PROJECT DELIVERABLE REPORT

D9.3 Project Website

A holistic water ecosystem for digitisation of urban water sector

SC5-11-2018

Digital solutions for water: linking the physical and digital world for water solutions

Document Information

Grant Agreement Number	820985	Acronym	NAIADES	
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Project Coordinator	CENTER FOR RESEARCH AND TECHNOLOGY HELLAS - CERTH			
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Revision History

Version	Date	Responsible	Description/Remarks/Reason for changes
0.1	28/08/2019	MI	Report write-up
0.2	30/08/2019	AIMEN	Internal Review
1.0	2/09/2019	MI	Review and Release
2.0	01/07/2021	MI	Report revision and update of relevant content following modifications on the website
2.1	01/07/2021	UDGA, AIMEN	Internal Review
2.2	1/07/2021	MI	Final submission

Detailed Updates of Revision 2.2

The table below offers a summary of the changes in the deliverable. However, most changes mentioned here took place on the website.

Number of Section	Title	Update	Description/Remarks/Reason for changes
3.2	Website Design and Structure	Design	Inconsistencies regarding the employed design (use of colour scheme, font, alignment, etc.) were eliminated and the design was harmonized. Certain visuals were also considered as having the need to be improved and were thus adapted.
3.2.1	Homepage	Design and Visuals	A quick access section for upcoming events has been added below the four tabs to access the consortium, the deliverables, the project and the pilots. Regarding the header, icons to access the social media channels of NAIADES have been included on the right, whereas the footer has been replaced with a new one.
3.2.2	Events	Content and Design	The design of the page has been adapted to a become more attractive and all past and upcoming events have been updated with a descriptive text and a respective image.
3.2.3	Project	Design	**About the Project**: Slight modification of the page, with the most notable change being the new icons for the four application domains.
			Expected Impact: Minor design modifications.
			Pilot Use Case: Rearrangement of page setup, with the use cases being put at the top of the map. Furthermore, the previous feature of dragging the arrow over each use case tab to make it flip and giving the visitor the possibility to access the additional pages was eliminated, as it was considered user-unfriendly. Instead, a static design was implemented.
			Picture Galleries: Minor design modifications
3.2.4	Results	Content and Design	**Deliverables**: The design of the page has been thoroughly changed. When landing on the page, each Work Package is shown and to access the respective deliverables, the user can simply click on the different folders.

			Presentations & Publications: The previously existing pages "Presentations" and "Published Papers" have been joined to one single page. Five folders for different types of publications (e.g., theses, online resources, etc.) have been created and relevant content has been uploaded to the website which can be downloaded by the visitor.
3.2.5	Blog	Content and Design	A "Blog" page has been created on the NAIADES website to disseminate blog posts written by the consortium partners. The design was adapted in a way that it is uniform with the rest of the site.
3.2.6	Consortium	Design	The design of the page has been changed in a way to adapt it to the rest of the NAIADES website. Also, the user can now directly click on the logo of the partner to access the respective website which makes it more user-friendly.
3.2.7	Contact	Design	The design of the contact page has been modified and quick access to the three social media channels as well as to upcoming events has been added.
4	Statistics	Content	To illustrate the evolution of views on the NAIADES website, a section on statistics has been added to the deliverable.
5	Conclusion	Content	The conclusion has been updated in function of the revised text.

Contents

List of Figures

1   Summary

The deliverable D9.3 'Project Website' is a public document of the NAIADES project, produced in the context of WP9.

The NAIADES website is the main platform for promoting and disseminating the project's objectives, pilot use cases, activities, events and results to a wide audience. The NAIADES website was developed in a clear and user-friendly way.

In order to guarantee the successful promotion of the project, to sustain the interest of the target audience and to draw new visitors, the website's content is being maintained, continuously updated and populated with new information throughout the project's lifetime.

2 Introduction

Within the NAIADES project, a work package on Raising Awareness, Standardisation and Exploitation Roadmap (WP9) has been included in order to carry out diverse internal and external activities related to the project. The objectives of WP9, as per the Grant Agreement, include 'disseminating the NAIADES achievements and findings to all key actors in the field' and 'organizing and/or publishing results in international journals, conferences, and workshops to inform the scientific community about NAIADES, its goals, activities and results and to gather valuable information on related issues'. In order to meet these objectives, the NAIADES project website will be used, as one of the key dissemination tools.

