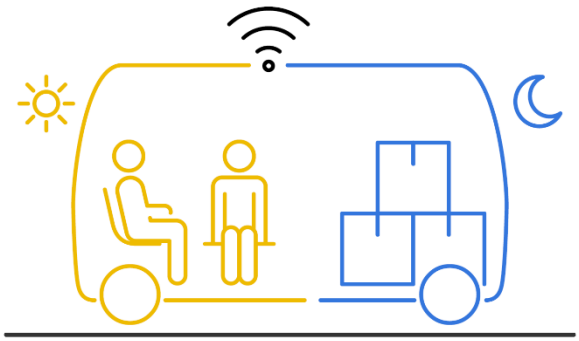

ULTIMO

Advancing Sustainable User-centric
Mobility with Automated Vehicles

DELIVERABLE

D7.2 Communication and dissemination plan, reports and materials - Second version

Co-funded by the European Union

Project co-funded by
Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Swiss Confederation
Federal Department of Economic Affairs, Education and Research EAER
State Secretariat for Education, Research and Innovation SERI

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This work has received funding from the Swiss State Secretariat for Education, Research and Innovation (SERI).

Document Information

Grant Agreement	**101077587**
Full Title	Advancing Sustainable User-centric Mobility with Automated Vehicles
Acronym	ULTIMO
Deliverable	D7.2 Communication and dissemination plan, reports and materials - Second version
Deliverable Due Date	31.03.2024
Work Package	WP7
Lead Partner	UITP
Leading Author	Charlotte van Hek
Dissemination Level	Public

Document History

Version	**Date**	**Author**	**Description of change**
1.0	28.02.2024	Charlotte van Hek, UITP	First version
1.1	11.03.2024	Loris Schmid, ArgYou	Additions to Chapter 7
1.2	21/03/2024	Daria Kuzmina, UITP	Additions to various chapters
1.3	22/03/2024	Antonios Lalas, CERTH	Additions to publications and events
2.0	25/03/2024	Julia Dallest, Open Geneva	Review of deliverable
3.0	27/03/2024	Charlotte van Hek, UITP	Consolidating comments and finalising of document

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Acronyms

ADS	Automated Driving Systems
AI	Artificial Intelligence
AM	Automated Mobility
AMB	Automated Minibus
API	Application Protocol Interface
AV	Automated Vehicle
BMM	Business Modelling Manager
CAV	Connected and Automated Vehicles
CB	Consortium Body
CERN	European Organization for Nuclear Research
D7.1	Deliverable 7.1
DC	Demonstration Coordinator
DI	The department of infrastructure (Swiss Canton of Geneva)
DMP	Data Management Plan
DTU test track	Technical University of Denmark test track
EAB	External Advisory Board
EC	European Commission
ECSEL	Electronic Components and Systems for European Leadership
EM	Exploitation Manager
EU	European Union
EUCAD	European Conference on Connected and Automated Driving
F2F	Face to face meeting
FEDRO	(Swiss) Federal Roads Office
FM	Fleet Management
FOT	(Swiss) Federal Office of Transport
GDPR	General Data Protection Regulation
GIMS	Geneva International Motor Show
GNSS	Global Navigation Satellite System
HARA	Hazard Analysis and Risk Assessment
IPR	Intellectual Property Rights
IT	Information Technology
ITU	International Telecommunications Union
LaaS	Logistics as a Service
LIDAR	Light Detection and Ranging
MaaS	Mobility as a Service
MEM	Monitoring and Evaluation Manager
MT	MobileThinking
OCT	General Transport Directorate of the Canton of Geneva
ODD	Operational Domain Design
OEDR	Object and Event Detection and Response
PC	Project Coordinator
PEB	Project Executive Board
PGA	Project General Assembly
PRM	Persons with Reduced Mobility
PTA	Public Transport Authority
PTO	Public Transportation Operator
PTS	Public Transportation Services
QRM	Quality and Risk Manager
QRMB	Quality and Risk Management Board
RN	Risk Number
SA	Scientific Advisor
SAE Level	Society of Automotive Engineers Level (Vehicle Autonomy Level)
SAN	(Swiss) Cantonal Vehicle Service
SDK	Software Development Kit
SLA	Sales Lentz Autocars
SMB	Site Management Board
SoA	State of the Art
SOTIF	Safety Of The Intended Functionality
SWOT	Strengths, Weaknesses, Opportunities, and Threats.
T7.1	Task 7.1
TM	Technical Manager
TPG	Transport Publics Genevois

UITP	Union Internationale des Transports Publics (International Transport Union)
V2I	Vehicle to Infrastructure communication
WP	Work Package
WPL	Work Package Leader

Executive Summary

This deliverable describes the ULTIMO communication and dissemination plan as well as all activities undertaken from M1 until M18 of the project. After publication of D7.1 (Dissemination strategy and plan) in M6, D7.2 reports on the implemented communication channels, materials developed, messages disseminated and stakeholders targeted. Furthermore a first analysis of the strategy is done, taking into account the KPIs set in D7.1.

The work done in T7.1 is closely related to T7.2 (Stakeholder Engagement & Exploitation), therefore some overlapping with D7.5 (Stakeholders Engagement & Exploitation Plan) might be present in this deliverable, certainly in regards to stakeholders targeted and activities undertaken by the partners.

The ambition of the ULTIMO project is to create an economically viable, large-scale and AV-based shared public transport service in different regions in Europe. To achieve this goal, it is key to involve a large number of stakeholders and consider communication and dissemination activities as of the utmost essence to ensure societal, environmental, technical, and political impact on local, and (inter)national levels.

