Project Title	Artificial Intelligence in Secure PRIvacy-preserving computing coNTinuum
Project Acronym	AI-SPRINT
Project Number	101016577
Type of project	RIA - Research and Innovation action
Topics	ICT-40-2020 - Cloud Computing: towards a smart cloud computing continuum (RIA)
Starting date of Project	01 January 2021
Duration of the project	36 months
Website	www.ai-sprint-project.eu/

D6.1 - Communication, dissemination & stakeholder engagement - 1st report

Work Package	WP6 | Dissemination & impact
Task	T6.1 | Communication, Dissemination, and Stakeholder Engagement
Lead author	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)
Contributors	All partners
Peer reviewers	Giulio Fontana (POLIMI), Patrick Thiem (C&H)
Version	V1.0
Due Date	30/06/2021
Submission Date	30/06/2021

Dissemination Level

X	PU: Public
	CO: Confidential, only for members of the consortium (including the Commission)
	EU-RES. Classified Information: RESTREINT UE (Commission Decision 2005/444/EC)
	EU-CON. Classified Information: CONFIDENTIEL UE (Commission Decision 2005/444/EC)
	EU-SEC. Classified Information: SECRET UE (Commission Decision 2005/444/EC)

AI-Sprint - Artificial Intelligence in Secure PRIvacy-preserving computing coNTinuum, has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no. 101016577.

Versioning History

Revision	Date	Editors	Comments
0.1	05/05/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	ToC
0.2	18/05/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Contributions to section 2
0.3	27/05/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Contributions to section 3
0.4	04/06/2021	All partners	Contributions to section 4 and 5
0.5	11/06/2021	All partners	Contributions to section 4 and 5
0.6	21/06/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Contributions to section 1 and 2 and overall editing of the document.
0.7	23/06/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Final version ready for internal review
0.8	24/06/2021	Giulio Fontana (POLIMI), Patrick Thiem (C&H)	Internal review
0.9	28/06/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Addressing comments from review
0.10	29/06/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Final version ready for submission
1.0	30/06/2021	Niccolò Zazzeri, Stephanie Parker, Rita Giuffrida (Trust-IT)	Final version ready for submission

Glossary of terms

Item	Description
COMPSs	COMP superscalar
CA	Consortium agreement
COMM	Communication
DISS	Dissemination
FaaS	Function as a service
GPGPU	General Purpose Graphics Processing Unit
HPC	High performance computing
KPI	Key Performance Indicator
OSS	Open Source Software
PR	Press Release
QPI	Quality Performance Indicator
T	Task
TEE	Trusted Execution Environment
UX	User Experience
WP	Work Package

Keywords

Cloud Computing; Cloud Infrastructure; Artificial Intelligence; Edge Computing; Computing Continuum; Software Design & Development; Cloud Trust & Security; Privacy;

Disclaimer

Executive Summary

This first AI-SPRINT Communication, Dissemination and Stakeholder Engagement report sets out the strategy for the first 18 months of the project in terms of communicating its goals, outputs and impacts, describing how it is sharing its results and building a community.

In terms of planning, it defines specific actions and measures for all activities related to community building and practical assets key to ensuring the proper visibility of AI-SPRINT as a research and innovation action aimed at underpinning the project's exploitation and sustainability path.

The report also outlines AI-SPRINT stakeholder groups and targeted engagement activities with a roadmap for the first 18 months of the project. It lays the foundations for future actions in two further documents (D6.4 in M18 and D6.8 in M36), which will report on impacts and achievements and update plans with an increasing focus on the go-to-market strategy and thus closely aligned with the exploitation and sustainability of AI-SPRINT.

It shows how activities will be monitored through pre-defined KPIs coupled with qualitative assessments. It also provides a concise report on current achievements, upcoming synergies and knowledge sharing, as well as engagement roadmaps for the targeted stakeholders.

The Communication, Dissemination and Stakeholder Engagement plan is designed as a coordinated, joint effort by all partners. Every partner will contribute to the actions foreseen in the communication plan, in proportion to effort assigned, knowledge and skills.

It is the first such report with the next versions coming in June 2022 and December 2023, which will increasingly focus on the go-to-market strategy for AI-SPRINT.

Table of Contents

List of Figures

List of Tables

1. Strategic vision

D6.1, Communications, Dissemination and Stakeholder Engagement, 1st Report is coordinated under WP6, Dissemination and Impact. It defines the strategy and plans for communication, dissemination and stakeholder engagement (WP6, "Dissemination and impact") over an 18-month period, from January 2021 – June 2022. It includes a drill-down on the stakeholder groups and channels that will be utilised to reach and inform them about AI-SPRINT over this timeframe.

The strategy defines the goals and focus of AI-SPRINT communications, dissemination and stakeholder, setting out measures for impact assessment through KPIs and qualitative metrics, while the plan (aka roadmap) outlines the "when, how and to whom". Both are part of a cross-consortium effort aimed at maximising impacts by drawing on complementary skills, knowledge and areas of experts.

D6.1is the first of 3 iterations of the strategy and planning for communication, dissemination and stakeholder engagement activities of AI-SPRINT, with the next versions coming in June 2022 (D6.4) and December 2023 (D6.8), which will increasingly focus on the go-to-market strategy as the project's results reaches higher levels of maturity and with a view to underpinning exploitation and sustainability. Future reports will also give detailed reports on impacts and achievements as the basis for the iterative versions of the plans, drawing on the outcomes and findings of:

- Task 6.2: Standards and open source collaborations and clustering (M3-36).
- Task 6.3: Market analysis and forecasting (M8-30).
- Task 6.4: Exploitation, Business Models and Sustainability (M12-36).
- Task 6.5: Rollout of the AI-SPRINT Alliance and Adopter Acceleration Club (M19-36).

The strategy and planning are aligned with the AI-SPRINT Plan for the Exploitation and Dissemination of Results (PEDR), which is underpinned by the strategy defined herein as the first major step in implementing the PEDR for the period M1-M18, coinciding with the launch of the initial communication, dissemination and engagement activities as reported in this document, the first media activities with the clustering and collaborations starting in March 2021 and the first market insights in August 2021.

Figure 1.1 – Communications and PEDR timelines

1.1 Scope of the document

This document responds to the following goals:

- Ensuring coordinated, regular communication of AI-SPRINT progress and main outcomes to improve the project's visibility.
- Widely broadcasting AI-SPRINT across all relevant stakeholder groups identified.
- Coordinating the dissemination of results through technical/business venues, monitoring impacts achieved.
- Establishing and reporting on synergies with peer projects and relevant initiatives to maximise the AI-SPRINT outreach.
- Regularly monitoring the impact of each activity and adjust the strategy based on both quantitative and qualitative metrics.
- Paving the way toward future exploitation of results and sustainability.

This document is a direct outcome of T6.1 "Communication, Dissemination and Stakeholder Engagement" while also drawing on the initial outcomes of T6.2 "Standards and Open Source Collaborations and Clustering", with impact monitoring will pave the way for the updated plan in month 18 and then in month 36. These updated plans will therefore be aligned with D6.3 and D6.9, the two iterations of the Exploitation Plans and Business Models in month 18 (June 2022) and month 36 (December 2023), respectively.

1.2 Document structure

The rest of this document is structured as follows:

- **Section 2**: focuses on AI-SPRINT exploitable assets and targeted stakeholders as the starting point for the strategy and plan.
- **Section 3**: defines the strategy for communication, dissemination and engagement activities.
- **Section 4**: sets out the actual plan that AI-SPRINT will be putting in place over the period July 2021 to June 2022.
- **Section 5**: summarises the progress on activities and the achievements up to June 2021.
- **Section 5**: draws the main conclusions and summarises the next steps.

2. AI-SPRINT Assets and Stakeholders

WP6 is inextricably linked to the AI-SPRINT outputs as shown in the figure below, spanning assets, business innovations, sustainability and exploitation, dissemination, end-users and stakeholders, Open Source Software clustering and standardisation, market insights, channels for engagement.

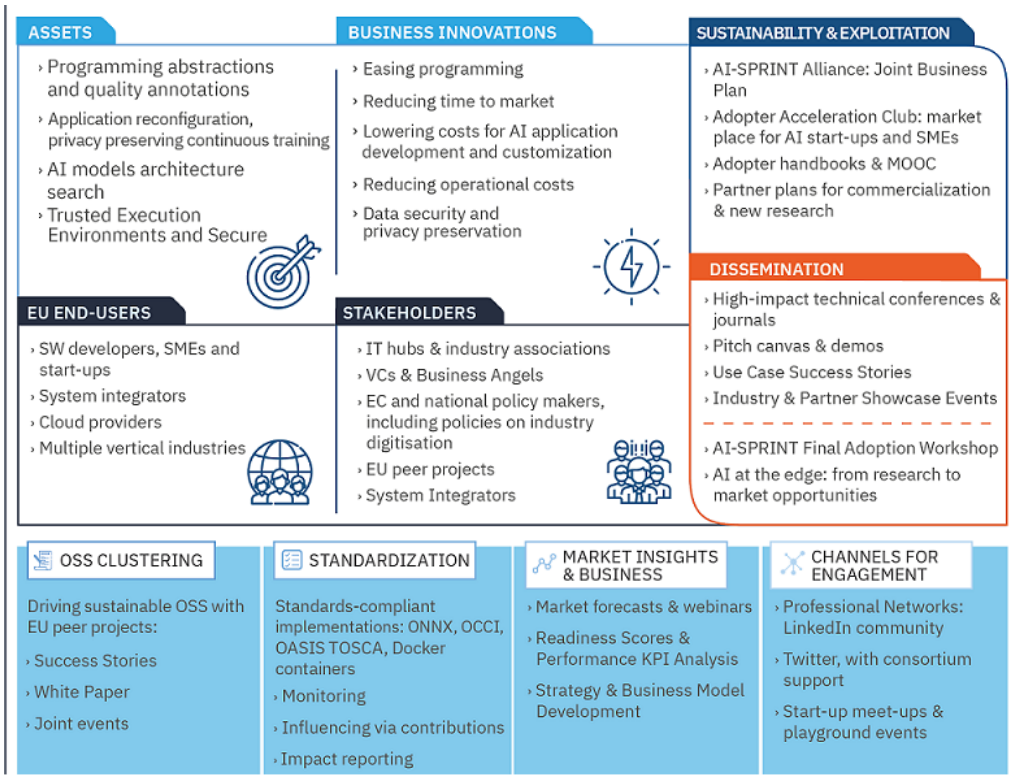


Figure 2.1– AI-SPRINT main outputs

2.1 Innovations and Exploitable Results

The main innovations and key exploitable results (KERs) of AI-SPRINT are:

- A framework for developing AI applications in the computing continuum (data centres, private cloud, public cloud, hybrid cloud, edge) and high-performance computing. The framework will enable a finely-tuned trade-off in terms of end-to-end latency and throughput, AI model accuracy, privacy and security guarantees.
    - Simplified programming models lowering today's steep learning curves for developing AI software in the computing continuum.
    - Highly specialised building blocks for distributed training, privacy preservation and advanced machine learning models, shortening time-to-market for AI applications.
    - Automated deployment and dynamic reconfiguration to lower the cost of operating AI software.
- AI-SPRINT tools will enable users to integrate security and privacy early in the design stage and seamlessly manage time varying conditions typical in real environments.
- Users of AI systems, software developers, system integrators and cloud providers will be able to benefit from the following assets and features from AI-SPRINT.

