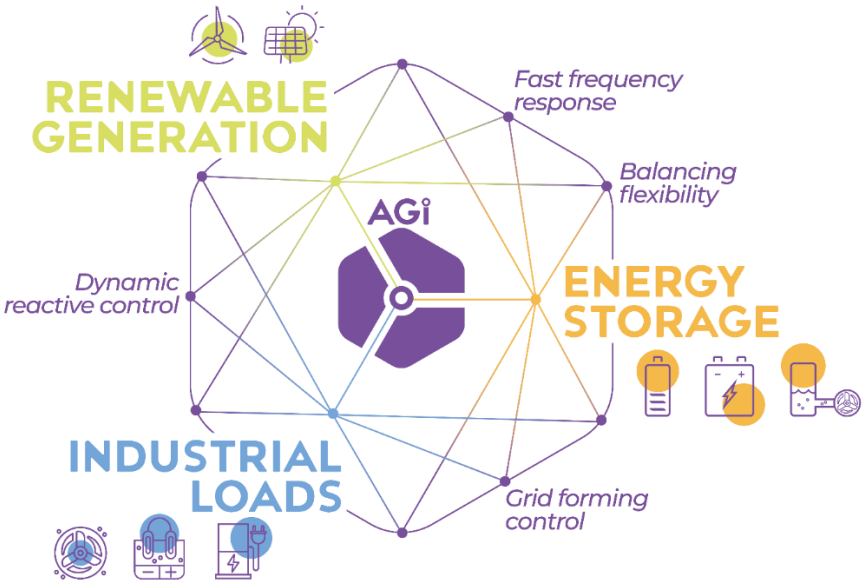


Figure 2 Graphic representation of the project scope

2.1.3 Brochure, poster, and roll-up banner

The roll-up banner includes the logo, project name, the main infographic, and contacts. It was produced to stand out during events and meetings. The digital version is available on the project website (1).

A threefold brochure and a poster have been designed to be conveyed at events, helping the partners to communicate project's main messages: it's goals, expected results, impacts and solutions.

These materials are in the Appendix section 7.2 Project Brochure, 7.3 Project Poster and 7.4 Project Roll-up banner.

2.1.4 Videos

A motion graphics video was produced to convey the project concept in an attractive and more comprehensible way to a broader audience. The video outlines the context of the project, the needs that it will respond to, the solutions that will be produced and tested and expected impacts. The video was shared on the main project communication channels: website (1), social media, newsletter.

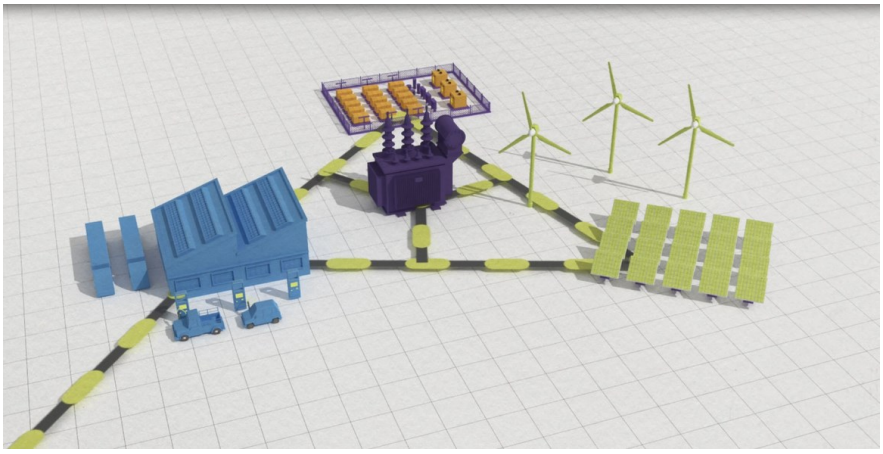


Figure 3 Frame from AGISTIN motion graphics video

At least three more videos will be produced during the project, aiming at creating awareness for the test sites and demonstrations that are planned and fostering the takeaway of the solutions by the main stakeholders.

2.2 Digital Marketing

2.2.1 Website

A dedicated website (2) was created to inform about the project activities and disseminate the results.

The project website provides visitors with:

- Context about the project, challenges it faces, what milestones are to be achieved and the desired project outcomes;
- Information about each partner;
- Useful resources to provide further information on AGISTIN;
- The latest news and project related events that are taking place;
- Contact information.

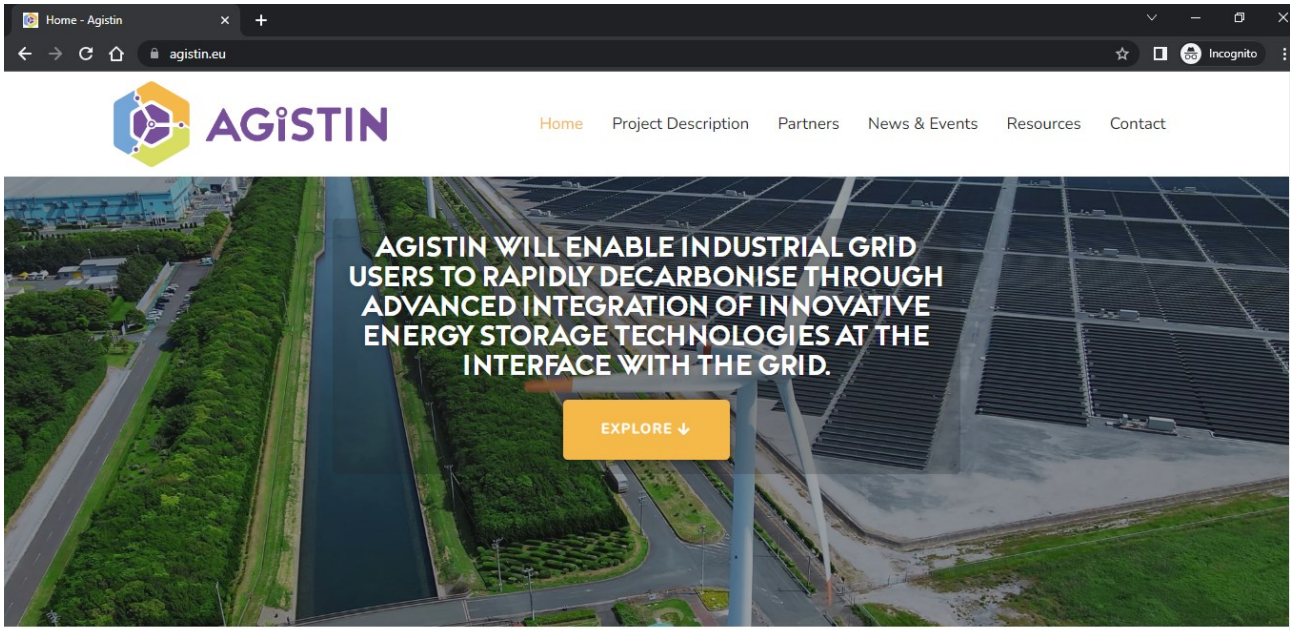


Figure 4 Screenshot of AGISTIN website homepage

The site has its own Content Management System (CMS) and links to the project social media accounts. It includes a form for readers to sign up to the project newsletter and email address for contacting the project coordinator and communications leader.

The project site has six main menus:

- Homepage – outlines project motto, consortium, and benefits.
- Project Description – provides the context, the challenges the project will address, solutions, milestones and objectives, and benefits,
- Partners – Short summary of all partners, their logos and link to their websites and social media channels.
- News and events – inform about relevant updates on the project, past and upcoming events organised or attended by the project.
- Resources page - include diversified elements, from communication materials to public deliverables and project resources that can be guidelines, reports, business cases or other information.
- Contact page- has a form that can be used to send message to the project coordinator and the social media links.

Site visits and downloads are being monitored through Matomo Analytics tool, an open-source analytics platform used by European Commission that provides anonymous but relevant and reliable insights into user behaviour, while staying compliance with the EU's General Data Protection Regulation (GDPR). The project aims at having five thousand visits per year.

