EMERALDS

Project Title	Extreme-scale Urban Mobility Data Analytics as a Service
Project Acronym	EMERALDS
Grant Agreement No.	101093051
Start Date of Project	2023-01-01
Duration of Project	36 months
Project Website	https://emeralds-horizon.eu/

D6.1 – Dissemination Plan

Work Package	**WP6, Communication, Exploitation & Standardisation**
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Due Date	**30.06.2023**
Date	**30.06.2023**
Version	**V1.0**

Dissemination Level

[X] PU: Public
[ ] SEN: Sensitive, only for members of the consortium (including the Commission)

This project has received funding from the Horizon Europe R&I programme under the GA No. 101093051

Versioning and contribution history

Version	Date	Author	Notes &/or Reason
0.1	28/02/2023	Marialetizia Mari (Trust-IT)	V0.1 - ToC
0.2	06/06/2023	Zach Smith, Marialetizia Mari (Trust-IT)	Version ready for QC
0.3	18/06/2023	Zach Smith, Marialetizia Mari (Trust-IT)	Revisions based on QC
1.0	27/06/2023	Zach Smith, Marialetizia Mari & Nicholas Ferguson (Trust-IT)	Final version

Quality Control (includes peer & quality reviewing)

Version	Date	Name (Organisation)	Role & Scope
0.1	06/04/2023	STM(UPRC), QM (TUC)	Comments on the ToC
0.2	12/06/2023	Charlotte Fléchon (PTV)	First Reviewer Comments
0.2	13/06/2023	Kristine Eglite (Grupa93)	Second Reviewer Comments
0.3	20/06/2023	Charlotte Fléchon (PTV) & Kristine Eglite (Grupa93)	Second Internal Review Round
0.4	28/06/2023	Yannis Theodoridis (UPRC)	Approval by Scientific and Technical Manager (UPRC)
1.0	30/06/2023	Foivos Galatoulas, Ioanna Fergadiotou (INLE)	Final review by Coordinator

Funded by the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No 101093051

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Terminology

Terminology/Acronym	Description
AI	Artificial Intelligence
DoA	Description of Action
DSBA	Data Spaces Business Alliance
EC	European Commission
GA4	Google Analytics 4
GDPR	General Data Protection Regulation
Iot	Internet of Things
IT	Information Technology
KER	Key Exploitable Results
MAaaS	Mobility Analytics As a Service
RIA	Research and Innovation action
SEO	Search Engine Optimisation
SME	Small Medium Enterprise
UVP	Unique Value Proposition
UX	User Experience
WP	Work Package

Table 1 - Terminology

GA Matrix of alignment

Table 2 lists the outputs of D6.1 Dissemination Plan mapped to the GA commitments as stated in the Description of Action (DoA) Annex 1 and Annex 2 of Horizon Europe Grant No 101093051.

GA Components Title (and type)	GA Component Outline	Document Chapter(s)	Justification
Deliverable			
D6.1	Document registering the key activities pertaining to maximizing the dissemination of EMERALDs outcomes during and after the project's lifecycle.	All	The deliverable details the target stakeholders, communications and dissemination channels and synergies.
Tasks			
T6.1	This task will cover the effective communication strategy ... for the service portfolio.	4,5	A full overview of the objectives, methodology, high-level plan is provided. Detailed implementation plans for how channels will be used and the various communications campaigns in Y1 are also provided.
T6.1	The proper engagement with the stakeholders ... listed in section 2.2. (iii) assess the impact of the dissemination and community building activities;	2,3,4,6	Target Stakeholder groups are presented with the associated Dissemination and Communication approach. KPIs for measuring Dissemination and Communication effectiveness are measured and recorded.
T6.3	This task will concentrate on building synergies.. sharing of project results	7	A plan for establishing a dissemination-centric cluster with similar projects is provided.

Table 2 - Matrix of Alignment

Executive Summary

EMERALDS is a Horizon Europe project developing a Mobility Analytics as a Service (MAaaS) toolset which can improve decision-making by public authorities and individuals, leading to more efficient mobility, saving time, costs and reducing environmental impact.

This document provides a plan for communications and dissemination activities that will be carried out through WP6 Communication, Exploitation & Standardisation in the EMERALDS project. At this stage of the project, the deliverable focuses on activities associated with Task 6.1 Communication and Dissemination activities and Task 6.3 EU Synergies and liaison which both run from M1-M36.

Published in M6 of the project, the document aims to

- Provide a high-level plan of activities for the full project lifetime with a particular focus on activities to be carried out in Year 1.
- Report on the current delivery of communications and dissemination activities at M6. This includes a focus on communicating project objectives and in particular the project use cases.
- Identify target stakeholders, value propositions and provide information on how to communicate with them.
- Describe how various communications and dissemination channels are being and will be used and provide a plan of action. This includes the project website, social media and a plan for future events and webinars.
- Identify synergies to be established with other projects funded under the same EC call HORIZON-CL4-2022-DATA-01-05 - Extreme data mining, aggregation and analytics technologies and solutions.

The achievement of WP6's success depends on the collaborative and coordinated efforts of all the WPs, encompassing not just communication activities but also the high-quality development of technical, scientific, and content-related work throughout the project's timeline.

1 Introduction

The exponential growth of data generated from diverse sources such as IoT devices, networks, and cloud centres has placed significant strain on existing cloud computing solutions. This highlights the necessity of transitioning towards innovative data processing paradigms. The magnitude of data calls for advanced technologies that can enhance the performance, speed, accuracy, and utility of tasks such as data discovery, collection, mining, filtering, and processing. Improved approaches are required to meet the challenges posed by the sheer volume of data and to extract valuable insights from it.

EMERALDS unites a consortium of experts in IT, Urban Data Science, Data Engineering, Urban Mobility, as well as stakeholders from public authorities and SMEs engaged in Mobility Planning and Operations. They share a common vision of introducing and promoting an advanced data analytics toolset on an extreme scale, in alignment with the objectives of the DSBA (Data Spaces Business Alliance). An overview of the envisioned impacts is illustrated in Figure 1-1.

The overarching aim of EMERALDS is to bring about a data-driven future where organisations and individuals can fully harness the value of their data. This aligns with the aspirations of the European Mobility Data Space.

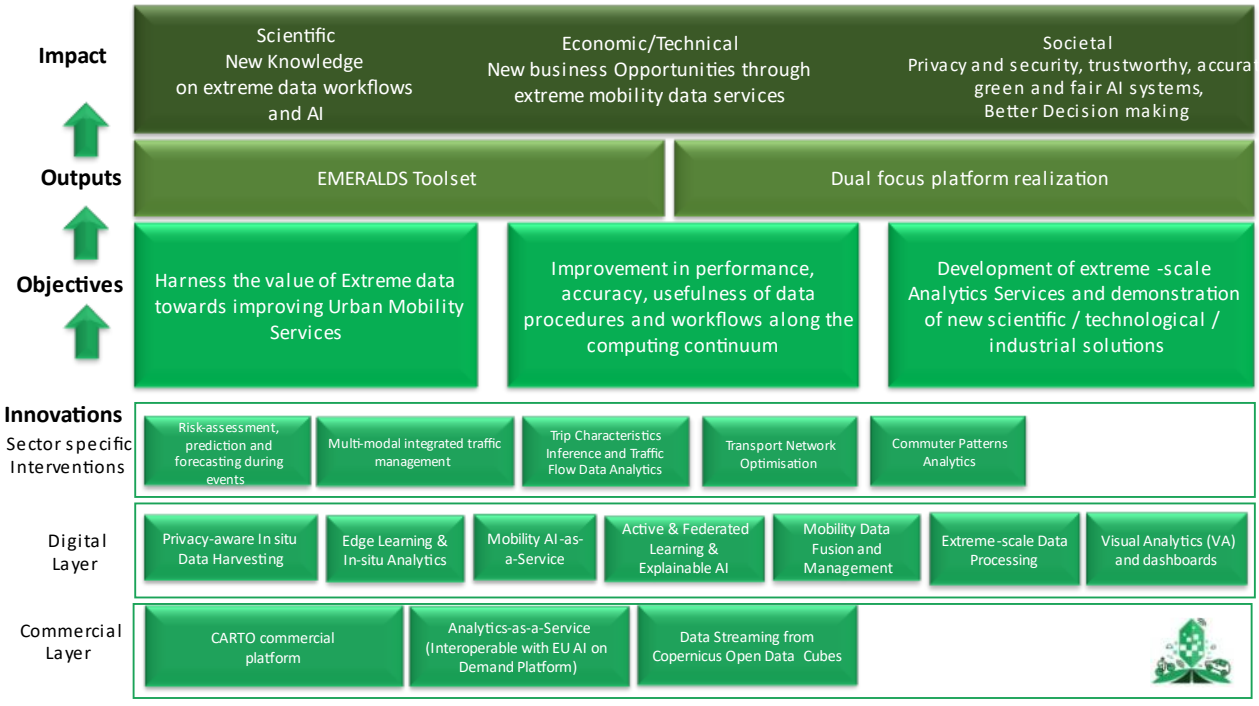


Figure 1-1 - EMERALDS Impacts Overview

The implementation of the Dissemination Plan will have crucial connections with the other work packages, with a timeline of activities, driven by a multi-faceted strategy which also orchestrates the communication activities and is aligned with concertation and synergy-developing initiatives conducted at pan-European level, besides policy-developing initiatives, and it is built around some strategic elements:

- The communication channels and marketing collaterals
- The stakeholder groups connected to the EMERALDS use cases
- Multiplier networks designed to engage with a broad range of secondary and tertiary stakeholders.
- The assets of EMERALDS.

