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Dissemination and Communication strategy

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Terms and abbreviations

ACM	Association for Computing Machinery
BSI	Bundesamt für Sicherheit in der Informationstechnik
CaaS	Certification as a Service
C5	Cloud Computing Compliance Criteria Catalogue
CNI	Centro Criptológico Nacional
CSA	Cloud Security Alliance
CSP	Cloud Service Provider
DoA	Description of Action
EC	European Commission
ENISA	European Union Agency for Cybersecurity
ENS	Esquema Nacional de Seguridad
EU	European Union
EU CSA	EU Cybersecurity Act
EUCC	European Cybersecurity Certification Scheme
EUCS	European Cybersecurity Certification Scheme for Cloud Services
IEEE	Institute of Electrical and Electronics Engineers
GA	Grant Agreement to the project
ICT	Information Communications Technology
KPI	Key Performance Indicator
KR	Key Result
OSCAL	Open Security Controls Assessment Language
RSA	Rivest–Shamir–Adleman
SME	Small and Medium Enterprise
SW	Software
TC	Technical Committee
WG	Working Group
WP	Work Package

Executive Summary

This deliverable outlines the comprehensive dissemination, communication, and networking strategy of the European EMERALD project. The aim is to effectively promote the project's scientific and technical outcomes and to engage a wider audience. In addition, milestones are defined to publicize the project both scientifically and to the general public. Key Performance Indicators (KPIs) are established for the dissemination, communication, and networking tasks, as defined by the project partners.

The dissemination strategy encompasses various channels, including academic publications at conferences, workshops, and journals. Targeted outreach efforts will ensure that project results reach relevant stakeholders, policymakers, and the scientific community.

Communication activities will focus on clear and concise messaging to convey the project's objectives, achievements, and societal impact. Engaging content will be developed for the project website, social media channels, press releases, and other media outlets.

Networking initiatives will foster collaboration and knowledge exchange among project partners, stakeholders, and external organizations. Partnerships with industry, academia, and other projects will enhance the project's visibility and broaden its impact.

Key milestones, for the communication and dissemination activities of the project, include the launch of the project website, publication of scientific papers, organization of workshops and webinars, and participation in relevant conferences and events. These milestones will serve as benchmarks to track the project's progress and ensure timely dissemination of results.

To measure the effectiveness of dissemination, communication, and networking efforts, specific KPIs have been established for each task. These KPIs include metrics such as the number of publications, website traffic, social media engagement, and collaborations formed.

Subsequent deliverables, scheduled for months 18 and 36, will provide detailed reports on all activities undertaken during the reporting period related to dissemination, communication, and networking. These reports will evaluate the achievement of KPIs, identify areas for improvement, and inform future strategies to maximize the project's impact and visibility.

1 Introduction

This deliverable outlines the EMERALD strategic approach to dissemination, communication and networking, aimed at maximizing the impact and reach of the project. For each activity, it describes the objectives to be achieved, the target audience involved, the tools that will be used, the activities to monitor and assess the achievements, and the expected results. These activities are part of WP6 “Dissemination, Exploitation and Communication”.

CNR will coordinate the dissemination and communication actions, while TECNALIA will coordinate the networking. Nevertheless, all partners will contribute to the dissemination, communication and networking processes. The members of the partners involved in the various activities are detailed in Table 1.

Table 1. People involved in dissemination, communication and networking activities

Partner	Name	Activities
TECNALIA	Juncal Alonso	Dissemination/Communication/Networking
TECNALIA	Cristina Martinez	Dissemination/Communication/Networking
TECNALIA	Iñaki Etxaniz	Dissemination/Communication/Networking
TECNALIA	Gorka Benguria	Dissemination/Communication/Networking
Fraunhofer	Christian Banse	Dissemination/Communication/Networking
Fabasoft	Björn Fanta	Dissemination/Communication/Networking
CNR	Marinella Petrocchi	Dissemination/Communication/Networking
CNR	Michela Fazzolari	Dissemination/Communication/Networking
CNR	Adriana Lazzaroni	Communication
CNR	Patrizia Andronico	Communication
CNR	Raffaella Casarosa	Communication
CNR	Fabio Benedetti	Communication
SCCH	Verena Geist	Dissemination/Communication
SCCH	Somayeh Kargaran	Dissemination/Communication
SCCH	Mario Pichler	Dissemination/Communication
KNOW	Angela Fessl	Dissemination/Communication/Networking
KNOW	Marketing Team	Dissemination/Communication
CXB	Ramon Martín de Pozuelo	Dissemination/Communication
CXB	Mario Maawad	Dissemination/Communication
IONOS	Netsanet Haile Gebreyesus	Dissemination/Communication
IONOS	Maria Barros Weiss	Dissemination/Communication
CF	Natalia Sobieska	Dissemination/Communication
ONS	Alberto P. Martí	Dissemination/Communication/Networking
ONS	Jordi Guijarro	Dissemination/Communication/Networking
NIXU	Antti Kantero	Dissemination/Communication/Networking
NIXU	Mika Leskinen	Dissemination/Communication

1.1 About this deliverable

This document establishes the basis for a successful implementation of the dissemination, communication and networking strategies in the context of the EMERALD project.

Dissemination and communication strategies are based on a detailed description of the objectives to be achieved, with a focus on the target audience and the key messages to be vehiculated to each target, while for the networking strategy, the relevant initiatives to be targeted are identified. Moreover, for each task, the processes to be followed for the implementation of the activities are presented. In addition, regarding dissemination and

communication, the tools used are described in dedicated sections, explaining the aim of each of them. Finally, the document presents how the project will report, monitor and assess the dissemination, communication and networking activities.

1.2 Document structure

The structure of this deliverable is straightforward: the dissemination, communication and networking strategies are detailed in Section 2, Section 3 and Section 4, respectively. Each main section is divided into five subsections, describing the objectives, the target groups, the process followed to achieve the objectives of the task, the tools/initiatives that will be used during the process and finally the monitoring and assessment strategies applied. Finally, Section 5 presents the main conclusions of the report.

In addition, three appendices have been included to make the document more comprehensive: *APPENDIX A: WP6 Monthly Report* reports a document to collect all the activities related with WP6; *APPENDIX B: EMERALD General Presentation* includes a general presentation to introduce the EMERALD project; and *APPENDIX C: Social media/Fragments Rotation Schedule* shows the first version of a calendar for the publication of posts on Social Media and on the “EMERALD Fragments” section of the website.

2 Dissemination strategy

According to the European Commission, dissemination consists of making knowledge and results of the project public (free of charge) for others to use [1].

Dissemination in projects is a critical process aimed at spreading knowledge and information about the project's outcomes to a wider audience. This strategic activity goes beyond merely sharing results. In fact, it involves engaging stakeholders, increasing visibility, and fostering a broader understanding and application of the project's findings. Effective dissemination ensures that the innovations, insights, and advancements achieved through a project reach those who can benefit from them, including industry professionals, policymakers, the academic community, and the public. By utilizing various channels, dissemination activities strive to maximize the impact of the project, encouraging uptake and application of its results in relevant fields.

2.1 Objectives

The main objectives of the dissemination process are the following:

- **Raising Awareness:** To increase awareness of the research project, in particular of the need of using Certification as a Service (CaaS) among relevant stakeholders, including Cloud Service Providers (CSPs), auditors, certification authorities, certification bodies, industrial associations, cloud consumers, etc.
- **Engaging Stakeholders:** To actively engage with various stakeholders throughout the project lifecycle, ensuring their input and feedback are considered and fostering a sense of ownership and collaboration.
- **Communicating Results:** To communicate the results of the project, including both the milestones as they are reached during the course of the project and the final integrated platform. These results are particularly interesting for the technical and industrial communities (CSPs, SMEs, auditors, cloud consumers, etc.), but may also be relevant for the scientific community to enhance access to relevant research advances.
- **Facilitating Knowledge Transfer:** To share research findings, methodologies, and best practices with peers, industry partners, and other interested parties to facilitate the exploitation process and stimulate further research and innovation.
- **Influencing Policy and Practice:** To inform and influence policy-making and professional practice by providing evidence-based findings and recommendations that can be incorporated into policies, guidelines, and operational procedures.
- **Encouraging Adoption and Utilization:** To promote the adoption and utilization of research outcomes, including technologies, standards, and practices, by demonstrating their benefits and potential applications to target audiences, seeking cooperation with ENISA, national agencies and national accreditation bodies.
- **Foster Networks and Partnerships:** To facilitate the creation of networks and partnerships with other researchers, institutions, and organizations, both nationally and internationally, enhancing the project's reach and establishing collaborations for future research.
- **Securing Future Funding and Support:** To attract attention from funding bodies, industry sponsors, and other potential supporters by showcasing the project's success and potential for future impact, thereby securing funding and support for continued research.
- **Enhancing Reputation and Visibility:** To enhance the reputation and visibility of the research partners, establishing them as leaders in their field and attracting talent, resources, and opportunities.

2.2 Target groups

This section defines the main groups targeted by the dissemination activities and reports the key message to be delivered for each group [2].

Cloud Service Providers

The main targets of the EMERALD project are CSPs, especially small CSPs, which lack the tools to monitor compliance with high assurance level controls in the EUCS. The dissemination activities will be dedicated to highlight how the EMERALD project makes it easier to achieve and maintain EU-wide cloud security certification through a continuous auditing mechanism.

Auditors, National/International Agencies and Certification Authorities

Another important target of EMERALD is represented by organizations interested in experiencing innovative strategies and methodologies for building cybersecurity requirements and metrics, that can be interoperable and/or can be adapted among different certification schemes. The dissemination activities will demonstrate the added value of Certification as a Service (CaaS) to achieve and maintain a cybersecurity certification compliant with several cloud security certification schemes.

Research & Technical Community

Researchers and Technologists are interested in cutting-edge research, innovation in cybersecurity, and novel knowledge created through the project's solutions. The outcome of EMERALD will provide valuable insights into emerging technologies and methodologies for CaaS and can contribute to the generation of innovative solutions that can be incorporated in already existing open-source or commercial products.

ENISA, National Authorities and other Policy-Makers

To effectively raise awareness about cloud security certification and keep stakeholders informed about current legislations and policies, the project will target National Authorities and other Policy-Makers with specific groups, as well as ENISA. The project will highlight its alignment with the automated monitoring aspects required in the EUCS [3] as well as other frameworks such as BSI C5 (Cloud Computing Compliance Criteria Catalogue) [4], and ENS (National Security Framework) [5], facilitating the creation of policies that reflect the current state of security standards.

Cloud Service Users (and General Public)

These groups will indirectly benefit from the outcomes of the project. In fact, cloud service customers will be able to make decisions about cloud services with confidence, knowing the security and reliability that comes with choosing services certified through a continuous and rigorous auditing process.

2.3 Dissemination process

Dissemination activities started in the first month of the project and are grouped into three phases [2], as detailed in the following.