As indicated in D7.1, the first phase of the strategy focused mostly on *communications,* thus to inform, promote and communicate about project vision and objectives. Therefore, in M1-M18 of ULTIMO, the project has:

- Positioned itself as a strong brand through consistent use of a visual identity and supporting materials;
- Launched and continuously updated the website;
- Published support materials including a leaflet;
- Created a project video as well as various other videos;
- Sent out multiple press releases and has been published in multiple (international) press articles or online media;
- Launched and continuously updated social media accounts X (formerly Twitter), LinkedIn and YouTube;
- Launched various content communications initiatives such as an e-newsletter, an interview campaign and blogposts;
- Focused on highlighting the deployment sites with many local communication activities;
- Made first steps in liaising with other international CCAM initiatives;
- Attended and spoken at many sector events to promote the ULTIMO vision;
- Ensured citizen engagement through three Hackathons and;
- Utilised partners' networks to raise awareness on the project.

In the rest of D7.2 we will provide further insights into these activities, and provide a plan for the rest of the project.

Introduction

During the past few years many projects and initiatives were undertaken deploying and testing Automated Vehicles (AVs) for public transportation and logistics. However in spite of their ambition, all of these projects stayed on the level of experimentation and never reached the level of a large-scale commercial deployment of transport services. The reasons for this are many, the most important being the lack of economically viable and commercially realistic models, the lack of scalability of the business and operating models, and the lack of user oriented services required for large end-user adoption of the solutions.

The ULTIMO project aims to create the very first economically feasible and sustainable integration of AVs for MaaS public transportation and LaaS urban goods transportation. ULTIMO aims to deploy in three sites in Europe 15 or more multi-vendor SAE L4 AVs per site. A user centric holistic approach, applied throughout the project, will ensure that all elements in a cross-sector business environment are incorporated to deliver large-scale on-demand, door-to-door, well-accepted, shared, seamless-integrated and economically viable CCAM services. We target the operation without safety driver on-board, in a fully automated and mission management mode with the support of innovative user centric passenger services.

ULTIMO's innovative transportation models are designed for a long-term sustainable impact on automated transportation in Europe, around the globe and on society. The composition of the consortium ensures the interoperability between multiple stakeholders by making adoption of new technology at minimum costs and maximum safety. The integration of the ongoing experiments of previous AV-demonstrator projects ensures highest possible technical and societal impacts from the very beginning of the project, as well as during the project lifetime and even long after its completion.

1.1 On-demand Mobility

Public transportation is a key element of a region's economic development and the quality of life of its citizens. Governments around the world are defining strategies for the development of efficient public transport based on different criteria of importance to their regions, such as topography, citizens' needs, social and economic barriers, environmental concerns, and historical development. However, new technologies, modes of transport and services have appeared, which seem very promising to support regional public transport development strategies .

On-demand transport is a public transport service that only works when a reservation has been recorded and will be a relevant solution where the demand for transport is diffuse and regular transport is inefficient.

On-demand transport differs from other public transport services in that vehicles do not follow a fixed route and do not use a predefined timetable. Unlike taxis, on-demand public transport is usually also not individual. An operator or an automated system takes care of the booking, planning and organization.

It is recognized that the use and integration of on-demand automated vehicles has the potential to significantly improve services and provide solutions to many of the problems encountered today in the development of sustainable and efficient public transport.

Fully Automated Vehicles

A self-driving car, referred in the ULTIMO project as a **Fully Automated Vehicle** (**AV**), is a vehicle that can sense its environment and moving safely with no human input.

The terms *automated vehicles* and *autonomous vehicles* are often used together. The Regulation 2019/2144 of the European Parliament and of the Council of 27 November 2019 on type-approval requirements for motor vehicles defines "automated vehicle" and "fully automated vehicle" based on their autonomous capacity:

An "automated vehicle" means a motor vehicle designed and constructed to move autonomously for certain periods of time without continuous driver supervision but in respect of which driver intervention is still expected or required

"Fully automated vehicle" means a motor vehicle that has been designed and constructed to move autonomously without any driver supervision

In ULTIMO, we aim to operate ***Fully Automated mini and micro shuttles for shared public transportation***. In relation to the SAE levels, the ULTIMO project will operate SAE Level 4 vehicles.

