



Project Title:

Autonomous self powered miniaturized intelligent sensor for environmental sensing and asset tracking in smart IoT environments



AMANDA

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Deliverable

DELIVERABLE D7.1 Project’s web site

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Executive Summary

The present document is a Deliverable of the AMANDA project, funded by the European Commission's Directorate-General for Research and Innovation (DG RTD), under its Horizon 2020 Research and innovation programme (H2020). It provides an overview of the AMANDA web site, its content and layout and the technologies used for its development. The web site was created in an easy to navigate and informative way, as a means to promote the dissemination of the project's results and its findings and to increase the project's impact.

The web site development was performed by PENTA, as the Dissemination & Communication Leader of the project, with support and feedback provided by the AMANDA Consortium. PENTA is responsible for the maintenance of the web site throughout the duration of the project through any necessary software updates and the incorporation of all relevant dissemination material, including public Deliverables, publications, articles, press releases, a newsletter as well as short videos and other multimedia content, in order to achieve a high level of visibility for the project's outcomes.

The AMANDA dissemination and communication activities performed as part of Task 7.2 will be monitored from the beginning of the project to its conclusion, to ensure that they are consistent with the Dissemination and Communication plan developed by Ilika for Task 7.1 and highlighted in Deliverables D7.3, D7.6 and D7.9. Reports on the dissemination and coordination with relevant activities will be described in Deliverables D7.4, D7.8 and D7.11.

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1. Introduction

1.1 Scope and Objectives

The purpose of Deliverable D7.1 – “Project’s web site” is to detail the development, deployment and maintenance of the AMANDA project’s web site, the central hub for content, channels and communities underlying the project’s dissemination plan. The site is designed in such a way to also act as a one-stop shop to access all information and services related to different AMANDA activities and to serve as a focal point for the project’s communication and dissemination activities. It was developed with a focus on presenting information in a clear and visually attractive way.

This document outlines the development of the AMANDA web site, summarizing the initial structure and content of the site at launch. The objectives of the project’s web site include the following:

- The web site is designed with ease of navigation in mind. It is created in such a way to be a comprehensive source of information for the AMANDA project
- The content, including dissemination material and the project’s outputs, will be relevant to different stakeholder groups, providing updates on the project’s progress
- To actively engage with stakeholders, a newsletter functionality will be included
- The web site framework is flexible in its structure, allowing not only for its expansion throughout the project’s lifecycle but also for its evolution beyond that.

The Deliverable is structured as follows:

- The first Section discusses the scope of the project’s web site and details the objectives behind its development
- The second Section details the design of the web site, giving emphasis to the responsive design paradigm followed and analyses the development process presenting the various technologies used. The site structure and appearance at launch are also discussed
- The third Section gives the conclusions of this Deliverable

1.2 Relation to Other Tasks and Deliverables

Deliverable D7.1 is the first Deliverable of WP7 – “Dissemination and Exploitation”. It focuses on the development, deployment and maintenance of the AMANDA web site, a central dissemination objective of the project that influences several associated Deliverables within AMANDA, as listed in the Table below.

Table 1 Relation to Other Tasks

Deliverable	Title	Lead beneficiary	Dissemination level
D7.3	Dissemination and Communication Plan v1	Ilika	Public
D7.4	Dissemination and Coordination with Relevant Activities Reports v1	PENTA	Public

D7.6	Dissemination and Communication Plan v2	Ilika	Public
D7.8	Dissemination and Coordination with Relevant Activities Reports v2	PENTA	Public
D7.9	Dissemination and Communication Plan v3	Ilika	Public
D7.11	Dissemination and Coordination with Relevant Activities Reports v3	PENTA	Public

2. The Project's web site

2.1 General Information

The web site of the AMANDA project is hosted at <http://www.amanda-project.eu/>. It will serve as the central online hub of communications for AMANDA. Together with additional forms of communication that will be available at a later date, such as social media presence, the newsletter, a monthly blog, webinar series and press releases the site will act as an amplifier of the project's key messages. The web site underwent a round of internal testing and review during the early days of January 2019 and went live on the 22nd of January 2019. The Figure below depicts the header section of the AMANDA web site at the day of its launch.