Evaluation of the Communication and Marketing activities will be based on the SMART approach: specific, measurable, achievable, realistic, targeted and timed. Measurable impacts, known as Key Performance Indicators (KPIs), will be periodically monitored. To measure the online presence and community engagement, an online Dashboard will be implemented. This Dashboard is a tool to assess and track the project's online footprint and the level of engagement with the community.

Furthermore, the publication of articles, reports from related organisations, magazines, and white papers from the relevant communities will also be closely monitored. This ensures that the project's impact through publications and collaborations is tracked and evaluated.

"EMERALDS tackles the challenge of processing extreme mobility data, stressing the capabilities of currently available cloud computing solutions and pinpointing the need to shift towards ground-breaking data processing paradigms. The developments related to big mobility data have already spurred disruption across business domains, revolutionising platform economies and unleashing innovative and intelligent services. Digitization is driving the evolution of the mobility ecosystem and services, changing the experience of urban transport and mobility services for consumers and shaping their expectations for years to come.

By advancing state-of-the-art extreme data mining, aggregation, and analytics technologies and integrating them with urban mobility and transportation domain expertise, the project presents an unprecedented opportunity to achieve impactful end-to-end solutions to real-life problems. The project uses advanced technologies, including AI, Big Data, and edge/fog/cloud computing, to explore new pathways on spatiotemporal data analytics, providing urban mobility operators and planners with advanced solutions for extreme-scale mobility data analytics tools and services.

The outcomes of EMERALDS can assist in evaluating prospective or existing transport infrastructure with varying resolutions, infer which mobility modes can enhance service quality in transport networks while delivering trip demand, event occurrence, smart routing, and traffic congestion predictions with improved accuracy."
Foivos Galatoulas, EMERALDS Coordinator

1.1 Purpose and scope of the document

The purpose of this plan is to effectively coordinate the dissemination and communication of the project across all levels and through multiple channels, ensuring the achievement of project objectives and impacts.

As can be seen in the PERT chart (Figure 1-2), WP6 activities run in parallel to other WPs. The role of WP6, and in particular, Task 6.1 Communication and dissemination activities, is to communicate the objectives and activities taking place in other WPs and to disseminate eventual results.
Task 6.3 Synergies and liaison focuses on the establishment of collaborations with related EU-funded projects, in particular funded under the same call call HORIZON-CL4-2022-DATA-01-05 - Extreme data mining, aggregation and analytics technologies and solutions, as well as liaising with related communities around technologies used such as AI and standardisation.
Both T6.1 and T6.3 run for the full lifetime of the project and therefore in this deliverable we provide an update of activities in both and a plan for future activities with a special focus on Year 1.
T6.2 Exploitation strategy runs from M22-36 and therefore is not included in this deliverable. This will be reported in D6.2.

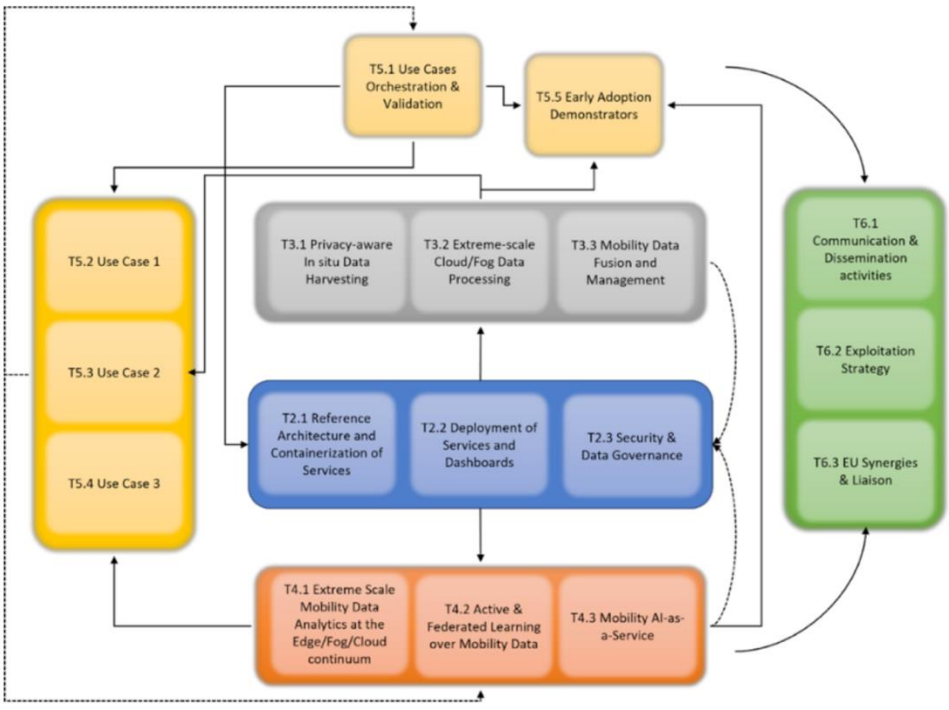


Figure 1-2 – EMERALDS PERT Chart

The EMERALDS **Dissemination Objectives**:

- Transfer knowledge and results to relevant stakeholders.
- Raise awareness and demonstrate economic, social, and technological benefits of EMERALDS solutions in the mobility and smart cities community.
- Maximise research impact and extend value beyond EMERALDS creators and end-users.

The **Channels**:

- Various channels will be used to disseminate EMERALDS results, including but not limited to:
  - Project website
  - Social media
  - Newsletter
  - Videos and interviews
  - Press releases
  - Events
  - Publications and scientific papers

By using these channels, EMERALDS aims to effectively achieve its dissemination objectives and reach a wide range of stakeholders.

2 Communication and Dissemination Methodology

The key to ensuring effective communication and eventual dissemination on results focuses on creating an in-bound pull to attract target stakeholders to find out about the project, participate or engage in some way with the project and join our community. Value or unique selling points of the project should be identified for each target stakeholder to generate value for them. Our methodology centres around turning "strangers" into the project's community members, to users or result adopters and eventually promoters that will help promote the project. All communications and dissemination activities need to be interconnected and coordinated and should have a logical place in the methodology, otherwise, there is a risk of effort going to waste as it may not contribute to the ecosystem of channels and paths to generate contacts (see Figure 2-1).

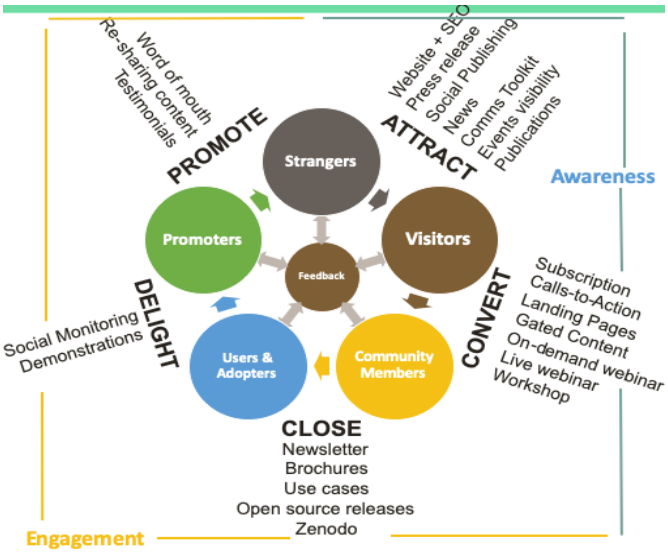


Figure 2-1 – The Methodology

The applied approach is derived from the inbound methodology, which combines targeted content marketing, automation, SEO and other techniques to maximise the results of communication and engagement activities.

Every communication and dissemination activity will be mapped to the Attract – Convert – Close – Delight – Promote process. This ensures a logical progression through the following profiles:

- Stranger, i.e., target stakeholder who is not familiar with the project.
- Visitor, i.e., target stakeholder who interacts with the digital content or with project partners.
- Community member, i.e., target stakeholder who registers to an event or newsletter
- User & adopter, Potential user or adopter of EMERALDS outputs or KERs. This could range from the use of content from deliverables or actual technologies.
- Promoter, i.e., stakeholders who are so pleased with their interactions with EMERALDS that they are happy to promote the project's outputs, services and results. Promoters, in turn are a key element to attract new strangers, who can initiate the cycle again.

The phases Attract to Convert are more focused on awareness raising and pure communication which are important for the communications activities described in this deliverable and Y1 activities. The Close to Promote phases are fundamentally the expression of engagement and dissemination actions and more related to Y2 and Y3 activities.

2.1 Monitoring

Monitoring is fundamental to track how communication and dissemination activities contribute to achieving EMERALDS' goals and where necessary, adjust based on the data. The main tools used for tracking the data are Google Analytics 4 (GA4) and the submissions received through the website's Drupal content management framework.

Since the new regulation on tracking cookies was implemented, users who don't accept tracking cookies are not tracked by GA4, so all the data coming from GA4 only represent partial results of the real total amount of website users. On Drupal however, it is possible to accurately track the number of people who submit on a form or download material. Nonetheless, despite the underreported number of users, the way GA4 calculates users is stable, and so a combination of tracking through GA4 and Drupal will still allow us to understand whether specific activities are effective.