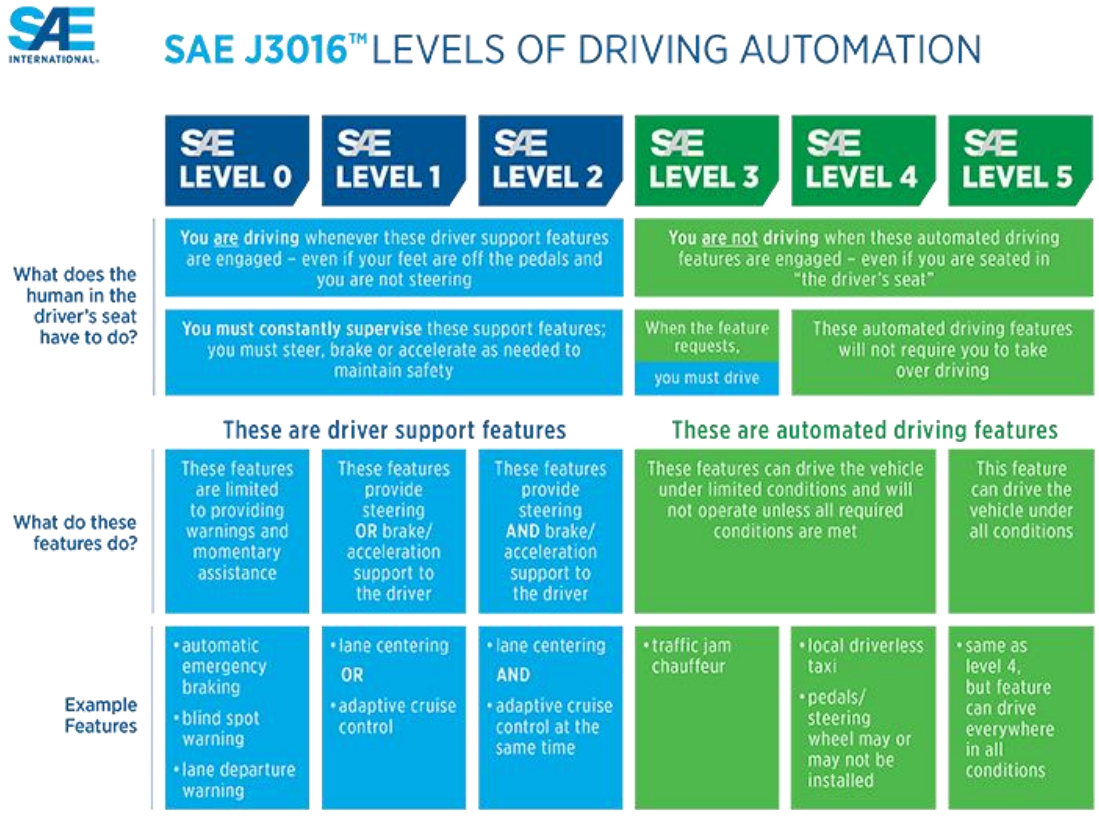

Figure 1: SAE Driving Automation levels (©2020 SAE International)

The ULTIMO dream for public transportation

Our city has a population of 700.000, and the local PTO (Public Transport Operator) deploys 3.000 Km of public transportation services' routes, with 4 backbone tram lines, 8 backbone large bus/trolley lines, and 340 fully automated multi-manufacturer mini and micro-shuttles in an on-demand, door-to-door shared public transport service. The fleet of the 340 automated mini-busses is composed of different vehicle generations and models from different manufacturers, as it was purchased in different batches during the last 12 years (it all started with the first 15 bought by a European project in 2023/24). It is today composed of the first 15 twelve-years old vehicles from manufacturer A, 160 eight-years old vehicles from manufacturer B and 160 two-years old vehicles from manufacturer A, which are the new generation of manufacturer's A vehicles. These last 160 vehicles re-placed the last 70 old, driver based, thermic busses that reached the end of their life after 18 years in operation. The change from driver large busses to automated mini-buses and from fixed line service to on-demand, door-to-door, for the last area of the city, was decid-ed 6 years ago, and was based to the great success of the already deployed AV-based ser-vices in the other parts of the city.

The integration of new vehicles in the PTO fleet was done within just a few days, thanks to the now standardised APIs of the automate vehicles' connection with the AV fleet management and orchestration service, that allows a plug-and-operate functionality, but also enables the combination of AVs with all other means of transport, offering a seamless citizen centric journey to the users. Similarly, the now standardized High Defi-nition (HD) maps between the vehicle manufacturers, allowed us to reuse the maps cre-ated in the past for the 3.000 Kms of routes of the city, with small adaptations for the new vehicle capabilities. At the same time of the purchase of the last 160 AVs, we also switched to a new AV fleet management and orchestration service, from another provider, which offers more precise trip time estimations, considering also traffic jams in the city and weather conditions (that affect traffic in the city). The replacement was made within just two weeks, thanks to the new standardised interfaces between AV fleet management and PTO MaaS services.

Passengers are now able to reserve, via their mobile phone app, on the fly or with pre-reservation trips from one side of the city to another, using the optimal transport mode available for them, with a combination of different transport modes, and having the au-tomated vehicle arriving next (or almost) to their door entrance and bringing them to their final destination or to a backbone transport connection. All trips are offered with highly reliable and accurate transport and arrival times, based on real time, dynamic route changes of the vehicles, responding to the passenger needs. Many passenger services are available in the AVs via a mobile phone app, adapted to all passengers' needs, from special needs passengers (visually impaired, wheel-chair users, pregnant women, elderly, children), to persons transporting suitcases or a baby-stroller, providing adapted information of their trip (where to get-off, PTO general information, and even infotainment, like city related information and historical facts and anecdotes, related to their current position).

With the full suppression of on-board operators, automated in-vehicle monitoring provides a multitude of passenger services, which were, and are developed with a con-tinuous collaboration and innovation between users and the PTO. An on-board unit iden-tifies locally (that is, in the bus) incidents and events, like aggressions, vandalism, forgot-ten objects, littering, accidents, etc., and raises incident alarms to the PTO back-office. The PTO officer at the back-office evaluates the incident and decides, based on the operator policies, what action

to take: dismiss the incident, or stop the vehicle and call one of the intervention teams to go the vehicle and take the required action. The back-office operator, based on the number of incidents and intervention time legal obligations, can deploy any of the 15 intervention teams available in the city, ready to reach within a few minutes any AV. At the back-office, service operators are able, with one set of screens linked to the fleet management, to follow the vehicle status, trip reservations, routes chosen, open and closed road segments (due to works, accidents, etc. thus adapting dynamically the trip routings), while in a second set of screens, the back-office operators can follow the passenger services' incidents and the status and location of the intervention teams. The two systems, although independent, are linked so that the back-office operator can transfer incidents to intervention teams and turn-on, when possible and under the local legal re-strictions, video connection to inspect the incident.

The public transport services are operating 24/7 with different active vehicles, de-pending on passenger transport demands. The PTO, being eco-sensible, has defined that the vehicle must have an average occupancy of at least 3 passengers. This of course has implications, especially in off-peak hours, in the transport delays, but it is fully justified for an optimal and eco-responsible operation. Exceptions are made for people with special needs or when the passenger is ready to pay an additional price.