AI-SPRINT Asset and Features	Overview and Expected innovations	Technology Maturity Level (TRL) at M36
Design and programming abstractions	Extending COMPSs (COMP superscalar) task annotation. Using performance parameters when assigning tasks to computing continuum resources. Using security and privacy annotations for data allocation and processing. Defining applications with a FaaS model. **Innovations and Impacts**: ● An advanced programming environment for applications distributed across the computing continuum. ● Enabling developers and system integrators to shorten time to market towards business-critical applications needing performance engineering.	6
Performance models	Offering machine learning methods and experiment design. Predicting AI application component performance in diverse configurations and deployment settings at the full computing continuum stack. **Innovations and Impacts**: ● Supporting early analysis and reasoning on the performance aspects of the final application. ● Optimising the matching between the target deployment and application component characteristics.	5
AI models architecture search	Performance estimation as a driver of search process. Automating the search of the most accurate deep network compliant with QoS constraints. Integrating architecture search with cloud-edge model partitioning. Performance becomes optimisation criteria. **Innovations and Impacts**: ● Making deep learning easier and faster to use and train better networks. ● Engineering the development of novel AI applications using the AI-SPRINT architecture with solutions for adding constraints on the forward pass or training time of the network or the security/privacy of data processed in production.	5
Applications design space exploration	Exploring automatic multiple candidate deployments for application components. Focusing on optimal initial deployment. Defining algorithms to quickly find good designs given QoS constraints.	5

	Innovations and Impacts: ● Defining next-generation tools for optimising placement of cloud and edge application components that allow reasoning about performance, costs and security of AI software systems. ● Enabling quality reasoning at higher level of abstraction.	
Continuous deployment	Integrating deployment and production scenarios. Automating the management of testing and releases tailored to AI applications. Allowing users to manage the diversity of devices and tools on the continuum. Dealing with software versioning and AI models. **Innovations and impacts**: ● Tools accelerating deployment and configuration of AI applications, shortening the cycles in-between software refactoring and bug-fixing. ● Overcoming the pain point for developers and system integrators without having to learn specific technologies for different cloud providers and edge technology. ● Simplifying deployment with no cloud provider lock-in and high-level TOSCA descriptions so developers and system integrators can focus on product development.	6
Programming framework runtime	Reacting to node failures on the full cloud-edge stack. Function as a service execution paradigm by extending runtime. Getting optimal placement and resource allocation for application components based on actual load and system configuration. Coping with the limited capacity on the edge layer. **Innovations and impacts**: ● Automatically parallelising and scheduling tasks based on constraints and performance parameters defined at design time. ● Optimising computing continuum resource use: ○ A monitoring framework spanning cloud and edge resources, application layer. ● A runtime framework triggering adaptation to guarantee adequate performance levels are met, also for the FaaS paradigm. Savings from reduced application downtime, SLA violations and cloud operation and/or energy costs from optimal resource management.	6
Privacy preserving continuous training	Offering runtime instruments for model drift detection and seamless retraining/updates. Novel solutions for federated learning at the edge, preserving privacy and reacting to changes in monitored processes. **Innovations and impacts**:	5

	• Developing techniques for model drift detection for any changes in the deployment environment. Automatically triggering model retraining procedures at the edge. • Federated learning techniques handling retraining in all cases where latency, bandwidth and privacy require training at the edge with seamless handling of model integration at the cloud level.	
Scheduling for accelerator devices	Sharing GPGPUs in cloud-based environments to maximise use and ease of programming models. Ensuring elasticity at GPGPU level, also through disaggregated hardware technologies. Optimal schedule and GPU number for multiple jobs with upper bounds on training time. **Innovations and impacts**: • A dedicated connection to cloud-based central services as a baseline for performance measurements. • GPU as a Service, leveraging rCUDA to build up scalable processing resources for multi-tenancy through virtualisation and scale up accordingly. • Tuning up the distributed processing in AI applications to these models, benchmarking diverse approaches, with an FaaS model on top of virtualised GPUs. • Lightweight rCUDA clients for edge devices for compatibility, assessing performance and penalties enabling dynamic reconfiguration.	5
Trusted execution Environments	Protecting the confidentiality and integrity of code and data even in environments where adversaries have root and hardware access. **Innovations and impacts**: • Using TEEs to ensure secure data processing in the computing continuum, where the framework allows running of legacy applications in TEEs without source code modification and need for extra developer effort. • Framework maximising application portability by supporting TEEs of diverse CPU architectures and vendors including GPUs. Attestation mechanisms and patch management for integrity. • Using secure boot mechanisms for correct OS booting.	6
Secure networks	Deploying traffic paths taking into account security policies, traffic isolation requirements and the security capabilities of network nodes. **Innovations and impacts**: • Using programmable data planes for efficient traffic isolation on heterogeneous devices in a uniform and simple way with a component translating security policies in network configuration rules. • Component deploying programmes that enforce such rules using any programmable hardware and security mechanisms at the nodes.	5

	• Tool checking if the deployed configurations meet security policies.	

Table 2.1 – AI-SPRINT Assets and Business Innovations

Templates will be created on each asset focusing on the IT pain points, value proposition, end-users targeted, the maturity levels, competitors and differentiators, feeding into D6.3 and D6.9, which in turn will shape the marketing activities and core message creation in in D6.4 and D6.8 around project maturity.

Sustainable assets

The AI-SPRINT business model relies on industry adoption as part of its exploitation strategy. Hence it plans to roll out two sustainable assets during its funding life cycle, namely the AI-SPRINT Alliance and the Adopters Accelerator Club (A^3C). Both will become fully operational through the implementation of a joint business plan.

- **AI-SPRINT Alliance**: Created for small SW houses and EU cloud providers services. Providers will be able to offer advanced solutions for designing and operating AI applications by having access to novel tools for AI application developments, secure execution, easy deployment and runtime management that AI-SPRINT will develop .
- **AI-SPRINT A^3C**: Tailored to end-users that want to use the design tools and runtime environment to rollout advanced design solutions hosted in their platform, extend their application deployment and resource management from their internal cloud to edge servers and AI-enabled sensors or end-user devices, optimising the seamless execution of application across the computing continuum with minimised energy consumption.

Both will have their own branding complementary to AI-SPRINT and dedicated sections on the website. Community development especially in terms of recruiting leads from each targeted group will be a primary goal by creating links with the European Digital Innovation Hubs and business angels to ease connections between the demand and supply sides. An important lever will be the promotion of funding opportunities for AI start-ups across the AI-SPRINT network and through press releases.

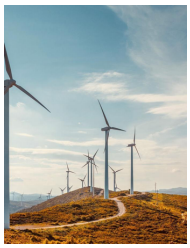
2.2 Use Cases: Industry verticals

AI-SPRINT advances are tested against three use cases: Personalised healthcare, maintenance and inspection, Farming 4.0, which will help demonstrate benefits potentially applicable to other industry verticals while showcasing the business, societal and environmental impacts.

Personalised healthcare - Testing AI-SPRINT technology on personalised stroke risk assessment and prevention with enhanced AI models. Using wearable and mobile devices to capture new insights on patient care powered by AI, with the smart allocation of the workload between cloud and edge. This use case implements the COMPSs programming models and machine learning developments. It also uses the cloud-edge environment as an effective framework for impactful clinical applications for stroke prevention. AI-SPRINT will deliver the benefits of incorporating wearable technology into healthcare, such as continuous data acquisition and low patient burden while ensuring the protection of sensitive data and healthcare risk forecasting models.

The drivers for AI-SPRINT are enhancing BSC's high-performance data analytics frameworks in edge-to-cloud platforms to manage distribution and parallelism across resources while ensuring the protection of sensitive data and healthcare risk forecasting models.

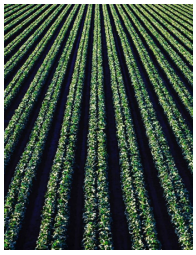
- **End-users**: Foundation Freno al Ictus, a non-profit organisation with the mission of overcoming the personal, family and social impacts of stroke-related illness.
- **Expected business impacts:** Using artificial intelligence to improve patient monitoring, enhancing patient care, reducing human error and better managing patient flow.
- **Expected social and environmental impacts:** Contributing to the United Nations Sustainable Development Goal 3 on "ensuring healthy lives and promoting well-being for all ages", including life expectancy and helping to save lives.



Maintenance and Inspection of wind turbines using AI models for detecting damage by collecting images from drones during their flight path and sending them to the edge-cloud channel for analysis. AI-SPRINT will accelerate inspection time by drastically reducing the time spent by operators to analyse damage or maintenance requirements and reducing human error. The solution will also enable lighter data pattern recognition routines and increase the reliability of windmill plants.

End-users: Air Fusion brings innovations to inspection and maintenance by transforming the infrastructure inspection sector with is proprietary AI-machine learning for automated damage detection, classification and change detection.

- **Business impacts:** Significantly improving the efficiency of AI models across the entire damage-identification workflow. Taking to market novel AI-enabled products, spanning telco towers, power transmission lines, gas pipelines and using distributed computations from cloud to edge.
- **Environmental and industrial impacts:** Reducing the environmental effects caused by malfunctioning wind power stations. Significantly contributing to energy efficiency and environmental sustainability. Contributing to the UN's Sustainable Development 9 on industry, innovation and infrastructure.



Farming 4.0 - Using edge and smart sensors to optimise phytosanitary treatments in vineyards. As agriculture increasingly embraces the digital revolution, artificial intelligence will improve processes and production systems. AI-SPRINT will develop novel models for phytosanitary product optimisation. These new AI models, which have never been used before in farming, will collect data from sensors deployed on grape harvesting machines and command the sprayer system of the machine to adapt the quantity of product to the actual need of the individual plant. Important impacts will come from optimising the use of chemical products and thereby lowering pollution levels and soil contamination, as well as reducing the overall quantity of phytosanitary products deployed. The technology developed by AI-SPRINT for this use case is expected to be applicable/adaptable also to other agricultural applications.

