

**Cost-effective transformation of a Highly-Efficient Advanced Thermal Ultra-SuperCritical coal-fired power plant into a CHP by retrofitting and integrating an ARBAFLAME biomass upgrading process**



## D7.2 DISSEMINATION AND COMMUNICATION PLAN

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CO	Confidential, only for Members of the Consortium, including the EU Commission Services	

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## LIST OF ACRONYMS AND ABBREVIATIONS

CA:	Consortium Agreement
CO:	Confidential
D:	Deliverable
DCP:	Dissemination and Communication Plan
DoW:	Description of Work, referring to the Annex I of the Grant agreement
D&C:	Dissemination & Communication
EC:	European Commission
EIP:	European Innovation Partnership
GA:	Grant Agreement
IPR:	Intellectual Property Rights
KPI:	Key Performance Indicator
M:	Month
PU:	Public
WP:	Work Package

## EXECUTIVE SUMMARY

This deliverable deals with all the activities planned for the project in order to disseminate and communicate the ARBAHEAT project results. The document includes a description of the communication channels and tools that have been adopted and will be adopted to disseminate the ARBAHEAT project objectives and future results as well as a description of the strategy to reach the different stakeholders.

The Dissemination and Communication Plan (DCP) is to be considered as a guide to support the consortium to carry out the dissemination activities using the right material and channels. The key point is to make sure that the project's outcomes are communicated to the appropriate target stakeholders, at appropriate times and with an appropriate methodology. The first version of the DCP will also look at the communication materials (being) realized, including the visual identity, promotion materials and tools and channels for engagement with stakeholders and the general public. The document is closely related to deliverable D7.4, in which a first update on the dissemination activities and materials is presented as well as deliverable D1.3 Stakeholder Analysis and Task 7.1 on Stakeholder Engagement.

During the ARBAHEAT project's lifetime the Dissemination and Communication Plan will be regularly updated on the basis of the project's evolution and new knowledge gained that will allow adding new dissemination opportunities.

The document is structured in the following sections:

- **Section 1 – *Project presentation*:** Introduction of the purpose of dissemination and communication task and presenting the main objective of the ARBAHEAT project.
- **Section 2 – *Approach to dissemination*:** Presentation of the Dissemination & Communication strategy in order to reach a real impact on the relevant stakeholders.
- **Section 3 – *Dissemination and communication channels, materials and tools*:** Presentation of the foreseen and already realised dissemination materials.
- **Section 4 – *Measuring the impact of dissemination*:** Overview of the dissemination tools and channels, as well as the minimum objectives to be achieved and the indicators for measurement of success.
- **Section 5 – *Consortium partner dissemination*:** Overview of the activities carried out and planned by each consortium partner including conferences, press releases, presentations and papers.
- **Section 6 – *Obligations towards the European Commission*:** Overview of the obligations of the project towards the European Commission.
- **Section 7 – *Conclusions***

## 1. ARBAHEAT, dissemination and communication

### 1.1 Introduction

The ARBAHEAT dissemination, communication and exploitation activities (WP7: *Stakeholder engagement, dissemination and communication*) are focused on ensuring optimal visibility and outreach of the project objectives and results tailored to stakeholder characteristics and on maximizing post-project impact and market uptake of the ARBAHEAT results. The Dissemination and Communication Plan (DCP), outlines the plans and strategies within ARBAHEAT to appropriately plan and organize all dissemination and communication activities undertaken by the consortium for the promotion of the project's results and findings to target audiences.

The main objective of the communication and dissemination activities is to spread out the project outcomes and results, not only at an European level but also globally, in a fully understandable way in order to:

- Create awareness of the ARBAHEAT potential;
- Expand the project network as well as gathering and incorporating valuable input from all stakeholders;
- Ensure that there is an on-going reporting of the ARBAHEAT results to all the relevant stakeholders;
- Support the project partners in maximizing the impact of their participation in EC-funded projects.

This plan is also to be considered as an initial guide to support the consortium to carry out the dissemination activities using the right material and channels. For this reason, the DCP will be updated (M18 and M36) and finalized (M48) on the basis of the project's evolution and of the acquired new knowledge that will allow adding new dissemination opportunities. Moreover, the DCP is guided by the Project Management Plan (D8.2-8.4) that establishes the required measures to ensure that sensitive content is not improperly disclosed.

### 1.2 ARBAHEAT project

The project's contents play an important role in the dissemination and communication strategy as they dictate the style and tone of the communication and set the general "brand guidelines". Therefore, an introduction to the project and its objectives is necessary to understand the ARBAHEAT D&C strategy and approach.

#### 1.2.1 About the project

The ARBAHEAT project aims to develop and demonstrate a new concept for the cost-effective retrofitting of existing fossil-fuel driven power plants via the first-of-a-kind integration of a biomass thermal treatment technology and application of on-site and off-site heat utilisation in an existing ultra-supercritical coal-fired power plant, and to validate operational strategies that prove a feasible and affordable solution for the future energy system. It foresees stakeholder engagement at multiple levels, from national up to the international level, in order to achieve the widest possible acceptance and to promote its diffusion as a good practice. This demonstration of an integrated very low-cost concept in large-scale energy production will pave the way to subsequent multiplication in commercial

industrial projects, thus has the potential to significantly contribute to the replacement of fossil-fuel in the heat and power sectors and increase the decarbonisation of the energy market.

More specifically, ARBAHEAT has the following objectives:

- To identify and secure suitable and sustainable biomass sources that meet the quality requirements for thermally treated biomass, and define cost-efficient onsite handling, pre-treatment and storage technologies;
- To enable CHP (Combined Heat and Power) operations by local diversion of steam and identify and techno-economically evaluate future modes of operations with off-site steam delivery;
- To develop a prototype of an on-site integrated steam explosion process with heat recovery to enable the cost-effective replacement of fossil fuels with thermally treated biomass;
- To establish the future heat and power production modes of the retrofitted bio-CHP plant and derive the associated thermal and electrical efficiencies;
- To design, install and commission the integrated ARBAHEAT bio-CHP concept and demonstrate the achievement of expected performance and efficiency rates of the concept in an operational environment;
- Validate the economic and environmental performance of the integration of the thermally treated pellets production and co-feeding into the existing coal power plant under representative industrial conditions [WP5] and Maximize impact and market uptake of project results through adequate exploitation, dissemination and communication activities.

### **1.2.2 Expected impact**

The ARBAHEAT project will contribute to the implementation of highly performant renewable technologies for combined heat and power (CHP) generation and their integration in the EU's energy system. The following key impacts are expected through ARBAHEAT:

- Reduce the cost of combined heat and power generation from renewable sources, making it competitive to alternative fossil fuel-based solutions;
- Increase the EU industrial capacity for renewable power and heat generation at a lower installation cost;
- Create a highly efficient way of decarbonisation of the power and heat sector.
- Other impacts
  - Contribute to the development of the local bio-based economy;
  - Carbon Capture Utilisation and Storage (CCUS) of bio based CO<sub>2</sub>.