Phase I: Awareness creation (M01-M06)

The first phase of the dissemination process lasts six months from the start of the project. During this period, as the results to be disseminated are not yet available, the main objective is to define the dissemination strategy. Defining a dissemination strategy involves a systematic approach to

ensure that the outcomes and knowledge generated by a project are effectively communicated to the relevant audiences. To this aim, the following steps are analysed and developed:

- Identifying the objectives: Specify what the dissemination aims to achieve.
- Understanding the audience: Different stakeholders may have different interests and needs. Target groups need to be identified, segmented and then analysed, to understand the preferences, challenges, and dissemination channels.
- Developing key messages: Clear, concise and compelling messages are developed, tailored to the interests and needs of each target group.
- Selecting appropriate channels and tools: According to the target groups analysis, the most effective channels and tools for dissemination are selected. A multi-channel approach can ensure broader reach and engagement.
-
- Monitoring and evaluating: A set of Key Performance Indicators (KPIs) are defined to evaluate the effectiveness of the dissemination activities. The performance of the dissemination activities is revised regularly to adapt the strategy as needed based on feedback and results.

In parallel, another aim is to support communication activities in generating awareness about the project's objectives, scope, and potential impacts. This phase is crucial for establishing a foundation for stakeholder interest and support. This was done mainly by defining the "WP6 monthly report" and preparing an "EMERALD general presentation". The former is described in detail in section 2.5, while more details on the latter can be found in section 2.4.6.

Phase II: Delivery (M07-M30)

In the second phase, the focus shifts on the implementation of the dissemination actions, to deliver detailed insights and progress updates to the target groups. This will include publishing research findings, case studies, posters and videos that highlight the project's developments and achievements. Posts and news published on social media and on the EMERALD website will be used to foster a dialogue with the audience, allowing for feedback and engagement. Participating in industry and academic conferences will also play a significant role in disseminating the knowledge generated by the project.

In the case of scientific dissemination toward the cybersecurity research community, the message will revolve around the explanation of the EMERALD approach, its results, and their innovation. Particular attention will be dedicated to validating outcomes and elucidating the connections between the EMERALD methodology regarding each Key Result (KR) and the associated previous work. This extensive phase will be organized into smaller, progressive cycles, each focusing on a specific KR of the project.

The technical dissemination will primarily engage the technical audience, concentrating on the comparison with frameworks that are similar or complementary to EMERALD. Actions will include crafting posters, hosting workshops, writing posts, and participating in targeted conferences. Furthermore, dissemination will support networking activities in pursuing partnerships with other projects and initiatives, to explore synergies and shared interests and to organize workshops and joint dissemination events.

As mentioned above, during this phase, performances will be evaluated via monitoring KPIs, on a regular basis to adapt the dissemination strategy if necessary.

Phase III: Final (>31; after the end of the project)

The final phase of the dissemination activities is centred around consolidating and sharing the project's outcomes and learnings. Activities will start six months before the end of the project and will possibly continue after the end of the project. Final reports, recommendations, best practice guidelines, and the final implementation of the platform will be deployed and shared widely. Success stories and case studies demonstrating the project's impact will be highlighted. Partners will be encouraged to participate in events, conferences, workshops and meetings where the results and achievements of EMERALD will be presented. Efforts will be made to ensure the sustainability of the project's outputs, including establishing partnerships for future collaboration. This phase aims to maximize the project's long-term impact and lays the groundwork for continued innovation and application of the results.

Each phase of the dissemination process is designed to build on the previous one, ensuring a comprehensive approach to stakeholder engagement and maximizing the project's visibility and impact.

2.4 Tools and supporting resources

This section describes the envisioned dissemination tools that will be used through the lifetime of the project. Each of these tools plays a crucial role in a comprehensive dissemination strategy, enabling the project team to effectively communicate its work, engage with relevant audiences and maximize the impact of the project.

2.4.1 Journal and conference publications

Conference and journal publications are pivotal for sharing research findings, methodologies, and innovations of EMERALD with the academic and professional communities. This activity will start with position papers to outcome the preliminary results of the project and to receive feedback from the research community. Then, scientific and technical papers will be developed and submitted to ambitious venues, to assess the EMERALD approach from a scientific point of view.

In the following, we report a list of possible venues that have been identified for the time being.

JOURNALS

- **Computers & Security** provides the IT security community with a unique blend of leading-edge research and sound practical management advice. It deals with all aspects of computer security, including protection, integrity, and privacy of information, aligning well with EMERALD's focus on cybersecurity certification.
- **Elsevier Computer Communications**. This journal publishes research on various aspects of computer communications, including network security and cloud computing. Papers discussing the technical aspects of the EMERALD framework, such as its architecture, security mechanisms, or integration with existing cloud services, could be well-suited for publication here.
- **IEEE Security & Privacy** is the premier magazine of the IEEE Computer and Reliability Societies for informing their members about recent and forthcoming advances in information technology pertaining to security, privacy, and dependability. The interest of this magazine in novel perspectives on industry practices, research directions, and policy matters aligns well with EMERALD's objectives to enhance cloud service security and certification processes.

- **IEEE Transactions on Cloud Computing.** Dedicated to the field of cloud computing, this journal covers innovative ideas, research results, and applications, with an emphasis on security aspects.
- **IEEE Transactions on Network and Service Management (TNSM).** As a journal specifically focused on network and service management, TNSM would be an excellent choice for papers related to the management and operation of the EMERALD framework, including topics such as scalability, performance optimization, and network security management.
- **Journal of Cloud Computing.** This journal publishes research articles on all aspects of Cloud Computing. Principally, articles address topics that are core to Cloud Computing, focusing on the Cloud applications, the Cloud systems, and the advances that will lead to the Clouds of the future, making it relevant for EMERALD's technological and service-oriented advancements.
- **Journal of Information Security and Applications.** This journal focuses on the original research and practice-driven applications with relevance to information security and applications, ideal for detailed discussions on EMERALD's cybersecurity solutions.

CONFERENCES

- The **ACM SAC Symposium on Applied Computing (SAC)** has been a primary and international forum for applied computer scientists, computer engineers and application developers to gather, interact and present their work.
- The **ACM Symposium on Cloud Computing (SoCC)** is the annual conference on cloud computing from ACM. It brings together researchers, developers, users, and practitioners interested in cloud computing, and is the only conference co-sponsored by the ACM Special Interest Groups on Management of Data (SIGMOD) and on Operating Systems (SIGOPS).
- The **Cloud Computing Security Workshop (CCSW)** is an important venue, which gathers researchers and practitioners in all security aspects of cloud-centric and outsourced computing.
- **European Conference on Service-Oriented and Cloud Computing (ESOCC).** This conference is the premier conference on advances in the state of the art and practice of Service-Oriented Computing and Cloud Computing in Europe. It includes an annual track seeking contributions by European research projects. It can be a good venue to disseminate preliminary results concerning all KRs, including the initial development of the case studies.
- **European Symposium on Research in Computer Security (ESORICS).** The aim of ESORICS is to further the progress of research in computer security by fostering a European community that bridges academia and industry in this realm. Sequentially hosted across various European nations, the symposium has solidified its position as one of Europe's most prominent conferences on computer security.
- **ETSI security conference.** ETSI's annual flagship event on Cyber Security is an important opportunity for the security community to come together to exchange with experts, network with peers, and share facts and opinions around the most relevant subjects of cybersecurity standardization.
- **EU Cyber Act Conference.** This event brings together product developers and the standards community from overall 27 countries in order to address and explore the wide-ranging effects produced by the EU Cybersecurity Act as well as the Cyber Security Resilience Act.
- **ENISA's conferences.** ENISA (European Union Agency for Cybersecurity) organizes various conferences, workshops, and events focused on cybersecurity across Europe. These

conferences aim to bring together cybersecurity experts, policymakers, industry stakeholders, and researchers to discuss emerging threats, best practices, and strategies for enhancing cybersecurity resilience.

- The **International Conference on Cloud Computing and Services Science (CLOSER)** aims at bringing together engineers, researchers and practitioners interested in advances and applications concerning the cloud infrastructure, operations, and available services through the global network.
- The **International Conference on Cloud Computing Technology and Science (CloudCom)** is a well-known conference in the field of cloud computing. It covers a wide range of topics related to cloud computing technology and its applications.
- The **IEEE International Conference on Cloud Computing (CLOUD)** represents a forum for researchers and industry practitioners to exchange latest advances in the state of the art and practice of cloud computing, identify emerging research topics, and define the future of cloud computing.
- The **IEEE Symposium on Security and Privacy** is a venue suitable to present developments in computer security and privacy, and for bringing together researchers and practitioners in the field.
- The **IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)** is a well-established conference for presenting leading works on trusted computing and communications, with regard to trust, security, privacy, reliability, dependability, survivability, availability, and fault tolerance aspects of computer systems and networks.

Among more industrial-focused and practitioner-oriented venues that we envision for dissemination we highlight the following.

- **Cloud Security Alliance (CSA) Research.** CSA publishes research reports and whitepapers on various aspects of cloud security, including certification and compliance. Contributing to CSA research can help reach a wide audience of industry professionals.
- **RSA Conference** is one of the largest gatherings of cybersecurity professionals, featuring both technical sessions and industry-focused tracks. Presenting EMERALD research at RSA can help connect with practitioners interested in cloud security.
- **Infosecurity Europe** is another major conference focused on cybersecurity. It includes sessions and workshops tailored to practitioners, making it a good venue for sharing research on cloud security certification.
- **CloudFest.** This is one of the main internet infrastructure events in the world, connecting the global cloud computing industry.
- **Cloud Security Expo.** This expo focuses specifically on cloud security topics and attracts professionals from across industries. Presenting EMERALD research here can help engage with practitioners interested in cloud security certifications.
- **Cloud Industry Forum (CIF).** CIF is an organization focused on promoting best practices and standards in cloud adoption.
- **Cloud Security Conferences.** There are several conferences specifically dedicated to cloud security, such as Cloud Security World, CloudSec, and Cloud Identity Summit. These events attract practitioners interested in the latest trends and developments in cloud security, including certification of cloud services.

2.4.2 EMERALD news

EMERALD news will be published as annual summaries and will provide a comprehensive overview of the project's progress, achievements, and key findings. They will be written in an accessible language to cater to a broader audience, including stakeholders, funding bodies, and the general public. These summaries will highlight milestones, showcase success stories, and outline future directions. They will be distributed through the project's website, email newsletters, and social media channels, ensuring regular updates reach interested parties. Annual summaries will be published at the end of each year of the project, and will be available on the project's website.

2.4.3 Posters

Posters are visual tools designed to communicate the essence of the project at conferences, workshops, and other events. They effectively summarize the project's objectives, methodologies, results, and impacts in an engaging and easily digestible format. Posters encourage face-to-face interaction, sparking conversations and enabling the project team to explain their work in more detail to interested attendees. They are an excellent way to attract attention and spark interest in a casual or academic setting.

