



Project Website

D7.5

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¹ **PU**=Public, **CO**=Confidential, only for members of the consortium (including the Commission Services), **CI**=Classified, as referred to in Commission Decision 2001/844/EC

Modification Control

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1 Overview of the Project

With a growing share of intermittent renewable energy sources grid stability can be maintained, and flexibility enhanced, by applying pumped hydropower energy storage. ALPHEUS will improve reversible pump/turbine (RPT) technology and adjacent civil structures needed to make pumped hydro storage economically viable in shallow seas and coastal environments with flat topography.

Three promising technologies will be considered:

- Shaft-driven variable-speed contra-rotating propeller RPT – avoiding guide vanes in a two-way device improves overall efficiency;
- Rim-driven variable-speed contra-rotating propeller RPT – rim driven configuration avoids the complexity of a shaft assembly, decreasing noise, vibrations, switching time, and maintenance costs;
- Positive displacement RPT – fish friendly and seawater-robust, low cost technology.

ALPHEUS plans stepwise development, starting by validating current assumptions in the lab and optimizing efficiency with numerical simulations. Based on results, two of these technologies will be chosen and functionality will be demonstrated for working models under realistic circumstances. Finally, a reasoned and quantified assessment of these two technologies will be delivered for further development into full scale prototype.

Combining current state-of-the-art and expertise of the partners ALPHEUS expects to reach round-trip RPT efficiency of 0.7 to 0.8. Fatigue resistance of mechanical and civil installations will be addressed, which occur with switching between pumping and turbinning modes within 1 minute. ALPHEUS will address environmental aspects, including fish friendliness, scenery and land use, juxtaposed with the ability of decentralized pumped hydro storage to stabilize the grid over a range of timescales and therefore allow higher penetration of intermittent renewable energy supplies. This will result in a methodology for assessing potential sites for pumped low-head and ultra-low head energy storage.

2 Objectives

Deliverable D7.5 – Project Website is a key component of Work package 7 – Communication and Dissemination strategy, its role is to raise awareness, inform, promote and engage on all aspects of the ALPHEUS project.

- To **raise awareness** with the general public about the benefits of the stakes of power generation in the world, the effects of pollution and global warming;
- To **inform**, all stakeholders of the project, whether internally or externally, of the project aims, objectives, progression and results;
- To **promote** the project itself and its results, via a combination of online and offline channels to a wider public of policy makers, governmental and non-governmental agencies, public and private institutions, and the scientific community at large.
- To **engage** all stakeholders in further developing of clean, renewable and sustainable technologies

The first version of the website went live on the 30th June 2020 at <https://www.alpheus-h2020.eu>

3 Website Development

3.1 Website Structure

The website is hosted on TU Delft servers and uses HTTPS secure technologies to guarantee a high level of security. The Content Management System (CMS) is based on WordPress 5.4.2, the latest stable release of the most popular web CMS which features an easy to use backend for non-expert developers along with powerful customisation capabilities to reflect ALPHEUS branding.

In addition and alongside the Wordpress CMS, the website uses MailChimp as the main communication platform. MailChimp integrates a number of functionalities around mail newsletters, social media scheduling and publishing and overall marketing automation.

3.2 Website Map

The website map reflects simplicity but depth of information providing clear headings for the most relevant information. Below is a non-exhaustive map down to the third level of pages.

Home	About	Partners
		Deliverables
		Milestones
	Work Packages	WP1 - Coordination
		WP2 - Turbine Design
		WP3 - Power Take-Off (PTO)
		WP4 - Turbine/PTO Validation
		WP5 - Civil Structure Engineering
		WP6 - Grid Integration
		WP7 - Dissemination and Exploitation
	News & Publications	Newsletters
		Publications
		Events
		Conferences
		Workshops
		Reports

Some menu items are currently deactivated as events and publications are not yet available, they will be activated and filled as the deliverables are completed.

3.3 Visual Identity

Although the website is currently quite scarce in visual, the team is collecting a number of striking visuals related to the different aspects of the project and the work packages.

3.4 Partners Pages

The Partners page highlights the profile, competencies and core members of the partners involved in the project.