### **1.2.3 Barriers and risks**

The above mentioned expected impacts of ARBAHEAT are subject to potential challenges during the execution of the project. The following potential challenges relevant to D&C can be expected:



Barriers & Risks	Proposed risk-mitigation measures
Ineffective consortium communication	Improve team building among members; improve communication facilities; increase face to face or telephone communications when possible.
Underestimation/ overestimation of workload	A Quality Assurance Plan will be defined to clarify all functions of the consortium in terms of management. It will also serve as a guideline in the relationship among partners and to provide suitable strategies should emergencies affect scheduled activities and events calendar.
Changed risk over project lifetime	A risk assessment plan will be defined in the beginning of the project. The progress of the project will be assessed and checked against the risk assessment plan, highlighting the occurrence of risks and providing proposals for solution.
Changes in the work plan	Prior to submission of the request to the Project Officer of the EC, the GA will approve all relevant changes of the work programme. Minor requests for work plan changes of the work plan changes are submitted, in the first instance, to the WP leader and are discussed on WP level. All changes will be reported in the progress reports.
Dissemination strategy not appropriate and/or ineffective outbound communication	A tailored Dissemination and Communication Strategy will be prepared. WP7 leads, and the coordinator will regularly discuss, monitor and evaluate the strategy and its effects, if necessary, additional relevant dissemination channels and the strategy will be discussed and adapted accordingly.
No interest of stakeholders/ political actors in ARBAHEAT results	Evaluate and update the engagement strategy and awareness raising activities.

Table 1: *Barriers and risks to D&C as mentioned in the DoW*

The above-mentioned list of challenges is non-exhaustive and possibly outlines only a small portion of the potential challenges. However, it is critical to bear these challenges in mind and to address them during the design of the dissemination strategy and tools and the deployment thereof.

## 2. ARBAHEAT approach to dissemination

### 2.1 Approach to dissemination and communication

The main objectives of ARBAHEAT's dissemination and communication strategy are:

- Define and classify target stakeholders (coming forward from Task 1.5 & 7.1);
- Identify dissemination methods and their specific associated activities for target stakeholder categories;
- Raise awareness on the target audiences, in particular the relevant stakeholders and market segments, about the objectives of the project, its results, its benefits, use and applicability;
- Get the necessary feedback to focus on the innovation needs of the sector;
- Seek support of the general public, authorities, lobbies and policy makers;
- Foster collaborations with other stakeholders in the technical, commercial and corporative fields with the aim to share resources, achieve synergies and exchange information and knowledge;
- Promote and create market opportunities that might result in commercial opportunities;
- Promote agreements with commercial partners and investors.

To this end, a specific ARBAHEAT dissemination strategy is supported by the following key points:

- The dissemination strategy that establishes a plan to promote the widespread adoption of ARBAHEAT initiatives;
- The production of dissemination materials;
- Stakeholder analysis to foster *targeted* dissemination and communication of ARBAHEAT;
- Activities to ensure the widest possible visibility.

### 2.2 Dissemination and communication strategy

ARBAHEAT's Dissemination and Communication strategy optimizes the transfer of generated knowledge and results to the stakeholder community and beyond, and broadcast ARBAHEAT's potential. The D&C strategy is based on two pillars:

- An extended communication analysis of stakeholder specifics;
- A stakeholder journey – to be made for each group of stakeholders.

Through analysis of the relevant specifics of each stakeholder group and determination of the considerations of each (group of) stakeholder in each phase of the stakeholder journey, an optimal package of media and communication tools can be defined and implemented at the right moment in time.

#### 2.2.1 Stakeholder analysis

At the start of the project a result-driven stakeholder analysis was performed. The aim of the stakeholder analysis was to identify further stakeholders in addition to those already identified in the preparatory phase. This analysis included two levels of stakeholders, namely primary and secondary:

- Primary stakeholders: persons that are directly influenced by or have a direct influence on the implementation/realization of the ARBAHEAT project (i.e. geographically located in the vicinity)
- Secondary stakeholders: persons that are influenced of have an influence on the projects impacts.

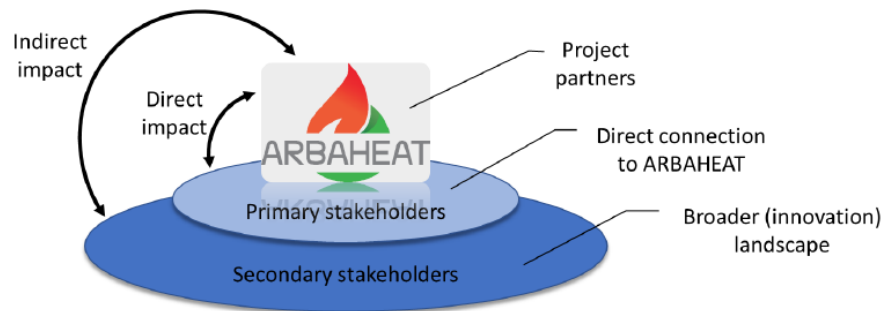


Figure 1: Stakeholder levels

Within the WP7 activities POR with its wide stakeholder commitment in the greater harbour area will be mostly focusing on the primary stakeholder community, whereas PNO will target the secondary level. In consultation with all project partners, the identified stakeholders will then be mapped and categorized according to: their characteristics, interests, attitudes, influence and relevant knowledge for the project with the aim of addressing each category using the most appropriate language and communication channels

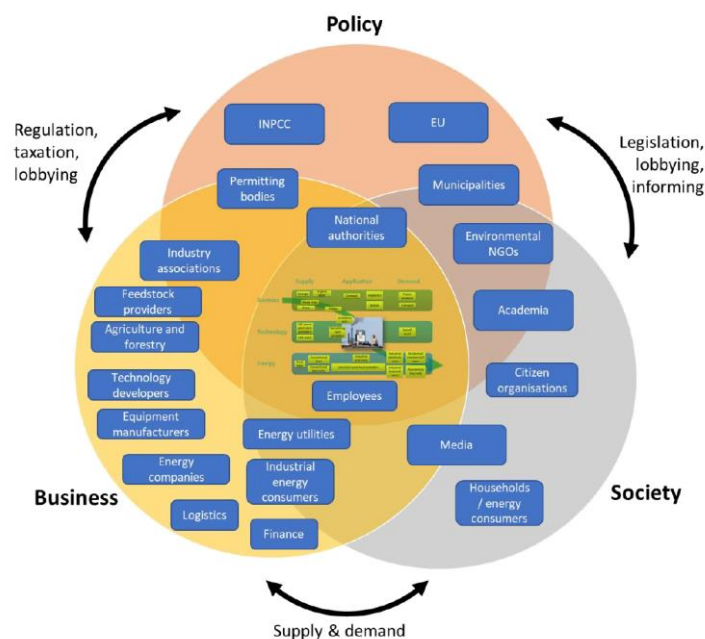


Figure 2: Wider stakeholder landscape with identified categories

The outcome of the stakeholder analysis (D1.3 – Report on stakeholder mapping) will be used in WP7, to target stakeholders for involvement in stakeholder engagement activities and to develop dedicated dissemination and communication as well as exploitation strategies and actions (WP6). The stakeholder mapping led to a database of stakeholders that will be periodically informed about the project outcomes.

### 2.2.2 Stakeholder Engagement

To increase the effectiveness of the ARBAHEAT project it is important to know who the stakeholders are and, more specific, in what way they are affected by the project. To this purpose, a dedicated Stakeholder Engagement Plan (SEP)(D7.1, to be delivered in M8) will be developed for meaningful participation, consultation, and collaboration with relevant stakeholders that have an interest in, or are likely to be impacted by the proposed project. These strategies will be implemented throughout the project's lifecycle. The goals of the SEP are to:

- Analyze and categorize key primary and secondary stakeholder groups;
- Outline the principles, timelines, procedures and approaches that will direct engagement with stakeholders;
- Improve decision-making and build understanding by, where relevant, involving project stakeholders in two-way communication;
- Ensure transparency and involvement of stakeholders in assessing and managing the potential environmental, socio-economic, and health impacts;
- Help manage potential risks, concerns and expectations during the project's lifecycle;
- Provide the consortium partners with a better understanding of the concerns and expectations of stakeholders, and the opportunities to increase the project's added value and benefits.