- **End-users:** Gregoire, a company that manufactures harvesting machines and sprayers with a world-leading position in the viticulture sector. AI-SPRINT will increase know-how and further strengthen the company's position in vineyard technology.
- **Environmental impacts:** develop novel models for phytosanitary product optimization, never exploited so far in the farming field, continuously adapting models for phytosanitary use based on the data gathered on the field.

2.3 Stakeholders

AI-SPRINT targets diverse stakeholders. Primary stakeholders relate to the market uptake of AI-SPRINT, i.e., through commercialisation opportunities and open source initiatives. They are therefore highly relevant as members of the Alliance and A3C.

Secondary stakeholders include peer projects for joint dissemination and EU policymakers. Tertiary stakeholders are associations serving as multipliers and advocates across the business community, industry verticals, digital innovation hubs and business angels. Tertiary stakeholders are primarily targeted to help scale out over time.

The specific benefits for each stakeholder type are summarised below.

European SME Software Houses and AI-application Developers: AI-SPRINT will enable this group to design and develop new AI applications with novel features like distributed inference and learning-as-a-service. Small businesses will be able to balance accuracy and privacy constraints, e.g. local/national and legal requirements while guaranteeing performance all the way from IoT to the cloud.

European System Integrators: Secure execution of AI models inference in production environments, multi-cloud support and resilient execution means system integrators can offer customers reduced time to deployment, lower latencies and integrated privacy and security. System integrators will be able to use AI-SPRINT OSS tools as innovative solutions with AI and edge computing and multi-cloud support for competitive edge. By integrating AI-SPRINT technology components, they will be able to offer new services to customers, potentially also with new technology functionalities.

European Cloud Providers: Using AI-SPRINT technology, European cloud providers will be able to expand their cloud offer, expand resource management to the edge and PaaS solutions for AI applications. AI-SPRINT is therefore an opportunity for providers to create a market entry points and gain competitive edge for AI cloud.

EU Digital Innovation Hubs, Venture Capitalists and Business Angels: AI-SPRINT can tap into uptake potential across diverse industry verticals, exploring investments not only in Europe but also in Africa, Asia and the USA through partner customer bases. Specifically, DIHs[1] are targeted because of their close links to start-ups and SMEs, with mechanisms to enable them to "test new technology solutions before they invest in them". Other ways to leverage growing markets is through VCs and business angels, including the European Association of Business Angels and by scouting investment opportunities, both in the private and public sphere.

European Peer Projects and Policy Makers: AI-SPRINT pursues all relevant opportunities to cluster and collaborate with peer projects and coordination and support actions with a view to boosting impacts from joint dissemination and the sharing of knowledge. Collaborations span joint events (virtual, physical, hybrid), joint papers and policy briefs, impact reports on OSS re-use, sharing of common/complementary results and exploring opportunities to fill standards gaps.

[1] https://ai-dih-network.eu/.

3. Communication Dissemination and Stakeholder Engagement Strategy

The AI-SPRINT strategy will take into account the official European Commission's guidelines[2] to distinguish between communication, dissemination and engagement.

The main purpose of the **communication activities** is to promote the project and make the research activities known to multiple audiences, beyond the project's own community in a way that they can be understood by non-specialists.

Typical communication activities and channels include visual and branding, the project website, promotional materials such as brochures, rollup and flyers, social media, videos, press releases, etc.

Communication activities can be carried out from the very beginning of the project until its end.

The main purpose of **dissemination activities** is to make the project's results public focusing on specific target groups that are potential users of the research results. This is not limited to industry players but also includes the scientific community, policy makers, etc.

Typical dissemination activities include peer-reviewed publications, presentations at scientific conferences, practical demonstrations, etc.

Dissemination activities can be carried out as soon as the project has produced significant results.

The main purpose of **engagement activities** is to build a consolidated network of relevant stakeholders coming from industry, research but also establishing synergies with peer projects and relevant initiatives.

Typical engagement activities include participation in third-party events, workshops and webinar organisation etc.

The AI-SPRINT Communication, Dissemination and Stakeholder Engagement Plan also underpins and pave the way toward the Plan for Exploitation and Dissemination of Results (PEDR) adopting a multi-phase approach aligned with developments and innovations across a 36-month timeframe:

1) technological innovations with a toolchain for enhanced AI applications in a trusted execution environment;
2) business innovations with reduced time to market; and
3) joint and individual exploitation plans, business models and paths to sustainability as well as collaboration with peer projects.

3.1 Communication Strategy

AI-SPRINT executes a coordinated, all-partner 36-month communication strategy defined under WP6, covering:

- AI-SPRINT branding: visual identity and reputation-building.
- UX web platform design, rollout and evolution with SEO-based and content rich.

[2] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/faq;keywords=/933

- Community building, primarily via LinkedIn as a tried and tested professional network with informative and SMART campaigns on Twitter.
- Stakeholder engagement through event planning, promotion and impact tracking. Events are virtual, physical and hybrid.
- Communications and marketing packages, including video pills.
- Regular KPI-driven impact assessment coupled with quality checks to ensure measures strongly and effectively support the AI-SPRINT PEDR and sustainability strategy.

These elements form the basis of the AI-SPRINT communications toolkit and its evolution over the project's R&I phases.

3.2 Dissemination Strategy

To support its goals and support the further exploitation of key results, AI-SPRINT will use different channels in order to orchestrate a proper dissemination strategy to effectively:

- Transferring knowledge and results produced by AI-SPRINT to stakeholders that can best make use of them.
- Raising awareness and openly demonstrating clear economic, social, and technological benefits of utilizing AI-SPRINT solutions within the AI market.
- Maximizing the impact of research, enabling the value of results to be potentially wider than the original focus.

In order to properly achieve the above objectives AI-SPRINT will disseminate its results through different channels as highlighted in Section 4.2.

3.3 Stakeholder Engagement

Specific engagement activities will be carried out in order to maximise AI-SPRINT impacts by building on an existing network around the cloud-edge continuum ecosystem and carrying out regular campaigns aimed at raising awareness about the project, its innovations and benefits.

The main stakeholder engagement activities will revolve around event planning, promotion and impact tracking, highlighted in Section 4.3. WP6 will be also responsible for defining, and implementing a database of all the relevant stakeholders which will support T6.2 "Standards and Open Source Collaborations and Clustering" as well as paving the way toward the sustainability path through the creation of the AI-SPRINT Alliance.

4. Communication Dissemination and Stakeholder Engagement Plan

4.1 Channels for Communication and Stakeholder Engagement

AI-SPRINT will use various communication channels leveraging on the project partner networks and will produce a set of tailored communication formats targeting different stakeholder groups. The consortium can count on extensive expertise and experience in creating a communication kit with diverse formats and extend the strong network by reaching out to a broad range of stakeholders, media, professional and social channels.

The main channels that will be utilised in AI-SPRINT.eu are:

- Social Media and Professional Networks
- Website
- Press Releases
- Videos
- Newsletters
- Events, workshops and technical conferences
- Webinars and Podcasts
- Traditional media

WP6 will ensure all necessary elements are carefully and strategically coordinated so both communication and dissemination can move seamlessly across stakeholder groups and across national borders, including multi-stakeholder engagement, EU and international perspectives.

The following sections give a short description of each channel and how it relates to the AI-SPRINT strategy.

4.1.1 Social Media and Professional Networks

In order to implement a multi-stakeholder engagement plan, AI-SPRINT is going to target primary stakeholders through social media channels and during events (both organised by AI-SPRINT and external).

The social media channels are an instant form of communication with community members and potentially interested people or organisations who do not belong to the AI-SPRINT consortium. Social media channels help ensure continual visibility of the project's efforts to targeted stakeholders like webinars, workshops or general events and announcements. The overall design and promotion of AI-SPRINT stakeholder engagement is to strengthen through three main channels of communication: Twitter, LinkedIn and YouTube.

- **Twitter** provides news and brief real-time information. AI-SPRINT uses this channel for posting instantaneous updates and advertising upcoming AI-SPRINT activities. Twitter cards are going to be highly exploited to increase the stakeholder engagement. These graphic materials are a way to give a human face to the project, show who are the people behind and say something relevant with the words of the partners. Showing who are the AI-SPRINT partners is crucial, especially during the social distance caused by COVID-19.

- **LinkedIn** is the most recognised social media channel for building professional networking. It is the ideal channel to share regular updates, promote events, engage with members and expand the community. PPC campaigns and twitter cards will be developed for this purpose.

- **YouTube** is the most popular web platform for video sharing. AI-SPRINT has created its own channel to post videos and webinar recordings about the project itself. The videos are posted on the AI-SPRINT website and social media channels to increase the number of visualisation and engagement with the community.

AI-SPRINT aims to run SMART campaigns to promote the project events. SMART campaigns are specific, measurable, achievable, realistic and time bound. The campaigns aim to promote press releases, webinars, workshops to maximise the impact of the item promoted. A campaign that follows these criteria has specific launch, mid-term and end dates to monitor the performances.
Over the course of the project lifespan, AI-SPRINT is planning to follow the SMART principles to better engage with its stakeholders and promote future events.

4.1.2 Website Development and UX

The AI-SPRINT website (https://www.ai-sprint-project.eu/) acts as one of the main channels for communication and engagement with the community. The website is GDPR compliant and is regularly updated.

The website serves as a timely and constantly updated repository of trustworthy sources of information linked to the project achievements: an easily accessible gateway where each section aims to respond to specific requests of the users. The website also needs to ensure a pleasant UX (User Experience) by increasing its visual appeal, sense of professionalism, usability and brand value. Following these principles, the website is built taking into consideration all interaction aspects between the AI-SPRINT stakeholders, the project objectives and main outputs.

The first version of the website, based on Drupal 8, was delivered in January 2021 and presented during the kick-off meeting. The first version was formed by a landing page, which included the main objectives of the project and its partners.

AI-SPRINT is planning to produce compelling messages that leverage on press and media partners networks and communication experts with copywriting skills. All the outcomes will be distributed on major media channels and on the website. Operational activities for the Marketing campaigns will include:

- Press Release
- Newsletter
- Promotional Material and Info-graphics
- Videos

Operational activities for each Marketing campaign will be further evaluated on a case-by-case basis.

4.1.3 Press Releases

The Press Release (PR) is one of the main communication channels used to provide information, through official statements, about the main AI-SPRINT achievements. For this reason, Press Releases are going to be prepared in conjunction with the main project milestones to ensure timely communication of the project progress. In support of AI-SPRINT awareness raising and visibility, the PRs are going to be published on the AI-SPRINT and project partners websites and promoted on a series of press and media channels which publish news linked to technology, artificial intelligence, cloud computing (the full list is available in the Annex 1).

Moreover, the Press Releases are translated in different languages (in general the ones spoken by the AI-SPRINT project partners) in order to disseminate their message to a wider audience.