The NAIADES project has developed its own web site, which can be accessed at https://www.naiades-project.eu/ . Through the website, visitors can find project relevant information, documents and other important materials such as results and outcomes of the project. The here presented deliverable D9.3 "Project website" describes the key points of design, structure, execution, and content.

The role of the NAIADES website is to provide information concerning the project to a very broad community. The following target groups were identified:

- the general scientific community and R&D industrial departments,
- the European Commission,
- journalists, general public and stakeholders,
- companies in smart water management sector,
- city administrators,
- policy-makers,
- standardization bodies,
- other private or public organizations.

Mandat International, as WP9 leader, is responsible for the development and maintenance of the website. However, since the main objective of the website is to successfully disseminate the achieved project results of all Work Packages during the lifetime of the project, all partners are engaged to the contribution of the website.
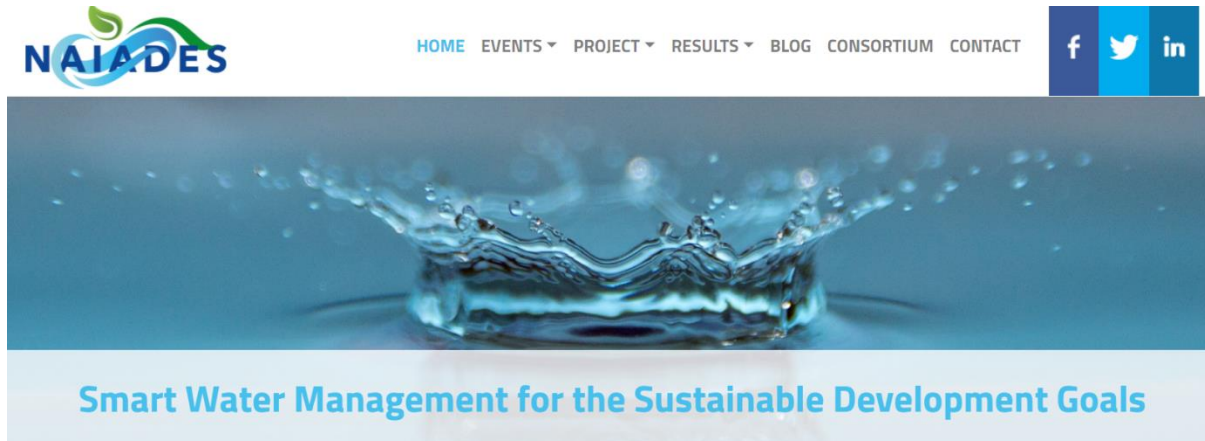
3 The Website

A website dedicated to NAIADES was designed and developed from M2 of the project under the leadership of Mandat International. This website intents to be an attractive platform for the project and a vehicle for the effective dissemination of the latest news, events and results.

3.1 Website Creation Process

In order to foster collaboration at the WP9 level, Mandat International organized an e-meeting in M2 inviting all the members of the consortium in order to discuss the website requirements prior to development. During the conference call, Mandat International presented a document containing a mock-up template of the website to the partners, including suggested content for each of its pages. The partners were actively encouraged to provide their comments during the call, and the structure of the website was consolidated and validated. After the call, Mandat International sent out an e-mail to the consortium, requesting the partners to further review the mock-up template and the content of the website by the middle of M3. In parallel, the mock-up template was shared and reviewed by Mandat International's website developer, who proceeded to the implementation of the desired results. The website was finalized at the end of M3. In M24 and M25 of the project, the website was extensively updated, existing gaps and inconsistencies were resolved and the website was generally enriched. The following sections will draw upon the structure and content of the website while carefully explaining the functionality of each page.

3.2   Website Design and Structure

The design of the website strives to be clear, aesthetical, easy to navigate and well connected to all social media platforms the project is making use of (namely Twitter, Facebook and LinkedIn) while providing access to all the related and updated information. The web page was designed to be browsed both on traditional computer displays and on smartphones. The pages adapt dynamically to the screen space, as seen in the **Error! Reference source not found.** and **Error! Reference source not found.** below:

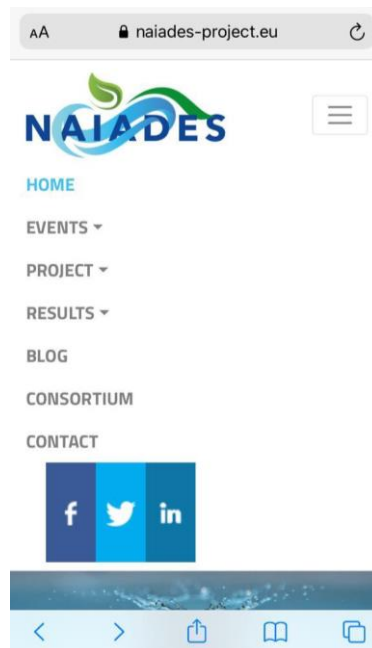*Figure 1: NAIADES Website - Computer Display*

Figure 2: NAIADES Website - Smartphone display

When accessing the website both on the smartphone or the computer, a pop-up appears at the bottom of the page, asking the visitor to either accept or decline the cookies policy (See Figure 3).