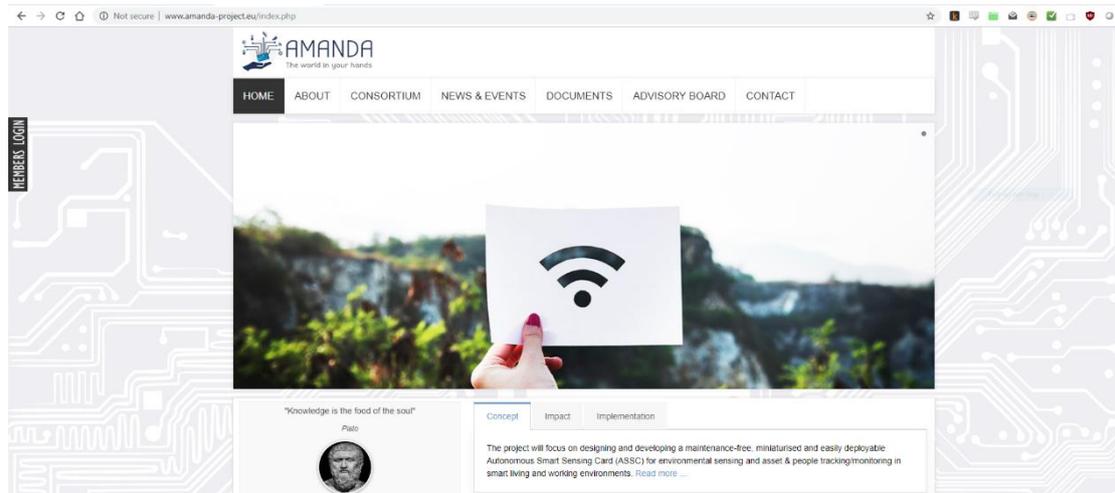


Figure 1 The header section of the AMANDA web site

The project web site is designed in such a way to target different target audiences that will be able to navigate the different sections of the web site in an easy and intuitive way. The broad range of key target audiences for the project's website includes:

- Partners of the AMANDA project
- EU bodies and regulatory bodies
- Researchers and the academic community from the fields of embedded systems, wearables, sensor development, wireless communication and/or energy harvesting
- The ESS community and related ICT service providers
- Industry users, such as key personnel from SMEs, mid-caps and start-ups seeking to adopt advanced electronic technologies and related ICT services
- Small, medium and large-scale consumers of embedded systems
- Aggregators
- Policy makers

The site will present the project brand and provide non-confidential information in a concise way, including:

- The project summary, ambition, concept and methodology
- Information on the Consortium, including links to each Partner's web site
- The core project objectives

- Project results
- Project's societal and industrial impact
- Organized and participated events

The web site will be visually attractive and presented in a clear and intuitive way, able to be navigated with ease. Information given will be current, relevant, engaging and timely. The site will be dynamic, making its updating flexible; content and whole sections may be added or removed as deemed necessary. It is designed following the responsive design paradigm, able to be rendered with an excellent design and with good performance in different categories of devices, such as PCs, tablets and mobile phones, to ensure the satisfaction of visiting stakeholders.

A number of different community tools will be part of the web site, to transform it to a stakeholder-led community hub. Thus, the stakeholders will be able to register their information through the web site, create their personal profile and subsequently share content, not only with the Consortium Partners but with other stakeholders as well, through a fully featured Discussion Board. Results of the project will also become available for stakeholders as soon as they are ready and publishable. At the end of the project, the web site will thus act as a central place for all post-project activities.

Different collaboration tools will also become available through the website, such as a Document Server, a Wiki and an Event Calendar, in order to aid the communication and development efforts of the AMANDA project's Partners.

PENTA is responsible for the hosting, development, maintenance and update of the AMANDA web site. PENTA, as the Dissemination & Communication Leader of the project, will also develop all required content for the site, including writing, editing and proofreading written content for each different section. To help in the enrichment of the site's content with a consistent stream of data, the relevant material, such as Publications, public Deliverables and project results will be gathered from all Partners. Multimedia content, such as images or videos will be also gathered or created by PENTA to complement all written material and enrich their presentation to make them visually appealing and easier to be comprehended by potential visitors. The same content can be written in a different tone or using a different language in order to target stakeholders with a different level of knowledge and expertise about specific areas of the project.

