Autopoietic Cognitive Edge-cloud Services

Deliverable 6.3
2nd Communication, Networking Plan, Dissemination Strategy Report

Grant Agreement Number: 101093126

hiro MICRODATACENTERS
inesc id lisboa
ipto
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Lakeside Labs SELF-ORGANIZING NETWORKED SYSTEMS
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IDSIA SUPSI
DATAPOWER CONSULTING

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The ACES consortium consists of the following partners:

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10	DATAPOWER SRL	DP	IT
11	SIXSQ SA	SIXSQ	CH

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List of terms and abbreviations

ABBREVIATION	DESCRIPTION
Autopoietic system	A system capable of producing and maintaining itself by creating its own parts.
CLOUD	Cloud computing is the on-demand availability of computer system resources, especially data storage (cloud storage) and computing power, without direct active management by the user. Large clouds often have functions distributed over multiple locations, each of which is a data centre. Cloud computing relies on sharing of resources to achieve coherence and typically uses a pay-as-you-go model, which can help in reducing capital expenses but may also lead to unexpected operating expenses for users.
EDGE	Edge computing is a distributed computing paradigm that brings computation and data storage closer to the sources of data. This is expected to improve response times and save bandwidth. Edge computing is an architecture rather than a specific technology, and a topology- and location-sensitive form of distributed computing.
KPI	Key Performance Indicators
SEO	Search Engine Optimisation
GA	Grant Agreement

Table of contents

Executive Summary *7*

1 Introduction *8*

1.1 Purpose and scope **8**

1.2 Structure of the deliverable **8**

2 Strategic Dissemination and Communication Plan at a Glance *9*

3 Communication Tools and Channels *12*

3.1 Website overview **12**

3.1.1 Website structure 12

3.1.2 The Webpages 20

3.1.3 Website Analytics 22

3.2 Social media **26**

3.2.1 Twitter 27

3.2.2 Linkedin 28

4 Dissemination and Communication Activities *30*

4.1 Scientific publications **30**

4.2 Participation in events **31**

4.3 Synergies with other initiatives and projects **31**

4.3.1 SWARMIN Project 32

4.3.2 EUCloudEdgeIoT initiative 32

4.3.3 COGNITIVE CLOUD PROJECTS 32

5 Dissemination and Communication Impact Assessment *33*

6 Next Steps *35*

6.1.1 Community building and stakeholder engagement: upcoming activities 36

6.1.2 Scientific and technical dissemination 36

6.1.3 Private sector dissemination 37

6.1.4 ACES use cases results in dissemination campaign 37

6.1.5 Synergies with other initiatives and projects 38

6.1.6 Videos to communicate certain sophisticated components of ACES 38

6.2 Dissemination and communication timeline for the next years **38**

7 Conclusions *42*

Executive Summary

This deliverable aims to illustrate the current status of dissemination and communication activity during the first year of the ACES project. It analyses, in particular, the effort provided by all the consortium's partners on each activity planned in the communication and dissemination plan, and the achieved results in terms of KPIs. The ACES communication and dissemination work package (WP) uses a range of tools in both traditional and digital media channels to ensure the widest possible reach to build awareness of the project and drive a positive impact on society, while also highlighting the consortium and the European Union commitment to excellence and innovation. During the project's progress, we will continue to emphasise our core messages, which revolve around a positive impact on the environmental sustainability and data governance of the European digital economy. Our plan includes a variety of measures and activities to identify the consortium members' roles, analyse stakeholders' needs, create a community around ACES, and establish and maintain effective communication and dissemination. During the next two years, we will always empower community building and stakeholder engagement to ensure an effective project exploitation plan. Several initiatives will be put in place to foster the ACES's Communication, Networking Plan, and Dissemination Strategy to improve effective communication and interaction with relevant stakeholders. To ensure that it stays relevant over the project's duration, the update of this document is planned at M24, and a final version will be compiled for M36.

1 Introduction

This deliverable presents an update on the communication and dissemination activities concerning the first year of the project. It aims to provide an overview of the ACES project's dissemination activities highlighting the team's efforts in its engagement with the wider community to promote the project mission. The ACES objectives for communication and dissemination remain the same from the start until the end of the project, in coherence with D6.2 "1st Communication, Networking Plan, Dissemination Strategy Report". The remainder of the report will be structured as illustrate paragraph 1.2.

1.1 Purpose and scope

The present report describes the dissemination and communication activities that took place during the first year of the project and outlines the planned activities for the remaining duration of the project. More specifically, the deliverable outlines the dissemination and communication objectives and strategy of the reporting period. In addition, it presents the tools and activities that were undertaken to accomplish the set objectives, disseminate the project, and implement the strategy as it was set out in the **deliverable D6.2 "1st Communication, Networking Plan, Dissemination Strategy Report".**

1.2 Structure of the deliverable

The present report is comprised of six chapters.

- **Chapter 1 -** serves as an introduction to the deliverable and an overview of the objectives for communication and dissemination.
- **Chapter 2 -** gives a high-level overview of ACES's dissemination and communication strategy and foreseen activities.
- **Chapter 3 -** presents the project materials created and used for dissemination purposes, including the project website and reports on its analytics and Search Engine Optimisation (SEO); moreover, it describes the social media activities.
- **Chapter 4 -** reports on scientific and non-scientific dissemination and communication activities performed until M12 of the project.
- **Chapter 5 –** describes how the target values for the project period are compared against values achieved by considering the KPIs defined in ACES's dissemination and communication Plan (D6.2) to assess progress.
- **Chapter 6 -** provides an overview of the second dissemination and communication reporting period, describing future dissemination activities and indicative dissemination events and scientific journals/specialised magazines that the project will target.

2 Strategic Dissemination and Communication Plan at a Glance

This section presents a high-level overview of ACES's dissemination and communication activities to be undertaken throughout the whole duration of the project. During the second reporting period for WP6 (M1 – M12), it focused its efforts on communicating the project start with the broader audience target, considering the need to diffuse awareness and knowledge of Edge-cloud services, their existence, and general benefits. The activities followed the approved communication funnel and resulted in an effective promotion of the project at a national, European, and international level. This was achieved through the contributions of all project partners.

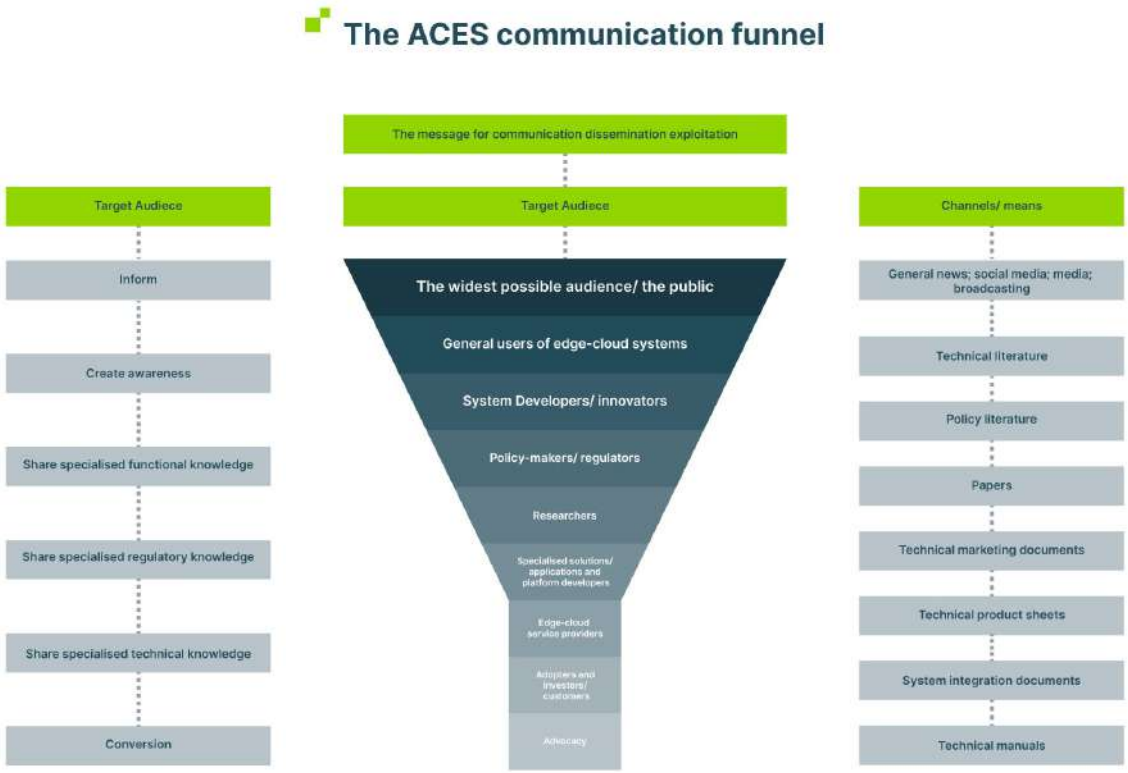


Figure 1 - The ACES communication funnel

In particular, the past months concerned the first phase of communication and dissemination that aimed at:

- **creating and distributing** content that informs people about the context of the project and the problems it aims to solve;
- **measure success** by tracking metrics such as website visits, social media engagement levels, or other indicators that can help gauge how well-received the promotion was;
- **engage with stakeholders** to understand their needs and iteratively tailor the communication accordingly;
- **building relationships** between stakeholders and creating a sense of trust so that they are more likely to support the project in later stages.

Figure 2 - The 4 phases of Communication and Dissemination Activity

Communication activities include all actions that contribute to spreading the project's results within and beyond the consortium and to direct stakeholders, maximising the project's contribution to innovation.

The dissemination activities deal with the spreading of research, scientific and technological knowledge generated within the project, aiming to ensure both a mid – and long-term impact by informing the European target audience. ACES communication and dissemination is a continuum process that needs the partner's engagement to:

- **Implement** a sound communication strategy and plan.
- **Implement** the communication plan and reach the targeted audiences.
- **Maximise** visibility of the project within and beyond the project's consortium.
- **Sharing** of the research, scientific and technological knowledge generated.
- **Liaise** with other projects and initiatives.
- **Engage** the targeted audiences to get feedback and validation.
- **Attract** potential users/clients and stimulate the appropriate market segments to support the project's exploitation strategy.

During the next two phases, **"Inform and Interact" and "Promote"**, the dissemination activity will follow the plan foreseen per each persona (described in D6.2) in each phase of the project's duration identified above. Differences emerge in the different use of social media, which is reported in the table below.

Persona	Social networks	Keywords	1 – Raise awareness	2 – Inform and interact	3 - Promote
Susan Melody George	LinkedIn and Twitter	Cloud-to-edge infrastructure, network architecture, data operations, energy-optimisation, latency	**LinkedIn posts, on-page SEO, blog posts, landing pages, events, newsletters**	**CTA on LinkedIn, website and landing pages**	**Tailored newsletter and marketing automation**
Joaquim de Almeida	Twitter, LinkedIn, YouTube, Mastodon	Cloud, edge computing, artificial intelligence applications, state-of-the-art [technology_name], data privacy, data sovereignty	**Social media posts, on-page SEO, blog posts, landing pages, workshops**	**CTA on the website, links on social media and landing pages**	**Tailored newsletter and marketing automation**

Persona	Social networks	Keywords	1 – Raise awareness	2 – Inform and interact	3 - Promote
Lotte Verbeek	LinkedIn, Twitter, GitHub	Horizon Europe projects, green data operations, semantic interoperability, distributed knowledge graph	**Research articles, LinkedIn articles, LinkedIn posts, social media posts, events, newsletters**	**CTA on research articles and LinkedIn articles/posts**	**Tailored newsletter and marketing automation**
Bruno Ganz	Twitter, LinkedIn	Data sovereignty, Green New Deal, European data spaces, European Chips Act, European Interoperability Framework	**Social media posts, on-page SEO, press releases, blog posts, events**	**CTA links on social media and website**	**Tailored newsletter and marketing automation**

Figure 3 - Dissemination plan overview and persona

Each persona described in D6.2 (see annexes - Personas) has different needs. Therefore, to efficiently target these different audiences and stakeholders, the consortium addresses the audiences through distinct channels and messages.

For the first year of the project period, the main objectives for the dissemination and communication were the following:

1) **Reinforce** the ACES brand by utilising it in all dissemination materials;

2) **Present** the project in all relevant events;

3) **Disseminate** the project's vision & objectives to key partners;

4) Create scientific content and share it to stakeholders such as the scientific community;

5) Reach out to the wider community of non-experts with social media posts.

To create a better coordination between all partners of the project, a joint calendar was created and proposed in **Chapter 7**. The calendar is a collaboration tool among all partners, and it is monitored by the WP6 leader. All activities are linked with the strategic KPIs for dissemination and communication.