While at peak-hours the full 340 strong fleet of AVs is in service for public transportation, in the off-peak and night hours, due to the reduced transportation needs, part of the fleet is not serving passenger transportation. However, because having a vehicle waiting idly is a waste of resources, the PTO has signed an agreement with Logistics as a Service (LaaS) Service providers. During the off-peak hours the unused vehicles are dynamically chartered by the different LaaS providers to be used for other types of incidental transport of goods or even non-public transportation of passengers. Local shops and enterprises use the service, on demand with dynamic reservation, to offer home delivery of on-line pur-chases, or B2B delivery of goods from an urban consolidation center to the distribution center (hub, many to one or one to many [7], or even transport their VIP customers directly to their offices or exposition centers. This way they can deliver the goods to their custom-ers in the city, with a delay of just 60 minutes with affordable prices, as the last mile is the most inefficient part of the goods delivery chain. The goods send can include books from local bookshops or libraries, supermarket bags or even documents exchanged between companies or waste. The local shops are even using the service in the early hours (5 o'clock in the morning) for re-provisioning their shops for the day. The so chartered AVs are "returned" to the PTO for public transport at the peak-hours automatically, at the end of the chartered time period.

2 WP7 Recap

2.1 WP7 objectives

Within ULTIMO, WP7 combines the tasks of working towards promoting automated mobility in ITS and ensuring the impact of the project findings. In the project, an 'impact first' strategy has been set up, ensuring the right channels, tools, and materials will be set up alongside an appropriate timeline and activities.

ULTIMO will apply an impact driven dissemination, exploitation and communication (D&E&C) strategy consisting of three major phases with a view to reach, engage and synergise key target audiences and stakeholders, maximising the potential short-term outcomes and long-term impacts of the project and the wide scale roll-out of Key Exploitable Results (KERs).

Within ULTIMO, all partners will contribute, upon invitation by the CINEA, to common information and dissemination activities to increase the visibility and synergies between HE/H2020 supported actions.

Ultimately, WP7 has the following objectives:

- Raise awareness and guarantee maximum visibility impact of the project objectives, progress/developments and results towards key target audiences;
- Encourage stakeholders to actively participate in ULTIMO activities and build ownership and community regarding automated mobility;
- Ensure knowledge exchange and collaboration with other (EU and international) initiatives, which will allow cross-fertilisation and the creation of synergies to maximise the project's impact in the CCAM sector;
- Gain sustainability over time therewith enlarging the community and engaging (local) stakeholders, to enhance acceptance of ULTIMO solutions in a long-term perspective;

The maximum effect will be ensured through the implementation of four key components:

- Develop the ULTIMO brand, so it becomes a synonym for Automated Vehicles' based public transportation of passengers and goods;
- Develop and implement an impact-oriented project online and offline strategy to outline a pathway for the sustainability of the ULTIMO movement;
- Establish communication partnerships with pre-existing excellent technology (SHOW, AVENUE), public transportation organisations, automated vehicle providers, fleet management service providers, networks, and associations;
- Amplify, monitor and evaluate the ULTIMO messages through strategic clustering and knowledge sharing.

2.2 Target groups & timeline

As described in D7.1, the target groups of the ULTIMO dissemination and communication strategy are as follows:

- **Automotive industries and manufacturers:** They shape a major share-holder group that is directly interested in ULTIMO advances;
- **Policy makers on local, national and EU level:** Essential to unlock the exploitation of project results and the realisation of the long-term impact of ULTIMO;
- **Public transport operators:** Results on how to deploy and operate fleets of AVs will be of great interest to PTOs looking to advance on CCAM;
- **Transport authorities and transport service providers:** This target group includes transport authorities and service provider's enterprises willing of becoming future customers;
- **Logistic service providers**: This target group includes mainly the urban logistic transportation service providers willing to adopt the business models that ULTIMO suggests;
- **Research and academia:** This target group corresponds to research and academic organisations, scientific journals, committees and other working groups in research fields related to the ULTIMO work;
- **Smart cities and governments:** Residential and commercial end-users, including smart city's authorities can benefit of ULTIMO's results and insights;
- **Standardisation bodies:** ULTIMO outcomes aim to advance scalability through standardisation bodies;
- **Passengers/citizens/associations:** citizen engagement will be an essential part of the ULTIMO project, as citizens will be the ones ultimately using AV services.

The identification of key stakeholders and the collaboration with them throughout the project will allow the consortium to constantly assess the demand for the incremental outcomes of ULTIMO, which will conclude with the elaboration of an exploitation plan that encourages the design of innovative business models for user-oriented services and products based on CCAM.

2.3 Phases of the dissemination strategy

Which audiences are targeted, through which channels and via which activities, depends on the phase within the ULTIMO project. While in the first phrase the focus will mainly lie on increasing wide-spread public visibility of the project (communications), the latter stages will ensure that key project results will be made available to relevant stakeholders (dissemination), including scientific community, policy makers, industry, etc.

Table 1 provides a schematic overview of the activities planned, as well as the phase in which they will be conducted.

Table 1: Overview of dissemination activities per project phase

Phase 1	**Awareness:** Increase public visibility about ULTIMO and inform stakeholders about objectives and planned outcomes.
	Channels & tools: • Develop visual identity and position ULTIMO as a brand; • Launch/updating of website; • Launch/updating of social media accounts (Twitter and LinkedIn); • Publication of support material such as brochures; • Creation of a general project video; • Attendance to events to present ULTIMO objectives and scope; • Citizen engagement through workshops participations; • Utilise partners' networks to introduce the project.
Phase 2	**Engagement and understanding**: Active involvement of practitioners and stakeholders in deployment sites and beyond. Focus on local dissemination. Highlight work done in sites and how it benefits CCAM and wider urban mobility community.
	Channels and tools: • Continue to update ULTIMO website; • Ensure local language (FR, DE) inclusion on website; • Social media promotion (with focus on deployment sites); • Other communication campaigns and material focused on informing about deployment sites; • Creation of videos about deployment sites; • Organisation of project events; • Attendance to conferences and other events; • Local events in deployment sites, citizen engagement events; • Press and online news coverage, also on local level; • Scientific papers to relevant journals and conferences; • (Possibility to) Engage influencers to communicate about ULTIMO and its results
Phase 3	**Engagement and adoption:** Make public and promote results of the project, promote the exploitation of the ULTIMO business models and solutions.
	Channels and tools: • Campaigns on social media and other communications campaigns; • Press and media; • Enhance liaison with practitioners and stakeholders; • Enrich website with results; • Submit scientific papers to relevant journals and conferences; • UITP project Brief recapping results; • Creation of video recapping results; • Presentation of results at conferences and other events; • (Possibility to) Engage influencers to communicate about ULTIMO and its results; • Organisation of Final Event presenting project outcomes.