2.2 Development Approach

The AMANDA web site is dynamic in nature, enabling content and whole sections to be added, reorganized and removed during the life time of the project and beyond. It additionally follows a modular approach with a flexible, fluid and adaptive design according to the responsive design paradigm as mentioned above, using [1]:

- Media queries and media query listeners
- A flexible grid-based layout that uses relative sizing
- Flexible images and media, through dynamic resizing or CSS

The site is using content blocks, superimposed on a fluid grid. Each block can subsequently:

- Be moved around in relation to other blocks
- Be activated or deactivated freely
- Have its prominence increased or decreased

Moreover, all blocks within the grid and all content within each block are sized in relative units instead of absolute units such as points or pixels. This allows for a flexible web site that follows closely the research and innovation nature of the project; while a concrete roadmap on the progression of the project actions will exist, the tone and means of their communication to the appropriate stakeholders can be more fluid, being refined and modified in real-time. As new technologies are researched, novel results become available and additional material becomes current, the site can adapt accordingly, focusing on different aspects:

- New sections can become available, or more prominent in relation to existing ones
- Older sections can be deactivated or marked as less relevant
- Content can be added, removed, highlighted or enriched using multimedia material

Moreover, different content can be elevated to a more prominent position for a defined period of time, shifting placeholders' focus to a current event or initiative. After the specific period of time elapses, the content will make way to the next item of immediate relevance to take its place and will subsequently be moved to a less prominent part of the site.

The Figure below presents two different views of the AMANDA home page, highlighting its block-centric structure that follows the responsive design paradigm. On the left part of the Figure, the full version of the page is depicted, as rendered on the Chrome browser on a regular desktop PC using a landscape orientation with a 1920x1080 resolution. On the right part, the mobile version of the same page can be seen, as rendered by the Chrome browser on a modern Android phone using a portrait orientation and a 2280 x 1080 resolution. As is evident by the Figure, the different blocks that comprise the home page take advantage of the increased horizontal space when a desktop web browser is used but are dynamically constrained horizontally due to the limited available horizontal estate in the mobile version and instead expand vertically.