Every 6 months, the WP6 leader checks if the planned activities are being completed as intended, and if not, corrections in the calendar are made to ensure that all the KPIs for the project will be met before the project's lifecycle ends. The calendar is available on the shared WP6 folder and it is open to everyone.

In the following sections, an overview of the dissemination and communication tools used to set the brand identity of the project and promote the project's concept, activities and initial results is provided.

3 Communication Tools and Channels

3.1 Website overview

In this section, we describe and report the impact of the project website, which is available under the domain http://www.aces-edge.eu. In addition, the modifications made on the website during the first year of the project are also presented.

As the central node for dissemination purposes and the main dissemination and communication channel, the ACES official website was built in the early stages of the project. The website serves as a collaboration tool for knowledge, experience, and best practice sharing, as well as for results consolidation and dissemination support. The project website is continuously maintained to provide up-to-date information and material on the project deliveries and news.

3.1.1 Website structure

The following chart presents the overview of the ACES website, mapping the different pages and their content at M12. The website is a dynamic object and while some of the structural elements remain stable, it will be updated dynamically as the project develops over time. In the updated sitemap, the changes done have been circled.

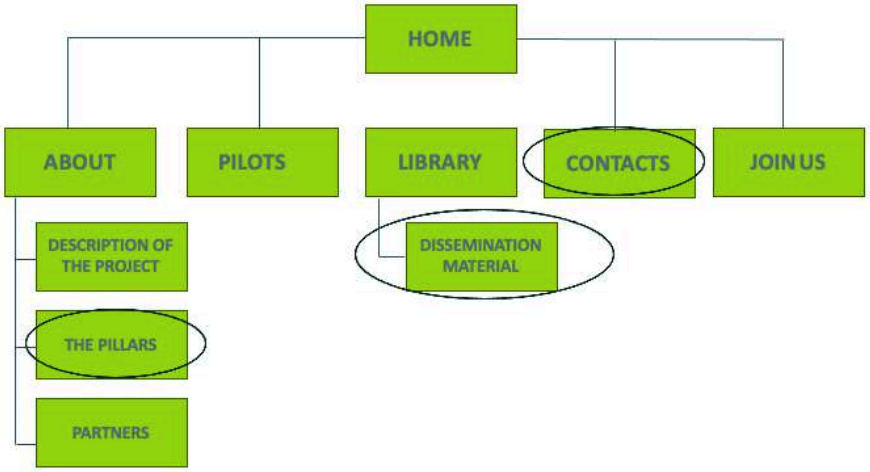


Figure 3 – ACES updated sitemap

With these changes it was possible to highlight some elements that in the previous structure remained hidden, leaving more space, for instance, for the Pillars explanation but also enriching the website with a specific session dedicated to the Library, in which the user can find and download all the project Dissemination Material (Fig. 4).

In the following pictures, it is possible to view the screenshot of dissemination material that can be downloaded from the website (Fig. 5 - 8). This kind of material can be useful to all website users interested in the ACES project, but also to support the dissemination activity in which all the consortium partners are engaged.

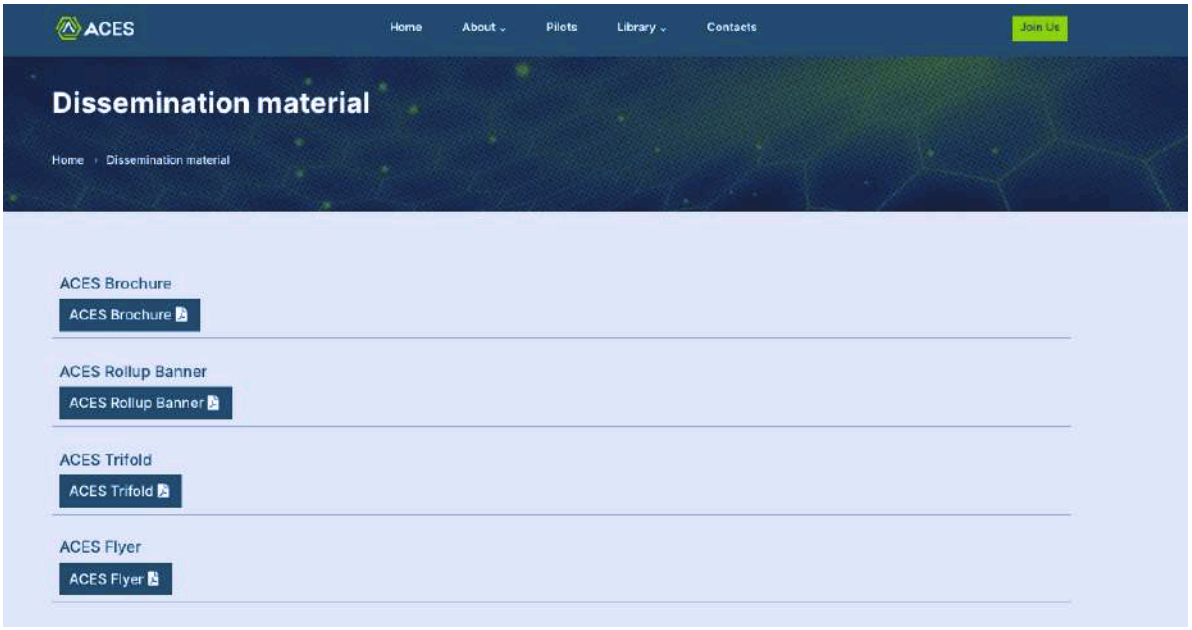
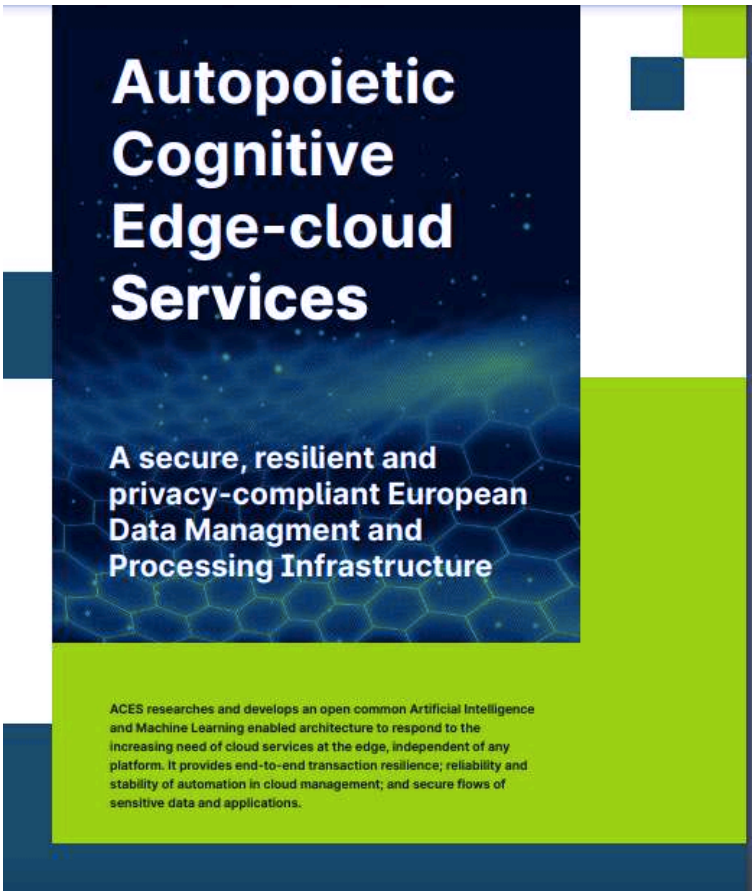


Figure 4 - Dissemination material session



12
Organization
36
Months of research and innovation
5.5+
Million Euros funded
About Us
ACES is a three-year research and innovation project funded under the Horizon Europe Framework Programme, Programme HORIZON-CL4-2022-DATA-01, project ID: 101093126. It is promoted by a consortium of 12 organisations, small and medium businesses, research and technology institutions, academia and industry, who are leaders in computer engineering, smart manufacturing, public policy, technological development, innovation management, business information system security and public administrations clusters.
Value Proposition
Innovative cloud-edge service based on optimised computing and network management, storage, and analytics, using AI and M/L techniques.
Autopoiesis to manage resources and workloads in respect to edge-relevant requirements such as latency, energy efficiency, security and throughput.
Optimised data management, storage, replication and data movement.
Research services to improve the experience of operators, software and application developers as well as end-users.
Demonstrated effectiveness in concrete edge-cloud application use cases.
Context and issues
ACES undertakes research and technological innovation to respond to the increasing need of edge-cloud computing and data management and the demand of edge services. ACES edge-cloud data and application services have the potential to enable a new infrastructure model, capable of guaranteeing end-to-end transaction resilience.
The ACES solution provides autonomy and self-regulating mechanisms that provide systems stability, locally and edge-wide. The requirements include the need for a horizontal flow of data and applications between sites as well as tackling issues of bandwidth, energy efficiency, security, and privacy.
Furthermore, the autonomous operations on the platform need to be clearly explainable to operators, application developers and end-users and low-overhead is required in terms of costs, latency, energy, labour.
Solution
ACES will provide an edge-services cloud with hierarchical intelligence, specifically autopoiesis and cognitive behaviours to manage and automate the platform.
These solutions include: Autopoiesis-based edge-services cloud; awareness tools, AI/ML agents for workload placement, service and resource managem ent, data and policy management, telemetry and monitoring; Autopoiesis agents to safeguard stability in situations of extreme load and complexity; Swarm technology-based methodology and implementation for orchestration of resources; Edge-wide workload placement and optimization; App store for classification, storage, sharing and rating of AI models used in ACES.

Key Outcomes
Autopoietic edge-cloud data and application service platform.
Management agents and tools for awareness; Artificial Intelligence and Machine Learning enabled tools to handle workload, service and resource management, data and policy management, telemetry and monitoringworkload placement.
Agents that maintain stability under conditions of extreme complexity and load.
Swarm technology-based solutions for orchestration of resources in the edge and policy handling.
Edge-wide workload placement and optimization service.
App store for ACES Artificial Intelligence models classification, storage, sharing and rating.
Impact
The aim of ACES is to develope a distributed, opportunistic, collaborative, heterogeneous, self-managed, self organising edge services environment, primarily edge-to-edge and secondly on the edge-to-cloud continuum.
The expected impacts of this implementation are:
Improved placement of Europe in the delivery of secured edge-cloud service platforms in the global scenario.
A reinforced capability of Europe to have available technical, computational and data transmission means to manage urgent societal challenges.
Availability of more effective technologies and tools to manage distributed cloud systems at the edge.
More specific impacts of ACES concern:
the energy sector, facilitating the transition towards a system capable of optimising the relationship between supply and demand and the integration of sustainable energy sources.
the more general impact on the European Green Deal, driving the concept of smart infrastructure and decentralised energy production.
impact on sustainable development goals.
Use cases
The Use Cases test and demonstrate the effectiveness and generalisability of the ACES design and technological solutions. They are based on three real-life application scenarios that take advantage of cognitive edge services with different levels of autonomy and, actionability within the services, the edge service stack and the hardware. These use cases will develop dedicated and, geographically distributed edge cloud to demonstrate its effectiveness and efficiency to technologists and end-users and they will be documented appropriately to prove the transferability to other industries and sectors.
(UC1) Market place and asset distribution.
(UC2) Distributed process management.
(UC3) IoT based asset monitoring and management.

