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

AMANDA
Grant Agreement No: 825464
[H2020-ICT-2018-2020] Autonomous self powered miniaturised intelligent sensor for environmental sensing and asset tracking in smart IoT environments

Deliverable

D7.8 Dissemination and Coordination with Relevant Activities Reports v2

Deliverable No.		**D7.8**	
Workpackage No.	**WP7**	Workpackage Title and task type	**Dissemination and Exploitation**
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Authors List

Leading Author (Editor)				
Surname		**Initials**	**Beneficiary Name**	**Contact email**
Vujičić		OV	PENTA	oskar.vujicic@penta.hr
Co-authors				
#	**Surname**	**Initials**	**Beneficiary Name**	**Contact email**
1	Bellanger	MB	LIGHTRICITY	mathieu.bellanger@lightricity.co.uk
2	Kouzinopoulos	CS	CERTH	kouzinopoulos@iti.gr
3	Marti	CM	E-PEAS	cyril.marti@e-peas.com
4	Meli	MM	ZHAW	mema@zhaw.ch
5	Mihaljević Pulić	AM	PENTA	andrea.mihaljevic@penta.hr
6	Pasero	DP	ILIKA	denis.pasero@ilika.com
7	Poole	PP	MICRODUL	phil.poole@microdul.com
8	Vis	PV	IMEC	Peter.Vis@imec.nl

Reviewers List

List of Reviewers				
#	**Surname**	**Initials**	**Beneficiary Name**	**Contact email**
1	Marti	CM	E-PEAS	cyril.marti@e-peas.com
2	Pasero	DP	ILIKA	denis.pasero@ilika.com

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List of definitions & abbreviations

Abbreviation	Definition
ASSC	Autonomous Smart Sensing Card
AWStats	Advanced Web Statistics
BLE	Bluetooth Low Energy
COVID-19	Coronavirus disease of 2019
DAR	Dissemination Activities Report
ESS	Electronic Smart Systems
FRAM	Ferroelectric Random-Access memory
IoT	Internet of Things
KPI	Key Performance Indicator
LoRaWAN	Long Range Wide Area Network
PMIC	Power Management Integrated Circuits
PV	Photovoltaic
R&I	Research and Innovation
SC	Scenario
TAD	Tweet Activity Dashboard
UC	Use Case

Executive Summary

The overall objectives of the dissemination and communication activities of AMANDA are to promote the project's results, including publications, events, workshops and talks, to a range of relevant target audiences. The target audience are members of academia and industry, as well as the general public. Dissemination activities are continuously updated, both with the list of publications available on the project's website (http://amanda-project.eu/) as well as through this particular Deliverable, subsequently updated on M42 of the project.
The objective of **Deliverable D7.4 - Dissemination and Communication with Relevant Activities Reports v1** was to provide an overview of the dissemination, communication, and marketing activities of the AMANDA project during the first 12 months of the AMANDA project. **Deliverable D7.8 - Dissemination and Coordination with Relevant Activities Reports v2** provides a thorough overview of the executed activities from the start of the project until March 2021. It also includes a description and preliminary evaluation of the adjustments of the activities made due to the COVID-19 pandemic. After describing the COVID-19 measures taken by the Consortium, this Deliverable details the various methods of dissemination and communication of the project used throughout the covered period of the project, including website, social media, newsletters, articles and publications, meetings and external events. Furthermore, this Deliverable provides information about the dissemination and communication activities planned for the rest of the project.

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1 Introduction

Deliverable D7.4 - Dissemination and Communication with Relevant Activities Reports v1 presented an overview of the dissemination, communication and marketing activities established during M1-M12 of the AMANDA project. The document is followed by **Deliverable D7.8** - **Dissemination and Coordination with Relevant Activities Reports v2** and shows relevant dissemination and communication activities carried out in the period between M1 and M27 and whether they are in line with the strategy "Phase 2 - Project Commercialisation phase", i.e. whether the project is successful in informing the target market about technological advantages which the AMANDA ASSC provides. In v2 of this document, the following Sections have been added or modified:

- The updated list of KPIs in Section 1, Table 1
- Added Section 2 – Adjustment of the project's dissemination and communication activities due to the COVID-19 pandemic
- Sections 3.2, 3.3 have been updated, and statistics have been added
- Additional social media channel – 3.3.3 YouTube
- Updated Section 3.4 – Project communication materials
- Updated Section 3.5 – Participation in externally organised events
- Updated Section 3.6 – Scientific papers and other publications
- Added Section 3.7 – Cooperation with other European Commission funded projects and initiatives
- Updated Section 4 – Advisory Board

The objective of dissemination and communication activities is to promote the results and benefits of the project and the actions of the AMANDA project partners. The target audience of these activities includes users from the industry, the ESS community, the academic community as well as policy-makers. The dissemination and communication activities during the period from M1 to M27 include:

- Visual identity of the project
- AMANDA public website launched at M1
- Presence in social media (LinkedIn, Twitter, YouTube)
- First AMANDA project's press release, newsletters
- AMANDA posters, leaflets and PowerPoint presentations
- Project videos
- Presentation of the AMANDA project at different trade show exhibitions, conferences and talks
- Conference and journal publications
- Setting up and maintenance of an internal list of stakeholders
- Liaison with other projects and initiatives

The objectives in the first year of the project have been defined in Deliverable D7.3 - Dissemination and Communication Plan v1 and include:

- Creation of the project branding and identity
- Finalisation of the project's logo and colour scheme
- Creating publicity materials: including leaflets/brochures, posters and other materials
- Creating the project's website including information on the Consortium members and the project's function
- Social media:
    - Twitter – posted 10 tweets
    - Facebook and LinkedIn profiles created
- Attendance and/or hosting of up to 3 relevant networking events or workshops addressing the target communities, stakeholders and end-users
- 1 newsletter

- 2-3 project publications (articles and/or papers and/or presentations)
- At least 5 blog entries

The Consortium's decision was to remove its presence from Facebook, considering that Facebook is not a social media suitable for scientific and research projects such as AMANDA.
In the second and third year of the project, the Consortium continues with the preparation, publication, and distribution of project communication materials, the maintenance of the project's website as well as the presence on social networks and publishes the latest news related to AMANDA's progress. Due to the COVID-19 pandemic, digital technologies emerged as the critical enabler, facilitating the continuity of dissemination and communication activities, thus during the third year of the project implementation, the Consortium focuses on preparing and holding webinars as well as preparing papers for publication in relevant scientific journals.
Several Key Performance Indicators were established to measure the dissemination success and impact of the project. The following Table summarises the KPIs introduced in **Deliverable D7.3 - Dissemination and Communication Plan v1** and subsequently updated in **Deliverable D7.6 – Dissemination and Communication Plan v2.**

Communication & Dissemination Supports and Channels	**KPIs**
Leaflet	2 project version + 2 technology specific (results)
Poster	1 initial version + update
Reference PPT presentation	1 initial version + update
Project newsletter	6 (2 per year)
Articles and proceedings	2 publications per year (on average)
Project Deliverables	See the list of Deliverables
Open access repository	1 deposit per year
Project video / demo	1 initial version + update
Project website	1 website, monthly updated
Related websites	5+
LinkedIn	At least 1 monthly update
Twitter	At least 1 weekly update
Presentation & feedback sessions (incl. webinars)	3
Training sessions	3
External events	20+

Table 1 List of KPIs for visibility and knowledge impact

The ambition of dissemination, communication, and networking activities includes the exchange of experience, scientific and technological knowledge, and establishing cooperative relationships with the relevant scientific and industrial partners. All activities from Table 1 were performed according to the set KPIs and timeline. Still, as the dissemination and communication plan is affected by the COVID-19 pandemic, attendance at the external events is only partially met.

2 Adjustment of the project's dissemination and communication activities due to the COVID-19 pandemic

It is without doubt that the COVID-19 pandemic significantly affected all project activities but in particular, dissemination and communication of the project's progress and results. Nevertheless, the research and dissemination activities related to the project continue as much as possible in remote mode. More specifically, during the months from January 2020, almost all face-to-face activities and events were cancelled. Thus, the Consortium was forced to create new communication mechanisms, namely through online meeting platforms. During 2020 and the first months of 2021, relevant events were cancelled, postponed or held online due to the pandemic. Table 2 below lists all scheduled AMANDA project events and shows the completion status given the constraints caused by the COVID-19 pandemic.

Date	Title of event, type and place/country	Completion status
07-10 January 2020	Consumer Electronic Show, trade show exhibition, Las Vegas/USA	Took place (DAR in Section 3.5.18)
23-26 January 2020	NANS20 (North American Neuromodulation Society Conference), Las Vegas/ USA	Took place (DAR in Section 3.5.19)
30-31 January 2020	The Things 2020, conference and trade show exhibition, Amsterdam/The Netherlands	Took place (DAR in Section 3.5.20)
11-13 February 2020	MD&M West, trade show exhibition, CA/USA	Took place (DAR in Section 3.5.21)
25-27 February 2020	Embedded World Conference, Nuremberg/Germany	It took place with much less people present (DAR in Section 3.5.22 and 3.5.23)
03-05 March 2020	IT-TRANS, international conference and exhibition, Karlsruhe/Germany	Postponed to 8-10 March 2022
18-19 March 2020	microTEC Südwest Cluster Conference "CMOS mixed signal array technology and what it can do for you", Germany	Postponed to a virtual event 18 March 2021
31 March 2020	Sensor Solutions International 2020, conference, Brussels/Belgium	Postponed and held online 19 May 2020 (DAR in Section 3.5.24 and 3.5.25)
31 March-2 April 2020	Medtec Live, trade show exhibition, Nürnberg/Germany	It took place as a virtual event. We could not show the AMANDA presentation as planned.
21-24 April 2020	INTERTRAFFIC, trade exhibition, Amsterdam/The Netherlands	Postponed to 29 March – 1 April 2022
13-14 May 2020	IDTechEx, "Ultral-Low-Power Capacitive Sensors based on Microdul's own semi-custom mixed-signal array technology", webinar, Berlin/Germany	Cancelled without replacement. It is intended to hold a Webinar in Q1 2021.

23-25 June 2020	Sensor & Test, trade show exhibition, Nürnberg/ Germany	It was cancelled without replacement.
24 June 2020	External Advisory Board meeting	Held online on 24 June 2020 (More information in Section 4)
08 August 2020	Machine Failure and Prevention Technology MFPT 20, Savannah/Georgia	Held online 06 August 2020 (DAR in Section 3.5.26)
03-07 September 2020	SIDO 2020, trade show exhibition, Lyon/France	Took place (DAR in Section 3.5.27)
08 September 2020	Future Networks Lab Accelerator Showcase and Demo Day, Pitch event	Held online (DAR in Section 3.5.28)
17-18 September 2020	5th IEEE International Symposium on Smart and Wireless Systems, conference, Dortmund/Germany	Planned for Dortmund, held online (DAR in Section 3.5.29)
22 September 2020	Sindex, SwissMedTech, conference, Bern/Switzerland	Took place (DAR in Section 3.5.30)
22-25 September 2020	InnoTrans, trade show exhibition, Berlin/ Germany	Postponed to 20-23 September 2022
25 September 2020	Interview of the current progress of the AMANDA project in the Athenian/Macedonian News Agency	Published on 25 September 2020 (DAR in Section 3.5.31)
30 September 2020	Interview on AMANDA and the COVID-19 mitigation scenarios in the Greek National TV channel ERT3	Took place (DAR in Section 3.5.32)
01 October 2020	Interview on AMANDA and the COVID-19 mitigation scenarios in the Greek National TV channel ERT1	Took place (DAR in Section 3.5.33)
10-13 November 2020	Electronica, trade show exhibition, online	Held online, but Microdul decided not to take part
10-12 November 2020	Wireless Congress, conference, Munich/Germany	Planned for Munich but held online (DAR in Section 3.5.34)
16-18 November 2020	Compamed, conference, Düsseldorf/Germany	Held online (DAR in Section 3.5.35)
17-19 November 2020	SMART CITY EXPO World Congress, trade show exhibition, Barcelona/Spain	Postponed to 16-18 November 2021
25 November 2020	Energy Harvesting EH2020, conference, online	Held online (DAR in Section 3.5.36 and 3.5.37)
26 November 2020	Innovative Solutions for Smart Urban Mobility, the roundtable discussion, Zagreb/Croatia	Held online (DAR in Section 3.5.38)
22 December 2020	Smart Eco parking, meeting, Croatia	Held online (DAR in Section 3.5.39)

19 January 2021	Presentation of AMANDA project to DIGICAT – Digital Catapult London	Held online (DAR in Section 3.5.40)
03 February 2021	SUNSAFE IoT, meeting, Croatia	Held online (DAR in Section 3.5.41)

Table 2 Scheduled external events of the AMANDA project M13-M27

The COVID-19 pandemic brought many uncertainties, changes and challenges. To tackle the long-term effects of the pandemic, the Consortium adopted a proactive approach. Thus, to assure the continuation of good quality of communication activities and dissemination plans, the following adjustments were made:

- In June 2020, the first video pack of the project was released, including five video animations presenting the defined use cases and operational scenarios of the AMANDA Autonomous Smart Sensing Card (ASSC). Creating the first video pack aimed to help achieve the project's goals, explain benefits for stakeholders, and impact society in general. A YouTube channel was created to facilitate the publication of videos and achieve a higher level of visibility and reach the target audience. A total of nine (9) videos are available on the AMANDA project official YouTube channel, six (6) video animations on the AMANDA use cases and operational scenarios, one (1) demo, and two (2) interviews:
    - https://www.youtube.com/channel/UCMQ7QphtN_HA7CXg6DwGDhQ/videos
- As many conferences relevant to AMANDA were postponed or forced to adopt the online format, partners are encouraged to focus on the preparation of scientific papers. Furthermore, conference presentations are available on the YouTube channel to increase the reached audience whenever possible. Two papers entitled "Low Power LoRaWAN node based on FRAM Microcontroller" and "Low Light Energy Autonomous LoRaWAN Node" were presented at the 5th International Symposium on Smart and Wireless Systems. The paper "Low Light Energy Autonomous LoRaWAN Node" won the best paper award in the video presentation category, and it's available at the following link:
    - https://youtu.be/_mNBRqS6UCA
- To increase the visibility and promotion of the AMANDA project during the crisis period and to approach the general public, contacts have been established with local, regional and national media. Content on project progress was prepared, emphasising the benefits that the community and individuals receive through the project. An interview "Pocket Computer as a Tool Against Coronavirus" was published in the Athenian/Macedonian News Agency, the Greek National News Agency, and it's available via:
    - https://www.cnn.gr/tech/story/235781/thessaloniki-ypologistis-tsepis-os-ergaleio-kata-toy-koronoioy-deite-pos
    - https://www.amna.gr/home/article/490921/Ypologistis-tsepis-ginetai-ergaleio-kata-tou-koronoiou

  Furthermore, two interviews were also given on the Greek national television channels ERT1 and ERT3, on the AMANDA project, its current research status, and how it is proposed to mitigate the effects of current and future pandemics. Both interviews are published on the project's official YouTube channel:
    - https://youtu.be/vef2PyVXxy4
    - https://youtu.be/RMDG2g5erN8

- The project continues using social media (LinkedIn, Twitter, and YouTube) to increase the outreach of the project's activities and results. Project is also actively promoted on each partner's official website and social media
- The project website is regularly reviewed and updated. It acts as a «one-stop-shop», so all information is updated weekly to ensure that the website carries the right messages reflecting the current stage of the project's development. Additional information and project communication material, including three newsletters, one leaflet, three posters and five PowerPoint presentations, that visitors may find attractive and useful are also published. From the five PowerPoint presentations, one was prepared by PENTA, two by ZHAW, and two by MICRODUL. All presentations were published at the project website under the dissemination materials section
- To maintain contacts of interested parties and simplify online distribution of dissemination and communication material, an internal stakeholder list was created. This mailing list will be held and updated during the whole project lifetime and is split into several topic-related sub-lists, including a division of stakeholder contacts according to defined use cases, a sub-list of relevant journals and Digital Innovation Hubs
- The organisation of the first webinar, which will take place in May 2021, is underway. A one-hour presentation is being prepared, emphasising the COVID-19 use case (UC3 - Mitigating the effects of the current pandemic). In April 2021, an email invitation to the webinar will be sent to a defined list of stakeholders

3 Dissemination and communication activities

3.1 AMANDA logo

The AMANDA logo was created at the very beginning of the project. The main objective of the logo is to achieve a clear visual recognition of the project. The logo is an integral part of every document and material related to the AMANDA project, aiming to set the baseline for a brand identity for further commercial service. The project logo depicts the AMANDA project vision and goals. There are three sections of the logo. The lower part is the hand reflecting the main message of the project, "The world in your hand". A credit card symbol graphically portrays the middle section and symbolises the form factor of the AMANDA card. The upper part of the logo reflects the ASSC-related architectural elements, made up of symbols that depict the sensors and a wireless connection to the world. Other symbols represent ASSC autonomy: PV module and battery.

Figure 1 The AMANDA project logo – symbol

Figure 2 The AMANDA project logo with the main message

3.2 AMANDA website

The AMANDA website is designed for the purpose of publishing all materials (promotions and publications) on a project funded by the European Commission. The website contains seven sections:

- Home – https://amanda-project.eu
- About - https://amanda-project.eu/about
- Consortium - https://amanda-project.eu/consortium
- News & Events - https://amanda-project.eu/news-events
- Documents - https://amanda-project.eu/documents/public-deliverables
- Advisory board - https://amanda-project.eu/advisory-board
- Contact - https://amanda-project.eu/contact

The website is a leading platform for the dissemination and promotion of the project. It contains the most crucial information about the project and is updated regularly as the project progresses. Compliance with GDPR is also ensured.

The website map has been designed to offer a complete overview of the project and easy access to all its activities.

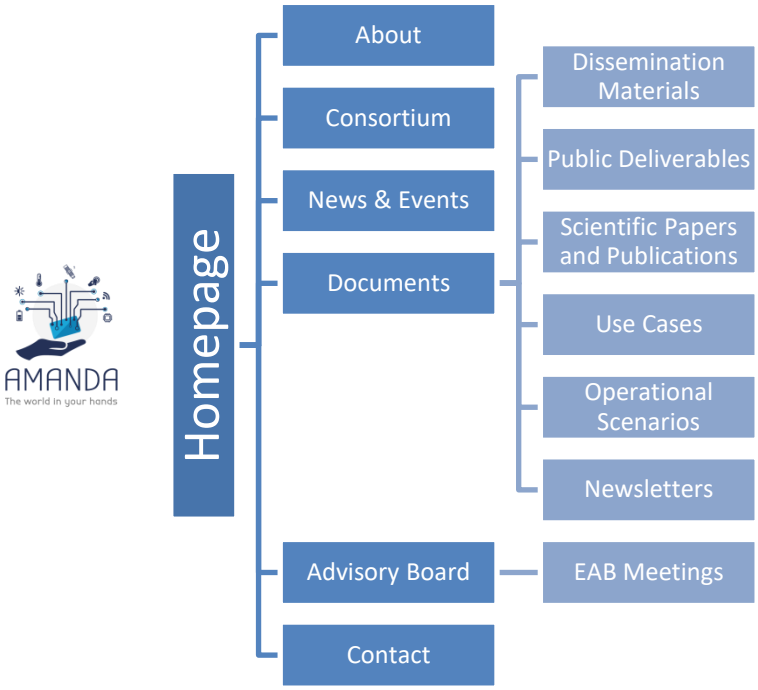


Figure 3 AMANDA project hierarchical website structure

To ensure better quality and user-friendliness of project website, the design of the website builds upon the following criteria[1]: *visual communication* (use of colours and photos, web pages are easy to browse, information is kept short and links are included to websites, publications, etc.), *verbal communication* (the website uses simple phrasing, no jargon is used to attract general public), *visibility* (maximum use of free or affordable methods to increase page ranking on search engines), *regular update of contents*.
The content of the website is presented in several separate sections:

- The *"Home"* section shows the most recently posted news on its page, a brief description of the AMANDA project, previews of the project partners, and describes the project goals.
- The *"About"* section summarises the AMANDA project.
- The *"Consortium"* section presents all partners involved.
- The AMANDA project logo, posters, leaflet, presentations, and newsletters have been published in the "*Dissemination materials*" section (https://amanda-project.eu/documents/dissemination-materials). The promotional materials are free to download from the website.
- The "*News and Events*" section (https://amanda-project.eu/news-events) has published more than 30 posts related to partner activities and project-related news and events.
- The "*Public deliverables*" section (https://amanda-project.eu/documents/public-deliverables) contains all publicly available documents.
- The *Scientific papers and publications* section (https://amanda-project.eu/documents/scientific-papers-and-publications/com-weblinks) includes the project's published scientific papers (conference and journal publications). Defined use cases (UC1-UC3) and operational scenarios (SC01-SC06) are also presented in this section.
- Members of the Advisory Board (https://amanda-project.eu/advisory-board) are shown on the website.