Stakeholder engagement is an ongoing process and the SEP will be reviewed and updated on a regular basis to adapt it to stakeholder needs and the project environment.

### 2.2.3 Stakeholder journey

The ARBAHEAT stakeholder journey model is derived from the online communication model '*customer journey*' (or '*buyers journey*'). This model consists of five phases a customer (or buyer) can find himself in: awareness → consideration → purchase → retention → advocacy. The model is based on the (commercial) premise that it is a company's highest goal to sell a product or service to a customer and, in order to achieve that, he has to pull the customer through these phases. After purchasing the product or services, the company will try its best to keep the customer happy (retention, advocacy).

The scope of a project such as ARBAHEAT will not (primarily) be to sell a product or service, but will mainly entail contribution or participation (industries), adoption (NGO's) or support (governments). Although the actual sale could admittedly be part of the scope of the project (end users) ARBAHEAT itself will not deal with retention and advocacy issues. Therefore, the ARBAHEAT stakeholder journey consists of three phases, with the first and second one being awareness and consideration. The third and last phase depends on the type of stakeholder and could be participate, adopt, support, stimulate or purchase. We call this third one the '*ARBAHEAT conversion goal*'.

As indicated, based on the extended communication analysis of stakeholder specifics a stakeholder journey will be elaborated per stakeholder group. This is done in three steps:

1. Composing the considerations each stakeholder group is supposed to make in each phase;
2. Composing a list of media, platforms and communication tools that fit the stakeholder group (and each phase) best;
3. Per phase an elaboration of each applicable medium and tool. It is important to realize that not every medium and every tool suits every stakeholder group and every phase.

The realised stakeholder journey will be an excellent base for an effective and substantiated ARBAHEAT communication and dissemination performance. A simplified example of a stakeholder journey can be found in the below figure. In parallel to the development of the Stakeholder Engagement Plan, the initial Dissemination & Communication Plan – this document – will be updated and improved.


<b>Group: Industry</b> - Crowd/bystander - Subjects/defenders - Weak supporters - Pro/market - Cost competitiveness, capacity, scalability, new functionality			
	Awareness	Consideration	Contribute
<b>Considerations →</b>	<ul style="list-style-type: none"> <li>- What is &lt;project's name&gt;?</li> <li>- How can I take advantage of it?</li> <li>- What do I miss out on if I don't participate (f.i. competition)?</li> </ul>	<ul style="list-style-type: none"> <li>- How can I get involved?</li> <li>- What does participation mean?</li> <li>- Who can help me?</li> <li>- How about IP and independence?</li> <li>- ...</li> </ul>	<ul style="list-style-type: none"> <li>- Who to contact?</li> <li>- How to keep up with the project?</li> <li>- What to do now?</li> <li>- ...</li> </ul>
<b>↓ Media and communication tools</b>	<ul style="list-style-type: none"> <li>- What are the costs</li> <li>- Am I qualified (knowledge/capacity)?</li> <li>- ...</li> </ul>		
Website (incl. SEO)	Build website with compelling content		Conversion form for interested visitors
FAQ's	FAQ can be placed on the website with focus on the group priorities	FAQ that answers these questions	
FP/press releases	Send press release to trade magazines and general press agencies		
Video	Video (what/how/why) for website		
Social media (LinkedIn, Facebook, ...)		Share posts with video and news	Launch users group
Newsletter		Start monthly newsletter with emphasis on progress made in the project and the advantages	Idem, also with projects successes (including new participants/expansion of the project and the growing range of interest around the project)
Workshops/events/webinars		Workshop/webinar for individual industries	Event for all participants (also outside the project)
Scientific publications		Share scientific publications on the website and via socials; ground breaking results via press release	

Figure 3: Stakeholder journey template

### 3 Dissemination and communication channels, materials and tools

During ARBAHEAT's lifetime multiple dissemination and communication materials and tools will be designed, produced, implemented and updated according to needs and requirements of the project's dissemination and communication strategy. A visual identity and promotional materials will be delivered and disseminated over the course of the project, ensuring the visual consistency of communication activities and contributing to its visibility. This includes the development of a visual identity, an informative project leaflet, roll-up banner, poster and other relevant dissemination materials, informative leaflets, informative videos and infographics that will be embedded in the website and shared through third party channels. Furthermore, online engagement with the wider stakeholder community will be facilitated through the development of an ARBAHEAT website, publication of ARBAHEAT e-newsletters and active hosting of high-visibility social media channels such as LinkedIn and Twitter.

A set of communication and dissemination tools has been developed to increase the visibility of the project and raise awareness among relevant audiences. The ARBAHEAT communication and dissemination materials will be deployed both on the online communication platforms and "offline" during events and conferences. The defined strategies and activities are further detailed in the following paragraphs.

Timing	Initial stage (M1-M12)	Mid stage (M13-M36)	Final stage (M37-M48)
Dissemination	<ul style="list-style-type: none"> <li>Website</li> <li>Visual Identity</li> <li>Promotional material</li> <li>Press releases</li> <li>D&amp;C plan</li> </ul>	<ul style="list-style-type: none"> <li>Newsletters</li> <li>Website updates</li> <li>Press releases</li> <li>Publication of reports and articles (scientific) publications</li> <li>Presentations at events</li> <li>Interim D&amp;C plan/report</li> <li>Visitor center</li> </ul>	<ul style="list-style-type: none"> <li>Newsletters</li> <li>Website updates</li> <li>Press releases</li> <li>Publication of reports and articles (scientific) publications</li> <li>Presentations at events</li> <li>Final D&amp;C report</li> <li>Visitor center</li> </ul>

Table 2: Dissemination and communication activities

#### 3.1 Visual identity

One of the first actions of the communication activities was the development of the project's identity. This identity is meant for non-verbal (often visual) representation of the ARBAHEAT brand, and it comprises important branding elements, namely: the project logo, printed materials and general brand style. It is worth mentioning that all current and future project related materials (and tools) are developed in English and formatted in line with the H2020 visual guidelines.

##### 3.1.1 Project logo

The main branding element is the logo. The logo plays a crucial role in the brand recognition and is linked with a non-verbal representation of the project, which must be consistent. The logo serves as

the project's identification and should be associated with the project. Therefore it should be included in all documentation and promotional materials.

The ARBAHEAT logo is displayed below. The red and green colors depict the renewable energy in the heat and power sectors. The project addresses to improve the flexibility of the energy grid and security of energy supply. This logo can be used in the project communication. The guidelines that describe how to use the logo can be found in the ARBAHEAT visual identity guide.



Figure 4: ARBAHEAT project logo (final version)

### 3.1.2 Infographics

Several infographics, partly aimed at presenting the project outcomes to a technical audience and partly addressed to the general public, will be produced and made available on the project website and on the websites of the project partners. The first infographic is displayed below and depicts the possibilities in which sustainable heat and electricity is available at all times through the ARBAHEAT process.

