ATTEST

WP8

Dissemination, Communication and Exploitation

Dissemination Plan

D8.1

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Abbreviations and Acronyms

AS	Ancillary Services
CTR	Click-Through Rate
D	Deliverable
DA	Day-ahead
DSO	Distribution System Operator
EC	European Commission
EU	European Union
KPI	Key Performance Indicator
MS	Milestone
OR	Open Rate
PR	Public Relations
RT	Real-Time
TSO	Transmission System Operator
WP	Work Package

1. Executive Summary

The Work Package 8 (WP8) aims at communicating, disseminating, and exploiting all solutions and results generated by the ATTEST project. It follows the global project schedule and is divided into three tasks: T8.1 Project dissemination, T8.2 Project communication, and T8.3 Project exploitation.

The dissemination plan is part of task T8.1. It will focus on the identification of stakeholders, on the description of dissemination channels, and on the establishment of Key Performance Indicators (KPIs) for measuring strategical efficiency.

TABLE 1 - SUMMARY OF STAKEHOLDERS, DISSEMINATION CHANNELS AND KPIS

STAKEHOLDERS	DISSEMINATION CHANNELS	KPIS
Energy regulators	Scientific journals	Sent PR's
Local authorities	Scientific events	Published news
Distribution systems operators	Stakeholder & Industry events	Website visitors
Transmission systems operators	Hosting platforms	Resources downloads
Academic institutions	Newsletters	Reached users
Smart Grids community	Website	Social media reactions
ICT community	Social media	Video visualizations
EC and EU-funded projects	Traditional media	Open rate
End users	Printed materials	Click-through rate
Media		Participation in events
		Published works
		Printed materials
		Uploaded tools

Although INESC TEC is the leader of this WP, all the partners of the consortium will be engaged in the execution of dissemination activities, either by accomplishing goals of their own or by contributing with feedback, recommendations, and reviews.

The three tasks of WP8 are interconnected, meaning they have a mutual impact. The communication plan will thus provide support to the dissemination plan, which will, in turn, pave the way to the exploitation plan.

The execution of the dissemination plan leads to the public provision of project results. All target audiences will become aware and capable of accessing both scientific outcomes and the developed prototypes. The free usage of project results intends to support further research and industrial development, materializing the main purpose of the whole project – which is to democratize knowledge, encouraging social, academic, and industrial progress.

The present document is the first deliverable (D8.1) of task T8.1. All contents will be further revised, updated, and reported on D8.4 (Follow up on dissemination, communication, and exploitation results) and D8.5 (Final report on dissemination, communication, and exploitation results).

2. Introduction

Research projects do not end at the bottom of their schedule. As scientific contributions to the development of industries and societies, their main goal is to support a continuous flow of ideas, experiments, and research activities. This dynamic contribution, however, is dependent on how far project results go after they are generated. An integrated marketing approach emerges, thus, as an answer to the need of connecting target audiences with scientific products, engaging them in the further development and deployment of solutions.

The dissemination plan is a strategic outline of the activities that shall bring project results to the attention of target groups. It includes the identification of key stakeholders, the description of dissemination channels, and the establishment of KPIs.

Target groups are identified according to their potential interest in using project results. Dissemination channels will be chosen by their potential reach towards stakeholders, paired with their ability to host scientific knowledge and prototypes. KPIs intend to measure the success of the dissemination campaign.

The development of the dissemination plan unfolds in the next four chapters: the definition of dissemination objectives; the description of the dissemination plan; the Advisory Board engagement plan; and final observations on threats and particularities of its strategic execution.

3. Dissemination Objectives

The dissemination of project results makes way to their effective use by the community and materializes the concept of knowledge sharing and capitalization. It unfolds in the spread of project results amongst all stakeholders, through a variety of channels.

Although scientific project results are important *per se*, they can also become the baseline for further research activities both within and outside the project's partner institutions. They will, therefore, be made available under open access policies to all stakeholders who perform R&D either in industrial or academic environments, contributing to a richer collective knowledgebase.