[1] EU Project Websites – Best Practice Guidelines (EC, 2010)

- The AMANDA project's official contact email is amanda@amanda-project.eu, represented with the link in the *Contact* section (https://amanda-project.eu/contact). The project website has direct access to AMANDA social media profiles by clicking over the footer part's icons

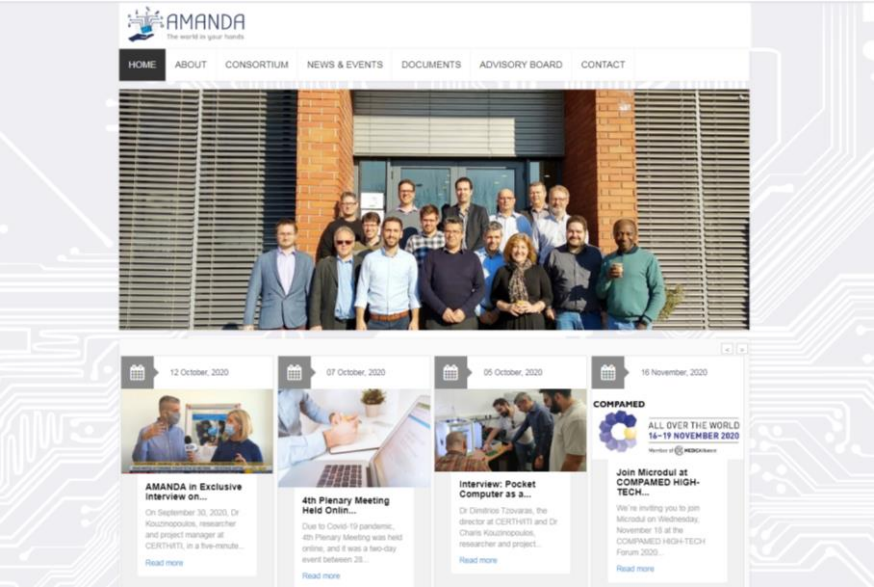
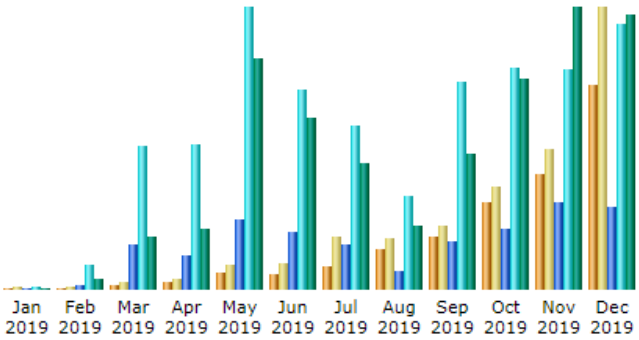


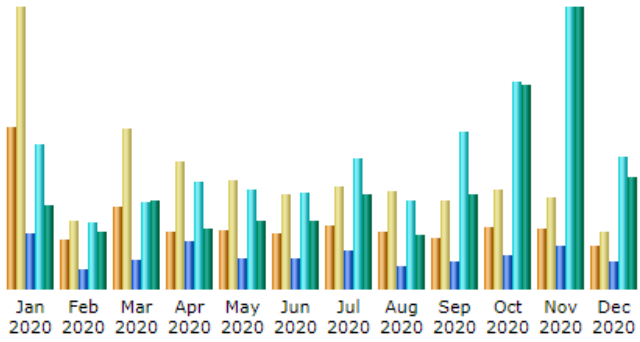
Figure 4 The AMANDA Website

All Consortium partners have the right, and it is advisable to use their official website to regularly inform stakeholders about project progress, plans and publish project results.
To track the number of visits and to analyse trends in the behaviour of visitors to the project's website, the AWStats tracking tool is used. By analysing the AWStats' output, useful attendance information can be obtained, such as unique visitors, repeated visitors, duration of each visit, number of viewed pages per visit, and popular site content. The monitoring is carried out throughout the project implementation. Analysing data on the total number of visitors, compared to 2019, the number of visitors in 2020 has tripled. In the graphs below, the highest columns appear during significant events in May 2019 (1st plenary meeting in Zürich, Wireless Tech Talk in Lausanne), November 2019 (1st review meeting in Brussels), as well as in January 2020 (publication of additional dissemination material), October 2020 (AMANDA in Exclusive interviews on the Greek National Television, and 4th plenary meeting), and December 2020 (publication of additional dissemination material). The above shows the importance of the news content on the project website to attract more visitors.



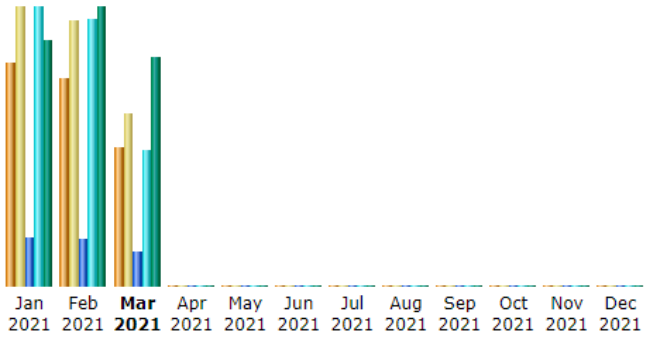
Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2019	1	25	72	117	2.68 MB
Feb 2019	11	15	289	1,528	37.01 MB
Mar 2019	35	69	2,783	8,954	184.44 MB
Apr 2019	60	96	2,156	9,071	210.61 MB
May 2019	150	215	4,367	17,647	811.84 MB
Jun 2019	136	235	3,600	12,496	601.33 MB
Jul 2019	200	472	2,835	10,225	440.69 MB
Aug 2019	360	450	1,142	5,801	223.08 MB
Sep 2019	467	566	2,959	12,983	473.83 MB
Oct 2019	773	909	3,761	13,847	739.50 MB
Nov 2019	1,028	1,252	5,453	13,731	988.30 MB
Dec 2019	1,817	2,505	5,169	16,622	963.24 MB
Total	5,038	6,809	34,586	123,022	5.54 GB

Figure 5 Unique visitors, number of visits, pages, hits, and bandwidth in 2019



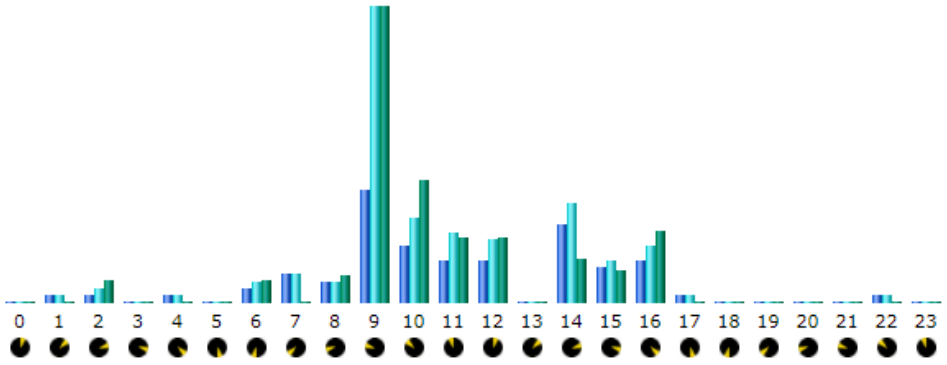
Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2020	2,163	3,762	6,456	16,978	927.66 MB
Feb 2020	654	900	2,283	7,748	620.41 MB
Mar 2020	1,087	2,143	3,421	10,195	977.61 MB
Apr 2020	766	1,694	5,548	12,588	662.97 MB
May 2020	776	1,459	3,568	11,627	747.79 MB
Jun 2020	734	1,264	3,519	11,253	749.53 MB
Jul 2020	844	1,372	4,432	15,442	1.02 GB
Aug 2020	769	1,307	2,581	10,345	590.69 MB
Sep 2020	672	1,183	3,135	18,444	1.01 GB
Oct 2020	831	1,326	3,917	24,370	2.19 GB
Nov 2020	798	1,233	5,080	33,130	3.02 GB
Dec 2020	571	754	3,206	15,474	1.20 GB
Total	10,665	18,397	47,146	187,594	13.60 GB

Figure 6 Unique visitors, number of visits, pages, hits, and bandwidth in 2020



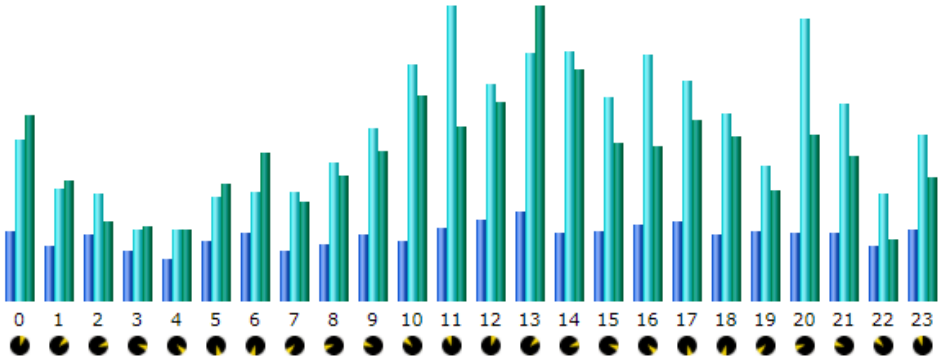
Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2021	500	625	2,255	12,763	497.04 MB
Feb 2021	466	596	2,186	12,207	563.11 MB
Mar 2021	312	388	1,565	6,213	461.86 MB
Apr 2021	0	0	0	0	0
May 2021	0	0	0	0	0
Jun 2021	0	0	0	0	0
Jul 2021	0	0	0	0	0
Aug 2021	0	0	0	0	0
Sep 2021	0	0	0	0	0
Oct 2021	0	0	0	0	0
Nov 2021	0	0	0	0	0
Dec 2021	0	0	0	0	0
Total	1,278	1,609	6,006	31,183	1.49 GB

Figure 7 Unique visitors, number of visits, pages, hits, and bandwidth in 2021



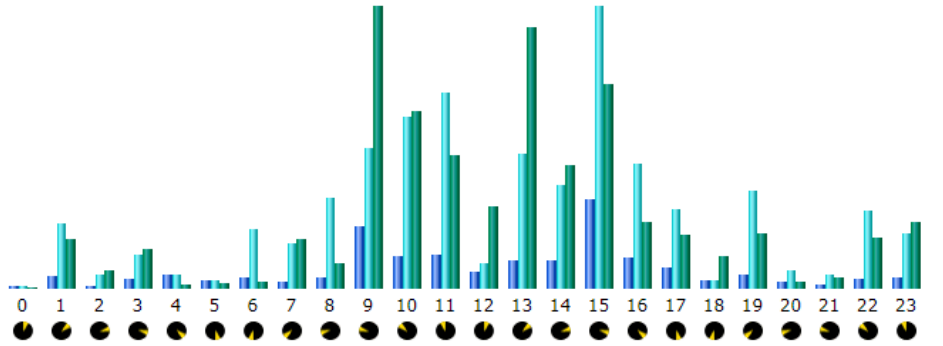
Hours	Pages	Hits	Bandwidth	Hours	Pages	Hits	Bandwidth
00	0	0	0	12	6	9	232.18 KB
01	1	1	327 Bytes	13	0	0	0
02	1	2	77.07 KB	14	11	14	155.84 KB
03	0	0	0	15	5	6	112.05 KB
04	1	1	327 Bytes	16	6	8	253.92 KB
05	0	0	0	17	1	1	327 Bytes
06	2	3	77.39 KB	18	0	0	0
07	4	4	1.86 KB	19	0	0	0
08	3	3	99.50 KB	20	0	0	0
09	16	42	1.03 MB	21	0	0	0
10	8	12	440.90 KB	22	1	1	327 Bytes
11	6	10	232.18 KB	23	0	0	0

Figure 8 Viewed pages, number of hits and bandwidth, grouped per hour in 2019



Hours	Pages	Hits	Bandwidth	Hours	Pages	Hits	Bandwidth
00	282	661	48.74 MB	12	330	886	52.14 MB
01	224	462	31.62 MB	13	365	1,015	77.13 MB
02	269	438	20.88 MB	14	279	1,024	60.57 MB
03	205	292	19.65 MB	15	286	831	41.20 MB
04	173	291	18.81 MB	16	313	1,005	40.36 MB
05	247	425	30.74 MB	17	325	900	47.50 MB
06	277	445	38.96 MB	18	271	769	43.23 MB
07	206	447	25.77 MB	19	282	555	29.12 MB
08	234	569	32.89 MB	20	281	1,158	43.36 MB
09	272	704	39.11 MB	21	277	805	38.03 MB
10	245	971	53.67 MB	22	224	440	16.07 MB
11	296	1,206	45.85 MB	23	293	679	32.30 MB

Figure 9 Viewed pages, number of hits and bandwidth, grouped per hour in 2020



Hours	Pages	Hits	Bandwidth	Hours	Pages	Hits	Bandwidth
00	9	9	258.94 KB	12	55	86	21.21 MB
01	38	218	12.70 MB	13	93	449	66.75 MB
02	10	44	4.76 MB	14	93	343	31.64 MB
03	30	108	9.71 MB	15	297	946	52.48 MB
04	46	46	1.04 MB	16	101	420	16.89 MB
05	24	24	856.11 KB	17	73	267	14.03 MB
06	34	196	1.38 MB	18	27	27	8.29 MB
07	26	149	12.72 MB	19	44	327	14.39 MB
08	36	302	6.08 MB	20	22	59	1.73 MB
09	209	469	72.37 MB	21	11	45	2.54 MB
10	109	577	45.66 MB	22	27	260	13.22 MB
11	110	654	34.10 MB	23	41	188	17.09 MB

Figure 10 Viewed pages, number of hits and bandwidth, grouped per hour in 2021

Locales		Pages	Hits	Bandwidth
United States	us	3,088	7,455	418.19 MB
Great Britain	gb	554	1,908	57.74 MB
China	cn	254	390	61.05 MB
Sweden	se	222	223	2.85 MB
Croatia	hr	222	1,170	58.92 MB
Australia	au	205	205	2.61 MB
Seychelles	sc	137	137	9.90 MB
Russian Federation	ru	132	132	14.35 MB
Chile	cl	119	120	6.60 MB
Mauritius	mu	119	119	2.97 MB
South Korea	kr	108	180	4.10 MB
India	in	107	262	9.16 MB
Germany	de	104	397	20.93 MB
France	fr	92	303	13.08 MB
Switzerland	ch	84	949	36.55 MB
Canada	ca	75	156	4.75 MB
Austria	at	68	68	4.27 MB
Ukraine	ua	60	60	12.09 MB
Indonesia	id	54	57	2.23 MB
Greece	gr	50	490	26.09 MB
Nigeria	ng	40	81	2.24 MB
Estonia	ee	39	39	494.51 KB
Belize	bz	34	34	431.11 KB
Brazil	br	34	107	5.51 MB
Denmark	dk	29	99	24.63 MB
Netherlands	nl	28	274	11.41 MB
Turkey	tr	26	118	9.29 MB
Spain	es	21	130	3.88 MB
Honduras	hn	20	20	253.59 KB
Pakistan	pk	20	100	3.88 MB
Romania	ro	19	19	777.67 KB
South Africa	za	19	60	11.07 MB
Bulgaria	bg	19	21	8.66 MB
Thailand	th	16	16	1.69 MB
Malaysia	my	14	15	3.63 MB
Poland	pl	11	11	139.48 KB
Iran	ir	10	11	2.00 MB
Italy	it	10	165	7.23 MB
Belgium	be	9	276	6.48 MB
Philippines	ph	9	9	8.44 MB
Hungary	hu	8	86	3.78 MB
Taiwan	tw	8	114	5.54 MB
Singapore	sg	8	8	1.91 MB
European country	eu	7	7	7.47 MB
Ireland	ie	7	85	3.80 MB
Mexico	mx	7	7	2.13 MB
Norway	no	7	89	3.44 MB
Colombia	co	7	8	110.96 KB

Figure 11 Viewed pages, number of hits and bandwidth, grouped by countries

3.3 Social media channels

To expand the project target audience, mainly to involve the general public and sector experts, AMANDA integrates social media tools strategically in communication activities. LinkedIn, Twitter and YouTube have been selected as the most appropriate social networks to promote the project achievements, news and outcomes. All partners are encouraged to promote the AMANDA project among their network and social media channel, encouraging contacts to join and invite further participants to activate dynamic content sharing and disseminate the project's progress among the scientific community and professional stakeholders and attract knowledge and generate awareness. All AMANDA social media accounts comply with the H2020 Programme Guidance Social media guide for EU funded R&I projects[2]. AMANDA social media profiles are monitored and analysed using the dashboard of selected social networks.

Channel	Account Name
LinkedIn	Amanda Project
Twitter	@AmandaProject2

[2]H2020 Programme Guidance Social media guide for EU funded R&I projects Version 1.1 07 January 2020, EC, [Online] https://ec.europa.eu/research/participants/data/ref/h2020/other/grants_manual/amga/soc-med-guide_en.pdf

YouTube	AMANDA project

Table 3 AMANDA social media channels

3.3.1 LinkedIn

LinkedIn is a social network specifically designed for career and business professionals to connect. Over 65 million professionals use LinkedIn to cultivate their careers and businesses.

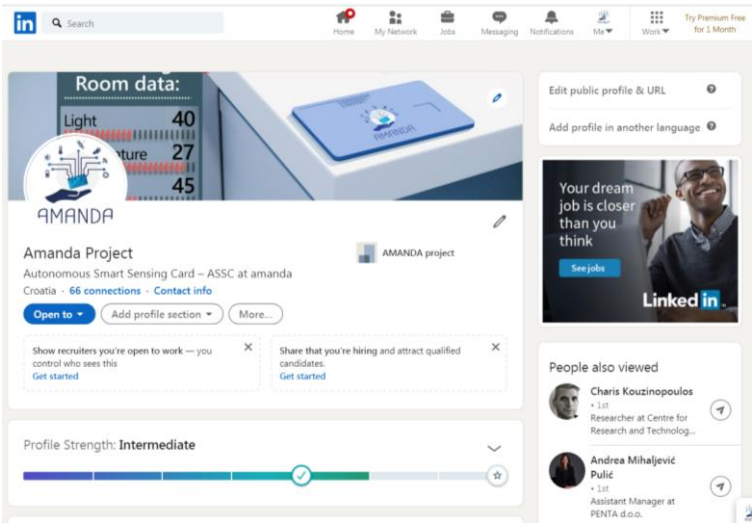


Figure 12 AMANDA LinkedIn profile

The AMANDA profile has been created for discussion and networks with specific audiences. AMANDA has achieved 67 connections, 73 followers, 35 posts, and 10425 post views. AMANDA's LinkedIn activities are a publication of posts on the latest project developments, news, and links to relevant content. The audience who follow AMANDA profile comes mostly from partners on the project and audience from various external events.

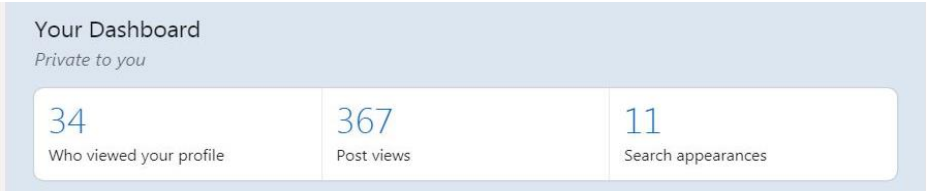


Figure 13 LinkedIn dashboard presenting data for the past 90 days

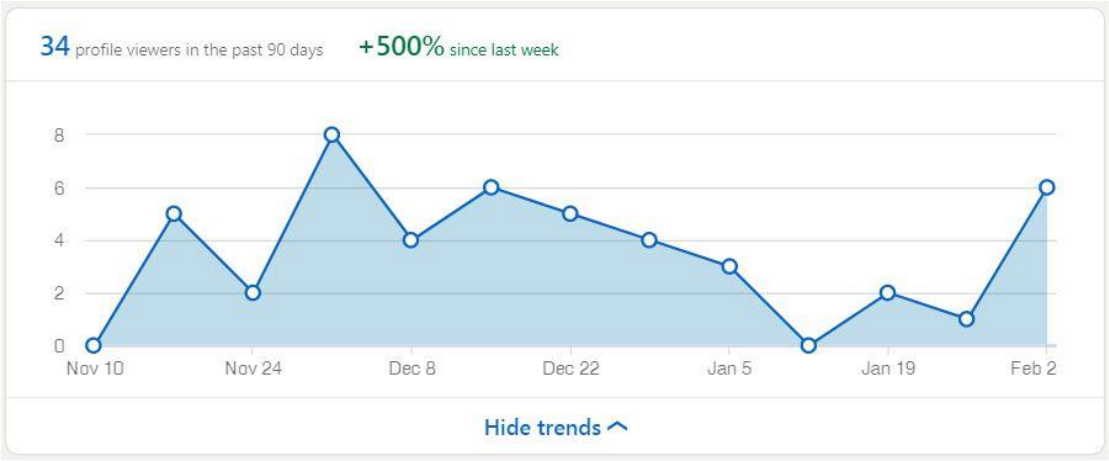


Figure 14 Number of profile views in the past 90 days

3.3.2 Twitter

Twitter is an online news and social networking site where people communicate in short messages. Twitter can support the development of communities with specific interests. AMANDA is represented by both "following" relevant accounts and being "followed" and by the publication of short posts on the latest project developments, news, and links to relevant content. At the end of M27, the official AMANDA Twitter account has 17 followers, 13263 Impressions, 40 tweets, and 569 profile visits. The official hashtag of the project is #amandaproject.

Figure 15 AMANDA Twitter Account

Twitter Analytics is used to optimise AMANDA project future Twitter campaigns to get better results. Key dashboards that are used to assess Twitter profile's performance include monthly Twitter report card and Tweet Activity Dashboard (TAD).

Figure 16 Account home – monthly Twitter report card

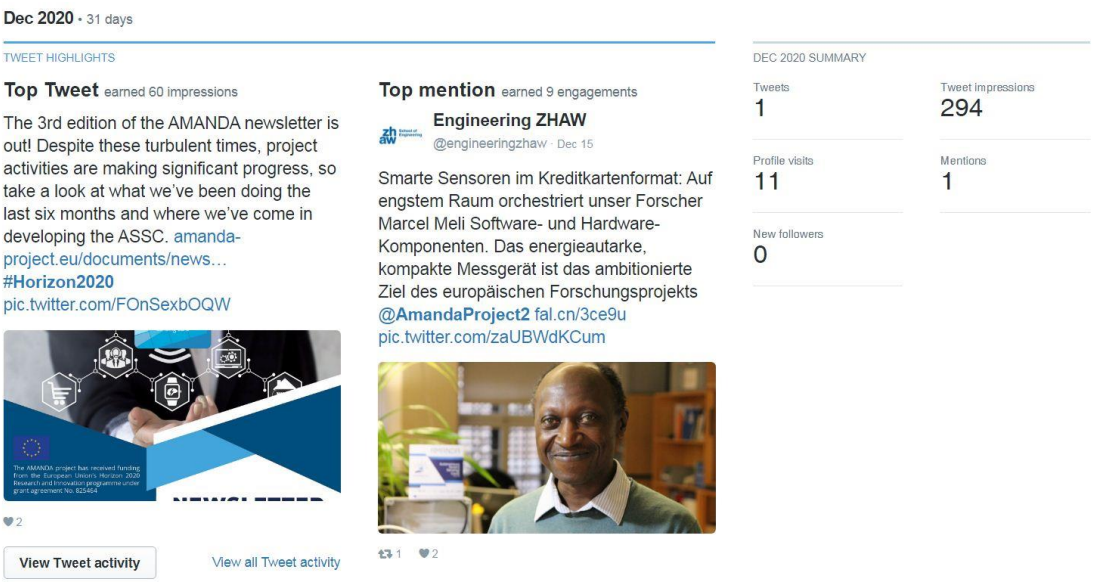


Figure 17 Tweet Activity Dashboard (TAD)

3.3.3 YouTube

The official YouTube channel was launched in M16 to facilitate the publication of audio-video contents that will follow during the project and achieve a higher level of visibility and reach a broad audience. A total of nine (9) videos are available on the AMANDA project official YouTube channel, and they convey information about the project quickly, clearly, and in an impressive way.