2.2.2 Social media

The social media networks chosen for the project were Twitter (3) and LinkedIn (4). While LinkedIn will enable the project to inform and engage with the industry and research communities, Twitter will get the project closer to the policy bodies and decision-makers. From a broader perspective, as social media is a free and accessible tool, used by a wide spectrum of audience groups, both social media channels will bring the project to the public sphere, generating public awareness within a wider audience encompassing all the main target groups.
Communication and interaction on social media will be aimed at a weekly basis, as consistency will be important to drive reach and engagement.
Topics to be posted on social media include at first the context of the project, the objectives, benefits, consortium, demos and use cases, as this will inform about the project and foster awareness. As the project evolves, the communication will focus on project activities (events, reports, deliverables, scientific publications) and milestones.

The impact of the social media networks will be monitored through the analytics tools available on Twitter and LinkedIn. The increase in followers and impressions will be indicative of the project reach and influence. The project will look at having at least three hundred followers and one thousand impressions on the best performing posts.

The Figures below are screenshots of the project's pages on LinkedIn and Twitter.

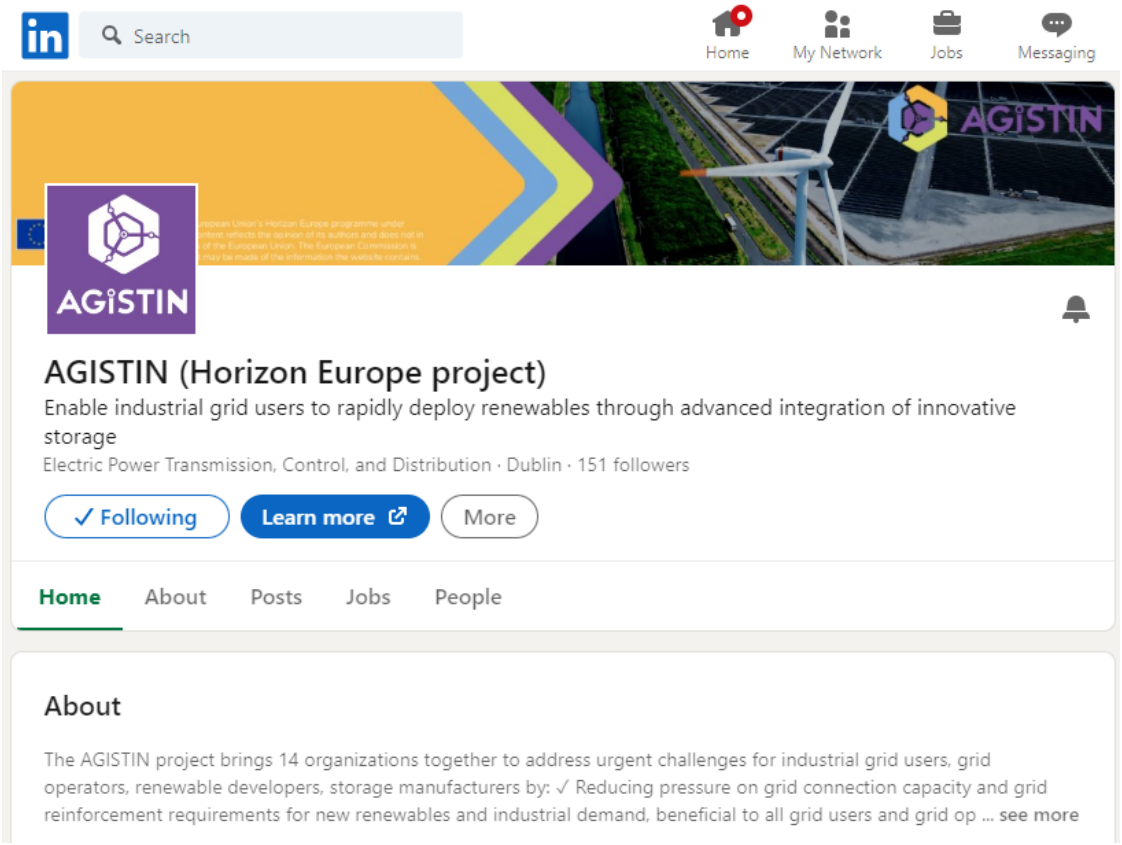


Figure 5 Project page on LinkedIn

Figure 6 Project page on Twitter

2.3 Public Relations

2.3.1 Press releases

The media outlets are one of the project audience groups. They are also one of the groups that most contribute to give credibility to the project as they are mostly perceived as reliable for the general society.

Therefore, the project will aim at disseminating at least two press releases (PR). One was already sent on M2 announcing the start of the project and it's available in the Appendix section 7.5 First Press Release. Partners were asked to release it within their networks. The results of the project dissemination are in the table below.

Table 4 News stories generated by media outlets after the release of the first PR

Date	Country	Media outlet	Title	Link
May-23	Ireland	Environment & Energy Management	European institutions combine know-how on energy storage to unlock the full potential of renewable energy	http://eandemanagement.com/wp-content/uploads/2023/05/EEM-Apl-May-2023-for-Web.pdf
11/5/2023	Germany	Verein Deutscher Ingenieure: BWK ENERGIE	Simulationsmodelle für intelligente Energienetze	https://elibrary.vdi-verlag.de/10.37544/1618-193X-2023-3-4/bwk-energie-jahrgang-75-2023-heft-3-4
10/2/2023	Global	PV Magazine	European institutions combine know-how on energy storage to unlock the full	https://www.pv-magazine.com/press-releases/european-institutions-combine-know-how-on-energy-

			potential of renewable energy	storage-to-unlock-the-full-potential-of-renewable-energy/

AGISTIN partners also published information on their website about the project, as listed in the table below.

Table 5 News pieces published on AGISTIN partners websites.

Date	Site	Title	Link
2/3/2023	Uni Kassel Website	Effiziente Energienetze: Kasseler Team entwickelt Open-Source Simulationsmodelle	https://www.uni-kassel.de/uni/aktuelles/meldung/2023/03/2/effiziente-energienetze-kasseler-team-entwickelt-open-source-simulationsmodelle
-	EASE website	Advanced Grid Interfaces for innovative STorage Integration	https://ease-storage.eu/eu-projects/agistin/
-	Fraunhofer CINES	Advanced Grid Interfaces for innovative STorage Integration	https://www.cines.fraunhofer.de/de/projekte/AGISTIN.html

The second press release is due to be released on M48, highlighting project outcomes and conclusions.

2.3.2 Events

Events are important channels to meet technology providers and grid operator, that will uptake the project outcomes, and research and academia, which will contribute to knowledge spill-over.

The project has identified a set of events where it aims to be represented, namely:

- ENLIT
- EPRI European Workshop Week
- Innogrid
- IEEE Innovative Smart Grid Technologies (ISGT)
- IEEE Power & Energy Society
- CIRED International Conference & Exhibition on Electricity Distribution
- Battery Innovation Days
- Renewable Integration Week
- Solar and storage integration workshop (storage)
- CIGRE, Powertech, AC/DC conf, EPE ECCE,
- Power Systems Computation Conference (PSCC)

- Champéry Power Conference
- EUSEW
- Battery Innovation Days
- Fraunhofer Berlin week

Participation in dedicated conferences and scientific journals are important to discuss issues, challenges, objectives, methodologies, achievements and projections related to AGISTIN technology.
Until M6 the project has been represented at the following events:

- EPRI European Workshop Week, Vienna (Austria), 14th-16th March 2023;
- BRIDGE General Assembly, Brussels (Belgium), 28th -30th March 2023;
- Hydropower projects clustering, Brussels (Belgium), 14th June 2023;
- TALENT project final event, Brussels (Belgium), 22nd June 2023.

The project also envisions to organise at least three workshops and two larger events to safeguard results are aligned with end-users needs and policy making in Europe.
At least four project webcasts reviewing the technical outcomes of the project will be recorded and disseminated at EU and national level. A final event to be organised to present the project results future sustainability of AGISTIN.

2.4 Direct Marketing

2.4.1 Newsletter

The newsletter is the direct marketing tool that will be used to engage with the project stakeholders. It is targeted to the scientific community, policy makers, industry and general public. It follows a template layout which includes:

- Cover story (feature story of the newsletter, main article, includes a photo/infographic/video. Can be a milestone, an outcome, a news piece)
- News & events (past and future)
- Resources
- Scientific Publications
- Public deliverables & Other reports
- Communication materials
- Contacts, acknowledgments and unsubscribe option

All partners are invited to contribute to the newsletter. The management and sending of the newsletter are done throughout HubSpot platform.
The first project newsletter was sent on the 30th June.