Like for the annual summaries, we plan to produce a poster at the end of each year of the project to summarize the objectives achieved and to present the results in suitable venues. Nevertheless, additional posters may be issued by the project partners to describe and present specific characteristics of the project whenever the opportunity arises to participate at a particular event. In particular, the content of each annual poster could include the following information:

- Year 1: Definition of the use case and high-level abstraction including the connection to user stories.
- Year 2: Definition of the high-level architecture and relations among components/tools.
- Year 3: Demo-system screenshots and proof-of-work.

2.4.4 Project showcases

Project showcases are demonstrations or presentations of the project's outcomes, prototypes, or technologies. In EMERALD, they will be mainly represented by demo videos, showing the functionality of the various tools developed in the project, allowing the audience to see the project's results in action and understand their practical applications. This tool is particularly effective for projects with tangible products, software, or innovations that can be demonstrated, such as EMERALD. All the videos produced during the project will be hosted on the EMERALD YouTube channel (described in Section 3.4.2).

We plan to release at least six demonstration videos, one describing the complete framework and the others specific for each component/tool included in EMERALD.

2.4.5 Events

Events, including workshops, seminars, webinars, and roundtable discussions, offer interactive platforms for disseminating project information and engaging with specific audiences. These events can be tailored to various purposes, such as educating stakeholders, fostering community engagement, discussing policy implications, or facilitating networking and collaboration opportunities. Events can be organized physically, virtually, or in a hybrid format, making them versatile tools for reaching and interacting with a wide range of participants. In EMERALD, the goal is to participate in at least 5 events per year, including different types of events: partners will be encouraged to participate in scientific conferences where papers presenting the project

or parts of the project will be accepted. Similarly, partners will be invited to attend industry events to publicise the EMERALD project and forge possible collaborations. Additionally, whenever possible, partners themselves will organize workshops on the project's themes to facilitate direct dialogue and exchange of ideas among stakeholders.

2.4.6 Presentations

Project Presentations will play a crucial role in the dissemination strategy, serving as a direct and engaging method to communicate the progress and outcomes of the project to a diverse audience. These presentations will be tailored for various events, showing detailed insights into the project's objectives, methodologies, and results. The goal is to inform stakeholders, attract potential collaborators, and garner support from the broader community. Each presentation will be crafted to highlight the innovative aspects of the project, demonstrating its relevance and benefits in real-world applications.

Additionally, these presentations will be made available on the EMERALD website to reach a wider audience. This approach will enhance the project's visibility and foster interactive dialogue and feedback. In this regard, the first EMERALD General Presentation has been published and can be used by partners attending to general-purpose events, where they can present the EMERALD project in broad outline (this presentation is detailed in *APPENDIX B: EMERALD General Presentation*).

2.5 Monitoring and assessment

As introduced in the description of the dissemination process, all the dissemination activities will be continuously monitored and assessed to ensure the achievement of the envisaged objectives. Continuous monitoring is also pivotal to identify potential deviations in the KPIs compliance and to promptly react by applying the appropriate countermeasures.

The monitoring and assessment phase will be based on the completion of the "WP6 Monthly report". This tool is an excel file containing all the dissemination, communication and networking activities related to WP6 (see Table 2). The file is available in the project's Fabasoft repository, and each partner updates it monthly. A detailed description of this report can be found in *APPENDIX A: WP6 Monthly Report*.

Table 2. Items in the WP6 Monthly report

Name	Description	Interested task(s)
Scientific publications (submitted)	List of scientific publications submitted in the reference month, but not yet accepted.	Dissemination
Scientific publications (once accepted/published)	List of scientific publications once they have been accepted.	Dissemination
General and business publications (announced)	List of publications that cannot be considered scientific. For instance, project-related publications on the partners' websites, interviews on the media, featured articles on the media.	Dissemination Communication
Events	List of events attended.	Dissemination Communication Networking
EMERALD fragments	List of posts published in the EMERALD web page in the section "EMERALD fragments".	Dissemination Communication

Name	Description	Interested task(s)
Collaboration & Cooperation	List of Networking activities performed with existing projects, initiatives, alliances, working groups, etc.	Networking
Press Releases	List of press releases published both at individual organizational level and by the whole consortium, by communication means such as newspapers, conferences or specialized magazines.	Communication
Other dissemination activities	Any other dissemination activity that does not fit in the previous sections.	Dissemination

To assess the correct development of the dissemination activities, the consortium will rely on Key Performance Indicators (KPIs), which will be used to monitor the progresses with a particular emphasis on the impact created rather than on the quantity of the results. Since the dissemination activities are crucial for the exploitation and commercialization of results, the partners will be stimulated to contribute actively. Table 3 describes the KPIs defined by the EMERALD consortium to monitor dissemination activities.

Table 3. EMERALD dissemination KPIs

Tool	KPI	Objective	Contingency plans
Journal publications	N. of publications submitted to international scientific journals	at least 2	Partners will be encouraged to publish papers, by indicating suitable venues. Should primary journal targets be challenging due to rejection or long publication times, alternative reputable journals will be identified for submission. Additionally, preprint repositories can be utilized to promptly share findings, ensuring continuous visibility and academic engagement.
Conference publications	N. of publications accepted to international scientific conferences	at least 10	In circumstances where open access can expedite dissemination, such open access journals will be considered. Collaborative publications with international researchers will help adapt strategies based on diverse experiences and broaden the research's impact. Early engagement with journal editors will also be pursued to tailor submissions more closely to editorial expectations and enhance acceptance chances.

Tool	KPI	Objective	Contingency plans
EMERALD news	N. of annual summaries published	1 per year	Partners will be encouraged to compile the WP6 monthly report, to keep track of all the activities related with WP6. The WP6 leader will be involved in meetings of other WP to stay up-to-date with news and the progress of the project in its various parts.
Posters	N. of posters related with EMERALD	at least 1 per year	Encourage partners to publish posters. Find appropriate events such as ETSI Security Week, EU Cybersecurity Act conference, Cloud Expo or ICT Event among others.
Project showcases	N. of demonstration videos produced	at least 6	Every time a prototype is implemented as part of the EMERALD solution, the possibility of creating a video describing it will be considered. Furthermore, the integrated platform as well as its validation on the different use-cases will be possibly exploited to create demonstration videos.
Participation in events	N. of events attended in which EMERALD (or parts of) will be presented or exhibited	at least 5 per year	The potential key events, interesting for EMERALD, will be monitored and reported in every WP6 meeting. Each event attended by EMERALD partners to present the project will be reported in the WP6 monthly report.
Cloud Community Publications	Number of references in external sources (e.g., project websites, Collaboration and Support Actions, EC)	>15	The scientific community, commercial stakeholders and the general public will be the target groups of the communication activities. The references to the EMERALD project will be monitored and checked every 6 months in order to fulfil the required KPI.

3 Communication strategy

The European Commission describes communication as follows:

“Communication means taking strategic and targeted measures for promoting the action itself and its results to a multitude of audiences, including the media and the public, and possibly engaging in a two-way exchange” [6].

In EMERALD, the Communication Task is devoted to the development of an effective communication strategy to promote the advancement and the results of the project. It will include a wide range of activities such as setting the visual identity, project website, materials (brochures, rollups, posters, flyers), social media, videos and press releases. These will help in providing targeted information to multiple audience, including the scientific community, commercial stakeholders, and general citizens.

The focus of the communication activities will be to create awareness, along the interested audience, of the EMERALD solutions and the problems it can solve. Therefore, the target will be to create and send key communication messages that are easy to understand, relevant and appropriate. The emphasis of these communication activities will be placed to create a community of people interested in the EMERALD solutions, where they may participate and co-create additional services to those already planned in the project. These activities will also be oriented to the commercial side to provide a first overview of the EMERALD approach and framework and arise curiosity in new scientific or industrial partners.

The definition of the communication strategy will pay special attention to the complementarity of the various actions to be carried out and will take into consideration the following elements:

- 1) Information about stakeholders and their roles.
- 2) The types of information that need to be shared with stakeholders.
- 3) The adoption of appropriate communication tools to communicate.
- 4) The frequency with which each stakeholder would like to receive information.
- 5) Implementation details.
- 6) Monitoring and assessment.

3.1 Objectives

A broad communication action will be undertaken to promote project objectives, activities and findings in a clear and comprehensible way to the audience. The EMERALD communication strategy will pursue the following objectives:

- Informing and involving society to show how it can benefit from the project activities.
- Demonstrate how EU funding helps to address technological and societal challenges.
- Raise awareness among CSPs, auditors, certification authorities, certification bodies, ENISA, industrial associations and cloud consumers.
- Ensure proper communication and maximum visibility of the project key facts, objectives, activities and findings.
- Distribute communication materials at relevant conferences involving the scientific community and at less specialized events aimed at the general public.
- Involve mass media through press releases.
- Pave the way for a successful commercial exploitation of the project outcomes.

3.2 Target groups

This section provides information about the identified stakeholders for a communication focusing on scientific-technical communities, commercial stakeholders and general public. EMERALD has identified initial stakeholders and key messages to be conveyed to communicate the results of the project:

Cloud Service Providers and Customers

Emphasise the benefits of adopting a framework such as the one proposed by EMERALD to achieve ongoing certification. This includes demonstrating how the framework can improve the efficiency and effectiveness of certification processes by enabling continuous monitoring and assessment of security standards.

ENISA/certification agencies

Demonstrate the benefits of the continuous certification framework to achieve and maintain compliance with EU-wide cloud security certification standards. This includes discussing how the framework can help harmonise certification procedures and increase transparency for consumers.

Auditors/accredited bodies

Emphasise how the EMERALD framework can strengthen the role of auditors and accredited bodies in verifying and confirming compliance with safety standards.

Scientific and Technical community

Emphasise the innovative nature of the EMERALD solution. This includes highlighting the technological advances and research that have gone into the development of the framework and the potential impact on improving cloud security.

General public and cloud service users

Illustrate how a continuously certified cloud service provider ensures the security of data and services at different levels. This can be done by presenting case studies or examples that show how the framework works in practice and how it helps to protect consumers.

Communicating these messages requires a clear and coherent strategy that ensures that each stakeholder group receives the information that is most relevant to them.

3.3 Communication process

The main aim of the communication strategy is to raise awareness about the EMERALD project and its results, with the intention of building a community interested in it.

At the project level, communication requires a clearer conceptualization. Therefore, the EMERALD consortium has deemed necessary to define a process that partners can follow for their communications actions:

- Identify a person and a group of persons dedicated to communication. This includes the creation of a team of people which, at various levels, will be dedicated to communication activities.
- Identify the key audiences and the target messages.
- Describe and follow up the list of expected actions that partners aim to realize in the project lifetime, including the frequency and timing of those actions.
- Create and design the communication tools.

- Evaluate and monitor the process.
- Improve the process when necessary.

3.4 Tools and supporting resources

Communication tools have become an essential component of successful project management and innovation. The ability to work together, share ideas, and communicate clearly is crucial for the project to thrive. This section outlines the communications means that will be used in EMERALD to reach out to the identified stakeholders and enable information sharing between them.