For the other EMERALDS channels such as social media and content repositories, these tools provide their own tracking systems. These will all be collected in the WP6 Management Sheet available to all project members.

An analytics dashboard will also be set up to track both website and social media goals in a user-friendly interface.

An Impact Tracker spreadsheet is used to monitor the monthly progress made on KPIs, giving the possibility to adjust effort according to trends. An Editorial Calendar is also used to plan upcoming news, events, and social media activities. This allows a timely distribution of outputs and communication.

3 Target Stakeholders

In this section we identify the main target stakeholders for EMERALDS and the value proposition that the project has for them. This will form the basis of messaging to them which will be implemented in the WP6 activities. This includes including participation to physical or virtual events, social media outreach, publication of news articles, and production of communication materials. The primary focus of EMERALDS is summarised in Figure2-2 which highlights the benefits of the extreme data management and AI analytics that the project will develop and the toolkit which will be developed and employed in use cases.

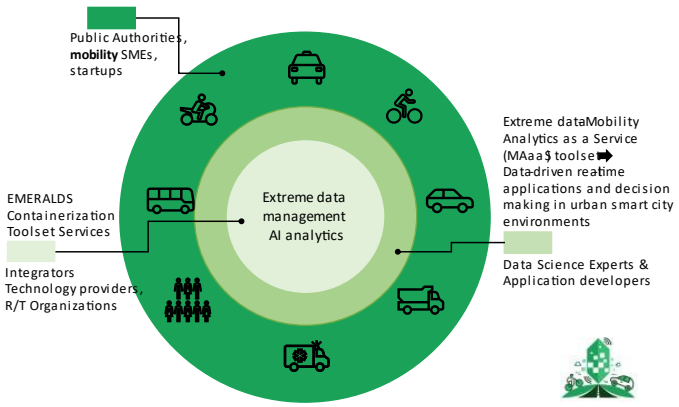


Figure 3-2 – EMERALDS Stakeholder Focus

3.1.1 Stakeholders and value proposition

The EMERALDS Toolset will provide a new resource providing meaningful knowledge and insights to aid transportation engineers, urban planners, urban data scientists and policy makers to make data-based decisions in a wide spectrum of applications, such as traffic engineering and risk management.

From simple use-cases like rerouting traffic to prevent congestion, multi-modal integrated traffic management, trip demand forecasting, to more crucial cases like crowdedness informed/aware risk assessment, emergency evacuations and search and rescue missions, being able to analyse data from the plethora of available sources can not only save citizens' time in their routine activities, but also prevent catastrophes that may lead to the loss of life.

The technology can improve decision-making by public authorities and individuals, leading to more efficient mobility, saving time, money and reducing environmental impact. The project targets six main stakeholder groups which are described in Table 3. This illustrates the main value propositions and communication channels that will be used to engage with the diverse stakeholders.

Table 3 Value proposition and onboarding strategies per target stakeholder group

Messaging around these key value propositions has been created around the first communications outputs in the first six months of the project. For example, in the creation of the first use case pages, the impact of the Trip Characteristics Inference and Traffic Flow Data Analytics use case in Riga[1] was highlighted with particular focus on the impact of the data and decision-making tools for policy makers and governmental authorities. The importance of the technologies in terms of optimising public transport and therefore improving the quality of life of citizens was also highlighted both in the dedicated web page and accompanying video. More technical information of interest to researchers and the technology industry is also included with information on how EMERALDS will address the challenge.

4 Strategy and Campaigns

A three-year strategy has been designed to ensure the effective communication of project objectives and activities and the eventual dissemination of project results and is described in Table 4.

The Year 1 campaigns described below (Table 5), will provide a solid foundation to disseminate important project milestones and deliverables that will be released in Year 2. These include v1 of the Toolset (D2.2 M18), the first demonstration of Emeralds (D2.4, M18), and use-case related demonstrations (D5.2, D5.4 and D5.6, both M24). In these cases, dissemination activities such as webinars can be an effective way to validate results. Finally, Year 3 will focus on dissemination as final results emerge and exploitation of them become a priority.

Table 4 EMERALDS 3-year communications and dissemination strategy

	Year 1 - Communication & market awareness	Year 2 - Use case & dissemination	Year 3 - Commercialisation & market uptake
What	• Planning: Dissemination plan for R&I + industry • Dissemination guidelines: shared visions - what & how • Identify and attract target audience • Define tailored messaging • Corporate design & branding	• 3 use cases results • 1st Version services toolset • Online dissemination: Press & media, guide • Scientific community: Publications & event presentations • Industrial community: Adoption, events, industry media	• Final Toolset ready • Toolset Adoption • Use case demos & training • Early Adoption Demonstrators • High-profile conferences & events • Scientific & industry dissemination • Policy brief paper
Why	Set up foundation for Y2&3 and leverage results from Use Case Scoping Document (D5.1)	Collect feedback & value proposition, to ensure service adoption & sustainability for the long-term	Create interest & opportunities for service adoption by target stakeholders. Increase both commercial and scientific

[1] https://emeralds-horizon.eu/pilots/trip-characteristics-inference-and-traffic-flow-data-analytics

			impact of project & exploitation opportunities
How	• Website publication and population • Social media set up and initial community building • Webinars and events focusing on objectives and use case.	• Demos of assets • Evolution of value propositions & engage with stakeholders though events, workshops & webinars trainings	• Build on results from the 2 early adopters • Engage with EU bodies & stakeholders & leverage with industrial players

Year 1 has seen the roll-out of four main campaigns focusing on the main objectives and topics of the project as described in Table 5. The various channels described in section 5 will be used in WP6 activities to promote them. As well as communicating the project objectives and mission, we are keen to exploit the use cases as a means to contextualise the project and its activities. By highlighting the various challenges that these real cities are facing, we are able to tell an attractive and interesting story to our target stakeholders. This then provides a solid background for communicating the toolset and technologies that the project will develop.

Table 5 Year 1 campaigns

Campaign	Objectives	Channels
Project objectives and mission	Communicating mission and objectives of EMERALDS to new and existing stakeholders.	• Website • Newsletter • Video • Webinar (M9) • Third party events
Use cases	Highlight impact of EMERALDS toolset and its eventual deployment in real-life contexts through use cases.	• Dedicated web pages • 3 videos • Webinar – use case deep dive (M9) • Social media
Toolset & Technologies	Spotlights on EMERALDS Toolset and the various technologies and big data used.	• Dedicated web page • Webinar on Reference architecture (M10) • Webinar on AI (M12) • Articles and interviews with partners

5 Communication & Dissemination Channels

This section discusses the various communication and dissemination channels that will be used to implement the project's communication and dissemination activities. The selected channels will effectively reach the target audiences, disseminate project information and results, and promote the impact of the project. The section identifies the key assets that will be used for dissemination, and their value proposition, as well as the monitoring activities that will be implemented to ensure the effectiveness of the communication and dissemination efforts.

The order of this chapter is as follows:

- Branding and design
- EMERALDS website
- Social media
- Newsletters
- Video & Interviews
- Press releases
- Events
- Publications & scientific papers

5.1 Branding & Design

The branding of a European project is an important aspect of the communication strategy as it serves to create a distinct identity for the project and helps to raise awareness among its target audiences. By creating a clear and consistent brand identity we can help to establish the project as a credible and authoritative source of information and can increase the likelihood that stakeholders will engage with and support the project's goals and objectives. Additionally, a well-defined brand identity can help to differentiate the project from other initiatives and organisations, which is particularly important in the crowded and competitive landscape of European research and innovation.

The project branding has been set up already in M1 of EMERALDS, starting with the EMERALDS project logo (Figure 5-1).

Figure 5-1 EMERALDS Logo

The EMERALDS logo's emblem was designed to represent both the name and the topic of the project. With an Emerald in the middle as the central element surrounded by elements relating to data and mobility. The colour green was chosen to represent the energy savings from processing data near to its location. Figure 5-2 below shows the selected colour palette.

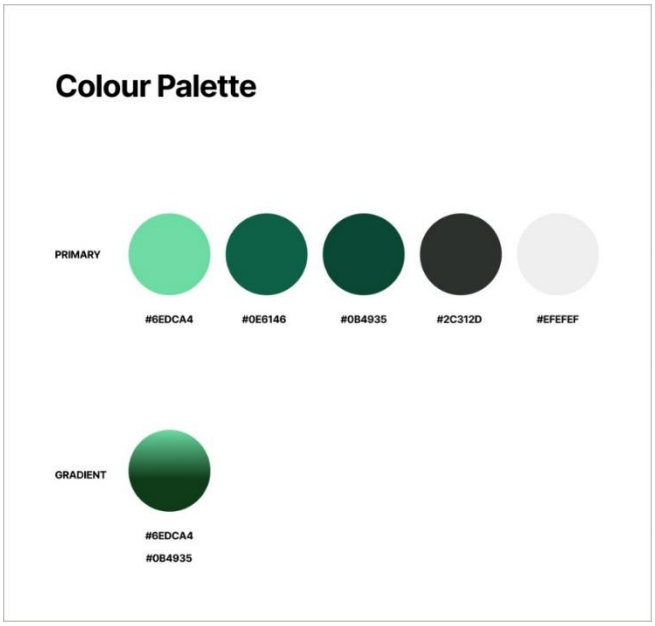


Figure 5-2 - EMERALDS Colour Palette

The chosen typography for the project is *Brinnan* for titles and subtitles and *Inter* for subtitles and paragraphs.