Figure 3: Pop-up Cookies Policy

3.2.1   Homepage

The homepage with the project logo is the first page appearing upon entering the website's address http://www.naiades-project.eu. It briefly describes the project and gives fast access to key project information through four tabs relative to the consortium, the deliverables, the project and the pilots. A "Tweets" section appears on the right, and is generated from a dynamic RSS feed based (See Figure 4) on the project's Twitter account. Furthermore, a quick access section for upcoming events below the four mentioned tabs allows users to gain an impression of future relevant events.

Figure 4: NAIADES RSS

The header (See **Error! Reference source not found.**) of the website consists of the NAIADES logo on the left and a quick access to the three social media profiles on the right, as well as of the following menu and submenus (shown above each page):

- Homepage (Home)
- Events
    o Upcoming Events
    o Past Events
- Project
    o About the Project
    o Expected Impact
    o Pilot Use Cases
    o Picture Galleries
- Results
    o Newsletters
    o Deliverables
    o Presentations & Publications
    o
- Blog
- Consortium
- Contact

The bottom of each page of the website contains a footer (See **Error! Reference source not found.**6) containing the NAIADES logo, an additional design element.as well as links to the Facebook, Twitter and LinkedIn pages and information on the EU grant agreement. Below, the user can find a listing offering quick access to the privacy and cookies policy, the "About the Project" and "Consortium" page as well as to the contact form.
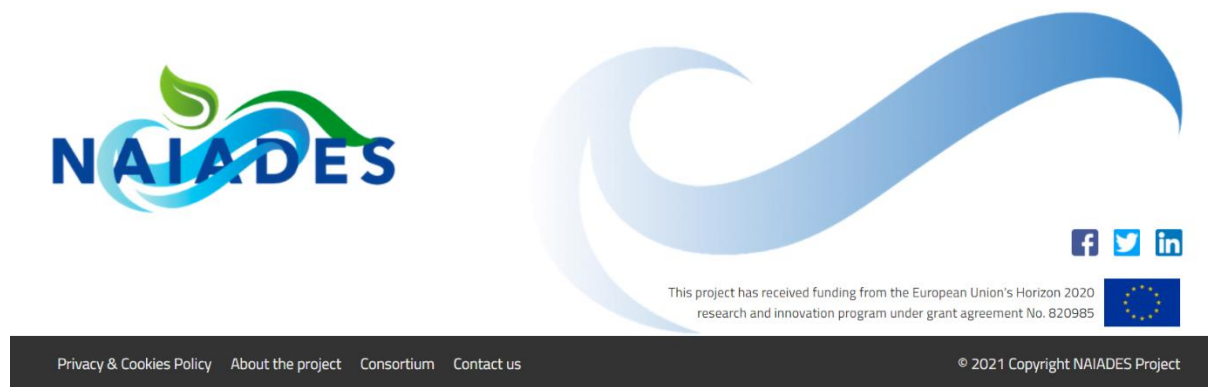

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 820985

Privacy & Cookies Policy   About the project   Consortium   Contact us   © 2021 Copyright NAIADES Project