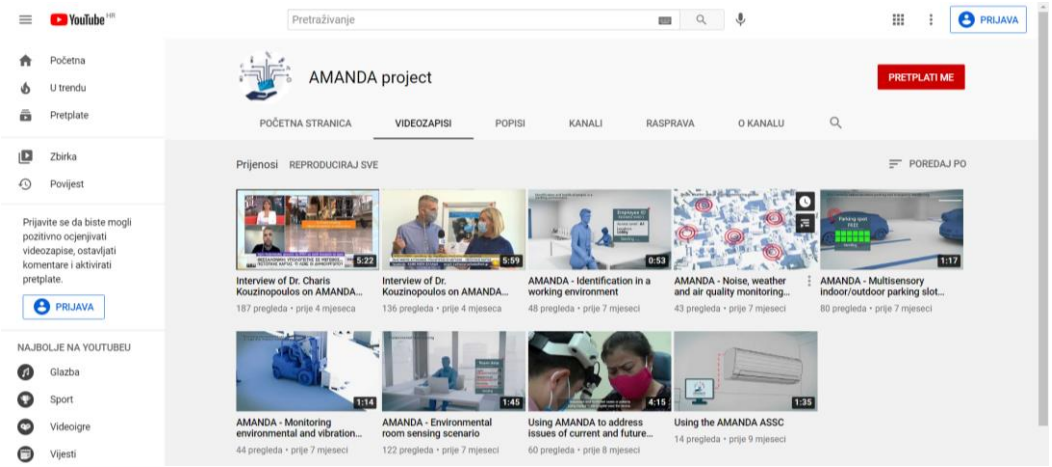


Figure 18 AMANDA YouTube channel

The performance of the AMANDA project YouTube videos is tracked using YouTube Studio Analytics. Tracking YouTube analytics is an integral part of any YouTube marketing strategy. For the AMANDA project, two main analytics sections are being used: watch time reports and interaction reports. The Watch time report compiles data from the project YouTube channel, the individual videos on the project channel, and any engagement from YouTube's mobile apps. A YouTube video earns one view when it's watched for 30 seconds or longer. The Audience retention report tracks viewer engagement over time. AMANDA project channel counts 758 views so far and has six subscribers. The number of times viewers have seen a thumbnail of a video is 1200, and the percentage of people that actually clicked on it is 12,1 %. These metrics help us to figure out if a thumbnail and video title is excellent and catchy. The average view duration of videos is 1:23. The highest number of video reviews

was recorded in June 2020, when six videos were published showing possible AMANDA card applications, and at the end of September 2020, when two interviews were published with Dr Charis Kouzinopoulos on AMANDA and the COVID-19 mitigation scenarios.

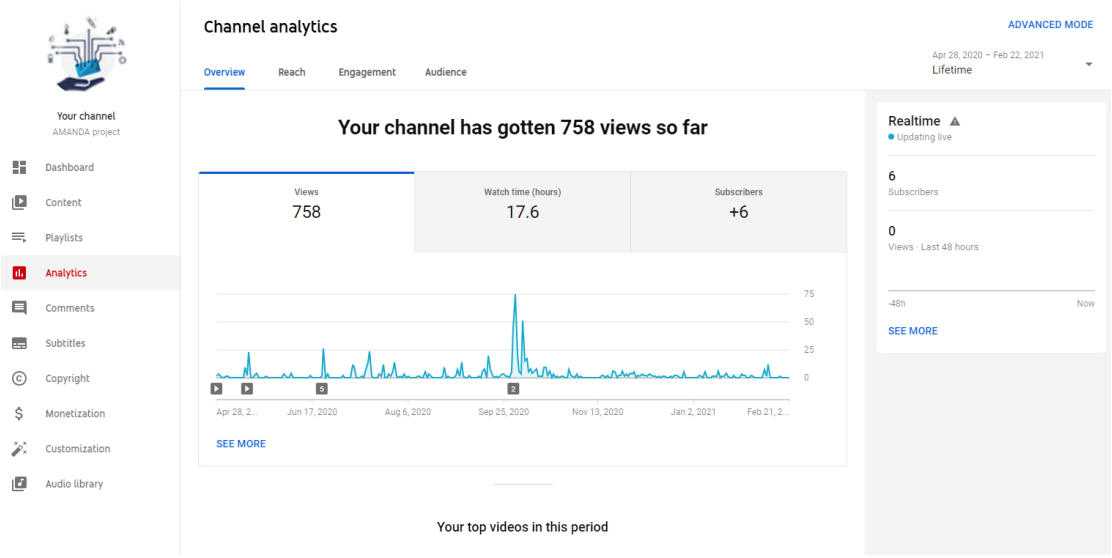


Figure 19 YouTube watch time report – channel's performance overview

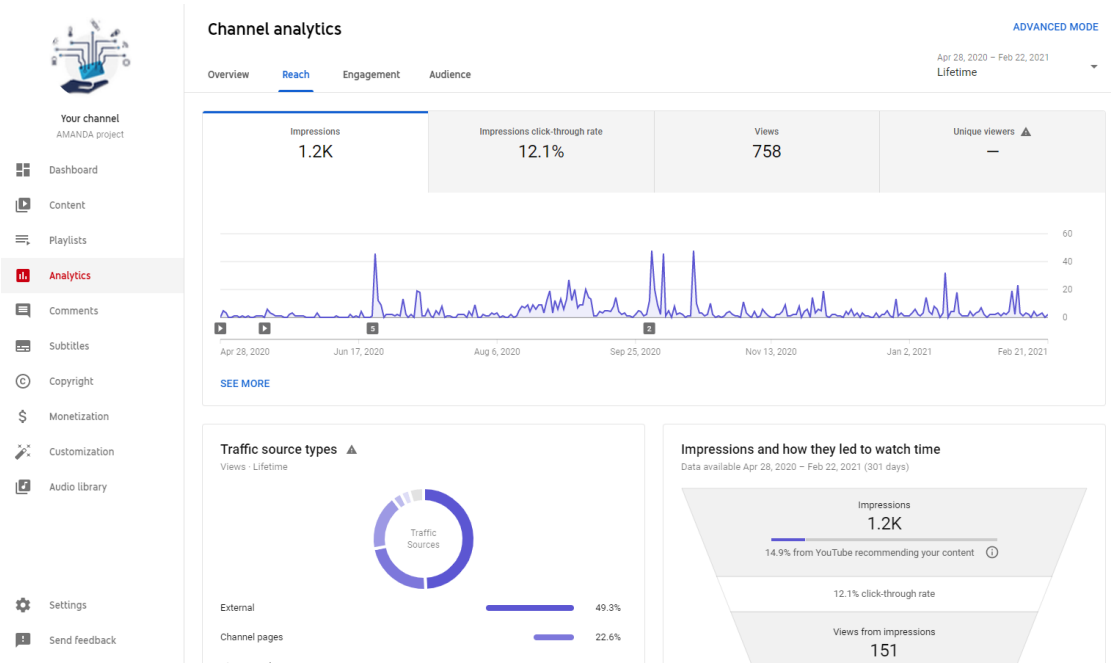


Figure 20 YouTube watch time report – total impressions

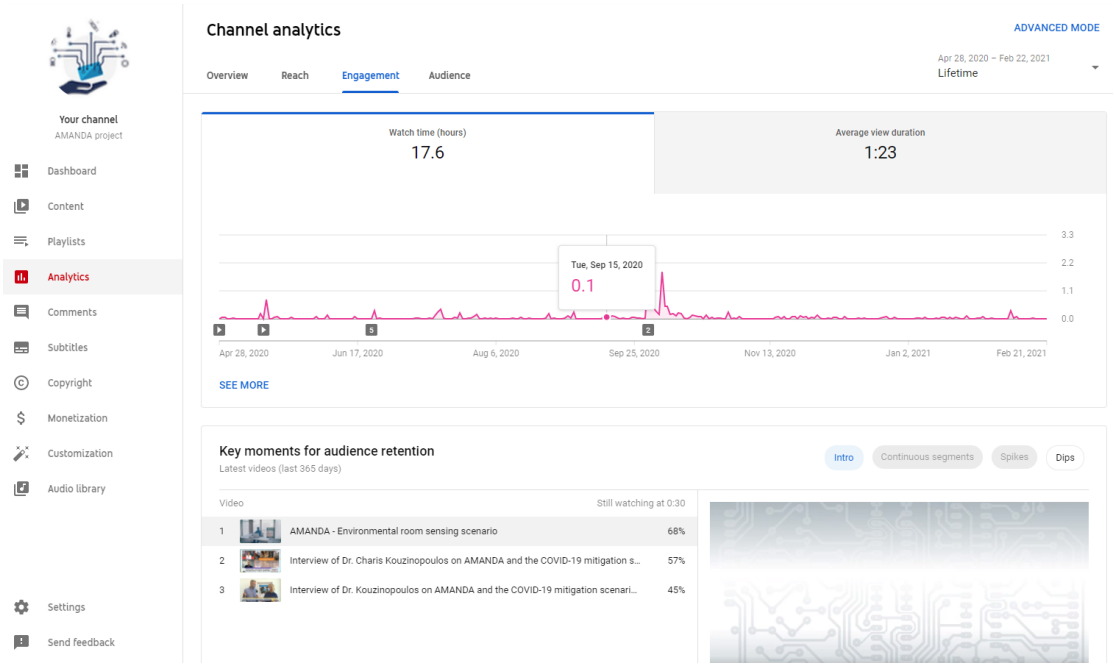


Figure 21 YouTube audience retention report

3.4 Project communication materials

Published promotion and communication materials for the AMANDA project that have been created for use at different events (online or face-to-face) include the following:

- Poster (3)
- Press release (1)
- Leaflet (1)
- Newsletter (3)
- Project presentation (5)
- Videos (9)

The listed materials have been published on social media and are available on the following link:

- https://amanda-project.eu/documents/dissemination-materials

The first poster's goal was to attract visitor attention and briefly introduce the project objectives. The project's slogan, "The world in your hands", is in the upper part. The second part is a stylised photograph of a hand with an ASSC. On the image, symbolically are illustrated the card's autonomy and multisensory characteristics. The third part contains the project logo with a short description of the card's concept, impact and implementation. Fourth, the bottom part presents the project partners and their logo. The partners use the poster at each of the activities in which they engage. The poster is an integral part of the visual presentation. Two copies of the poster were delivered to each partner for use at external events and presentation on their business premises.

Figure 22 AMANDA poster and first press release

The second and third AMANDA posters were published in M24, providing a clear and more specific message. Posters are prepared to communicate with each other, presenting the defined operational scenarios of deploying the autonomous multisensory card and the used technology, card layout, and components. The content of the posters is clear and easily understandable for interested parties. The posters are available in an online format, published on the project website, but are also distributed to partners in duplicate.

Figure 23 AMANDA second and third poster

In M17, the first AMANDA leaflet was issued, providing the target audience with an attractive and written project overview. This trifold flyer on the first leaf shows the logo and name of the card – *Autonomous Smart Sensing Card (ASSC)*, as well as the members of the Consortium. By opening the first leaf, the reader sees an illustration of an autonomous multisenso-

ry card and quickly understands the basic features and components it includes. The potential usability of the card is demonstrated in the interior of the leaflet. The back of the leaflet shows project goals, locations of the Consortium members, and the necessary contact information in case of additional inquiries from interested parties. The AMANDA leaflet is available in electronic version, published on the project website, and a printed version is distributed in 50 copies per each partner. The preparation of the next leaflet is planned for M36.

Figure 24 AMANDA leaflet

The project has produced three (3) newsletters that provided up-to-date information on AMANDA's status and achievements. The first newsletter was released in M4 to raise awareness concerning AMANDA, introduce the Consortium members, and elaborate on project objectives. The second newsletter, issued in M18, presents six use cases and nineteen operational scenarios for the three versions of the ASSC – indoor, outdoor and wearable. The newsletter explains the architecture of the card and details all current dissemination activities. The third newsletter was released in M24, including information about the project's latest achievements and elaborating on the impacts of the COVID-19 pandemic on the AMANDA activities. The 3rd edition also presented a revised list of use cases and operational scenarios. Engagement with stakeholders is crucial to the success and sustainability of the project. Therefore Consortium is keeping an internal list of stakeholders, and it will be maintained during the whole project lifetime. Newsletters were sent to approximately 200 email addresses of potentially interested parties and are published on the project website and social media. Subscription to project newsletters is also open to the general public, using the form at AMANDA project website. The next newsletters are planned to be released in M31, M37 and M42.

Figure 25 Excerpts from the third AMANDA newsletter

With the intention to define and design a template for a partner's internal promotion of the AMANDA project, a PowerPoint presentation was prepared and published on the project website. Therefore, 13 slides were produced describing the main project objectives, the architecture of the ASSC, defined use cases and operational scenarios. To disseminate the results of the progress of the AMANDA project, the partners prepared additional presentations, five of which were published on the project website under the section Dissemination material.

Figure 26 AMANDA PowerPoint presentation slides screenshots

The first video package, consisting of 5 two-minute videos, was published in M17 to start an awareness and interest in AMANDA, explaining benefits for stakeholders and its impact on society. A manuscript has been developed by focusing on use cases and operational scenarios, demonstrating the card's technology and components. In M17, an additional video was prepared and published as an announcement of health-related use case concerning current and future epidemics. In M22, two exclusive interviews of Dr Charis Kouzinopoulos on the Greek national television channels, ERT1 and ERT3, were published, presenting the project's current research status and how it is proposed to mitigate the effects of current and future pandemics. All videos were posted on the AMANDA YouTube channel:

- https://www.youtube.com/channel/UCMQ7QphtN_HA7CXg6DwGDhQ/videos)

and are shared at the project's LinkedIn and Twitter profile. Within the end of the third year, Consortium will prepare a final video in order to disseminate research and its results.

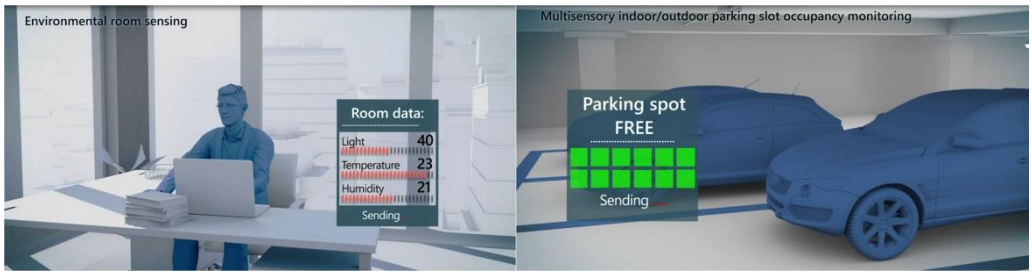


Figure 27 Screen captures from AMANDA project videos

3.5 Participation in externally organised events

In the period of M1-M27, the partners have communicated about their activities, aiming to promote the AMANDA project. The main objective is to present the AMANDA project and to enlighten the audience with the project objectives. Specific information on AMANDA partners' participation in a number of externally organised events is given at the end of this Section (where applicable).

Type of activity	Number of events
Conferences	11
Cooperation with other EU projects and initiatives	4
Interviews	3
Posters	2
Presentations to potential customers	10
Trade show exhibitions	13
Website updates	4
Scientific papers	5
Pitch events	1
Tech talks	3
Round tables	1

Table 4 Number of events per type of activity-attended

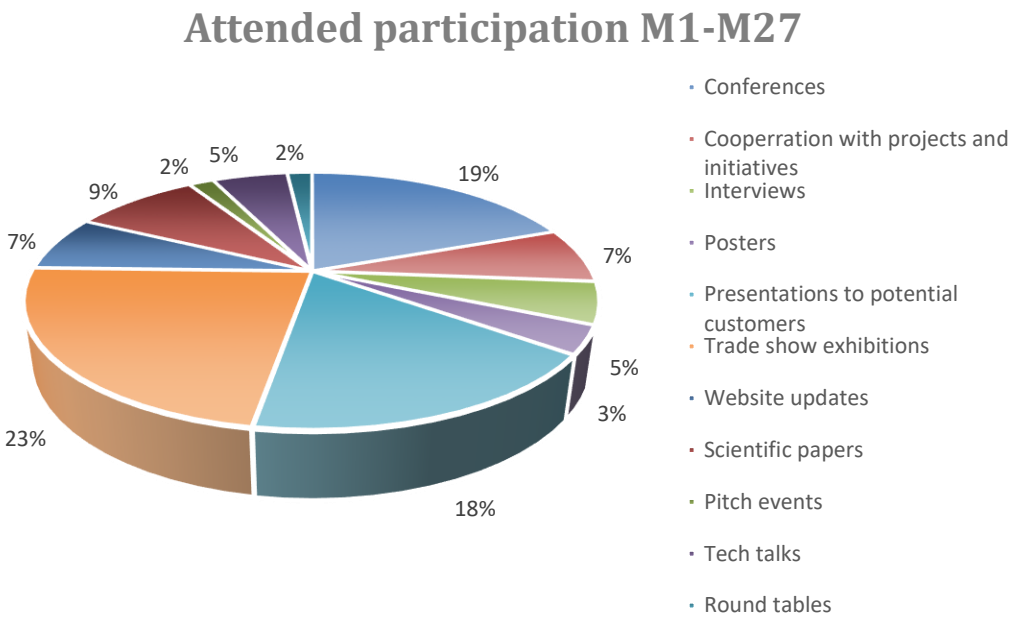


Figure 28 Attended participation M1-M27

In the coming period, M28-M42, the partners plan a whole range of activities. Table 5 below shows the types of activities, and the estimated number of events partners plan to attend. Also, as expected, partners are wary of predicting participation in external events due to the current situation with the COVID-19 pandemic.

Type of activity	**Number of events**
Scientific papers	11
Short courses	1
Trade show exhibitions	12
Conferences	2
Webinars	1

Table 5 Number of events per type of activity-foreseen

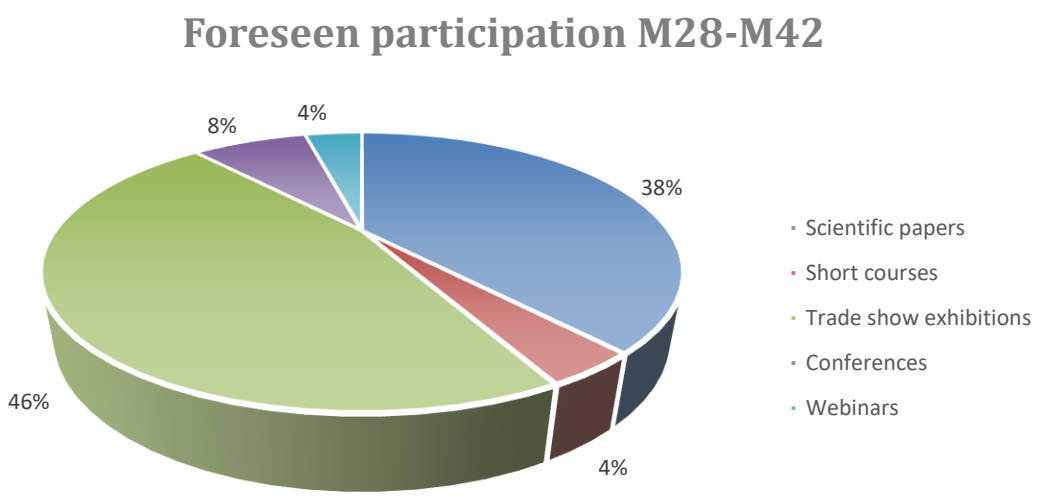


Figure 29 Foreseen participation M28-M42

3.5.1 CERTH participation

3.5.1.1 Attended participation M1-M12

Type of activity	Title	Content of activity	Date	Place/Country
Conference	2019 IEEE International Conference of Consumer Electronics (ICCE)	AMANDA: An Autonomous Self-Powered Miniaturized Smart Sensing Embedded System	10 September 2019	Berlin/Germany

Table 6 Dissemination activities by CERTH M1-M12

Type of audience	Size of audience
Scientific community/ Students	~150 per academic year
Industry	~10
End-users	~100

Table 7 Estimated number of people reached by CERTH M1-M12

3.5.1.2 Attended participation M13-M27

Type of activity	Title	Content of activity	Date	Place/Country
DIH presentation	Digital Catapult London	Presentation of AMANDA project to DIGICAT – Digital Catapult London	19 January 2021	Online
Interview	Interview of the current progress of the AMANDA pro-	Pocket Computer as a tool against Coronavirus	25 September 2020	Thessaloniki/Greece

	ject in the Athenian / Macedonian News Agency			
Interview	Interview on AMANDA and the COVID-19 mitigation scenarios in the Greek National TV channel ERT3	AMANDA project and the COVID-19 mitigation scenarios	30 September 2020	Thessaloniki/Greece
Interview	Interview on AMANDA and the COVID-19 mitigation scenarios in the Greek National TV channel ERT1	AMANDA project and the COVID-19 mitigation scenarios	01 October 2020	Thessaloniki/Greece

Table 8 Dissemination activities by CERTH M13-M27

Type of audience	**Size of audience**
Industry (DIH presentation)	4
General public (communication campaign – interviews)	N/D

Table 9 Estimated number of people reached by CERTH M13-M27

3.5.1.3 Foreseen participation for the period M13-M27

Type of activity	**Planned journal/Conference**	**Content of activity**	**Estimated date**	**Place/Country**
Conference publication	IEEE International Conference on Artificial Intelligence Circuits and Systems	A low-power fire monitoring and detection system on embedded systems using a multilayer perceptron	Submitted on M25	Online
Conference publication	IEEE International Conference on Omni-layer Intelligent systems	A low-power and low-rate indoor crowd counting system	To be submitted on M27	Barcelona, Spain (Online)

Table 10 Foreseen dissemination activities by CERTH M13-M27

3.5.1.4 Foreseen participation for the period M28-M42

Type of activity	**Planned journal/Conference**	**Content of activity**	**Estimated date**	**Place/Country**
Journal publication	Special Issue of "Embedded Intelligence in IoT Systems" MDPI journal	ParkIoT: An embedded solution for parking	M28	Online

Journal publication	TBD	Size unconstrained system integration	M32	Online
Journal publication	TBD	Edge intelligence algorithms on an embedded system with an emphasis on low-energy consumption	M32	Online
Journal publication	TBD	Data fusion algorithms on an embedded system with an emphasis on low-energy consumption	M36	Online
Journal publication	TBD	Cyber security on an embedded system with an emphasis on low-energy consumption	M36	Online

Table 11 Foreseen dissemination activities by CERTH M28-M42

3.5.2 IMEC participation

IMEC is a research institute with a significant business network, which develops technology for quick adaptation in the industry. That made it possible to use a business model in which the dissemination strategy focuses only on potential customers. The focus of dissemination is on building intimate business relationships with individual companies. That is why in Table 12, most of the activities are individually adjusted towards preselected companies rather than widely announced during public events.