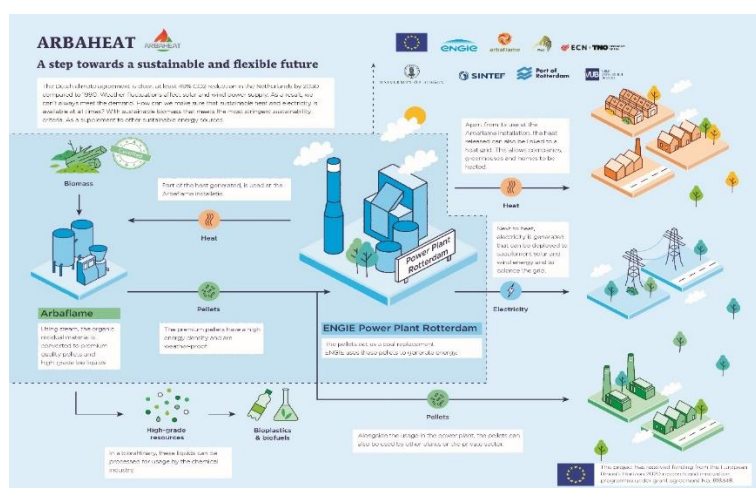


Figure 5: ARBAHEAT infographic

## 3.2 Printed materials

A visual identity itself is not enough to communicate the values and results of the project. Thus, additional materials need to be developed, like brochures, flyers, posters and other required physical materials (often printed). These materials are to be used at public and private events, conferences and



will be available for download on the ARBAHEAT website. In the first year, printed copies will be provided for the dissemination and communication purposes/activities. These will include the following:

- Project leaflets, roll-up banners and posters: informative project leaflets, roll-up banners, a poster and other relevant dissemination materials will be produced to provide information about the project objectives. These materials will be available initially as an electronic document and a limited number of copies will be printed on environmentally friendly paper for outreach events. A final leaflet will be produced by M48 to inform about the project main outcomes, for distributions at conferences and events (PNO, M6/M48).

Examples of the printed materials can be found below.



Figure 6: Arbaheat project roll-up banner & poster



### 3.3 Project website

#### 3.3.1 Public website

The purpose of the website is to gather all information and news about the project. All promotional materials should include a link to the website. It should be the portal where (external) stakeholders can get information on the ARBAHEAT project and connect with the project management and administration.

The website can be accessed through the URL [www.arbaheat.eu](http://www.arbaheat.eu) and was launched in M6. The homepage (Figure 7) contains a short summary of the project, links to all ARBAHEAT consortium partners, a form to subscribe to the ARBAHEAT newsletter for the latest news and events and the notification that the project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 818349. The website comprises project related information and is divided into several sections:

- The project: *Description of the project including objectives, short methodology and expected impact*
  - Background
  - Objectives
- Consortium: *short description per project partner*
- Contact

All subsites list the latest news and event items and a form to subscribe to the ARBAHEAT newsletter. There will also be a restricted area, which is accessible to consortium members only. On this subsite, consortium members can exchange restricted reports and documentation. It also serves as a repository for dissemination and communication materials.

The website will be presented in English and all information should be as accessible as possible to a broad audience. Since the URL of the website should be listed on all promotional materials and press releases, it is to be expected that members of the general public are as likely to visit the website as policy members and potential users of the ARBAHEAT solutions and project results.

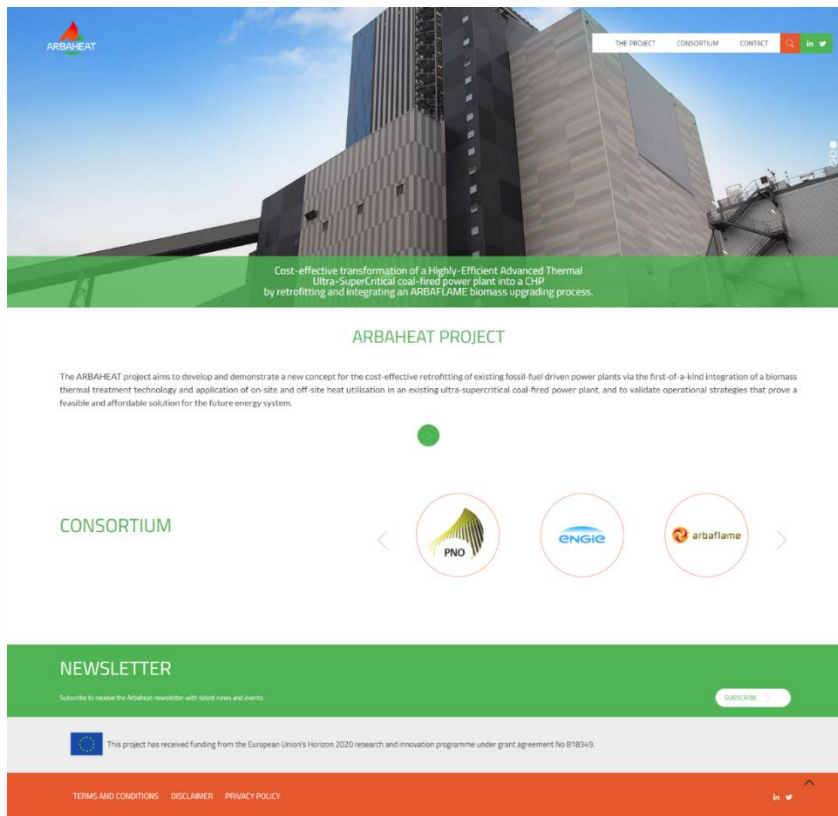
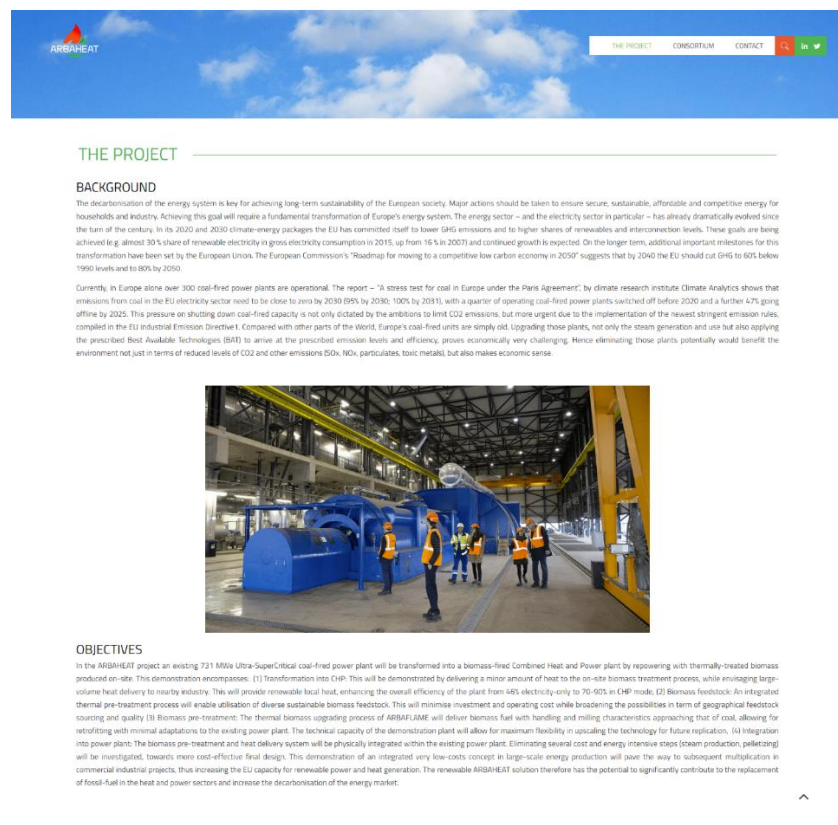