3 Communication and dissemination activities

In the following chapters we will describe the communication and dissemination activities conducted until M18 in more detail.

3.1 ULTIMO as strong brand

The visual identity of the ULTIMO project has played an important role in establishing the project as a strong brand. Consistent use of the visual identity enhances project content and ensures that stakeholders following our project's progress can readily associate information.

3.1.1 ULTIMO visual identity

While more information on the ULTIMO logo/visual identity can be found in D7.1, in this report we'll briefly touch upon the different logos developed and used.

Figure 2: Different variations of the ULTIMO logo

As can be seen in Figure 2, various versions of the ULTIMO logo have been developed. Having multiple logo versions ensures seamless adaptability across various platforms. A horizontally oriented logo might fit better in some contexts, while a vertical version might be more suitable in others. This adaptability preserves the visual identity's integrity in every scenario.

To further strengthen project identity, other material has been developed, including banners, a poster and a roll-up.

Figure 3: ULTIMO roll-ups

Alike the logo, different versions of the roll-up have been created (see Figure 3), so partners can showcase the one best suited for their event/occasion. The same thing was done for the ULTIMO posters, of which two different versions were created to best suit the consortium's needs or set-up/audience of the event.

3.1.2 Guidelines & accessibility of project material

To support partners in using the project logo and other material correctly and consistently, an extensive set of (visual) guidelines and templates has been created. These guidelines include the visual charter (colours and fonts), rules and recommendations on how to communicate about the ULTIMO project, how to use the project logo, and how to correctly include mention of EU funding.

Also included are guidelines on how to ensure accessibility of documents and (web) material to all, including to people with disabilities. Examples touch upon how to ensure sufficient colour contrast, or font size. These tips will ensure that all materials developed in the project will follow the WCAG (Web Content Accessibility Guidelines).

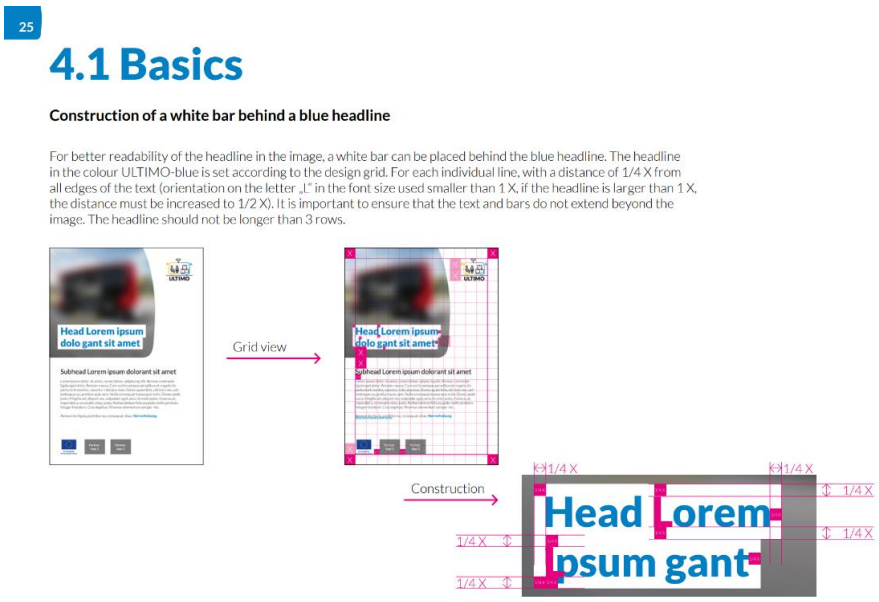

Figure 4: page from the ULTIMO visual guidelines

3.2 ULTIMO website

The ULTIMO website can be accessed via https://ultimo-he.eu/. It was launched in March 2023.

3.2.1 Website set-up

The ULTIMO website is one of the most important tools in achieving the set dissemination and communication objectives. It is platform where the project consortium will communicate with external stakeholders, including policy makers and industry, but also passengers and citizens. The fact that the website has to be informative to a wide array of stakeholders, means this platform must be widely accessible in format and tone. Therefore all content on the website is clear, to the point and free of jargon.

As was already discussed in D7.1, the ULTIMO website has been developed carefully to follow WCAG guidelines, ensuring accessibility to people with disabilities. This means for example ensure sufficient contrast of colours, clear descriptions of images, and keyboard access.

3.2.2 Content

While technically no results have been published yet at this stage in the project, the website has been (alongside social media) the main platform to disseminate project updates, progress and insights. Various content communications initiatives, such as partner interviews, blogposts and news articles (on ULTIMO Hackathons by Open Geneva with partners and local stakeholders, deployment sites' tests) have been published on the website, ensuring project progress is publicised and relevant stakeholders are continuously informed about developments within ULTIMO.