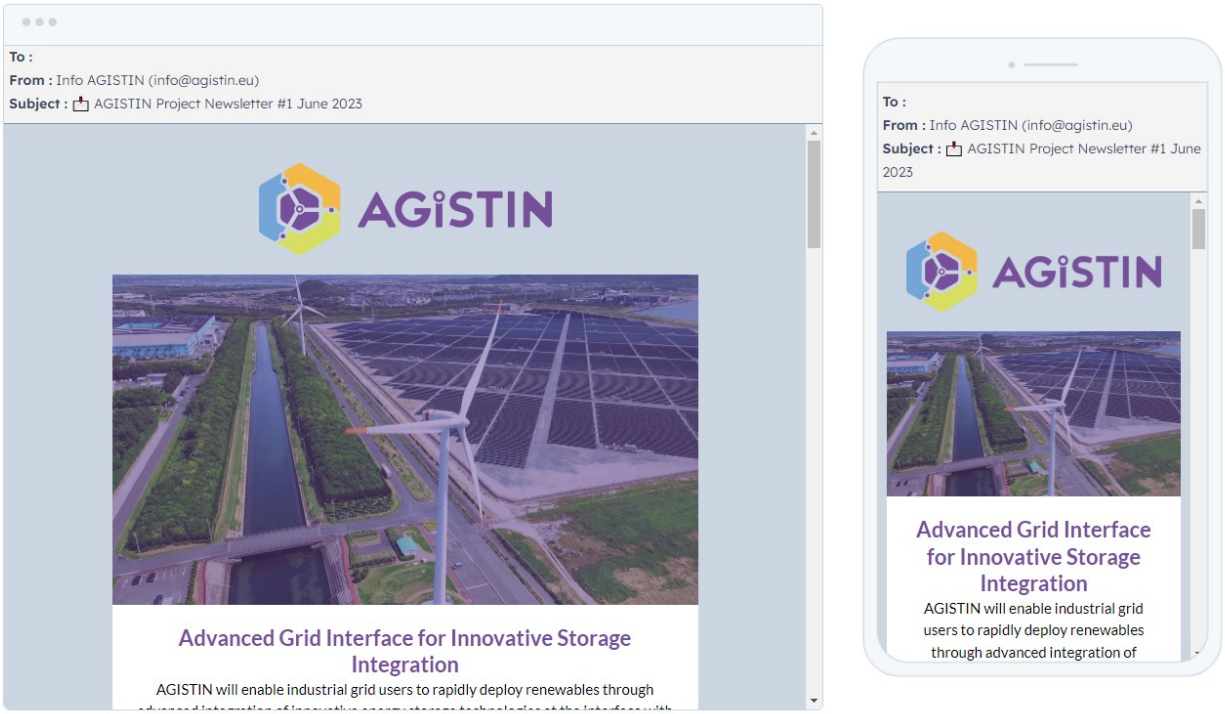


Figure 7 AGISTIN First newsletter

The newsletter is available on the project website (1). The project will send a newsletter to all subscribers every six months. Subscriptions to the project newsletter can be done in the footer of the project website.

The key performance indicators will aim at having more than 100 subscriptions and achieving 30% of newsletter openings.

2.5 Cooperation with other research projects and innovation activities

BRIDGE is an initiative directly supported by the European Commission that brings together all Horizon (2020 and Europe) projects in the energy sector. AGISTIN is active in 4 WGs: Data management, Business models, Regulation and Consumer and Citizen engagement.

Through this participation, AGISTIN will be able to coordinate with similar projects to understand their activities and find synergies. By working with other projects on different topics relevant for AGISTIN, we will be able to gather insights that might be relevant for the project but that otherwise we wouldn't have the resources to investigate directly.

2.6 Scientific Publication

It is expected that the first publications will be prepared after the second year of project implementation and most articles will be published towards the end of the project, or even shortly after it. The project expects to publish at least eight high impact publications on innovative storage integrated by the AGI in leading journals and conferences and in total 12 publications in highly respected journals (based on the average Impact Factor of journal of the respective field).

The targeted journals are:

- IEEE Open Access Journal of Power and Energy
- IEEE Access
- IEEE Transactions on Power Systems
- IEEE Transactions on Smart Grid
- IEEE Transactions on Sustainable Energy
- IEEE Transactions on Energy Conversion
- IEEE Transactions on Power Delivery
- IEE Transactions on Power Electronics
- International Journal of Electrical Power & Energy Systems
- Joule
- IET Renewable Power Generation
- MDPI Energies

2.7 Monitoring Strategy

The monitorization and evaluation of the KPIs will be performed on a continuous basis. A communication and dissemination record are keeping track of all communication actions performed by WP7 consortium partners.

2.7.1 Key performance indicators and early impact assessment

The below table shows KPI per action and the results achieved until M6. Maintaining a continuous monitorisation will allow us to reinforce tactics and implement mitigation measures when the action is not performing as expected.

Table 6 Key performance indicators and early impact assessment

Action	KPI	Target value	M6
Logo, brochure, poster, roll-up banner	Number of downloads and prints	>200 downloads >200 prints	21 downloads 1 print
Video	Video views	>200 video views	476 views
Website	• Webpage visits/year • Downloads/downloadable material • Website content updates	>5000/year >50 > 12	871 visits 53 downloads 5 content updates
Social Media	• Followers on social media • Impressions per 3 top posts/period	>300/overall >1000/post	224 followers 3 top posts: - 10/2/2023 - 1,287 impressions - 23/01/2023 – 994 impressions - 16/05/2023 – 692 impressions

Newsletter	• Published newsletters • Subscriptions • Percentage of clicks	>2/year >100/overall >30%/issue	1/ year 28 subscriptions
Press Release	Number of press releases Number of media clippings	2 PR 10 media clippings	1 PR 3 media clipping
Events	Events attended (trainings, webcasts, workshops, round table, conference, webinars)	>10/year	4
Publication of scientific and technical results	• Papers in scientific journals • Publication link visits on website • Participation to tech conferences	>3/year >50/publication >3/year	0

3 Exploitation Plan

The exploitation plan aims at defining a strategy to successfully harness the project's results.
The tools presented in the following sections will serve to identify the most appropriate exploitation path and the required actions to improve the technology readiness level (TRL) of the key exploitable results (KERs). Upcoming versions will be updated according to the project's outcomes. The final roadmap will contain a detailed explanation of the key exploitable results and a business model plan for those results identified as marketable, it will elaborate a competitors' analysis and identify the main business opportunities and exploitation risks. Each KER owner will be responsible for providing the relevant content required for the further development of the exploitation plan.
In order to define and plan exploitation actions, this first version of the plan provides a broad framework that will be used to collect and analyse relevant information from project's results.
The elaboration of the exploitation framework is defined through the following two main concepts:

1. Exploitation overview: It provides the fundamental concepts to identify, characterize, and prioritize the key outputs of the project to determine their most sustainable and suitable exploitation route. The overview offers a classification method of each result by type and of when and where the result could be deployed.
2. Commercial exploitation: It is used to identify whether the project results have the potential to be commercially exploited and presents a business model strategy. The commercial exploitation of a result will depend on the partner's willingness to marketize it.

The exploitation plan execution will be secured by EASE, as the Exploitation Manager. EASE will coordinate with an Innovation Board, composed of the project partners that own KERs, to identify and define the most suitable exploitation pathway for each of the KER.

3.1 Key Exploitable Results

Throughout its whole duration, the project will produce Key Exploitable Results (KERs) which will generate benefits for the consortium's partners. Although KERs' identification will be a continuous process along the years of the project, the table below shows those initially defined by the consortium and identified in the Grant Agreement.