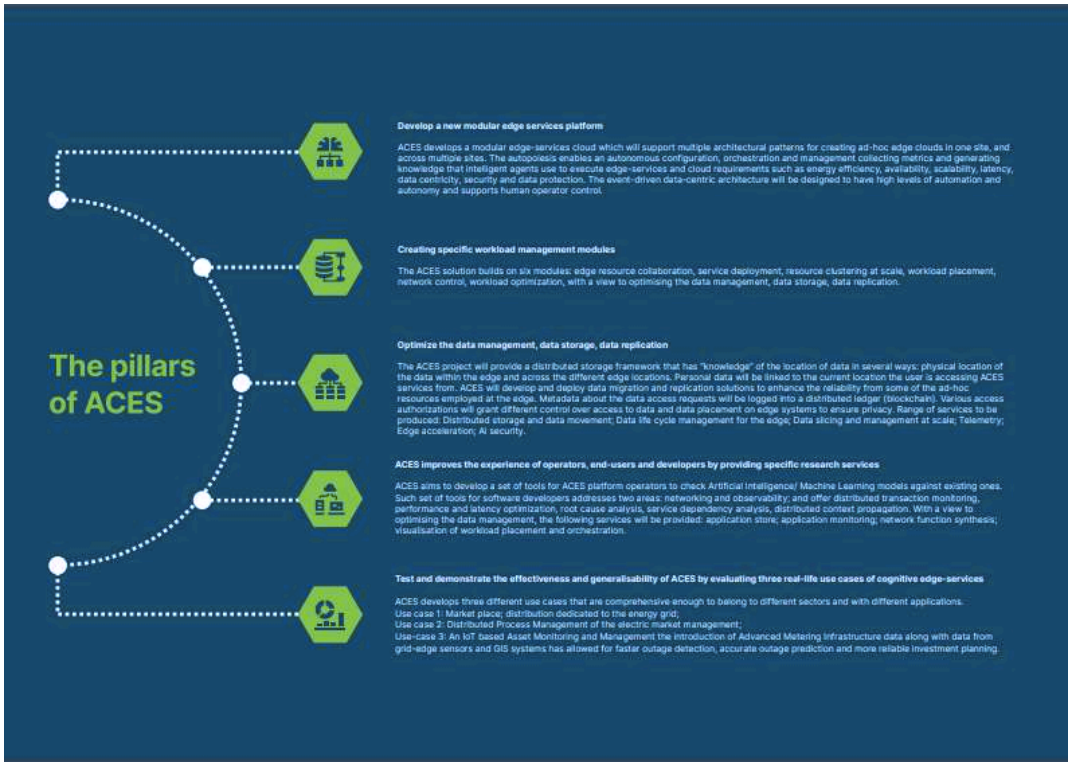


Figure 5 - ACES Brochure

ACES will develop a System based on open common architecture, device and platform agnostic and fit on the largest Edge MicroDataCenter down to the smallest server cluster.

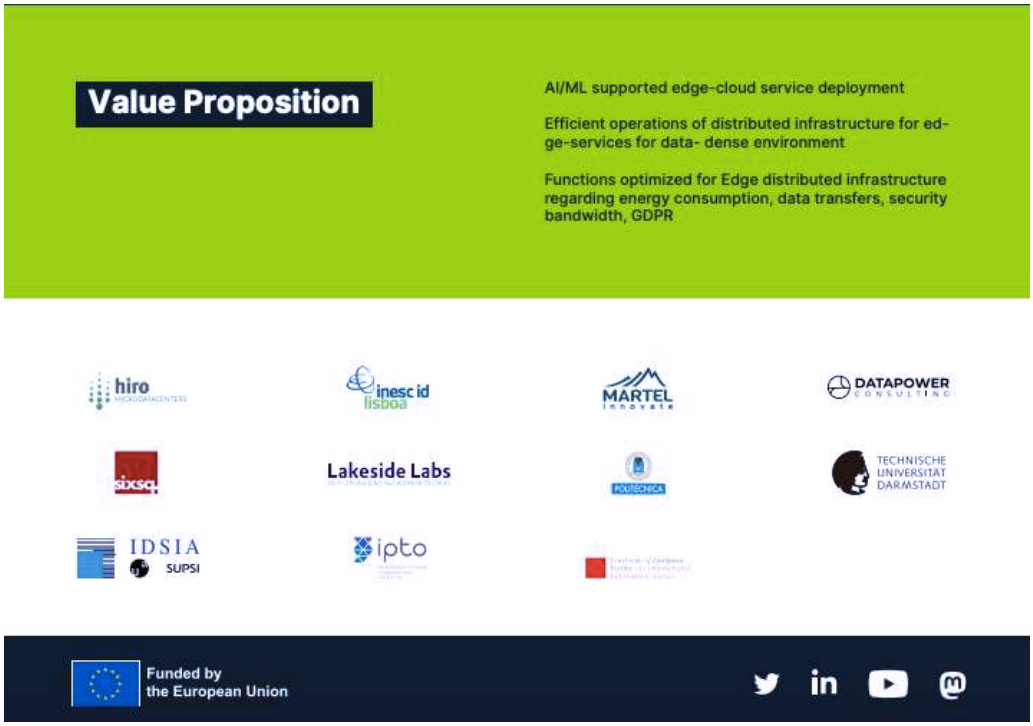


Figure 6 - ACES Rollup

Figure 7 - ACES trifold brochure

Figure 8 - ACES flyer

At the same time, the session Contacts have been put in evidence to facilitate communication, information requests, and networking. In effect, by clicking on it, it is possible to access the main project contacts (Project Coordinator, Technical Coordinator, and Dissemination Manager), and reach the Join us page. It is also possible to access the latter by scrolling through the Home page.

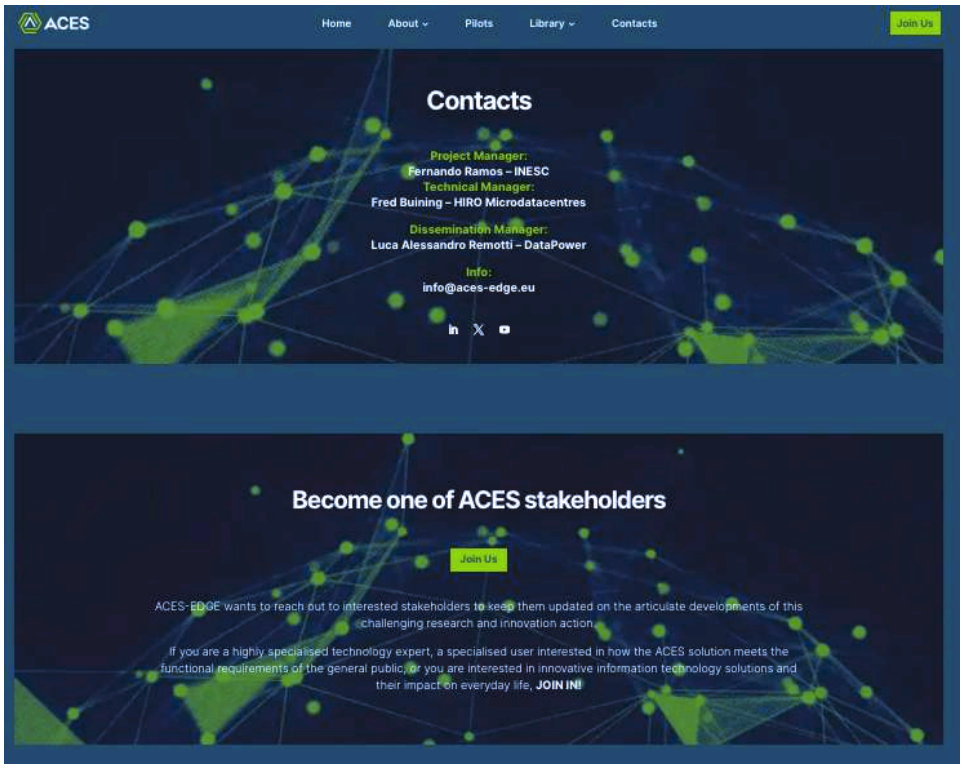


Figure 9 - ACES Contacts

3.1.2 The Webpages

In this section, we present the screenshots with the updates of the ACES site (compared to the initial version).

An important modification of the first version of the website was to add to every page the Join Us session and the newsletter subscription form, to facilitate the community-building process. Moreover, the **Pilots session** has been added to the website. This page has the function to describe the 3 use Cases that will be explored during the project. Their common goal is to demonstrate a set of cognitive edge-services, to analyse different implementations of awareness, autonomy, actionability within the ACES services, the edge-services stack, and the relevant hardware, and to evaluate the effectiveness and transferability of the ACES research project.

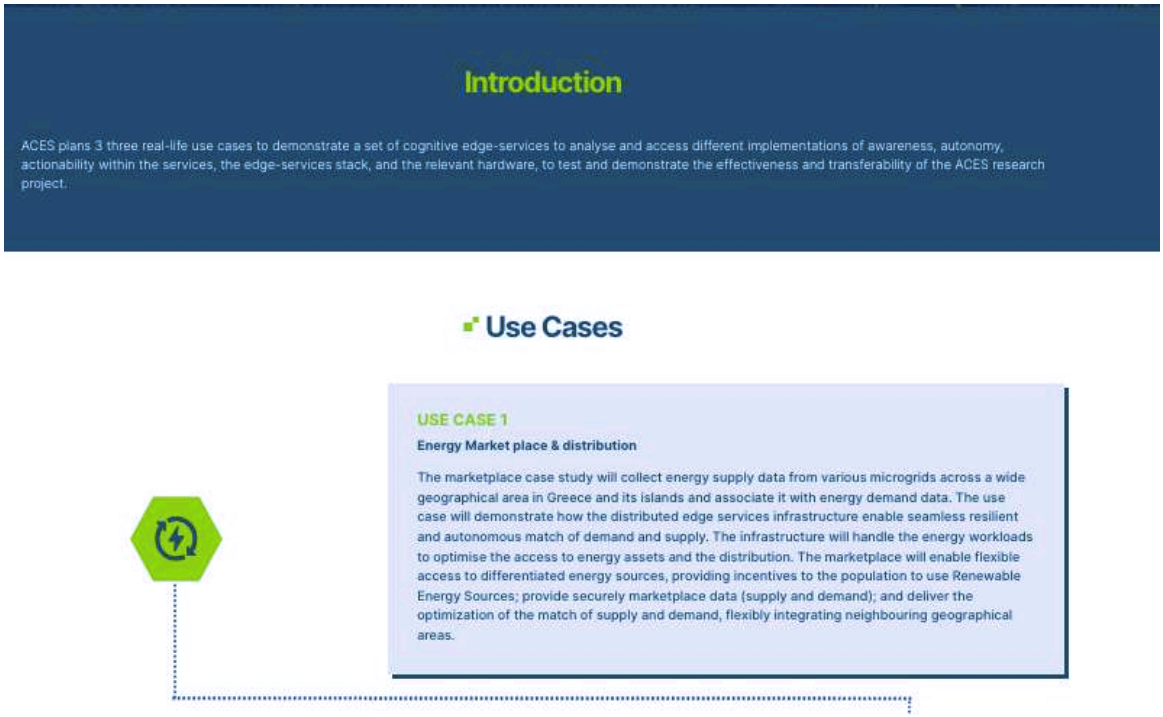


Figure 10 - Use Case 1

Figure 11 - Use Cases 2, 3

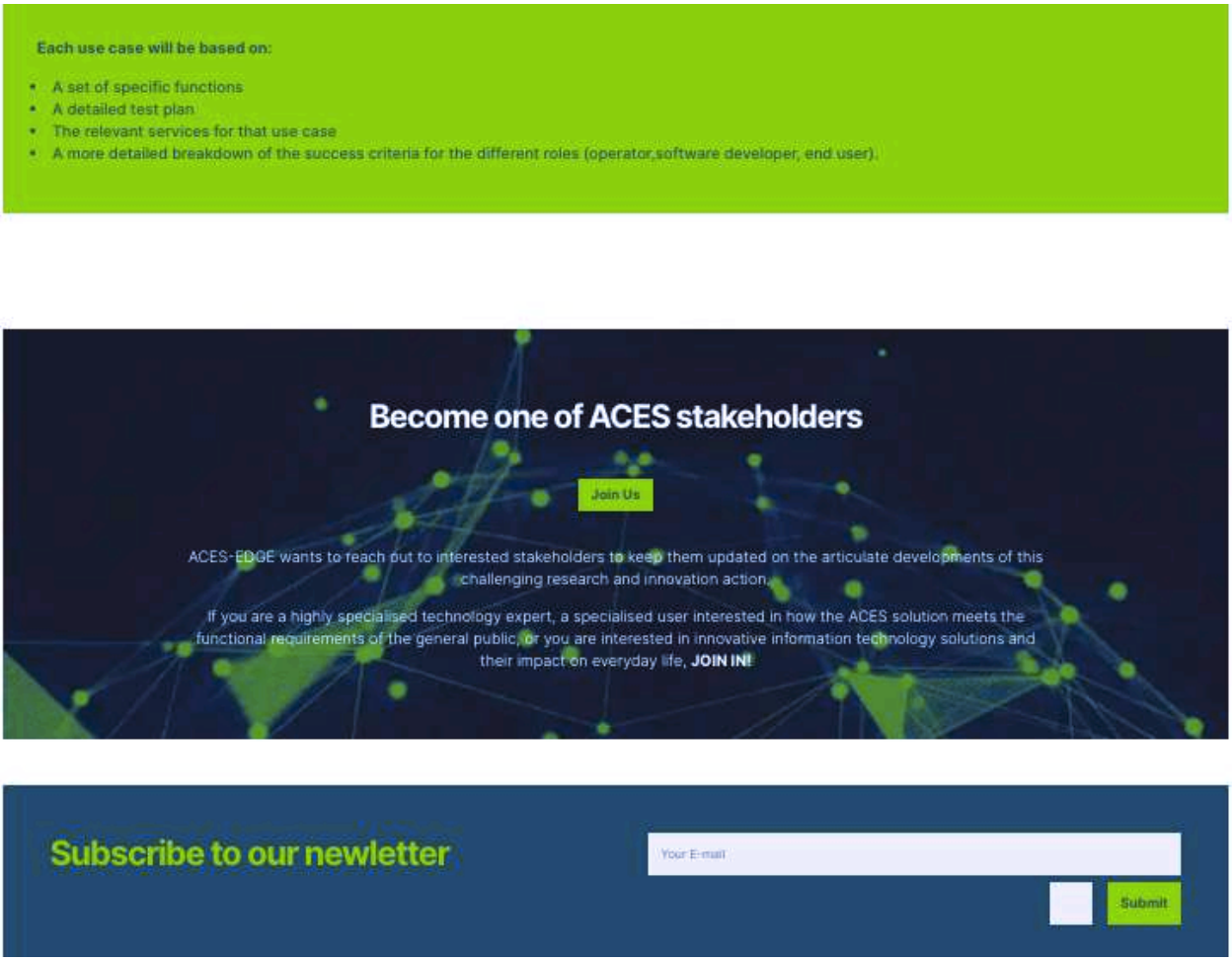


Figure 12 - Use Case page with the Join Us section and the newsletter subscription form

At this stage, some pages have not been implemented yet, since the specific approach, the design and the targets have not yet been defined and depend on other work lines. Namely:

- the Blog posts;
- the Events section;
- the Video section.