4.1.4 Videos

According to Facebook data, videos are an important way to engage with the stakeholders as they generate more than 135% organic reach than a picture on social media channels[3].

Videos are composed of images and audio and the union of these two aspects makes the video content more accessible and easier to understand. Thanks to this, videos represent an extremely useful instrument to engage with relevant stakeholders.

A series of videos are going to be produced to promote AI-SPRINT, including:

- A general video about the project objectives.
- A video made of stock footage and remote digital interviews of the consortium members.
- A general video to promote the AI-SPRINT Alliance.

The videos released, including webinar recordings, are going to be published on the AI-SPRINT YouTube channel and promoted on the project's social media channels.

In order to increase the number of their visualisations, Pay-Per-Click Campaigns (PPC) are going to be launched. PPC Campaigns are an excellent paid tool that works on keywords and offers the possibility to show the videos to potential stakeholders who search online for the keywords selected for the campaign. In addition, the campaigns are called Pay Per Click because the company pays only when a user clicks on the announcement.

The benefits offered by PPC campaigns are linked to the opportunity to sponsor the advertisements only to selected target customers and, as a consequence, the costs can be reduced. The targeting can be optimised by including relevant keywords, the topic of the video, demographic and interests of the audience.

4.1.5 Newsletters

Newsletters can serve a number of purposes. They can create or increase awareness, provide basic information such as details of upcoming events and insights from the past ones, or create a sense of stability and commitment for the project by sharing its achievements and relevant messages to the stakeholder's community.

AI-SPRINT has developed a branded newsletter to make it user friendly and entice the readers.

In the period M1-M6, a newsletter has been shared with the AI-SPRINT community to promote the Energy reduction for AI loads webinar, as shown in the figure below.

[3] https://influencermarketinghub.com/social-media-video-specs/

Table 4.1 – Screenshot of the AI-SPRINT newsletter

The plan foresees up to six newsletters in the period M7-18. Upcoming events and project achievements are the topics that are going to be shared through this means of communication.

The community counts 101 subscribers by June 2021. The plan to increase the number considers to:

- Include a section on the website's landing page that invites the visitors to sign up for the newsletter, which has been already included from M4.

- Include the possibility of subscribing to the AI-SPRINT newsletter in all the events registration forms.
- Publish posts on Twitter and LinkedIn that encourage the social media followers to subscribe to the newsletter.

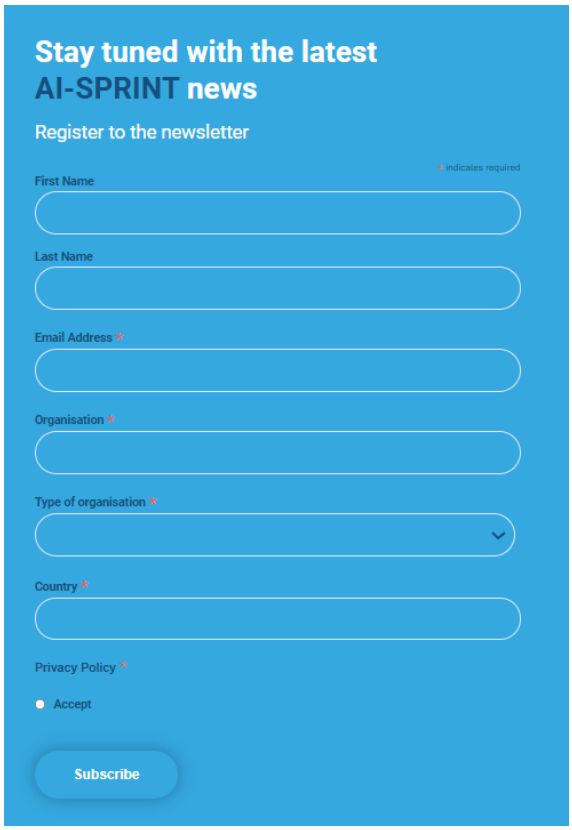


Table 4.2 – Newsletter subscription section on the AI-SPRINT website

4.2 Channels for Dissemination of Results

AI-SPRINT dissemination strategy aims at two main objectives:

- making the knowledge developed throughout the project available to the widest audience
- supporting the uptake and exploitation of results towards key stakeholder groups

In order to reach research community, industry, commercial actors, professional organisations, policy makers, and other European projects the following steps are going to be adopted:

- Timely publication of project results on the AI-SPRINT website, where a specific section will be reserved for gathering all the public deliverables, and an open access repository;
- Timely publication of technical components, learning tools and any contents produced during the project;
- Dissemination to stakeholders directly at live events organised by AI-SPRINT where the project's results feed into workshops, demo sessions and networking events, and enable stakeholders to make use of the project results in practice and uptake them for later use;
- Dissemination to stakeholders during third-party workshops, conferences and events, and via articles in peer reviewed publications and sector-specific magazines and journals.

4.2.1 Technical Conferences and Workshops

In the RIA context, such events, often linked to event proceedings or peer-reviewed papers, are a small but important means to confirm results and enhance the reputation of contributing authors in the field. A preliminary list of conferences identified suitable for submission of proceedings and peer-reviewed papers can be found in section 4.3.2.

Other events are selected based on alignment with event calendars and AI-SPRINT proven results/findings, according to the specific objectives that AI-SPRINT dissemination strategy revolve around:

Objective	Activities	Sample of events/workshops	Timeline
Widely broadcasting AI-SPRINT at top-notch scientific venues as the basis for reputation-building within the developer community	Presentations, peer-reviewed paper submission, technical posters	IEEE Cloud,IEEE EdgeCom,IEEE NFV-SDN,IROS, ACM SOCC, TOCS,ComNet,SRDS	M1-M36
Showcasing mature results at international trade fairs, industry and B2B events, start-up playgrounds, including virtual events.	Market-focused demos, adoption info and marketing packages for endusers	GITEX, DataCenterWorld, CloudExpo, CloudFest, European Conference on AI, AI & Big Data Expo, AI Summit, European Big Data Value Forum	M23-M36

Table 4.3 - Rationale of conference and workshop participation and preliminary list

4.2.2 Papers and publications

The scientific contribution of AI-SPRINT will produce several technical publications which will be presented in different kinds of conferences and will be further utilised for dissemination. Resulting publications are tracked through WP6 in sync with the project coordinator.

A preliminary list of conferences where such contributions can be presented has been planned with the consortium partners:

Conference	Date
IEEE Cloud https://conferences.computer.org/cloud/2021/	05-10.09.2021
IEEE EdgeCom http://www.cloud-conf.net/cscloud/2021/ssc/index.html	26-28.06.2021
IEEE NFV-SDN https://nfvsdn2021.ieee-nfvsdn.org/	09-11.11.2021
IROS https://www.iros2021.org/	27.09-01.10.2021
ACM SOCC http://acmsocc.org/2021 /	01-03.11.2021
TOCS http://www.ictocs.com/	10-11.12.2021
ComNet http://www.commnet-conf.org/	03-05.12.2021
SRDS https://srds-conference.org/	20-23.09.2021
MLDM http://www.mldm.de/	18-22.07.2021
IntelliSys https://saiconference.com/IntelliSys	02-03.09.2021
IEEE ICC 2022 https://icc2022.ieee-icc.org/	16-20.05.2022
IEEE DSN https://dsn2021.ntu.edu.tw/	21-24.06.2021
OSDI 2021 https://www.usenix.org/conference/osdi21	14-16.07.2021
SOSP 2021 https://sosp2021.mpi-sws.org/	25-28.10.2021
IEEE InfoCom https://infocom2021.ieee-infocom.org/	10-13.05.2021
ACM SOCC http://acmsocc.org/2021/	01-03.11.2021
ICDCS 2021 https://icdcs2021.us/	07-10.07.2021
Middleware 2021 https://middleware-conf.github.io/2021/	06-10.12.2021

Table 4.4 - Preliminary list of targeted conferences

The AI-SPRINT Consortium is committed to open data repositories and journals. The project is planning to use Zenodo[4], a joint repository that is part of the OpenAIRE service operated by the EC. In addition to this, individual partners will also use repositories available at their respective institutions to enhance the dissemination of the scientific publications. Where possible, gold open access options will be targeted, in which the publisher makes the publication available as open access or will target green open access options through self-archive by making publications available in an online repository after publication (a suitable budget has been allocated for gold open access). AI-SPRINT will also make available all the experimental data, including application logs and training data sets, thereby ensuring its reproducibility and sharing of research results.

4.3 Stakeholder Engagement

The main purpose of engagement activities is to build a consolidated network of relevant stakeholders coming from industry and research but also establishing synergies with peer projects and relevant initiatives.

[4] https://www.zenodo.org/

AI-SPRINT will pursue its multi-stakeholder engagement strategy through community building, event organisation and participation, webinars and analysing and profiling of its community members.

4.3.1 AI-SPRINT Webinars and Podcasts

Webinars and podcasts are two useful instruments that support the AI-SPRINT team to continuously monitor impacts in terms of stakeholder engagement and dissemination of results.

Webinars are central to enable a smooth transition from physical events to virtual events and offer the chance of presenting cutting-edge and crucial results of the AI-SPRINT project.

The main strategic goals of the webinars are linked to the promotion of the AI-SPRINT objectives, its thematic use cases (personalised healthcare, maintenance and inspection, and farming 4.0) and the Alliance.

Promotional, outreach and dissemination activities spanning through the pre- and post-webinars are going to be implemented for all the events:

- Creation of standardised and branded graphics;
- Set-up of a dedicated registration page on the AI-SPRINT website;
- Tailored email campaign to reach out relevant stakeholders;
- Social media regular activity;
- Live tweeting during the event;
- Upload and release of the recorded webinar and speakers' presentations on the AI-SPRINT website;
- Post-event "thank you message" addressing the participants;
- Post-webinar report published on the website;
- Repurpose of the content on the social media in the following weeks.

Podcasts are a means of communication which is becoming very popular thanks to the growth in the number of podcast choices and low-cost entry. Their popularity is also linked to the fact that they allow for "multitasking": indeed, people can work on different tasks while listening to a podcast, resulting in a higher level of flexibility. Podcasts are also very well suited to making concepts accessible to newcomers and general public. The more relaxed and informal format likens them to fireside chats, albeit in virtual format. Podcasts also have the advantage of being able to extract very short extracts ("soundbites") from the recording and sharing them in bite-sized pieces across social media.
Overall, podcasts are a means to entice new listeners and engage them in interesting conversations.

The plan therefore foresees the use of podcasts availing from first-hand experience, dedicated editorial software and platforms for making the podcasts publicly available. The organization of podcasts will entail:

- Defining the podcast theme, title and timeline (from preparation to post-production and promotion).
- Creating a straightforward storyboard with questions for the selected guests (up to 3).
- Organising a practice session to prepare guests.
- Recording the podcast and time-stamping the storyboard.
- Putting together the full recording and selected extracts and uploading all on the dedicated platform.
- Checking guests' satisfaction.
- Carrying out the promotional campaign after making the podcast live.