Prototypes, as well, can be a valuable input to industrial and scientific communities. Whether they contribute to the improvement of existing systems' performance or offer a starting point to the development of customized solutions, they shall also be made available as open-source tools to all stakeholders.

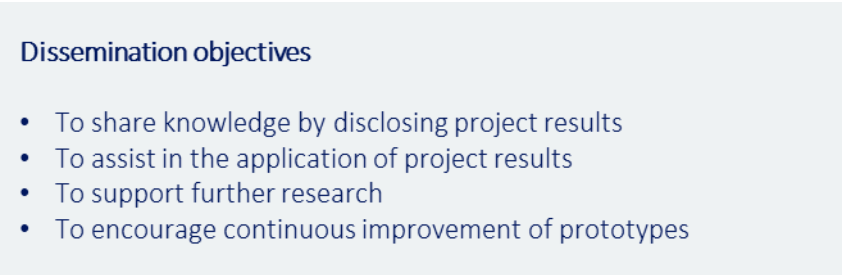

FIGURE 1 - SUMMARY OF DISSEMINATION OBJECTIVES

The dissemination plan accounts for the extended impact of the project, assuring its value beyond the project's duration.

4. Dissemination Plan

The dissemination plan is part of an extended communication work package (WP8). It engages all partners and focuses on disclosing project results, preparing them to be of public use and to support further research.

Results will be disseminated both at the national and international levels, matching the European nature of the project. The process will be structured in four stages: (1) identification of target groups, (2) identification of types of results, (3) identification of dissemination channels, and (4) development of the dissemination strategy.

FIGURE 2 - STAGES OF THE DISSEMINATION PLAN

The identification of target groups is a major strategical step, which influences the selection of dissemination channels. Knowing the recipients' interests and consumption preferences is essential when choosing platforms to share results.

Determining which types of results are to be disseminated is equally critical to the selection of dissemination channels, as technological challenges may emerge and interfere with strategy execution.

Furthermore, dissemination channels have the potential to either improve or damage the message. They must comply with the nature of the results while meeting dissemination requirements and recipients' needs.

The dissemination strategy then derives from the previous stages as a comprehensive model that brings different project results to all target groups through the most appropriate channels. It comprises a method, but also a schedule and a set of dissemination principles that guide the process throughout.

Being part of a full communication strategy WP, the dissemination plan must have several points of contact with the communication plan. It will, therefore, make use of communication materials that support both the communication of the project and the dissemination of results. Additionally, it paves the way for the exploitation of results, thus being equally connected to that part of the process.

4.1. Target Groups

The first stage of the dissemination plan consists of defining target audiences - which will later influence the choice of dissemination channels.

Aside from the general public, specific target groups were chosen based on their possible interest in project results, either because they perform R&D activities or because their business can benefit from such knowledge and/or prototypes.

For this project, ten specific target groups have been identified:

- Energy regulators
- Local authorities
- Distribution System Operators (DSOs)
- Transmission System Operators (TSOs)
- Academic Institutions

- Smart Grids community
- ICT community
- European Commission and other EU-funded projects
- End users
- Media outlets

4.1.1. Energy Regulators

Energy regulators such as ERSE (PT), HERA (HR), ILR (LU), or Ofgem (UK) may benefit from project results as indicators on the state of the art of European energy systems. They may also get access to updated information on current needs and future challenges of European energy networks, and how these might be affected by regulation policies.

4.1.2. Local Authorities

Local authorities, such as Zagreb authorities (HR) or the Greater Manchester Combined Authority (UK), can equally benefit from an updated insight on European energy systems. Their knowledge of the opportunities and challenges that the industry faces may support the adjustment of local networks, industrial practices, and industry standards.

4.1.3. Distribution System Operators

DSOs such as EDP Distribuição (PT), Creos (LU), ENEL (IT), or ENWL (UK) may find valuable knowledge about both their business and their peers' in project results. They can use this knowledge to expand their R&D activities and revise their operations.