Figure 30 Dissemination of AMANDA to IMEC visitors

3.5.2.1 Attended participation M1-M12

Type of activity	Title	Date	Place/Country
Posters	Project poster at the entrance to the IMEC building	01 September 2019 – 01 January 2022	HTC 31 Eindhoven /Netherlands
Presentation to a potential customer	Pitch to Japanese gas sensor manufacturer	April 2019	Confidential
Presentation to a potential customer	Pitch to Belgium based Window production manufacturer	February 2019	Confidential
Presentation to a potential customer	Discussion with technological campus management	June 2019	Confidential
Presentation to a potential customer	Pitch to the Dutch research institute	March 2019	Confidential
Presentation to a potential customer	Pitch to Japanese car component manufacturer	September 2019	Confidential
Presentation to a potential customer	Pitches to two Chinese component manufacturers	October 2019	Confidential
Presentation to a potential customer	Pitch to United States sensor manufacturer	September 2019	Confidential
Presentation to a potential customer	Pitch to United States utility company	November 2019	Confidential
Presentation to a potential customer	Pitch to the French utility company	August 2019	Confidential

Table 12 Dissemination activities by IMEC M1-M12

Type of audience	Size of audience
Visitors of IMEC	~500
Potential customers	20

Table 13 Estimated number of people reached by IMEC M1-M12

3.5.2.2 Attended participation M13-M27

Type of activity	Title	Date	Place/Country
DIH presentation	Presentation of AMANDA project to DIGICAT – Digital	19 January 2021	Online

	Catapult London		
Presentation to a potential customer	Advanced Gas sensing solutions	February 2021	Online/China

Table 14 Dissemination activities by IMEC M13-M27

Type of audience	Size of audience
Industry	4
Potential customers	6

Table 15 Estimated number of people reached by IMEC M13-M27

3.5.2.3 Foreseen participation for the period M13-M27

Type of activity	Title	Date	Place/Country
Sensors and Actuators B: Chemical	Undefined yet	Undefined yet	NP
Eurosensors conference	Undefined yet	Undefined yet	Undefined yet
Presentations to potential customers	NP	NP	NP

Table 16 Foreseen dissemination activities by IMEC M13-M27

3.5.2.4 Foreseen participation for the period M28-M42

Type of activity	Title	Date	Place/Country
Short course	Non-CMOS based sensors for IoT	13-19 June 2021	Kyoto/Japan (Online)

Table 17 Foreseen dissemination activities by IMEC M28-M42

3.5.3 Lightricity participation

Lightricity has taken part in various tradeshows and exhibition events in 2019, all based in European countries, where the company has promoted the AMANDA project alongside its technology. The targeted audience mainly was industrials and stakeholders (see Table 19 and Table 21) that could understand the benefits of the AMANDA platform while providing useful feedback for the different use cases that are still under development. These interactions have been key to ensure that the AMANDA system specifications are in line with industry's expectation. Events noted in Table 18 and Table 20 were also an opportunity to monitor any competitor's activity. No AMANDA demonstrators were available to show at this stage, however, the objectives of the AMANDA project were clearly explained and adapted to the type of audience. The latest AMANDA dissemination material (flyers, posters) will be shared in the upcoming events described in Table 23. Lightricity has also updated its company website to provide a description of the AMANDA project and Consortium, and directly linked the webpage to the AMANDA official site.

3.5.3.1 Attended participation M1-M12

Type of activity	Title	Date	Place/Country

Trade show exhibition/Conference	SIDO2019	April 2019	Lyon/France
Trade show exhibition/Conference	IDTechEx2019	April 2019	Berlin/Germany
Trade show exhibition/Conference	ISWC	October 2019	Barcelona/Spain
Website update	Lightricity website page on AMANDA with link to AMANDA project website	Mid-2019	UK
Preparation of publication	Joint IEEE publication with CERTH, EPEAS and Ilika	September 2019-now	-

Table 18 Dissemination activities by Lightricity M1-M12

Type of audience	**Size of audience**
Scientific community (mostly academic)	~100
Industry (potential customers)	~300
Others (mixed audience)	~200

Table 19 Estimated number of people reached by Lightricity M1-M12

3.5.3.2 Attended participation M13-M27

Type of activity	**Title**	**Date**	**Place/Country**
Presentation/Conference	Sensors Solution International	19 May 2020	Brussels/Belgium (Online)
Pitch event	Digital Catapult's Future Networks Lab Accelerator Showcase and Demo Day	08 September 2020	Online
Trade show exhibition/Conference	Energy Harvesting 2020	25 November 2020	Birmingham/UK (Online)
Preparation of publication	Joint IEEE publication with CERTH, EPEAS and Ilika	January 2020-now	Online

Table 20 Dissemination activities by Lightricity M13-M27

Type of audience	**Size of audience**
Scientific community (mostly academic)	~100
Industry (potential customers)	~200

Others (mixed audience)	~300

Table 21 Estimated number of people reached by Lightricity M13-M27

3.5.3.3 Foreseen participation for the period M13-M27

Type of activity	Title	Date	Place/Country
Trade show exhibition/Conference	Embedded World	February 2020	Nuremberg/Germany
Trade show exhibition	Rail Live!	March 2020	Madrid/Spain
Presentation/Conference	SSI	March-April 2020	Brussels/Belgium
Trade show exhibition /Conference	Sido2020	May 2020	Lyon/France
Trade show exhibition /Conference	IDTechEx2020	May 2020	Berlin/Germany
Trade show exhibition /Conference	ISWC	October 2020	Barcelona/Spain
Trade show exhibition /Conference	Electronica	November 2020	Munich/Germany

Table 22 Foreseen dissemination activities by Lightricity M13-M27

3.5.3.4 Foreseen participation for the period M28-M42

Type of activity	Title	Date	Place/Country
Trade show exhibition/Conference	Embedded World	March 2021	Nuremberg/Germany (Online)
Trade show exhibition	Rail Live!	June 2021	Madrid/Spain
Presentation/Conference	SSI	June 2021	Brussels/Belgium
Trade show exhibition /Conference	Sido2021	September 2021	Lyon/France
Trade show exhibition /Conference	IDTechEx2021	tbd	Berlin/Germany
Trade show exhibition /Conference	ISWC	October 2021	Barcelona/Spain

Table 23 Foreseen dissemination activities by Lightricity M28-M42

3.5.4 EPEAS participation

3.5.4.1 Attended participation

EPEAS dissemination activities are focused on the PMIC as well as on the image sensor and related to global requirements of IoT devices energy harvesting requirements. In its activities, EPEAS will:

- Exhibit and explain EPEAS products at tradeshows
- Add an online web page section for AMANDA
- Present the AMANDA project at events with flyer
- Introduce the project to a customer when relevant

- Promote the partners based on customer requirements

When attending tradeshows, along with its living demonstrations, EPEAS shows some customer's product (*with their agreement*) and an AMANDA flyer (*see below*). EPEAS demonstrators are some sensors (T°/humidity, lux meter and accelerometer) with a radio communication (SigFox, LoRa, Beacon BLE) supplied by energy harvesting. The aim is to show people EPEAS products working and integrated into IoT-like devices.

Figure 31 EPEAS on the AMANDA web site

3.5.4.2 Attended participation M1-M12

EPEAS has attended events noted in Table 24 and Table 25. A presentation on the AMANDA project was available at the EPEAS booth.

Figure 32 EPEAS attended participation

Type of activity	Title	Date	Place/Country
SigFox eco-system and exhibition	SigFox Connect 2019	20-21 November 2019	Singapore/APAC

Table 24 Dissemination activities by EPEAS M1-M12

3.5.4.3 Attended participation M13-M27

Type of activity	Title	Date	Place/Country

Trade show exhibition	Consumer Electronic Show (CES)	7-10 January 2020	Las Vegas/USA
LoRa eco-system and exhibition	The Things 2020	30-31 January 2020	Amsterdam/EMEA
Trade show exhibition	Embedded World 2020	25-27 February 2020	Nuremberg/EMEA
Trade show exhibition	SIDO 2020	03-07 September 2020	Lyon/EMEA

Table 25 Dissemination activities by EPEAS M13-M27

Type of audience	Size of audience
SigFox Connect 2019 - Industry	2000 participants
Consumer Electronic Show (CES) – Industry, general public, customers	180000 attendees expected, and more than 4500 exhibitors
The Things 2020 "LoRaWAN"- LoRa eco-system, industry, customers	2000 visitors and all majors actors of the LoRa eco-system
Embedded World – Embedded electronic specialists	938 exhibitors and 150000 visitors
SIDO 2020 – Industry and customers	150 exhibitors

Table 26 Estimated number of people reached by EPEAS M13-M27

3.5.4.4 Foreseen participation for the period M13-M27

EPEAS has planned to participate at the following trade shows during 2020:

Figure 33 EPEAS foreseen participation

Type of activity	Title	Date	Place/Country
Trade show exhibition	CES	7-10 January 2020	Las Vegas/USA
LoRa eco-system	Thinks Networks	30-31 January 2020	Amsterdam/EMEA

and exhibition			
Trade show exhibition	Embedded World	25-27 February 2020	Nuremberg/EMEA
Trade show exhibition	Hannover Messe	20-24 April 2020	Hannover/EMEA
Trade show exhibition	SIDO	12-13 May 2020	Lyon/EMEA
Trade show exhibition	Electronica	10-13 November 2020	Munich/EMEA

Table 27 Foreseen dissemination activities by EPEAS M13-M27

3.5.4.5 Foreseen participation for the period M28-M42

Type of activity	Title	Date	Place/Country
Trade show exhibition	Embedded World	1-5 March 2021	Nuremberg/EMEA (Online)
Trade show exhibition	SIDO	22-23 September 2021	Lyon/EMEA
Trade show exhibition	SIDO	09-10 November 2021	Paris/EMEA

Table 28 Foreseen dissemination activities by EPEAS M28-M42

3.5.5 ZHAW participation

ZHAW is involved in teaching, research and dissemination of technologies. Some of the insights derived from this project will flow in teaching activities, helping to enhance courses and providing appropriate examples at different levels. Furthermore, demonstrators derived directly or indirectly from the project will be used for open doors activities geared at promoting technologies and bringing them nearer to the masses. Dissemination will also be done by attending conferences, contributing in specialised journals and popular science journals.

3.5.5.1 Attended participation M1-M12

Type of activity	Title	Date	Place/Country
Keynote at IoT Techtalk (Amanda presented as example)	IoT Everywhere? Harvesting energy to power future IoT nodes	28 May 2018	Lausanne/Switzerland
Conference paper ICCE Berlin 2019	AMANDA: An Autonomous Self-Powered Miniaturized Smart Sensing Embedded System	September 2019	Berlin/Germany

Table 29 Dissemination activities by ZHAW M1-M12

Type of audience	Size of audience
Students (Internet of Things class)	Approximately 20 per semester
Scientific Community (Conferences)	In the order of hundreds

Table 30 Estimated number of people reached by ZHAW M1-M12

3.5.5.2 Attended participation M13-M27

Type of activity	Title	Date	Place/Country
Conference presentation at Embedded World 2020	"Powering Sigfox nodes with harvested energy"	25-27 February 2020	Nuremberg/Germany
Conference presentations at 5th IEEE International Symposium on Smart and Wireless Systems	Oral presentation: "Low Power LoRaWAN node based on FRAM Microcontroller". Video presentation: "Low Light Energy Autonomous LoRaWAN Node"	17-18 September 2020	Online
Conference presentation at Wireless Congress 2020	"The Amanda Project"	10 November 2020	Online

Table 31 Dissemination activities by ZHAW M13-M27

Type of audience	Size of audience
Embedded World 2020: scientific community, industry	30
5th IEEE International Symposium on Smart and Wireless Systems: scientific community	50 attendees (oral presentation), 70 views (video presentation)
Wireless Congress 2020: scientific community, industry	20

Table 32 Estimated number of people reached by ZHAW M13-M27

3.5.5.3 Foreseen participation for the period M13-M27

Type of activity	Title	Date	Place/Country
Conference paper in preparation	In preparation (about EH and indoor positioning)	Early 2020	Winterthur/ Switzerland Restrictions - Paper not presented
Teaching IoT (AMANDA as exam-	IoT class	February – May 2020	Wintertur, Zürich/Switzerland

ple in course)			
Open doors activity for public - AMANDA poster	Nacht der Technik	July 2020	Winterthur/Switzerland Cancelled

Table 33 Foreseen dissemination activities by ZHAW M13-M27

3.5.5.4 Foreseen participation for the period M28-M42

Type of activity	Title	Date	Place/Country
Conference or journal paper	Low power indoor localisation	tbd	tbd
Conference or journal paper	Related to Co_2 and IoT	tbd	tbd
Conference or journal paper	Related to High performance computing and EH	tbd	tbd
Conference or journal paper	Related to robustness of EH systems	tbd	tbd
Conference or journal paper	Nb-IoT node powered by harvested energy	tbd	tbd

Table 34 Foreseen dissemination activities by ZHAW M28-M42

3.5.6 ILIKA participation

Ilika has primarily participated in the dissemination of AMANDA by way of public speaking at the events shown below. Ilika has designed the PowerPoint slide below to promote AMANDA:

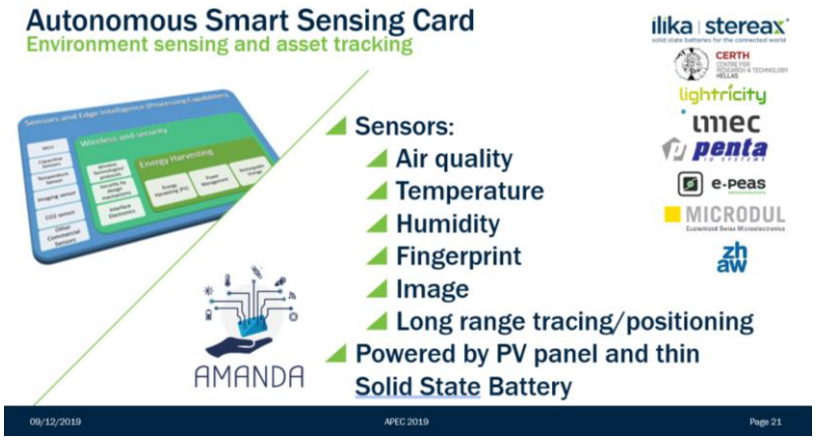


Figure 34 Mentioned AMANDA on the Ilika website

Ilika has also mentioned AMANDA on their website: https://www.ilika.com/latest-news/autonomous-sensor-deployment-project

3.5.6.1 Attended participation M1-M12

Type of activity	Title	Date	Place/Country
Conference	HiTEN	8 July 2019	Oxford/UK
Conference	APEC	17 March 2019	Anaheim/TX

Table 35 Dissemination activities by Ilika M1-M12

Type of audience	Size of audience
Scientific audience	50+
Industry	50+

Table 36 Estimated number of people reached by Ilika M1-M12

3.5.6.2 Attended participation M13-M27

Type of activity	Title	Date	Place/Country
Conference	Sensor Solutions International 2020 19 May 2020	19 May 2020	Online
Conference	Machine Failure and Prevention Tech-nology MFPT 20	06 August 2020	Online
Conference	Energy Harvesting EH2020	25 November 2020	Online

Table 37 Dissemination activities by Ilika M13-M27

Type of audience	Size of audience
Scientific audience	100+
Industry	100+

Table 38 Estimated number of people reached by Ilika M13-M27

3.5.6.3 Foreseen participation for the period M13-M27

Type of activity	Title	Date	Place/Country
Conference	EnerHarv	June 2020 (tbc)	USA (tbc)
Conference	Sensors Expo	22 January 2020	San Diego/USA

Table 39 Foreseen dissemination activities by Ilika M13-M27

3.5.6.4 Foreseen participation for the period M28-M42

Type of activity	Title	Date	Place/Country
Trade show exhibi-tion	Sensors Expo	28-30 June 2021	San Jose/USA
Conference	APEC, Applied Pow-	9-12 June 2021	Online

	er Electronics Conference		

Table 40 Foreseen dissemination activities by Ilika M28-M42

3.5.7 Microdul participation

Microdul dissemination activities concentrate on the MS8892 capacitive sensor and MS1089 temperature sensor. Traditionally these activities include:

- Exhibiting at trade shows
- Cold acquisition by Microdul and by its representatives in Germany and Italy
- Information on Web-Site, Datasheets, Application Notes and Flyers
- Posts on social media such as Linked-In
- Presentations at events
- Promotion via memberships with Swiss MedTech, SwissT.net, IEEE, IGExact and microTec Südwest
- Webinars

3.5.7.1 Attended participation M1-M12

Prototypes of the capacitive sensor will be first available in 2020. Therefore activities to promote the sensors will start in 2021. Generally, dissemination has been delayed by COVID19. Two abstracts detailed below have been drafted and submitted in 2019 for presentations in 2020:

- An abstract entitled "CMOS mixed-signal array technology and what it can do for you" has been submitted for inclusion at the microTec Südwest Cluster Conference in Freiburg, March 2020. It is intended to have one slide that mentions the AMANDA project.
- An abstract entitled "Ultra-Low-Power Capacitive Sensors based on Microdul's own semi-custom, mixed-signal array technology" has been submitted for inclusion at the IDTechEx trade show/conference in Berlin, May 2020. It is intended to have some slides to feature the new capacitive sensor and mention the AMANDA project.

3.5.7.2 Attended participation M13-M27

Type of activity	Title	Date	Place/Country
Trade show exhibition	NANS20 (North American Neuromodulation Society Conference)	23-26 January 2020	Las Vegas/USA
Trade show exhibition	MD&M West	11-13 February 2020	CA/USA
Trade show exhibition	Sindex, SwissMedTech	22 September 2020	Bern/Switzerland
Virtual trade show	Compamed	16-18 November 2020	Düsseldorf/Germany

Table 41 Dissemination activities by Microdul M13-M27

Type of audience	Size of audience
NANS20: Neuro-modulation companies	3000-5000 people

MD&M West: Medical companies	20000 professionals
Sindex: Industrial companies	13000 visitors
Compamed: Medical companies	45000 visitors

Table 42 Estimated number of people reached by Microdul M13-M27

3.5.7.3 Foreseen participation for the period M13-M27

Microdul has planned exhibitions at the following trade shows in 2020:

Figure 35 Microdul foreseen participation

Type of activity	Title	Date	Place/Country
Trade show exhibition	MD&M West	11-13 February 2020	CA/USA
MicroTec Südwest Cluster Conference	"CMOS mixed-signal array technology and what it can do for you"	18-19 March 2020	Freiburg/Germany
Trade show exhibition	Medtec Live	31 March-2 April 2020	Nürnberg/Germany
Trade show exhibition	IDTechEx	13-14 May 2020	Berlin/Germany
Conference presentation at IDTechEx	"Ultra-Low-Power Capacitive Sensors based on Microdul's own semi-custom, mixed-signal array technology"	13-14 May 2020	Berlin/Germany
Trade show exhibition	Sensor & Test	23-25 June 2020	Nürnberg/Germany
Trade show exhibition	Sindex 2020	22-24 September 2020	Bern/Switzerland

Trade show exhibition	Electronica	10-13 November 2020	Munich/Germany
Trade show exhibition	Compamed	16-18 November 2020	Düsseldorf/Germany

Table 43 Foreseen dissemination activities by Microdul M13-M27

At trade shows and for membership of Swiss MedTech, SwissT.net, IEEE, IGExact and microTec SüdWest, dissemination is supported by:

- Demonstrators for the capacitive sensors and temperature sensors
- Flyers
- One-to-one contact with potential customers

Cold acquisition and posts on social media will be supported with:

- A presentation containing a market pitch to highlight applications and product advantages
- Videos are planned towards the end of 2021 to illustrate product advantages
- Website information including datasheets, application notes and flyers
- Sample availability at the end of 2020 for AMANDA and end of 2021 to 2022 for potential customers

Type of audience	**Size of audience**
MD&M West: Medical companies	20000 professionals expected
microTec Cluster Conference Südwest:	Over 20 companies expected
MedTech Live: Medical companies	4600 visitors expected
IDTechEx: Emerging technologies, mixed audience of academics and industry.	2600 visitors expected
Sensor & Test: Industrial companies	6900 visitors expected
Sindex: Industrial companies	13000 visitors expected
Electronica: Consumer and Industrial companies.	80000 visitors expected
Compamed: Medical companies	>100000 visitors expected

Table 44 Estimated number of visitors to trade shows where Microdul exhibits

3.5.7.4 Foreseen participation for the period M28-M42

Participation in live events is severely limited due to COVID-19 restrictions. Therefore Microdul will review participation throughout the year.

Type of activity	**Title**	**Date**	**Place/country**
Webinar	Ultra-Low-Power Capacitive Sensors	Q1 2021, tbd	Online

Table 45 Foreseen dissemination activities by Microdul M28-M42

3.5.8 PENTA participation

PENTA is heavily involved in public traffic and Smart Cities solution. Dissemination activities lie on the promotion of products. Each of the PENTA activities emphasises involvement in the AMANDA project, promoting its goals and project partners.