Table 7 Key Exploitable Results

WP	KER and Task	KER name	Technology transferred	KER owner
2	KER1 (T2.4)	LCA framework for industrial grid users, storage and renewables	Industrial partners may use the proposed framework in environmental, sustainability and governance reporting associated with new projects.	CTF
2	KER2 (T2.5)	Functional requirements for AGIs	Results disseminated to organisations involved with the development of network codes, grid services and power electronic integration services.	RTE
3	KER3 (T3.2) (T3.3)	AGI templates and selection tool	Common set of AGI designs published plus in-depth description of how the aspects of selecting AGI topology and storage have to be processed in a tool.	UKL
3	KER4 (T3.5)	Open-source AGI control methods	Transparent control scheme and verifiable behaviour available to inspect, incorporate into projects.	ETH
4	KER5 (T4.5)	Aqueous ECR battery system demonstration result	Further development by GSR; create field references in pilot installations.	FHG-IEE
4	KER6 (T4.5)	Validated models for industrial grid users providing grid forming capability	Provides evidence to support future applications of storage integrated through AGIs to meet qualification standards to provide grid forming capabilities and related services.	FHG-IEE
5	KER7 (T5.4) (5.5)	Operation of coupled electrolyser, storage and renewables	Planning for renewable H2 projects using project results to screen for design options and storage technology selection.	SHL, CTF
5	KER8 (T5.5)	Determination of the impact of batteries on alkaline electrolyser degradation	Provide experimental results on the impact of the rate of change in electrolyser.	CTF
3,5	KER9 (T3.5) (T5.5)	Determination of minimum economic grid connection for SHL	Economic sizing for a grid connection for electrolysers given onsite renewables and	ETH, CTF

		renewable H2 demo	storage.	
6	KER10 (T6.1)	Multi-level control system for irrigation canals to act as storage	Optimisation and control system for multiple AGI sites across an irrigation network.	UPC
6	KER11 (T6.3)	Results of testing Al-ion battery	Testing of a commercial, yet less familiar and explored storage system. Generate further knowledge on the operation of the storage system through different profiles or consumption cases.	CDR
3,4,6	KER12 (T3.4) (T4.5) (T6.3)	Validated models of innovative storage behaviour	Third party validated testing of dynamic response of the innovative storage tech.	FHG-IWES, FHG-IEE, CDR
4,6	KER13 (T4.6) (T6.4) (T6.5)	Analysis of irrigation systems as innovative storage systems	Dissemination of the optimal sizing tool to transform irrigation canals in innovative storage systems. Inform development of pumping equipment through dissemination. Dissemination to irrigation communities of the potential of the innovative storage system developed	UPC, ICAT, RINA

3.2 Exploitation framework

The purpose of this section is to provide the partners with useful definitions of concepts and tools that are relevant to the project's exploitation activities.

3.2.1 Exploitation overview

This subsection provides an overview of the exploitation-related concepts that are useful to gain a further understanding of the activities that will be carried out for this purpose. The exploitation overview intends to identify the partner's expectations and claims of the results and to characterize them to define the most suitable exploitation pathway.

a) Exploitation aims

The expected ways in which partners will contribute to the exploitation of the results, including intellectual property rights (IPR) intentions, can be summarized through the BFMULO matrix. Such tool can be used to facilitate the assessment of the exploitation strategy of the KERs, by assigning to each KER, for each partner, the following categories/actions:

- B: IPRs on background information. Existing knowledge, owned by project partners, that would be necessary for the development of the results.
- F: IPRs on foreground information. All types of exploitable results generated during the project. To mark the result with an F, partners should be involved in a task(s) related to the result itself.
- M: Manufacturing the products. It can include selling them or directly using them.

- U: Using the result through the implementation of own knowledge to generate or develop new products/processes or other type of results. It includes the direct or indirect use of foreground knowledge on further research, creation, or marketing actions beyond the ones covered by the project.
- L: Licensing the result.
- O: Other type of exploitation means (e.g., consultancy, provide services, etc)

Table 8 BFMULO Matrix (example)

KER#	Partner 1	Partner 2	Partner 3
KER1			
KER2			

b) Characterization of results

Identification of the problem/need

The nature of the problem that the result is trying to address, and where it comes from, will be described through the following categories:

- Technical: Need for higher performance, higher durability, different standards and features, etc.
- Financial: Need for lower CAPEX or OPEX, higher revenues, safer value chains, faster ROI, etc.
- Environmental: Need to reduce GHG emission, reduce pollutants, reduce impact on nature, etc.
- Social: Need to reduce impact on society, safer value chains, better work conditions, etc.

Actors involved

The considered segments of society manifesting the need are the following:

- Private entities: Private companies, high education institutions, non-governmental institutions.
- Public entities: Governmental bodies, research centres, high education institutions.
- Industry: Group of companies that develop similar activities and make up a sector of the economy, i.e., energy, construction, chemical, transport and mobility, etc.

Type of project result

Project's results could be either new or building upon former technologies/methods/products, etc. In either case, the outputs of the project may be classified using the following concepts:

- Methodology/Method: A method is a systematic sequence of steps aimed at solving a problem or executing an action. A methodology is the use of a method or methods in a particular field of study.
- Process: A group of methods used in the development stage of a product/service.
- Product: Tangible good derived from the combination of processes and methods intended to cover a need and with the potential to be commercialized.
- Service: Activities that benefit a group of people in a market, without providing tangible assets.

- Algorithms: A sequence of instructions or rules put together to produce a service or enable a computation action.
- Software: Operating system used by a digital equipment or program.
- Website: Virtual platform, containing a set of interconnected web pages, created to share information online.
- Scientific articles: Written publications containing research findings or theories supported by data and explained through a methodology.
- Product design: The process of creating a product that addresses a specific need in a given market. It involves research and development actions.
- Name of a product/service: A new name that identifies a new or existing product or service.
- Expertise: Skill or knowledge on a specific subject.
- Data base: Organized collection of data/information.

Exploitation level

The exploitation level of the project's results will be explained through the following definitions:

- Not exploitable: It is not possible to exploit the results by the end of the project.
- Weakly exploitable: It is unlikely that the results will be exploitable by the end of the project.
- Moderately exploitable: There is an exploitation potential that will be furthered explored.
- Highly exploitable: There is a concrete possibility that these results can be exploited.

Development phase

The development stage of the results of the project will be classified using the following categories:

- Under development: The result has a low level of development or is being developed by the project and requires further resources to become exploitable.
- Developed not exploited: The result has been developed but requires further research or resources to become exploitable.
- Being exploited: The result is fully developed and being exploited.

Time to exploitability

Based on their features, different results can be exploited with different timings:

- More than 5 years;
- Between 3 and 5 years;
- Between 1 and 2 years;
- Less than 1 year;
- Immediately at the end of the project.

Exploitation route

The exploitation route of the results will be defined through the following areas:

- Scientific/Academic: Research; Thesis; Journal article; Knowledge transfer.
- Social: Social activity; Policy/regulation.
- Economic: Spin-off; Start-up, marketable product or service; Patent.

- Technological: Development and creation of new technology, design or manufacturing process.

Geographical scale

The following geographical levels may be useful to identify the scalability of the project's results:

- Local: The exploitation of the result is only possible and significant in the area where it was developed or deployed. There are existing barriers for further exploitation beyond the local site.
- National: The exploitation is only significant at a national level. There are existing barriers for further exploitation.
- Global: The exploitation of the result is possible and significant at an international level.

Link to other KERs

KER owners will identify whether and how their results depend on other KERs to progress.

Technology Readiness Level advancement

The project characterization should also indicate the expected TRL advancement that the result should reach by the end of the project.

- TRL start: The TRL of the KER at the beginning of the project.
- TRL end: The TRL of the KER by the endo of the project.

3.2.2 Commercial exploitation

Project's results that are classified as commercially exploitable will be further analysed through tools that allow to better understand their commercial and exploitation potential. These tools are described in the following subsections.

a) *High-level market assessment*

Commercially exploitable results will be debriefed using elements from the value proposition and business model canvas structure. The following subsection provides the definitions and concepts that will be used to understand the feasibility, estimate the potential of the different KERs to be commercialized and define IPR protection.

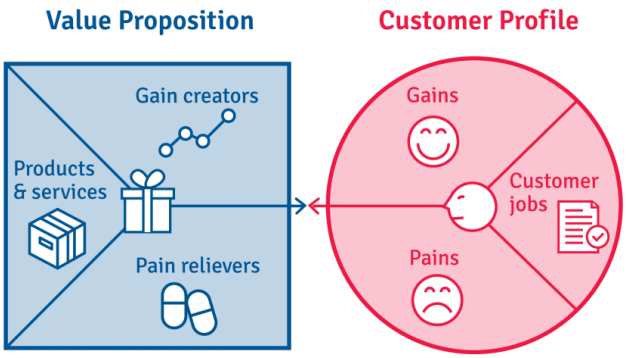


Figure 8 Value proposition canvas

Customer profile

- Customer activities: The usual activities or jobs that the customer typically performs.
- Needs: The biggest challenges that the customers face while performing the actions described in the customer activities, i.e., lack of access to information, lack of adequate tools, energy independence, etc.
- Gains: The results that the potential customers would like to obtain or the benefits they would be expecting by doing the activities previously described, i.e., energy savings, reach environmental targets, increased performance, etc.