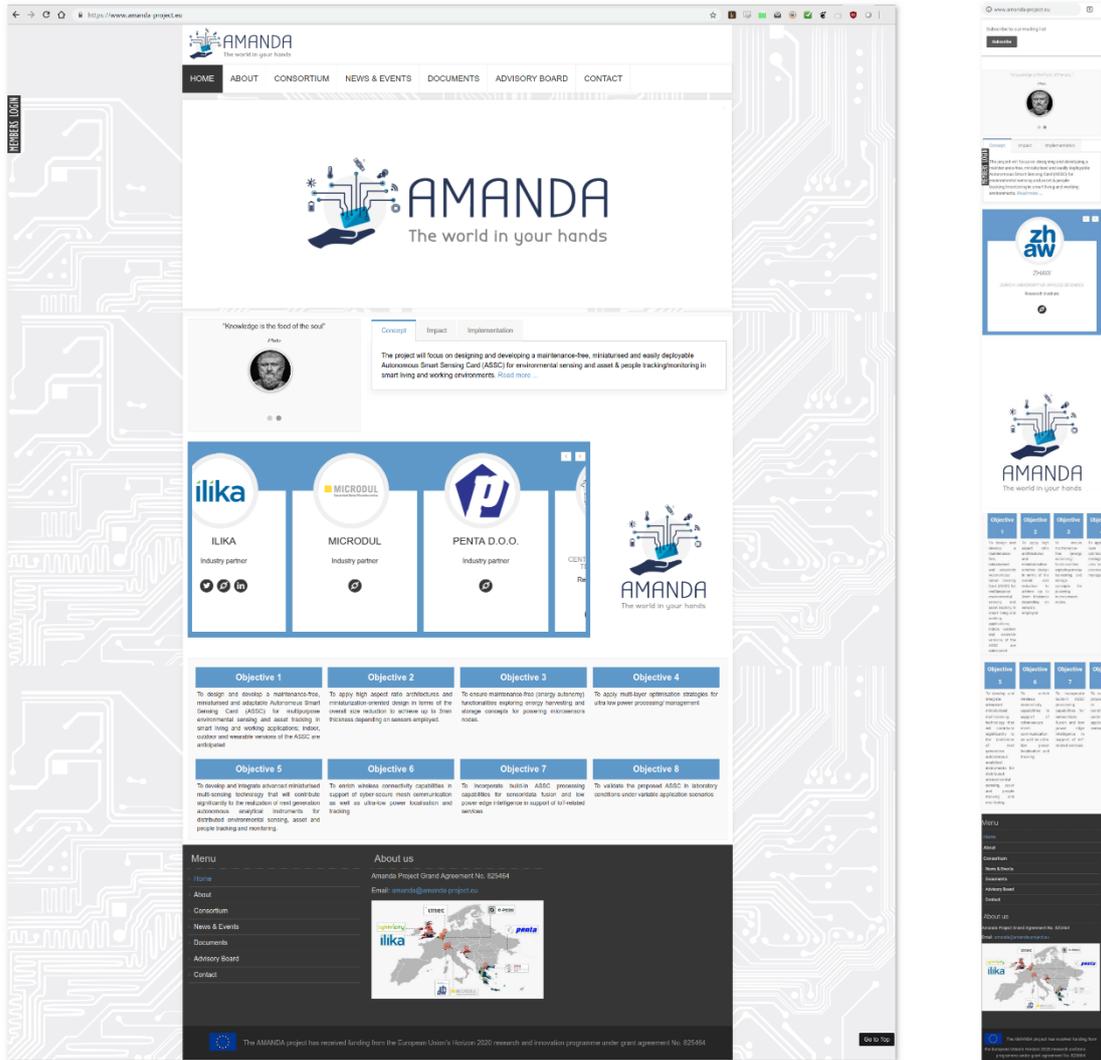


Figure 2 The desktop (left) and mobile (right) versions of the AMANDA web page at launch

2.3 Site structure at launch

The web site was launched during the very first month of the project, therefore at this early stage lacks important information such as Publications and public Deliverables, the specification of the AMANDA hardware, reports on the development of the ASSC, lab testing outcomes as well as different dissemination material and multimedia content. It already includes however all essential, for a H2020 Research and Innovation project, information sections.

The home page – gives important information on the project and highlights important content for different periods of time in an aesthetically pleasant way. The ‘members’ section, still under development, can be accessed from the left part of the home page using a login panel that is hidden by default to minimize visual clutter, as can be seen in the Figure below.

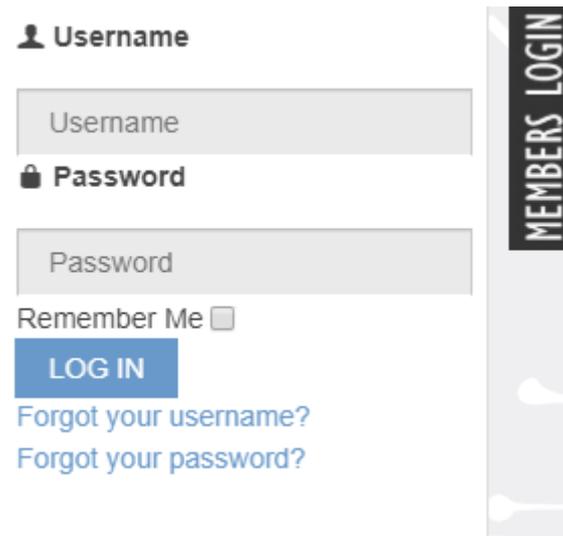


Figure 3 The login panel to access the 'members' section

The 'About' section – contains an overview of the project, including a preliminary representation of the design of the ASSC, including different sensors, the energy harvester, the rechargeable storage, the RF module and the interface electronics. The about section can be seen in the below Figure.