Figure 7: Website homepage design template



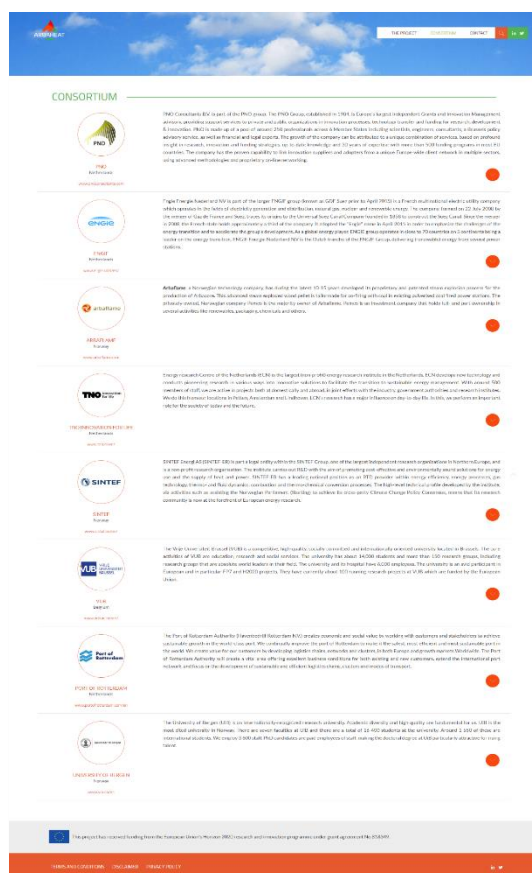


Figure 8: Website design templates

### 3.3.2 Web portals

Apart from the projects own dissemination channels, the project results will also be disseminated through links to international platforms and web portals such as the European Climate Adaptation platform, the WeAdapt climate change adaptation platform and several others with which partners have connections.

## 3.4 Publications

### 3.4.1 (Scientific) publications

Each partner should contribute by submitting publications for technical literature and dedicated journals (web and print) at least once a year. The submitted final versions of the publications should then be uploaded onto the ARBAHEAT website and to be actively promoted via ARBAHEAT's own and partners' social media channels. Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results and effort is placed on making publications available in pre-published format.

#### 3.2.1 3.4.2 Articles in external sources

Next to scientific publications, articles will be submitted to specific newsletters and non-scientific journals on renewable & applied energy, biomass and the environment in general, such as (non-exhaustive):

- Applied Energy
- Biomass and Bioenergy
- Applied Thermal Engineering
- VGB PowerTech
- Power Engineering International

ARBAHEAT publications in external sources are being tracked to estimate the reach of its communication efforts. The results are summarised in table 10 below.

Title	Organisation	Language	Date of publication	Link
Start Europees onderzoeksproject voor innovatieve ombouw van kolencentrale naar biomassa	Port of Rotterdam	Dutch	31-11-2018	<a href="https://www.portofrotterdam.com/nl/nieuws-en-persberichten/start-europees-onderzoeksproject-voor-innovatieve-ombouw-van-kolencentrale">https://www.portofrotterdam.com/nl/nieuws-en-persberichten/start-europees-onderzoeksproject-voor-innovatieve-ombouw-van-kolencentrale</a>
ARBAHEAT – Duurzame toekomst voor kolencentrales mogelijk door omschakeling op biomassa	TNO	Dutch	31-11-2018	<a href="https://www.tno.nl/nl/aandachtsgebieden/ecn-part-of-tno/roadmaps/naar-co2-neutrale-brand-en-grondstoffen/duurzame-energie-chemie-en-materialen-uit-biomassa-via-thermochemische-conversie/arbaheat-duurzame-toekomst-voor-kolencentrales-mogelijk-door-omschakeling-op-biomassa/">https://www.tno.nl/nl/aandachtsgebieden/ecn-part-of-tno/roadmaps/naar-co2-neutrale-brand-en-grondstoffen/duurzame-energie-chemie-en-materialen-uit-biomassa-via-thermochemische-conversie/arbaheat-duurzame-toekomst-voor-kolencentrales-mogelijk-door-omschakeling-op-biomassa/</a>
Engie begint onderzoeksproject om kolencentrale Rotterdam in biomassacentrale te veranderen	Financieel Dagblad	Dutch	31-11-2018	<a href="https://fd.nl/ondernemen/1276065/engie-begint-onderzoeksproject-om-kolencentrale-rotterdam-in-biomassacentrale-te-veranderen">https://fd.nl/ondernemen/1276065/engie-begint-onderzoeksproject-om-kolencentrale-rotterdam-in-biomassacentrale-te-veranderen</a>
ARBAHEAT	European Commission	English	1-10-2018	<a href="https://ec.europa.eu/inea/en/horizon-2020/projects/h2020-energy/biomass-biofuels-alternative-fuels/arbaheat">https://ec.europa.eu/inea/en/horizon-2020/projects/h2020-energy/biomass-biofuels-alternative-fuels/arbaheat</a>
EU research project to convert a coal-fired plant to advanced biomass launched	Bioenergy International	English	5-11-2018	<a href="https://bioenergyinternational.com/research-development/eu-research-project-to-convert-a-coal-fired-plant-to-advanced-biomass-launched">https://bioenergyinternational.com/research-development/eu-research-project-to-convert-a-coal-fired-plant-to-advanced-biomass-launched</a>
Kolencentrale op Maasvlakte gaat draaien op biomassa	Maritiem Nederland	Dutch	2-11-2018	<a href="http://www.maritiemnederland.com/nieuws/kolencentrale-op-maasvlakte-gaat-draaien-op-biomassa/item3047">http://www.maritiemnederland.com/nieuws/kolencentrale-op-maasvlakte-gaat-draaien-op-biomassa/item3047</a>
Hulp voor kolencentrale bij cruciale verbouwing	Algemeen Dagblad	Dutch	31-11-2018	<a href="https://www.ad.nl/rotterdam/hulp-voor-kolencentrale-bij-cruciale-verbouwing~a4375301/">https://www.ad.nl/rotterdam/hulp-voor-kolencentrale-bij-cruciale-verbouwing~a4375301/</a>
Europees project voor ombouw van kolencentrale naar biomassa	Engineeringnet	Dutch (BE)	7-11-2018	<a href="http://www.engineeringnet.be/belgie/detail_belgie.asp?Id=21157">http://www.engineeringnet.be/belgie/detail_belgie.asp?Id=21157</a>
Nieuwsblad Transport > Plan: kolencentrale Engie Maasvlakte 100 op biomassa	Nieuwsbladtransport	Dutch	31-11-2018	<a href="https://www.nieuwsbladtransport.nl/havens/2018/10/31/plan-kolencentrale-engie-maasvlakte-100-op-biomassa/">https://www.nieuwsbladtransport.nl/havens/2018/10/31/plan-kolencentrale-engie-maasvlakte-100-op-biomassa/</a>
Eenvoudig van kolen naar	Engineersonline	Dutch	31-11-2018	<a href="https://www.engineersonline.nl/nieuws/id30617-eenvoudig-van-kolen-naar-biomassa-dankzij-nieuwe-techniek.html">https://www.engineersonline.nl/nieuws/id30617-eenvoudig-van-kolen-naar-biomassa-dankzij-nieuwe-techniek.html</a>