Value proposition

- Customer activities: How to integrate into customer's activities the product/service/type of result that is being offered and its relevance.
- Pain relievers: How the KER is expected or can help to solve the customer's needs or problems identified in the previous segment.
- Gain creators: How the KER is expected or can help to create value for the potential customers; which benefits from above and beyond the customer is expected to encounter.

Business model

- Customer segments: The customers for whom the value is being created and their characteristics. The customer segment is related to the need and actors involved.
- End user: The end user is the person or entity that uses the product, whether different from the customer or not.
- Market volume: The market scenarios that are suitable for the exploitation of the result and the potential market volume.
- Unique selling point: The unique value that is being delivered to customers and that is solving a specific need or problem, as well as the competitive advantages.
- Solution: The research/market gaps or challenges that the KER is looking to overcome and how.
- Channels: How the final KER will be made available to customers, through which channels, and how it will be showcased.
- Key activities: Activities required for the exploitation of the KER, including development, production/manufacturing, distribution, service, etc.
- Supply chain overview: The overall strategy for the supply chain, key components and resources. It includes key partners for the exploitation of the results and their key activities, as well as members from the consortium and external experts.
- Key non-financial assets: Key resources needed to exploit the value proposition (infrastructure, personnel, IPR, skills, equipment, etc).
- Key financial resources: Key financial resources needed to exploit the value proposition (external investment, funding requirements).
- Revenue streams and type of business model: The foreseen type of revenue sources for the exploitable result, and the structure chosen by the partner to exploit the results and generate revenue, potentially profit, from the revenue stream.

- Cost structure: Most important costs related to the exploitable result, both in terms of fixed and variable costs.
- Market price: How much the end customer will be willing to pay for the KER.
- Exploitation risks and mitigation measures: What are the foreseen risks that can jeopardize the development and exploitation of the KER and the possible mitigation measures to reduce or avoid these risks. Partners must classify the potential severity level of each risk (High, Moderate, Low)
- Steps to market: What are the necessary activities that must be implemented, at the end of the project, to make the KER ready for the market.

Intellectual property

The project's results involving intellectual property development can be protected through the following legal instruments. Further details on IP, including background and foreground information, will be described in the IPR report contained in the final version of the exploitation roadmap (D7.3).

- Patent: Grants the owner the exclusive exploitation legal right of an invention, for a limited period of time.
- Copyright: Protects original works from being copied, distributed, adapted, and displayed by an entity different from the owner.
- Trademark: Used to identify and distinguish brand names and logos used for products or services from others.
- Domain name: A unique access name to an online website or portal.
- Utility model: Similar to a patent, offers a property right for inventions' protection.
- Industrial design: Protects the unique visual features of a product, namely shape, colours, configuration, etc.
- Confidential information: Refers to any piece of information or data that is declared as classified and is not meant for public disclosure, such as trade secrets.

b) SWOT Analysis

The SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis can be a useful tool to identify the competitive position of the project's results. It analyses internal and external factors, taking into account both actual and potential situations.

More in details, the SWOT analysis will consider:

- Features, internal to the project, which can bring an advantage vs other subjects/product (strengths);
- Features, internal to the project, which can be considered as liabilities and obstacles to the exploitation of the project's results (weaknesses);
- External conditions/situations that may be favourable if adequately considered (opportunities);
- External conditions/situations that may harm the realisation and exploitations of the project's results, if not adequately dealt with (threats).

Table 9 SWOT Analysis

Strengths	Weaknesses
• Skills • Unique selling point • Costumer's opinion • Positive attributes • Available resources	• Problems/complaints • Could be improved • Negative attributes • Obstacles/challenges • Customer's opinion
Opportunities	**Threats**
• Competition analysis • Allocation/leverage of resources • Market size • Commercialisation channels	• Emerging competitors • Regulatory environment • Market volatility • Technical constraints

c) *Competitor analysis*

The competitor analysis will be used to identify possible alternative solutions to the project's results offered by other subjects.

The following subsection provides the instructions to help each partner provide the right information.

- Alternative solution: A similar product/service already existing on the market or a product/service addressing the same needs.
- Competitors (names): Existing or possibly emerging competitors that offer or have the potential to offer a similar value proposition or solution, or are trying to solve the same need.
- Type of competitors: Whether the competitor is an industrial or corporate enterprise, a SME, an academic or research institution.
- Drawbacks: Possible drawbacks (e.g., technology, user experience, price, channels, commercial maturity, not solving the problem at its full extension, maintenance, environmental impact, lifespan) for each of the alternative solutions listed.
- Key features: Key features that represent a leverage or advancement (user friendly, operability, performance, quality, safety, less manufacturing time, improve in value chain) with respect to the alternative solutions listed.

3.3 Exploitation overview

This section gives an overview of the information that will be provided by partners throughout the project, in relation to the project results' exploitation.

3.3.1 Exploitation aims

The BFMULO matrix allows all the partners to determine how they will be participating to the exploitation of the KERs they are involved with. Through the matrix, partners can indicate their intentions and claims for each KER, by using the BFMULO categories (between none and all of them). See BFMULO matrix table in section 7.6 BFMULO matrix of Appendix.

3.3.2 Characterization of results

The table in Appendix section 7.7 Exploitation of results – Characterization table shows how characterization information will be organized and displayed in future exploitation plans, once the project will start producing results.

3.3.3 Summary

The table in Appendix section 7.8 Characterization summary – template provides a summary of the characterization process used in the exploitation overview process to identify and classify the main results of the project.

3.4 Commercial Exploitation

Once the project will start producing results, the responsible partners will share the available data about the possibility of commercial exploitation.

3.4.1 High-level market assessment

The tables presented in Appendix section 7.9 High-level market assessment template will summarize and report the abovementioned information, shared also through the next exploitation plans:

Customer profile: The table will describe, for each project result, the profile of relevant customers, with an indication of their expectations and challenges;

Value proposition: For each project result, the table will display the product/services provided, the value created for customers and how customers' needs and problems are solved;

Business model: For each result, future exploitation plans will provide a table including all the main data describing the result's positioning on the market.

Intellectual Property: The table indicates, for each KER, which instruments the partner(s) are adopting/willing to adopt to protect intellectual property rights on background and foreground information.

3.4.2 SWOT Analysis

Future exploitation plans will also present a SWOT analysis for each of the project results, to identify internal/external, actual/potential factors characterizing each of them.

The information, provided by the partners responsible for each result, will be organized in the form of the following table.

Table 10 SWOT Analysis – template

KER# Name of KER	
Strengths	Weaknesses
• [ ] • [ ] • [ ] • [ ] • [ ]	• [ ] • [ ] • [ ] • [ ] • [ ]
Opportunities	Threats
• [ ] • [ ] • [ ] • [ ] • [ ]	• [ ] • [ ] • [ ] • [ ] • [ ]

3.4.3 Competitor Analysis

Throughout the duration of the project, existing and potential competitors will be analysed and evaluated according to different criteria including drawbacks and advantages such as:

- Technology,
- Quality,
- Price,
- Channels.

The information retrieved and analysed by project partners will be then summarized as represented in the table below.