Figure 6: NAIADES Website Footer

3.2.2   Events

The "Events" section lists all the past and upcoming events in which the NAIADES project was or will be involved. The listing of each event contains title and date and is enriched by a visual to make the page more attractive to the visitor (See Figure 7). By clicking either on the name or the image of a specific event, the user can access a subpage with more detailed information such as a brief description and the location of the conference.
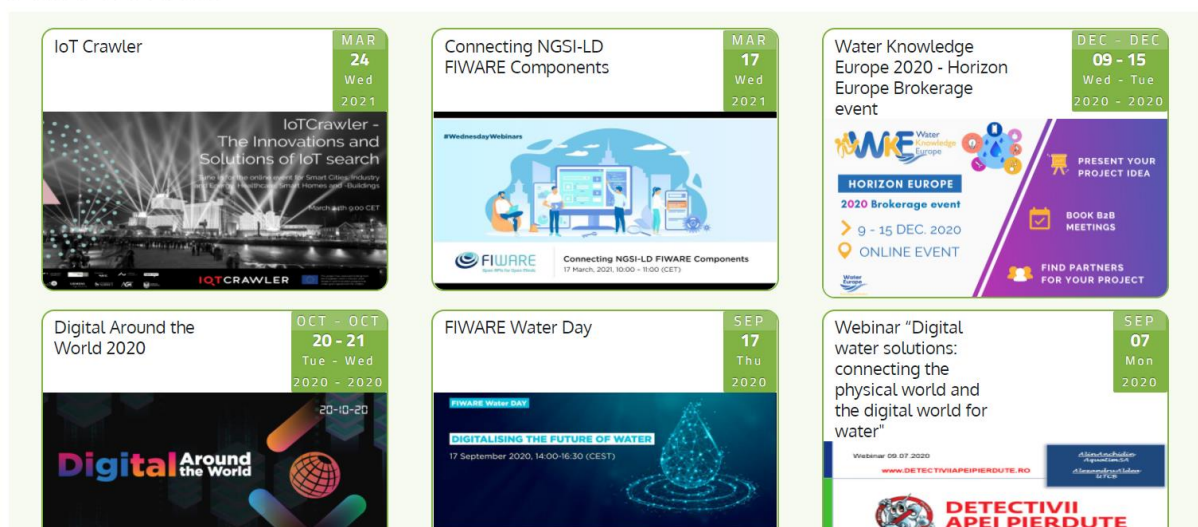
Past Events

Figure 7: Overview Design Events Page

3.2.3   Project

The Project menu is subdivided into 4 sub-sections which strive to provide a comprehensive overview of the NAIADES activities.

The page "About the Project" (See **Error! Reference source not found.**8) offers a brief description of the project and its objectives. It introduces the four application domains relevant to NAIADES including water consumption & efficiency, confidence of water consumers, safety & reliability, and personalised persuasive feedback and services.

The Project

NAIADES's vision is to support the modernization and digitization of water sector by providing a holistic solution for the control and management of water ecosystems. NAIADES aims to address the increased need for sustainable and eco-friendly water methodologies by defining a new ICT framework, with a wider scope than a sole technical proposition. Driven by the need to yield an end-to-end, uniform approach, NAIADES redefines water management by taking into consideration issues pertaining to cost, safety, complexity, vulnerability, societal acceptance, user behaviour and ethics.

NAIADES covers four application domains:

APPLICATION 1
Water consumption & efficiency
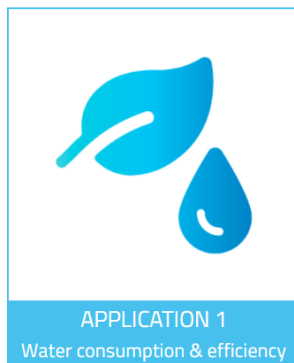
NAIADES aims to minimize the cost for water utilities by developing, implementing and integrating several innovative tools in the proposed ecosystem:

○ Optimization of water consumption and smart water operation scheduling tool that will enable the optimization of water consumption in combination with real-time smart water planning;

○ A personalized water behavioral change support mobile application, which will aim to enhance public awareness on water consumption and usage savings by providing the users with detailed information about their water consumption, thus aiming to enhance public awareness on water consumption and usage savings, promoting user engagement and enhancing user participation in water conservation activities;

○ By developing and implementing the Water demand prediction Toolkit which will predict the water demand in order to save water resources, reduce operation and energy costs and greenhouse gases; and by the development and use of a single metadata harmonization tool which will contribute to the reduction of computation cost (by feature extraction, factor analysis, etc.).

All these innovative technological tools of NAIADES system will enable a radical transformation of the water sector making existing technologies more performant and therefore more cost-efficient and attractive for the market.

Figure 8: About the Project

The "Expected Impact" page summarises the general projected outcome of the project, and also provides a more detailed overview of the expected impacts for each of the work packages.