5.1.1 Project branded materials

So far, branded materials include a roll-up banner and sticker, and a bundle with notebook and pen (Figure 5-3, Figure 5-4).

Figure 5-3 EMERALDS branded material: Roll-up Banner (left) and Stickers (right)

Figure 5-4 EMERALDS branded material: Notebook & Pen

Icons have also been designed for each of the primary stakeholders that the project addresses as outlined below (Table 6).

Table 6 EMERALDS stakeholder icons

	• Research & Academia
	• Policymakers & governmental Authorities
	• Transport Industry
	• Technology Industry
	• Civil Society
	• Standards development and related organisation

Icons have also been designed for each of the Use Cases on the website and will be used in all future branded material (Figure 5-5).

Figure 5-5 Use case icons

Next Steps

Moving forward, EMERALDS expects to create additional branded materials for distribution at physical events planned in the coming months.

The next step for project branded materials is to create a branded flier for use in third party events that summarises the key information about the project such as:

- The challenge being addressed
- The EMERALDS solution (including information about the technical architecture)
- How the solution is being validated (the use cases)
- Who can benefit (relevant stakeholders)
- How they can follow the project (website and social media)

In addition, digital material such as twitter cards and backdrops for webinars will be created.

5.2 Website

The EMERALDS web platform (https://emeralds-horizon.eu/) acts as a central channel for the communication and engagement strategy, describing the project's objective and reporting on updates on results, collaborations with related initiatives, news and latest events that are then promoted via the social media channels.

A landing page was published in M1 with basic information on the project objectives, general overview and a Newsletter registration form so visitors could receive future updates. A clickable menu bar directed visitors to anchors within the homepage section.

The second version of the website was published in M3 with a menu and connected content. Below we provide an overview of each website section and how they have evolved.

- **Home page** (https://emeralds-horizon.eu/): this is the first page where users land, and it is designed in a way to offer an immediate, brief but comprehensive view of the project's main objectives and added value. It includes a concise pay off and briefly describing EMERALDS' main vision. It is broken into four blocks with the final newsletter registration block acting as a call to action for website visitors:
    - Main project overview including EMERALDS introductory video.
    - The EMERALDS Toolset
    - The expected impact of the project
    - Newsletter Registration

The home page ends with partner information and a footer with links to the social media channels, in line with User Experience's best practices, and the GDPR-compliant Privacy Policy link. The emeralds-horizon.eu website privacy policy was also revised following suggestions from the Independent Ethics Advisor on M5. The policy is provided in the Annex of D1.2 EMERALDS Ethics Report version 1 (due M6). The home page can be reached at any time, by each node of the website, by clicking on the EMERALDS logo on the top left of the page.

Table 7 describes the content and overview of the website menus. The main focus of work in the first six months has focused on the campaigns around communicating the project objectives and the use cases in terms of the motivation, background and the challenges that the project will address and how the technologies will become accessible, reusable and effective through the toolset.

Table 7 Website activities M1-M6

Section	Content	Delivery
About	Overview of project objectives and mission Project overview video	M4
Toolset	High-level description of toolset based first concept.	M4
Use cases	EMERALDS is validating its toolset through three Use Cases. A full page of the website is dedicated to each of these including a detailed description and the first use case video. This includes: overview focusing on use case context; challenge faced; expected impact of EMERALDS; video interview with use case partner. **Use Cases (**https://emeralds-horizon.eu/pilots/trip-characteristics-inference-and-traffic-flow-data-analytics**); (**https://emeralds-horizon.eu/pilots/risk-assessment-prediction-and-forecasting-during-events**):**	M3
Impact	High-level overview of project impact	M3
News	"News" section includes updates on the project's result and new collaborations, as well as relevant matters in the domain of Mobility Analytics	M3
Events	The "Events" page focuses on physical, virtual and hybrid events, whether they are events organised by EMERALDS for its community, events including EMERALDS' participation or any relevant external event linked to the topics of the project. An editorial plan has been set up, to collect any relevant item to publish in these pages, schedule its publication in order to enhance visibility.	M3

Next steps

The content of the website in Y1 will evolve based both on the delivery other communications and dissemination activities as well as information from key public deliverables in particular on the toolset and the use cases (Table 8).

Table 8 Website next steps

Section	Content	Delivery
Toolset	Detailed overview of the expected toolset including interview with main partners and main public information around reference architecture and D2.1 and focusing on the technologies used	M7-10
Use cases	Further details on use cases based on information from D5.1	M7-9
Impact	Overview of main impacts of EMERALDS project considering: scientific, economic/technical; societal impact; wider impact globally.	M6

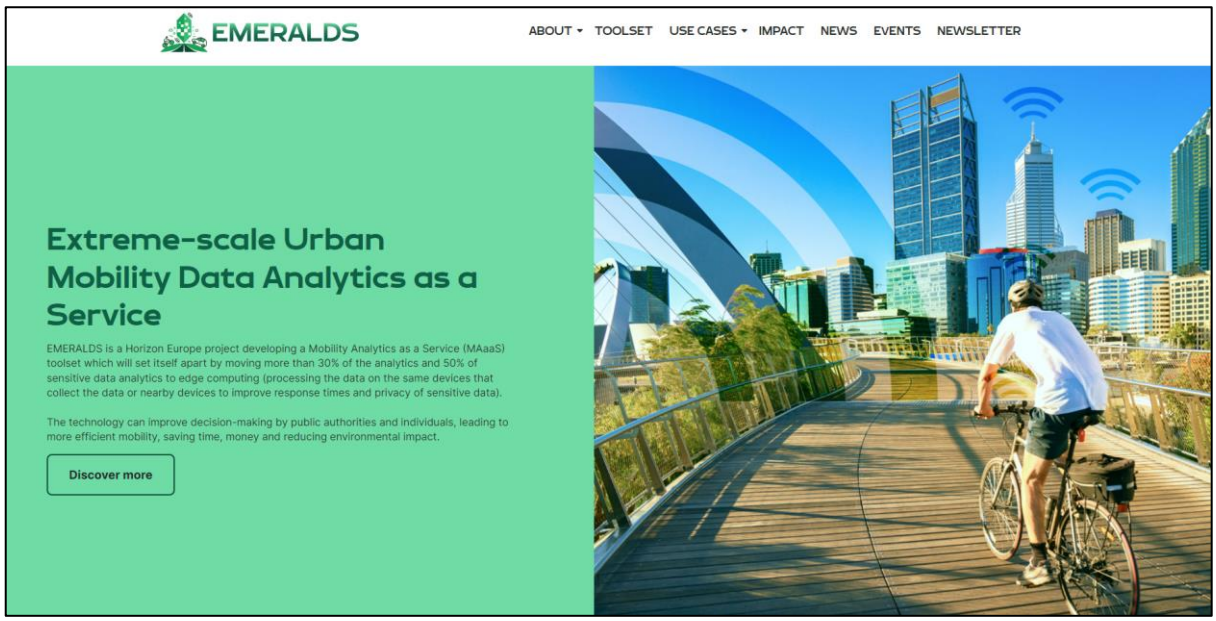


Figure 5-6 The first view of the website homepage

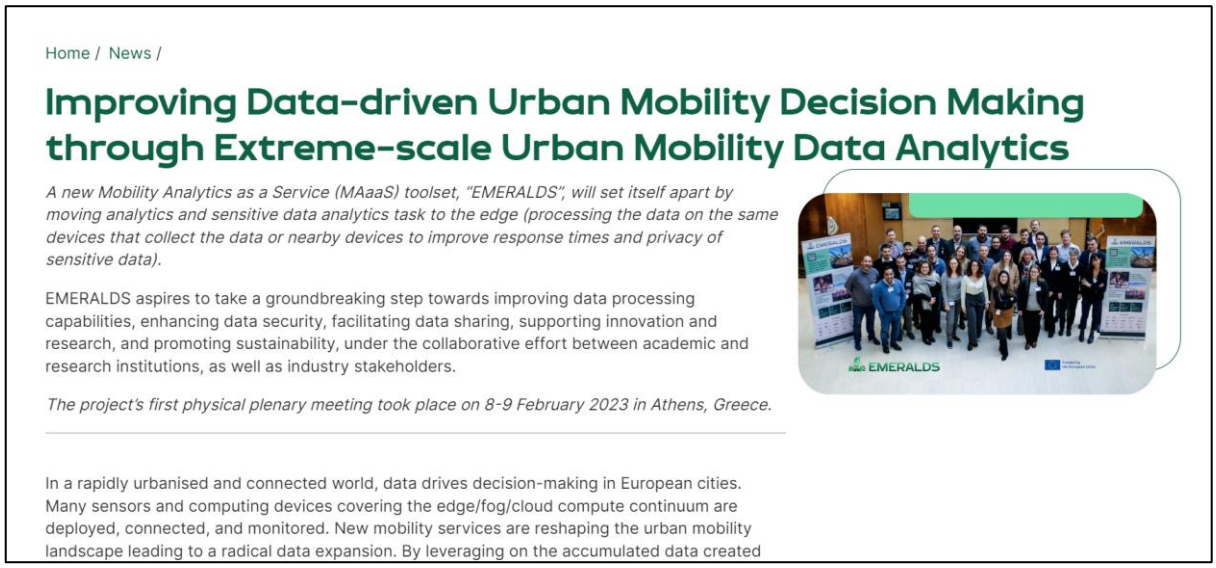


Figure 5-7 A news page on the website

Visitors can explore the website to learn more about the project objectives, work packages, and use cases (landing page depicted in Figure 5-6). Moreover, the visitors can stay updated with the latest project news and developments through the news feed (Figure 5-7). More images of the website are attached in the ANNEX.