Figure 36 Mentioned AMANDA project on PENTA website

3.5.8.1 Attended participation M1-M12

Type of activity	Title	Date	Place/country
Tech Talk in Croatian Chamber of economy	IoT technology in smart cities	19 June 2019	Pula/Croatia
Presentation in the Ministry of Culture of the Republic of Montenegro	National Cultural Card	03-06 September 2019	Cetinje/Montenegro
Tech talk in Croatian Chamber of Economy	Energy Efficiency in Construction, Innovation and Environmental Protection	3 October 2019	Pula/Croatia
Conference	Urban traffic at a standstill	10-11 October 2019	Zagreb/Croatia

Table 46 Dissemination activities by PENTA M1-M12

Type of audience	Size of audience
A mixed audience of academics, students	~150
Mixed audience	~100
Tech talk - mixed audience of academics and industry, students and scientific community	~300

Table 47 Estimated number of people reached by PENTA M1-M12

3.5.8.2 Attended participation M13-M27

Type of activity	Title	Date	Place/country
Round Table	Innovative Solutions For Smart Urban Mobility	26 November 2020	Online/Croatia

Kick-off meeting	Smart Eco Parking	22 December 2020	Online/Croatia
Kick-off meeting	SUNSAFE IoT	03 February 2021	Online/Croatia

Table 48 Dissemination activities by PENTA M13-M27

Type of audience	Size of audience
Mixed audience (Scientific community, industry, IT sector, public city companies)	33

Table 49 Estimated number of people reached by PENTA M13-M27

3.5.8.3 Foreseen participation for the period M13-M27

Figure 37 PENTA foreseen participation

Type of activity	Title	Date	Place/country
Trade show exhibition	InnoTrans	22-25 September 2020	Berlin/Germany
Conference and trade show exhibition	IT-TRANS	3-5 March 2020	Karlsruhe/Germany
Trade show exhibition	SMART CITY EXPO World Congress	November 2020	Barcelona/Spain
Trade show exhibition	INTERTRAFFIC	21-24 April 2020	Amsterdam/The Netherlands

Table 50 Foreseen dissemination activities by PENTA M13-M27

3.5.8.4 Foreseen participation for the period M28-M42

Type of activity	Title	Date	Place/country
Trade show exhibition	SMART CITY EXPO World Congress	16-18 November 2021	Barcelona/Spain
Conference and	IT-TRANS	08-10 March	Karlsruhe/Germany

trade show exhibition		2022	
Trade show exhibition	INTERTRAFFIC	29 March – 01 April 2022	Amsterdam/The Netherlands

Table 51 Foreseen dissemination activities by PENTA M28-M42

3.5.9 Dissemination Activities Report (DAR)

In addition to the given lists of individual partner participation in external events, below follow the Dissemination Activities Reports presenting more specific details about communication activities and attended events. Dissemination Activities Report consists of the following Sections: basic event information, scope of the event, description of the participation, audience reached, feedback and follow-up, key figures, useful links, and photos where available.

3.5.10 Tech Talk on 19 June 2019

Key figures				
Name of event	**IoT Technology in Smart Cities**			
Date	**19 June 2019**			
Place	**Pula, Croatia**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release	**X**	Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific community (higher education, research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
	X	Policy markers		
Countries addressed	Croatia			
Partners	PENTA			

3.5.10.1 Scope of the event

In cooperation with the Croatian Chamber of Economy - Pula County Chamber, PENTA and Faculty of Informatics Pula, organised a Tech Talk with the main topic of IoT technology. The event was held on 19 June 2019, at the premises of the Croatian Chamber of Economy - County Chamber of Pula. This event was intended for the transport, industry and IT sector, public city companies, and local and regional self-government. Representatives of the Faculty of Informatics in Pula presented the IoT research of the Faculty, while representatives of PENTA d.o.o. talked about the AMANDA project and the application of IoT technology in smart cities.

3.5.10.2 Description of the participation

Oskar Vujičić (PENTA), at the beginning of the event, presented the AMANDA project's Consortium. In particular, the objectives of the AMANDA project, the technical challenges ahead of the project and the possible further application of the Autonomous Smart Sensing Card (ASSC) were discussed. After the conference, a very constructive discussion was held about the technical features and possibilities of using the ASSC.

3.5.10.3 Audience reached

The scientific community, transport, industry and IT sector, public city companies, local and regional self-government

3.5.10.4 Feedback and follow-up

AMANDA project raised the interest in a very positive way. Participants considered Autonomous Smart Sensing Card (ASSC) a unique solution and were interested in information on further progress of the project, especially in the development and evaluation of the presented sensors, as well as on possible use cases.

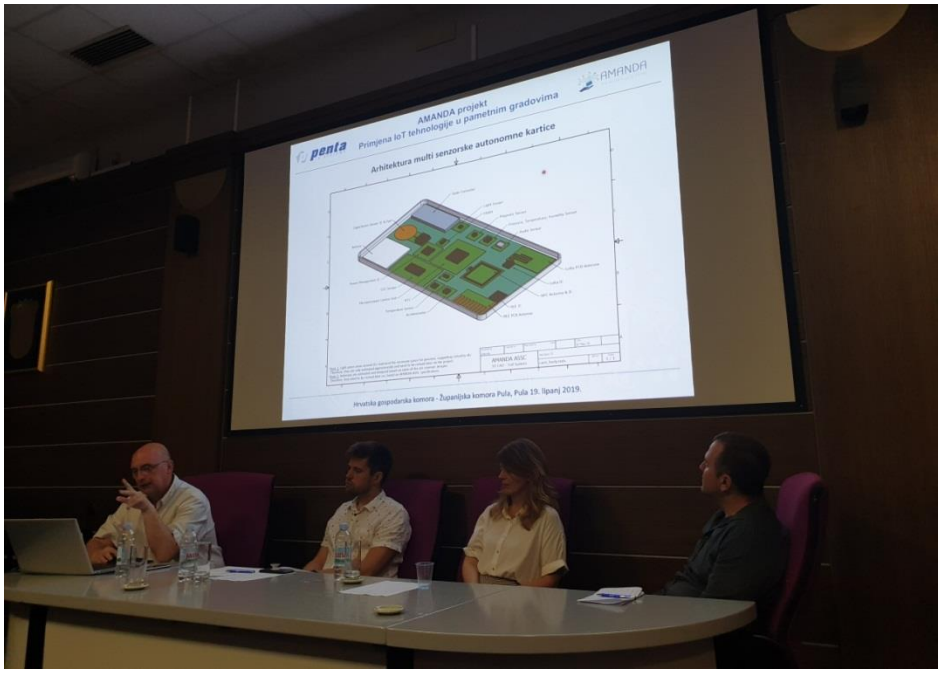
3.5.10.5 Key figures

40 participants from Croatia, Slovenia

3.5.10.6 Useful links

https://hgk.hr/zupanijska-komora-pula/u-hgk-zk-pula-odrzano-predavanje-o-iot-tehnologiji
https://amanda-project.eu/news-events/130-amanda-project-presentation-in-croatian-chamber-of-economy

3.5.10.7 Photos



3.5.11 Conference on 9 July 2019

Key figures				
Name of event	**HiTEN 19**			
Date	**9 July 2019**			
Place	**Oxford UK**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop

		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific community (higher education, research)		Medias
	X	Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	UK			
Partners	ILIKA			

3.5.11.1 Scope of the event

What the organisers say: "The objective of the HiTEN Conference is to have a unique forum that brings together researchers and practitioners in academia and industry from all over the world. All styles of practical high-temperature electronics design and implementation approaches are encouraged, along with a variety of high-temperature application areas. Today the main semiconductor focus of HITEN is silicon and silicon on insulator (SOI). Although, HITEN is not simply a semiconductor focused network. HITEN provides a conduit for the exchange and dissemination of information on all aspects of high-temperature electronics. It is a global network with users, suppliers, developers and fundamental researchers dealing in all aspects of High-Temperature Electronics.

3.5.11.2 Description of the participation

Denis Pasero, Product Commercialisation Manager gave an oral presentation, "Miniature Power Sources for High Temperature Industrial Sensors"

3.5.11.3 Audience reached

Scientific community, industry

3.5.11.4 Feedback and follow-up

Two good contacts

3.5.11.5 Business opportunities identified

Two good business opportunity with a developer of sensors for the automotive industry and a developer of miniature medical devices.

3.5.11.6 Key figures

~50 people attended

3.5.11.7 Photos

3.5.12 Presentation on 3 September 2019

Key figures				
Name of event	**National Cultural Card**			
Date	**3-6 September 2019**			
Place	**Cetinje, Montenegro**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release	**X**	Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific community (higher education, research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
	X	Policy markers		

Countries addressed	Croatia, Montenegro
Partners	PENTA

3.5.12.1 Scope of the event

"National Cultural Card" presentation was held at the premises of the Ministry of Culture Montenegro, and the scope of this event was to present the overall content of two projects (National Cultural Card, AMANDA), as well as defined tasks and primary objectives.

3.5.12.2 Description of the participation

Darko Maljić (PENTA) presented the National Cultural Card project goals, the project's hardware foreseen, and the project's application content. Oskar Vujičić (PENTA) presented the AMANDA project, used technologies, objectives and potential use cases. One of the main goals of this event was to explain the features of AMANDA ASSC and the potential of connecting with the National Cultural Card project, which is a part of the Cetinje Smart City project.

3.5.12.3 Audience reached

Industry, public city companies, local and state government

3.5.12.4 Feedback and follow-up

Participants reported their interests in a response form after the presentation. Contact data (email addresses) of those present who were interested in receiving project communication material were collected.

3.5.12.5 Business opportunities identified

A potential connection with the Cetinje Smart City project was identified. Cooperation depends on the further development of the AMANDA project.

3.5.12.6 Key figures

30 participants from Croatia, Montenegro

3.5.12.7 Useful links

https://amanda-project.eu/news-events/137-talk

3.5.12.8 Photos

3.5.13 Conference on 8 September 2019

Key figures				
Name of event	**IEEE 9th ICCE conference 2019**			
Date	**8-11 September, 2019**			
Place	**Berlin, Germany**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop

		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific community (higher education, research)		Medias
		Industry		Investor
		Civil Society		Customers
	X	General Public		Other
		Policy markers		
Countries addressed	Europe, America			
Partners	CERTH			

3.5.13.1 Scope of the event

The 9th International Conference on Consumer Electronics (ICCE-Berlin) 2019 was organised as part of the world's leading trade show for consumer electronics and home appliances, IFA Berlin. Dr Charis Kouzinopoulos from CERTH presented the conference paper titled "AMANDA: An Autonomous Self-Powered Miniaturized Smart Sensing Embedded System" that gives an overview of the AMANDA project

3.5.13.2 Audience reached

Scientific Community

3.5.13.3 Conference paper

https://ieeexplore.ieee.org/document/8966223

3.5.13.4 Key figures

50 participants from all over Europe and America

3.5.13.5 Useful links

http://www.icce-berlin.org/
https://amanda-project.eu/documents/public-deliverables/send/6-public-deliverables/11-amanda-an-autonomous-self-powered-miniaturized-smart-sensing-embedded-system-2
https://edas.info/p25749

3.5.13.6 Photos

3.5.14 Workshop on 26 September 2019

Key figures				
Name of event	**SURFAS 19**			
Date	**26 September 2019**			
Place	**Guildford UK**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop	**X**	Participation to a workshop

		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific community (higher education, research)		Medias
		Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	UK			
Partners	ILIKA			

3.5.14.1 Scope of the event

The workshop is originating from EU funded Interreg cross-channel collaboration programme "SURFAS" with France, where we target development of RF energy harvesters for low power, small device applications.

3.5.14.2 Description of the participation

Denis Pasero, Product Commercialisation Manager, gave an oral presentation Powering Autonomous Sensors for Industry 4.0 and MedTech with Solid State Batteries."

3.5.14.3 Audience reached

Scientific community

3.5.14.4 Feedback and follow-up

Excellent feedback about feasibility of batteries combined with Energy Harvesting, here vibration

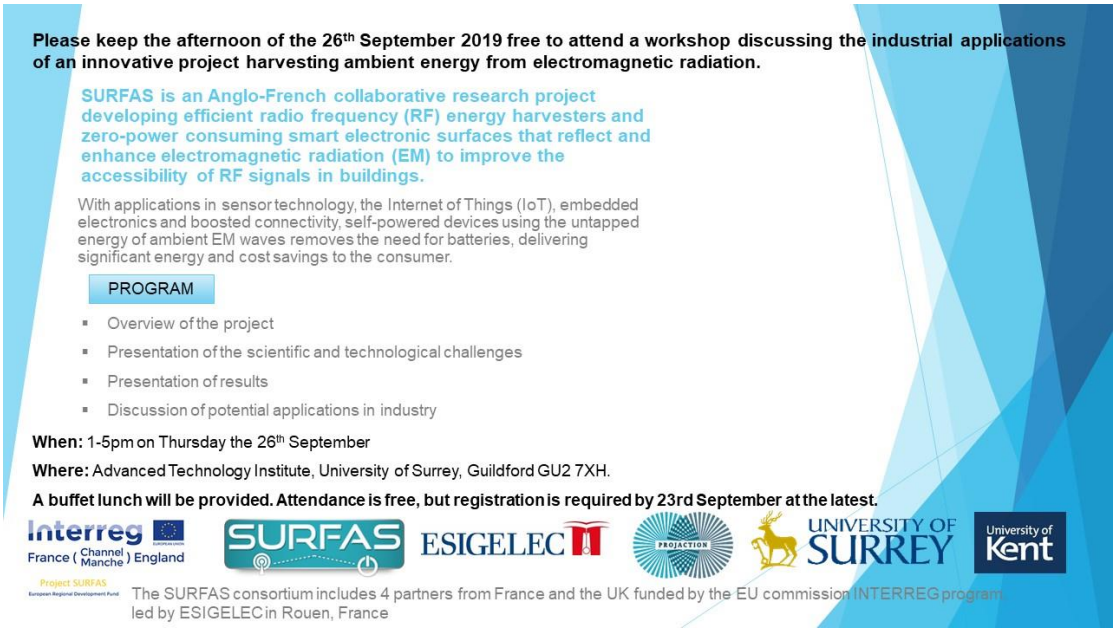
3.5.14.5 Business opportunities identified

Two good contacts with University of Guildford and ESIGELEC Technopôle du Madrillet, France

3.5.14.6 Key figures

~20 people attended the webinar

3.5.14.7 Photos



3.5.15 Conference on 3 October 2019

Key figures				
Name of event	**Energy Efficiency in Construction, Innovation and Environmental Protection**			
Date	**3 October 2019**			
Place	**Pula, Croatia**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific community (higher education, research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
	X	Policy markers		

Countries addressed	Croatia
Partners	PENTA

3.5.15.1 Scope of the event

"Energy Efficiency in Construction, Innovation and Environmental Protection" conference was organised by the Croatian Chamber of Economy – Pula County Chamber. The conference presented innovations and solutions provided by Croatian manufacturers and service providers in energy efficiency and environmental protection. Representatives of the companies had presentations about public sector buildings after energy renovation, emphasising that many solutions related to consumption control as well as air quality control, smart lighting, smart parking, etc. are applicable not only in public but also in other sectors. The scope of the event was IoT (Internet of Things) in the context of energy efficiency.

3.5.15.2 Description of the participation

The autonomous self-powered multi-sensor card and application in building automation were Oskar Vujičić (PENTA) presentation. In his speech, Oskar Vujičić presented all the partners in the project, the primary goals and expectations, and especially commented on the application of the AMANDA ASSC in building automation.

3.5.15.3 Audience reached

The scientific community, industry, public city companies, local and regional self-government

3.5.15.4 Feedback and follow-up

Even though the discussion after PENTA's presentation was mainly focused on the building automation direction, an open debate and relevant brainstorming followed for almost all AMANDA use cases. After the conference, several companies were informed about the AMANDA project and expressed interest in receiving the project communication material.

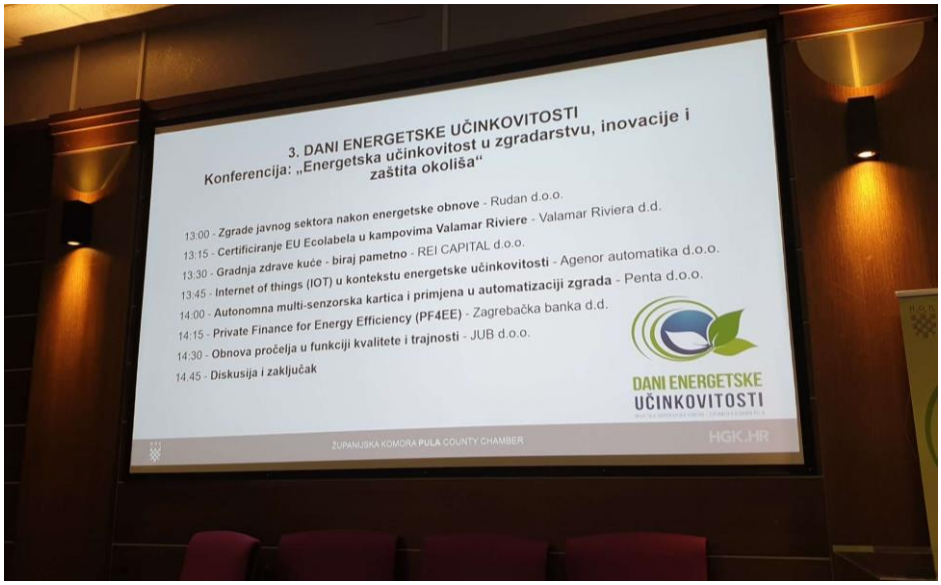
3.5.15.5 Key figures

50 participants from Croatia, Slovenia

3.5.15.6 Useful links

https://www.hgk.hr/zupanijska-komora-pula/u-hgk-zk-pula-odrzana-konferencija-energetska-ucinkovitost-u-zgradarstvu-inovacije-i-zastita-okolisa-najava
http://www.regionalexpress.hr/site/more/konferencija-energetska-uinkovitost-u-zgradarstvu-inovacije-i-zatita-okolia

3.5.15.7 Photos


3. DANI ENERGETSKE UČINKOVITOSTI
Konferencija: „Energetska učinkovitost u zgradarstvu, inovacije i zaštita okoliša“
13:00 - Zgrade javnog sektora nakon energetske obnove - Rudan d.o.o.
13:15 - Certificiranje EU Ecolabela u kampovima Valamar Riviere - Valamar Riviera d.d.
13:30 - Gradnja zdrave kuće - biraj pametno - REI CAPITAL d.o.o.
13:45 - Internet of things (IOT) u kontekstu energetske učinkovitosti - Agenor automatika d.o.o.
14:00 - Autonomna multi-senzorska kartica i primjena u automatizaciji zgrada - Penta d.o.o.
14:15 - Private Finance for Energy Efficiency (PF4EE) - Zagrebačka banka d.d.
14:30 - Obnova pročelja u funkciji kvalitete i trajnosti - JUB d.o.o.
14:45 - Diskusija i zaključak
DANI ENERGETSKE UČINKOVITOSTI
ŽUPANIJSKA KOMORA PULA COUNTY CHAMBER
HGK.HR


penta Autonomna multisenzorska kartica i primjena u automatizaciji zgrada
AMANDA projekt
AutonoMous self powered miniAturized iNtelligent sensor for environmental sensing anD asset tracking in smArt IoT environments
imec
e-peas
penta
ilika
Hrvatska gospodarska komora - Županijska komora Pula, Pula 03. listopad 2019.


IOT

3.5.16 Conference on 10 October 2019

Key figures				
Name of event	**Urban Traffic at a Standstill Conference**			
Date	**10-11 October 2019**			
Place	**Zagreb, Croatia**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Website		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific community (higher education, research)		Medias
	X	Industry		Investor
		Civil Society		Customers
	X	General Public		Other
		Policy markers		
Countries addressed	Croatia			
Partners	PENTA			

3.5.16.1 Scope of the event

The Conference "Urban Traffic at a Standstill" organised by the Faculty of Transport and Traffic Sciences was held in the period of 10-11 October 2019 with the purpose of presenting the results and achievements of the project SPARK Sense, funded by the European Regional Development Fund. The holder of the SPARK Sense project is PENTA, while the project partner is the Faculty of Transport and Traffic Sciences from Zagreb. On the first day of the conference, the AMANDA project, Consortium, primary goals, as well as the expected results, were presented.

3.5.16.2 Description of the participation

The Faculty of Transport and Traffic Sciences from Zagreb, a scientific research institution and a partner in this project, presented the research results into the impact of the system on the environment. As part of the research, the faculty created an environmental impact study and a citizen satisfaction study with a new standstill traffic solution. CEO of PENTA, Mladen Pamić, took the opportunity to present the AMANDA project, features and possibilities of

using the innovative ASSC card in smart parking systems, emphasising that it can be integrated into the realised SPARK Sense project.

3.5.16.3 Audience reached
Scientific community, industry and IT sector, general public

3.5.16.4 Feedback and follow-up
The high interest of all present was expressed, which was reflected in the affirmative and substantive discussion. As the AMANDA project was in the first year of implementation, participants were interested in monitoring the project's progress, so they were given information about the official website, profiles on social networks (LinkedIn, Twitter), and contacts of PENTA as a project partner.

3.5.16.5 Business opportunities identified
Instead of using sensors with a battery life of up to 5 years that are attached to the asphalt surface, in SPARK Sense parking solution, it is possible to use the AMANDA ASSC by installing it in parking barriers located in parking spaces.

3.5.16.6 Key figures
70 persons joined the two-day conference

3.5.16.7 Useful links
https://www.penta.hr/en/news/spark-sense-project-presentation-faculty-transport-and-traffic-sciences-zagreb-traffic-rest-conference/

3.5.16.8 Photos


3.5.17 Exhibition on 20 November 2019

Key figures				
Name of event	**SigFox Connect 2019**			
Date	**20-21 November 2019**			
Place	**Singapore**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
	X	Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	Asia			

Partners	E-PEAS

3.5.17.1 Scope of the event
Exhibition around the SigFox technology and its use in IoT.

3.5.17.2 Description of the participation
E-PEAS had a booth to present its power management ICs and its application within IoT. The technology shown is the same as the one used in the AMANDA project.

3.5.17.3 Audience reached
2000 participants from 70 countries

3.5.17.4 Feedback and follow-up
Interesting opportunities showed up – actual follow-up on 2 of them

3.5.17.5 Business opportunities identified
Mainly internal

3.5.17.6 Useful links
https://www.sigfox.com/en/sigfox-connect-20-21-november-2019-singapore

3.5.18 Exhibition on 07 January 2020

Key figures				
Name of event	**Consumer Electronic Show**			
Date	**07-10 January 2020**			
Place	**Las Vegas, USA**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
	X	Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers

	X	General Public		Other
		Policy markers		
Countries addressed	Worldwide			
Partners	E-PEAS			

3.5.18.1 Scope of the event

It is the largest consumer electronic show that gathers all actors in the field. This exhibition is the occasion for the main annual announcement of innovations.

3.5.18.2 Description of the participation

E-PEAS had a booth to present its power management ICs and its application within IoT. The technology shown is the same as the one used in the AMANDA project.

3.5.18.3 Audience reached

180000 attendees and >4500 exhibitors

3.5.18.4 Feedback and follow-up

The exhibition was an exciting opportunity to meet partners, customer and investigate new opportunities.