DSOs may also apply prototypes to their processes and optimize their systems, using project results as self-standing products or build upon these to create owned tailored solutions.

4.1.4. Transmission System Operators

TSOs such as REN (PT), Creos (LU), NGSO (UK), TERNA (IT), or RTE (FR) may use project results to meet new approaches to current and future operational challenges.

Besides getting an updated insight on global energy networks, TSOs can apply project results to their systems, improving delivery performance and optimizing processes.

4.1.5. Academic Institutions

Academic institutions, such as the Energy Institute Hrvoje Pozar (HR), the Faculty of Electrical Engineering, Computer Science and Information Technology Osijek (HR), the University of Genoa (IT), or the University of Melbourne (AU), may benefit from project results as they bring know-how and support existing and future research projects on the field of energy networks.

4.1.6. Smart Grids Community

To the members of the Smart Grids community, such as NexxtLab (LU) or Energy Systems Catapult (UK), project results provide a collection of relevant aggregated data that supports the design and optimization of energy management systems. These institutions may also become end-users for prototype tools.

4.1.7. ICT Community

Project results – prototypes, in particular – may also be useful to all members of the ICT community. Being shared as open-source, they provide a baseline for new and supplementary optimization tools, thus contributing to the development of both the energy industry and any other field where such technology shall apply.

4.1.8. European Commission and other EU-funded projects

Several EU-funded projects may use project results to further expand their research. SINCRO.GRID, CoordiNet, TRINITY, CROSSBOW, TDX-ASSIST, or EU-SysFlex are identified examples of potential beneficiaries, although more instances may prove eligible. Future EU projects may build upon ATTEST prototypes and data to create advanced knowledge or prototypes and the EU Commission can introduce findings and methods in future directives, policies, and research framework programs.

4.1.9. End Users

The impact of project results can go far beyond the energy industry players. The Croatian demonstrator is an example of how building owners and managers can benefit from project findings and optimize the performance of their own energy infrastructure.

4.1.10. Media

Media outlets are efficient information vehicles both for their extensive reach and credibility. They are key target groups for this project because they can convey the message to several audiences and contribute to greater public awareness about project results.

4.2. Types of results

Project results will be divided into two categories: scientific results and prototypes. The categorization of results allows for a more accurate dissemination strategy, adapting dissemination channels to types of results and dissemination objectives.

4.2.1. Scientific Results

Theoretical outcomes of the project are categorized as scientific results and materialize in a set of scientific papers and presentations. This type of results mainly supports further research activities within and outside the consortium.

At least 15 publications in journals and 20 energy and ICT conference papers and presentations are expected to result from the work to be developed in the project. They may be of interest to all the identified target groups, serving both theoretical research and system development.

4.2.2. Prototypes

Prototypes are practical applications of research results. They materialize in a set of optimization tools conceived to support the operation, planning, and maintenance of energy systems.

12 software prototypes, arranged in three modules of the toolbox (planning, operation, and asset management), are expected to result from the project:

- Optimization tool for distribution network planning
- Optimization tool for transmission network planning
- Optimization tool for planning TSO/DSO shared technologies

- Tool for Ancillary Services (AS) procurement in day-ahead (DA) planning of distribution network
- Tool for AS activation in real-time operation of distribution networks
- Tool for state estimation of distribution networks
- Tool for AS procurement in DA operation planning of transmission networks
- Tool for AS activation in real-time (RT) operation of transmission networks
- Tool for on-line dynamic security assessment
- Tool for the characterization of the condition of assets
- Tool for the definition of condition indicators based on heterogeneous information sources
- Tool for the definition of smart asset management strategies

Although they are mostly directed to TSOs and DSOs, prototypes may also benefit other target groups, in that they can set the standard for the development of future energy systems.