3.4.1 Website

The EMERALD website is active since February 2024 and is available at the following link: <https://www.emerald-he.eu/>

It has been designed to provide users with all the publicly accessible information on the project's actions and targets reached. The website has a twofold goal. On one hand, it will be used for short, targeted messages, presenting the project and the activities in a friendly manner. On the other hand, it will be used as a platform to share the project's activities, results and materials such as deliverables, communication tools, open-source software and other.

The website incorporates different sections to host the different kinds of content that will be accessible during the project. It is developed as a single access point where all the latest information, results and achievements are accessible in a structured aspect, hosting the EMERALD Fragments and social media accounts of the project with all the latest information.

As established in deliverable D6.1 [7] the website is a robust communication and dissemination tool that will be regularly updated as the project goes on, with publications, news, achievements and events. All the details concerning the view and perception, structure and content of the website can be found on Deliverable D6.1. Table 4 summarizes the main characteristics of the EMERALD website.

Table 4. Main characteristics of the EMERALD website

Characteristic	Description
Objective	Provide information about the project with different levels of detail.
Key Message/Content	Communicate the mission of EMERALD, the solutions adopted, and the results achieved (software, deliverables, publications). It will also include EMERALD fragments coming from the partners, participation in events, news, networking activities and links to social network profiles.
Target Groups	Scientific community, Technical community, Technology providers, Certification agencies, Cloud services providers, Cloud services consumers, Auditors, Security certification experts and General public.
Information Required & Level of Detail	Different levels of detail in the information. While most of the website is written in a user-friendly manner, with brief and focused content, posts, also known as EMERALD fragments, can be much more detailed and in-depth. For in-depth information of EMERALD, visitors can even check out the public deliverables that will be posted on a dedicated page of the website.
Information Providers	All EMERALD partners

Characteristic	Description
Language	English
Frequency & Timing	News and Fragments will be updated on a regular basis. All other information will be uploaded whenever it becomes available.
Feedback and Follow Up Activity	Feedback from visitors and partners, KPIs coming from Google analytics tools.

3.4.2 Social media

The EMERALD consortium understands communication activities as those in which the project's expected added value is presented and demonstrated to non-specialized audiences with the aim of promoting the project itself and the results attained to a wider audience. This is done by harnessing the power of social media. Regular updates on events, news or the status of the project will be published on the EMERALD's social channels.

Social media is clearly an effective instrument to communicate with different types of audiences. Choosing the right messages and format is important to reach different target groups. EMERALD's aim is to specifically leverage these differences, as summarized in Table 5.

Table 5. Social media strategy

Community	Potential partners	Scientific community
• Conversational approach • Include pictures to catch people's eyes • Share latest achievements • Share EMERALD events/meetings • Supply statistics and info about cybersecurity and certification	• Simple vocabulary • Highlight project partners • Video, graphics and images over long text • Share project outcomes • Invitation to join discussions • Share EMERALD events/meetings • Supply statistics and info about cybersecurity and certification	• Scientific publications • Project results • Information about the Project achievements • News about Cybersecurity and Cloud service certification • Networking initiatives • Share news regularly

An initial set of social network profiles have been created during the first months of the project and their contents will be updated by all the partners on a regular basis. From the range of the existing social networks, EMERALD will focus on X, LinkedIn and YouTube.

X: @EmeraldHEproj

URL: <https://twitter.com/EmeraldHEproj>

X, where events, milestones and achievements will be broadcasted. X (Twitter) will be used both for content generated inside the project as well as outside the project. The topics will revolve around security and certification. EMERALD will also follow relevant accounts on the topics. The goal is to attract visitors and create awareness of the project. As a good practice to generate leads, whenever a post is published on the website, a tweet is published announcing it. This will help spread the word about the project through retweets and likes. Short news, updates or complementary links associated to the project will also be published. A strategic list of relevant hashtags and potential followers will assist the communication team in gaining attention and sharing existing knowledge.

LinkedIn: emerald-he-project

URL: <https://www.linkedin.com/company/emerald-he-project/>

LinkedIn, where the project's results will be made available. This social network has a professional character, messages will be sent to a specific audience to collect different experiences, results, observations or evidence in events. Messages in LinkedIn should be comprehensive, providing, if possible, technical details. Messages should be made accessible for reading also to an audience that does not have a LinkedIn account. In this way, it will be possible to get in touch with other business, scientific and economic entities and share results, open issues, or future initiatives in other contexts.

YouTube: @EmeraldHEproject

URL: <https://www.youtube.com/@EmeraldHEproject>

The YouTube channel will serve as a repository for all video content related to the project. It will be used to showcase practical applications and functionalities of EMERALD through detailed video demonstrations. These videos will provide visual insights into how the project's tools are implemented and will possibly show their impact in real-world scenarios. The goal is to engage viewers by showing the tangible benefits of the project, thereby enhancing understanding and support among the target audience. To maximize reach, each uploaded video will be promoted across other social media platforms, accompanied by brief descriptions and links to detailed content.

Finally, project partners will play an important role to give visibility to the project by sharing EMERALD achievements and news through their own social media pages. In particular, partners will be encouraged to:

- Follow EMERALD on social media.
- Engage with social media contents (like, share, comments).
- Share what appears on EMERALD's social media inside their social media accounts.
- Include EMERALD social media accounts inside project publications to maximize impact and attract followers to the EMERALD accounts.

3.4.3 Flyers

The project flyers are intended to raise awareness of the EMERALD project and to present key project information in a concise manner. They also aim at highlighting the project's innovative approach to Evidence Management for Continuous Certification in Cloud Services and to entice the reader to visit EMERALD's website for further insights. Flyers will be printed for distribution at appropriate locations, but they can also be viewed and downloaded through the website. The presentation of the content and design of the first project flyer, released in February 2024, can be found in D6.1 [7].

This first project flyer, realized in a tri-fold layout, is shown in Figure 1 and Figure 2, and is available at the project web page: <https://www.emerald-he.eu/flyers/>.

PARTNERS

tecnalia TECNALIA is the largest centre of applied research and technological development in Spain. It provides specific solutions to the major global challenges and transforms technological research into prosperity.

Fraunhofer FRAUNHOFER AISEC, a leader in cybersecurity research, develops customized security concepts and solutions to protect businesses and the public sector against cyberthreats and to enhance data security.

Fabasoft Fabasoft PROCESO is a unique business ecosystem providing selected, powerful and seamlessly integrated solutions for document-intensive business processes.

CNR CNR is the largest public research institution in Italy. Founded in 1953 it is focused on carrying out, disseminating and enhancing scientific and technological research in the main fields of knowledge.

SCCH SCCH is a non-profit COMET center that focuses on data and software science. Excellent research is conducted in both areas at SCCH. SCCH was founded by the Johannes Kepler University Linz in 1999.

Know-Center The Know-Center is a leading European innovation and research center for trustworthy AI and data science.

CaixaBank CaixaBank is the leading financial group in Spain and one of the most significant in Portugal. Constantly striving for the innovation, it will provide a large experience on cybersecurity in finance.

IONOS IONOS is the leading European digitalisation partner for small and medium sized businesses (SMB).

CloudPiero CloudPiero provides innovative cloud services. The company values and operates cloud computing platforms for demanding markets, such as the European space sector, climate research and science.

Open Nebula OpenNebula Systems is the deep-tech company behind OpenNebula, the only European open-source Cloud & Edge Computing Platform in the market and a success story of EU-funded research and innovation.

Nixu NIXU, a DNV company, is a trusted cybersecurity services partner. We help our customers ensure business resilience with peace of mind across multiple industries, enabled by some of the best cybersecurity professionals in Europe.

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PROJECT INFO

Overall budget: € 5,498,900
Start date: Nov 2023
End date: Oct 2026
Coordinated by: FUNDACIÓN TECNALIA RESEARCH & INNOVATION
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Funded by the European Union

EMERALD
Evidence Management for Continuous Certification as a Service in the Cloud

Figure 1. Outer panels of the first EMERALD flyer

OBJECTIVES

- 1 Provide next generation evidence gathering tools based on a knowledge graph approach.**
KR1 EXTRACT: A framework to continuously extract knowledge on various layers of the cloud service and prepare suitable evidence based on them.
KR2 CERTGRAPH: A graph-based structure, the certification graph, to consolidate all necessary information of the service and make it easily query-able.
- 2 Reduce complexity in multi-scheme Cloud certifications by assisted metric mapping.**
KR3 OPTIMA: An intelligent system to select an optimized set of metrics that can be measured to demonstrate compliance to the selected certification scheme.
KR4 MULTICERT: A tool to assess chosen metrics based on information stored in the certification graph and to evaluate the final certificate decision.
KR5 AIPOC: Proof of concept (PoC) on how to scale the CaaS approach to cloud-based AI systems.
- 3 Provide a seamless user experience of continuous auditing for auditors and auditees.**
KR6 EMERALD UI/UX: A user interaction concept and conducted studies to show what information each user needs in an audit process.
- 4 Provide interoperability to other frameworks, security assessment tools and repositories.**
KR7 INTEROP: An interoperability layer, the trustworthy systems, assessment results and catalogue data.
- 5 Validate the outcomes in industrial pilots.**
KR8 PILOTS: Involvement of realistic use cases by potential applicants of EMERALD.
- 6 Promote the project, disseminate results and coordinate with international agencies.**
KR9 DECAS: Dissemination and communication of results via multiple channels, relevant conferences and the scientific community. Exploitation of achievements by the technical and pilot partners. Standardization activities to discuss, verify and deepen the findings with standardization bodies.

BENEFITS

- Provide novel techniques on the assessment of AI models [KR5-AIPOC] specific to the robustness of ML systems, their interpretability, and the mitigation of potentially negative impacts such as model unfairness.
- Explore for existential overlap between cloud certifications and AI-based certifications with the aim of evidence re-usability in a multi-certification scenario [KR4-MULTICERT].
- Integrate evidence collection techniques into a single graph-based structure, the Certification Graph [KR2-CERTGRAPH].
- Develop a holistic security evaluation approach for ML models by making scientific findings applicable in the real world.
- Improve and extend existing evidence collection techniques, mainly organisational evidence extraction like done in AMOE.
- Offer a concept for a UI to address certification-as-a-service [CaaS] and its continuous and lean re-certification aspects focused on the user [KR6-EMERALD UI/UX].
- Put in place a co-design approach that combines empirical social enquiry and computational approaches to investigate requirements, work-related phenomena, interdependencies in work processes and the available technologies to obtain a holistic view of the current state of practice.

THE PROJECT

The main objective of EMERALD is to pave the road towards Certification-as-a-Service (CaaS) for continuous certification of harmonized cybersecurity schemes, like the European Cybersecurity Certification Scheme for Cloud Services (EUCS).