3.1.3 Website Analytics

This section presents figures from the website's analytics page of the ACES website from the day of its creation to the time of the present report. Regarding the website audience, on aggregate, we had a total of **811 visits since its launch**. We also count **14 downloads** during the first year, **2,135 pageviews, and 1,298 unique page views**. **The average session duration is above two minutes (00:02:42),** which is a very good benchmark.

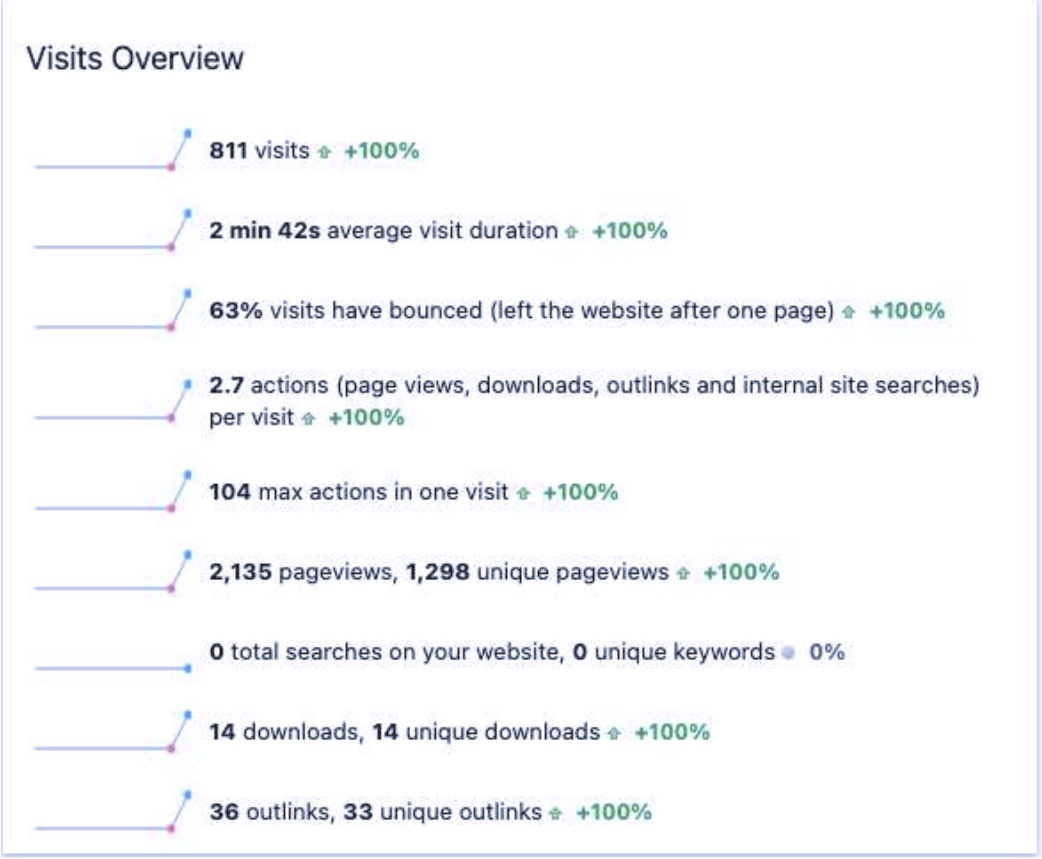


Figure 13 - Visits overview

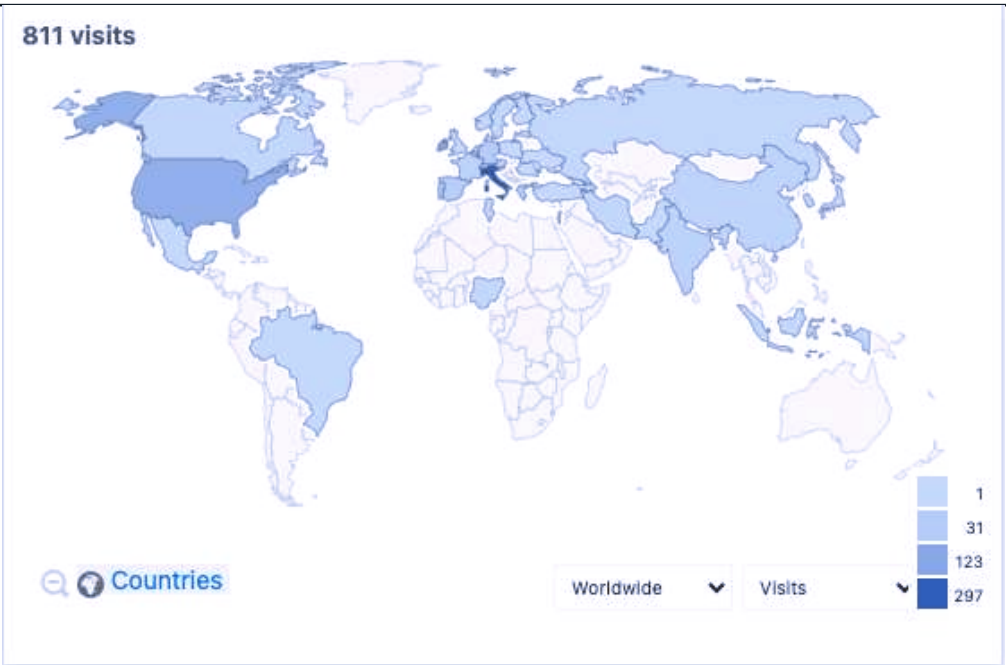


Figure 14 - Audience per geographical location

Country

COUNTRY	▼ VISITS
Italy	297
Ireland	123
United States	101
Portugal	31
Germany	30
Spain	25
Switzerland	24
France	15
Greece	15
Netherlands	15

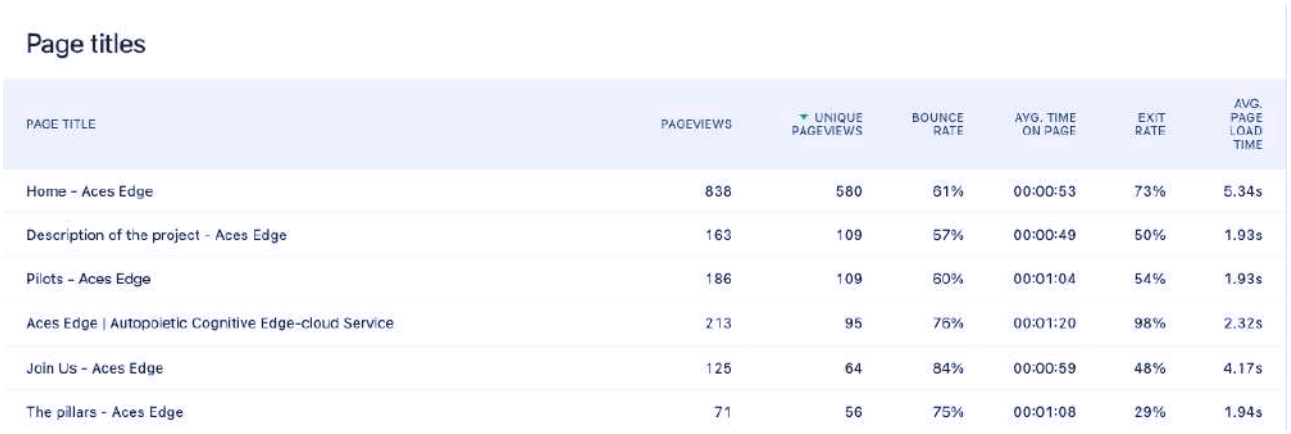
Figure 15 - List of top countries with most users on the website

Downloads

DOWNLOAD URL	UNIQUE DOWNLOADS	DOWNLOADS
www.aces-edge.eu	14	14
/wp-content/uploads/2023/07/ACES-brochure.pdf	5	5
/wp-content/uploads/2023/07/ACES-flyer.pdf	3	3
/wp-content/uploads/2023/07/ACES-rollup-banner.pdf	3	3
/wp-content/uploads/2023/07/ACES-trifold.pdf	3	3

Figure 16 - List of downloads from the website

In the rank of the six pages that acquired the majority of visitor it is possible to find:



Page titles

PAGE TITLE	PAGEVIEWS	UNIQUE PAGEVIEWS	BOUNCE RATE	AVG. TIME ON PAGE	EXIT RATE	AVG. PAGE LOAD TIME
Home - Aces Edge	838	580	61%	00:00:53	73%	5.34s
Description of the project - Aces Edge	163	109	57%	00:00:49	50%	1.93s
Pilots - Aces Edge	186	109	60%	00:01:04	54%	1.93s
Aces Edge | Autopoietic Cognitive Edge-cloud Service	213	95	76%	00:01:20	98%	2.32s
Join Us - Aces Edge	125	64	84%	00:00:59	48%	4.17s
The pillars - Aces Edge	71	56	75%	00:01:08	29%	1.94s