4.3. Dissemination Channels

Different types of results call for distinct dissemination channels, which shall be also adapted to their objectives – either to simply be disclosed or to become an effective contribution to the energy sector.

Scientific results will be disseminated through long-lasting channels, such as journals, where knowledge can be hosted and accessed anytime in the future. They will also be disseminated in events, where oral presentations make room for open discussion and encourage further research in- and outside the academic community.

Prototypes, on the other hand, will be disseminated through open access hosting platforms, allowing for free usage among industry players in addition to the scientific community. By being published in an open-source model, they also favor collaborative improvements to the tools.

For all types of results, generic dissemination channels will be considered as well. Due to their extensive reach, these channels can raise awareness among end-users about relevant project outcomes – be it because of their intrinsic value or because they have unfolded in new patents, products, or solutions.

4.3.1. Scientific Journals

Meeting the requirement of making project results publicly available, scientific results will be published in international journals with open access options.

Journals not only spread results throughout vast academic and industrial communities, but also ensure they remain available in the future, either online or offline, for public use.

4.3.2. Scientific Events

Conferences and other scientific meetings are an opportunity to share project results with a variety of stakeholders. Besides presenting the most relevant results, project partners engage in open discussions about the project and its impact on future research.

4.3.3. Stakeholder & Industry Events

As industry players may not attend to scientific events, other meetings become important to raise awareness about project results. Innovation events, such as the public meetings of the EU Technology and Innovation Platforms, offer access to an audience where grid operators, regulators, and industry partners exchange on future challenges and solutions.

4.3.4. Hosting Platforms

As some project results may materialize in digital tools, they will be hosted in public platforms where long-term public access shall be granted.

Every prototyped resource will be available as an open-source tool, allowing for public use, but also collaborative improvements, supporting further developments in the energy industry.

4.3.5. Newsletters

The direct approach to stakeholders is a pro-active method for bringing project results to their attention. It can also be customized and adjusted to the specific interest of each target group, lending more efficiency to the message and, consequently, to the dissemination plan. Additionally, newsletters can be forwarded among users, expanding their reach.

4.3.6. Website

Minding end users, the general public, and institutions outside the energy and ICT areas – who might not attend industry events or read scientific journals – project results will be disseminated on the website.

As an open platform, the website will provide public, unconditional access to information, both through the publication of news and the linkage to available resources.

4.3.7. Social Media

Social media channels are directed to both end-users and the general public and will be responsible for disclosing project results. They require a more simplified message, yet they benefit from extensive reach.

4.3.8. Traditional Media

Media outlets enjoy an extensive reach combined with credibility and a variety of scopes. Using them as a channel to disclose project results may result in end-users' recognition and awareness of available resources.

4.3.9. Printed Materials

Despite being communication materials, printed resources can act as dissemination channels. Due to their versatility, they can approach a variety of target groups, spreading the message effectively and efficiently.

4.4. Dissemination Strategy

The strategy for disclosing and disseminating project results will take into consideration the different target groups and their interests. Types of results and dissemination channels will also be considered, so that messages reach the right audience, with the right content, through the right carrier.

To this purpose, messages will be given a deep thought. They will be elaborated according to the target audience's interests and level of expertise, so that project results are not only revealed but well understood.

The accomplishment of this task will partially count on the execution of the communication plan, given that different audiences and channels call for different communication materials. Also, some dissemination channels are, simultaneously, communication channels.

Equally relevant to the dissemination strategy is the knowledge management plan. As tools and resources are made publicly available, limits to public access, and use shall be established to protect confidential data.

Finally, dissemination principles will be applied besides project execution. Post-project stakeholder engagement ensures lasting dissemination and promotes additional discussion.

4.4.1. Dissemination Messages

As different audiences may have disparate levels of expertise, dissemination messages will be adjusted to target groups, so they easily understand project results.

Messages for end-users, the general public, and the media will be simple, clean, and straightforward. They will disclose project results in a general fashion and focus on their impact on economic, environmental, and industrial development. Jargon will be avoided, and further details will be directed to other dissemination channels.