5.3 Social Media

Social media is a key supporting channel for the communications and outreach activities. All relevant stakeholders can be found on the three main channels used by the project, Twitter, LinkedIn and YouTube.

5.3.1 Twitter

Posts are created on Twitter on a weekly basis based on a cycle of EMERALDS-related topics so that coverage is varied and appropriately detailed (Figure 5-8). Tweets are designed to provide the follower with new information regarding a topic and content from related documents are used and linked to drive traffic to the website and increase registrations to for example the newsletter and events. Live tweeting at events and during webinars has been a key feature of future activities.

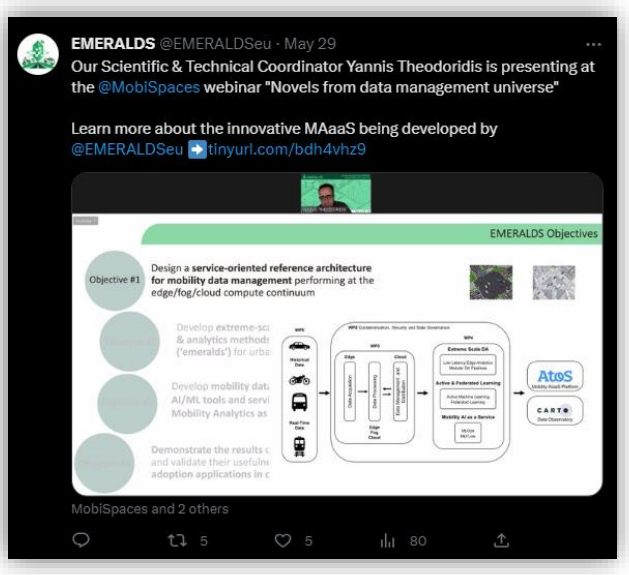


Figure 5-8 Live Tweet from the MobiSpaces Webinar

- Twitter:
  - Link: https://twitter.com/EMERALDSeu;
  - Followers: 53;
  - Tweets: 23 – a summary of the results of the Tweets can be found in Table 9.

Table 9 EMERALDS Twitter Statistics at M6

Metric	Result
Total Impressions	6455
Total Likes	111
Total Retweets	77
Total Link Clicks	27
Average Daily Engagement Rate	5.5%

5.3.2 LinkedIn

In our dissemination efforts, we actively utilise LinkedIn as a key platform for reaching a wide audience of professionals, researchers, policymakers, and other stakeholders interested in our project. By creating and regularly updating a dedicated LinkedIn page, we share project

updates, relevant news, webinars, and success stories with our network. Additionally, we strategically engage with other relevant groups and pages on LinkedIn, expanding our reach and fostering collaboration across various sectors. By leveraging LinkedIn's vast user base, we not only raise awareness about our project but also facilitate meaningful dialogues, knowledge exchange, and the building of relationships that may lead to future partnerships and opportunities for collaboration. The use of LinkedIn as a dissemination channel is instrumental in ensuring our project's impact on a European and global scale.

- LinkedIn:
    - Link: https://www.linkedin.com/company/emeraldseu;
    - Followers: 196 Followers;
    - Updates: 15 – a summary of the results of the Updates is given in Table 10.

Table 10 EMERALDS LinkedIn Statistics at M6

Metric	Result
Total Impressions	7001
Total Likes	367
Total Reposts	31
Average Engagement Rate per Update	7.01%

5.3.3 YouTube

The widespread popularity and accessibility of YouTube make it an invaluable platform for the communicating of project objectives and dissemination of project findings and outcomes. Leveraging YouTube's vast user base and dynamic multimedia capabilities, we can effectively engage with diverse audiences, including policymakers, stakeholders, and the general public. Through carefully crafted videos, we can deliver concise and visually appealing content that highlights the key messages and achievements of our project. This platform provides a powerful medium to showcase our research, innovation, and impact, ultimately contributing to the broader dissemination and uptake of our project's results.

- YouTube:
    - Link: https://www.youtube.com/channel/UCtemjXe3jF-NfDK3nh_CmIw;
    - Videos: 4
    - Video Views: +225

When considering the impact of social media, the best metrics to track are likes and retweets/reposts as the demonstrate direct user engagement. As can be seen in Tables 9,10 above, both Twitter and LinkedIn have demonstrated a high number of likes and retweets/reposts for the number of Tweets/Updates that have been made over the 6-month period. With the fact that the social media content is targeted, these numbers show that the social media channels are effectively engaging the project’s stakeholders.

Next steps

The social media channels will be used to support all communications activities in particular for the promotion of the upcoming webinars outlined in section 5.7. Dedicated social media campaigns and if deemed necessary pay-per-click campaigns will be put into place to attract participants from the various stakeholder groups.

Live tweeting will also take place during the events as we find that this is extremely effective in attracting new followers and registrants for both the newsletter and future events.

A series of posts about the use cases using the audiovisual material from the use case videos to have a wider impact will also run in parallel to the publication of updated information on the use cases on the website.

5.4 Newsletter

Communication via email is one of the highest value activities as it allows us to reach our target audiences directly via email. For most cases, we will send emails to our EMERALDS Community Database which is comprised of contacts that have expressly asked to be informed of the EMERALDS updates.
Newsletters are circulated to communicate the latest developments within the project. The newsletter is sent to the members of the EMERALDS Community Database with branded and professionally designed visuals and carefully curated content.

The Newsletter subscription initiative was established using the MailChimp platform, with the subscription field successfully integrated onto the homepage of the website. This implementation has been operational since the beginning of Month 1, allowing for the collection of subscribers. As of now, the database comprises 36 subscribers.
The first newsletter was dispatched in Month 6 to the aforementioned subscribers.

Next steps

Moving forward, a series of newsletters with “special spotlights” are planned for the following six months, aiming to disseminate comprehensive information about the pilots' activities and challenges. We have delayed the first newsletter so it can coincide with new information from the use case scoping report (D5.1).

The following are the proposed themes for these special issues:

- **M7** - One special issue will be exclusively dedicated to introducing the project and its objectives as well as promoting information on the three use cases. This will also draw on content from D5.1 and the scoping activities related to the use cases.The newsletter will also promote the first webinar in M9.
- **M9** - The second newsletter will focus on the challenges associated with urban mobility and events risk assessment, highlighting how the EMERALDS project effectively addresses them. This particular issue is planned for around M9.
- **M12** - The third newsletter will focus on the toolset and technologies used for its development. This will disseminate the output of D2.1 (Reference Architecture) and will highlight the role of emerging technologies such as AI in the project.

5.5 Video & Interviews

At the first project General Assembly 10 video interviews were recorded with members of the consortium focusing on areas such as project objectives, use cases, technologies and impact.

The focus in the first six months has been on boosting interest around the project objectives and the use cases. This has resulted in 1 general project video (see Figure 5-9) and 3 videos for the use cases produced by WP6 and uploaded to the EMERALDS YouTube channel. They have also been posted on LinkedIn and Twitter and embedded in the relevant pages on the website. As stated in section 5.2, the interviews have been embedded into the dedicated use case pages.

These videos will be used as part of multimedia communication across channels.

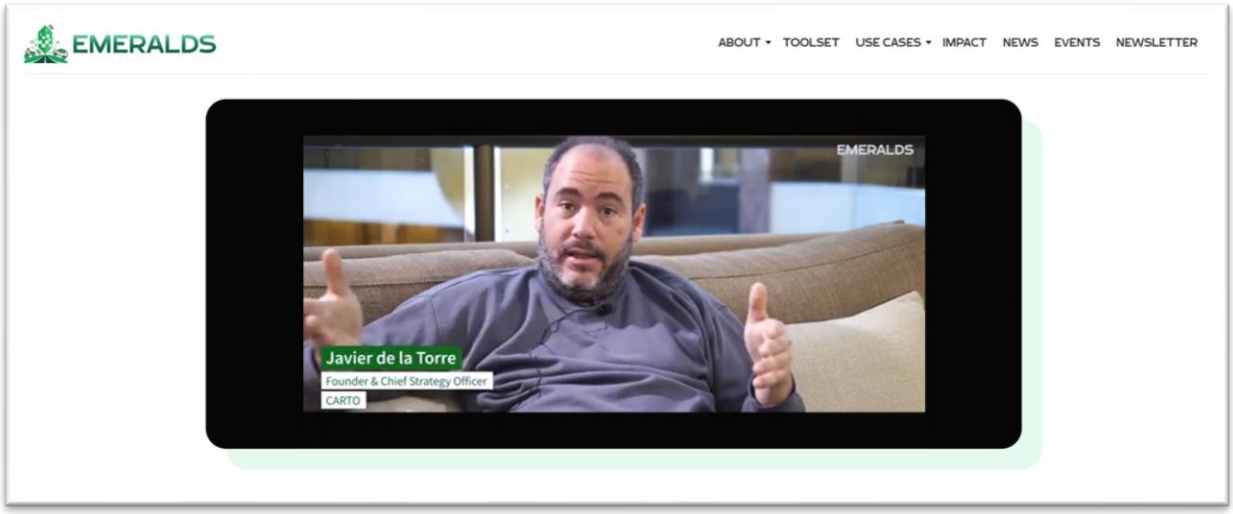


Figure 5-9 – Project Video embedded on website homepage.