Figure 17 - Page of most visited webpages

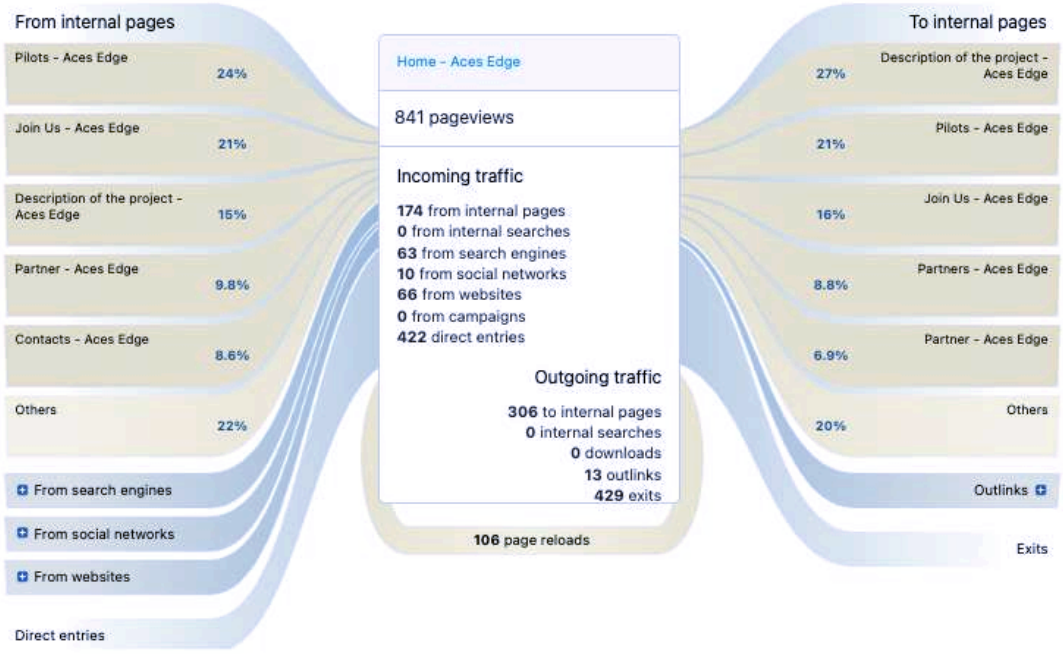


Figure 18 - Visitors' transition inside the website

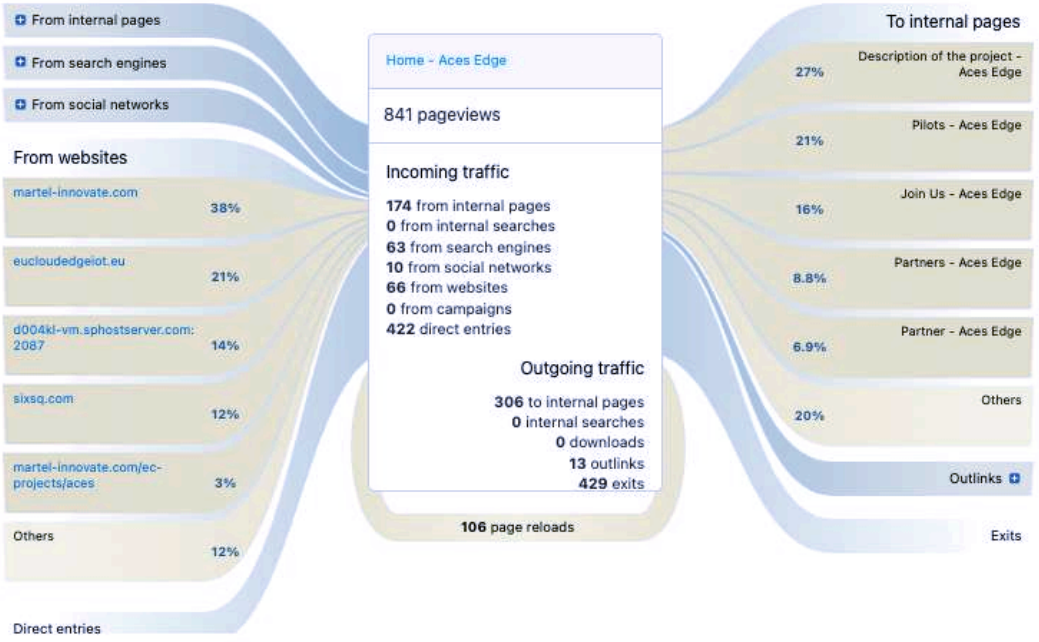


Figure 19 - Visitors' transition from website inside the website

Concerning monthly statistics analysis, we report below one month, M9 – M10. In the figure, many elements show a decrease compared to the annual average. This data most likely derives from the lack of further updates which are necessarily linked to the progress of the project. It is foreseeable, as demonstrated in the previous figure – where it is clear the new Pilots pages are among the most visited

pages – that in the coming months, we should expect an increment of visitors, as the project progresses and its results are shared.

Figure 20 - Visits overview

3.2 Social media

The massification of ACES dissemination will also take place through the programmed management of a social media editorial calendar. ACES' social media channels are **YouTube, LinkedIn, and Twitter**. Each of them was chosen to differentiate the message based on the target persona, thus implementing a more targeted communication strategy. All project partners who have social media accounts follow each other profiles, reposting or retweeting coherent content, tagging, and mentioning the ACES profile. Whenever a partner attends an event on behalf of the project, we aim to have a blog post followed by a social media campaign. Every LinkedIn and Twitter post will always be done tagging the participating partners and their company's profile.

Moreover, the social media role is important to reach the project target groups, addressing them to visit the ACES website and thus follow the project via the blog, the dissemination material, the project results, etc.

During the past month, as it is possible to observe in the figure below, users who visited the project website from the ACES social media came from **Twitter (70%) and LinkedIn (30%).**

Also, all the social media icons have been included in the footer of the ACES website, with the profile pictures containing the official logo. All social profiles have been customised following the same consistency criterion to make themselves immediately recognisable.

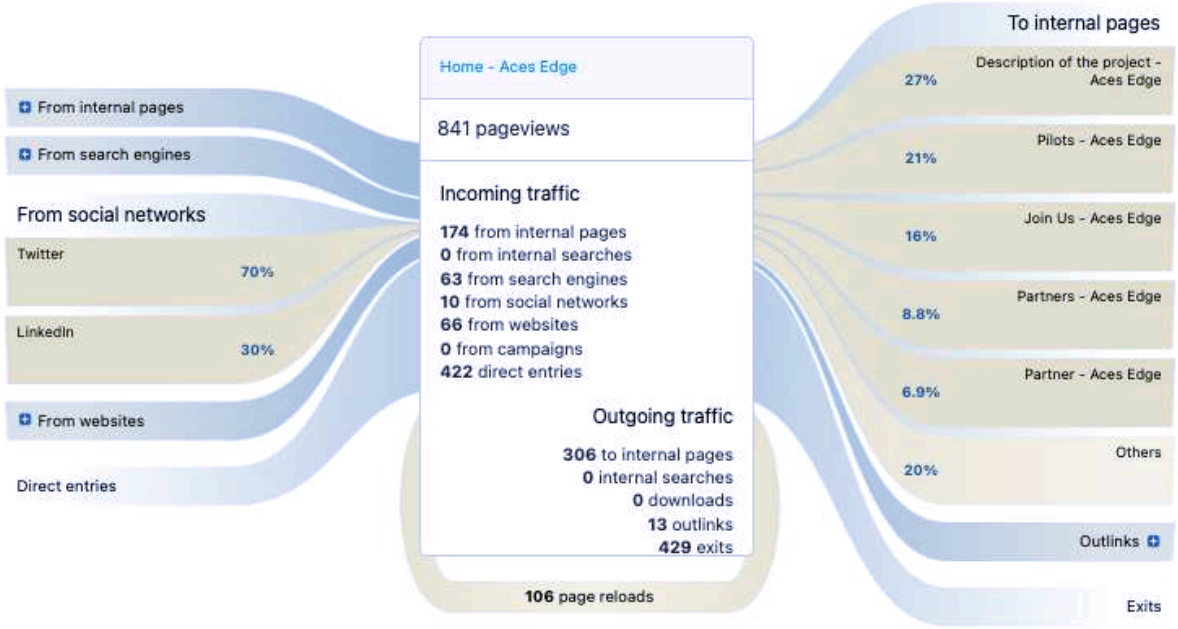


Figure 21 - Visits overview from social networks

3.2.1 Twitter

Twitter is a content-based social media extremely concise. In this case, the ACES project target is defined on interests, pages followed, hashtags followed, and people followed. For this reason, the content is written in a way that is different from other social media channels.

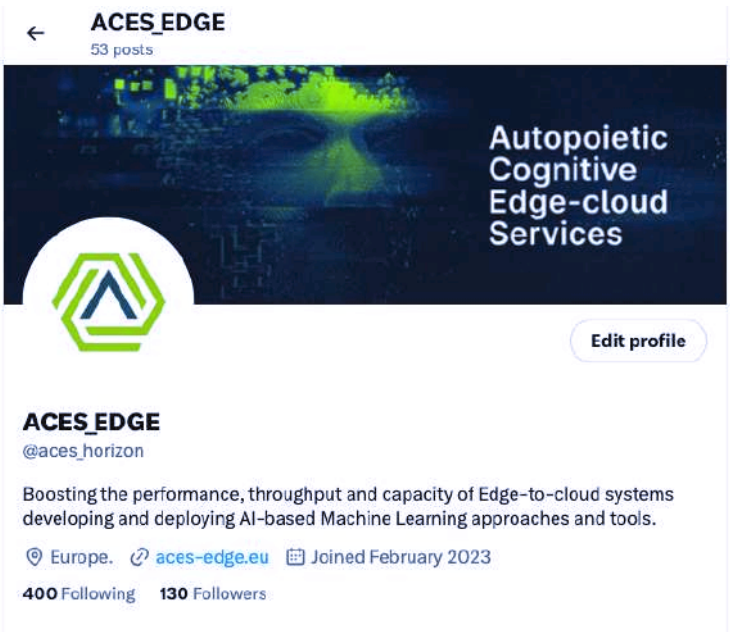


Figure 22 - ACES's Twitter page

From the launch of the ACES social media in February 2023 there were **308 impressions with 53 posts and 130 followers**. In June, with the post: *"#ACES_EDGE a RIA funded by #HorizonEU, develops an open common AI/ML enabled architecture to respond to the demand of cloud services at the edge; automated #cloudmanagement; secure flows of #sensitive #data and applications"*, the account collected **1.585 profile visits and 185 impressions.**

The Twitter ACES account is used to disseminate information about the project, events, and keynotes given by consortium members. Whenever possible, partner accounts are tagged to raise the impression of each tweet. Figure 23 depicts some of the tweets that performed well in the last months.

Figure 23 - ACES's tweets

3.2.2 Linkedin

LinkedIn is one of the most powerful in terms of disseminating professional information. The ACES page in LinkedIn is mainly used to connect with the scientific and technical community of the project. The blogposts are replicated as posts and articles (depending on the content) on the LinkedIn page to attract more visitors to the website.

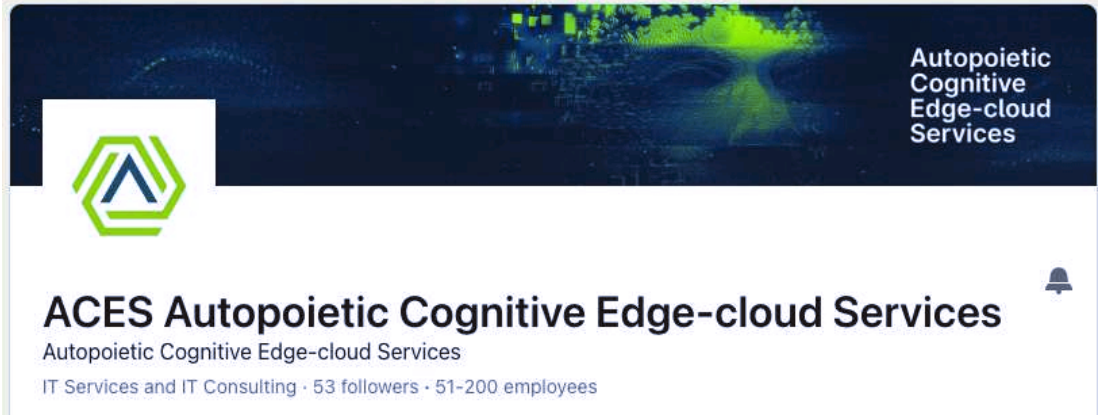


Figure 24 - ACES's Linkedin profile

Regarding the impressions on the LinkedIn page, the ACES project page had a total of **14 posts**, colleting **83 impressions and 53 followers**. The professional LinkedIn page was useful to attract a part of the scientific community to the website, even though it was not the main channel to attract new users. It is possible to see some analytics from the LinkedIn posts in the following figure.

The European Commission and the EUCloudEdgeIoT initiative are proud to... Posted by Chiara Senfett 7/26/2023 Not eligible to boost. Learn more	37	-	1	2.7%	0	0
Home Posted by Chiara Senfett 7/26/2023 Not eligible to boost. Learn more	31	-	0	0%	0	0
European Alliance for Industrial Data, Edge and Cloud presents its first deliverables Posted by Luca Alessandro Remotti 7/12/2023 Not eligible to boost. Learn more	26	-	1	3.85%	0	0
European Alliance for Industrial Data, Edge and Cloud presents its first deliverables Posted by Chiara Senfett 7/10/2023 Get more engagement Boost	172	-	5	2.91%	7	0
Front Posted by Chiara Senfett 7/3/2023 Get more engagement Boost	197	-	2	1.02%	12	0

Figure 25 - ACES's Linkedin posts

4 Dissemination and Communication Activities

This section summarises the communication and dissemination activities that have been performed by the ACES consortium throughout the first 12 months of the project. These activities are split into the following categories:

- Scientific publications
- Participation in events
- Synergies with Other initiatives and projects.