The "Pilot Use Cases" page delves into the three cities where the project's demonstrations will take place (i.e., Alicante, Brăila and Carouge). After a brief introduction of the general aim of the NAIADES use cases, each city is presented individually. The user can click either on the picture or the "View more details" button of each tab to obtain more details on each pilot (See Figure 9).
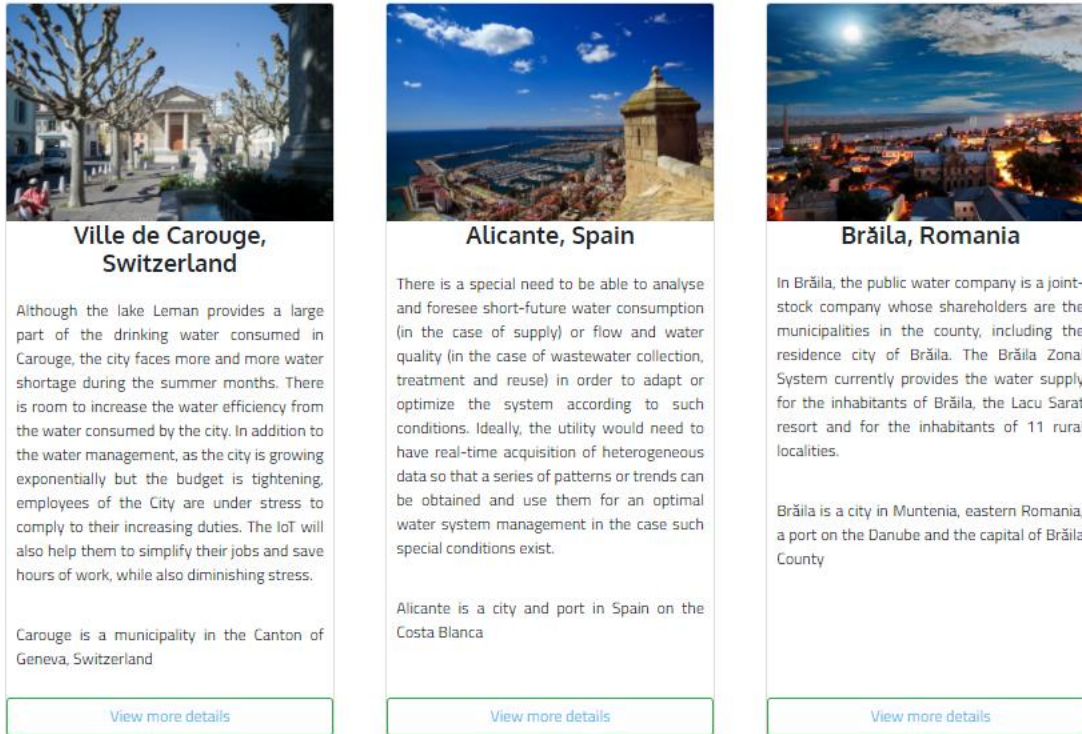
Ville de Carouge, Switzerland

Although the lake Leman provides a large part of the drinking water consumed in Carouge, the city faces more and more water shortage during the summer months. There is room to increase the water efficiency from the water consumed by the city. In addition to the water management, as the city is growing exponentially but the budget is tightening, employees of the City are under stress to comply to their increasing duties. The IoT will also help them to simplify their jobs and save hours of work, while also diminishing stress.

Carouge is a municipality in the Canton of Geneva, Switzerland

View more details

Alicante, Spain

There is a special need to be able to analyse and foresee short-future water consumption (in the case of supply) or flow and water quality (in the case of wastewater collection, treatment and reuse) in order to adapt or optimize the system according to such conditions. Ideally, the utility would need to have real-time acquisition of heterogeneous data so that a series of patterns or trends can be obtained and use them for an optimal water system management in the case such special conditions exist.

Alicante is a city and port in Spain on the Costa Blanca

View more details

Brăila, Romania

In Brăila, the public water company is a joint-stock company whose shareholders are the municipalities in the county, including the residence city of Brăila. The Brăila Zonal System currently provides the water supply for the inhabitants of Brăila, the Lacu Sarat resort and for the inhabitants of 11 rural localities.

Brăila is a city in Muntenia, eastern Romania, a port on the Danube and the capital of Brăila County