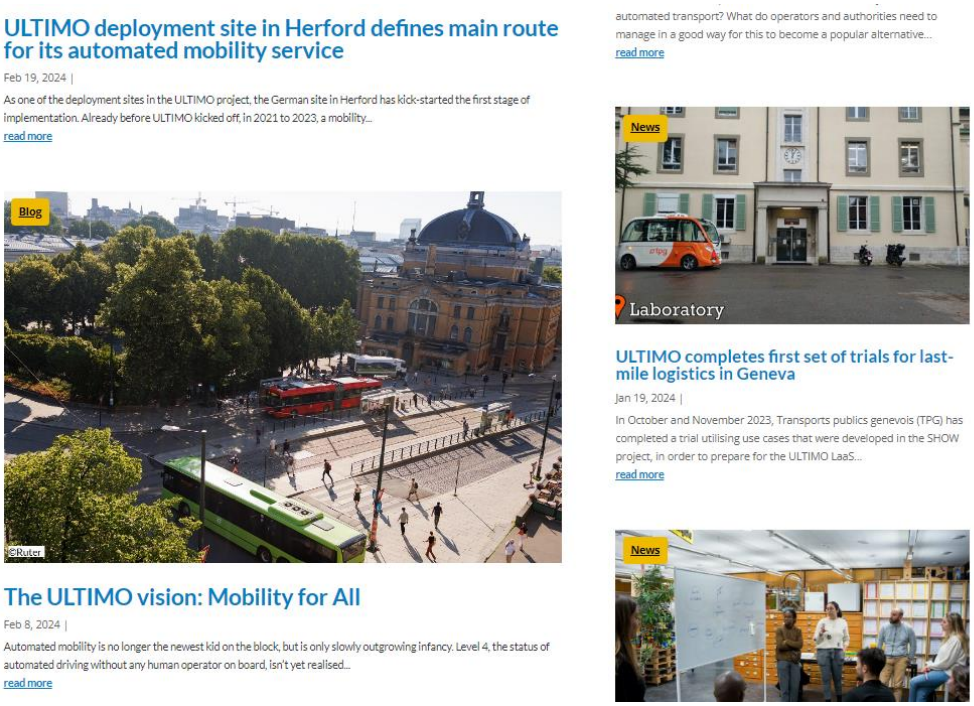

Figure 5: News section of the ULTIMO website

Apart from the partners' section, which has been part of the website since its launch, in M12 of the project a dedicated 'Members section' (Figure 6) was added to the website, allowing for visitors to get to know the team behind the ULTIMO and their exact role in the project.

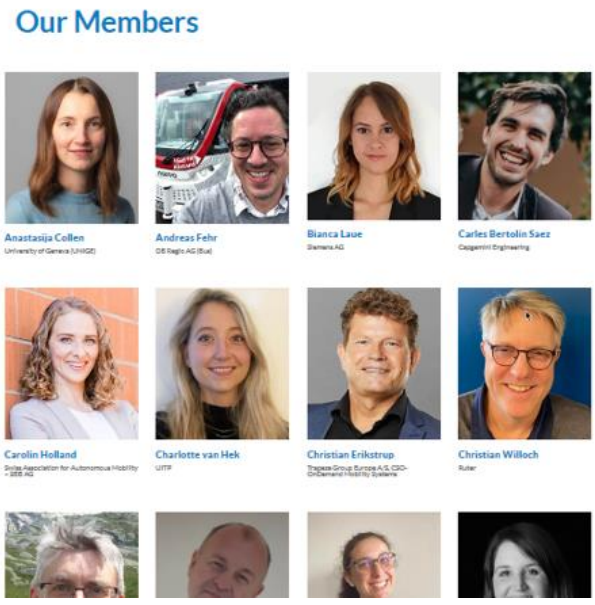

Figure 6: ULTIMO Members' section

As the website is one of the main platforms to inform passengers and citizens about the deployment of automated mobility in their region, all website content can be translated to the local languages of the deployment sites (French, Norwegian and German).

3.2.3 Measuring the impact

The WordPress' tracking Tool MonsterInsights has been used to register the number of visitors and sessions to the ULTIMO website. As can be seen in Figure 7, the ULTIMO website has seen a constant high number of visitors since its launch, amounting to a total of 4,962 sessions, 14,507 pageviews and 1,454 unique users in total. This means the ULTIMO website is far exceeding the originally set KPI (500 visits/year in Y1).

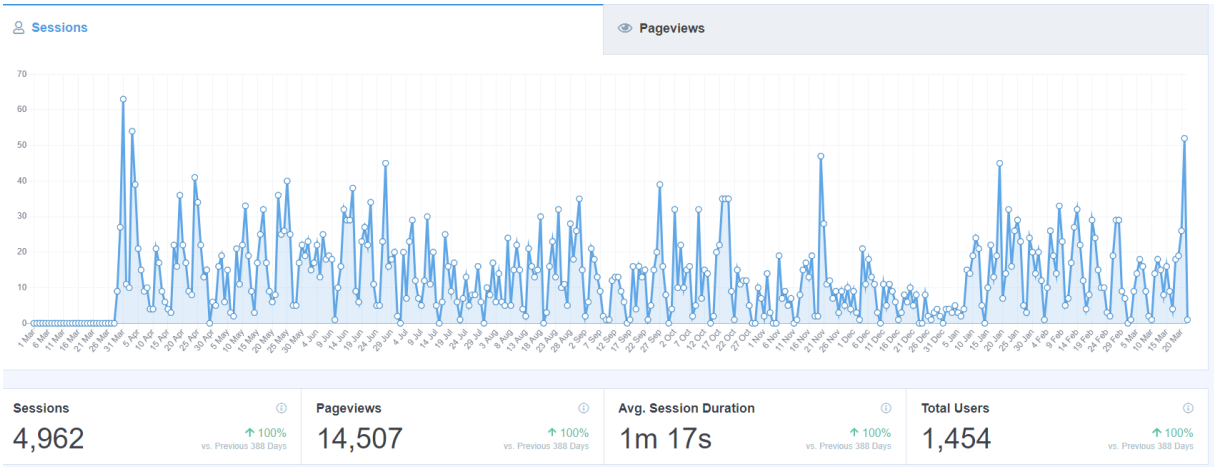

Figure 7: ULTIMO website visits

When looking at the countries where ULTIMO web visitors are accessing the website from (Figure 8) it is noticeable that the top three countries are those where the deployments will take place. This underlines the relevance of the local aspect of the website. Also noticeable is the relatively high number of visitors from Japan, which is most likely due to the collaboration between the Japanese Cool4 Initiative and ULTIMO which kicked off late 2023.