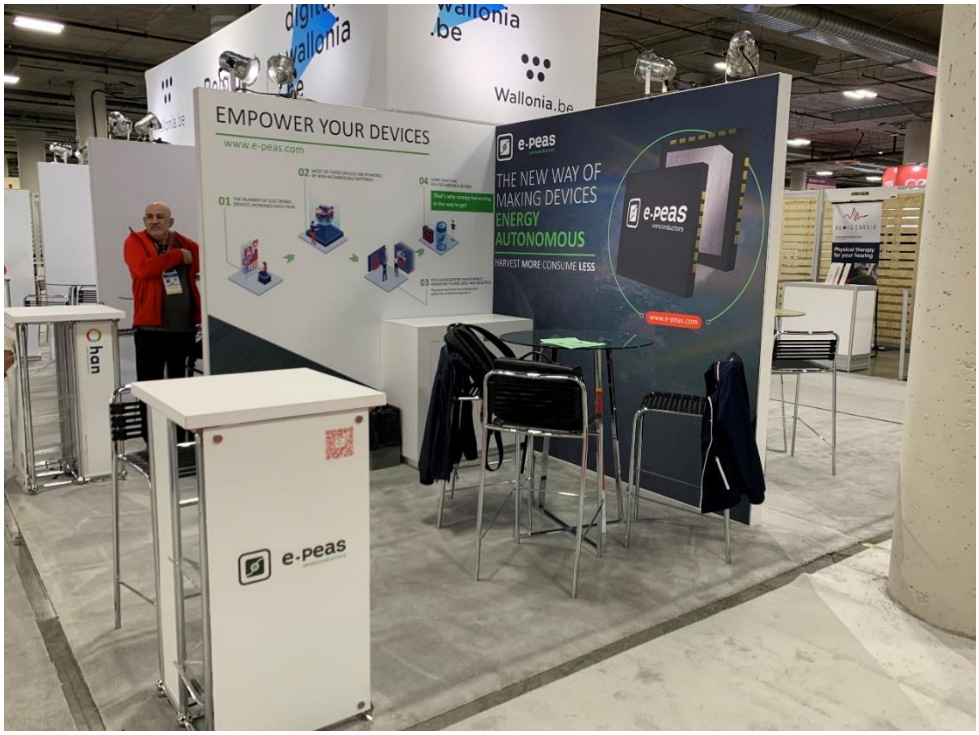
3.5.18.5 Business opportunities identified

Mainly internal

3.5.18.6 Useful links

https://www.ces.tech/

3.5.18.7 Photos



3.5.19 Conference on 23 January 2020

Key figures				
Name of event	**NANS20 (North American Neuromodulation Society Conference)**			
Date	**23-26 January 2020**			
Place	**Las Vegas, USA**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	USA plus world wide			
Partners	MICRODUL			

3.5.19.1 Scope of the event

The three-day conference for education and promotion in Las Vegas, USA aimed at all players in the neuro-modulation business.

3.5.19.2 Description of the participation

Microdul prepared a short presentation (90210961) of the AMANDA project, which was continuously presented on a laptop in a prominent position next to our demonstration model during the trade show.

3.5.19.3 Audience reached

30 visitors with potential interest and discussion for Microdul products or services.

3.5.19.4 Feedback and follow-up

Thirty leads for Microdul and three leads for Microdul-Semiconductors, all in the area of neuro-stimulation.

3.5.19.5 Business opportunities identified

No leads were directly relevant for the AMANDA project. The possible manufacture of the battery was discussed with Ilika at the conference.

3.5.19.6 Key figures

Participation of 50 companies and 3000-5000 people.

3.5.19.7 Useful links

https://conference.neuromodulation.org/
https://www.microdul.com/en/news/newsarticles/next-trade-show-compamed.html

3.5.19.8 Photos

3.5.20 Conference and exhibition on 30 January 2020

Key figures				
Name of event	**The Things 2020**			
Date	**30-31 January 2020**			
Place	**Amsterdam, The Netherlands**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
	X	Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	European countries			
Partners	E-PEAS			

3.5.20.1 Scope of the event
Conference about LoRaWAN, LoRa technology and its application in IoT ecosystem

3.5.20.2 Description of the participation
E-PEAS participated in the conference and some workshops. They had a small booth presenting the same energy harvesting solution used in AMANDA along with LoRa technology.

3.5.20.3 Audience reached
Major LoRa eco-system actors. Over 2000 visitors

3.5.20.4 Feedback and follow-up
Main contact with partners to propose common solution

3.5.20.5 Business opportunities identified

Mainly internal

3.5.20.6 Useful links

https://www.thethingsnetwork.org/conference/

3.5.21 Conference on 11 February 2020

Key figures				
Name of event	**MD&M West**			
Date	**11-13 February 2020**			
Place	**Anaheim, California, USA**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media	**X**	Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	USA plus world wide			
Partners	MICRODUL, participation together with Switzerland Global Enterprise			

3.5.21.1 Scope of the event

Three-day show in Anaheim, California, aimed at the world medical device market. All major players in the medical market attend this show.

3.5.21.2 Description of the participation

Microdul prepared a short presentation (90210961) of the AMANDA project, which was continuously presented on a laptop in a prominent position next to our demonstration model during the trade show.

3.5.21.3 Audience reached

40-50 visitors with potential interest and discussion for Microdul products or services.

3.5.21.4 Feedback and follow-up

One company showed interest in the temperature sensor

3.5.21.5 Business opportunities identified

Three leads in the area of Microdul Semiconductors but only one relevant to the temperature sensor.

3.5.21.6 Key figures

Participation of 1900 companies and 20000 people.

3.5.21.7 Useful links

https://www.mdmwest.com/en/
https://www.microdul.com/en/news/newsarticles/trade-show-md-und-m-west-2020/

3.5.21.8 Photos

3.5.22 Conference on 25 February 2020

Key figures				
Name of event	**Embedded World Conference 2020**			
Date	**25-27 February 2020**			
Place	**Nuremberg, Germany**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or

				workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
	X	Civil Society		Customers
	X	General Public		Other
	X	Policy markers		
Countries addressed	All (Embedded World is a World event)			
Partners	ZHAW			

3.5.22.1 Scope of the event

The embedded world Exhibition & Conference is the world's leading meeting place for the embedded community. The conference and the fair run in parallel. Allowing academia, industry and general public to interact and exchange information about various themes related to embedded systems. This year, the corona crisis seriously affected the numbers, with hundreds of firms and thousand of visitors staying away. Prof. Marcel Meli from ZHAW attended, moderating sessions on low-power and presenting the paper “Powering Sigfox Nodes with Harvested Energy”. That paper is related to the low-power wireless aspects of the AMANDA project.

3.5.22.2 Audience reached

Scientific Community, Industry

3.5.22.3 Conference paper

https://doi.org/10.21256/zhaw-20066

3.5.22.4 Key figures

Tens of participants from several countries

3.5.22.5 Useful links

https://www.elektroniknet.de/international/embedded-world-conference-2020-connecting-embedded-intelligence-165228.html
https://www.electronicspecifier.com/news/podcasts/highlights-from-embedded-world-2020

Review 2020:
Thank you for joining embedded world Exhibition&Conference 2020

At embedded world 2020, the international meeting place for the industry, more than 900 exhibitors from 42 countries presented the entire value chain for embedded system technologies this year. Once again, the embedded world Conference and the electronic displays Conference convinced with expert knowledge at the highest standards.

- 1500 attendees
- 266 presentations
- 197 net hours or more than 8 days of lectures
- 13 in-depth classes
- Top-level keynote, given by Prof. Dr. Ulrich Loewen, Senior Principal Key Expert Engineer, Siemens Corporate Technology

Nevertheless, this year's embedded world Conference was anything else than usual. Due to the upcoming corona crisis some speakers could not physically come to the event. We were able to compensate for this and run the full conference program with close to 60 life remote presentations. Our thanks go to all speakers for their willingness to cooperate and to all participants for their understanding for some program changes on a short notice.

3.5.23 Conference and exhibition on 25 February 2020

Key figures				
Name of event	**Embedded World 2020**			
Date	**25-27 February 2020**			
Place	**Nuremberg, Germany**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
	X	Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	European countries			
Partners	E-PEAS			

3.5.23.1 Scope of the event
Electronic show with a dedicated conference on embedded systems. The exhibition allows excellent networking for both partners and customers.

3.5.23.2 Description of the participation
E-PEAS participate in the exhibition with a booth and presenting the energy harvesting controller products within multiple application.

3.5.23.3 Audience reached
Industry and customers

3.5.23.4 Feedback and follow-up
Some first contact has been taken. The opportunities are still at an early stage.

3.5.23.5 Business opportunities identified
Mainly internal

3.5.23.6 Key figures
>900 exhibitors, >150000 visitors

3.5.23.7 Useful links
https://www.embedded-world.de/en

3.5.24 Webinar on 19 May 2020

Key figures				
Name of event	**Sensor Solution International (Angel Tech Online Summit)**			
Date	**19 May 2020**			
Place	**On-line webinar**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release	**X**	Participation to an event other than a conference or workshop (WEBINAR)
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor

		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	International			
Partners	ILIKA			

3.5.24.1 Scope of the event

Initially, a 2-day event in Brussels, Belgium, on March 20, was cancelled due to Covid-19 and replaced by an online seminar. The organisers say: "AngelTech is the number one global event covering compound semiconductor, photonic integrated circuit and sensor technologies. With a strong over-lap between the three conferences, attendees and exhibitors are exposed to the full relevant supply chains and customer and supplier bases."

3.5.24.2 Description of the participation

Denis Pasero, Product Commercialisation Manager, gave an oral presentation, "Extended temperature range Solid State Batteries for Industrial IoT", at 15:05 GMT and answered questions.

3.5.24.3 Audience reached

Scientific community, industry

3.5.24.4 Feedback and follow-up

No feedback

3.5.24.5 Business opportunities identified

Disappointing online event with no feedback received

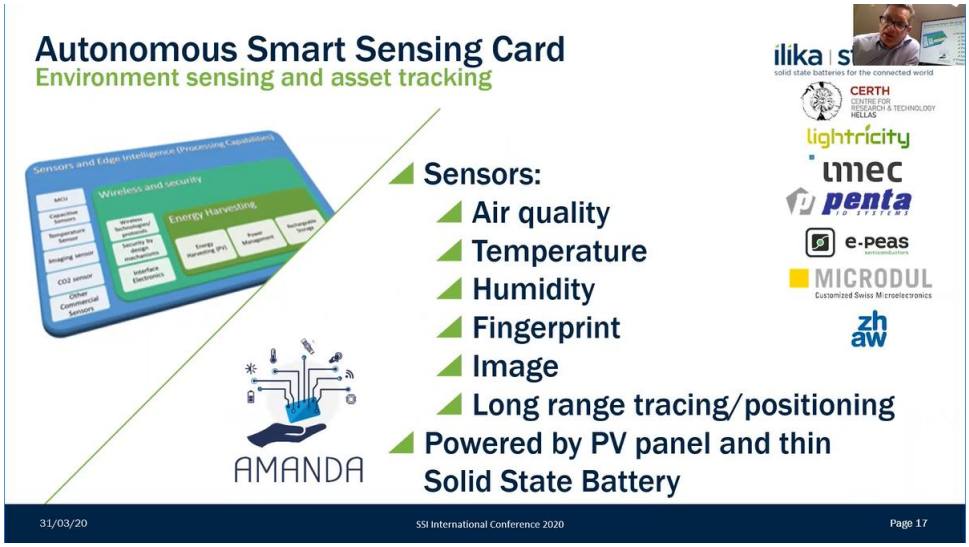
3.5.24.6 Key figures

~40 people attended the webinar

3.5.24.7 Useful links

https://www.ilika.com/latest-news/webinar-sensor-solutions-international-19th-may-2020/

3.5.24.8 Photos



3.5.25 Conference on 19 May 2020

Key figures				
Name of event	**Sensors Solution International, Online Summit**			
Date	**19 May 2020**			
Place	**Online**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)	**X**	Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	Worldwide			
Partners	LIGHTRICITY			

3.5.25.1 Scope of the event
Connecting, informing and inspiring the global sensors industry

3.5.25.2 Description of the participation
Lightricity made a presentation on ultra-high efficiency photovoltaic energy harvesting for challenging environments. This included some slides on the AMANDA project around autonomous sensing.

3.5.25.3 Audience reached
Industry: ~100; Scientific community: ~30; Others: ~100

3.5.25.4 Feedback and follow-up
Good interest from delegates (~5 follow up leads)

3.5.25.5 Business opportunities identified

Mainly internal opportunities

3.5.25.6 Key figures

3 conferences, 700+ delegates; 80+ exhibitors

3.5.25.7 Useful links

https://sensorsinternational.net/

3.5.26 Webinar on 06 August 2020

Key figures				
Name of event	**Machine Failure and Prevention Technology MFPT 20**			
Date	**6 August 2020**			
Place	**On-line webinar**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release	**X**	Participation to an event other than a conference or workshop (WEBINAR)
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	International			
Partners	ILIKA			

3.5.26.1 Scope of the event

Initially, a 2-day event in Savannah, Georgia, August 20, was cancelled due to COVID-19 and replaced by an online seminar. What the organisers say: "The MFPT and Vibration Institute Annual Training Conference & Expo (VIATC) gives you practical learning and provides you quality networking for industrial vibration analysis, precision alignment and balancing, and highlights insights into complementary condition monitoring technologies and emerging

issues impacting reliability management like artificial intelligence(AI) and motion amplification."

3.5.26.2 Description of the participation

Denis Pasero, Product Commercialisation Manager, has recorded an ON-DEMAND oral presentation, "Miniature Solid State Batteries for High Temperature Industrial Sensors".

3.5.26.3 Audience reached

Scientific community, industry

3.5.26.4 Feedback and follow-up

No feedback

3.5.26.5 Business opportunities identified

Disappointing online event with no feedback received

3.5.26.6 Key figures

6 people requested the webinar

3.5.26.7 Useful links

https://www.ilika.com/latest-news/webinar-sensor-solutions-international-19th-may-2020/

3.5.27 Conference and exhibition on 03 September 2020

Key figures				
Name of event	**SIDO 2020**			
Date	**03-07 September 2020**			
Place	**Lyon, France**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
	X	Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers

		General Public		Other
		Policy markers		
Countries addressed	Mainly France			
Partners	E-PEAS			

3.5.27.1 Scope of the event

The event is focused on multiple subjects as IoT, Robotics or IA, and helps create synergy between all actors. Due to Coronavirus, it was not sure up to the end that the exhibition would be held. Therefore, some major actors didn't show up as announced.

3.5.27.2 Description of the participation

E-PEAS participated in the exhibition with a small booth, but the presence was limited to be compatible with the restriction rules imposed by the coronavirus crisis.

3.5.27.3 Audience reached

Industry and customers

3.5.27.4 Feedback and follow-up

This edition was relatively low in result due to the absence of some big actors. The contacts with existing customers and partners were possible, but no new opportunity popped-up.

3.5.27.5 Business opportunities identified

None

3.5.27.6 Key figures

>150 exhibitors

3.5.27.7 Useful links

https://www.sido-lyon.com/

3.5.28 Pitch event on 08 September 2020

Key figures				
Name of event	**Future Networks Lab Accelerator Showcase and Demo Day**			
Date	**8 September 2020**			
Place	**Online**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training	**X**	Pitch event
		Social media		Trade fair
		Web-site		Participation in activities

				organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)	**X**	Medias
	X	Industry	**X**	Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	UK mainly			
Partners	LIGHTRICITY			

3.5.28.1 Scope of the event

Pitch day event organised by the Digital Catapult (UK) to showcase technologies that are transforming the UK's technology ecosystem.

3.5.28.2 Description of the participation

Lightricity made a presentation on its ultra-high efficiency photovoltaic energy harvesting and applications within the IoT (asset tracking and monitoring). This included some information on the AMANDA project around autonomous sensing.

3.5.28.3 Audience reached

Industry: ~50; Scientific community: ~30; Investors: 10; Others: ~100

3.5.28.4 Feedback and follow-up

1 video was shot on Lightricity premises for dissemination purposes.

3.5.28.5 Business opportunities identified

Mainly networking opportunities and access to independent laboratory facilities (external validation).

3.5.28.6 Useful links

https://lightricity.co.uk/news/f/upcoming-digital-catapults-futurenetworkslab-pitch-day
https://www.youtube.com/watch?v=1tHe32DmfKE

3.5.29 Conference on 17 September 2020

Key figures				
Name of event	**5th IEEE International Symposium on Smart and Wireless Systems**			
Date	**17-18 September 2020**			
Place	**On-line, hosted in Dortmund, Germany**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop

		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication cam-paign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
		Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	All (Embedded World is a World event)			
Partners	ZHAW			

3.5.29.1 Scope of the event

The symposium explores wireless systems and their applications. The aim of the Symposium is to exchange experience and enhance scientific collaboration. In particular, papers focusing on novel developments in wireless radio technologies, wireless network architectures, advanced IoT applications and services and smart wireless systems will be welcomed. Due to the corona virus crisis, the conference that was scheduled to take place in Dortmund Germany, was finally held on-line.
Prof. Marcel Meli from ZHAW attended, presenting 2 papers:
As oral presentation: “Low Power LoRaWAN node based on FRAM Microcontroller”.
As video presentation: “Low Light Energy Autonomous LoRaWAN Node”
Both papers are related to the low power embedded and wireless aspects of the AMANDA project.

3.5.29.2 Audience reached

Scientific Community

3.5.29.3 Conference paper

Not yet on-line. Papers and presentation available from the Amanda Consortium server.

3.5.29.4 Key figures

About 50 participants from several countries (on line) during the oral presentations.

3.5.29.5 Useful links

http://idaacs.net/2020
https://www.youtube.com/watch?v=_mNBRqS6UCA

3.5.29.6 Photos

The paper “Low Light Energy Autonomous LoRaWAN Node” also won the best paper award in the category of the papers that were presented on video.

3.5.30 Conference on 22 September 2020

Key figures				
Name of event	**Swiss Medtech-Day 2020**			
Date	**22 September 2020**			
Place	**Bern, Switzerland**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education,		Medias

		Research)		
	X	Industry		Investor
		Civil Society	X	Customers
		General Public		Other
		Policy markers		
Countries addressed	Switzerland and German speaking European companies			
Partners	MICRODUL, as a member of Swiss Medtech			

3.5.30.1 Scope of the event

A one-day conference for education and promotion in Switzerland, Bern aimed at medical companies.

3.5.30.2 Description of the participation

Microdul prepared a short presentation (90210961) of the AMANDA project, which was continuously presented on a laptop in a prominent position next to our demonstration model during the trade show. AMANDA brochures were on hand.

3.5.30.3 Audience reached

25 visitors with potential interest and discussion for Microdul products or services.

3.5.30.4 Feedback and follow-up

About 15 leads for Microdul and 2 relevant for Microdul Semiconductors. One or two people took the AMANDA brochures.

3.5.30.5 Business opportunities identified

No leads were directly relevant for the AMANDA project.

3.5.30.6 Key figures

Participation of about 100 companies and about 500 people.

3.5.30.7 Useful links

https://www.microdul.com/en/news/newsarticles/swiss-medtech-day-2020.html
https://www.swissmedtechday.ch/

3.5.30.8 Photos

3.5.31 Interview on 25 September 2020

Key figures				
Name of event	**Interview in the Athenian/Macedonian News Agency**			
Date	**25 September, 2020**			
Place	**Thessaloniki, Greece**			
Type of Activity		Organisation of conference paper reviews,		Participation to a conference

		poster presentation		
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
	X	Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
		Industry		Investor
		Civil Society		Customers
	X	General Public		Other
		Policy markers		
Countries addressed	Greece			
Partners	CERTH			

3.5.31.1 Scope of the event

Dr Dimitrios Tzovaras and Dr Charis Kouzinopoulos gave an interview in the Athenian/Macedonian News Agency, the Greek National news agency, on the AMANDA project progress and how it is related to the mitigation of the effects of COVID-19. The interview was later republished in most Greek Internet Media outlets.

3.5.31.2 Audience reached

General Public

3.5.31.3 Useful links

https://www.cnn.gr/tech/story/235781/thessaloniki-ypologistis-tsepis-os-ergaleio-kata-toy-koronoioy-deite-pos
https://www.amna.gr/home/article/490921/Ypologistis-tsepis-ginetai-ergaleio-kata-tou-koronoiou

3.5.31.4 Photos

3.5.32 Communication campaign on 30 September 2020

Key figures				
Name of event	**Interview of Dr Kouzinopoulos on AMANDA and the COVID-19 mitigation scenarios in the ERT3 channel**			
Date	**30 September, 2020**			
Place	**Thessaloniki, Greece**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
	X	Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)	**X**	Medias
		Industry		Investor
		Civil Society		Customers
	X	General Public		Other
		Policy markers		
Countries addressed	Greece			
Partners	CERTH			

3.5.32.1 Scope of the event

Dr Kouzinopoulos gave an interview for the current progress of the AMANDA project, the miniaturized size of the card as well as the general and COVID-19 mitigation scenarios of the Project in the Greek National TV channel ERT3.

3.5.32.2 Audience reached

General Public

3.5.32.3 Useful links

https://www.youtube.com/watch?v=RMDG2g5erN8&ab_channel=AMANDAproject

3.5.32.4 Photos

3.5.33 Communication campaign 01 October 2020

Key figures				
Name of event	**Interview of Dr Charis Kouzinopoulos on AMANDA and the COVID-19 mitigation scenarios in the ERT1 channel**			
Date	**1 October, 2020**			
Place	**Thessaloniki, Greece**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)

	X	Communication campaign (e.g radio, TV))		Other
Type of Audience		Scientific Community (higher education, Research)		Medias
		Industry		Investor
		Civil Society		Customers
	X	General Public		Other
		Policy markers		
Countries addressed	Greece			
Partners	CERTH			

3.5.33.1 Scope of the event

Dr Kouzinopoulos gave an interview for the current progress of the AMANDA project, the miniaturized size of the card, as well as the general and COVID-19 mitigation scenarios of the Project in the Greek National TV channel ERT3.

3.5.33.2 Audience reached

General Public

3.5.33.3 Useful links

https://www.youtube.com/watch?v=vef2PyVXxy4&ab_channel=AMANDAproject

3.5.33.4 Photos

3.5.34 Conference on 10 November 2020

Key figures				
Name of event	**Wireless Congress Conference 2020**			
Date	**10-12 November 2020**			
Place	**Munich, Germany (on line)**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference

		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication cam-paign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
	X	Civil Society		Customers
	X	General Public		Other
	X	Policy markers		
Countries addressed	All (Wireless Congress draws people from different countries)			
Partners	ZHAW			

3.5.34.1 Scope of the event

The Wireless Congress (Systems and Applications) is an international conference that takes place every year in Germany. Every second year, it is staged in parallel with Electronica which is one of the world largest Fair for electronics. Wireless Congress allows exchanges between the academic world and the industry with a strong emphasis on finding/presenting solutions to current issues in the industry, but also looking into upcoming technologies. The event of this year (2020) was on line, due to the restrictions related to the pandemic. Prof. Marcel Meli from ZHAW attended and was involved in 3 presentations, all related to low-power, energy harvesting and wireless system. One of the presentations was about "The Amanda Project", introducing the different aspects of the project, the partners, goals and giving some information about its progress and challenges.