4.1 Scientific publications

During the first year of the project several scientific publications related to ACES have already been submitted and published by different partners. The scientific material can be seen in **Table 1:**

Partner(s)	Type	Title	Main author(s)	Publisher/ Conference
INESC	Poster/Paper	In-Network ML Feature Computation for Malicious Traffic Detection, in ACM SIGCOMM '23: Proceedings of the ACM SIGCOMM 2023 Conference, Sept., 2023, pp. 1105–1107	J. Amado, F. Pereira, S. Signorello, M. Correia, F. Ramos.	ACM SIGCOMM '23
	Paper	Using Range-Revocable Pseudonyms to Provide Backward Unlinkability in the Edge, in CCS'23, Nov. 2023, pp. 3018-3032	C. Correia, M. Correia, L. Rodrigues	CCS'23
	Paper	PoTR: Accurate and Efficient Proof of Timely-Retrievability for Storage Systems, in PRDC'23, Oct. 2023, pp. 111-122	C. Correia, R. Prates, M. Correia, L. Rodrigues	PRDC'23
ISDIA	Conference paper	Split-Boost Neural Networks	R. G.Cestari, G.Maroni, L. Cannelli, D. Piga, S. Formentin	IFAC
	Journal paper	Gradient-based bilevel optimization for multi-penalty Ridge regression through matrix differential calculus	G. Maroni , L. Cannelli, D. Piga	IFAC
LAKE	Conference paper	Agent-based Modeling in the Edge Continuum using Swarm Intelligence, in 16th International Conference on Agents and Artificial Intelligence, 24 February 2024, Rome, Italy, 2024	M. Schranz, K. Harshina, P. Forgacs, F. Buining	6th International Conference
TUDA	Conference paper	FLEDGE: Ledger-based Federated Learning Resilient to Inference and Backdoor Attacks, in Annual Computer Security Applications Conference	J. Castillo	Annual Computer Security Applications Conference
	Conference paper	FreqFed: A Frequency Analysis-Based Approach for Mitigating Poisoning Attacks in Federated Learning, in the Network and Distributed System Security Symposium	H. Fereidooni, A. Pegoraro , P. Rieger, A. Dmitrienko, A.-R. Sadeghi	The Network and Distributed System Security Symposium
SIXSq	Magazine article	IoT-edge-cloud Building a simple, secure, and future-proof infrastructure in HiPEAC magazine	A. Veillon	HiPEAC magazine

Table 1 - ACES scientific material

4.2Participation in events

The following lists all events ACES' partners attended during the first year of the project. The events consist of conferences, workshops, seminars, and keynotes in relevant events. Most events had an international reach and audience. In these events, the ACES partners had the opportunity to present the project and its aims. As a result, a significant number of researchers, policymakers, SMEs, and other stakeholders became aware of the project, helping achieve widespread and effective dissemination of ACES and its goals.

Partner	Event Name	n. of attending participants	Link	Date
INESC	SIGCOMM'23	500	https://conferences.sigcomm.org/sigcomm/2023/	09/11 - 14/ 2023
	Hotnets'23	100	https://conferences.sigcomm.org/hotnets/2023/program.html	11/28-29/2023
	CCS'23	500	https://www.sigsac.org/ccs/CCS2023/	11/ 29/2023
	PRD'23	100	https://prdc.dependability.org/PRDC2023/	10/25/2023
	Invited talk	30	https://www.mit.edu/	Nov 2023
	Invited talk	30	https://www.cmu.edu/	Dec 2023
	2023 EuCNC & 6G Summit	n.r.	https://www.eucnc.eu/2023/www.eucnc.eu/programme/workshops/workshop-2/index.html	06/06-09/2023
IPTO	Sfhmmy - Electrical and Computer Engineering Conference (ECESCON)	1500	https://sfhmmy.gr/%CE%B1%CF%81%CF%87%CE%B9%CE%BA%CE%AE	04/21-23/2023
MARTEL	NexusForum	+/-100	https://opennebula.io/innovation/nexusforum2023/	10/ 5 - 6/2023
	European Big Data Value Forum	+/- 500	https://european-big-data-value-forum.eu/	10/25 - 27/ 2023
INESC	SIGCOMM'23	n.r.	https://conferences.sigcomm.org/sigcomm/2023/	09/11 - 14/2023
	Hotnets'23	n.r.	https://conferences.sigcomm.org/hotnets/2023/	11/28-29/2023
SIXSq	Edge Computing Expo Europe	6000 visitors	https://edgecomputing-expo.com/europe/	09/26/2023

Table 2 – ACES's partners participation events

4.3 Synergies with other initiatives and projects

To ensure complementarities and in the interest of maximising benefits, synergies have been established between existing projects and initiatives. This ensures that information is exchanged among different but related projects in workshops, consultations, and networking events.

ACES has established links with edge-based projects with similar goals to ACES. The main synergy was established with the **EUCloudEdgeIOT initiative**, which will be following described in § 4.3.2.

Partner	Project title	Link	Reference organisation	Joint activities	Triggering actions
LAKE	Swarmin	https://www.lakeside-labs.com/research/swar	Lead: LAKE; partner: Infineon Technologies Austria GmbH, University of Klagenfurt, University of Graz, Messfeld GmbH, Novunex GmbH	Synergies in the simulation framework	Joint engineering of swarm intelligence algorithms due to similar abstraction level (2024)
MARTEL	EUCloudEdgeIoT initiative	https://eucloudedgeiot.eu/	n.r.	Participation in Task Force 3 - Architecture activities	n.r.
	Cognitive cloud projects	https://eucloudedgeiot.eu/members/european-research-and-innovation-projects/	n.r.	Participation in Task Force 3 - Architecture activities	n.r.
SIXSq	EUCloudEdgeIoT initiative	https://eucloudedgeiot.eu/	Atos	Participation to task force groups focusing on dedicated topics: orchestration, data management, monitoring and observability, resource management.	n.r.

Table 3 - ACES Synergies with other initiatives and projects

During the progress of the project all the partners will be committed to identify and evaluate other initiatives of interest for ACES.

4.3.1 SWARMIN Project

SWARMIN - Swarm Intelligence and Combinatorial Optimization for Energy Efficient and Adaptive Industry 4.0 is a project to which Lakeside Labs, partner of ACES project, is directly committed. In SwarmIn the overall goal is to balance WIP waves and flow factors along with production plant optimization featured with energy- and resource-efficiency parameters. To reach this goal the project designs a new architecture to combine different methods of artificial intelligence (AI). First, it applies combinatorial optimization as a high-level optimization approach for global estimation of configuration parameters. It reduces the solution space that is used as input for the second, low-level optimization, applying swarm intelligence as a multi-agent, in a bottom-up approach. This is an innovation, as a mixed-swarm approach that considers both cyber-physical systems (CPSs, e.g., machines, lots) and humans as agents impacting energy and resource efficiency in an Industry 4.0 setting has not been investigated in the field of semiconductor manufacturing before. For low-level optimization, each agent is equipped with a set of local rules. The connection between high- and low-level optimization is a novelty, for which the project models the production plant as a self-organizing system of agents that work together.

4.3.2 EUCloudEdgeIoT initiative

The EUCloudEdgeIoT.eu initiative aims to realise a pathway for the understanding and development of the Cloud, Edge and IoT (CEI) Continuum by promoting cooperation between a wide range of research projects, developers and suppliers, business users and potential adopters of this new technological paradigm. OpenContinuum supports the cloud-edge-IoT domain by focusing on the supply side of the computing continuum landscape, fostering European strategic autonomy and interoperability through an open ecosystem for the computing continuum, with open source and open standards.

The EUCloudEdgeIoT.eu initiative offers a set of cooperation mechanisms with the community of research projects in the Cloud, Edge, IoT and related domains in the form of six individual task forces (TFs). The aim of these task forces is to assist in the coordination and dissemination with stakeholders from the Cloud, Edge and IoT ecosystems, such as research projects, coordination projects, the European Commission, and other organisations.

The EUCloudEdgeIoT.eu task forces avoid overlap of work between projects, enable project amplification, and allow the identification of potential areas of collaboration and conflict. Acting as a multiplier, the goal of EUCloudEdgeIoT Task Forces is also to create common strategies, approaches, and methodologies to areas of interest within the CEI Ecosystem, and to increase the visibility of the Cloud, Edge and IoT continuum towards the development of the community. Each TF targets specific types of projects and stakeholders.

ACES project is currently involved in Task force 3, particularly in the following working groups:

- UPM (WG3 - Data management)
- HIRO (WG4 - Resource management, leading the working group)
- HIRO (WG5 - Orchestration)
- INESC-ID (WG6 - Network)
- SIXSQ (WG7 - Monitoring & Observability)
- LAKE (WG8 - Artificial Intelligence).

4.3.3 COGNITIVE CLOUD PROJECTS

EUCloudEdgeIoT.eu coordinates a portfolio of projects in the CEI Computing Continuum to ensure consistent exploitation of these projects' outcomes to help regain European competitiveness in core internet infrastructures. Among these, ACES is involved in the call "Cognitive Cloud".

5 Dissemination and Communication Impact Assessment

The ACES communication and dissemination objectives are measured through Key Performance Indicators (KPIs), defined in the Grant Agreement. **In Table 5**, we present the main activities proposed in the dissemination and communication plan (D6.2) carried out with positive results during the first year of the project:

Main activities	Sub-activities	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M10	M11	M12
ACES KoM	Publication of first press release													
	Publication through partner's channels													
WP6 KoM	Organisation													
	Follow up													
DPC plan drafting	Partners' input													
	Drafting													
	Feedback collection and finalisation													
Definition of visual identity	First elaboration													
	Finalization													
Website set-up	Mock-up definition													
	Finalization													
Social media account set up														
Shared dissemination log														
Mapping of stakeholders	Partners' input													
	Mapping and engaging													
Mapping of events	Partners' input													
	Mapping													
Mapping of publication	Partners' input													
	Mapping													
Drafting and submission of scientific articles														
Launch of website	Launch													
	Content update													
Publication through social media														
YouTube video														
ACES overall project presentation														
Newsletter														
Workshops, webinars	Design and organisation													
	Announcement													
Publication of the first scientific article														
Publication of a scientific poster														
Participation in EU and national events														
Press release														

Table 4 - ACES main dissemination activities foreseen in the Dissemination and Communication Plan

The communication and dissemination activity supports and follows the project's progress that characterises and influences its timeline. In the previous table, there are some activities like **YouTube videos, newsletter publications, workshops and webinars that are still not started because they strictly depend on specific project results still not being achieved during the first year.** The same things for some KPIs described in Table 6, where it is possible to check the achieved KPIs by the first year of the project and to read in red those that were not possible to achieve because depending on

the project's progress. During the next 2 years of the project, the Communication and dissemination planning will take into consideration to reach out to all the KPIs that have been left behind.

Activity	KPI	Objective	Year 1
Organisation of project events	No. Of events organised	2 workshops organised	0
Organisation of project events	No. Of events organised	4 demo events	0
Participation to conferences and workshops	No. Of events attended	20 attended events	13
Participation to conferences and workshops	No. Of events project presented	10 events the project presented	4
Participation to conferences and workshops	No. Of events attended	2 project demo booths	0
Scientific Publications	No. Of publications	10 conference papers	7
Scientific Publications	No. Of publications	4 journal papers	1
Scientific Publications	No. Of publications	4 articles in industry magazines	1
Community building/ Stakeholder engagement	No. Of contact points	50 industry contact points	0
Community building/ Stakeholder engagement	No. Of communities reached	5 industry communities informed about project	0
Community building/ Stakeholder engagement	No. Of webinars organised	2 webinars	0
Collaborations and synergies with projects	No. Of activities with other projects	5 projects with synergies	2
Collaborations and synergies with projects	No. Of synergies with other projects	4 joint activities	1
Internal dissemination in partners' network	No. Of internal events	10 internal partner events	2
Internal dissemination in partners' network	No. Of internal website outreach	30 links to project website	36
Internal dissemination in partners' network	No. Of internal training sessions	4 training sessions	0
Project's website	No. Of visitors	5000 unique visitors	841
Project's website	Duration of visit	2 min. Average visit duration	2'42''
Project's website	No. Of page views	10000 pageviews	2135
Social Media Presence	No. Of followers	750 accumulative followers	183
Social Media Presence	No. Of followers and engagement	1000 accumulative posts	69
Social Media Presence	No. Of followers and engagement	250 interactions	391
Project's Blog	No. Of engagement	100 interactions	0
Project's Blog	No. Of posts	50 posts	0
Traditional Media	No. Of press releases	3 press releases	0
Communication Material	No. Of comms material published	9 eNewsletter	0
Communication Material	No. Of comms material published	2 videos	0
Communication Material	No. Of comms material published	5 blog posts in EC mechanisms	0
Communication Material	No. Of comms material published	5 project's factsheets/brochures and banners	4

Table 5 – Current status of ACES KPI

6 Next Steps

The ACES project is approaching its **second phase, which consists of informing and interacting**. This phase is designed to ensure that all stakeholders are kept up to date on the project progress, involving providing regular updates to stakeholders, as well as engaging them in meaningful dialogue about ACES's developments. Different instruments to inform and engage stakeholder groups, such as **newsletters, blog posts, sharing information material, interactive surveying, webinars, focus groups, and living labs. Calls To Action (CTA)** will be used for this purpose to improve stakeholder engagement and participation. A call to action (CTA) is a prompt on a website or on social media that asks users to perform a specific action like signing up for a newsletter, downloading a demo, responding to a survey, etc. This kind of activity will contribute to keeping an effective two-way-street communication channel with stakeholders to nurture a community around ACES.