Addressed users of such a CaaS solution are stakeholder groups of the cybersecurity domain: cloud service providers, cloud customers, auditors, and standardization agencies.

For cloud service providers as well as cloud customers, EMERALD will offer a framework to set-up, manage and monitor their certifications and enable lean re-certification.

For auditors, EMERALD will be an audit assistance framework.

To achieve the overall objective, EMERALD will design and implement a user interaction concept, offering a uniform way to address audits and offer the above mentioned stakeholders a solid degree of complexity reduction through the customization of the audit process.

Lastly, EMERALD will provide cybersecurity and standardization agencies with novel strategies and methods for building cybersecurity requirements and metrics that can react to changes and, if necessary, are interoperable enough to be translated to other schemes.

Figure 2. Inner panels of the first EMERALD flyer

Table 6 summarizes the main characteristics of the EMERALD flyer.

Table 6. Main characteristics of the EMERALD flyer

Characteristics	Description
Objective	To be distributed at conferences, workshops, meetings and events.
Key Message/Content	Present key aspects of EMERALD and raise awareness of the project.
Target Groups	Visitors to conferences and events, visitors of the website, general public.
Information Required & Level of Detail	Project info, key objectives, benefits, partners logos and description, social media accounts.
Information Providers	Communication and dissemination. Task Leaders.
Language	English
Frequency & Timing	At least 3 Flyers distributed among partners.
Feedback and Follow Up Activity	Get feedbacks from the Project Coordinator and make changes accordingly.

3.4.4 Press releases

EMERALD will publish the project's activities and achievements through the different communication tools, but will also produce press releases to reach national news outlets. EMERALD will engage with the press as a mediator between the project and its audiences. It will therefore target both general and specialized media outlets, depending on the specific messages and needs at any given time of the project.

Press releases will identify the project milestones emphasizing on clear and to-the-point presentation of goals, key achievements, approach adopted, benefits, events and partner initiatives. Joint consortium press releases will be produced in English language, but will also be translated in all the languages of partners involved in the project. They will be disseminated to the media, press agencies and on social networks whenever considered relevant. Partners are also encouraged to produce their own press releases to communicate locally. Table 7 summarizes the main characteristics of the EMERALD Press releases.

Table 7. Main characteristics of the EMERALD press releases

Characteristics	Description
Objective	Provide details of the project goals and status. Press releases are essential for maintaining visibility and engaging with a wider audience.
Key Message/Content	Briefly present different key aspects of EMERALD.
Target Groups	Scientific and technical community, Technology providers, Certification agencies, Cloud services providers, Cloud services consumers, Auditors, Security certification experts and general public.
Information Required & Level of Detail	Press releases provide timely updates on the project's progress, significant milestones and newsworthy events to the media and general public. They present different key aspects of EMERALD:

Characteristics	Description
	- In a less technical language (for the general audience) - In a more technical way (for CSP's, compliance managers, auditors...)
Information Providers	WP leaders and Task leaders.
Language	English, Spanish, German, Italian, Polish and Finnish.
Frequency & Timing	At least 2 per country in the project, translated into the partners language
Feedback and Follow Up Activity	Feedbacks from media and readers.

3.4.5 EMERALD fragments

A section of the project website will be dedicated to the publication of the EMERALD “fragments”, which will offer short in-depth pills on the different project activities. A sort of online diary in which all partners will keep users updated on the technologies, solution adopted, problems faced and any other relevant news that occur during the project lifetime.

Fragments represent pieces of information written in a simple and straightforward style enriched with images and links to further information and to the website's detail page. Table 8 summarizes the main characteristics of the EMERALD Fragments. They are organized into the following categories to make it easier for the reader to find news items about the project:

- Deliverables
- Communication
- Events
- Meetings
- Networking
- Publications
- Exploitation
- Standardization

EMERALD fragments are available at the following link: <https://www.emerald-he.eu/emerald-fragments/>. They will be used to raise awareness about EMERALD milestones and outcomes. Whenever a new fragment is published on the website, it will also be used for dissemination on social networks, thus attracting users' attention to the EMERALD project.

Table 8. Main characteristics of the EMERALD fragments

Characteristics	Description
Objective	Provide information about different aspects of EMERALD. The content is written by partners, who are free to decide which content they wish to publish. Fragments will deal with different issues on which EMERALD focuses on.
Key Message/Content	Briefly present different key aspects of EMERALD.
Target Groups	Scientific and technical community, Technology providers, Certification agencies, Cloud services providers, Cloud services consumers, Auditors, Security certification experts and general public.

Characteristics	Description
Information Required & Level of Detail	Fragments will be on the EMERALD website and will usually describe the project, results and benefits with a language easy to understand by everyone. In addition, fragments can also be released on partners' websites.
Information Providers	All partners
Language	English
Frequency & Timing	At least 2 per month
Feedback and Follow Up Activity	Feedbacks from readers

3.5 Monitoring and assessment

The monitoring of the communication activities of EMERALD will be carried out through the regular assessment of the Key Performance Indicators (KPIs) which are defined with respect to the communication outreach foreseen for each tool.

As part of the tracking of the communication activities a “Social media/Fragments Rotation Schedule” will be defined. This will be supported by a calendar to schedule the social media posts and the Fragments to be published on the website. This will allow the communication team to ensure a minimum number of actions to capture the attention of the audience. The first version of this calendar is available in *APPENDIX C: Social media/Fragments Rotation Schedule*.

Monitoring activities will be carried out using Google Analytics metrics for the project website and Twitter analytics. The WP6 leader and the Project Coordinator will regularly monitor the Communication KPIs, which will be tuned to cover all aspects of communication. The M18 and M36 reports will include updates on the fulfilment of the project KPIs. Table 9 describes the initial list of these KPIs.

Table 9. Communication KPIs

Comm. Tool	KPI	Objective	Contingency plans
EMERALD website	Yearly visits	>1,500	Promoting the website through other channels (especially in social networks).
	Duration of visits	More than 2 min. for 40% of users	Re-organize the website to make it easier to find relevant items. Upload more attractive content.
	Monthly downloads: Posters, flyers Public reports	30 50	Promoting the website and the downloadable material through other channels (especially in social networks).
Social media X	Regular tweets or when a relevant milestone is taking place (e.g., event, releases, etc.)	>200 followers At least 36 tweets (1 per month)	Control and encourage the publication of tweets, depending on the phase of development and implementation. These may be monthly, weekly or even daily at peak milestones.

Comm. Tool	KPI	Objective	Contingency plans
Social media LinkedIn	Regular posts whenever a relevant milestone is taking place (e.g., event, releases, etc.)	At least 36 posts (1 per month)	Manage and encourage the publication of posts, depending on the phase of development and implementation. These may be monthly, or weekly at peak milestones.
Flyers	Number of flyers produced	At least 3 1) CNR 2) TECNALIA 3) FABA	Create and send key communication messages that are easy to understand, relevant and appropriate.
Press releases	Number of specialized press releases	At least 2 per country in the project, translated into the partners language	Manage the publication of press releases and encourage partners in translating and publishing them as well
EMERALD fragments	Number of entries	At least 6 every year	The posts in the EMERALD fragments section will discuss the different technologies, solutions, problems faced or any other relevant novelty that has occurred in the project. Posts will be advertised on social networks to bring more traffic to the website.

4 Networking strategy

Networking activities involve all external initiatives as well as liaison and co-operation activities with other projects or initiatives with same or similar targets to EMERALD. The consortium will actively seek to expand collaborations with other related national, EU and international projects to foster synergies, build on relevant available results, avoid effort duplication and optimise the results of the projects and public resources invested in research. The continuous networking and collaboration activities with external bodies will have a strong impact on the high quality and competitiveness of the solution.

This section provides a synthesis of the networking plan that has been outlined for the project, and discusses the opportunities arising from networking and other online and physical presences.

4.1 Objectives

EMERALD will participate in networking activities which relate to its KRs and engage with communities involved in the continuous security certification domain. The defined networking plan focuses on participation in activities with:

- Existing or completed National, Pan-European and International Projects relating to the continuous security certification topic.
- Cloud Computing related groups/organisations.
- International Scientific Conferences.
- Relevant Collaboration and Support Actions from the EC.

The implementation of networking activities within EMERALD will be carried out by all partners, considering their specificities and existing networks covering various audiences and initiatives (including scientific, commercial and industrial efforts). In particular, KR owners have a responsibility to network with their peers to benefit from exposure to third parties.

One of the main aspects relevant to the networking activities is the correct identification of the audience and the specific purpose of the event attendance. Attendance at an event should be justified and followed up after the event to track the impact created. The focus of networking will also change as the project and key results become more mature.

The main expected outcomes from the networking activities include:

- Gathering information and expert knowledge on specific topics related to the EMERALD KRs.
- Raising awareness of the EMERALD approach and solution in relevant knowledge areas and contributing/enriching approaches of other initiatives.
- Positioning the EMERALD project within relevant initiatives.

4.2 Target groups

Table 10 lists the networks with which EMERALD consortium members expect to collaborate throughout the project. Please note that the list of Stakeholders, which was identified in the DoA [2], includes the following: Certification agencies, Cloud service providers, Cloud service customers, Auditors/security certification experts, Scientific and technical community in the field of CaaS.

Table 10. Networks

Partner	Networking/Target Groups	Stakeholders
TECNALIA	Cloud consumers, Data Centre Operators, EU Projects, SMEs, Academic Researchers, Enterprise Business	All
Fraunhofer	Cloud Service Providers, EU Projects, Open-Source Community, EU IPCEI-CIS ecosystem	All
FABA	ETSI TC-CYBER & TC SAI, EU Alliance on Industrial Data, Edge and Cloud, bitkom Germany, Austrian research projects, Austrian I4.0 Hub, LNI4.0, Gaia-X	All
CNR	EU and national projects, Academic Researchers	Scientific and technical community in the field of CaaS
SCCH	EU Projects, SMEs, Academic Researchers, Industrial Partners of SCCH Network, Research organization's partners of SCCH Network	All
KNOW	EU Projects, Academic Researchers, SMEs and Industry Partners of the Know-Center Network	All
CXB	EU projects, SMEs, Press Releases, industrial partners of CXB network	All
IONOS	EU and National Projects, Cloud Providers	All
CF	Cloud Service Providers, EU projects, Academic Researchers	All
ONS	Cloud Service Providers, Data Centre Operators, EU Projects, Academic Researchers, Enterprise Business, EU IPCEI-CIS ecosystem, NexusForum.eu ecosystem, EU Cloud Alliance ecosystem.	All
NIXU	DNV Assurance, CSPs from finish market, Cloud Services customers from finish market, Nixu and DNV Security certification experts, TRAFICOM and NCSA-FI	Certification agencies, Cloud service providers, Cloud service customers, security certification experts.

4.3 Networking process

The networking plan will follow the same approach as the dissemination plan and will evolve in the three separate phases already defined in the DoA [2]. In addition, we will implement continuous monitoring and assessment of networking activities, as described in section 4.5.