Table 11 Competitor analysis – template

KER #	KER Name						
Alternative solution	Competitor	Type of competitor	Link	Drawback 1	Drawback 2	Key feature 1	Key feature 2
Solution 1	Competitor 1						
Solution 2	Competitor 1						
Solution 3	Competitor 2						
Solution 4	Competitor 2						
Solution 5	Competitor 3						

4 WP7 Plan

4.1 WP7 Deliverables

Table 12 List of WP7 deliverables

List of WP7 Deliverables		
D7.1	First Communication, Dissemination and Exploitation Plan including project identity and website report (Report, EPRI)	M06
D7.2	Mid-term Communication, Dissemination and Exploitation Plan (Report, EPRI)	M24
D7.3	Final Exploitation Roadmap including Business Plan and IPR report (Report, EASE)	M42
D7.4	Final Communication and Dissemination Report (Report, EPRI)	M48
D7.5	Collection of newsletters and dissemination activities (Report, EPRI)	M48
D7.6	AGISTIN EU Positioning paper (Report, EASE)	M48

4.2 Allocation of Resources

Table 13 Summary of staff effort in WP7

Name	Acronym	WP7
EPRI EUROPE DAC	EPRI	16
UNIVERSITAET KASSEL	UKL	2
RTE RESEAU DE TRANSPORT D'ELECTRICITE	RTE	2.5
FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV	FHG	2
FUNDACION CARTIF	CTF	2
CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT	CDR	2
SHELL GLOBAL SOLUTIONS INTERNATIONAL BV	SHL	2.8
UNIVERSITAT POLITECNICA DE CATALUNYA	UPC	2
GEYSER BATTERIES OY	GSR	2
INFRAESTRUCTURES DE LA GENERALITAT DE CATALUNYA SA	ICAT	2
EUROPEAN ASSOCIATION FOR STORAGE OF ENERGY	EASE	11
RINA CONSULTING SPA	RINA	12
EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZUERICH	ETH	2
Total		60.3

5 Conclusions

The Work Package 7 will communicate and disseminate the results and findings of AGISTIN to a wide range of stakeholders through several marketing tactics and tools, encompassing the project website, social media channels, public relations activities, newsletter, presence at events and conferences and workshops, organisation of webinars.

By creating the necessary channels and opportunities to communicate regularly and engage with stakeholders, the project expects to deliver the necessary conditions for the stakeholders (industry representatives, technology suppliers and regional, national and EU authorities) to take the most out of the project findings, implementing the new tools developed and recommendations in their business models.

Furthermore, AGISTIN will seek to engage with similar projects and initiatives, to create synergies and collaborations between EU-funded programmes and Horizon Europe-supported actions e.g. BRIDGE among others.

WP7 will make possible to underline the commercial potential of the key exploitable results identified during the elaboration of the project. The exploitation plan will act as tool to follow the evolution of the project's outcomes, identify the exploitation aims, and define individual approaches that will maximize the impact of the results.

Fostering collaboration between partners and establishing strategic synergies is one of the main objectives of the plan. This will make possible to develop optimal exploitation pathways that will contribute to the technology and knowledge transfer.

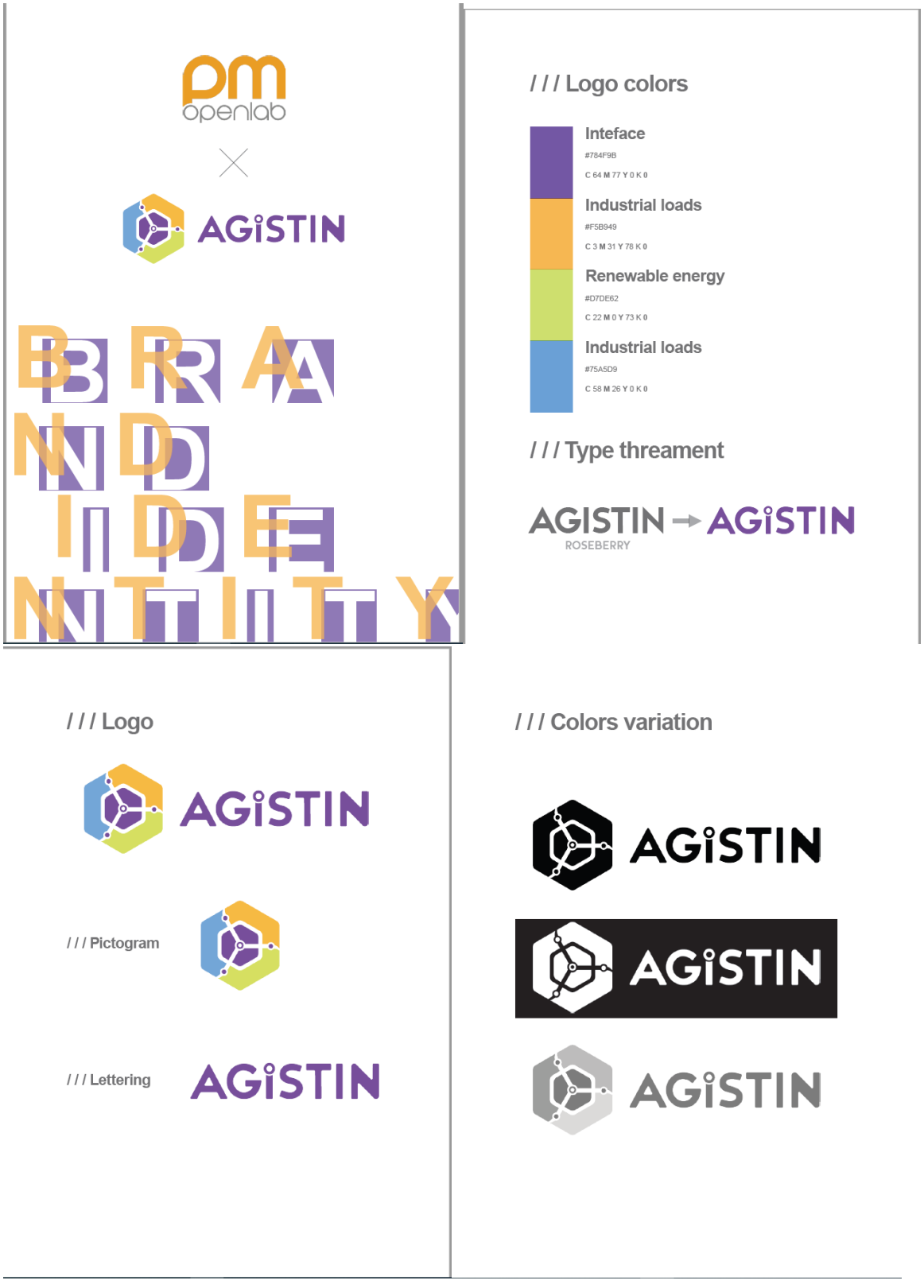
Finally, the exploitation roadmap will be created by the end of the project, containing a well-defined commercial strategy and the succeeding activities to guarantee the exploitability of the outcomes.

6 References

1. AGISTIN Resources. *AGISTIN*. [Online] https://www.agistin.eu/resources/.
2. AGISTIN Home page. *AGISTIN*. [Online] https://www.agistin.eu/.
3. Twitter. *Twitter*. [Online] https://twitter.com/AGISTINProject.
4. LinkedIn. *LinkedIn*. [Online] https://www.linkedin.com/company/agistin/.

7 Appendix

7.1 Project Brand Identity



/ / / Font selection

AGiSTIN

/ / / Title Text Size (responsive setting) - NUNITO FONT FAMILY

Display (Black 30pt 24pt 20pt)

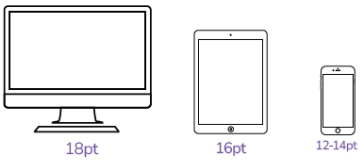
Header 1 (Semibold 30pt 24pt 18pt)

Header 2 (Semibold 20pt 18pt 16pt)

Header 3 (Semibold 18pt 16pt 14pt)

When you set the headers and the body copy, the white space should be 30px(display;h1), 20px (h2) or 15px(h3).

/ / / Body Text Size (responsive setting) - NUNITO REGULAR



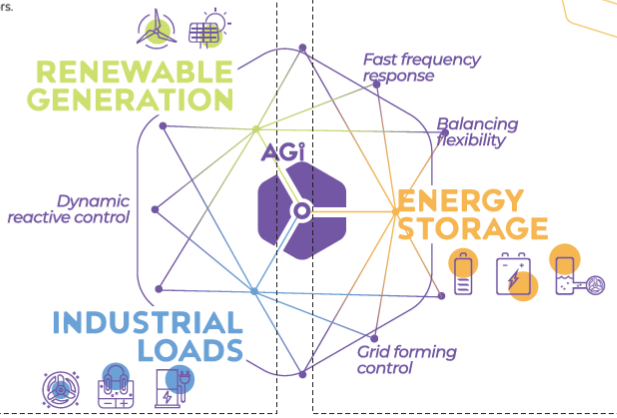
7.2 Project Brochure

Context

The rapid and widescale deployment of renewables and electrification of society presents an era-defining challenge for grid operators to develop and operate the grid reliably.

In European grids such as Ireland, Germany and the Netherlands, challenges for grid development, grid access, network congestion, operations with low inertia grids, human capital and supply chain threaten to impede the realisation of decarbonisation goals, despite the best effort of grid operators.