Top 10 Countries

1.	Germany	1,084
2.	Norway	776
3.	Switzerland	592
4.	Belgium	533
5.	France	322
6.	Spain	241
7.	Japan	181
8.	Austria	113
9.	United States	91
10.	Denmark	89

Figure 8: Demographics of ULTIMO website

3.3 Social media

Alongside the website, social media is one of the major tools utilised to communicate to all stakeholders. At the start of the project, both a Twitter account and LinkedIn page have been set up, while at a later stage a YouTube channel was published.

3.3.1 X

X (former Twitter) is used in the ULTIMO project to support reaching an audience that includes most (if not all) of our target groups, including policy makers and press. After discussions within WP7 it was decided to utilise the account of the related and completed AVENUE project and change it to an ULTIMO platform (@ULTIMO_project). By doing so, the consortium was able to capitalise the already existing follower base from the AVENUE project, which largely consists of stakeholders ULTIMO is also seeking to reach.

At the time of writing, the ULTIMO X account has 787 followers: 103 more than when the AVENUE account changed to ULTIMO.

The content shared on X includes news articles and interviews from the ULTIMO website, but also standalone posts on conferences and other events, re-shares from our deployment site partners and other CCAM initiatives, sector insights on automation, among others.

While X remains an important social media tool that is particularly handy when reporting live (for examples at conferences) and to reach press (which overall is still very active on X), a slow but steady decline in growth of follower base as well as engagement is reported by various project partners who also use X. Therefore, the evolution of X will be closely monitored by the ULTIMO consortium, and our strategy in regard to X will be adapted accordingly if needed in a future reporting period.

3.3.2 LinkedIn

The ULTIMO LinkedIn account (www.linkedin.com/company/ultimo-project/) has been the most important and successful social media platform in the project, seeing the reaching of and high engagement from nearly all target groups. While at the time of writing the ULTIMO proposal, Twitter (now 'X') might have still been more suited for awareness raising, in 2024 LinkedIn has exceeded X in terms of engagement and follower base, not in the least because many of ULTIMO's consortium partners are active on LinkedIn and thus ensure a multiplication effect when sharing ULTIMO posts. This provides an opportunity for community-building (as is no longer seen on X), where partners, stakeholders and sector experts have the opportunity to exchange knowledge and experience, tag each other and mobilise their networks. Because of this, ULTIMO will be enhancing its efforts on LinkedIn.

At the time of writing (March 2024), the ULTIMO LinkedIn account counts 835 followers.

3.3.3 Other social media platforms

The possible utilisation of other social media platforms, including YouTube, Instagram and TikTok, has been discussed after project kick-off. As of March 2024, an ULTIMO YouTube channel (https://www.youtube.com/@ULTIMOproject) has been created while the other platforms are still under discussion.

Currently counting 25 subscribers, the ULTIMO YouTube gathers all video content made by ULTIMO partners, including interviews with Hackathon participants and ULTIMO team members, the general project video, and updates from deployment sites. Further video content will be continued to be posted once the project progresses.

Already touched upon in D7.1, the launch of an Instagram account is still under debate in March 2024. Instagram is a social media platform heavily focused on visual content such as videos and photos, with its target groups being mainly the general public (passengers). For this reason, Instagram might be especially useful to reach passengers in the local deployment sites. Further discussion with the deployment site partners is needed to settle on this matter.

Finally, the set-up of a TikTok (a social media platform focused on video content) has been discussed and downvoted, following EU-wide concerns on possible privacy and data issues.

3.3.4 Measuring the impact

As set in D7.1, the KPI for social media in Y1 was '4 posts/month Twitter and LinkedIn (and multiplication in partners accounts)'. This KPI has been reached beyond expectations: while in the first phase of the project (until M12) approximately 4-5 posts per month were published, in the last six months this has increased to at least 2 posts per week, hence 8 to 10 posts per month (see also Table 6).

Apart from the KPI which focuses on followers on social media, another method to look at how successful ULTIMO social media channels are, is engagement. On X, we can see that from March 2023 – March 2024, ULTIMO posts in total have gained 10.508 impressions (the number of times the tweets have been seen), or 876 impressions per month. While this is a solid number, also here we can guardedly say engagement on X might not be at the same levels as it was before.

For LinkedIn, we can say the opposite. From March 2023 – March 2024 (as LinkedIn analytics only allow you to go back one year), the ULTIMO LinkedIn page has gained 2,820 page views while ULTIMO posts have gained 59,600 organic impressions in total (the number of times content is displayed to our followers or extended network without paying for it).

These statistics show that ULTIMO manages to 1) lead many stakeholders to its page/content and 2) its content is also very well by people on LinkedIn. This last statement is also underlined by the fact that engagement on individual ULTIMO posts is very high: our posts are gaining many likes, shares, reactions and clicks.

3.4 Videos

In the first reporting period, ULTIMO has developed various videos for different purposes. They are all available on our YouTube channel: https://www.youtube.com/@ULTIMOproject.

One general project video has been developed to highlight the ULTIMO vision, objectives and partners. It was developed by a dedicated design agency chosen by UITP and coheres to project identity. The animation video explains the (mobility) challenges ULTIMO wants to tackle through automated mobility services and dives deeper into the three deployment sites. The tone of the video is straightforward and free of jargon, meaning it can be understood by a large number of target groups including policy-makers and passengers. It has been

disseminated through the website and social media and is available via this link: https://www.youtube.com/watch?v=uah0sYY5xi8. Six days after the posting date, the video has gathered 156 views.

Further videos have been developed: one video focused on the citizen engagement has been created by partner Open Geneva, to explain how co-creation and the ULTIMO methodology will contribute to better future mobility services. During the 3rd General Meeting in Frankfurt, a video interview was done with the ULTIMO Coordinator and Technical Manager, discussing the progress and next steps of the project.