The plan foresees up to three podcasts at least in the July 2021-June 2022 timeframe. Podcast guests will come from within and outside the project depending on the topic. Podcasts will also be proposed for joint

organisation with peer projects. The expected audiences will be mostly coming from general public but will cover topics which are relevant also to AI-SPRINT primary stakeholder groups, such as European SME Software Houses, European Cloud Providers, EU Digital Innovation Hubs, Venture Capitalists and Business Angels, and European Peer Projects and Policy Makers. Proposed topics include:

- Guide into the AI-SPRINT project objectives.
- A deep dive into the use cases developed by AI-SPRINT (Personalised Healthcare, Maintenance and Inspection, and Farming 4.0).
- An introduction to the AI-SPRINT Alliance and its benefits.
- AI and edge computing, including newcomer guides.

4.3.2 3rd party Events

Participation in third-party events serves several purposes depending on their scope and purpose:

- Sharing AI-SPRINT insights, knowledge, technical and non-technical results.
- Gaining an understanding of the technology landscape, including advances in peer-project, other EU and international research. This may also include joint dissemination with peer projects.
- Getting insights into market needs and business adoption plans.
- Communicating the focus and benefits of AI-SPRINT.
- Increasing AI-SPRINT visibility.
- Extending the AI-SPRINT network, including developer communities and leads for the Alliance and A^3C.

Over time, it will also be important to be active at events that are important for exploitation and sustainability in terms of uptake.

Third-party event participation is driven around their timeliness with AI-SPRINT outputs, topic and audience relevance and will increasingly prioritise events that offer an opportunity to showcase mature results, from both a technical and market update potential perspective. Participation spans presentations, panel debates, promotional stands, poster displays, remote participation and the distribution of project promotional material (roll-up banners, brochures, etc.) for focused and effective communication, dissemination and engagement outcomes, with live reporting via twitter, updates and blogs on LinkedIn. The participation in third-party events will also involve sharing takeaways and follow-up actions with the consortium and periodically with advisers, tracking impacts as part of the innovation management. This also applies to events hosted by AI-SPRINT.

The table below provides a preliminary list of AI-SPRINT visibility at different market targets and stakeholder events.

Event	Event Type	Date
Harnessing the Cloud-Driven Revolution: Trends, Challenges and Opportunities	Workshop	04/02/2021
Hub4cloud collaborative meeting	Virtual collaboration meeting	28/04/2021
WP4 AI4EU meeting	Virtual collaboration meeting	30/04/2021
ScaDL 2021	Workshop	21/05/2021
Energy reduction for AI loads: New solutions from ANDREAS and AI-SPRINT	Webinar	08/06/2021
2nd SWForum.eu workshop	Workshop	29/06/2021 – 01/07/2021
GECCO 2021	Conference	10/07/2021 – 14/07/2021
SITEVI 2021	Fair	30/11/2021 – 02/12/2021

Table 4.5 - Third-party events preliminary list

For events planning the consortium will define, through a shared online events document available to all partners, what events represent the best opportunity for the project. The "events file" of AI-SPRINT will include at least:

- Who is going to attend, where & when;
- What is going to be presented (Overview of presentation/topic);
- Type of audience/stakeholder & approximate number (to support in reporting activities);
- What Graphical material & details for shipping is needed.

As part of the communications plan WP6 takes care to: timely publish the event on the website; publish the presentation slides; set up a dedicated Social Media campaign; this allows additional visibility for partners and the project.

4.3.3 Channels for reaching Stakeholders

AI-SPRINT can tap into a wide pool of associations and partner networks to build synergies and reach the targeted stakeholders at the primary, secondary and tertiary levels.

The table below shows partner networks mapped across diverse technology enablers and topics relevant for AI-SPRINT. These strong network links cover many relevant targeted end-users and stakeholders, spanning cloud computing, edge computing, AI, as well as diverse industry verticals industries such as automotive, energy, healthcare, industry , robotics, farming and related associations, which can act as multipliers alongside the DIHs.

The pool of networks will therefore help AI-SPRINT to build its community database as part of its strategy for stakeholder engagement, starting from the first webinar (March 2021).

Technology and Topics	Examples	Partner Involvement
5G	5G EVE, FFULL5G	TRUST-IT, POLIMI IDC
Artificial Intelligence	AI4EU	BSC, POLIMI
AI and Robotics	euRobotics AISBL	POLIMI
Big Data	BDVA / DAIRO partnership EUHubs4Data	IDC IDC
Cloud computing: Coordination and policy	Cloudscape series, CloudWATCHHub.eu, H-CLOUD HUB4CLOUD	POLIMI, TRUST-IT, IDC IDC IDC (through collaboration with H-CLOUD)
Cloud computing: R&I	e.g. MORPHEMIC, DECENTER	7BULLS, POLIMI
Cybersecurity	cyberwatching.eu	TRUST-IT
Digital Transformation	Advanced Technologies for Industry (ATI) project OPEN DEI (DEI Focus Area)	IDC
Edge Computing	5G PPP projects and 5G-IA WGs, Open Networking Foundation	TRUST-IT, POLIMI
HPC	MAX; FocusCoE, LIGATE, eFlows4HPC	TRUST-IT, BSC, POLIMI
NGI	NGI ATLANTIC	TRUST-IT
Software	SWForum.eu	POLIMI, TRUST-IT

Table 4.6 - Mapping of Partner Networks

The AI-SPRINT engagement strategy also taps into a pool of multipliers that can help create a snow-ball effect across broader communities.

Multipliers: Associations and Hubs
Artificial Intelligence: AI: European Association for Artificial Intelligence (EurAI) and member societies, e.g., ACIA (Catalonia), AEPIA (Spain), AFIA (France), AIIA (Italy), GI-FBKI (Germany) PAIS (Poland); AT (ÖKAI); Benelux (BNVKI/AIABN); BU (BAIA); CH (SGAICO); CZ (CSKI); DK (DAIS); FI (FAIS);GR (EETN); HU (NJSZT); IE (AIAI); IL (IAAI); LV (LANO); NO (NAIS); PT (APPIA); SE (SAIS); SL (SLAIS); SK (SSKISAV); RO (ARIA); UK (AISB, BCS-SGAI). EU Artificial Intelligence Excellence Centres with 28 EU countries and 200+ participants from industry and research. National research centres, e.g., AT, BE, DE, SE. AI Tribune; Artificial Intelligence, Deep Learning, Machine Learning; Artificial Intelligence; Future Technologies: AI, Robotics, IoT & Start-ups.
Small business Associations and Hubs: Multipliers to attract end-users across diverse AI application developments, e.g., Digital SME Alliance, EIT Digital, European Business and Innovation Centres Network (EBN), Enterprise Europe Network (EEN), European Digital Innovation Hubs (eDIH), FIWARE Foundation, INTEROP-VLAB, LINKS Foundation, SMEs United. NetWorld2020 SME Working Group.

Table 4.7 - Multipliers: Associations and Hubs

4.4 Monitoring Impacts

The communication and dissemination objectives mentioned above will be measured through a set of Key Performance Indicators (KPIs) and QPIs (Key and Quality Performance Indicators) clearly listed in the Grant Agreement.

The communication and dissemination plan adopts a SMART (Specific, Measurable, Achievable, Realistic, Timely) approach to its continuous activities along the project life-cycle.

Specific objectives and activities are set up based upon the identified KPIs, taking into account different target groups and channels to reach them, timely matched to project opportunities and results and with a clear start and end date.

KPIs will be closely monitored throughout the whole duration of the project, with a view to ensure the successful achievement of all the results. Under specific circumstances, KPIs could be slightly adjusted with a common agreement of the Consortium and the European Commission: every deviation from the initial KPIs framework will be surely proved and explained accordingly.

From a communication and dissemination perspective we report here below the elements, related measures and metrics that the project will undertake during its lifetime:

Communication KPIs and QPIs

KPI	Targets/Assessments
KPI-COMMS-1: Number of popularized publications	≥ 1 joint publication, e.g., CORDIS success stories
KPI-COMMS-2: Number of press releases produced with tracked clippings	≥3 PRs; ≥ 12 clippings.
KPI-COMM-3: Number of general project and market-facing videos	≥6, dynamic videos including the MOOC
KPI-COMMS-4: Number of promotional material produced, including market campaigns	≥ 500 with tracked distribution & downloads
KPI-COMMS-5: Number of views/downloads of project outputs	≥500 with tracked downloads
KPI-COMMS-6: Overall community profiled by stakeholder category in the AI-SPRINT ecosystem.	≥400(M12); ≥600(M24); ≥1200(M36), with min. 55% from primary target groups for the A3C and adoption potential.
KPI-COMMS-7: Market-facing pitches and marketing packages	≥1 pitch for major results; ≥1 success story per use case.
KPI-COMMS-8: Newsletter production and distribution,	≥18 over the project lifecycle.
QPI-COMMS-1: Profiled community, e.g., EU SMEs (end-users & providers) and other core stakeholders, such as sector associations, e.g., for farming 4.0, healthcare, IIoT, etc.; impacts of engagement with start-ups and SMEs, etc.	Quality assessment: prospective leads & referrals through community profiling, ensuring the AI-SPRINT community is fit for purpose.

Table 4.8 - Communication KPIs and QPIs

Dissemination KPIs and QPIs

KPI	Targets/Assessments
KPI- DISS-1: #of technical/scientific conferences/workshops	≥ 10 attended
KPI-DISS-2: # of technical/scientific in journal articles (peer-reviewed) accepted	≥ 6
KPI-DISS-3: # of technical/scientific articles at international conferences and workshops (peer-reviewed) accepted	≥12
KPI-DISS-4: # of H2020 projects in the cluster and # of jointly organized events (e.g., workshops/exhibitions)	≥ 5; ≥ 2
KPI-DISS-5: # of events attended/organized with pitches and/or side meetings with leads, including trade fairs	≥3
KPI-DISS-6: # of pitch videos produced with tracked views	≥ 3; ≥300 views (total)
KPI-DISS 7: # of trainees attending MOOC courses covering main AISPRINT topics	≥ 500
KPI & QPI-DISS-8: # of community members, profiled by organization type, e.g., start-up/SME, public organization, large companies, associations, hubs, accelerators, cloud	≥300
KPI- DISS-1: #of technical/scientific conferences/workshops	≥ 10 attended

Table 4.9 - Dissemination KPIs and QPIs

4.5 M1-M18 Roadmap

Any communication and dissemination plan should follow a regular roadmap with identified actions that may be tracked, monitored against the main KPIs of WP6, the following table provides a first draft roadmap from month 1 to month 18.