biomassa dankzij nieuwe techniek				
VUB onderzoekt innovatieve ombouw van ENGIE-kolencentrale in Rotterdam naar biomassacentrale	Vrije Universiteit Brussel	Dutch (BE)	16-11-2018	<a href="https://press.vub.ac.be/vub-onderzoekt-innovatieve-ombouw-van-engie-kolencentrale-in-rotterdam-naar-biomassacentrale">https://press.vub.ac.be/vub-onderzoekt-innovatieve-ombouw-van-engie-kolencentrale-in-rotterdam-naar-biomassacentrale</a>
ARBAHEAT: Cost-effective transformation of a Highly-Efficient	Vrije Universiteit Brussel	English	16-11-2018	<a href="https://cris.vub.be/en/projects/arpaheat-costeffective-transformation-of-a-highlyefficient-advanced-thermal-ultrasupercritical-coalfired-power-plant-into-a-chp-by-retrofitting-and-integrating-an-arbaflame-biomass-upgrading-process(c8774f1d-d6e9-4341-9de7-4e87f988481e).html">https://cris.vub.be/en/projects/arpaheat-costeffective-transformation-of-a-highlyefficient-advanced-thermal-ultrasupercritical-coalfired-power-plant-into-a-chp-by-retrofitting-and-integrating-an-arbaflame-biomass-upgrading-process(c8774f1d-d6e9-4341-9de7-4e87f988481e).html</a>
Biomass powered plant considered at Rotterdam	SAFETY4SEA	English	1-11-2018	<a href="https://safety4sea.com/biomass-powered-plant-considered-at-rotterdam/">https://safety4sea.com/biomass-powered-plant-considered-at-rotterdam/</a>
EU-backed coal-to-biomass project launched	ENDS Waste and Bioenergy	English	2-11-2018	<a href="https://www.endswasteandbioenergy.com/article/1497900/eu-backed-coal-to-biomass-project-launched">https://www.endswasteandbioenergy.com/article/1497900/eu-backed-coal-to-biomass-project-launched</a>
Renewable energy projects of companies to play a major role against climate change	Biogas World	English	8-11-2018	<a href="https://www.biogasworld.com/news/biogas-news-renewable-energy-projects/">https://www.biogasworld.com/news/biogas-news-renewable-energy-projects/</a>

Table 3: **ARBAHEAT articles in external sources**

The above-mentioned list of publications is non-exhaustive and will be updated during the lifetime of the project.

### 3.4.3 Press releases

Involvement of press and media is a fundamental part of the communication and dissemination activities. During the project all the partners will use their own communication portals and tools in order to share public news and announce upcoming events where the ARBAHEAT project will be represented. Next to this, at least 3 press releases will be send out during the project to disseminate specific findings and achievements of the project, aimed at the European press and national journalists.

## 3.5 Newsletters

An e-newsletter will be produced annually (M12, 24, M36, M48) to inform the main stakeholders as identified for this purpose on the project's progress. The newsletters will contain: recent news, project progress reports, possible publications, press releases and ARBAHEAT events. These newsletters will be (in open access) available for download on the ARBAHEAT website and send to all main stakeholders as identified for this purpose.

## 3.6 Social media channels

In recent years, social media has become an essential tool for communication, networking and content sharing purposes and it therefore helps in realizing communication and dissemination goals of ARBAHEAT. Social media presence will allow the project to:

- Reach the relevant stakeholders;
- Establish (online) presence;



- Increase ARBAHEAT's brand awareness.

ARBAHEAT will be prominently present on social media, in particular on LinkedIn and Twitter as these platforms are most relevant in the scientific and academic world. The social media channels that have currently been created for the ARBAHEAT project are the following:

- LinkedIn: arbaheat project <https://www.linkedin.com/company/arbaheat>
- Twitter: @arbaheat\_h2020 [https://twitter.com/arbaheat\\_h2020](https://twitter.com/arbaheat_h2020)

By being present on various social media platforms, ARBAHEAT increases its chances for exposure and expands the number of “touch points” with the audience, whereby platforms users can reach and engage with the brand and its work in a very simple and (almost) costless way. It is also understood that communicating on social media calls for massive use of quality visuals and photographs, to ensure engagement from the audience.

In order to build and grow the audience for the chosen social platforms, the following actions need to be taken:

- Proactive posting on the ARBAHEAT social media channels/platforms;
- Promotion through Partner's social media channels;
- Sharing engaging, interesting and thought-provoking content on the social channels;
- Interlinking with partner's social media channels by means of following/like and requesting to follow/like the account back;
- Following/like other nature-based solution projects, European Commission and Horizon 2020 related social media accounts and pages;
- Following/like the audience defined in the stakeholder analysis;
- Use appropriate communication style when engaging with the audience.

### 3.6.3 LinkedIn

LinkedIn is oriented at “business crowd” and it is a strategic choice to begin dissemination on LinkedIn, as this is a platform where most of the professional stakeholders are present. Furthermore, ARBAHEAT can benefit from the existing LinkedIn networks and communities involved in the area of nature-based solutions. The aim is to amplify the message and get it to the target audience in the shortest amount of time. Below a screenshot of the ARBAHEAT LinkedIn page is shown.