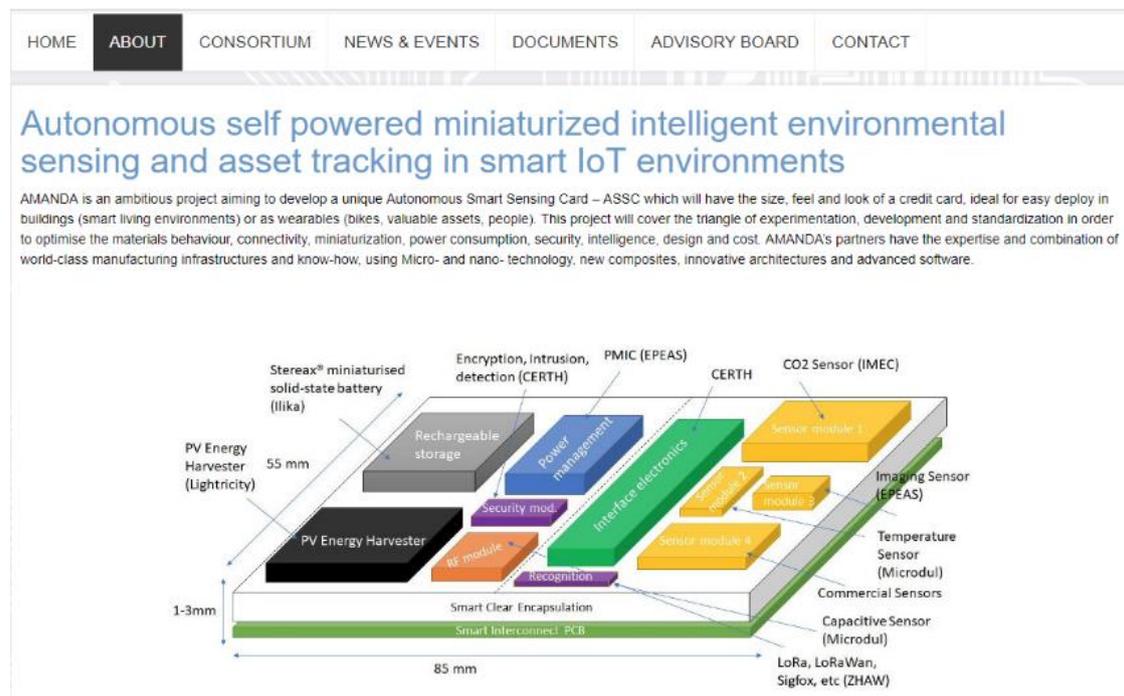


Figure 4 The 'about' section of the web site

The 'Consortium' section – includes information on the Partners of the consortium. Each Partner header is clickable and leads to an individual landing page per Partner, where

additional personalized information per Partner can be presented, as depicted in the Figure below.

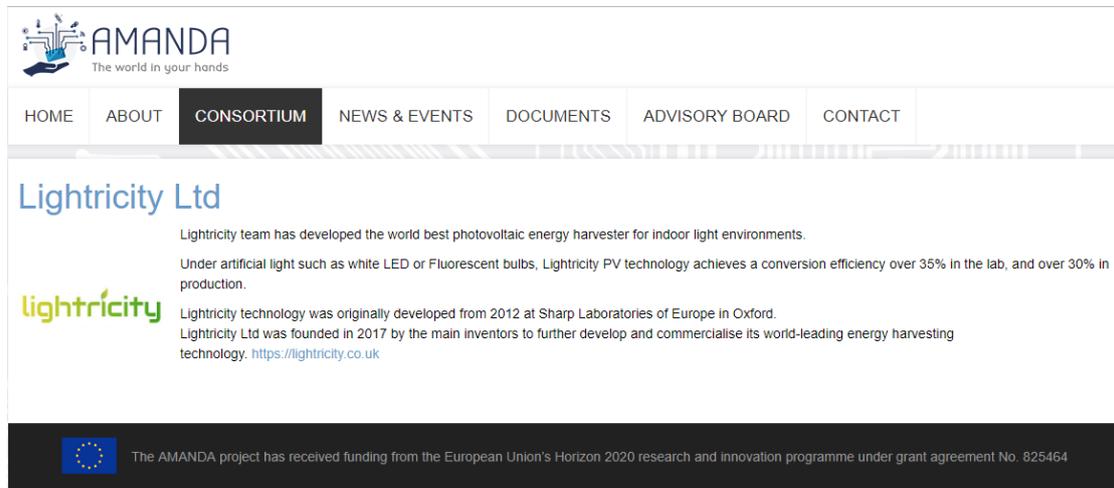


Figure 5 Personalized landing page per partner

The 'News & Events' section – gives information on important news regarding the AMANDA project, such as Milestones achieved, Publications on prestigious Conferences and Scientific Journals and important outcomes. Moreover, a list of past and upcoming events that the AMANDA project organized or where AMANDA partners participated is also featured in this Section. Initially, information on the AMANDA Kick-Off meeting hosted at the CERTH premises in Thessaloniki in the beginning of January 2019 is given, enriched using multimedia content, as can be seen in the below Figure.