The Roadmap will enable better monitoring of the communication activities, understanding what works or does not work according to the effort spent and helping to refine strategy over time for maximum effectiveness. Necessary adjustments will be made during the course of the project depending on the main project outcomes and project evolution. The following table reports the envisioned Roadmap of activities from M1 to M18.

	Current Status	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	EoP KPI
KPI-COMMS-1: Number of popularized publications	2			1 - CORDIS publication			1 - CORDIS publication													≥ 1
KPI-COMMS-2: Number of press releases produced with tracked clippings	1; 8			1 PR on AI-SPRINT overview								1 PR on joint event for Clustering				1 PR on Alliance				≥3 PRs; ≥ 12 clippings
KPI-COMM-3: Number of general project and market-facing videos	2			1 Webinar#1			1 Webinar #2		1 General video							1 Video on the Alliance				≥6,
KPI-COMMS-4: Number of promotional material produced, including market campaigns	45	5	5	13	4	5	13					1 Marketing campaign for joint event				1 Marketing campaign for Alliance				≥ 500
KPI-COMMS-5: Number of views/downloads of project outputs	0																			≥500
KPI-COMMS-6: Overall community profiled by stakeholder category in the AI-SPRINT ecosystem.	376	100	190	250	320	350	376													≥400(M12); ≥600(M24); ≥1200(M36)
KPI-COMMS-7: Market-facing pitches and marketing packages	0																			≥1 pitch for major results; ≥1 success story per use case.
KPI-COMMS-8: Newsletter production and distribution,	3			1			2	1		1		1		1		1		1	1	≥18
KPI- DISS-1: #of technical/scientific conferences/workshops	5						1	3		1										≥ 10
KPI-DISS-2: # of technical/scientific in journal articles (peer-reviewed) accepted	2						2													≥ 6
KPI-DISS-3: # of technical/scientific articles at international conferences and workshops (peer-reviewed) accepted	1						1	3		1										≥12
KPI-DISS-4: # of H2020 projects in the cluster and # of jointly organized events (e.g., workshops/exhibitions)	3; 1			1 - SWFor	1 - Hcloud	1 - ANDREAS							1 Joint event for Clustering							≥ 5; ≥ 2
KPI-DISS-5: # of events attended/organized with pitches and/or side meetings with leads, including trade fairs	6		1	1	2	1	1	2				1	1							≥3
KPI-DISS-6: # of pitch videos produced with tracked views	0																			≥ 3; ≥300 views (total)
KPI-DISS 7: # of trainees attending MOOC courses covering main AISPRINT topics	0																			≥ 500
KPI & QPI-DISS-8: # of community members, profiled by organization type	376	100	190	250	320	350	376													≥300

5. Achievements and Impacts to date

AI-SPRINT has carried out continuous communications from the very outset, setting up the media platform (www.ai-sprint-project.eu) and social networks, creating collaterals and creating media campaigns on the project launch. This section provides some details on those activities carried out in the first 6 months of the project.

5.1 Website and Branding

Over the course of the first six months from the project launch, a complete brand image of AI-SPRINT has been prepared. The project branding aims to ensure a consistent and distinctive look and feel across various communication channels spanning from social media, printing and web platforms with the creation of branded posters, fliers, website banners, web platform graphics, presentations template, deliverable template and a remote video call background.

The branding includes the development of the AI-SPRINT logo, available in two versions (with and without the payoff) as shown in Figure 5.1, to make the project recognisable. The logo is, indeed, used in any communication and dissemination activities. In addition, the team has also prepared a dedicated banner, published on the social media channels (Figure 5.2) and Microsoft Powerpoint template (Figure 5.3) that the partners can use whenever they present the project to the public.

Figure 5.1 – AI-SPRINT logo

Figure 5.2 – AI-SPRINT banner

Figure 5.3 – AI-SPRINT power point template

As all the events have been taken place online, the team has also developed a zoom background to make the project recognisable during virtual presentations.

Figure 5.4 – AI-SPRINT zoom background

Moreover, in the period M1-6, the team has developed a first version of the AI-SPRINT website, in which more sections have been included in order to:

- ensure a pleasant UX (User Experience) by increasing its visual appeal, sense of professionalism, usability and brand value;
- provide harmonised branding that also reflects across the external digital channels;
- facilitate the navigational steps of the users through a clear section's breakdown and tailored icons to diversify (and define) the different website areas.

The website impacts at month 6 are reported in the table below in terms of number of visitors and sessions.

Number of visitors						
M1	**M2**	**M3**	**M4**	**M5**	**M6 (first 2 weeks)**	**Total**
0	1263	1163	555	337	256	3500

Table 5.1 – Website number of visitors

Number of sessions						
M1	**M2**	**M3**	**M4**	**M5**	**M6 (first 2 weeks)**	**Total**
0	1336	1350	643	455	340	4200

Table 5.2 - Website number of sessions

The following are the key features that help make the site comprehensive, user-friendly, and helpful to the AI-SPRINT community.

- The homepage is composed of a main menu composed by the sections: USE CASES, MEDIA, NEWS AND EVENTS and PARTNERS. Each section directs the users to other pages in which they can learn more about each of them.
- The inclusion of an emotional video with a text that highlights the main project's goals, visible on the top of the homepage.
- The inclusion of the newsletter, social media channels, news, events and use cases accessible also from the homepage of the website.