Phase I: Awareness creation (M1-M6)

- Identify collaborative projects and initiatives.
- Identify the target audience.

- Identify the representatives of the communication team who will lead each collaborative activity.

Phase II: Delivery (M7-M30)

- Facilitate networking activities with projects identified in Phase I.
- Facilitate engagements with organisations, groups or specific audiences identified during Phase I.

Phase III: Final (>M31; after the project end)

- Establish networks to demonstrate the key results emerging from EMERALD.
- Conclude project collaborations and define activities beyond the project.

The EMERALD networking team, consisting of one representative member from each of the respective organisations, will carry out the networking process shown in Figure 3. The main results of the networking activities will be reported in D6.4 “Dissemination and Communication Report-v1” and D6.5 “Dissemination and Communication Report-v2”, and will be published in the “Networking” section of the EMERALD website.

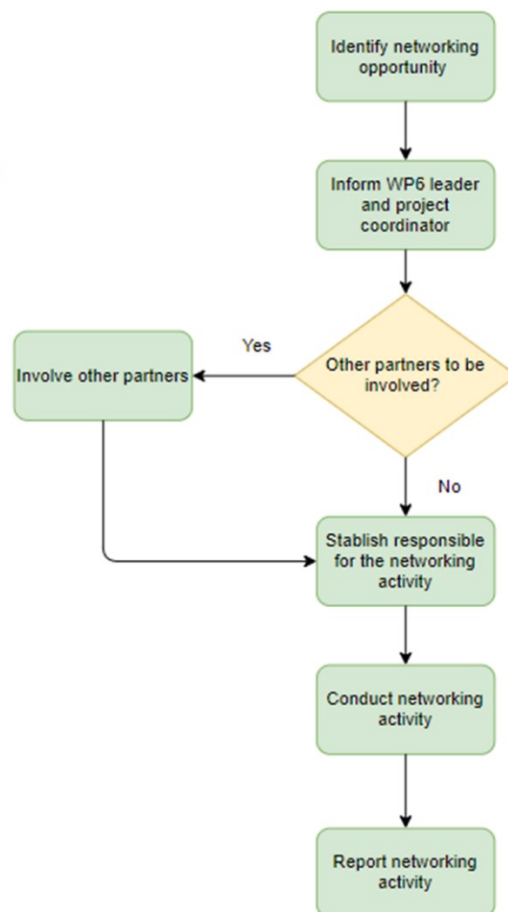


Figure 3. EMERALD Networking process

4.4 Networking initiatives

This section describes the Networking activities foreseen in EMERALD, which have been classified into three categories:

- Collaboration with projects.
- Collaboration with networks.
- Collaboration with other initiatives.

4.4.1 Projects

EMERALD will establish a close collaboration with those “sister” projects approved under the same topic as EMERALD, i.e., HORIZON-CL3-2022-CS-01-04 Development and validation of processes and tools used for agile certification of ICT products, ICT services and ICT processes¹. The creation of the *Cluster of Future Certification projects* is foreseen as a way to operate a real collaboration between these projects with the aim of creating a greater impact and awareness of the activities carried out. Other related projects will be invited to the Cluster to increase the potential and impact for joint events and joint publications covering different points of view.

The *Cluster of Future Certification projects* is envisioned to provide a forum for discussion and collaboration for research and innovation initiatives that address the challenges and issues of *Next Generation Agile Certification* from various perspectives and approaches. Its main objective is to foster collaboration among existing research initiatives, creating a critical mass of projects to share experiences, collaborate on approaches in order to elaborate a broad EU perspective, and discuss challenges for adoption and future research.

Collaboration can be established in two ways:

- Technical:
 - Technical collaboration between projects.
 - Collaboration on scientific papers.
 - Sharing/Developing best practices for approaching technical collaboration with open-source communities.
 - Development of roadmaps for future research.
- Dissemination and Exploitation:
 - Organisation of joint workshops focusing on both academia and industry.
 - Supporting individual projects through the organisation of project innovation management events.
 - Organisation of joint exploitation workshops to bring together researchers, technology transfer experts, legal experts, industrial experts and external venture capital experts and obtain recommendations for projects.
 - Whitepapers on specific topics.

Table 11 presents the European projects related to EMERALD that are potential candidates for networking its research and results.

Table 11. Projects related to EMERALD

Project	Objective and scope	Potential areas of collaboration	Status
ECCO² : European Cybersecurity Competence	This project, led by the European Cyber Security Organisation (ECSO), aims to support the activities necessary to develop, promote, coordinate and organize the work of the	Participation in the ECCO Community group on Roadmapping, coordinated by FhG and CNR. Co-	Started

¹ Please refer to: https://cordis.europa.eu/programme/id/HORIZON_HORIZON-CL3-2022-CS-01-04/en

² Please refer to: <https://cyberwatching.eu/ecco-about-us>

Project	Objective and scope	Potential areas of collaboration	Status
Community 	Cybersecurity Competence Community at European Level, within the scope and operations of the ECCC and National Coordination Centres Network. The goal is to improve cooperation between cybersecurity projects and initiatives, public and private, across Europe.	organization of webinars and events.	
COBALT³: Certification for Cybersecurity in EU ICT using Decentralized Digital Twinning 	COBALT aims to elevate the overall level of cybersecurity, contributing to a future where certifications are universally recognized and trusted. By aligning with existing initiatives such as the EU CSA, ENISA, EUCS, and the EUCC, the project becomes a catalyst for harmonizing cybersecurity practices.	Cluster of Future Certification projects	Started
CERTIFAI⁴: Agile conformance assessment for cybersecurity CERTification enhanced by Artificial Intelligence 	CERTIFAI endeavours to create an open software framework employing AI-driven, cost-efficient continuous assessment and (re-)certification methods specifically tailored for ICT products, processes, and services. This proactive approach addresses the evolving cybersecurity landscape by ensuring robust compliance throughout the product life cycle.	Cluster of Future Certification projects	Started
CUSTODES⁵: A Certification approach for dynamic, agile and reUSable assessmentT fOr composite systems of ICT proDucts, servicEs, and processes 	CUSTODES will discover and translate certification information of the Building Blocks of the composite ICT products or Services under evaluation, will provide Certification information to the interested parties and will share information on newly identified vulnerabilities related to the specific blocks or composite products as needed	Cluster of Future Certification projects	To be started

³ Please refer to: <https://horizon-cobalt.eu/>

⁴ Please refer to: <https://certifai.info/>

⁵ Please refer to: <https://custodes-project.eu/>

Project	Objective and scope	Potential areas of collaboration	Status
	increasing transparency, re-usability and trust. It will also utilize a Restricted & Trusted Execution (RTE) Environment, to ensure the chain of custody of the product under assessment.		
CERTIFY⁶: aCtive sEcurity foR connectEd devices liFecYcles 	CERTIFY defines a methodological, technological, and organizational approach towards IoT security lifecycle management with the objective of achieving a high level of security in detecting and responding to a broad spectrum of attacks.	Cluster of Future Certification projects	To be started
DOSS⁷: SECURE-BY-DESIGN IOT OPERATION WITH SUPPLY CHAIN CONTROL 	DOOS focuses on improving the resilience of IoT supply chains.	Cluster of Future Certification projects	To be started
IPCEI-CIS⁸: IPCEI Next Generation Cloud Infrastructure and Services 	Initiative aimed at building the next-generation cloud-edge infrastructure for Europe. The objective is to build a powerful and sustainable first-ever “Multi-Provider Cloud-Edge Continuum” that is not tied to individual providers. AI-optimised security solutions for the next-generation cloud edge in diverse cloud environments will be developed, enabling the seamless integration of a variety of different new data processing solutions in the European Union.	The developments during the IPCEI-CIS project will be monitored during the execution of the EMERALD project to find synergies and alignment on cybersecurity and automated compliance monitoring in multi-cloud environments.	Started

⁶ Please refer to: <https://certify-project.eu/>

⁷ Please refer to: <https://dossproject.eu/>

⁸ Please refer to: <http://www.ipcei-cis.eu/>

Project	Objective and scope	Potential areas of collaboration	Status
AK-Graph⁹: AI-based Software Architecture Design for the Engineering of Secure and Sustainable Systems	The objective of this project is to describe software architecture knowledge in a knowledge graph to lay out the foundation for automatically processing architecture knowledge with reasoning- and AI-based approaches in order to provide architecture design guidance and automate architecture evaluation.	The results of the analysis related to software security will be used in EMERALD for developing the certification graph.	Started
EUCloudEdgeIoT¹⁰: Building the European Cloud, Edge & IoT Continuum for business and research 	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.	Participation in webinars and task forces.	To be started
DOME¹¹: A Distributed Open Marketplace for Europe Cloud and Edge Services  DOME (Distributed Open Marketplace for Europe)	The aim of DOME to support businesses and public organisations digital transformation making available a catalogue of cloud-to-edge offerings in Europe.	Results sharing. Joint disseminations and communication activities.	Started
NexusForum.EU¹²: Consolidating Research and Policy along the Cognitive Computing Continuum 	NexusForum.EU will boost the consolidation of the European Computing Continuum ecosystem building on the valuable activities and impact generated so far within the existing EUCloudEdgeIoT (EuCEI) initiative, as well as provide a forward-looking and bold vision in new areas and directions that have not been explored so far.	Participation in events. Co-organization of webinars. Participation in open-consultation activities.	Started

⁹ Please refer to: <https://projekte.ffg.at/projekt/3971037>

¹⁰ Please refer to: <https://eucloudedgeiot.eu/>

¹¹ Please refer to: <https://dome-marketplace.eu/>

¹² Please refer to: <https://eucloudedgeiot.eu/task-forces/coordination-and-support/#nexusforum>

Collaborations established and continued during the project will also be reported in the Networking section of the website (see Figure 4).