3.5.34.2 Audience reached

Scientific Community, Industry

3.5.34.3 Conference presentation

Available on Amanda Web site: https://amanda-project.eu/documents/dissemination-materials/send/5-dissemination-materials/33-amanda-presentation-at-wireless-congress-2020-zhaw

3.5.34.4 Key figures

Tens of participants from several countries

3.5.34.5 Useful links

A review of the WC2020 taken from the web site of the conference (26th January 2021) (from Prof. Dr. Axel Sikora, Offenburg University, Hahn-Schickard)
https://events.weka-fachmedien.de/wireless-congress/home/

REVIEW 2020

Wireless Congress: Systems & Applications
10-12 November 2020 I virtual and interactive conference

The Future of Wireless

In keeping with the motto of the panel discussion "The Future of Wireless", the 17th Wireless Congress demonstrated the possibilities that modern communication technology already offers today to shape our future. As a live conference in which all participants communicated with each other via the Internet, the Wireless Congress 2020 connected speakers and participants across continents and time zones. The programme, which was extended to three days, made it possible to integrate participation in the Wireless Congress into the working day via computer - whether from the office or the home office. The wireless experts were also able to use the chat function and video conferencing in the networking area to exchange information during the three days of the congress. The digital platform of the Wireless Congress offered speakers, exhibitors - EnOcean, Hyline Communication and Sierra Wireless - and participants opportunities to make new contacts and refresh existing contacts. Participants could post questions to the speakers in a separate Q&A chat. They were answered in a special "Session Panel Discussion" at the end of each session.

Wireless will continue to conquer new fields of application

The quest for more bandwidth and the utilisation of higher frequencies is driving wireless researchers worldwide. Insights into current and future research projects were provided by the three keynote speakers: Joseph Barry, Analog Devices, Dr. Josef Blanz, Qualcomm CDMA Technologies GmbH, and Prof. Dr. Nils Weimann, University of Duisburg-Essen (UDE). They highlighted the potential of new and improved wireless technologies. Radio communication will penetrate areas and enable applications for which radio seems unsuitable today, e.g. where fast control, high availability and robustness or sensor technology are required.

5G, Wi-Fi 6, Mioty and more

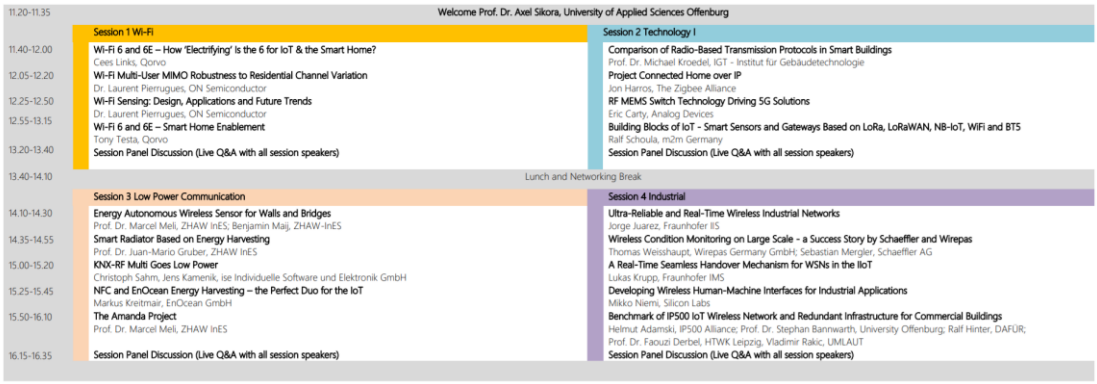
In addition to 5G and Wi-Fi 6, the major topics of the 17th Wireless Congress included LPWAN technologies, Bluetooth and the still young Mioty radio protocol. For the first time, the Wireless Congress dedicated an entire session to the Mioty topic. Other future topics were discussed in the sessions Industrial and Technology, Security and Low Power Communication.Günter Grundmann, VdS Schadenverhütung, made it clear in his keynote speech that radio communication also must fulfil general conditions, e.g. in order to be used in the security sector. Further framework conditions are provided by the European Commission, among others. In a Compliance session, the congress participants learned about the implementing measures currently being worked on by the Commission - in the course of the Radio Equipment Directive 2014/53/EU - and the consequences SMEs fear.The 17th Wireless Congress - for the first time organised and transmitted digitally on the Internet over three days - ended with the conclusion: Digital communication technology offers mature and reliable opportunities to exchange information in a pandemic - but it cannot replace personal experience and discussions on the fringes of a traditional congress.

The coming 18th Wireless Congress will be planned again as a traditional congress with exhibition on 10-11 November 2021.

Our thanks go to our **partners** – the Messe München, organizers of the electronica virtual, and the German Electrical and Electronic Manufacturers' Association (ZVEI) – **exhibitors**, **speakers** and **participants.** Without you this event would not have become what it was - a successful, interactive, virtual event with many interesting discussions and a very high quality programme.

3.5.34.6 Photos

Part of the program (day 1 of 3 days) showing the slot for The Amanda Project presentation



3.5.35 Conference on 16 November 2020

Key figures				
Name of event	**Compamed**			
Date	**16-19 November 2020**			
Place	**On-line (Düsseldorf, Germany)**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media	**X**	Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	Worldwide medical companies			
Partners	MICRODUL			

3.5.35.1 Scope of the event

Four-day conference for medical companies in Europe but worldwide attendance.

3.5.35.2 Description of the participation

Microdul prepared a presentation (M90-21-1007), “Saving power for wearables using Microdul Sensor Technology”, which was presented live. Two slides were dedicated to the AMANDA project.

3.5.35.3 Audience reached

15 people participated in the live webinar, and about 60 people participated via You-Tube.

3.5.35.4 Feedback and follow-up

About 12 leads for Microdul and none relevant for Microdul Semiconductors.

3.5.35.5 Business opportunities identified

No leads were directly relevant for the AMANDA project.

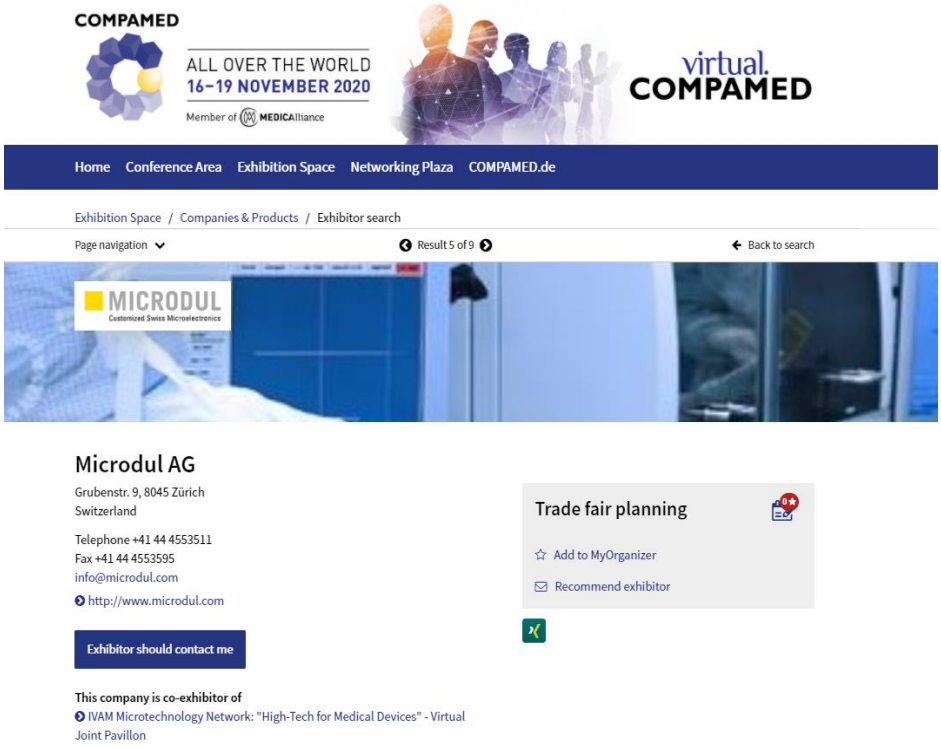
3.5.35.6 Key figures

Participation of about 45000 people from 169 nations with 1500 exhibitors.

3.5.35.7 Useful links

Microdul AG of Zürich at COMPAMED 2020 in Düsseldorf (compamed-tradefair.com)
https://www.youtube.com/watch?v=Q0xitT5tLQ8&feature=youtu.be

3.5.35.8 Photos



Product category: Wearables

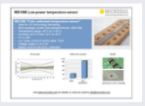
Human Body Detector (HBD)

Dramatically cut system power by switching it off when your wearable is not being worn by using the Microdul "Human Body Detector". The human body detector is designed to detect if a wearable is on the body or not. A typical application is the Everion product from Biovotion (https://www.biovotion.com/everion/). The human body detector is best-in-class with respect to power consumption. The human body detector uses two electrodes per channel. One transmits and one receives. The capacitance values and the thresholds can be read out. The threshold value can be changed via the interface.

Less

https://youtu.be/FGz2HWKBLwE

PDF HBD Flyer



Product category: Temperature sensors

MS1088 Low-power temperature sensor

MS1088 "Fully calibrated temperature sensor"

- Ideal for IoT and energy harvesting
- 80nA average current (one sample/minute), 20nA idle
- Temperature range -40°C to +120°C
- Accuracy ±0.3°C from 10°C to 40°C
- I2C or SPI
- Low peak current in active state: 75µA
- Voltage range 2.2 to 3.5V
- Battery End-of-Life (EOL) detection

Less

Visit us

Unsettled / NN

16.11.2020	Topic
all-day	**The Microdul team is there for you all day** Als ISO 9001- und ISO13485-zertifizierter Spezialist für qualitativ hochwertige Mikroelektronik beherrscht Microdul sämtliche Prozesse vom Engineering bis zur… More PDF Microdul AG image brochure E M30 14 3912
18.11.2020	**Topic**
11:00	**Saving Power for Wearables using Microdul Sensor Technology** Roland Steger Microdul AG, Zürich, CH Dr. Philip J Poole Microdul AG, Zürich, CH PDF Microdul Datasheet E

AMANDA
The world in your hands

Capacitive & temperature sensor roadmap

AutonoMous self powered miniAturized iNtelligent sensor for environmental sensing anD asset tracking in smArt IoT environments

Microdul Inside

- MS8892 Ultra-low-power capacitive sensor 65nA used for wake-up
- MS1089 Ultra-low-power temperature sensor with “30nA” standby current

- Autonomous, connected sensor card
- Ultra-low-power, ultra long life – 10 years
- Solid state battery, no battery change required
- Small and thin (3mm thickness)
- Multi-sensor

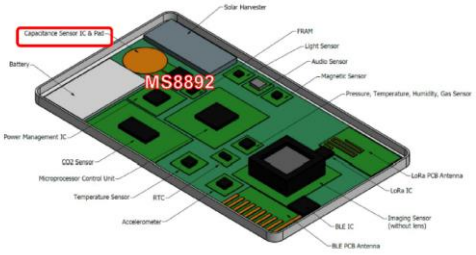
Use cases

- Environmental monitoring and reporting
- Assets tracking and occupancy monitoring
- Mitigating the effects of the current pandemic

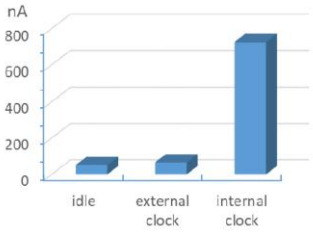
This project has received funding from the European Union’s Horizon 2020 Research and innovation programme under Grant Agreement n°825464

MICRODUL
Customized Swiss Microelectronics

Save power, wake-up with MS8892

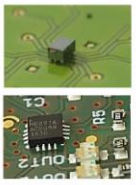


MS8892 Cap-Sensor Current



MS8892

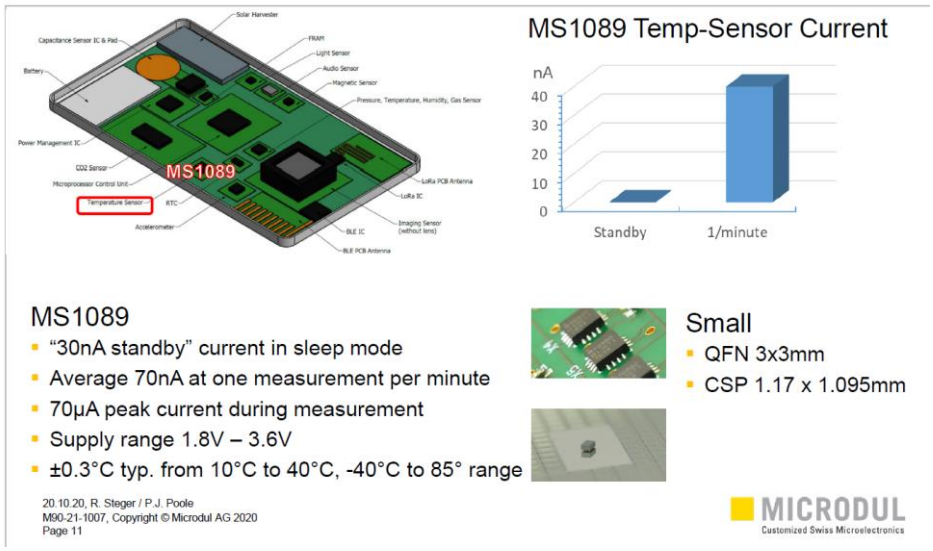
- 65nA external clock, 725nA internal clock
- Capacitance measurement or switch mode
- Automatically compensates factory tolerances
- Measures up to 1pF, voltage range 1.8-4.5V
- Autonomous operation or I²C with MCU



Small

- QFN 3x3mm
- CSP 1.52 x 1.03mm

MICRODUL
Customized Swiss Microelectronics



3.5.36 Conference on 25 November 2020

Key figures				
Name of event	**Energy Harvesting 2020**			
Date	**25 November 2020**			
Place	**Online**			
Type of Activity		Organisation of conference paper reviews, poster presentation	**X**	Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)	**X**	Medias
	X	Industry		Investor
		Civil Society		Customers
		General Public		Other

		Policy markers		
Countries addressed	International			
Partners	LIGHTRICITY			

3.5.36.1 Scope of the event

The 10th annual Energy Harvesting Network Dissemination Event took place as a webinar series.

3.5.36.2 Description of the participation

Lightricity made a presentation on its photovoltaic energy harvesting technology and applications for IoT. This included information on the AMANDA project around autonomous sensing.

3.5.36.3 Audience reached

Industry: ~50; Scientific community ~30; Others: ~100

3.5.36.4 Feedback and follow-up

Good interest from delegates (3-4 follow up leads)

3.5.36.5 Business opportunities identified

Mainly internal.

3.5.36.6 Useful links

http://eh-network.org/news_event.php?id=292

3.5.37 Webinar on 25 November 2020

Key figures				
Name of event	**Energy Harvesting EH2020**			
Date	**25 November 2020**			
Place	**On-line webinar**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release	**X**	Participation to an event other than a conference or workshop (WEBINAR)
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education,		Medias

		Research)		
	X	Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	International			
Partners	ILIKA			

3.5.37.1 Scope of the event

What the organisers say: The focus of this year's event is on showcasing EH technology demonstrations, from R&D prototypes in the lab to ready commercial solutions. The EH Network has registered members from over 400 companies/institutions, and this annual event brings together academics, industrialists, policy stakeholders and end-users of EH technologies.

3.5.37.2 Description of the participation

Denis Pasero, Product Commercialisation Manager, gave an oral presentation, "Miniaturising IoT Sensors with Solid State Batteries and Energy Harvesting".

3.5.37.3 Audience reached

Scientific community, industry

3.5.37.4 Feedback and follow-up

Organisers are professionals in Energy harvesting at Uni of Aston and Chester – contact created

3.5.37.5 Business opportunities identified

Possible follow up collaborations with organisers

3.5.37.6 Key figures

100+ attendees

3.5.37.7 Useful links

https://preview.mailerlite.com/d6m1f9/153056489931748670 1/i2v0/

3.5.38 Round table on 26 November 2020

Key figures				
Name of event	**Round table "Innovative Solutions For Smart Urban Mobility"**			
Date	**26 November 2020**			
Place	**Online, Jitsi Meet**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release	X	Participation to an event other than a conference or

				workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))		Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
	X	Policy markers		
Countries addressed	Croatia			
Partners	PENTA			

3.5.38.1 Scope of the event

The Round Table "Innovative solutions for smart urban mobility" is held online on 26 November 2020. Its purpose was to open a discussion between representatives of the Ministry, entrepreneurs offering innovative solutions for smart urban mobility, academic, and companies' representatives for public urban passenger transport.

3.5.38.2 Description of the participation

Mladen Pamić (PENTA) talked about innovative solutions we are developing in urban mobility and urban public transport. He highlighted CITYpass solution's benefits, AMANDA Autonomous Smart Sensing Card, and SPARK VCAM ticketless parking solution in his presentation.

3.5.38.3 Audience reached

Scientific community, transport, industry and IT sector, public city companies, government

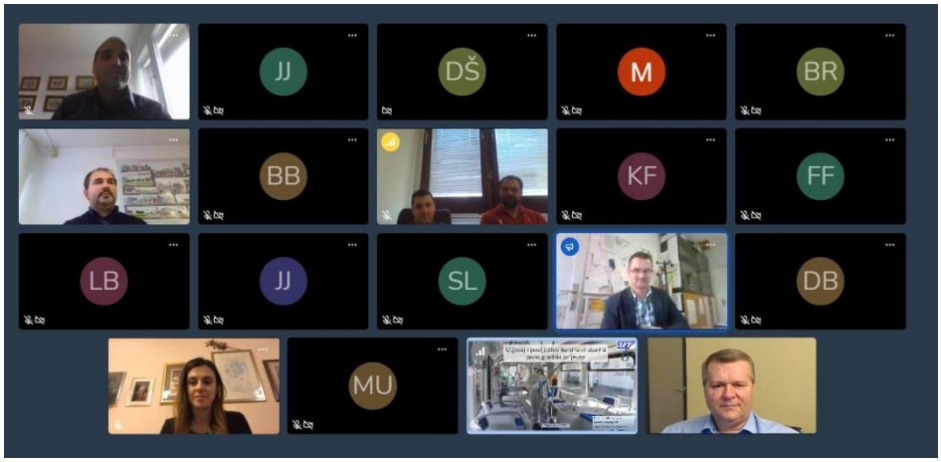
3.5.38.4 Feedback and follow-up

AMANDA project raised the interest in a very positive way. Participants considered Autonomous Smart Sensing Card (ASSC) a unique solution and were interested in receiving more information of ASSC application in SC03 Continuous occupancy monitoring in a parking lot.

3.5.38.5 Key figures

20 participants from Croatia

3.5.38.6 Photos



3.5.39 Meeting on 22 December 2020

Key figures

Name of event	**Smart Eco Parking, Kick-off meeting**			
Date	**22 December 2020**			
Place	**Online, Jitsi Meet**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))	**X**	Other
Type of Audience		Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society	**X**	Customers
		General Public		Other
		Policy markers		
Countries addressed	Croatia			
Partners	PENTA			

3.5.39.1 Scope of the event

The Smart Eco Parking project is co-financed by the European Regional Development Fund, and its implementation began on 01 December 2020. On 22 December 2020, a kick-off meeting was attended by four companies that briefly presented their scope of business and the projects they are currently implementing. The Smart Eco Parking project aims to establish cooperation between the three SME companies and an integrator by establishing a Consortium cooperation department/expert team to create innovative service "SMART ECO PARKING" and product "SMART PARKING."

3.5.39.2 Description of the participation

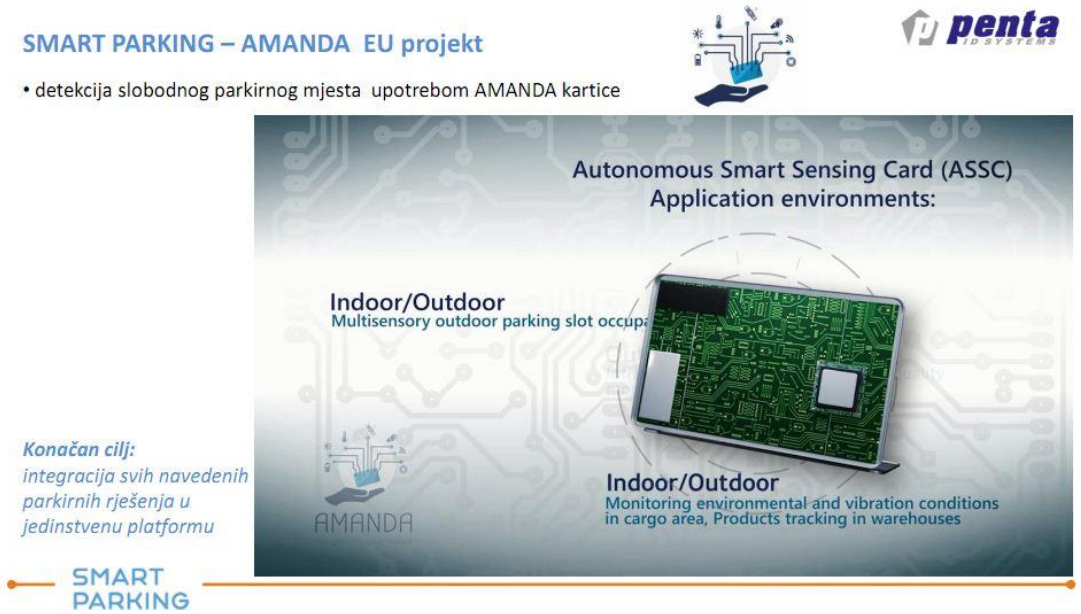
Andrea Mihaljević Pulić (PENTA) and Mladen Pamić (PENTA) presented the goals and current achievements of the AMANDA project to the members of the Consortium (3E Projekti d.o.o., SENSUM d.o.o., PENTA d.o.o.). The SMART ECO PARKING and AMANDA project have a similar user group and field of application - SC03 Continuous occupancy monitoring in a parking lot. Within the SMART ECO PARKING project, a Consortium consisting of three partners has the opportunity to promote the AMANDA project and offer the ASSC as one of the solutions for sustainable development of stationary traffic (parking).

3.5.39.3 Audience reached
Industry and IT sector

3.5.39.4 Feedback and follow-up
The Smart Eco Parking project Consortium members are very interested in cooperating and connecting with the AMANDA project. Details on the exchange of knowledge will be further elaborated on in the next meetings.