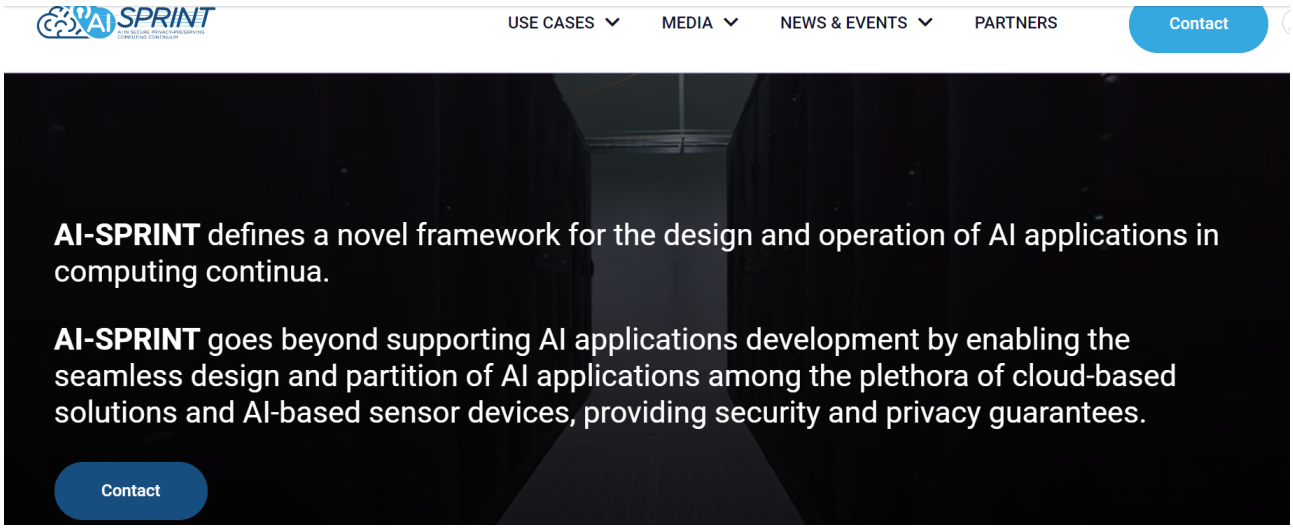


Figure 5.5 – Homepage video and main menu

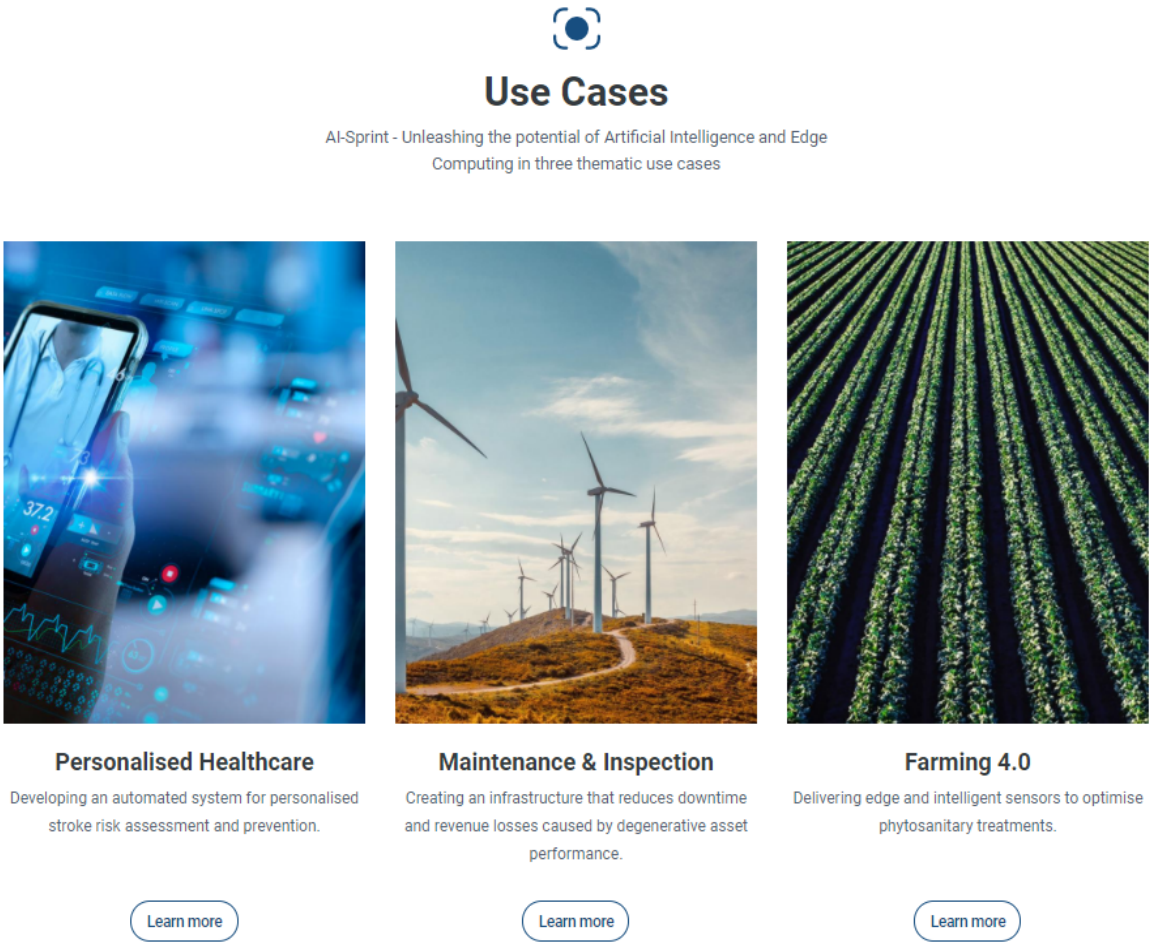


Figure 5.6 – Use cases on the AI-SPRINT homepage

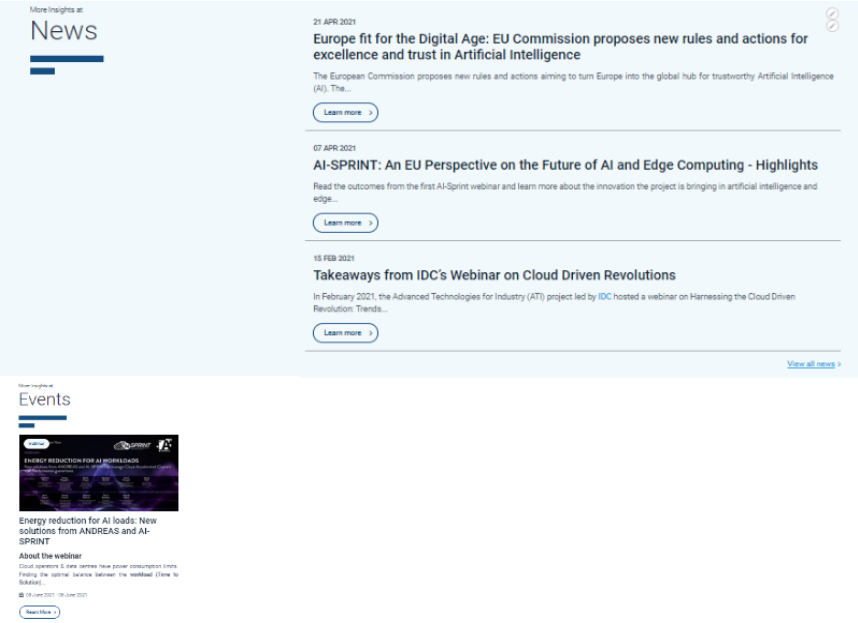


Figure 5.7 – News and events on the AI-SPRINT homepage

Additional iterations will be carried out by M18 aimed at improving the main functionalities. The plan involves:

- The creation of dedicated branding for the Alliance aligned with the AI-SPRINT visual identity.
- The creation of a new section dedicated to the AI-SPRINT Alliance, with the branding, a short video on the benefits of joining, a list of members, which may include photos and logos depending on the permissions granted.
- The inclusion of a publication section where scientific articles written by the project partners can be found.
- Other UX upgrades based on on-going analysis.

5.2 Press Release

AI-SPRINT has delivered a Press Release (PR) after the kick-off meeting in English and translated, by the project partners, in Italian, French, German, Spanish, Polish and Romanian.

Figure 5.8 - AI-SPRINT Press Release

The Press Release explained what are the main objectives of the project and the consortium involved in the project and has been published on the following websites:

- CORDIS[5].
- AI-Sprint[6].
- Politecnico di Milano[7].
- Electronics, Information and Bioengineering department of Politecnico di Milano[8].
- Cefriel[9].
- Medium[10].
- Technische Universität Dresden[11]

5.3 AI-SPRINT Community Engagement

5.3.1 Community Building

AI-SPRINT has built a community of 376 members in just 6 months from the project launch, composed as follows,

- 172 LinkedIn followers, including partners with profiles on this professional network.
- 93 Twitter followers, including several partners with accounts.
- 101 Newsletter subscribers.

The community is represented by a very diverse network as shown in the picture below.

[5] https://cordis.europa.eu/article/id/428934-ai-sprint-artificial-intelligence-in-secure-privacy-preserving-computing-continuum
[6] https://www.ai-sprint-project.eu/media/publications
[7] https://www.polimi.it/en/opening-details/article/10/al-via-il-progetto-ai-sprint-9129/
[8] https://www.deib.polimi.it/ita/progetti-h2020/dettagli/392
[9] https://www.linkedin.com/posts/cefriel_ai-sprint-goals-activity-6769579254289076224-HaJO
[10] https://medium.com/beck-et-al-rom%C3%A2nia/ai-sprint-inteligen%C8%9Ba-artificial%C4%83-pentru-securitatea-confiden%C8%9Bialit%C4%83%C8%9Bii-con%C8%9Binutului-computerizat-bf0d74d6864
[11] https://tu-dresden.de/ing/der-bereich/news/eu-forschungsinitiative-ai-sprint-soll-innovationen-fuer-anwendungen-der-kuenstlichen-intelligenz-in-cloud-und-edge-umgebungen-vorantreiben

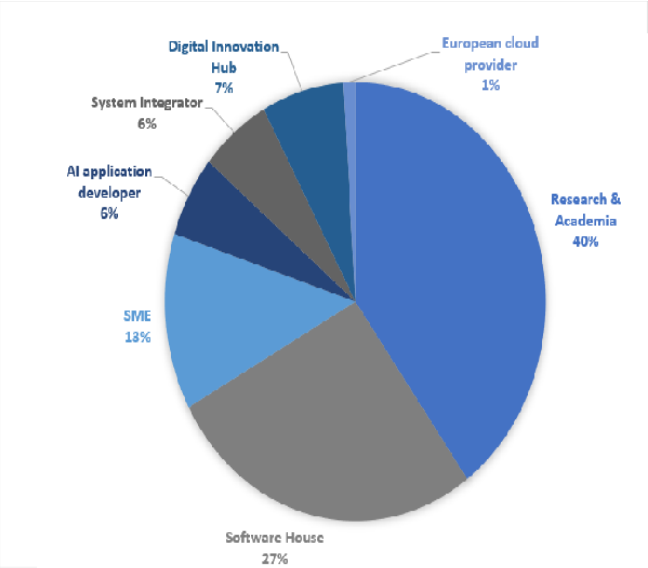


Figure 5.9 – AI-SPRINT community breakdown

Members of the community are recorded and profiled in a database which is regularly updated and allows the team AI-SPRINT team to:

- Quantify, qualify and profile the community.
- Tailor communication to different sub-communities based on their profile.
- Build better relationships and pinpoint the most active members with whom more targeted interactions can take place.
- Increase AI-SPRINT visibility to public events.
- Ensure promotional campaigns are successful.

An example of the breakdown of AI-SPRINT community members is reported in the table below:

AI-SPRINT community members
AI application developers: Honeywell, Deloitte, fortiss GmbH
European Cloud Provider: RunEL, i-Deal S.R.L., NodeWeaver
Digital Innovation Hub: Access Now, Huawei Cybersecurity Transparency Center, CREA, Digital Transition and Transformation Service of the Azores Regional Government, Berlin Partner, GMV, SNAM spa, Schneider Electric.
Research and Academia: Klagenfurt University, University of Trento, Himolde, Eindhoven University of Technology, Cefriel, Iran Science and Technology University, Finnish Meteorological Institute, Lithuanian Computer Society, Harvard University, Insight Research Centre for Data Analytics, State University of Rio de Janeiro, ICOOR, Cardiff University, Tecnoalimenti, University College Dublin, LIST - Luxembourg Institute of Science and technology, London South Bank University, IW Cologne,University of Pavia, Sahand University of technology, West University of Timisoara, B'IMPRESS, Fundacio i2CAT, Earthlab, IZTECH, INFN, NTNU
SMEs: sigest, Technikon Forschungs- und Planungsgesellschaft GmbH, RedZinc, AUSTRALO, Nextworks, Technik GmbH

Software House: GIM, SINTEF, FIWARE Foundation, IDENER, Software Imagination & Vision, Telecom Italia S.p.A., Technolution B.V., Engineering Ingegneria Informatica, Telenor, INLECOM, STMicroelectronics
System Integrators: Bosch, VZUG, THALES

Table 5.3 - Example of AI-SPRINT community members breakdown

5.3.2 Webinar Outcomes

Over the course of six months, AI-SPRINT has organised two webinars.

The first one, '**AI-SPRINT: An EU Perspective on the Future of AI and Edge Computing**', took place on 30 March 2021. The webinar gave participants the opportunity to learn more about how AI-SPRINT is driving technological innovation, including applications in three real-world cases, outlining key challenges, needs and future trends in artificial intelligence thanks to talks from the key project partners and a panel discussion with experts in the field.

The second one, entitled '**Energy reduction for AI loads: New solutions from ANDREAS and AI-SPRINT'**, was organised together with the ANDREAS project, one of the TETRAMAX innovation hub initiatives. The webinar took place on 8 June 2021 and offered an in depth look at the strategy and objective of the ANDREAS and AI-SPRINT projects, which are developing practical solutions to change the present paradigm of Artificial Intelligence and Deep Learning methods in terms of data computing, processing and energy consumption.

The table below provides a snapshot of the webinars in terms of date and number of participants.

Webinar	Date	Number of participants
AI-SPRINT: An EU Perspective on the Future of AI and Edge Computing'	30/03/2021	95
Energy reduction for AI loads: New solutions from ANDREAS and AI-SPRINT	08/06/2021	29

Table 5.4 - Webinar #1 and #2 overview

In order to promote the webinar, dedicated web pages with a registration form were created and SMART social media campaigns were performed. SMART campaigns refer to communication activities that are specific, measurable, achievable, realistic, time-bound. Dates are set for the campaign launch, mid-term impact monitoring and impacts at the end of the campaign.

'AI-SPRINT: An EU Perspective on the Future of AI and Edge Computing' webinar main outputs:

The webinar was well-received with a total of 95 participants, from 22 countries, with a participation rate of 65%. During the webinar, some live poll-questions were posed to the audience to better understand the participants' average engagement and familiarity with artificial intelligence and edge computing topics.