Messages for the identified specific target groups will be exhaustive, detailed, and highly technical. They will focus on innovations and possible applications of the research findings. Project results will be carefully demonstrated and described, so they can be reused and improved in the future.

4.4.2. Knowledge Management

Making project results available for reuse raises questions about Intellectual Property Rights (IPR), especially when prototypes become open-source, public tools.

On this matter, a patent landscape and a freedom-to-operate analysis will be carried out to identify technological hotspots and prevent the infringement of third-party IPR.

4.4.3. Action Plan

The dissemination of results will follow project execution. Actions will take place when results become available and will be updated regularly.

Results might, therefore, not be disseminated all at a time. Instead, they can be disclosed separately and through different dissemination channels, ensuring they stay appropriate and relevant. This results in a lengthy and sometimes agile schedule, where campaigns may or may not have a predetermined start and end date.

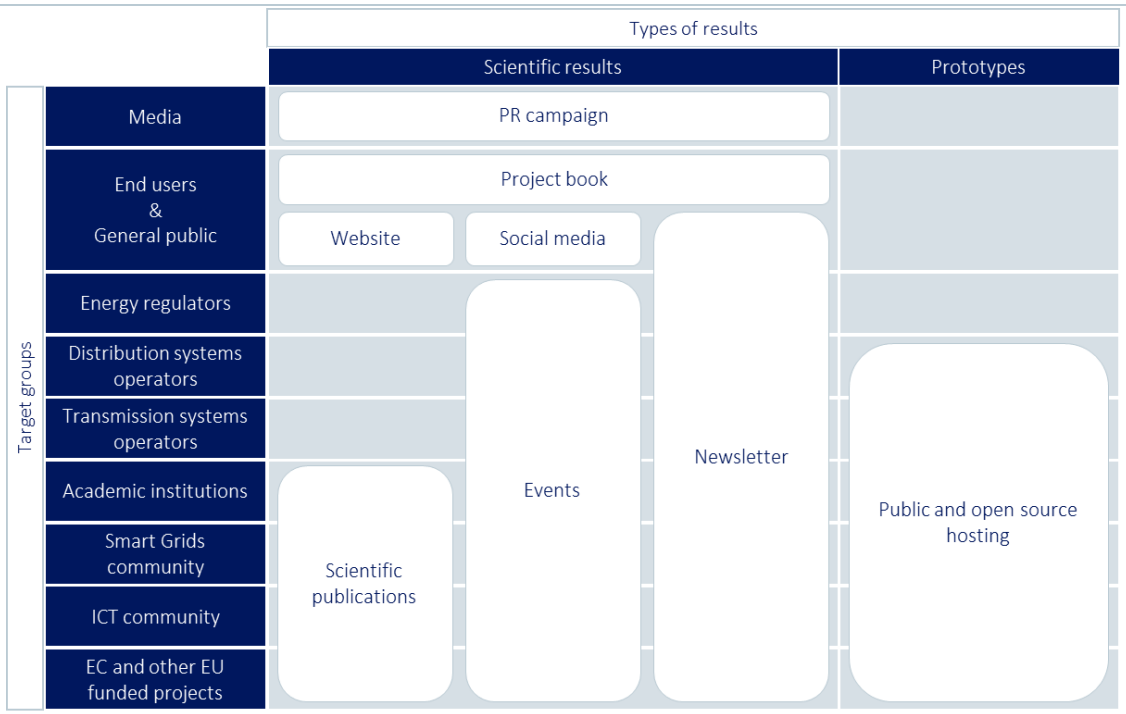

FIGURE 3 - OVERVIEW OF THE DISSEMINATION STRATEGY

4.4.3.1. PR Campaign

A press-release to the media not only communicates project results but also raises general awareness about their public availability, thus contributing to the dissemination plan.

To this matter, a PR campaign about scientific results and prototypes will include information about where they can be used or downloaded.