3.5.39.5 Key figures
7 participants from Croatia

3.5.39.6 Photos

3.5.40 Meeting on 19 January 2021

Key figures	
Name of event	**Presentation of AMANDA project to DIGICAT – Digital Catapult London**
Date	**19 January 2021**
Place	**Online MS Teams meeting**

Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))	**X**	Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
		Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	UK			
Partners	IMEC-NL, CERTH, ILIKA			

3.5.40.1 Scope of the event

This meeting was set up to introduce the DIGICAT Digital Innovation Hub to the AMANDA project and explore possible synergies between the DIH and the project.

3.5.40.2 Description of the participation

The agenda of the meeting was the following:

- Round of introduction
- What is the AMANDA project?
- Consortium
- General Architecture
- Use-cases
- Current status
- Why are we reaching out?
- Q&A

3.5.40.3 Audience reached

From DigiCat, there where four people in the call, a Commercial Manger IoT, a Project/product Team Manager, a Manager of the Future Network Labs and a Lead engineer IoT

3.5.40.4 Feedback and follow-up

After the meeting, Digicat had an internal review meeting and reported that “We're excited by your project ...”.
There are several follow-up activities that Digicat could engage in (see list below) though this requires a final form-factor device. Potential follow-up action will be discussed in the Consortium to align on which follow-up actions to take/pursue.

3.5.40.5 Business opportunities identified

Possible actions proposed by Digicat were:

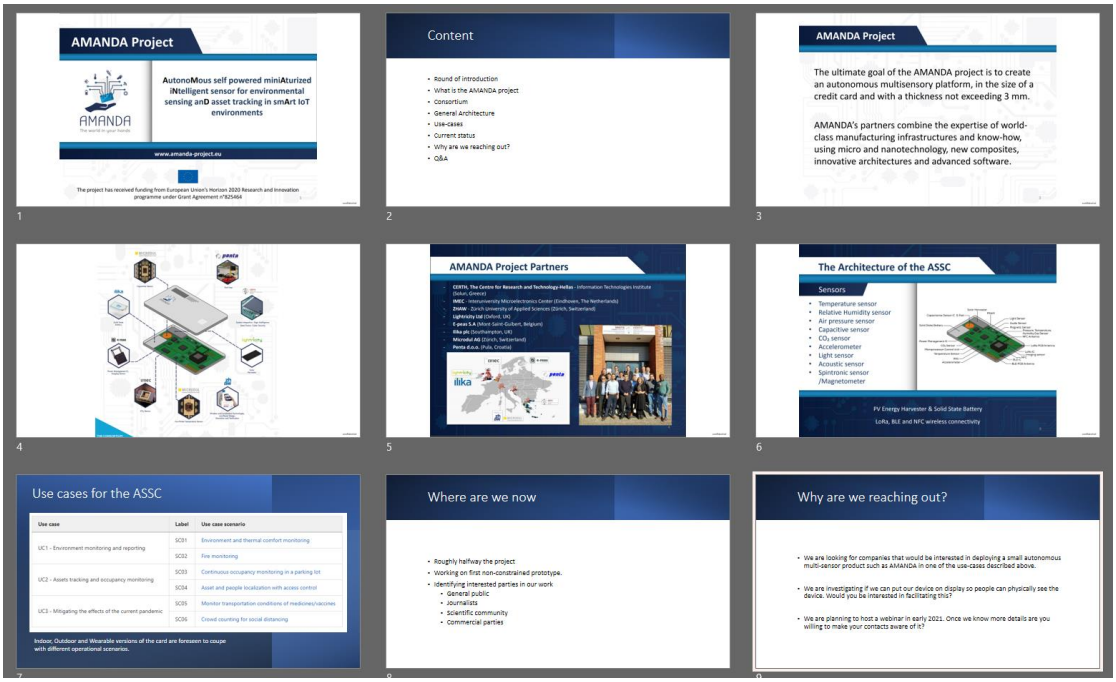
- We'd be very happy to host demos and marketing material in the FNL. The big challenge, of course, is that we are still locked down, so the footfall is very low. We've added cameras to the Lab and can offer virtual tours, which is better than nothing at all!
- We do have a number of on-going projects which could take advantage of your hardware (LoRaWAN) in the asset tracking use case
- We'd be very happy to do testing and power consumption profiling
- We'd be happy to introduce you to some of the partners in the FNL who might be able to offer distribution and/or larger scale manufacturing opportunities
- In terms of creating a challenge programme, this would really have to be on a commercial basis, which typically carries a price tag of £50K or more. This is effectively a competition, where we set a number of challenges (which obviously would involve using your hardware) to solve particular use cases - and then opening this up to a large number of SMEs who compete to win - they then go on to received funding/pilots etc. This might work better as a more formal "Beta" programme, but again that would be on a commercial basis, and we'd have to work on that together

3.5.40.6 Useful links

https://www.digicatapult.org.uk/

3.5.40.7 Photos

Screenshot of the slide deck used



3.5.41 Meeting on 03 February 2021

Key figures				
Name of event	**SUNSAFE IoT, Kick-off meeting**			
Date	**03 February 2021**			
Place	**Online, Microsoft Teams Meeting**			
Type of Activity		Organisation of conference paper reviews, poster presentation		Participation to a conference
		Organisation of a workshop		Participation to a workshop
		Press release		Participation to an event other than a conference or workshop
		Exhibition		Brokerage event
		Flyers training		Pitch event
		Social media		Trade fair
		Web-site		Participation in activities organised jointly with other H2020 project(s)
		Communication campaign (e.g radio, TV))	**X**	Other
Type of Audience	**X**	Scientific Community (higher education, Research)		Medias
	X	Industry		Investor
		Civil Society		Customers
		General Public		Other
		Policy markers		
Countries addressed	Croatia			
Partners	PENTA			

3.5.41.1 Scope of the event

The implementation of the SUNSAFE IoT project started on 18 January 2021, as part of the Call for Proposals "Increasing the development of new products and services resulting from research and development activities - Phase II", funded by the European Regional Development Fund. On 03 February 2021, a kick-off meeting was held at which the project's goals were presented, as well as possible cooperation and connection with projects of similar thematic interest. The project aims to develop SUNSAFE IoT (smart umbrella) product due to the implementation of research, development, and innovation activities. SUNSAFE IoT is a device with an integrated round housing with an upper surface covered with photovoltaic cells. Its purpose meets the tourism sector's needs and is in line with the thematic priority area S3, energy and sustainable environment.

3.5.41.2 Description of the participation

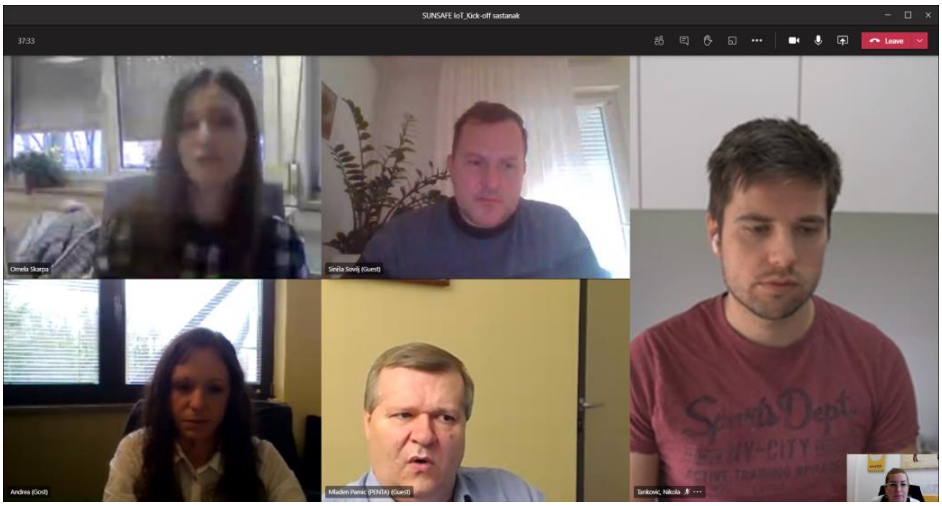
Andrea Mihaljević Pulić (PENTA), the coordinator of the SUNSAFE IoT project, and Mladen Pamić (PENTA), project manager, presented the AMANDA project to the members of the

Consortium (Faculty of Informatics, Juraj Dobrila University of Pula, SENSUM d.o.o., PENTA d.o.o.) and a discussion was held on areas in which the potential cooperation of both projects would benefit. Similar technologies are being used in both projects (LoRa IoT communication, BLE, sensor technology), so exchange in knowledge and evaluation techniques is expected.

3.5.41.3 Audience reached
Scientific community, industry and IT sector

3.5.41.4 Feedback and follow-up
The SUNSAFE IoT project Consortium members are very interested in cooperating and connecting with the AMANDA project. Details on the exchange of knowledge will be further elaborated on in the next meetings.

3.5.41.5 Key figures
6 participants from Croatia

3.5.41.6 Photos


3.6 Scientific papers and other publications
AMANDA has been actively looking for high profile academic and industrial events within the project's domain of interest. The following Table presents scientific publications on project-related topics that were produced and published up to M27 and publications planned for the period M28-M42.

No.	Title	Leading author	Title of the journal or series	Publisher	Year of publication
Attended					
1.	AMANDA: An Autonomous Self-Powered Miniaturized Smart Sensing Embedded System	CERTH	2019 IEEE International Conference of Consumer Electronics	IEEE	2019
2.	Powering Sigfox	ZHAW	Embedded	Weka Me-	2020

	nodes with harvested energy		World 2020	dien	
3.	Low power LoRaWAN node based on FRAM microcontroller	ZHAW	2020 IEEE 5th International Symposium on Smart and Wireless Systems	IEEE	2020
4.	Low light energy autonomous LoRaWAN node	ZHAW	2020 IEEE 5th International Symposium on Smart and Wireless Systems	IEEE	2020
5.	A low-power fire monitoring and detection system on embedded systems using a multilayer perceptron	CERTH	IEEE International Conference on Artificial Intelligence Circuits and Systems	IEEE (submitted)	2021
Foreseen					
1.	Size unconstrained system integration	CERTH	tbd	tbd	2021
2.	Edge intelligence algorithms on an embedded system with an emphasis on low-energy consumption	CERTH	tbd	tbd	2021
3.	Data fusion algorithms on an embedded system with an emphasis on low-energy consumption	CERTH	tbd	tbd	2021
4.	Cyber security on an embedded system with an emphasis on low-energy consumption	CERTH	tbd	tbd	2021
5.	ParkIoT: An embedded solution for parking	CERTH	Special Issue of "Embedded Intelligence in IoT Systems" MDPI journal	MDPI	M28
6.	Low power indoor localisation	ZHAW	tbd	tbd	2021
7.	Related to CO_2 and IoT	ZHAW	tbd	tbd	2021 - 2022
8.	Related to high performance com-	ZHAW	tbd	tbd	2021 - 2022

	puting and EH				
9.	Related to robustness of EH systems	ZHAW	tbd	tbd	2021 - 2022
10.	Towards low power miniaturize CO_2 sensor	IMEC	tbd	tbd	2022
11.	Nb-IoT node powered by harvested energy	ZHAW	tbd	tbd	2022

Table 52 Scientific papers and other publication

3.7 Cooperation with other EC funded projects and initiatives

During the second and third year of the project, online research on projects with similar thematic interest is conducted, and an initial invitation for an exchange of knowledge was sent. The intention is to cooperate with existing initiatives, projects, and associations by establishing effective communication to assure that all dissemination activities, including the promotion and follow up of project results, will reach a wider audience of targeted stakeholders. The following Table shows projects that accepted the invitation and provide concrete options for professional knowledge exchange.

Project name, website, logo if available	**Funding body**	**Project description**	**Link with AMANDA project**
5E Project https://5e-project.eu/	Horizon 2020	5E project provides the Digital Showcase, an online platform that aims to increase the visibility of innovative European electronics products, particularly products whose innovative character builds on Nano-Electronics, Flexible & Wearable Electronics and Electronic Smart Systems.	AMANDA ASSC was added in the Digital Showcase of 5E (https://5e-project.eu/portfolio/amanda-project/), which creates new opportunities for visibility, promotion, networking to European actors, from industry and academia to advanced technologies. Registration of AMANDA ASSC to the 5E Digital Showcase opened the door to the 5E contest, and the application is submitted on 19 March 2021. Further communication material will also be shared at the digital showcase and in the 5E project social media.
SPARK Sense https://sparksense.eu/	European Regional Development Fund (ERDF)	The goal of the project is to find and establish an adequate solution/system that will reduce the traffic jam and at the same time	There is a possibility to test AMANDA ASSC for operational scenario SC03 Continuous occupancy monitoring in a parking lot. Instead of using SPARK Sense's parking sensors, ASSC could provide information about a parking

		make it easier for drivers to carry out their daily duties by providing parking space reservation in the city centre; development of the mobile application, parking sensor, parking barriers, new forms of payment	spot's occupancy status and detect vehicles. The project has a similar user group and field of application.
SMART ECO PARKING 	European Regional Development Fund (ERDF)	Development of innovative service "SMART ECO PARKING" and innovative product "SMART PARKING" offering intelligent transport solutions intended for urban and stationary traffic (parking) and the development of green infrastructure, reducing the impact on climate change in urban areas	The project has a similar user group and field of application (SC03 Continuous occupancy monitoring in a parking lot). Within the SMART ECO PARKING project, a Consortium consisting of three partners has the opportunity to promote the AMANDA project and offer the ASSC as one of the solutions for sustainable development of stationary traffic (parking).
SUNSAFE IoT 	European Regional Development Fund (ERDF)	The aim of the project is the development of SUNSAFE IoT product (smart umbrella) as a result of the implementation of research, development and innovation activities that meet the needs of the tourism sector and are in line with the thematic priority area S3, energy and sus-	Similar technologies are being used in both projects (LoRa IoT communication, BLE, sensor technology), so exchange in knowledge and evaluation techniques is expected.

		tainable environment. It is based on innovative technologies, development of advanced sensor networks in the Internet of Things, management of large amounts of data and cloud solutions	
ESAIRQ (Environmental Sensors for Air Quality)	PENTA	Design an electrochemical sensor for CO_2 based on ionic liquid electrolytes, including a readout and data algorithms for data quality improvement.	The ESAIRQ project deals with the investigation of ionic liquid-based sensors for air quality analysis. The sensor developed for the Amanda project has stricter requirements (size, energy consumption), but the sensing principle is equivalent. Also, insights in electronics developments, algorithms and sensor limitations can be exchanged between projects.
Flexible, self-powered and modular E-textile platform for sport, health and safety applications	Innovate UK	The project will develop disruptive e-textiles for sport and healthcare markets and the capability to greatly reduce the dependence on battery systems for these wearable technologies by using Lightricity's energy harvesting technology.	The wearable versions of the AMANDA will benefit from this project outcome (lightweight, flexible PV device, low power electronics for activity tracking/monitoring)
PETS (PErpetual Track Sensors)	Innovate UK	Development of self-powered sensors for monitoring key parameters affecting the performance of the railway infrastructure (load, temperature,	Uses similar technologies (miniaturised battery, PMIC, some sensors) and circuit design knowledge could help in AMANDA; Also uses different technologies (vibration harvesting) in a completely different but relevant environment

		shock, etc.)	

Table 53 Interaction with other EU funded projects

The Consortium also identified the need to liaise with operational Digital Innovation Hubs (DIH) related to AMANDA objectives, take advantage of one-stop-shops, access technology testing, financing advice, market intelligence and networking opportunities. An initial list of DIHs has been drafted and summarised below.

Country	**Name**	**Status**
The Netherlands	TechMed Innovation Hub	Added contact to the internal list of stakeholders; delivered 2nd and 3rd Newsletter in M18 and M24; initial reach-out email sent in M24 (cooperation proposal)
Greece	Foundation for Research and Technology – Hellas (FORTH) / PRAXI Network	Added contact to the internal list of stakeholders; delivered 2nd and 3rd Newsletter in M18 and M24; initial reach-out email sent in M24 (cooperation proposal)
Croatia	CROBOHUB Croatian Robotics Digital Innovation Hub	Added contact to the internal list of stakeholders; delivered 2nd and 3rd Newsletter in M18 and M24; initial reach-out email sent in M24 (cooperation proposal)
Croatia	CybersecRDI: Cybersecurity Research, Development and Innovation Hub	Added contact to the internal list of stakeholders; delivered 2nd and 3rd Newsletter in M18 and M24; initial reach-out email sent in M24 (cooperation proposal)
Germany	DIGIHUB Südbaden	Added contact to the internal list of stakeholders; delivered 2nd and 3rd Newsletter in M18 and M24; initial reach-out email sent in M24 (cooperation proposal)
UK	DigiCat (London Digital Catapult)	Added contact to the internal list of stakeholders; delivered 2nd and 3rd Newsletter in M18 and M24; initial reach-out email sent in M24 (cooperation proposal); 1st introduction meeting held online in M25 (DAR in Sec-

		tion 3.5.40)

Table 54 List of relevant Digital Innovation Hubs

4 Advisory board

The Advisory board helps keep AMANDA directly oriented towards the societal and economic needs for energy autonomous measurement devices by evaluating AMANDA outputs and advising the Consortium about the market needs. Its main role is to provide expertise outside the Consortium's members, leading to the augmentation of knowledge and strategic thinking. Furthermore, it will review selected reports of the project related to use cases, standardisation, business models, etc.

The Advisory Board members are permanent for the project duration, except if they wish to leave the Board voluntarily. The Advisory Board is comprised of experts from the scientific community. All Board's members have wide recognition in their respective fields at different backgrounds and areas of expertise, including needs/requirements of the market, technological trends and standards. This Group will meet at least once per annum to monitor the project achievements and to help and advice the Consortium about the market's needs in order to enhance the project's impact. The members of the Advisory Board are summarised in Table 55.

Title	Name	University	Department
Professor	Vedran Bilas	University of Zagreb	Electronic Systems and Information Processing
Associate Professor	Ioannis Papaefstathiou	Aristotle University of Thessaloniki	Electronic and Computer Engineering
Professor	Des Gibson	University of the West of Scotland	Institute of Thin Films, Sensors & Imaging School of Engineering & Computing
Project Manager	Angelos Papadopoulos	KLEEMANN HELLAS S.A)	Group Health, Safety, Environmental, Technical Services and Research Projects

Table 55 External Advisory Board members

The first external Advisory Board meeting was held online in June 2020 (M18). Members of the Advisory Board provided advice and guidance for developing the project to ensure its high quality and excellence. As a general remark, the experts commented that the project is very well set-up and innovative with a lot of potential in the research and industry sectors. Some insights of the experts included:

- Effort should be taken on the profiling of the firmware to avoid a bottleneck from all the data from all the sensors
- The short- and long-range communications should be made efficient enough. Because it's going to be easy to reach a bottleneck
- The Consortium should keep in mind the way the power management will operate for the whole of the card (especially during the prototyping phase)
- From the partners' presentations and the EAB discussion, it's not obvious what the project's goal is. So, apart from the miniaturization of the card, could you summarize the key characteristics of the ASSC? You could create a compact presentation of technical capabilities. sensors & sensing quantities, basic parameters (e.g. sensitivities and ranges) to figure out power consumption of each sensing unit to realize which units can be used at the same time (due to different constraints such as size

and power consumption) -can all of them be used at the same time?-, what the MCU can do and how many devices can be used at the same time, sampling rate? Refresh rate? Different UCs need different rates. The most interesting part is the power consumption part; more details are needed in this presentation (power budgets, what will happen if the card is in the dark, etc.)

Their feedback for the AMANDA project was significant in providing technical, legal, and ethical support and encouraging AMANDA's potential cooperation with other initiatives and projects. The next Advisory Board meeting will be scheduled in the period from M28-M30.

5 Conclusions and future activities

Deliverable D7.8 - Dissemination and Communication with Relevant Activities Reports v2 provided an overview of the dissemination, communication, and other activities carried out during the M1-M27 period of the AMANDA project. It was an update over **Deliverable D7.4 - Dissemination and Communication with Relevant Activities Reports v1** that reported on the M1-M12 dissemination and communication activities of the project. The M1-M42 dissemination and communication activities of AMANDA will be reported in **Deliverable D7.11 - Dissemination and Communication with Relevant Activities Reports v3.** The main objective is to keep the interested parties engaged with the project and its results. The project partners participated in various events such as conferences, tradeshows and presentations. Great importance is attached to the presences of the project on social networks. The partners have successfully started building a network of contacts interested in the goals of the AMANDA project. Table 1 presented the aims pursued in **Deliverable D7.3 - Dissemination and Communication Plan v1** and updated in **Deliverable D7.6 – Dissemination and Communication Plan v2.** Many of these goals have been already achieved, such as:

- Three project newsletters, three posters, and one leaflet were issued
- Five PowerPoint presentations were published on the AMANDA project website
- Seven project videos were produced and published at AMANDA YouTube channel
- Five scientific papers were produced
- The AMANDA project website is up-to-date and well maintained
- The Deliverables provided are submitted and published within the deadline
- The news related to the project and partner activities is regularly posted on social networks
- The partners have participated in many events where they actively promoted the AMANDA project

In the coming period, the partners will emphasise their activities in connection with other EU projects, participation in international conferences and publication of papers. All subsequent actions will lead to a significant improvement in the visibility of the AMANDA project.

By analysing and evaluating presented dissemination activities from M1 to M27, the AMANDA project has received positive feedback and raised significant interest from various audiences, such as industrial and IT companies, scientific and research communities, policy makers, end users, etc. In the upcoming period, the WP7 team will plan, coordinate and report further dissemination and communication activities. As detailed in this Deliverable, a number of conferences and events were cancelled due to the COVID-19 pandemic and its impact on travel. Given that a coronavirus pandemic marked 2020 and 2021, the Consortium will strive to maintain and increase the digital presence in the coming period. The first webinar with emphasis on the COVID-19 use case is being prepared. By the end of 2021, two additional webinars are planned, as well as the preparation of workshops that should present the final achievements in the development of the ASSC. The Consortium is keeping an internal list of stakeholders, and it has been maintained during the whole project lifetime. At least three newsletters will be issued by the end of the project to present the project's implementation progress and dissemination activities. The project website and social media profiles will be regularly updated with the latest news on the project's current status. The Consortium will take special efforts to produce more scientific journal and conference publication to disseminate research results. Cooperation with other EU projects is already successful and shows the benefits and expected results, however, the WP7 team will continue to search for further projects with relevant content. Such liaisons, including cooperation with Digital Innovation Hubs, can help in Consortium's effort to raise the project’s positive reputation in the long term. Stronger collaborations will continue once AMANDA achieves specific results.