Energy storage is the key resource that is needed to orchestrate and integrate industrial processes and large-scale renewables. Advanced storage integration methods are needed to resolve issues for grid users and operators.



About

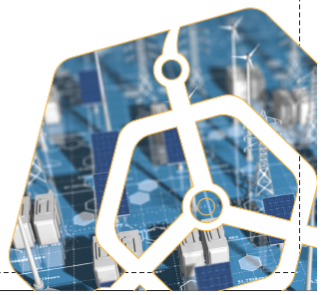
AGISTIN is a four year project (2023-2027) that proposes to develop grid integration architectures for energy storage with on-site renewables and emerging DC end uses.

This follows the DC coupling approach considered in current PV + storage hybrids, extending it to include end use, grid users and system integrators.

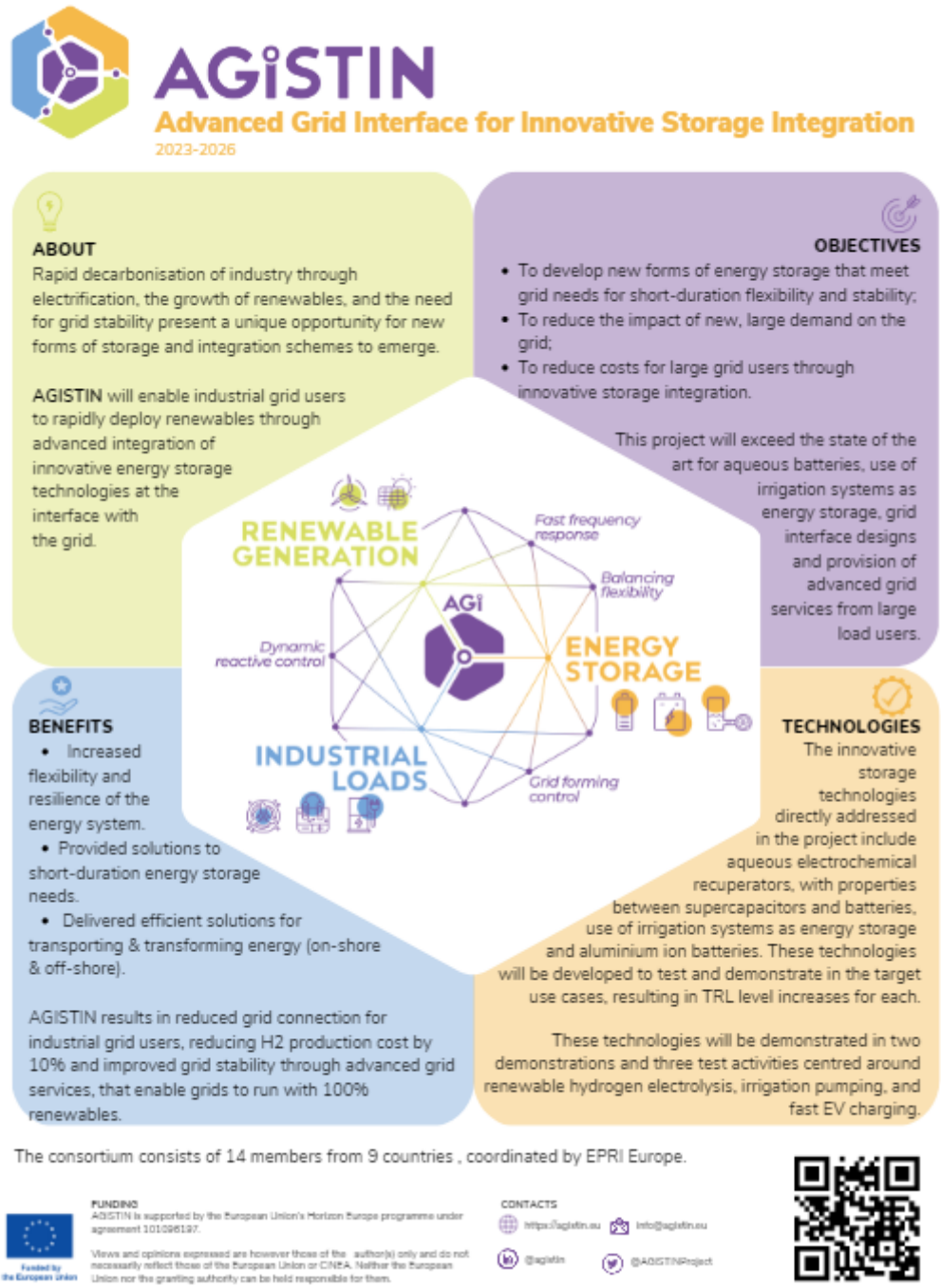
The project will develop control algorithms to coordinate between all three asset classes that will be open sourced for exploitation by system integrators and power electronics OEMs.

Objectives

- Demonstrate the performance and value of innovative storage technologies providing flexibility and grid services.
- Design advanced grid interfaces to integrate energy storage with industrial grid users and on-site generation.
- Demonstrate the technical feasibility of the innovative coupling of multiple forms of energy storage, production and demands into innovative energy systems and novel grid topologies.
- Enable innovative storage, coupled through the proposed advanced grid integration technologies, to provide the new grid services needed in the energy transition.
- Reduce material use and embedded emissions by innovative approaches of energy storage integration with industrial grid users.
- Propose innovative business models to easily enable energy storage integration with significant grid users.



7.3 Project Poster



7.4 Project Roll-up banner

7.5 First Press Release

New Collaborative Project to Advance Innovative Energy Storage Grid Integration

Dublin, Ireland (Feb. 9, 2023)– As companies decarbonise to meet clean energy targets, and society's dependence on electricity grows, energy storage will become an increasingly important technology to ensure continued grid stability and reliability. Today, fourteen leading European energy groups, research organizations, and universities launched a new, four-year project to help energy companies rapidly deploy renewables through the advanced integration of innovative energy storage technologies.

Participants in the "Advanced Grid Interface for Innovative Storage Integration" (AGISTIN) project include: EPRI Europe DAC, University of Kassel, RTE, Fraunhofer Institute for Wind Energy Systems IWES, Fraunhofer Institute for Energy Economics and Energy System Technology IEE, CARTIF, CIEMAT, Shell Global Solution International B.V., CITCEA-UPC, Geyser Batteries, Infraestructures de la Generalitat de Catalunya, European Association for Storage of Energy (EASE), RINA Consulting, and ETH Zurich. The project runs through the end of 2026.

Specifically, the AGISTIN project will focus on:

- Reducing pressure on grid connection capacity and grid reinforcement requirements to account for and support new renewables and industrial demand
- Enabling major clusters of industrial grid users to economically integrate significantly more on-site renewables than traditional integration approaches
- Providing advanced grid services such as grid forming control, fast frequency response and balancing flexibility to support grid operators when managing low inertia grids and reducing curtailment of renewables

These efforts could help the European Union meet its commitment to a 55 percent economy-wide reduction in carbon emissions by 2030. What's more, the project could help avoid delaying the electrification and decarbonisation of society.

"As the European electricity grid continues to decarbonise, it must be better prepared to integrate more renewables, storage, and low carbon industrial processes," said Eamonn Lannoye, managing director of EPRI Europe. "The outcomes of this project could inform energy providers throughout Europe and beyond, assisting even more stakeholders as they work towards realising the 'Fit for 55' goals."

"We are excited to join the AGISTIN consortium and kick-start the design, development, and deployment of advanced grid interface for battery storage, which can seamlessly integrate renewables with industrial uses, contributing to the renewable energy system of the future," said Yin Sun, senior electrical engineer, Shell Projects & Technology.

"For a startup like ours, the AGISTIN project is a great opportunity to bring the technology one step closer to the end-user," said Andrey Shigaev, CEO at Geyser Batteries. "Geyser Batteries offers numerous advantages for industrial users on both sides of the meter and having such a strong partner network of AGISTIN will help to use the potential of this technology through

advanced grid integration. Eventually, this project enables us all in achieving the overarching goal of 100 percent renewables-based power grids and moving towards a carbon-neutral society."
AGISTIN is supported by the European Union's Horizon Europe program agreement no. 101096197. Follow the project for updates on LinkedIn and Twitter.