Next steps

Snippets from the 4 videos already produced as well as other unused footage will be used where relevant both on social media and on website pages to explain and describe the project objectives, the use cases, the technology and project impact.

The next set of professionally produced videos planned will be a follow up videos for each use case after M24 when MS3 “Use case 1st assessment cycle” is completed, to speak about the progress and results of each use case.

5.6 Press Releases

A press release on the project launch “Improving Data-driven Urban Mobility Decision Making through Extreme-scale Urban Mobility Data Analytics” was produced and distributed by WP6 in M2.

The press release focused on the project’s mission, objectives, use cases and included quotes from the coordinator. It was published on the project website and is included in the ***Annex***.

The press release was published in 5 external websites:

- https://www.geoinformatics.com/tu-delft-argaleo-eu-mobility-data-project/
- https://dutchcycling.nl/knowledge/blogs-by-experts/tu-delft-and-argaleo-win-eu-project-for-mobility-data-solution/
- https://innovationorigins.com/en/selected/utrecht-and-the-hague-pilot-cities-in-european-mobility-data-project/
- https://biplatform.nl/2688751/tu-delft-en-argaleo-winnen-eu-project-voor-oplossing-mobiliteitsdata.html (in Dutch)
- https://tbmnet.nl/nieuw-europees-project-emeralds-voor-verbeteren-mobiliteitsdata/ (in Dutch)

Partners have also published the press release or information about the project on their institutional websites.

- https://konnecta.io/projects/emeralds
- https://company.ptvgroup.com/en/resources/newsroom/latest-news/ptv-group-to-support-new-research-project-emeralds-on-urban-mobility-data-analytics
- https://micd.tudelftcampus.nl/projects/emeralds-tool-to-analyse-mobility/
- https://www.tsi.gr/projects/emeralds/

Next steps

Further Press Releases are planned for M18 when MS2 “Primary implementation cycle and initial integration” is completed resulting in the early versions of the containerised services and M33 after MS4 “Integration of services, Deployment on platforms, 2nd assessment cycle” is completed resulting in ready-to-use versions of the EMERALDS services.

5.7 Events

Ten webinars will be held over the course of the project, with the first of these currently being planned for M9. This will provide a project overview to the community of stakeholders which has been built over the first months of the project. Table 11 provides an overview of the webinar planned by EMERALDS for Y1. These cover the main various topics of the campaigns outlined at the start of this document.

Table 11 Webinar series

Title/Topic	Month	Related Deliverable
Project intro + use case deep dive A detailed project introduction, offering a comprehensive overview of the EMERALDS' objectives, methodologies, and technical approach. Additionally, an extensive use case deep dive, delving into the three specific scenarios to examine the applied technologies, data analysis techniques, and technical outcomes expected.	M9	D5.1
Toolset & reference architecture Exploring the toolset and reference architecture utilised within the project. We provide an in-depth analysis of the software tools, frameworks, and technologies employed, along with a detailed examination of the reference architecture, enabling participants to gain a comprehensive understanding of the technical infrastructure and resources leveraged for the successful implementation of EMERALDS.	M10	D2.1
AI for Mobility Analytics Participants will gain valuable insights into the application of artificial intelligence techniques, such as machine learning and data analytics, for analysing mobility patterns, optimising transportation systems, and making data-driven decisions, empowering them with the knowledge to leverage AI for transformative advancements in the field of mobility.	M12	D2.1
Joint webinar with cluster projects (see section 8) Exploring how the cluster of EU research projects are tackling the challenges posed by "Extreme data" - the growing volume, velocity, and variety of data. Attendees will gain insights into cutting-edge techniques, scalable infrastructure, and advanced analytics approaches employed by these projects to effectively process, analyse, and derive valuable insights from massive datasets, paving the way for innovative solutions and advancements in data-driven research and applications.	M13	n/a

5.7.1 Third Party Events

Participation in third-party events is an effective way to communicate to a wider audience about the project, create synergies and build a community. In this the first six months of the project the focus has been on presenting the project in several third-party events.

Table 12 registers the participation in third-party events from consortium members:

Table 12 Participation at third-party events

#	Event	Type	Date	Project Month	Partners
1	""Get-to-know" introductory and welcome day from Data Spaces Support Centre (DSSC) to Horizon Europe Projects in Data sharing in the common European data spaces and Strengthening Europe's data analytics capacity (HE Cluster 4 – 2021/2022 – Data - 01)"	Webinar	23/2/2023	M2	INLECOM
2	PrepDSpace4Mobility Stakeholder Workshop (ERTICO)		10/05/2023	M5	INLECOM, KNT
3	MobiDataLab DataThon	Hackathon	15/05/2023-16/05/2023	M5	AIT, ULB
4	Novels from data management universe - different applications, from EU Green Deal, Water, Food and Mobility		29/05/2023	M5	INLECOM, UPRC, TRUST-IT

Next steps

The following third-party events have been identified (Table 13) as opportunities to participate in presentations and workshops. Applications are currently underway or planned. More events are being continuously identified and assessed for participation.

Table 13 Upcoming events

#	Event	Type	Date	Where
1	Major Cities of Europe - Annual Conference	Workshop in parallel session	25-27 October 2023	Prato (Italy)
2	Smartcityexpo	Panel discussion and workshop	7-9 Nov 2023	Barcelona & online (Spain)
3	EDBVForum, Valencia, (ES)	Booth for a group of projects	25-27 October 2023	Valencia (Spain)
4	POLIS Conference 2023	TBD	29-30 November 2023	Leuven (Belgium)
5	IEEE International Conference on Smart Mobility - IEEE	TBD	2024	TBD

5.8 Publications & Scientific Papers

As described in the description of action, all EMERALDS publications, along with public datasets and code deliverables, will be stored in repositories listed in Open AIRE (Open Access Infrastructure for Research in Europe). The project will deposit these publications in open research data repositories such as **ZENODO** to enable third parties to access and utilize them. To ensure open access to the deposited publications, the Consortium partners will have the freedom to choose between self-archiving ("green" Open Access) or open access publishing ("gold" Open Access). In the first scenario, EMERALDS partners will deposit the final peer-reviewed manuscript in a repository of their choosing, guaranteeing open access to the publication within a maximum period of six months. Alternatively, the project will strive to publish in open access journals or journals that offer the possibility of making individual articles openly accessible.

As of M6, project partners are being surveyed for their upcoming publications. These are kept track of in the impact tracking sheet to make sure that WP6 also promotes these publications to the project's community once published.

EMERALDS aims to publish its research in scientific journals and conferences that focus on the fields of **data management** (e.g., IEEE Transactions on Knowledge and Data Engineering ***TKDE***, ACM Special Interest Group on Management of Data ***SIGMOD,*** ACM Special Interest Group on Knowledge Discovery and Data Mining ***SIGKDD,*** Very Large Data Bases, ***VLDB,*** IEEE International Conference on Data Engineering ***ICDE***), **ML/AI** (e.g., IEEE Transactions on Neural Networks and Learning Systems ***TNNLS***, Association for the Advancement of Artificial Intelligence AAAI, Journal of Machine Learning Research ***JMLR***, International Conference on Machine Learning ***ICML***, European Conference on Machine Learning ***ECML***), **distributed systems** (e.g., Journal of Parallel and Distributed Computing ***JPDC***, IEEE Transactions on Parallel and Distributed Systems ***TPDS***, Conference on Innovative Data Systems Research ***CIDR***), **security** (e.g., Transactions on Privacy and Security ***TPS***, Network and Distributed System Security Symposium ***NDSS***) and mobility (e.g., Transportation Research Part C: Emerging Technologies ***TRC***, Journal of Urban Planning and Development ***JUPD***) . Additionally, the project is in the process of liaising with EIT innovation days and the Open-Source Summit Europe.

6 KPIs and Monitoring

6.1 KPI Table

Communications and dissemination KPIs are presented in Table 14 where we provide an overview of each KPI goal and the current status at M6.

Table 14 Project KPIs and Progress as of M6

Metric	Goal by M36	At M6	Status
Social Media Followers	1500+	254	On Track
Branding Suite (communications materials)	12+	4	On Track
Scientific Publications	15+	0	Planned
Newsletters	12+	1	On Track
Newsletter Subscribers	350+	36	Targeted recruitment at planned webinars
Videos	6+	4	On Track
Video Views	1000+	228	On Track
Policy Brief	1 (with 300+ downloads)	0	Planned
Open consultation on Policy Brief	1	0	Planned
Synergies	10+	5	On Track
Potential Adopters	5+	0	Planned
Website Releases	4+	2	On Track
Press Releases	3+	1	On Track
Use Case Workshops	2+ (30+ attendees each)	0	Planned
Webinars	10 (30+ attendees each)	0	Planned
Final Event	1 (100+ attendees)	0	Planned
Third-Party Events	30+	4	On Track

Analysing Table 14, the tasks with the status “On Track” are progressing as expected towards the target KPI for M36. Those marked as “Planned” are actions that are planned for when the project has progressed further. Those marked as “Needs Improvement” are actions whereby further progress was required at M6.