Conversations with the Press will also be encouraged, so that researchers may clarify concepts and emphasize the public availability of results.

4.4.3.2. Website campaign

The website - which has been previously developed for communication purposes - will host and deliver project results. Papers, publications, posters, and any other scientific results communication materials will be available for public access and download. Direct links to prototyped tools will be included, as well.

Besides informing the general public, the website ensures the availability of results for all target groups in the long term. It is available at www.attest-project.eu and will be further explored in the communication plan (D8.2).

4.4.3.3. Social Media Campaign

Apart from other communicational purposes, social media feeds intend to disseminate and keep the general public informed about project results. On this subject, they bring results to the attention of users and spread information on how to access them.

More specifically, Twitter and LinkedIn posts will inform the public about relevant findings, while sharing links to the repositories where scientific knowledge and prototypes are stored.

4.4.3.4. Newsletters on project results

Newsletters will inform stakeholders about project findings. They will also include direct links to the locations where results are stored, so that specific target groups can use them.

Newsletters may also work as an indirect dissemination tool, in that recipients can save them for further memory and redirect them to other relevant users. They will reach the general public and all specific target groups.

4.4.3.5. Participation in events

The consortium members will participate in a set of academic and industrial events, presenting project results, and encouraging target groups to use them.

Both industrial and academic target groups are expected to be present at such events, being IEEE Powertech or MedPower examples of some relevant conferences.

4.4.3.6. Scientific Publications

Scientific results will be published in journals with open access options. They target mainly the R&D community, although they may be of use for regulators and industrial players, too.

The following journals will be considered for publication:

- Electric Power Systems Research
- IEEE Transactions on Smart Grid
- IEEE Transactions on Power Systems
- IET Generation, Transmission & Distribution

4.4.3.7. Project Book

Of all the printed resources, the project book is one of the best solutions to disseminate project results. It compiles all the information on the project and the consortium while specifying on methodology, outcomes, and impacts. As a result of being a complete and extensive piece of information, it will be edited by the end of the project, when research activities come to an end.

4.4.3.8. Public hosting

Prototypes will be made available in public hosting platforms. They will be uploaded as open-source tools, allowing for free use and improvement. This strategy will focus mainly on industry and R&D stakeholders, although anyone can access the resources.

On the other hand, non-anonymous data sets used to test ATTEST open-source tools may attract significant attention in the research community. They will, therefore, be made available to support benchmarking for further improvements and extensions developed by others.

Github will be the preferred platform because it complies with all the knowledge sharing requirements of the project. Nevertheless, other solutions may apply.

4.4.4. After-project Stakeholder Engagement

Post-project stakeholder engagement extends the relevance of the results and promotes continuous discussion. Besides, target groups may be interested in further developments performed on scientific results and prototypes.

While stakeholders are kept updated about relevant news and exploitation results, they maintain interest in the project. To that purpose, a direct marketing approach will be used, complemented with general dissemination channels when applicable.

4.5. Key Performance Indicators

The execution of the dissemination plan will be assessed through the monitoring of KPIs. These are chosen at the beginning of the project and monitored permanently until the end of the project. Afterward, only KPIs related to active campaigns will be monitored.

For each dissemination action/campaign, specific KPIs are to be defined. They provide useful insights over the execution of the plan and allow for continuous strategical improvement while reflecting the effectiveness of dissemination messages and channels.

It is worthy of note, however, that the deep intersection of the communication and the dissemination plans is expressed on the definition of KPIs. As some dissemination activities are supported by communication resources, the assessment of individual performance becomes impractical and unproductive. Several performance indicators are, therefore, relevant to both strategies.