View more details

Figure 9: Pilot Use Case Tabs

At the bottom of the page, the three cities are positioned on a dynamic Google map (See Figure 10) to help the visitor locate them geographically.
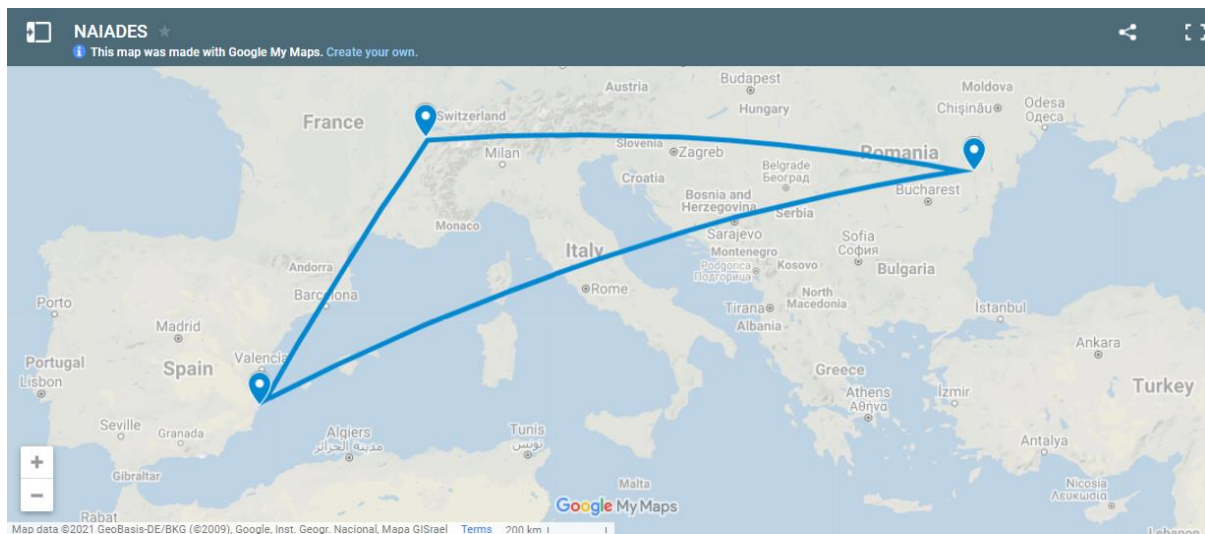
Figure 10: Map of Project Pilots

Finally, the submenu 'Picture galleries' (See Figure 11) displays photographs from relevant project events as well as from the pilots.

Picture Galleries

Alicante - Project meeting (January 2020)

Brăila

Carouge

Alicante

Figure 11: Picture Galleries

3.2.4 Results

The 'Results' section provides all the related NAIADES documented material. Three pages, reachable through the provided submenu, give access to the newsletters, the deliverables and to relevant presentations and publications (See Figure 12).
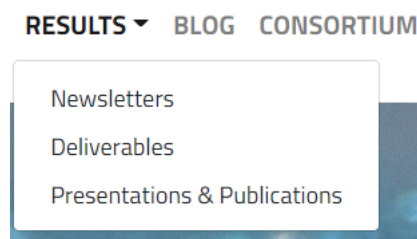

RESULTS ▾ **BLOG** **CONSORTIUM**

Newsletters

Deliverables

Presentations & Publications

Figure 12: Results Submenu

The 'Newsletter' page presents a list with the project's newsletters. The user of the website can download the provided newsletters using the associated hyperlink to each issue.

Deliverables

The following page contains the list of the public NAIADES deliverables. The deliverables will be published after successful completion of the review.

📂 WP1 Project Management, Quality Assurance and Reporting

Project Handbook
Scientific and Innovation Roadmap
Scientific Roadmap and innovation management Evaluation
Ethical HelpDesk Reports - Mid-term
Ethical HelpDesk Reports – Final
Data Management Plan
Recommendations for Data Policy
NAIADES IPR Plan & IPR Management

📁 WP2 SDGs and End-user Driven Requirements and Architecture

📁 WP3 Data and Sensors Infrastructure

📁 WP4 NAIADES Smart Framework: AI monitoring, optimization and treatment modules

Figure 13: Deliverables Page

On the 'Deliverables' page (See Figure 13) all the project deliverables are listed. Once published, the public deliverables are made available for preview and download.

The 'Presentations & Published Papers' section of the website is subdivided into five categories, namely presentations, online resources, scientific publications, theses and published papers. They include a selection of the most relevant public resources produced by the NAIADES consortium. Each subsection provides a table including information on the date of publication, language, the general topic and the title of the resource as well as offering the option for downloading the relative document.

3.2.5   Blog

The "Blog" page provides access to contributions from the consortium partners that are being gathered as part of the dissemination activities. The listing on the main page provides the title and a brief introduction to each blog post (See Figure 14). By clicking either on the title or the supporting visual, the user can access the post in its entirety.

Blog

Laboratory plants for a better drinking water treatment

In drinking water supplies systems, water from natural courses is fully treated before being supplied to a distribution system from where it will go to consumers. Water treatments consists in sequential units to eliminate pollutants and pathogens. It usually includes pretreatment; coagulation, flocculation and sedimentation; filtration and disinfection. Performance models can help in understanding and predicting treatments effectiveness, especially in stream events when abstraction water changes like during storms or droughts.