In terms of scientific publications, the lack of publications from the consortium in the first 6 months of the project is not surprising, as generally more scientific insights become apparent as the project progresses to the later stages. In fact, the first scientific publication from the consortium is planned for M8 by consortium partner Austrian Institute of Technology (AIT).

In terms of Newsletter subscribers, we have planned a social media campaign in M7 to encourage people to read our first newsletter (sent in M6) and subscribe for further issues, to boost the number of newsletter subscribers. In addition, we anticipate that webinars organised in M9-12 will also provide new subscriptions. When registering for webinars, participants will be given the option to also sign up for the newsletter.

6.2 Monitoring

Monitoring is fundamental to track how communication and dissemination activities contribute to achieving EMERALDS' goals and where necessary, adjust based on the data. The main tools used for tracking the data are Google Analytics 4 (GA4) and the submissions received through the website's Drupal content management framework.

Since the new regulation on tracking cookies was implemented, users who don't accept tracking cookies are not tracked by GA4, so all the data coming from GA4 only represent partial results of the real total amount of website users. On Drupal however, it is possible to accurately track the number of people who submit on a form or download material. Nonetheless, despite the underreported number of users, the way GA4 calculates users is stable, and so a combination of tracking through GA4 and Drupal will still allow us to understand whether specific activities are effective.

For the other EMERALDS channels such as social media and content repositories, these tools provide their own tracking systems. These will all be collected in the WP6 Management Sheet available to all project members.

An analytics dashboard will also be set up to track both website and social media goals in a user-friendly interface.

An Impact Tracker spreadsheet is used to monitor the monthly progress made on KPIs, giving the possibility to adjust effort according to trends. An Editorial Calendar is also used to plan upcoming news, events, and social media activities. This allows a timely distribution of outputs and communication.

7 Synergies & Liaison

Forming synergies with projects with similar objectives and target stakeholders is a key objective of Task 6.3. A particular focus of this activity is to identify and establish a collaboration with projects funded under HORIZON-CL4-2022-DATA-01-05 - Extreme data mining, aggregation and analytics technologies and solutions (RIA). Projects funded under this call, which includes EMERALDS, are expected to provide ground-breaking advances in the performance, speed and/or accuracy as well as usefulness of data discovery, collection, mining, filtering and processing in view of coping with "extreme data". The technologies and solutions are expected to discover and distil meaningful, reliable and useful data from heterogeneous and dispersed/scarce sources and deliver it to the requesting application/user with minimal delay and in the appropriate format[2].

The main objective will be to:

- Form a group of projects representatives;
- Organise regular collaboration calls;

[2] *https://cordis.europa.eu/programme/id/HORIZON_HORIZON-CL4-2022-DATA-01-05/en*

- Map commonalities in objectives, target stakeholders, technologies[3] and eventual results;
- Explore the creation of forming a “project cluster” around a specific topic;
- Plan and deliver joint dissemination activities in the lifetime of the projects.

Related and Sister projects under the Horizon Europe Programme

The table below (Table 15) provides an overview of the 6 projects that are funded under the call.

Table 15 Related and sister projects

Project Snapshot	Description
EFRA Extreme Food Ri**sk Analytics** **GA: 101093026** **Budget: € 4 833 797,50** **Duration: Jan 2023 – Dec 2025** **8 Partners** **https://efraproject.eu/**	Food safety is a top priority in Europe. Data mining, aggregation and analytics are essential to address scientific, economic and societal challenges associated with food safety. The EU-funded EFRA project will develop and test solutions to discover food risk data from heterogeneous and dispersed/scarce data sources with minimal delay and appropriate format. It will also design relevant human aspects and interactions with users to measure usefulness for human risk prevention actions in real-world use-cases. By integrating big data, IoT and AI, it is possible to foster links to food data innovator communities. To achieve these goals, EFRA will design, test, and deploy tools and undertake appropriate initiatives to facilitate their uptake, elicit feedback, and engage stakeholders.
EXA4MIND E**xtreme Analytics for MINing Data spaces** **GA: 101092944** **Budget: € 4 911 425,00** **Duration: Jan 2023 – Dec 2025** **8 Partners** **https://exa4mind.eu/**	The EU-funded EXA4MIND project plans to build an extreme data platform that brings together data storage systems and powerful computing infrastructures. To this end, researchers will set up a unique, modular extreme data database and advanced analytics on supercomputers powered by artificial intelligence and machine learning. These technologies should help unlock data collection from heterogeneous sources, automatic data harmonisation and annotation on the fly. At its core, EXA4MIND is driven by four application cases in the fields of molecular dynamics, autonomous driving, smart agri/viticulture and health/social big data.
EXTRACT A distributed data-mining software platform for extreme data across the compute continuum **GA: 101093110** **Budget: € 4 997 875,00** **Duration: Jan 2023 – Dec 2025**	Data and extracted knowledge have become a crucial part of the digital transformation of many sectors. The process of extracting knowledge from data relies on data mining, which requires optimisation for efficient and specific data collection. However, data mining cannot cope with situations where data characteristics are extreme. This creates a developmental bottleneck, and solutions are needed to allow for efficient data mining across computing continuums that can handle extreme

[3] *The actions should address the integration of relevant technologies (e.g. big data, AI, IoT, HPC, edge/fog/cloud computing, language technologies, cybersecurity, telecommunications, autonomous systems etc.)*

11 Partners **https://extract-project.eu/**	data characteristics. The EU-funded EXTRACT project offers a solution to this challenge. It will develop a data-driven open-source software platform that will utilise a vast array of computing technologies to guarantee safety, improved performance and energy efficiency while allowing for extreme data mining.
Graph-Massivizer Extreme and Sustainable Graph Processing for Urgent Societal Challenges in Europe **GA: 101093202** **Budget: € 4 998 062,50** **Duration: Jan 2023 – Dec 2025** **12 Partners** **https://graph-massivizer.eu/**	Graph-Massivizer will develop a high-performance, scalable and sustainable platform for information processing and reasoning relying on the massive graph representation of extreme data. It will deliver five open-source software tools and FAIR graph data sets. The tools will focus on holistic usability (extreme data ingestion and massive graph creation), automated intelligence (analytics and reasoning), performance modelling and environmental sustainability trade-offs. The project will validate the innovation on four complementary use cases covering the economy, society and the environment. It expects to show a two-fold improvement in data centre energy efficiency and over 25 % lower greenhouse gas emissions for basic graph operations.
NEARDATA Extreme Near-Data Processing Platform **GA: 101092644** **Budget: € 3 913 585,00** **Duration: Jan 2023 – Dec 2025** **11 Partners** **https://neardata.eu/**	Near-data processing, namely placing the processing power near the data rather than sending data to the processor, mitigates challenges associated with the expensive movement of extremely high volumes of data. The EU-funded NEARDATA project will design a near-data platform to enable the consumption, mining and processing of distributed and federated data. The envisaged platform will eliminate the need to optimise the logistics of data access across heterogeneous data locations and pools. It will host an intermediary data service providing serverless connectors that optimise data management operations and interactive queries. Real-time video and event streams will be supported. Ultimately, the platform will host a data broker service, enabling trustworthy data sharing and data pipeline orchestration across the computing continuum.
SYCLOPS Scaling extreme analYtics with Cross-architecture acceLeration based on **OPen Standards** **GA: 101092877** **Budget: € 4 090 673,75** **Duration: Jan 2023 – Dec 2025** **7 Partners** **https://www.syclops.org/**	The widespread adoption of AI has resulted in a market for novel hardware accelerators that can efficiently process AI workloads. Unfortunately, all popular AI accelerators today use proprietary hardware-software stacks, leading to a monopolisation of the acceleration market by a few large industry players. The EU-funded SYCLOPS project aims to democratise AI hardware acceleration by building on open standards. On the hardware front, researchers will promote the adoption of RISC-V, an open instruction set architecture based on established reduced instruction set computer (RISC) principles. On the software front, they will promote the adoption of SYCL, an open, cross-vendor, cross-architecture programming model. Standardised, AI acceleration enabled through SYCLOPS is expected to boost performance and scalability of extreme data analytics.

CREXDATA **Critical Action Planning over Extreme-Scale Data** **GA: 101092749** **Budget: € 8 698 105,00** **Duration: Jan 2023 – Dec 2025** **15 Partners** **https://www.crexdata.eu**	The EU-funded CREXDATA project plans to develop a platform for real-time critical situation management, including flexible action planning and agile decision-making. CREXDATA will produce the algorithmic apparatus, software architecture and tools for gathering federated predictive analytics and forecasting in the face of uncertainty. The proposed framework will facilitate proactive decision-making, by providing highly accurate and transparent short- and long-term forecasts, explainable via advanced visual analytics and accurate, real-time, augmented reality facilities. Offered as a platform-as-a-service solution, CREXDATA platform will be evaluated in three use cases: maritime crisis management, weather emergency management and health crisis management.