TABLE 2 - DISSEMINATION KPIS

STAKEHOLDERS	DISSEMINATION CHANNELS
PR campaign	2 press releases 3 published news per PR
Website campaign	3.500 unique visitors 1.000 file downloads
Social media campaign	8.000 reached users (aggregated) 2.000 reactions (aggregated) 1.000 video visualizations (aggregated)
Newsletter	70% OR (per release) 12% CTR (per release)
Events	20 participations
Scientific publications	15 published works
Printed resources	1.000 printed units (aggregated)
Public hosting	12 publicly shared prototypes

PR campaigns are assessed by their execution, but also by their results, meaning the number of news pieces they unfold into. This KPI shall be monitored for each press-release, in each country.

Website dissemination performance will be measured by the count of visitors and by the number of downloads registered for the entire project duration. To this purpose, the aggregated total of file downloads will be considered.

As social media dissemination campaigns focus on making project results available to as many audiences as possible, total aggregated post reach will be measured for all dissemination posts. Interactions will also be taken as a clue for strategy efficiency, as well as video visualizations.

Newsletters, on the other hand, concentrate on a set of subscribers that are more restricted, yet more interested in knowing project results thoroughly. In this case, open rate (OR) will be used as KPI,

combined with click-through rate (CTR) - thus assessing not only the reach of the dissemination channel but also the effectiveness of the message.

Event participations and scientific publications are measured in a simple count. Both actions imply knowledge dissemination from the moment they happen, so they do not require a more detailed assessment.

However, specific goals for scientific publications have been assigned to each consortium partner, ensuring even coverage of all topics in all fields. The distribution of publications goes as follows:

TABLE 3 - PUBLICATION KPIS PER PARTNER

PARTNER	PUBLICATIONS IN JOURNALS	CONFERENCE PAPERS	TOPICS	RELATED WP
INESC TEC	3	4	Markets, Planning tools, Operation tools	WP2, WP3, WP4
UNIMAN	4	5	Markets, Planning tools	WP2, WP3
ICENT	3	6	Markets, Operation tools, Demonstration	WP2, WP4, WP7
LIST	2	4	Operation tools	WP4
COMILLAS	2	2	Asset Management tools	WP5
Techrain	0	3	ICT platform, Demonstration	WP6, WP7
HEP ODS	0	2	Demonstration	WP7
HOPS	0	2	Demonstration	WP7
KONCAR-KET	3	5	Operation tools, Asset Management tools	

The performance of printed resources starts on execution. The abundance of such materials is proportional to their reach - as is the effectiveness of the dissemination of results -, so printed units will be considered as a major KPI for this campaign. Nonetheless, printed resources will be handed out to all consortium members, so that they can carry on with their distribution. Despite not being thoroughly assessed, the objective is to disseminate these materials in all project events and any other dissemination opportunities that may emerge (participation in events, industry fairs, academic meetups, and others).

Likewise, the broadcast *per se* of prototypes complies with the requirement of knowledge sharing, outdoing download numbers as the most appropriate KPI. As downloads are expected to build with time, only the number of available tools will be considered.

5. Advisory Board

The Advisory Board will be involved in the dissemination strategy, namely for advice and recommendations on the prototype sharing methodology – where scalability and replicability are

particularly important and must coexist with IPR. Additional feedback will be sought for the results exploitation plan.

Contacts have been initiated to gather members for the Advisory Board following the first Steering Committee meeting. The final composition of the group is expected to be known by the end of month 5 (D8.3).

6. Conclusion

As an effort to bring project results to the attention of stakeholders, the dissemination plan is highly dependent on project schedule and execution. It is expectable, thus, that the action plan starts only after a few months into the general work plan – when project results become real and shareable.

Furthermore, dissemination activities often use communication materials and channels. Both plans turn out to be deeply intersected, hence blurring the limits between what is communication and what is dissemination. It is only natural, then, that some actions may overlay, despite pursuing distinctive goals.

The dissemination plan, anyhow, is the very first step towards the exploitation strategy. Rather than simply disclosing project results, it focuses on preparing them to be capitalized on. A good execution – and monitoring – of the dissemination strategy is therefore essential for the success of the subsequent exploitation plan.