Water consumption prediction - the NAIADES approach

The water consumption prediction has an important place within the water economy. For example, Alicante water utility, in order to be able to distribute potable water to its residents, needs to fill its water tanks. Due to lower energy prices, Alicante water utility is refilling their water tanks over the night – every night. In order to prevent bacteria development in potable water, water needs to be consumed – or disposed (a loss).

NAIADES – defining use cases to improve water management via digital innovations

The NAIADES project envisions the use of digital innovations for improved water management in three pilots in Europe, Alicante (Spain), Braila (Romania) and Carouge (Switzerland). An important step in the project is the identification of needs and the subsequent definition of use cases. This task, carried out by IHE in collaboration with all the partners in the project, promoted discussions among partners and stakeholders during the first half of the project, which complemented the findings of earlier visits made to the pilots of Alicante and Braila.

Figure 14: NAIADES Blog with Contributions of Partners

3.2.6   Consortium

The consortium page consists of two components. First, all members of the NAIADES project are presented in a visual way through the use of an interactive map. By clicking on each of the location tags, the user can access the respective partner's information such as name, logo, link to website and country (See Figure 15)
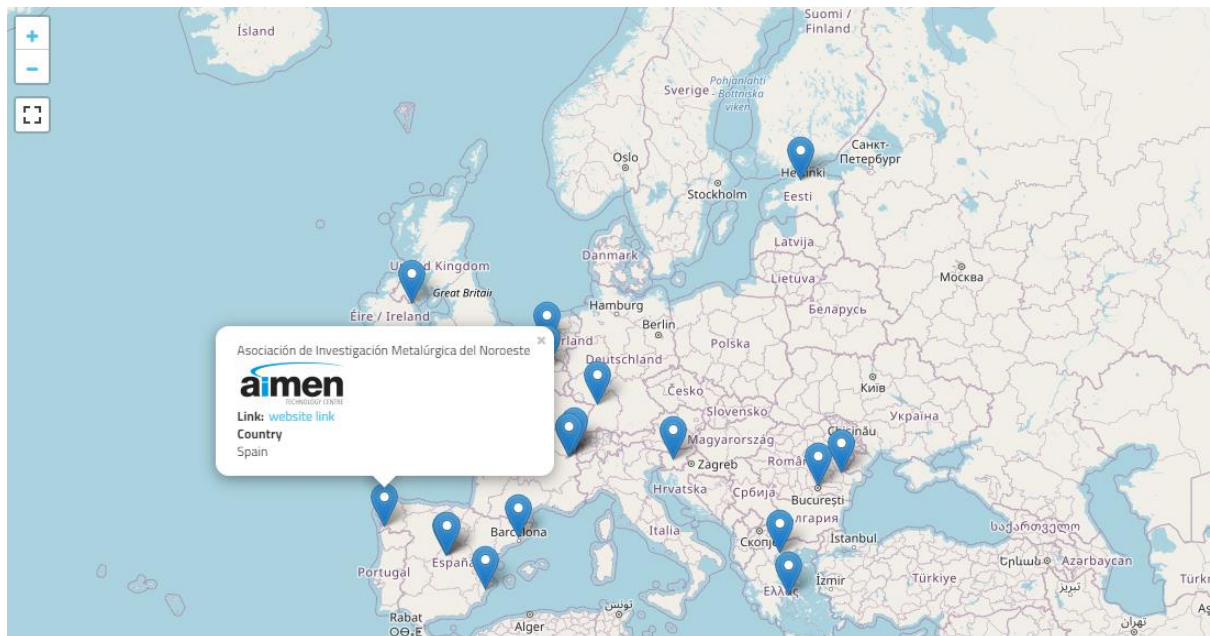
Figure 15: Consortium Map

Under the map, all partners are listed in a dedicated table, including the logo, the name of the partner and the location (See Figure 16). To access the organization's website, the user can simply click on the logo to be redirected to the respective site.