The first objective will be of course to understand which of the projects described above are interested in collaborating. The benefit of such collaboration as we see it are the foundations for the EC's Horizon Results Booster (HRB) Dissemination services which are delivered by Trust-IT. Forming synergies is generally an objective of all projects. By joining the collaboration, projects will be meeting their own project objectives and provide a platform for the elaboration of further synergies or re-use of results between the projects. The organisation of joint events can have extremely positive impact in terms of combining project networks and communications efforts to meet a broader audience. The projects have a total of 77 partners which can potentially massively boost the geographical coverage and reach of any joint communications or dissemination activity. A jointly organised webinar for example, if promoted by all projects, is likely to attract a larger audience.

A clear identification of the Key Exploitable Results (KERs) for each project, highlighting wherever possible their Unique Value Proposition (UVP) is at the basis of all dissemination activities. This is often a weak point for most research projects, which have difficulties in clearly understanding the UVP of the KERs and in some cases, even recognising the actual KERs. An objective of this synergy would for the projects involved to define UVPs which in turn would impact positively on the EC in helping them understand and communicate early the KERs of their own projects.

In terms of actual joint dissemination activities, we would encourage the projects to deliver:

- a series of joint webinars
- a policy brief or joint set of recommendations

Topics for these would be identified in the regular meetings set up. These could focus on providing a set of recommendations targeting the European Commission and policy makers on strategic priorities related to the call.

For example, projects with a focus on Artificial Intelligence could collaborate in a joint webinar focusing on how AI technologies are key for achieving project activities and how they are addressing related challenges associated with the AI- Act or Standardisation topics related to the EC's standardisation request in AI. A post-webinar policy brief could be jointly produced providing an overview of how projects are addressing these points with a set of recommendations for, for example, priorities in future calls.

Similarly, with all projects having use cases, it would be interesting to carry out a joint webinar show-casing the objectives and challenges of each UC or organising specific joint webinars on specific vertical sectors.

Action plan

Table 16 provides an overview of the actions to be carried out in the following months.

Table 16 Action Plan

Action	Timing	Lead & contributors
Set up: Contact all projects and propose formation of collaboration.	**M6**	**Trust-IT**
Information sharing: Organisation of conference call and sharing of information on project: • **Objectives** • **Technologies** • **Target stakeholders** • **KERs & timing** • **Communications & dissemination timeline** • **Set up of joint shared documents to facilitate collaboration. E.g., shared events file**	**M7**	**Trust-IT** **All projects**
Identification of joint communication/dissemination objectives and areas of exploration.	**M8-9**	**Trust-IT** **All projects**
Delivery of first joint communication/dissemination activity. As a first activity, we would suggest a joint webinar.	**M12**	**Trust-IT** **All projects**
Continuation of collaboration and planning of future actions	**M11-36**	**Trust-IT** **All projects**

8 Conclusion

In conclusion, the D6.1 "Dissemination plan" plays a crucial role in ensuring the effective communication and distribution of information regarding the EMERALDS project to achieve its objectives and impacts. By implementing a well-defined dissemination and communication strategy, the project aims to transfer knowledge, raise awareness about project benefits, and maximise overall impact. The collaboration and coordination of all work packages, including technical and scientific aspects, are vital for the success of WP6 and the project as a whole.

To ensure the plan's successful implementation, active support from EMERALDS partners is essential. Regular virtual meetings within the WP, led by Trust-IT as the WP leader, provide a platform for discussing completed activities, planning upcoming tasks, and addressing any potential corrective actions. By fostering collaboration and knowledge exchange through early connections with other projects and organisations, the project can leverage synergies and enhance its outcomes.

Moving forward, the dissemination and communication efforts outlined in this plan will continue to evolve throughout the project's timeline. By leveraging various channels, such as social media, workshops, webinars, and third-party events, the project aims to reach a wide range of stakeholders and ensure the distribution of high-quality content. Ultimately, the successful execution of the dissemination plan will contribute to the EMERALDS project's visibility, impact, and the achievement of its goals.

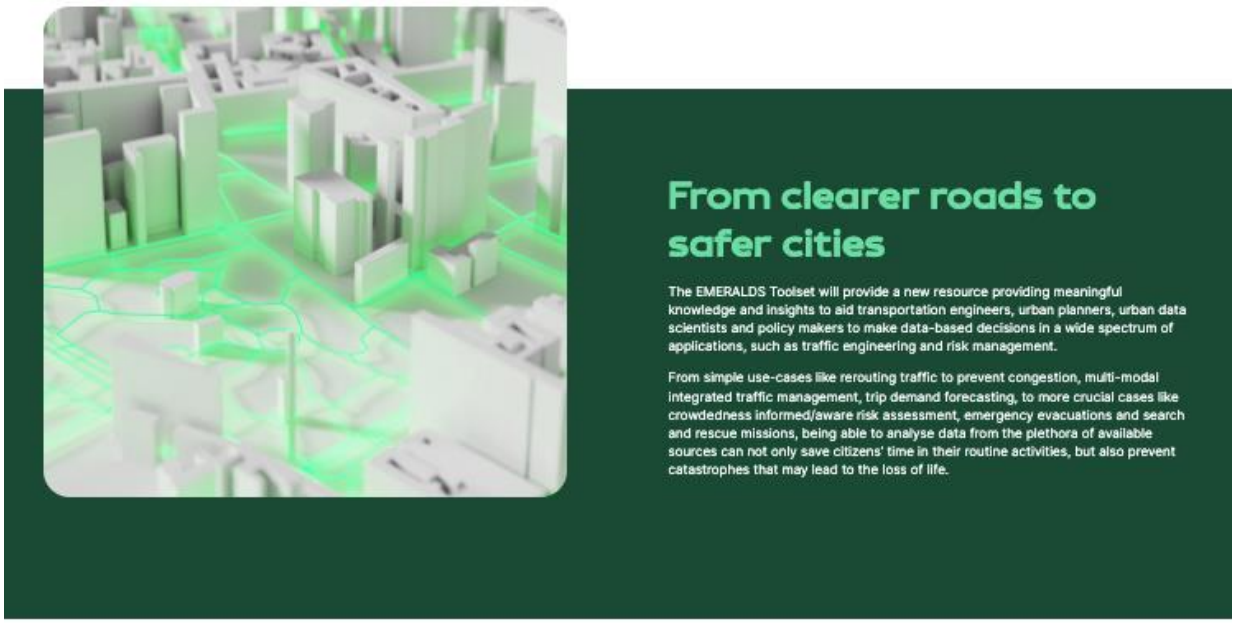
9 ANNEX

- The press release on the project launch:

  "Improving Data-driven Urban Mobility Decision Making through Extreme-scale Urban Mobility Data Analytics"

- The website shows the first video, shot during the KickOff Meeting, embedded on the home page:

The EMERALDS toolset section will be implemented on the website, where the information and a dedicated section will be the point of contact and will disseminate the links to the technical results.



The Use Cases possess a designated section on the website, wherein each pilot is comprehensively elucidated and presented. This section will also encompass details regarding campaigns, initiatives, events, and online webinars that are specifically tailored for these use cases. Herein, we provide an overview of the initial use case, along with a dedicated webpage featuring an embedded video for enhanced understanding.

EMERALDS

ABOUT ▾ TOOLSET USE CASES ▾ IMPACT NEWS EVENTS NEWSLETTER

Home /

Risk-assessment, prediction and forecasting during events

View Edit Delete Revisions Clone

With more than half the world's population living in cities and urban areas leading to overcrowding in cities and bringing people into ever-greater contact every day, the hustle and bustle of busy urban centres can cause a variety of challenges not only for residents but also for businesses, visitors, authorities and emergency services. With growing examples of challenges in managing large crowds at events and avoiding mass crushes, there is a growing need for better decision-making support resources to enable authorities, emergency services and event organisers and the like to be better prepared for such events. These can range from resources to address both the short-run (real-time interventions) or longer-run (planning) undesirable situations.

In the EMERALDS project, Argaleo and the Delft University of Technology are working closely with the municipality of **The Hague** to design a risk assessment, prediction and forecasting system to support decision-making. Being the political capital of the Netherlands, The Hague is often the stage of (political) demonstrations which, in some cases, escalate. Moreover, the city welcomes substantial numbers of tourists each year and has a vivid beach scene (Scheveningen), which causes the necessary challenges for the safety and accessibility of all stakeholders. Think of visitors, inhabitants, and entrepreneurs.

How EMERALDS will address the challenge

With an overwhelming amount of data available, EMERALDS will address how to make optimal use of them to provide reliable decision support for planning and operational management under stressful conditions. The use case will design a decision support system for municipalities to address several scientific and technical challenges:

- Determining which data/data sources are relevant to estimate, predict, and forecast the risks of irregularities.
- Predicting and forecasting the factors leading to these irregularities, including the estimation, prediction and forecasting of crowding and citizens' mobility plans in the case of major events.

Multi-dimensional identification of risk, based on the current and predicted physical and context characteristics of the situation using dedicated AI techniques.

How it will work

The use case focuses on the exploitation of extreme data analytics and AI for risk assessment, prediction, and forecasting by developing two methods. The first is aimed at the prediction and forecasting of the situational variables (e.g., crowding, but also weather and hazard dynamics). The second combines the prediction/forecast of the situational variables with the (observed) contextual variables (e.g., characteristics of the current event, the composition of the crowd being observed and sentiments in the public) to assess the risk level. The combination of the two methods results in a data-driven assessment of the risk and the need to intervene.

Watch the Video