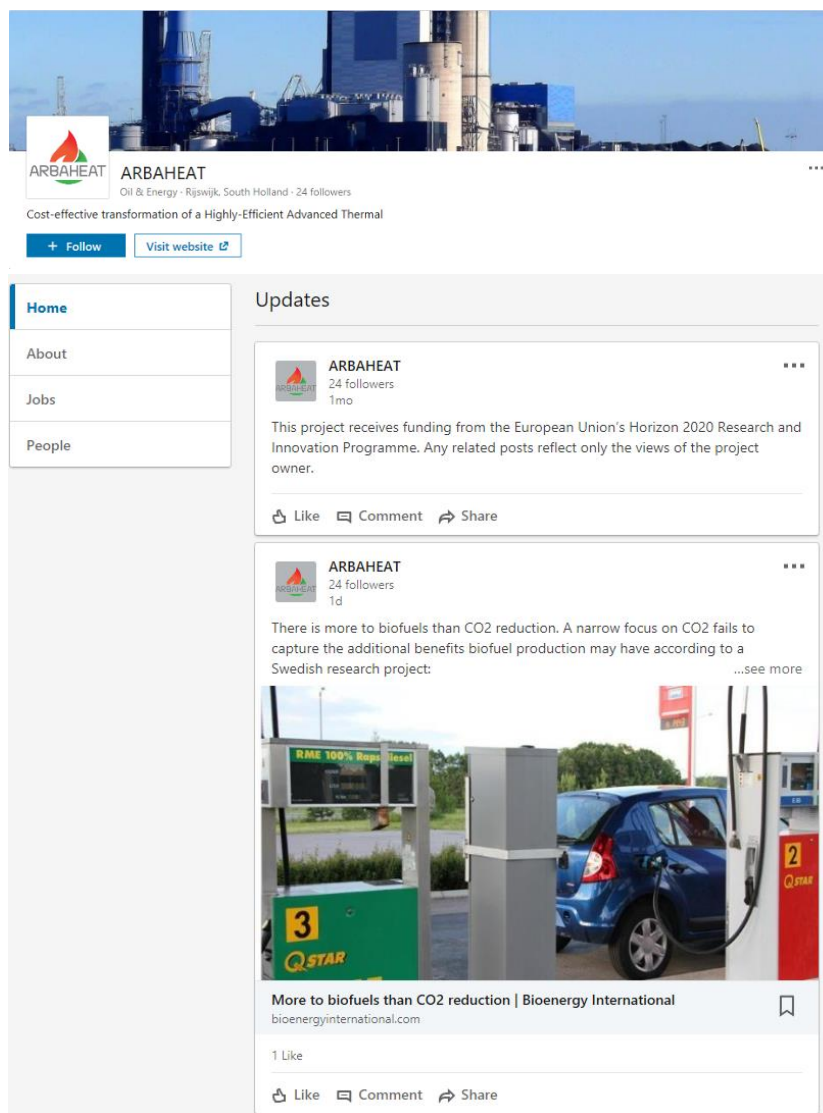


Figure 9: LinkedIn page

### 3.6.4 Twitter

Since Twitter will be used for the communication and dissemination purposes, it is important to mention several distinctive platform features that will be put at work. Below a screenshot of the ARBAHEAT Twitter page is shown.

One of the key-features of Twitter is the information filtering by mentions of hashtags. Hashtags allow to quickly search and find information within the platform related to a certain topic. Therefore, the basic hashtags relevant for the project will be (non-exhaustive list): #ARBAHEAT; #energyefficiency; #Horizon2020; #H2020; #biomass; #renewableenergy.

The Twitter accounts related to the environment, climate, energy, research and innovation, European Commission and H2020 (non-exhaustive); @EU\_Commission; @EU\_H2020; @MSCActions; @EUhorizon2020; @EUClimateAction; @Energy4Europe; @INEA\_EU; @EU\_ENV; @ERC\_Research; @EU\_Growth; @EU\_EASME; @IMI\_JU; @BBI2020; @EU\_ScienceHub; @H2020SME; @NAIAD2020; @ThinkNatureEU; @BiomassResearch; @EITeu; @EU\_ecoinno.



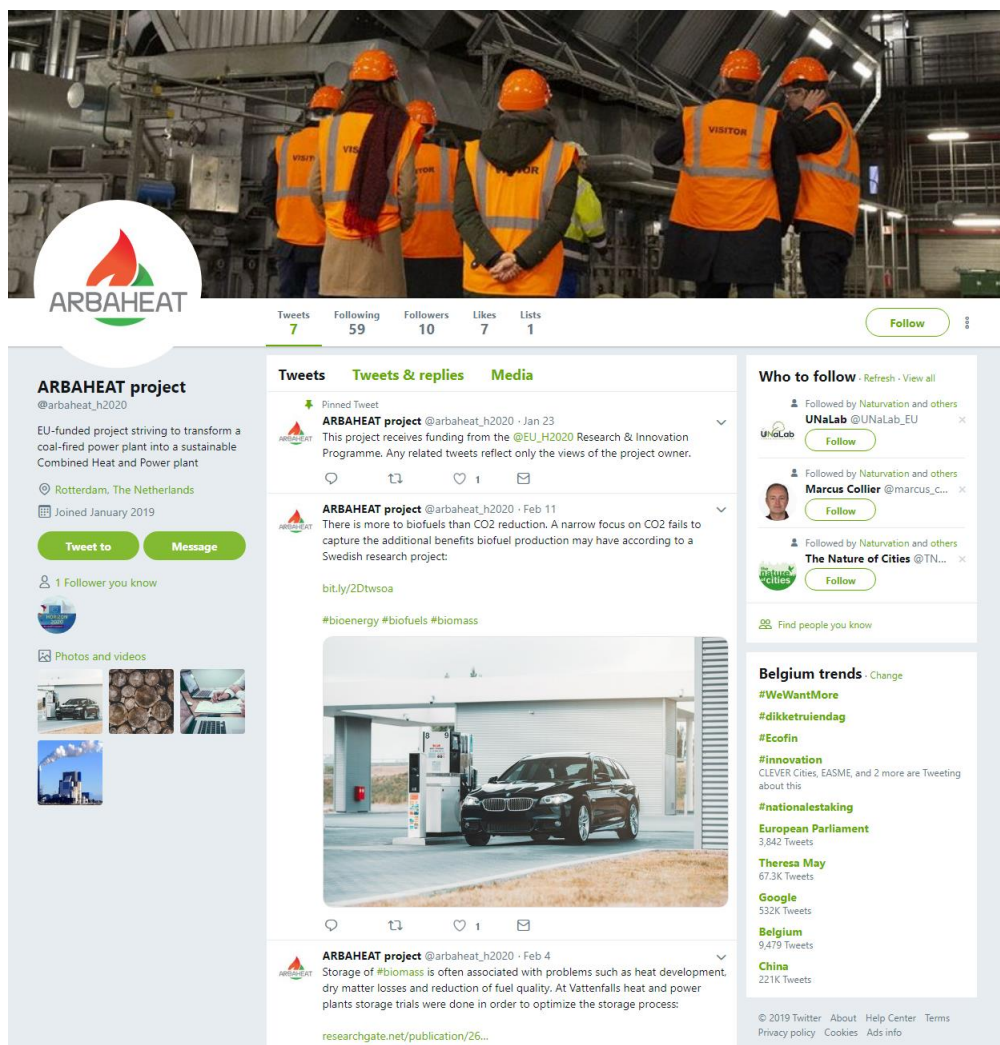


Figure 10: Twitter page

### 3.7 Other materials and project tools

Additional materials are available or will be produced to consistently communicate on the project and/or signify its involvement and/or presence, namely:

- PowerPoint presentation: A PowerPoint presentation template with the ARBAHEAT branding, the project's key messages and a general description;
- Online videos: A video with short interviews with key partners from the consortium will be realized. The video will contain a short part describing the concept in an attractive way as well as the key results. The video will be diffused on media channels such as YouTube and other internet platforms.

### 3.8 Events

The research of events has started at the beginning of the project, it is still ongoing and it will continue until the end of project. Starting M6, each semester an update of the list with the relevant events is sent to the entire consortium. The results of the research are posted on the project communication website in order to promote an active participation by both partners and contacts. To actively and



effectively transfer generated knowledge and to inform stakeholders on the project results, face-to-face interactions will be conducted during the project's lifetime.

- External events attendance (i.e. scientific conferences): At least 12 (inter)national meetings, industrial workshops, congresses, conferences or other events will be attended by partners to ensure wide dissemination of project's outcomes, i.e. powergen conferences, European Biomass Conference & Exhibition (EUBC), dedicated conferences on i.e. Applied Energy organized by ACI, VDI and other commercial parties; international Flame Research Foundation (IFRF) workshops; symposium of the Combustion Institute, events of the European Energy Research Alliance (EERA).
- Organisation of site visits: During the project's lifetime at least 3 site visits will be organized to showcase and share project's results with interested stakeholders.
- Visitor information center: A temporary visitor-information center will be established at the demonstration site or an equally appealing location in Rotterdam, to provide information on the process, and for teaching and showing what biomass is all about.
- Organisation of a final project event: ARBAHEAT will organize a final event to disseminate results and inform stakeholders using an explicit scientific approach combined with a business perspective. This event will either be standalone or as a side-event to a larger relevant conference to ensure wider dissemination of results.