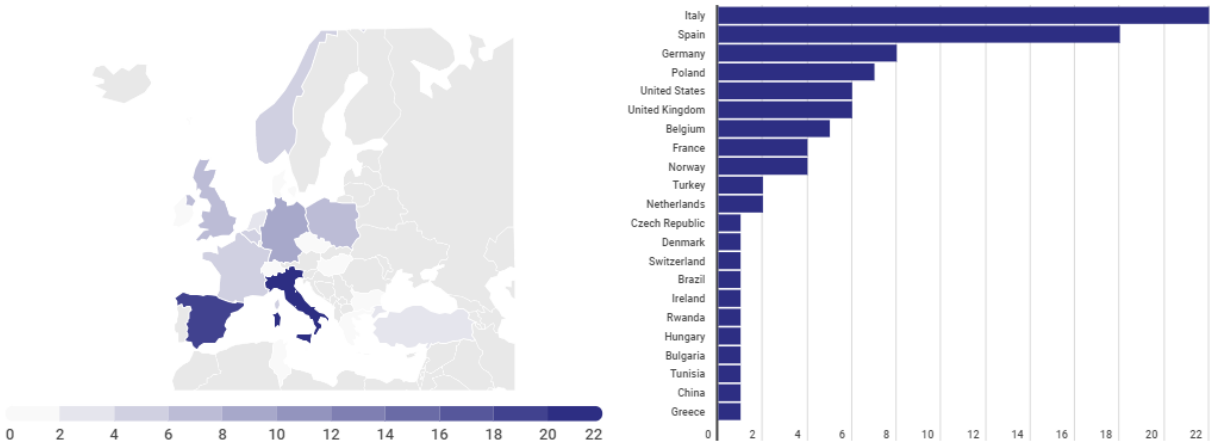


Figure 5.10 – Number of participants of the 1st webinar

As mentioned above, a SMART campaign has been launched to promote the webinar among relevant stakeholders. In this case, it ran from 12 to 29 March, gaining 1078 impressions on LinkedIn and 5868 on Twitter.

Below, it is possible to find some graphic examples developed for this purpose.

Figure 5.11 – Graphic examples of the SMART campaign of the AI-SPRINT 1st webinar

'Energy reduction for AI loads: New solutions from ANDREAS and AI-SPRINT' webinar main outputs:

29 participants from 10 countries attended the second webinar of the AI-SPRINT project, showing a participation rate of 60%. Some live poll-questions were posed to the audience to better understand the participants' average level of experience in energy efficiency in cross-section between Data Centers, HPC systems and Artificial Intelligence.

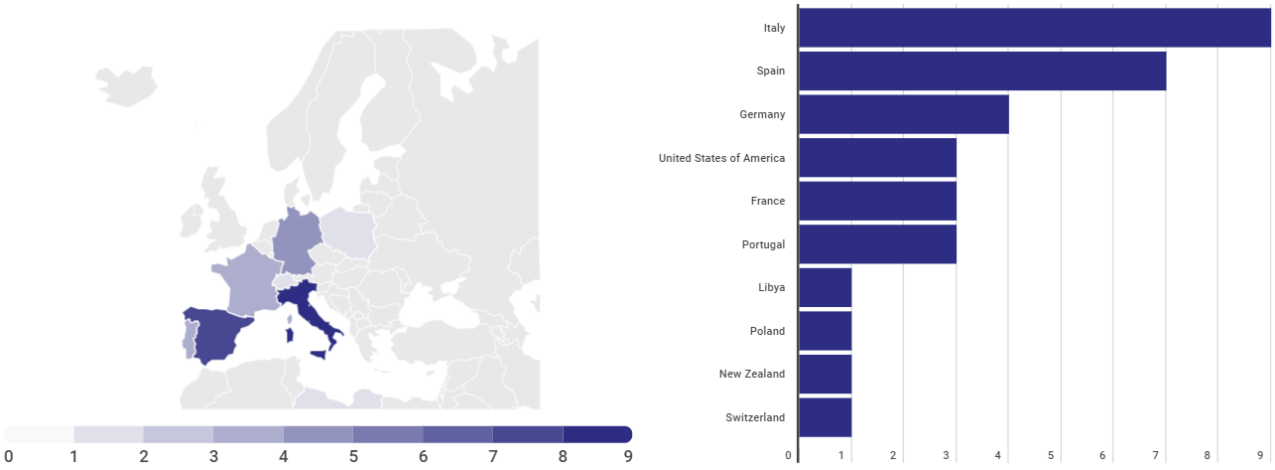


Figure 5.12 - Number of participants of the 2nd webinar

The SMART campaign has been prepared and monitored to promote the second webinar too. It was launched from 21 May to 7 June 2021, gaining 1767 impressions on LinkedIn and 4022 on Twitter. Some graphic examples developed for this purpose are available here below.

Figure 5.13 - Graphic examples of the SMART campaign of the AI-SPRINT 2nd webinar

5.4 Videos

During the first six months from the launch of the project, the AI-SPRINT team has been working on three videos:

- WEBINAR VIDEOS: the webinars organised in March 2021 (AI-SPRINT: An EU Perspective on the Future of AI and Edge Computing) and June 2021 (Energy reduction for AI loads: New solutions from ANDREAS and AI-SPRINT) have been recorded live and published on the project YouTube channel and website. The recorded videos give the opportunity to all interested people, also the ones that did not manage to attend the webinars, to watch it online.
- GENERAL VIDEO: the general video aims to provide an overview of the project objectives, briefly explain what are the AI-SPRINT use cases and the Alliance. The general video is going to be finalised by M8 and, once ready, is going to be published on YouTube and the website. Dedicated PPC campaigns and social media promotions will be implemented to promote it.

5.5 Technical Publications

As an essential element of H2020 dissemination of results, publications help to demonstrate advances beyond the state-of-the-art and validate research findings.

In the following tables we report the papers accepted for publication, including peer-reviewed, open-access and non-peer-reviewed papers.

Journal papers	Authors	Title of the Journal	Status and reference	Peer review
Demystifying Attestation in Intel Trust Domain Extensions via Formal Verification	Muhammad Usama Sardar, Saidgani Musaev, Christof Fetzer (TUD)	IEEE ACCESS	Published DOI 10.1109/ACCESS.2021.3087421	Yes
Network Function Decomposition and Offloading on Heterogeneous Networks with Programmable Data Planes	Daniele Moro, Giacomo Verticale, Antonio Capone (POLIMI)	IEEE Open Journal of the Communications Society	Submitted but not yet published	No

Table 5.5 - Journal papers

Title of proceedings	Authors	Title	Publisher	Status and reference	Type of publication	Peer review	Joint public/private
EuroPar 2021	Francesc Lordan, Daniele Lezzi, Rosa M. Badia (BSC)	Colony: Parallel Functions as a Service on the Cloud-Edge Continuum	Springer	Pending	Article	Yes	No
DSN 2021	André Martin, Cong Lian, Franz Gregor, Robert Krahn (TUD), Valerio Schiavoni, Pascal Felber, Christof Fetzer (University of Neuchatel)	ADAM-CS - Advanced Asynchronous Monotonic Counter Service	IEEE	Pending	Article	Yes	Yes
AIML 2021 Workshop Proceedings (Advances in Artificial Intelligence & Machine Learning)	H. Sedghani, D. Ardagna, M. Matteucci, G. Fontana, G. Verticale, F. Amarilli (POLIMI) R. Badia, D. Lezzi (BSC) I. Blanquer (UPV) A. Martin (TUD) K. Wawruch (7BULLS)	Advancing Design and Runtime Management of AI Applications with AI-SPRINT. Applications, Challenges & Concerns) 2021.	IEEE	Pending	Article	Yes	Yes
NEvo@Work ACM Workshop on NeuroEvolution@Work	E. Lomurno, S. Samele, M. Matteucci, D. Ardagna. (POLIMI)	Pareto-Optimal Progressive Neural Architecture Search	ACM	Pending	Article	Yes	No
Conference on data and applications security and privacy (DBSec'21)	Wojciech Ozga, Do Le Quoc, Christof Fetzer (TUD)	Perun: Confidential Multi-Stakeholder Machine Learning Framework with Hardware Acceleration Support	Springer	Pending	Article	Yes	No

EuroPar 2021	Francesc Lordan, Daniele Lezzi, Rosa M. Badia (BSC)	Colony: Parallel Functions as a Service on theCloud-Edge Continuum	Springer	Pending	Article	Yes	No

Table 5.6 - Proceedings papers

6. Conclusions and Next Steps

The 1st version of AI-SPRINT Communication, Dissemination and Stakeholder Engagement plan represents the cornerstone of every communication and dissemination activity to be carried out over the project's lifetime and the foundations for exploiting and sustaining the results. As such, it has been developed and agreed-upon by all Partners involved in WP6.

It defines the strategy for communication, dissemination and stakeholder engagement and sets out plans for each core activity. The roadmap thus sets the pace for the coming months in terms of reaching the goals and assessing impacts.

The main conclusions are:

- The current version of the plan is tightly linked to the project results. It underpins exploitation and sustainability in what will be an increasingly go-to-market strategy along and beyond the project lifeline. It is therefore is to be considered as a living document, enabling partners to update it as needed as part of the coordination of the "Dissemination and Impact" work package (WP6) whenever necessary and progressively ahead of the production of the second version due in Month18 (June 2022).
- The document defines all strategic goals, including branding and defines its communication channels and levers.
- WP6 activities in the first six months of the project have been conducted with good coordination and produced tangible results, including completion of project branding, launch of the website, visibility at events, production of press releases and technical papers as well as engagement with peer projects, industry and relevant EU initiatives.
- A first roadmap for the period M1-M18 has been developed and it will be followed as part of WP6. The roadmap will be updated in the upcoming months as part of WP6 activities to ensure the proper monitoring of contractual KPIs and adequate engagement of the various stakeholders.

Annex 1: List of PR media channels

PR channel (name)	PR channel (website)
CORDIS	https://cordis.europa.eu/
Electronic, Information and Bioengineering Department of Politecnico di Milano	https://www.deib.polimi.it/eng/home-page
Cefriel	https://www.cefriel.com/
Medium	https://medium.com
TechNative	https://technative.io/wire/
Tech.eu	https://tech.eu/
TelecomTV	https://www.telecomtv.com/
TechCrunch	https://techcrunch.com/
The Register	https://www.theregister.com/
Tech Forge Media	https://techforge.pub/
Developer	https://developer-tech.com/
CloudTech	https://cloudcomputing-news.net/
Edge Computing News	https://edgecomputing-news.com/
IoT Tech News	https://iottechnews.com/
Telecoms Tech News	https://telecomstechnews.com/
Techforge	https://techforge.pub/
Artificial Intelligence News	https://artificialintelligence-news.com/
IoT Business News	https://iotbusinessnews.com/
Venture Beat	https://venturebeat.com/
The New Barcelona Post	https://www.thenewbarcelonapost.com/ca/
Business Cloud News	https://www.businesscloud.co.uk/
CloudPro	https://www.cloudpro.co.uk/
IT Briefcase	https://www.itbriefcase.net/
DW Deutsche Welle	https://www.dw.com/en/top-stories/s-9097
European AI Alliance	https://ec.europa.eu/digital-single-market/en/european-ai-alliance
Datacenter-insider	https://www.datacenter-insider.de/
IT Daily / IT Management	https://www.it-daily.net/
IT-BUSINESS	https://www.it-business.de/
IT-DIRECTOR	https://www.it-zoom.de/it-director/news/
IT-Mittelstand	https://www.it-zoom.de/it-mittelstand/news/
Tagesspiegel Background	https://background.tagesspiegel.de/digitalisierung