7.6 BFMULO matrix

Table 14 BFMULO matrix – template

KER	EPRI	UniK	CTF	RTE	UKL	GSR	ETH	FHG-IEE	FHG-IWES	IRDE	SHL	UPC	CDR	ICAT	RINA	EASE
LCA framework for industrial grid users, storage and renewables																
Functional requirements for AGIs																
AGI templates and selection tool																
Open-source AGI control methods																
Aqueous ECR battery system demonstration result																
Validated models for industrial grid users providing grid forming capability																
Operation of coupled electrolyser, storage and renewables at																
Determination of the impact of batteries on alkaline electrolyser degradation																
Determination of minimum economic grid connection for SHL renewable H2 demo																
Multi-level control system for irrigation canals to act as storage																
Results of testing Al-ion battery																
Validated models of innovative storage behaviour																
Analysis of irrigation systems as innovative storage systems																

7.7 Exploitation of results – Characterization table

Table 15 Characterization table – template

Project Result #	Name of project result	WP#	TRL start: TRL end:
KER Owner:		Participants:	
Brief description of the KER:			
Identification of the problem/need	Technical	☐	Comments:
	Financial	☐	
	Environmental	☐	
	Social	☐	
	Other	☐	
Actors involved	Private entities	☐	Comments:
	Public entities	☐	
	Industry	☐	
	Other	☐	
Type of project result	Methodology/method	☐	Comments:
	Process	☐	
	Product	☐	
	Service	☐	
	Algorithms	☐	
	Software	☐	
	Website	☐	
	Scientific articles	☐	
	Product design	☐	

	Name of a product/service	☐	
	Expertise	☐	
	Data base	☐	
	Other: precise	☐	
Exploitation level	Not exploitable	☐	Comments:
	Weakly exploitable	☐	
	Moderately exploitable	☐	
	Highly exploitable	☐	
Development phase	Under development	☐	Comments:
	Developed but not exploited	☐	
	Being exploited	☐	
Time to exploitability	More than 5 years	☐	Comments:
	Between 3 and 5 years	☐	
	Between 1 and 2 years.	☐	
	Less than 1 year	☐	
	Immediately at the end of the project	☐	
Exploitation route	Scientific/Academic	☐	Comments:
	Social	☐	
	Economic	☐	
	Technological	☐	
Geographical scale	Local	☐	Comments:
	National	☐	
	Global	☐	
Link to other KERs	KER4	Description:	
	KER4	Description:	
	KER4	Description:	

7.8 Characterization summary – template

Table 16 Characterization summary – template

PRs	TRL	Problem/need	Actors involved	Type of project result	Exploitation level	Development phase	Time to exploitability	Exploitation route	Geographical scale	Link to other KERs
PR1										
PR2										
PR3										
PR4										
PR5										
PR6										
PR7										
PR8										
PR9										
PR10										
PR11										
PR12										
PR13										

7.9 High-level market assessment template

Table 17 High-level market assessment– template

KER#	KER NAME			
Customer profile				
Customer activities	1. 2. 3. 4. 5.			
Needs	1. 2. 3. 4. 5.			
Gains	1. 2. 3. 4. 5.			
Value proposition				
Customer activities	1.	How relevant is it?		
		Necessary	☐	
		Core, but requires other processes/components	☐	
		Complements a core solution	☐	
		Good to have	☐	
		Other (specify)	☐	
	2.	Necessary	☐	
		Core, but requires other processes/components	☐	
		Complements a core solution	☐	
		Good to have	☐	
		Other (specify)	☐	
	3.	Necessary	☐	
		Core, but requires other processes/components	☐	
		Complements a core solution	☐	
		Good to have	☐	
		Other (specify)	☐	
	4.	Necessary	☐	
		Core, but requires other processes/components	☐	
		Complements a core solution	☐	
		Good to have	☐	
		Other (specify)	☐	
	5.	Necessary	☐	
		Core, but requires other processes/components	☐	
		Complements a core solution	☐	
		Good to have	☐	
		Other (specify)	☐	
Pain relievers	1.			
	2.			
	3.			
	4.			
	5.			
Gain creators	1.			
	2.			

	3.		
	4.		
	5.		
Business model			
Customer segments	SMEs	☐	Characteristics:
	Private large enterprises	☐	Characteristics:
	Public entities	☐	Characteristics:
	Industry	☐	Characteristics:
	Research and academic institutions	☐	Characteristics:
	Non-profit organisations	☐	Characteristics:
	Other (specify)	☐	Characteristics:
End user	SMEs	☐	Characteristics
	Private large enterprises	☐	Characteristics:
	Public entities	☐	Characteristics:
	Industry	☐	Characteristics:
	Research and academic institutions	☐	Characteristics:
	Non-profit organisations	☐	Characteristics:
	Other (specify)	☐	Characteristics:
Market volume	Market scenario		# of potential buyers
Unique selling point			
Solution	Research/market gaps or challenges		How:
	1.		
	2.		
	3.		
	4.		
Channels	Website	☐	
	Retailers	☐	
	Distributor	☐	
	Other (specify)	☐	
Key activities	Design		Description
	1.		
	2.		
	3.		
	Manufacturing		
	1.		
	2.		
	3.		
	Distribution		
	1.		
	2.		
	3.		
	Others		
	1.		
	2.		
	3.		
Supply chain overview	Partners		Resources
Key non-financial	Infrastructure	☐	
	Personnel	☐	

assets	Equipment	☐				
	Skills	☐				
	Other (specify)	☐				
Key financial resources	Private funding	☐				
	Other HE funds	☐				
	Public grant	☐				
	Bank loan	☐				
	Venture capital	☐				
	Other (specify)	☐				
Revenue streams / type of business model*	1.	Subscription model				
	2.	Subscription model				
	3.	Subscription model				
	4.	Subscription model				
Cost structure	CAPEX				OPEX	
Foreseen market price						
Exploitation risks	Risks	H	M	L	Description	
	Technological	☐	☐	☐		
	Market	☐	☐	☐		
	Resources related	☐	☐	☐		
	Partnerships	☐	☐	☐		
	IPR/Legal	☐	☐	☐		
	Management and financial	☐	☐	☐		
	Environmental	☐	☐	☐		
	Regulation and safety	☐	☐	☐		
Mitigation measures	1. 2. 3. 4.					
Steps to market	Within 6 months after the end of project				Description	
	1.					
	2.					
	3.					
	Within 12 months after the end of project					
	1.					
	2.					
	3.					
	Within 24 months after the end of project					
	1.					
	2.					
	3.					
Intellectual property						
IPR Background	Type		Owner		Description	
	Patent	☐				
	Copyright	☐				
	Trademark	☐				
	Domain name	☐				
	Utility model	☐				
	Industrial design	☐				
	Confidential information	☐				
IPR Foreground	Type		Owner		Description	
	Patent	☐				
	Copyright	☐				
	Trademark	☐				
	Domain name	☐				

	Utility model	☐		
	Industrial design	☐		
	Confidential information	☐		
Additional comments				

** For the types of business models considered, see Table 18 for descriptions*

Table 18 Types of Business Models

Business model	Definition
Subscription model	In this type of model, the customer pays a recurring fee, on a time period basis, to have access to a product or service.
Freemium model	This type of model is more typical in software-as-a-service (SaaS) business. The owner provides free access to their product or service, while limiting the use of key features. Users can opt to pay a subscription fee in order to have full access to these features.
Razor blades model	This model is characterized because the two or more parts that make up the product. Some elements have a higher profit margin than the rest. However, to obtain the main functionality or have access to more features, the client must purchase more than one element.
Franchise model	This model is characterized because the two or more parts that make up the product. Some elements have a higher profit margin than the rest. However, to obtain the main functionality or have access to more features, the client must purchase more than one element.
Leasing model	In this type of model, a company purchases a good or product from another company. This product is then available to clients under a subscription fee, for a limited period of time.
Utility business model	This is the typical business model used by the utility companies to offer their products. Customers are charged according to their usage of the service or product.
Data licensing model	In this model, key data is sold to other companies, which they use to generate advertising and behavioural insights.
Product to service model	This type of model offers a service or solution to a client, through a product, without having the client purchase the product.
Manufacturer	This model refers to a company processing raw material to convert it into a final product.
Peer to peer model	In this model, a company allows transactions between the supply and demand side.
Hidden revenue model	This model is characterized because the users do not pay to use the product or service. However, the company generates revenues from other sources.