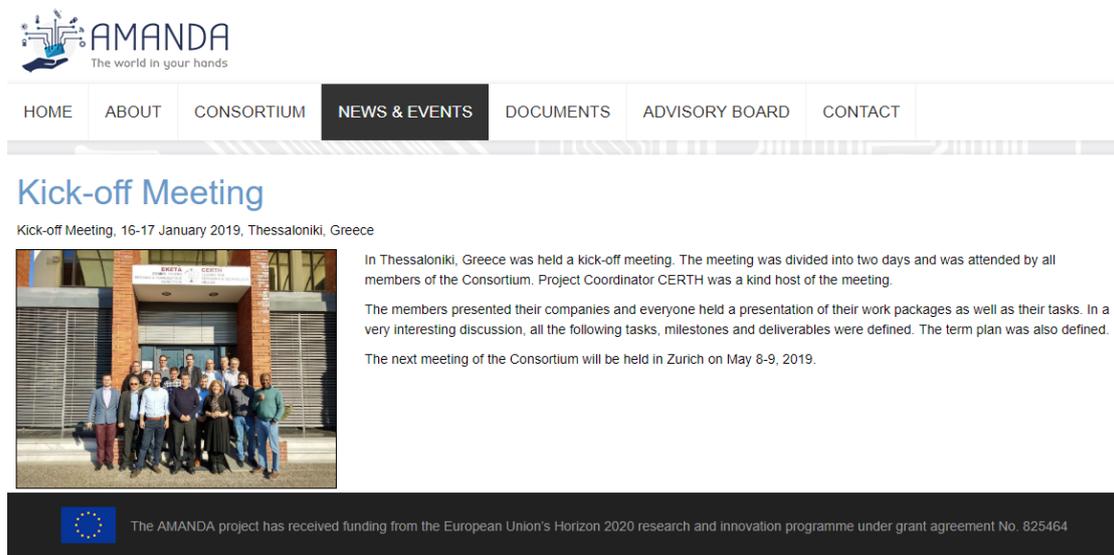


Figure 6 Information on the Kick-Off meeting held in Thessaloniki, Greece

The 'Documents' section – At launch, the Documents section consists of two subsections; a Dissemination material subsection as well as a Public Deliverables one. As the project

progresses, additional subsections will be added, such as Publications, Presentations and Press Kits.

The ‘Advisory Board’ section – This section will hold information on the External Advisory Group as soon as it will be established.

The ‘Contact’ section – The Contact section gives to the stakeholders a means of contacting the project representatives. Initially it contains the project’s E-Mail address, amanda@amanda-project.eu as a method of communication. The E-mail address is handled by the Project Coordinator and the Dissemination & Communication Leader. In the future, this section will be enriched with a contact form, to enable for a more user friendly means of communication.

2.4 Technologies Used

The website is built using the Joomla platform [2] a popular, free and open-source content management system (CMS) for publishing web content. It is developed using a model–view–controller web application framework, based on the PHP language for scripting and on a database layer for data storage that supports MySQL, MS SQL as well as PostgreSQL. The Joomla CMS can be used to create aesthetically pleasing, dynamic web pages. As of January 2019, around 3% of the total Internet web sites are powered by Joomla [3]. In addition to the Joomla core running on PHP, the web site also uses the JQuery, a fast, and feature-rich JavaScript library, in order to create a number of interactive and visual effects as well as motion.

Joomla is extendable, with more than 8.000 available extensions. These extensions can be used to expand the website functionality, with additional functionalities including multimedia, social web and social media, news display, site management, style and design, marketing and communication. As the web site matures and is developed further, it is anticipated that a number of additional extension, libraries and API calls will be used to expand the site’s functionality, such as calls to Google Maps, hooks to Twitter/Instagram/Facebook and other social media, APIs to track future newsletters and others.

Finally, the styling and theming of the site is completely separated from the actual content. It is designed by employing a cornerstone technology of the World Wide Web, Cascading Style Sheets (CSS). CSS is a style sheet language used to describe the presentation of a document, such as colors, layout and text fonts.

2.5 Impact Assessment

The website will be subject to the standard impact assessment practices through the lifetime of the project, in order to monitor its usage and implement changes when required, such as when result expectations are not met.