Partners

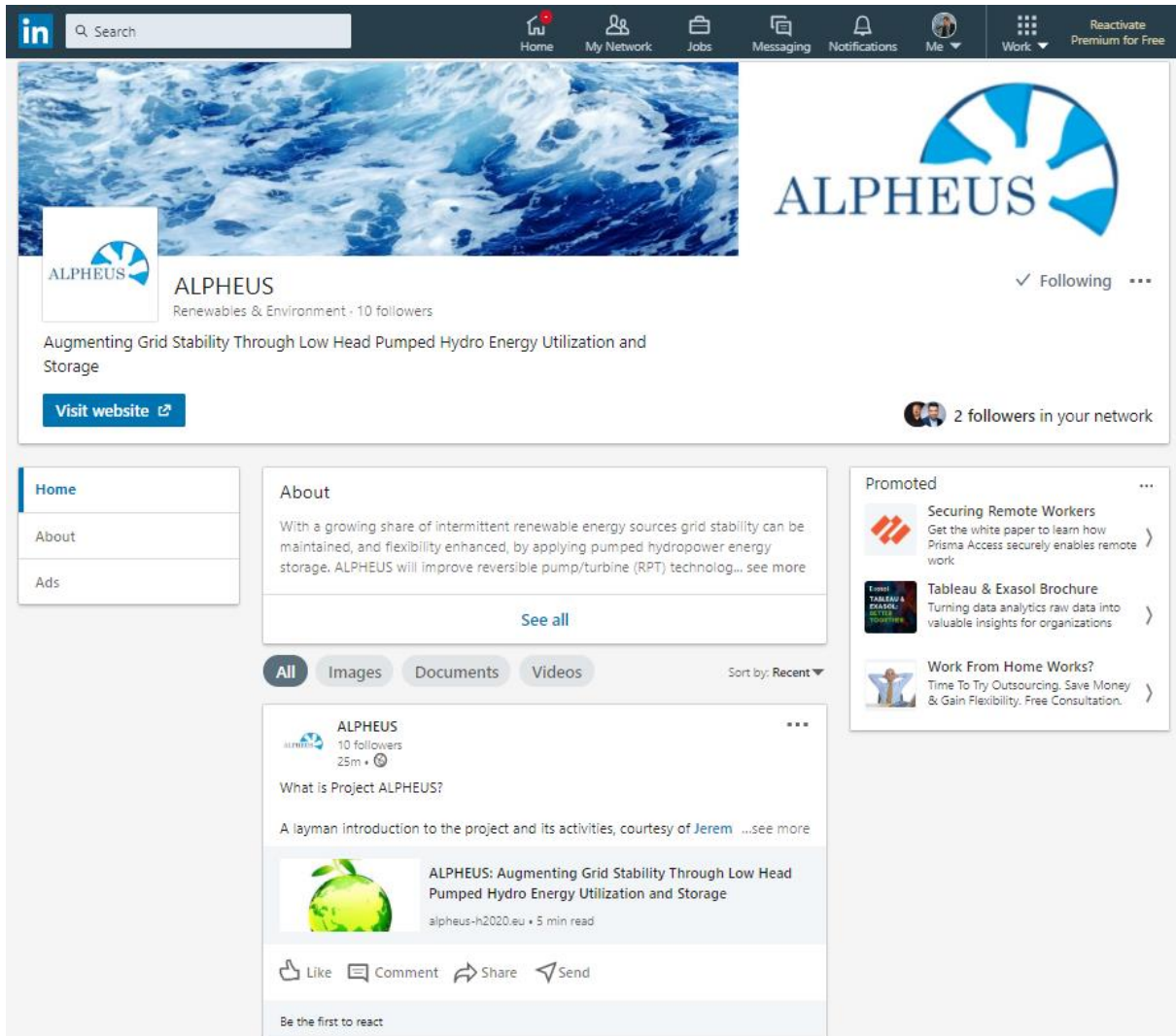


The pages currently contain only basic information on the partners but will in future contain the profile of the main contributors, interviews with the PhDs involved in the project and some virtual tours of the facilities for testing of ALPHEUS equipment.

3.5 Social Media

The Social Media communication strategy is to communicate across the most relevant channels to targeted audiences, these include:

- LinkedIn, a showcase page has been created in order to let people follow the project progress and its development: <https://www.linkedin.com/showcase/alpheus-h2020/>



- ResearchGate is a community dedicated to the wider technical audience and a dedicated project page has been created: <https://www.researchgate.net/project/ALPHEUS-Augmenting-grid-stability-through-Low-head-Pumped-Hydro-Energy-Utilization-Storage>
- Twitter, a twitter handle is going to be created as @ALPHEUS-H2020 to also share news and relevant items to the public
- Across all social media channels, we will be using #alpheus as the main hashtag to collect the relevant posts

As we develop more content, we can experiment with a number of additional social media channels such as Instagram or Facebook to try and reach a wider audience.

3.6 Key Performance Indicators

A very important factor for the website and mailing list management is to attract views and audience while building a network of contacts interested in following the project progress.

Alpheus website will use Google Analytics tracking code to count the number of visitors and the audience while MailChimp will contain the names and email address of people subscribed to the mailing list and newsletter.

The website KPI have been agreed as:

- At least 10,000 people visited the website
- At least 2 newsletters are published
- At least one non-scientific publication is presented

4 Conclusion and Recommendation

The website operates like a live interface between the project members and the scientific community and general public, as such it is important to keep constant flow of information throughout the entire duration of the project. This will be achieved with a combination of project deliverables but also coverage of the partners, the researchers and their facilities.

Over time we can see the website growing as a good repository of information related not only to the ALPHEUS project itself but also surrounding structures and general stakeholders.