## 4. Measuring the impact (KPI's)

A set of communication and dissemination tools has been developed to increase the visibility of the project and raise awareness among relevant audiences. To adequately measure the impact of these materials and tools, an overview of objectives to be achieved and indicators for measurement for success were defined. Table 8 presents the dissemination and communication activities, the measurable results (Key Performance Indicators) as well as the status of each activity. In case the objective is not fulfilled, a contingency plan is considered.

Activities	Measurable result (KPI)	Status (M12)
Communication activities		
Infographics	Several infographics, partly aimed at presenting the project outcomes to a technical audience, and part addressed to the general public, will be produced and made available on the project website and on the websites of the project partners.	1 infographic published in M2
Social media (LinkedIn & Twitter)	News will be distributed via social media channels such as Twitter, Facebook and LinkedIn.	Weekly updates
Project video	A video with short interviews with key researchers and managers from the consortium will be realised. The video will contain a short part describing the concept in an attractive way as well as the key results. The video will be diffused on media channels such as YouTube and other internet platforms.	Being planned for M12
Communication materials	Press releases will be published on the project and the partners' websites when important achievements are reached (at least 3 press releases during the lifetime of the project).	0
Visits	During the project's lifetime at least 3 site visits will be organized to showcase and share project's results with interested stakeholders. A temporary visitor-information center will also be established at the demonstration site or an equally appealing location in Rotterdam, to provide information on the process, and for teaching and showing what biomass is all about.	0
External events	At least 12 (inter)national meetings, industrial workshops, congresses, conferences or other events will be attended by partners to ensure wide dissemination of project's outcomes, i.e. powergen conferences, European Biomass Conference & Exhibition (EUBC), dedicated conferences on i.e. Applied Energy organized by ACI, VDI and other commercial parties; international Flame Research Foundation (IFRF) workshops; symposium of the Combustion Institute, events of the European Energy Research Alliance (EERA).	2
Dissemination		
Website	In M3 a dedicated project website will be delivered by PNO. The website will consist of a publically accessible website where general information as well as dissemination and communication materials will be made available, including updates on project progress. The restricted area of the website will offer pre-prints of all publications to be published in Open Access for effective knowledge sharing. Links to the websites of the partners and (inter)national organizations will be featured. The main language will be English.	Launched in M3

Project newsletters	An e-newsletter will be produced annually (M12, M24, M36, M48) to inform stakeholders on project progress. It will be compiled and published on the project website and send to all main stakeholders as identified for this purpose.	First newsletter expected M12
Attendance of external events	At least 12 (inter)national meetings, industrial workshops, congresses, conferences or other events will be attended by partners to ensure wide dissemination of project's outcomes, i.e. powergen conferences, European Biomass Conference & Exhibition (EUBC), dedicated conferences on i.e. Applied Energy organized by ACI, VDI and other commercial parties; international Flame Research Foundation (IFRF) workshops; symposium of the Combustion Institute, events of the European Energy Research Alliance (EERA).	2
Scientific publications	At least 6 scientific articles will be published. Access to all the relevant scientific publications will be ensured, effort is placed on making publications available in prepublished format. Envisaged journals are for instance Applied Energy; Biomass and Bioenergy, Applied Thermal Engineering, VGB PowerTech.	0
Articles	At least 4 articles are envisaged to be published during the project's lifetime in journals such Power Engineering International or equivalents	0
Dissemination materials	A brochure, and a poster explaining the objectives and the impact of ARBAHEAT will be developed at the beginning of the project.	Printed in M6
Events	A final event will be organized to disseminate results and inform stakeholders with an explicit scientific approach combined with a business perspective, standalone or as a side-event to a larger relevant conference to ensure wider dissemination of results.	0

Table 4: *Dissemination and Communication measurable deliverables ARBAHEAT*

All the D&C activities and their impact are being extensively tracked in separate tables, which can be found in this deliverable.

## 5. Management of the dissemination and communication activities

### 5.1 Partners' responsibilities

The implementation of the dissemination activities foresees to actively involve all the partners. The partner responsible for dissemination – WP7 leader PNO Consultants B.V. – is working to supply actual, relevant and reliable information to support the full communication of the project results.

All consortium partners have an important role in the dissemination of project results, and all the partners are committed to presenting project outcomes in order to obtain a balanced participation from each partner. All the partners are contacted to define and execute dissemination efforts in order to provide a structured and dynamic approach to the communication of project results.

Responsibilities PNO Consultants B.V. (WP7 leader):

1. Coordinate the WP;
2. Prepare the dissemination plan and realise its implementation;
3. Develop and design a project web page and maintain it;
4. Create social media accounts (Twitter and LinkedIn) and manage them;
5. Design and prepare newsletters and manage the subscriber/recipient list;
6. Produce a project video, develop a PowerPoint presentation template and leaflets, (all of) which will also be used in other participating countries.

Other partners' responsibilities:

1. Help prepare the dissemination plan and implementing it;
2. Help by identifying stakeholders, networks and contribute to a summary of the most relevant stakeholders;
3. Contribute to the creation of newsletters;
4. Spread the newsletters;
5. Contribute to the design of logo and leaflets and all communication & marketing material;
6. Contribute to the development of a project web page.

### 5.2 Partner dissemination

Partners are requested to maintain an active participation within the dissemination strategy. After 12 months, all the partners will receive an e-mail in order to collect and monitor dissemination progress as conducted in the preceding twelve months. Eighteen months after the first update, all the partners will receive a second e-mail to collect and monitor dissemination progress. Twelve months after the second update, all the partners will receive a third e-mail to collect and monitor dissemination progress for the final report on the dissemination activities and materials. Proactive and balanced levels of participation will have profound effects throughout the whole project and will guarantee the fullest possible application of dissemination techniques.

## 6. Obligations towards the European Commission

The European Commission has set a few obligations towards all projects receiving Horizon 2020 funding. Two important requirements related to the Dissemination and Communication activities is the obligation to use the EU emblem and a disclaimer excluding the responsibility of the agency.

### 6.1 Obligation to use the EU emblem

All dissemination and communication materials produced in the project should contain the following reference in a form of a sentence and the EU emblem:



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 818349

### 6.2 Disclaimer excluding agency's responsibility

This deliverable contains original unpublished work except where clearly indicated otherwise. The publication reflects the author's views. The European Commission is not liable for any use that may be made of the information contained therein.

## 7. Conclusions

This document covered the main features of the ARBAHEAT project and connected them with the preliminary dissemination and communication strategy, structured around (1) stakeholders (2) communication materials, tools and channels that will be used to convey project's results, (3) monitoring and evaluation, and (4) management structure. Examples of used materials, platforms and tools were also being provided along with detailed elaboration on their use.

The ARBAHEAT project will be well disseminated to the different stakeholders, but also to the scientific community and the public. Dissemination activities are already being actively designed, implemented and carried out by the partners since the beginning of the project.

Dissemination activities will gradually evolve with the project, increasing usable channels and number of people reached (stakeholders, end users, researchers, industrialists, public etc.). Efforts will continue during the ARBAHEAT project life cycle and also after, by exploiting innovations and even commercialization by targeted ARBAHEAT members.

To deliver tangible and efficient results in line with the project objectives, this document will be updated at least in month 18 and month 48 of the project. More regular updates will be visible on ARBAHEAT's website and socials media platforms, allowing more dissemination results such as public events and presentations.