AWStats [4], an open-source tool that generates advanced web, streaming, ftp or mail server statistics graphically will be used to track the number of visits and to analyze trends in the behavior of visitors to the project’s website. The monitoring will be carried out throughout the lifetime of the project. By analyzing the output of AWStats, useful insight on the visitors can be obtained:

- Unique visitors
- Repeated visitors
- Duration of each visit

- Number of viewed pages per visit
- Popular site content

The content and structure of the web site can be adjusted accordingly in order to satisfy the needs of the visitors, prolonging their stay in the site, serving them with the most useful data and ultimately attracting additional traffic. Information on the project’s strategy to ensure the website is updated regularly with relevant information across all WPs in order to achieve a high level of visibility for the project’s outcomes will be available in Deliverable D7.3 – “Dissemination and Communication Plan” on M12.

The Figure below depicts statistics reported by AWStats on the number of viewed pages, number of hits and bandwidth, grouped for each day of the week:

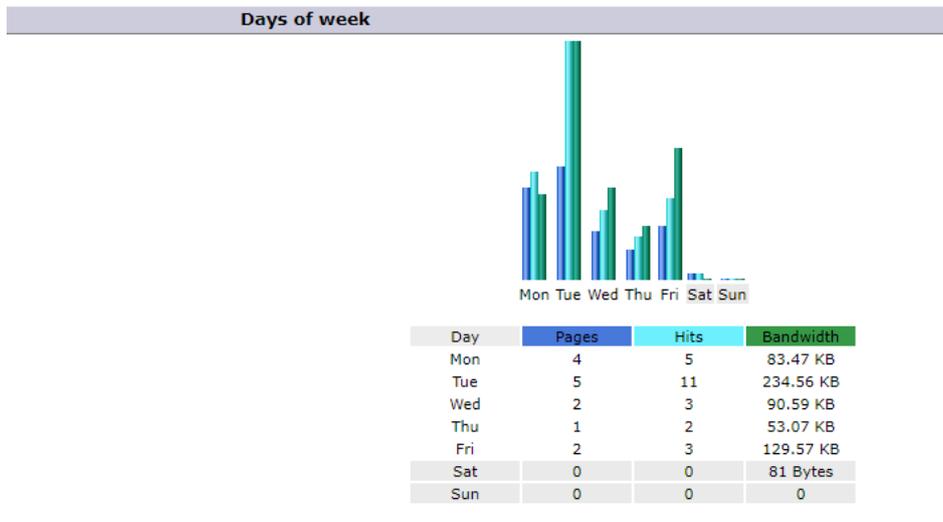


Figure 7 Viewed pages, number of hits and bandwidth, grouped per week day

The following Figure reports the same statistics, grouped per hour of the day:

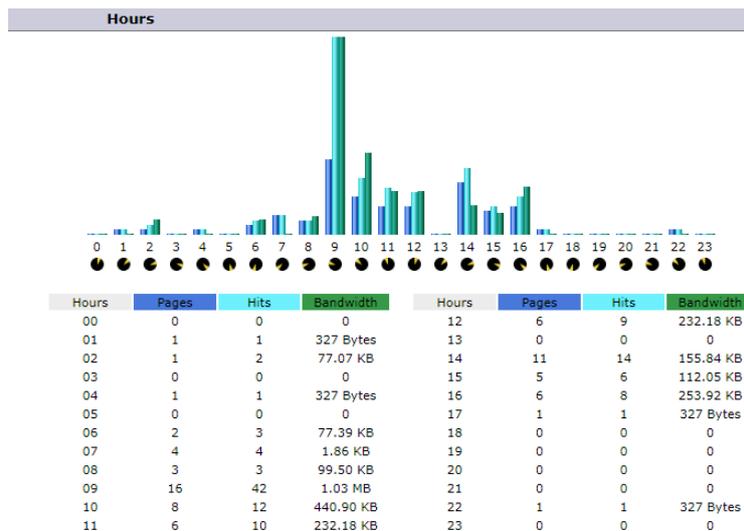


Figure 8 Viewed pages, number of hits and bandwidth, grouped per hour

The next Figure presents the AWStats statistics for the number of visits, viewed pages, the number of hits and the consumed bandwidth for each day of January 2019:

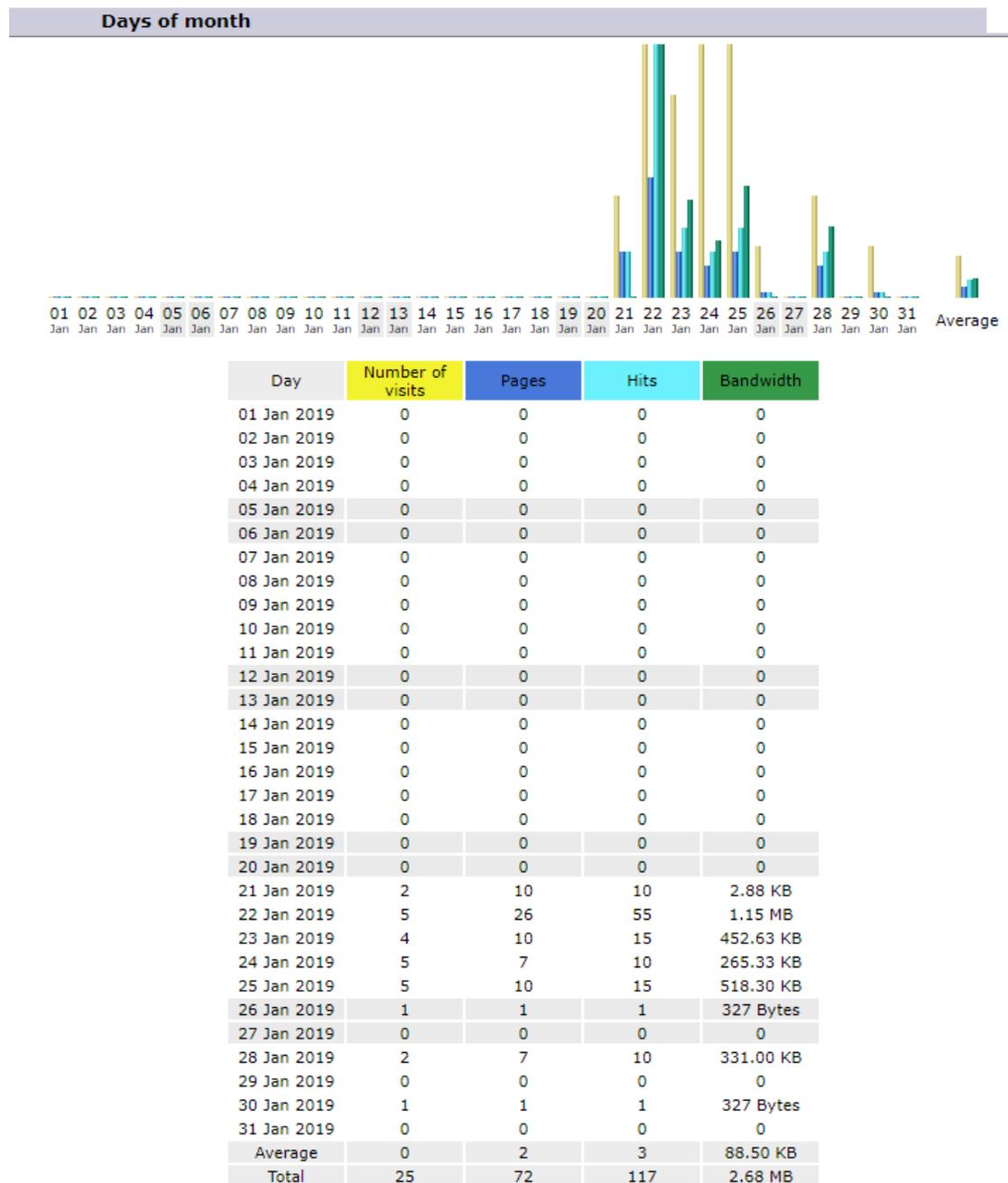


Figure 9 Number of visits, viewed pages, the number of hits and the consumed bandwidth statistics per day

3. Conclusions

Deliverable D7.1 – “Project’s web site” describes the AMANDA web site, a core component of the dissemination and communication actions for the project.

This document lays out the scopes and objectives behind the creation of the web site and described the way Deliverable D7.1 relates with other Deliverables of WP7. Then it gives detailed information for different aspects that motivated the design of the web site, while also presenting the technologies used to build the web site.

In this Deliverable, it was established that the web site will be updated and developed throughout the lifetime of the AMANDA project and its content will be current, relevant, engaging and updated in a timely fashion. Deliverable D7.3 – “Dissemination and Communication Plan” will go into more detail about the dissemination and communication strategy regarding the web site and how this will be done according to the brand image of AMANDA.

References

- [1] K. D. Graeve, "HTML5 - Responsive Web Design," [Online]. Available: <https://msdn.microsoft.com/en-us/magazine/hh653584.aspx>.
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