Logo	Name	Country
CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS	Centre for Research and Technology Hellas – CERTH	Greece
iBO Institute for Bio-economy & Agri-technology	Institute for Bio-Economy and Agri-Technology - iBO	Greece
konnektable TECHNOLOGIES	Konnektable Technologies Limited	Ireland
MANDAT INTERNATIONAL	Mandat International (Fondation pour la Coopération Internationale)	Switzerland
UDG Alliance	UDG Alliance	Switzerland
aimen TECHNOLOGY CENTRE	Asociación de Investigación Metalúrgica del Noroeste	Spain

Figure 16: List of NAIADES Partners

3.2.7 Contact

The 'Contact' Page allows the visitor to fill in a form to directly contact NAIADES representatives. Messages sent via the contact form are forwarded to contact@naiades-project.eu. All received messages at this address are redirected to the respective project partners (CERTH, the coordinator, and the WP9 lead, Mandat International) which are charged with answering to the requests. Next to the contact form, there is also a quick access to the social media platforms of the project and upcoming events (See Figure 17).

Figure 17: Overview of Contact Page with Form and Direct Access to Social Media and Upcoming Events

4 Statistics

The NAIADES website managed to attract increasing number of visitors over the advancing of the project (See Figure 18). Indeed, whereas between M3 to M7, an approximate number of 1,200 users visited the web page, in year two of the project (M8 to M19), already around 8,500 people interacted with the website. These numbers rose further in the first six-month period of year three (M20 to M25), during which a total amount of roughly 6,700 visitors could be recorded. This corresponds to an increase of 58%.

2019

Summary					
Reported period	Year 2019				
First visit	26 Aug 2019 - 11:59				
Last visit	31 Dec 2019 - 23:25				
	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Viewed traffic *	<= 1,177 Exact value not available in 'Year' view	1,793 (1.52 visits/visitor)	4,632 (2.58 Pages/Visit)	35,674 (19.89 Hits/Visit)	1.62 GB (944.88 KB/Visit)
Not viewed traffic *			1,607	2,881	16.12 MB

* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

2020

Summary					
Reported period	Year 2020				
First visit	01 Jan 2020 - 00:20				
Last visit	31 Dec 2020 - 23:43				
	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Viewed traffic *	<= 8,511 Exact value not available in 'Year' view	15,754 (1.85 visits/visitor)	67,500 (4.28 Pages/Visit)	204,372 (12.97 Hits/Visit)	9.10 GB (605.65 KB/Visit)
Not viewed traffic *			16,857	27,145	105.00 MB

* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

2021

Summary					
Reported period	Year 2021				
First visit	01 Jan 2021 - 00:05				
Last visit	30 Jun 2021 - 17:10				
	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Viewed traffic *	<= 6,724 Exact value not available in 'Year' view	15,868 (2.35 visits/visitor)	34,899 (2.19 Pages/Visit)	109,211 (6.88 Hits/Visit)	9.70 GB (640.77 KB/Visit)
Not viewed traffic *			15,637	24,372	99.75 MB

* Not viewed traffic includes traffic generated by robots, worms, or replies with special HTTP status codes.

Figure 18: Overview of Development of Visitors on the NAIADES Website from August 2019 to June 2021

Countries			
Countries		Pages	Hits
United States	us	12,630	27,445
China	cn	5,124	7,621
Russian Federation	ru	2,450	2,969
Germany	de	1,850	4,375
Unknown	unknown	1,637	10,028
France	fr	1,303	3,514
Ukraine	ua	1,204	1,649
Switzerland	ch	929	5,966
Spain	es	680	6,385
Great Britain	gb	655	3,457
Czech Republic	cz	514	1,224
Netherlands	nl	488	2,165
India	in	479	1,451
Canada	ca	430	1,403
Romania	ro	430	3,766
Greece	gr	337	3,868
Belgium	be	314	2,334
Italy	it	304	2,168
Moldova	md	291	414
Ireland	ie	238	936

Figure 19: List of Top 20 Countries Visitors Accessed the Website from between January and June 2021

Regarding the country domains visitors accessed the website from, it can be noted that between January and June 2021 most hits were made from the United States, China and Russia. However, all countries of origin of the consortium partners, except Slovenia and Estonia, are present in the top 20 visitors (See Figure 19).

5   Conclusion

Currently, the NAIADES website is one of the most essential dissemination tools. Throughout the project, the NAIADES consortium is continuously updating the contents of the website, notably by providing blogposts for the "Blog" page and adding information about upcoming events to the "Events" section. In particular, newly produced dissemination material as well as publications and public deliverables are regularly being added to the 'Results' section, in order to offer the user a comprehensive overview of the new accomplishments of the project. Moreover, other relevant pages such as the "Events" section and the "About the Project" page are also being updated whenever needed.

The website content is continuing to grow and evolve with the project. New inputs are keeping the website visitors informed of upcoming events, achieved results and other relevant topics.