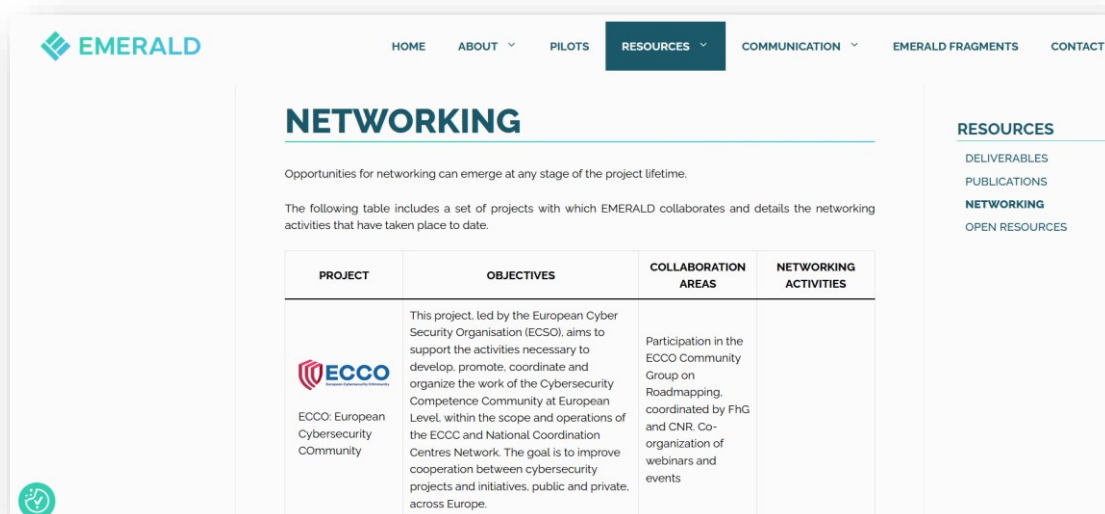


Figure 4. Networking section of the EMERALD website

4.4.2 Networks

Another way to carry out the EMERALD networking activities is to investigate which existing networks are relevant to the project. At this stage, the EMERALD consortium members have identified the following:

- **Gaia-X¹³**: The network and project launched by the EC aiming to develop common requirements for a European data infrastructure. Its goal is to establish an ecosystem, whereby data is shared and made available in a trustworthy environment.
- **ECSCO (European Cyber Security Organisation)¹⁴**: The main goal of ECSCO is to coordinate the development of the European Cybersecurity Ecosystem, support the protection of the European Digital Single Market and ultimately contribute to the advancement of European digital sovereignty and strategic autonomy.
- **ENCS (European Network for Cyber Security)¹⁵**: ENCS brings together critical infrastructure stakeholders and security experts to deploy secure European critical energy grids and infrastructure.

4.4.3 Other initiatives

Other initiatives to be considered for the EMERALD networking activities include the following:

- **EUROSCAL (The EU Friends of OSCAL)¹⁶**: EUROSCAL is a community-driven initiative launched by the MEDINA project (GA 952633)¹⁷ to promote the adoption of OSCAL in Europe. The goal of EUROSCAL is to bring together an enthusiastic and open community of OSCAL stakeholders in Europe in order to further motivate its adoption. By sharing

¹³ Please refer to: <https://gaia-x.eu/>

¹⁴ Please refer to: <https://ecs-org.eu/>

¹⁵ Please refer to: <https://encs.eu/>

¹⁶ Please refer to: <https://euroscal.eu>

¹⁷ Please refer to: <https://medina-project.eu/>

experiences, guidelines, and even source code, EUROSCAL is expected to pave the road towards automated certification in the way envisioned by MEDINA and EMERALD.

- **SCCG (Stakeholder Cybersecurity Certification Group)**¹⁸: This initiative was established to support and facilitate the strategic issues regarding the European cybersecurity certification framework.
- **ETSI (European Telecommunications Standards Institute)**¹⁹: This standardization body produces globally applicable standards for ICT-enabled systems, applications and services deployed across all sectors of industry and society. The FAB partner has active participation in the TC-CYBER²⁰ and TC-SAI²¹ groups and has a Programme Committee role for the Cyber Security Conference.
- **OASIS TOSCA (Topology and Orchestration Specification for Cloud Applications) TC**²²: TOSCA is an OASIS standard language to describe a topology of cloud-based web services, their components, relationships, and the processes that manage them.
- **IETF (Internet Engineering Task Force)**²³: Founded in 1986, is the premier standards development organization (SDO) for the Internet.

4.5 Monitoring and assessment

Following the approach already described for dissemination and communication, EMERALD will evaluate and track the achievement of the networking objectives through continuous monitoring of the established KPIs.

Table 12 presents an initial list of EMERALD's indicators of success in relation to its collaborative activities throughout the project lifecycle. This list will be updated during the project lifecycle.

Table 12. KPIs for Networking activities

KPI name	Description	Objective
Technological collaboration	Join forces in enhancing and developing	At least one technological asset
Events co-organized	Workshops and/or satellite events and/or joint sessions	At least 2
Joint dissemination	Joint papers and/or news articles	At least 2
Working Groups	Participation in Working Groups	More than 3

¹⁸ Please refer to: <https://digital-strategy.ec.europa.eu/en/policies/stakeholder-cybersecurity-certification-group>

¹⁹ Please refer to: <https://www.etsi.org/>

²⁰ Please refer to: <https://www.etsi.org/committee/cyber>

²¹ Please refer to: <https://www.etsi.org/committee/technical-committee-tc-securing-artificial-intelligence-sai>

²² Please refer to: <https://groups.oasis-open.org/communities/tc-community-home2?CommunityKey=f9412cf3-297d-4642-8598-018dc7d3f409>

²³ Please refer to: <https://www.ietf.org/>

5 Conclusions

This deliverable presented the plan for the dissemination, communication, and networking activities of the European project EMERALD. The primary objective was to effectively promote the project's scientific outcomes while engaging a wider audience. Milestones have been established to ensure the project is communicated both within the scientific community and to the general public, with specific Key Performance Indicators (KPIs) set for each task to track progress.

The dissemination strategy encompasses a range of channels, including academic and general publications. Communication efforts focus on clear messaging through the project website, social media channels, press releases, and media outlets. Networking initiatives aim to foster collaboration among partners and external organizations, enhancing the project's visibility and impact.

Key milestones include the launch of the project website, publication of scientific papers, organization of workshops and webinars, and participation in conferences and events.

To measure effectiveness, specific KPIs have been established, such as publication metrics, website traffic, and social media engagement. Subsequent deliverables will provide detailed reports on activities undertaken, evaluating KPI achievement and informing future strategies.

6 References

- [1] European Commission, “Communication, Dissemination and Exploitation,” [Online]. Available: https://ec.europa.eu/research/participants/docs/h2020-funding-guide/imgs/quick-guide_diss-expl_en.pdf. [Accessed 22 April 2024].
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- [3] ENISA, “EUCS – Cloud Services Scheme,” [Online]. Available: <https://www.enisa.europa.eu/publications/eucs-cloud-service-scheme>. [Accessed April 2024].
- [4] BSI, “C5 - Cloud Computing Compliance Criteria Catalogue,” [Online]. Available: https://www.bsi.bund.de/EN/Themen/Unternehmen-und-Organisationen/Informationen-und-Empfehlungen/Empfehlungen-nach-Angriffszielen/Cloud-Computing/Kriterienkatalog-C5/C5_Einfuehrung/C5_Einfuehrung_node.html. [Accessed April 2024].
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- [6] European Commission, “Dissemination and Exploitation in Horizon 2020,” [Online]. Available: https://ec.europa.eu/research/participants/data/ref/h2020/other/events/2017-03-01/8_result-dissemination-exploitation.pdf. [Accessed 22 April 2024].
- [7] EMERALD Consortium, “D6.1 - Project flyer and public website,” 2024.

APPENDIX A: WP6 Monthly Report

The following is an example of WP6 Monthly report. It is an excel template that has been created to collect all the activities related to dissemination, communication and networking, performed by the EMERALD partners each month.



1.1 Scientific publications (submitted)

Here we list the scientific publications planned and submitted in the reference month, but not yet accepted.

Table 1. List of Scientific Publications

Title of the article	Name of authors and Organisations	Event and publication (journal/conference name, date, other info)

1.2 Scientific Publications (once accepted/published)

Here we list the scientific publications once they have been accepted, reporting all the details.

Table 2. List of Scientific Publications (detailed info)

Title	Authors	Title of the periodical or the series	Number, date, or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication?

EMERALD WP6 monthly report

1.3 General and business publications

Here we list any publication that cannot be considered scientific. For instance, publication on the partners' websites, interviews on the media, featured articles on the media.

Table 3. List of General & Business Publications

Title	Link or reference	Date	Partner/Authors (organisations)

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EMERALD WP6 monthly report

1.4 Events: Conferences, seminars, workshops, and webinars

Here we list the events (any kind of) attended during the reference month.

Table 4. List of events

Event	Date	Name and type of audience	Countries addressed	Size of audience	EMERALD People attending (names)	Other (e.g., link, event poster, etc.)

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1.5 EMERALD fragments

Here we report the posts published on the EMERALD website, in the section 'EMERALD fragments'.

Table 5. Posts on the EMERALD fragments

Title of blog entry	Main author	Release Date

1.6 Collaboration & Cooperation with other projects, programmes, working groups, initiatives, etc.

Here we describe the projects (& other initiatives) we collaborate with (or plan to), giving some details (areas, topics, and the status).

Explanation symbols for the status

	Collaboration has already started – concrete collaboration activities are reported
	Collaboration is envisioned but have not started yet
	Collaboration is not feasible Collaboration have started but could not be continued – concrete collaboration activities are not reported

Table 6. Collaboration with other projects

Project/Initiative	Areas for collaboration	Description of activities	Status	Partner

1.7 Press Releases

Here we insert the press releases issued both at individual organizational level and by the whole consortium.

Table 8. Press releases

Type	Published in	Partner/Authors

1.8 Other Dissemination Activities

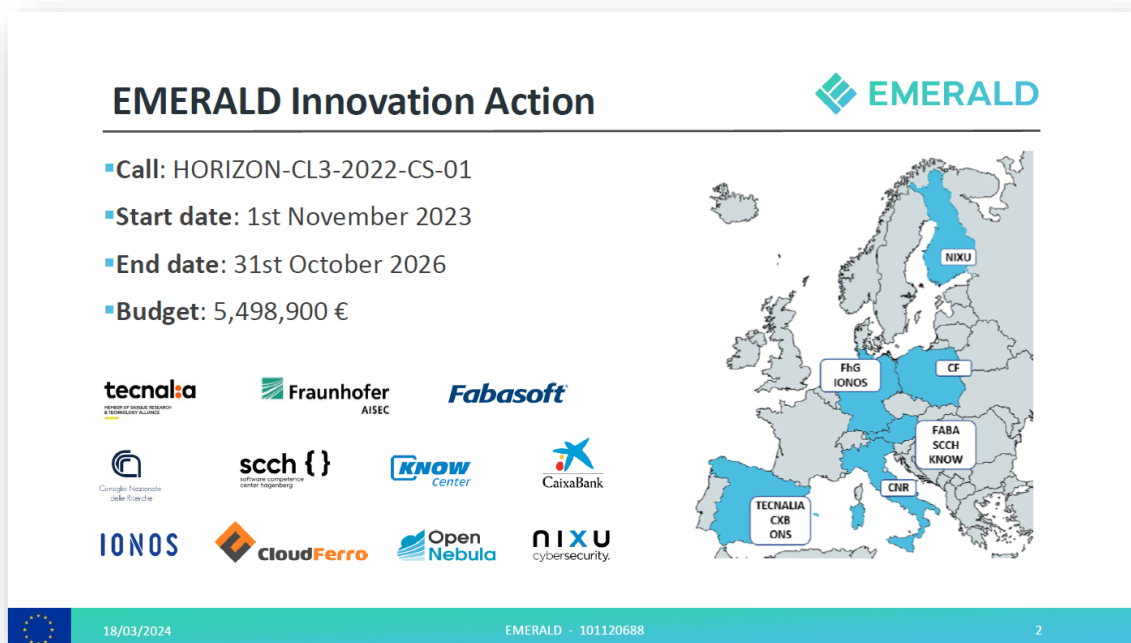
Here we insert any other dissemination activities that do not fit in previous sections.