In effect, during this second year, **it will be important to keep stakeholders informed about any changes or developments that may affect their involvement in the project and at the same time, provide opportunities for stakeholders to give feedback and ask questions, so that they can be involved in decision-making processes related to the project.**

In coherence with the first year of the project, all the communication and dissemination activities will follow the approach based on Persona (Annex - Personas) that will support us in addressing to the target specific activities, tools and mechanisms put in place efficiently per each year. Tables 7 and 8 report their description in detail.

Persona	Social networks	Keywords	Year 2 – Inform and interact	Year 3 - Promote
Susan Melody George	LinkedIn and Twitter	Cloud-to-edge infrastructure, network architecture, data operations, energy-optimisation, latency	**CTA on LinkedIn, website and landing pages**	**Tailored newsletter and marketing automation**
Joaquim de Almeida	Twitter, LinkedIn, YouTube	Cloud, edge computing, artificial intelligence applications, state-of-the-art [technology_name] , data privacy, data sovereignty	**CTA on the website, links on social media and landing pages**	**Tailored newsletter and marketing automation**
Lotte Verbeek	LinkedIn, Twitter, GitHub	Horizon Europe projects, green data operations, semantic interoperability, distributed knowledge graph	**CTA on research articles and LinkedIn articles/posts**	**Tailored newsletter and marketing automation**
Bruno Ganz	Twitter, LinkedIn	Data sovereignty, Green New Deal, European data spaces, European Chips Act, European Interoperability Framework	**CTA links on social media and website**	**Tailored newsletter and marketing automation**

Table 6 - Overview of the activities planned per persona

Communication Mechanism	Year 2 – Inform and interact	Year 3 - Promote
Project's website	Regular update of the website content; watch website's analytics to measure impact and provide content of interest	Regular update of the website content; clear visibility of results, demo/application material in an interactive way
Social Media presence	Promote project's outcomes and events; interact with followers to get feedback; answer on comments and private messages on the various channels; upload public material; reproduce relevant content and monitor relevant hashtags	Promote project's outcomes and events; interact with followers to get feedback; answer on comments and private messages on the various channels; upload public material; reproduce relevant content (more sporadically)
Project's blog	Provide frequent blog posts to initiate discussions on specific issues relevant to the project to receive feedback	Publish frequent blog posts to demonstrate and promote project's results
Traditional media	Press releases to announce the significant events/results	Press releases to promote the business case of the project's results
Communication material	Prepare revised brochure, banner and frequent releases of e-Newsletter; publish blogs/news in EU instruments (e.g. Cordis News, research EU magazines etc.)	Prepare final brochure, banners, frequent releases of e-Newsletters and video demonstrators; publish blogs/news in EU dissemination instruments

Table 7 - Overview of the activities and related planned tools

6.1.1 Community building and stakeholder engagement: upcoming activities

Building up the ACES community is one of the main goals of the strategic communication plan. **During M22 and M36 (during the project final conference), the organisation of community events centered around workshops where participants will collaborate on applying specifying solutions to a targeted context will be useful to engage the community**. The aim is to organise project workshops in conjunction with other external event like conferences. In this way, it will be possible to increase the impact of the activity and extend the potential audience, generating, at the same time new networking opportunities.

Regarding the contents mainly directed to the community, special emphasis will be given to information about the results, activities planned and carried out, use case developments, and public deliverables. A specific focus will be also given to the general public to maximise awareness of the project findings and their impact. In annex A it is possible to find the first list of project stakeholders.

6.1.2 Scientific and technical dissemination

Scientific dissemination involves communicating the ACES research results to other scientists, academics, and experts in the field. Technical dissemination involves communicating research results to a broader audience outside of academia, which is nonetheless knowledgeable on technical concepts. The primary goal is to maximise the impact of ACES's research results. This can be achieved

by publishing the findings in peer-reviewed journals, presenting them at conferences, and making them available online. Additionally, other researchers should be able to build upon ACES's results and make further advances in their own research. Finally, disseminating ACES's findings makes them a common good that everyone has access too regardless of their background or resources. It ought to be clarified that the latter aspect is tied to open publications.

We recall that ACES aims to advance the state-of-the-art in the development of the edge-services cloud stack and implement autopoiesis cognitive frameworks. ACES will:

- Innovate and extend limited capabilities and autopoiesis cognition of existing services;
- Develop new autopoiesis cognitive edge-services.

Once ACES's results become relevant for archival journals, the consortium will aim to publish high-level articles in some of the most relevant journals related to the project topics. These publications will inform about project objectives, including the main service system specifications and the results achieved in order to reach potential users outside the consortium. Academic and research partners will participate in external European and international scientific conferences and events to show the project developments and achievements. International academic networks will be used as an awareness and dissemination channel.

A non-exhaustive selection of international journals that are best suited for publishing ACES-funded scientific articles can be found in Annex B. In line with the project approach, the journals listed are multi-disciplinary and cover different scientific areas. Furthermore, a selection of forthcoming international conferences, covering different scientific areas, confirmed or under consideration by ACES partners can be found in Annex C.

During M13 and M14 and the first months of 2025, they will be asked to the consortium to identify the main and the most relevant publication channels. They will be evaluated starting from partners' produced content, publication target groups, and scientific and technical dissemination aims relating to the ACES project.

6.1.3 Private sector dissemination

ACES targets the private sector, more specifically the industry 4.0 and technology providers and developers, to raise interest in the technologies employed in the project, perform connections between the organisations developing these technologies and consortium members, and facilitate technology creation. This audience will be a critical part of the dissemination because of the importance of directly addressing SMEs, start-ups, and digital innovation hubs (both national and European) to ensure technical take-up by competitive players. Participation in trade fairs and other dissemination channels (e.g., social media) will be the primary channels to reach them. In addition, to generate awareness within the business community, specific workshops and events will be organised to spread the innovative project results. In this context, 2 project demo booths organisation have been foreseen in conjunction with specific sector conference and events. **They will be organised and put in place from M18 to M20 and during the last project year from M32 and M34. Of course, it will be crucial to identify and evaluate the best opportunity which carry out this kind of dissemination activity that together with the demo event (M16, M22; M28, M34) will be a push and foster the ACES exploration phase.**

6.1.4 ACES use cases results in dissemination campaign

The dissemination of ACES outputs will make the knowledge developed throughout the project available to wider audiences. To reach key stakeholders in the research community, industry, commercial actors, professional organisations, policymakers and citizens' organisations at the local level, ACES will carry out demonstrations, training, workshops, and social media campaigns in the regions where the use cases will take place, namely: Cyclades, Crete, and Attica.

6.1.5 Synergies with other initiatives and projects

The partner's network is particularly important for ACES to access generated knowledge by external projects and organisations well as make available the ACES-generated knowledge to other projects and initiatives that can take advantage. **The links and synergies will be particularly important in the exploitation phase, but the mapping of solutions, outcomes and stakeholder/target groups will already be relevant in the communication and dissemination phase.**

In the next two years, the partner's engagement in triggering synergy actions will be an important requirement not only to promote the project results, but also to increase the ACES network, and build connections to explore the market to foster the exploitation project's phase. In this context, the partner's commitment in the dissemination activity is becoming always more fundamental. During the first months of 2024, the WP6 leader will provide tools to map more efficiently partner networks, report conferences and event participation, and, acquire information to map and reach new stakeholders.

Once the ACES project is more clearly specified in terms of technological solutions, it is expected not long after the definition – during a workshop consolidating the blueprint – the final map of related initiatives and their characterization (in terms of advances, results, and impacts).

6.1.6 Videos to communicate certain sophisticated components of ACES

Videos are a very effective means to diffuse information and create awareness. ACES will use them to create knowledge for the general public about the key characteristics and functionalities of the ACES edge-cloud.

ACES has different opportunities to use videos:

- Functional animations demonstrating the operation of architectures and the interactions of systems;
- Functional animations demonstrating the ways different edge-cloud users can benefit from the solution;
- Video captures to illustrate the approaches of different physical actors in cloud systems, as users and providers.

The video formats will be decided during this project's phase and provided at M17 and M30.

6.2 Dissemination and communication timeline for the next years

During the next couple of years of the project, the focus will shift from the general audience to the technical and scientific one to effectively communicate and disseminate research results to various target audiences, creating materials that highlight the project's results, and collaborating with other relevant communities and research projects across Europe. The team will continue to participate in events, conferences, and workshops and will actively seek opportunities to promote the project through publications and other official communication channels.

In the table below KPIs for years 2 and 3 are mapped. In red color the activities that will start from the next project phases.

Activity	KPI	Objective	Year 2	Year 3
Organisation of project events	No. Of events organised	2 workshops organised	1	1
Organisation of project events	No. Of events organised	4 demo events	2	2
Participation to conferences and workshops	No. Of events attended	20 attended events	4	3
Participation to conferences and workshops	No. Of events project presented	10 events the project presented	3	3
Participation to conferences and workshops	No. Of events attended	2 project demo booths	1	1
Scientific Publications	No. Of publications	10 conference papers	2	1
Scientific Publications	No. Of publications	4 journal papers	1	2
Scientific Publications	No. Of publications	4 articles in industry magazines	1	2
Community building/ Stakeholder engagement	No. Of contact points	50 industry contact points	25	25
Community building/ Stakeholder engagement	No. Of communities reached	5 industry communities informed about project	3	2
Community building/ Stakeholder engagement	No. Of webinars organised	2 webinars	1	1
Collaborations and synergies with projects	No. Of activities with other projects	5 projects with synergies	3	2
Collaborations and synergies with projects	No. Of synergies with other projects	4 joint activities	1	3
Internal dissemination in partners' network	No. Of internal events	10 internal partner events	4	4
Internal dissemination in partners' network	No. Of internal website outreach	30 links to project website	30	30
Internal dissemination in partners' network	No. Of internal training sessions	4 training sessions	2	2
Project's website	No. Of visitors	5000 unique visitors	2079	2079
Project's website	Duration of visit	2 min. Average visit duration	2 min. Average visit duration	2 min. Average visit duration
Project's website	No. Of page views	10000 pageviews	3932	3932
Social Media Presence	No. Of followers	750 accumulative followers	567	567
Social Media Presence	No. Of followers and engagement	1000 accumulative posts	284	284
Social Media Presence	No. Of followers and engagement	250 interactions	250	250
Project's Blog	No. Of engagement	100 interactions	50	50
Project's Blog	No. Of posts	50 posts	25	25
Traditional Media	No. Of press releases	3 press releases	1	2
Communication Material	No. Of comms material published	9 eNewsletter	4	5
Communication Material	No. Of comms material published	2 videos	1	1
Communication Material	No. Of comms material published	5 blog posts in EC mechanisms	2	3
Communication Material	No. Of comms material published	5 project's factsheets/brochures and banners		1

Table 8 - KPIs Year 2 and 3

In **Table 9 it is possible to read the timeline for the next two years of the ACES project, the achieved KPIs (project year 1) and the planned target for the forthcoming years.**

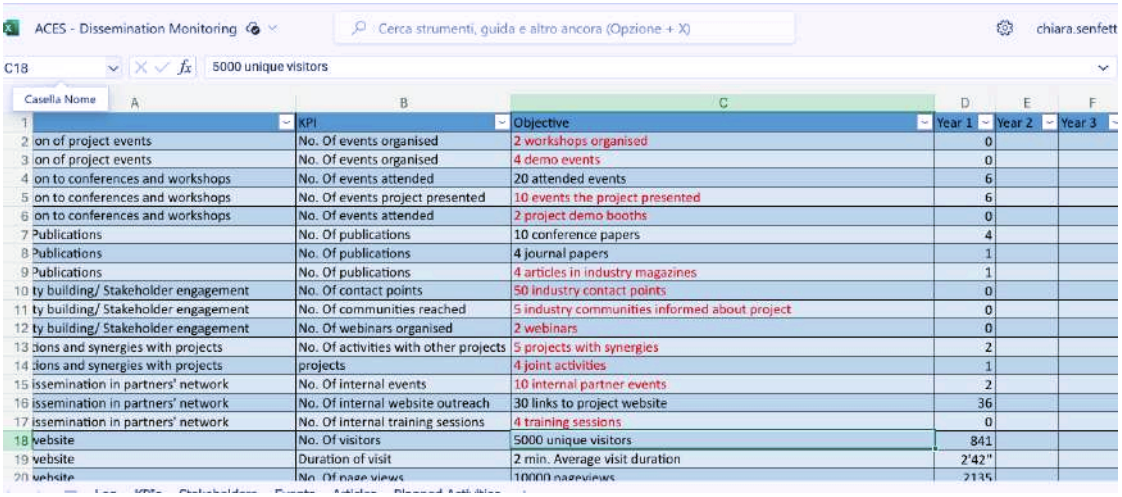
The purpose of creating the timeline of activities as outlined in the table below (M13- M36) is to map the KPIs and match the communication and dissemination activities as indicated within the timeline itself. The timeline will be added to the project repository so everyone inside the consortium is updated regularly about deadlines and deliverables that are necessary. At the same time, the project timeline could be updated relating to the project's progress and its outputs production.