Table 7. Other dissemination Activities

Type	Name & Comment	Partner/Authors	Date	Link if appropriate

APPENDIX B: EMERALD General Presentation

This presentation can be used by EMERALD partners to present the project at general-purpose events.



EMERALD Mission



- EMERALD **leverages the findings** of the well esteemed H2020 project MEDINA (GA 952633), starting from TRL 5 in summer 2023 and advances them in the EMERALD Core to TRL 7.
- EMERALD **will focus on evidence management components** for the continuous certification approach.
- EMERALD **will provide a proof of concept (PoC)** for mapping the findings to future Artificial Intelligence (AI) certification schemes.



AI Services

AI Cloud Service Compliance
Criteria Catalogue (AIC4)

Deutschland
Digital-Sicher•BSI



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EMERALD Overall objective



The main objective of EMERALD is to pave the road towards **Certification-as-a-Service (CaaS)** for continuous certification of harmonized cybersecurity schemes, like the European Cybersecurity Certification Scheme for Cloud Services (EUCS).



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EMERALD Main objectives



- 1 Provide next-generation evidence gathering tools based on a **knowledge graph approach**
- 2 Reduce complexity in **multi-scheme Cloud certifications** by assisted metric mapping
- 3 Provide a **seamless user experience** of continuous auditing for auditors and auditees
- 4 Provide **interoperability to other frameworks**, security assessment tools and repositories
- 5 Validate the outcomes in **industrial pilots**
- 6 **Promote** the project, **disseminate** results and **coordinate** with international agencies



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EMERALD Key Results 1/3



KR1: EXTRACT

Evidence extraction from cloud service: A framework to continuously extract knowledge on various layers of the cloud service and prepare suitable evidence based on them. This result covers the improvements on existing evidence extraction tools and concepts of MEDINA, such as AMOE (Assessment and Management of Organisational Evidence). The framework works on utilizing information and verifies the implementation of technical and organisational measures. The tools enable different levels of abstraction – from low level such as source code to higher levels, such as policies and procedures.



KR2: CERTGRAPH

Certification graph: A graph-based structure, the certification graph, to consolidate all necessary information of the service and make it easily query-able. The graph-based approach allows storing and linking heterogeneous information extracted from different evidence sources. Furthermore, linking allows to create additional nodes in the graph that aggregate individual aspects and fragments of information to a higher-level of combined evidence, while maintaining traceability back to information sources.



KR3: OPTIMA

Optimized metric selection: An intelligent system to select an optimized set of metrics that can be measured to demonstrate compliance to the selected certification scheme. One of such optimizations could be the maximum amount of re-used evidence.



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EMERALD Key Results 2/3



KR4: MULTICERT

Cloud certifications: A tool to assess chosen metrics based on information stored in the certification graph and to evaluate the final certificate decision.



KR5: AIPOC

Proof of Concept for AI-based certifications: By transferring the innovation results to upcoming AI certification schemes, EMERALD establishes a Proof of Concept (PoC) on how to scale the Certification as a Service (CaaS) approach to cloud-based AI systems.



KR6: EMERALD UI/UX

User experience for complexity reduction: A user interaction concept and conducted studies to show what information each user needs in an audit process. The concept shall lead to a user interface (UI), which is tailored to the users' needs during all stages of an audit and guides them through the process of identifying problems top down – from high level requirements down to specific implementation in documents (e.g., policies) or technical specifications.



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EMERALD Key Results 3/3



KR7: INTEROP

Interoperable assessment, evidence and catalogue data: EMERALD will provide an interoperability layer among the trustworthy systems, assessment results and catalogue data. Security schemes are prone to change and thus updates would be required. EMERALD aims to mitigate this by incorporating the scheme data in a standardized format such as OSCAL (Open Security Controls Assessment Language). Furthermore, EMERALD aims at providing interoperability at the trustworthy evidence layer by evaluating usage of the European Blockchain Services Infrastructure (EBSI) for its trustworthiness system.



KR8: PILOTS

Industrial pilots: Involvement of realistic use cases by potential applicants of EMERALD. This is key to derive and validate the proposed contents of the project objectives. PILOTS is responsible for providing these real-world application examples and test data. The data will be forwarded to the evidence extraction stakeholders, so the components can be fine-tuned to improve quality of the results.



KR9: DECAS

Dissemination, exploitation, communication and standardization: Dissemination and communication of the project results via multiple channels, relevant conferences (e.g., ETSI security conference) and the scientific community. Exploitation of the project achievements by the technical and pilot partners. Standardization activities to discuss, verify and deepen the project findings with standardization bodies. Concepts for continuous use and deployment after the project has finished need to be prepared and documented.



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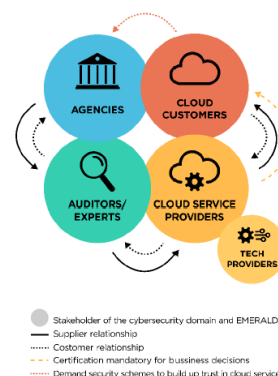
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EMERALD Target users



Addressed users are stakeholder groups of the cybersecurity domain: cloud service providers, cloud customers, auditors, and standardization agencies.

- For **cloud service providers** as well as **cloud customers**, EMERALD will offer **a framework to set-up, manage and monitor their certifications and enable lean re-certification**.
- For **auditors**, EMERALD will be an **audit assistance framework**.
- For **cybersecurity and standardization agencies**, EMERALD will provide **novel strategies and methods for building cybersecurity requirements and metrics that can react to changes** and, if necessary, are interoperable enough to be translated to other schemes.



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EMERALD Framework



To achieve the overall objective, EMERALD will design and implement a **user interaction concept**, offering a uniform way to address audits and offer the previously mentioned stakeholders a solid degree of complexity reduction through the customization of the audit process.

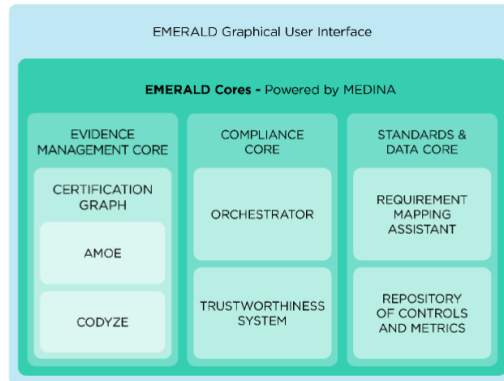


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EMERALD Overview



EMERALD GUI: harmonized interface, offering a human centered application

EMERALD CORE: manages heterogeneity and provides abstraction

EVIDENCE MANAGEMENT CORE: abstracts evidence from components through an Evidence Graph

COMPLIANCE CORE: assessment and evaluation of chosen metrics

STANDARDS & DATA CORE: integration of the security scheme and standards data as well as the metrics

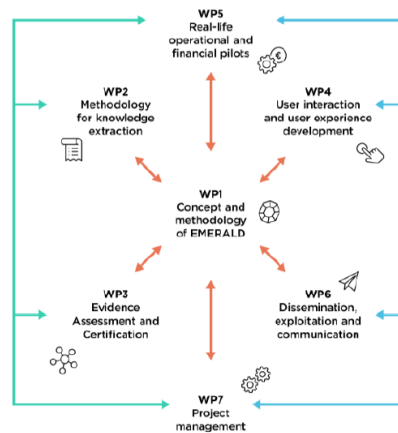


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EMERALD Work Packages



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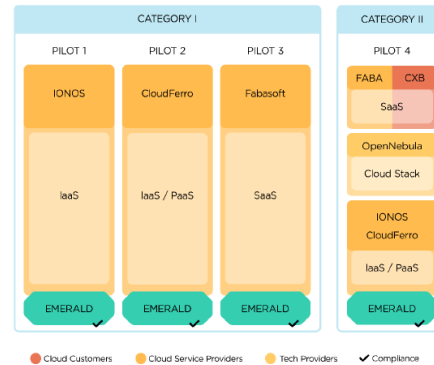
EMERALD Industrial pilots



Involvement of realistic use cases by potential applicants of EMERALD.

Category I: Certification of public Cloud Services (IaaS, PaaS, SaaS)

Category II: Certification of hybrid cloud-edge environments for the financial sector



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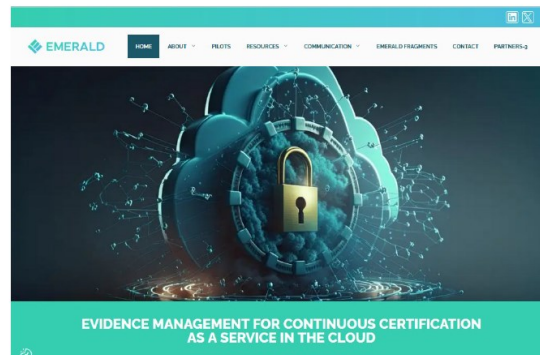
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More information



Further details are available at

- **EMERALD website**
www.emerald-he.eu
- **X**
[EmeraldHEproj](#)
- **LinkedIn**
[emerald-he-project](#)



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Thank you!

APPENDIX C: Social media/Fragments Rotation Schedule

2024													
Month	Jan Responsible	Feb Responsible	Mar Responsible	Apr Responsible	May Responsible	Jun Responsible	Jul Responsible	Aug Responsible	Sep Responsible	Oct Responsible	Nov Responsible	Dec Responsible	
Partner	-	-	-	CNR	FABASOFT	CF	IONOS		CaixaBank	ONS	NIXU	TECNALIA	
Partner				IONOS	TECNALIA	KNOW	SCCH		FABASOFT	CNR	CF	CXB	
2025													
Month	Jan Responsible	Feb Responsible	Mar Responsible	Apr Responsible	May Responsible	Jun Responsible	Jul Responsible	Aug Responsible	Sep Responsible	Oct Responsible	Nov Responsible	Dec Responsible	
Partner	KNOW	SCCH	TECNALIA	FHG	CNR	FHG	TECNALIA		FABASOFT	FHG	SCCH	FHG	
Partner	ONS	NIXU	IONOS	CF	ONS	NIXU	SCCH		CNR	KNOW	TECNALIA	FABASOFT	
2026													
Month	Jan Responsible	Feb Responsible	Mar Responsible	Apr Responsible	May Responsible	Jun Responsible	Jul Responsible	Aug Responsible	Sep Responsible	Oct Responsible			
Partner	KNOW	TECNALIA	CNR	FABASOFT	IONOS	ONS	Caixa		CF	NIXU			
Partner	CAIXA	ONS	NIXU	FHG	SCCH	CF	KNOW		IONOS	CAIXA			