ACTIVITY	KPI	KPI YEAR 1 (ACHIEVED)	KPI YEAR 2 (TARGET)	KPI YEAR 3 (TARGET)	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
Organisation of project events	2 workshops organised	0	1	1																								
Organisation of project events	4 demo events	0	2	2																								
Participation to conferences and	20 attended events	13	4	3																								
Participation to conferences and workshops	10 events the project presented	4	3	3																								
Participation to conferences and workshops	2 project demo booths	0	1	1																								
Scientific Publications	10 conference papers	7	2	1																								
Scientific Publications	4 journal papers	1	1	2																								
Scientific Publications	4 articles in industry magazines	1	1	2																								
Community building/ Stakeholder engagement	50 industry contact points	0	25	25																								
Community building/ Stakeholder engagement	5 industry communities informed about project	0	3	2																								
Community building/ Stakeholder engagement	2 webinars	0	1	1																								
Collaborations and synergies with projects	5 projects with synergies	2	3	2																								
Collaborations and synergies with projects	4 joint activities	1	1	3																								
Internal dissemination in partners' network	10 internal partner events	2	4	4																								
Internal dissemination in partners' network	30 links to project website	36	30	30																								
Internal dissemination in partners' network	4 training sessions	0	2	2																								
Project's website	5000 unique visitors	841	2079	2079																								
Project's website	2 min. Average visit duration	2'42''	2 min. Average visit duration	2 min. Average visit duration																								
Project's website	10000 pageviews	2135	3932	3932																								
Social Media Presence	750 accumulative followers	183	567	567																								
Social Media Presence	1000 accumulative posts	69	284	284																								
Social Media Presence	250 interactions	391	250	250																								
Project's Blog	100 interactions	0	50	50																								
Project's Blog	50 posts	0	25	25																								
Traditional Media	3 press releases	0	1	2																								
Communication Material	9 eNewsletter	0	4	5																								
Communication Material	2 videos	0	1	1																								
Communication Material	5 blog posts in EC mechanisms	0	2	3																								
Communication Material	5 project's factsheets/brochures and banners	4		1																								

Table 9 - Project communication and dissemination timeline

Collaboration with the project's stakeholder panel will be strengthened through more stakeholder engagement activity and ongoing communication. Efforts will also be made to publish and disseminate a new policy brief and organise accompanying events to involve the European policymaking and public administration community.

Every step is monitored in the Aces – Dissemination monitoring tool update in the project's repository. The WP leader will check with WP partners regularly to evaluate if other courses of action are needed in order to reach the KPIs defined in the project's description of the action. During the first two months of 2024, the WP6 leader will organise update meetings on specific focus to share with the consortium the next steps for the main dissemination activities planned in the timeline.



	A	B	C	D	E	F
1		KPI	Objective	Year 1	Year 2	Year 3
2	on of project events	No. Of events organised	2 workshops organised	0		
3	on of project events	No. Of events organised	4 demo events	0		
4	on to conferences and workshops	No. Of events attended	20 attended events	6		
5	on to conferences and workshops	No. Of events project presented	10 events the project presented	6		
6	on to conferences and workshops	No. Of events attended	2 project demo booths	0		
7	Publications	No. Of publications	10 conference papers	4		
8	Publications	No. Of publications	4 journal papers	1		
9	Publications	No. Of publications	4 articles in industry magazines	1		
10	ty building/ Stakeholder engagement	No. Of contact points	50 industry contact points	0		
11	ty building/ Stakeholder engagement	No. Of communities reached	5 industry communities informed about project	0		
12	ty building/ Stakeholder engagement	No. Of webinars organised	2 webinars	0		
13	ions and synergies with projects	No. Of activities with other projects	5 projects with synergies	2		
14	ions and synergies with projects	projects	4 joint activities	1		
15	issemination in partners' network	No. Of internal events	10 internal partner events	2		
16	issemination in partners' network	No. Of internal website outreach	30 links to project website	36		
17	issemination in partners' network	No. Of internal training sessions	4 training sessions	0		
18	vebsite	No. Of visitors	5000 unique visitors	841		
19	vebsite	Duration of visit	2 min. Average visit duration	2'42"		
20	vebsite	No. Of page views	10000 pageviews	2135		

Figure 26 - Aces – Dissemination monitoring tool

7 Conclusions

The first year of the ACES project was focused on the project identity launch, concentrating on effective communication and dissemination addressed to the general public to inform and create awareness about the project topic and the research goal of ACES. The team created results-oriented dissemination materials and started to collaborate with other relevant initiatives and research projects across Europe. The project's partners' participation in events and conferences, as well as efforts to promote it through scientific publications, helped to raise project awareness. The website structure has been updated, made more accessible and oriented to the next year's activity, which is characterised by an increment of the stakeholder's engagement and interaction. Overall, the dissemination and communication efforts during the first year of the project were successful in raising awareness about the project, but the next phases will be determinant to prepare the exploitation activity and reach the planned KPIs as well. The engagement of all partners in triggering action that could facilitate the ACES 'community-building implementation and stakeholder engagement will be fundamental to effectively focus the project's results on the market and its sustainability beyond the project ending.

Annex A - Stakeholders

This annex is a stakeholders list. It includes the name of the stakeholders (first column) and the type, according to the target groups (second column).

Stakeholder	Type
CLEVER	E - Initiatives
MobiSpaces	A - Industry
Smart Manufacturing Industry	A - Industry
Smart Governance and Smart Cities	A - Industry
Gaia-X	E - Initiatives
Digital Europe	A - Industry
EGI	C - Industry
NTT Data	C - Industry
Ericsson	C - Industry
Epsilon Italia	C - Industry
APCO Worldwide	C - Industry
Open Geospatial Consortium	C - Industry
GLACIATION	E - Initiatives
OpenContinuum	E - Initiatives
UNLOCK-CEI	E - Initiatives
INCODE	E-Initiatives
TARDIS	E-Initiatives
FLUIDOS	E-Initiatives
BRAINE	E - Initiatives

KEA Kinetic Edge Alliance	E – Initiatives
OGA Open Grid Alliance	E – Initiatives
GAIA-X	E – Initiatives
DESIGNSCAPES	E - Initiatives
DECIDO	E - Initiatives
ETAPAS	E - Initiatives
ACROSS	E - Initiatives
CPSWARM	E - Initiatives
BugWright2	E - Initiatives
SWILT	E - Initiatives
MESON	E - Initiatives
DAIRO	E - Initiatives
FIWARE	E - Initiatives
ELASTIC	E - Initiatives
5GEMERGE	E - Initiatives
1- SWARM	E - Initiatives
AIgoRNN	E - Initiatives
ASSURED	E - Initiatives
SUPERCLOUD	E - Initiatives
SyNAPSE	E - Initiatives
UPVN	E - Initiatives
NG-STORAGE	E - Initiatives

Table 10 - Stakeholder list

Annex B - Avenues for publication

Name	Type	Audience
IEEE Access	Academic Journal	Scientific community
IEEE Explore	Academic Journal	Scientific community
Swarm Intelligence	Academic Journal	Scientific community
IEEE International Conference on Autonomic Computing and Self-Organizing Systems ACSOS	Conference Proceedings	Scientific community
International Conference on Swarm Intelligence ANTS	Conference Proceedings	Scientific community
BDVA	Industry publication	Industry
ERCIM	Online and offline magasine	Industry
EGOV-CeDEM-ePart	Conference Proceedings	Scientific community
IEEE Euro S&P	Conference Proceedings	Scientific community
ESORCIS	Conference Proceedings	Scientific community
ICIS	Conference Proceedings	Scientific community
ACM SIGCOMM	Conference Proceedings	Scientific community
Usenix NSDI	Conference Proceedings	Scientific community
ACM SOSR	Conference Proceedings	Scientific community
ACM CoNEXT	Conference Proceedings	Scientific community
NATURE	Academic Journal	Scientific community
IEEE Transactions on Cloud and Computing	Academic Journal	Scientific community
ACM	Academic Journal	Scientific community
Springer	Academic Journal	Scientific community
Elsevier	Academic Journal	Scientific community

arXiv	Academic Journal	Scientific community
MIS Quarterly	Academic Journal	Scientific community

Table 11 - Avenues for publication

Annex C - Events

Event name	Event type
Concertation and Consultation on Computing Continuum: From Cloud to Edge to IoT	EC Concertation and Consultation Conference
IEEE International Conference on Autonomic Computing and Self-Organizing Systems ACSOS	Scientific Conference
International Conference on Swarm Intelligence ANTS	Scientific Conference
Data 4 Policy	Summit
Cloud computing and Digital Single Market Roundtable	Roundtable
Forum PA	Conference
Data Week 2024	Workshop
European Big Data Value Forum	Conference
AIWEEK	Conference
DTX	Conference
PoliMi Annual Digital Innovation Report	Conference
Long Night of Research (AUT)	Public event
Research Days (AUT)	Workshop
EGOV-CeDEM-ePart	Scientific Conference
IEEE Euro S&P	Scientific Conference
ESORCIS	Scientific Conference
ICIS	Scientific Conference
SEMIC	Conference

Table 12 – Events

Annex D - Personas

PERSONAS		
Persona 1: Susan Melody George (A & C) – Business partners and customer		
	Name	Susan Melody George
	Age	38 to 55 years old
	Job title	Mid-senior level executive
	Level of education	Master's Degree / MBA
	Social networks	LinkedIn and Twitter
	Keywords	Cloud-to-edge infrastructure, network architecture, data operations, energy-optimisation, latency
Persona 2: Joaquim de Almeida (F) – General public		
	Name	Joaquim de Almeida
	Age	28 to 62 years old
	Job title	Technology and platform user
	Level of education	Bachelor to Master
	Social networks	Twitter, LinkedIn, YouTube, Mastodon
	Keywords	Cloud, edge computing, artificial intelligence applications, state-of-the-art [technology_name], data privacy, data sovereignty
Persona 3: Lotte Verbeek (B & E) – Public or private researchers		
	Name	Lotte Verbeek
	Age	25 to 60 years old
	Job title	Researcher / Innovation manager
	Level of education	Doctorate (e.g. PhD, EdD)
	Social networks	LinkedIn, Twitter, GitHub
	Keywords	Horizon Europe projects, green data operations, semantic interoperability, distributed knowledge graph
Persona 4: Bruno Ganz (D) – Policymakers		
	Name	Bruno Ganz
	Age	42 to 60 years old
	Job title	Policy maker at EU or national level
	Level of education	Doctorate (e.g. PhD, EdD)
	Social networks	Twitter, LinkedIn
	Keywords	Data sovereignty, Green New Deal, European data spaces, European Chips Act, European Interoperability Framework

Table 13 - Personas

Table of figures

Figure 1 - The ACES communication funnel 9
Figure 2 - The 4 phases of Communication and Dissemination Activity 10
Figure 3 - Dissemination plan overview and persona 11
Figure 4 - Dissemination material session 13
Figure 5 - ACES Brochure 15
Figure 6 - ACES Rollup 17
Figure 7 - ACES trifold brochure 18
Figure 8 - ACES flyer 19
Figure 9 - ACES Contacts 19
Figure 10 - Use Case 1 20
Figure 11 - Use Cases 2, 3 20
Figure 12 - Use Case page with the Join Us section and the newsletter subscription form 21
Figure 13 - Visits overview 22
Figure 14 - Audience per geographical location 23
Figure 15 - List of top countries with most users on the website 23
Figure 16 - List of downloads from the website 24
Figure 17 - Page of most visited webpages 24
Figure 18 - Visitors' transition inside the website 25
Figure 19 - Visitors' transition from website inside the website 25
Figure 20 - Visits overview 26
Figure 21 - Visits overview from social networks 27
Figure 22 - ACES's Twitter page 27
Figure 23 - ACES's tweets 28
Figure 24 - ACES's Linkedin profile 28
Figure 25 - ACES's Linkedin posts 29
Figure 26 - Aces – Dissemination monitoring tool 41

Table of tables

Table 1 - ACES scientific material 30
Table 2 – ACES's partners participation events 31
Table 3 - ACES Synergies with other initiatives and projects 31
Table 4 - ACES main dissemination activities foreseen in the Dissemination and Communication Plan 33
Table 5 – Current status of ACES KPI 34
Table 6 - Overview of the activities planned per persona 35
Table 7 - Overview of the activities and related planned tools 36
Table 8 - KPIs Year 2 and 3 39
Table 9 - Project communication and dissemination timeline 41
Table 10 - Stakeholder list 44
Table 11 - Avenues for publication 46
Table 12 – Events 47
Table 13 - Personas 48