In addition to these videos, partners such as tpg and Ruter have created video materials focused on activities in their deployment sites. More information on this can be found in Chapter 4.1.

In the second stage of the project the focus will be on the deployment sites and engaging local audiences. Therefore, more project videos will be created in collaboration with the sites with the aim to explain what the sites are testing and why their activities (and automated mobility in general) are relevant for local stakeholders and urban mobility as a whole.

In the final stage of the project the focus will be on disseminating results to all relevant stakeholders, including the academic community, industry and policymakers. This video will focus on recapping the main results of the project, and how ULTIMO has ultimately advanced our sector.

3.5 E-Newsletter

ULTIMO has created a project e-newsletter aiming to communicate project updates and news to all relevant stakeholders. Apart from delivering news about the project, the goal will also to provide a platform to the sector with relevant, more general CCAM news.

3.5.1 Measuring the impact

The first newsletter was sent on 27 June 2023 to 50 subscribers and had an opening rate of 70%. This means the KPI (one newsletters sent out to 60 subscribers) was not met, and extra efforts have to be made to increase readership of the ULTIMO e-newsletter and to meet the KPI set for Year 2. Newsletter 1 is available here: Mailchimp.

In Y2 of the project, the newsletter shall be further promoted and two newsletters shall be sent out (one in spring and one in autumn). Generally, it will be released every six months, depending on the activities and events to report to subscribers.

3.6 Press and media

Although not listed as dedicated stakeholder group within ULTIMO, press and media are considered an important target group for the project for dissemination purposes. Because of its inherent ability to reach large number of public (including ULTIMO stakeholders), it is widely used to convey message to build public opinion and awareness, and it can be used to educate people on the benefits of automated mobility and CCAM.

ULTIMO partners have been very active in communicating to the press: a total of 12 press releases was sent out, whereby the vast majority was sent by local partners to local press titles. Table 2 includes all press releases by ULTIMO partners.

Table 2: Press release by ULTIMO partners

Date	Partner	Title	Language	Link
1/12/2022	UITP, DB, all	Unlocking large-scale and passenger-centric automated mobility: new EU project ULTIMO launches	EN	https://cms.uitp.org/wp/wp-content/uploads/2022/12/ULTIMO_launchPRfinal.pdf
1/12/2022	ArgYou	Neue autonom fahrende Busse für die Schweiz und Europa	DE + FR	https://argyou.com/de/argyou-news-neues-nachrichten-mobile/autonom-fahrende-busse-schweiz-europa.html
22/12/2022	UNIGE	55 million to develop the public transport of the future	EN	https://www.unige.ch/communication/communiques/en/2022/55-millions-pour-developper-les-transports-publics-du-futur
1/1/2023	RUTER	Ruter's new self-driving service will pick you up on demand	NO + EN	https://ruter.no/om-ruter/presse/presserom/#/pressreleases/ruters-nye-selvkjoerende-kjoeretoey-vil-plukke-deg-opp-paa-bestilling-3225352 (Translated EN version available via ULTIMO Sharepoint)
5/3/2023	RUTER	Ruter's annual report 2022	NO	Homepage for report: https://aarsrapport2022.ruter.no/ Chapter on self-driving transport: https://aarsrapport2022.ruter.no/aret-2022/fra-dor-til-dor-med-selvkjorende-kollektivtransport/
10/5/2023	ZF	ZF at UITP Barcelona 2023: Showcasing the Autonomous, Connected and Electrified Future of Public Transportation		https://press.zf.com/press/en/releases/release_55424.html
3/6/2023	DB	Herford will fahrerlose Busse	DE	Herforder Kreisblatt, Westfalen-Blatt (Text available on Sharepoint)
9/6/2023	DB	Spannendes Projekt: Ab 2024 sollen in Herford selbstfahrende Busse unterwegs sein	DE	https://www.nw.de/lokal/kreis_herford/herford/23582800_Spannendes-Projekt-Ab-2024-sollen-in-Herford-selbstfahrende-Busse-unterwegs-sein.html
11/6/2023	DB	Fahrerlose Busse in Herford: Ein richtiger Schritt oder nicht zuverlässig genug?	DE	https://www.nw.de/lokal/kreis_herford/herford/23585246_Fahrerlose-Busse-in-Herford-Ein-richtiger-Schritt-oder-nicht-zuverlaessig-genug.html
13/06/2023	DB	Selbstfahrende Kleinbusse in Herford können bis 60 km/h fahren	DE	https://www.nw.de/lokal/kreis_herford/herford/23587748_Selbstfahrende-Kleinbusse-in-Herford-koennen-bis-60-km-h-fahren.html
16/06/2023	DB	Viel Begeisterung für selbstfahrende Busse von Herforder Politikern	DE	https://www.nw.de/lokal/kreis_herford/herford/23588772_Viel-Begeisterung-fuer-selbstfahrende-Busse-von-Herforder-Politikern.html

27/09/2023	Tpg & Padam Mobility	Les Transports publics genevois ouvrent au grand public leur service de véhicules automatisés sur le site de Belle-Idée	FR	https://www.tpg.ch/fr/service-de-vehicules-automatises
29/12/2023	DB	Im Herbst 2024 rollt der erste selbstfahrende Bus durch Herford	DE	https://www.nw.de/lokal/kreis_herford/herford/23744078_Im-Herbst-2024-rollt-der-erste-selbstfahrende-Bus-durch-Herford.html

ULTIMO in the media

Thanks to the effort of the partners, contacts with the press and the various dissemination activities undertaken, news about ULTIMO has been published in a wide array of media and press titles: online, offline, and even via radio (Radio Lac) and TV (LemanBlue TV). From well-known sector titles such as Intelligent Transport Magazine and MetroMagazine to smaller blogs and websites of fellow EU-initiatives: ULTIMO has made its appearance in many local, national and (non-EU) international media, as can be seen in Table 3.

Table 3: ULTIMO in the media

Source	Date	Title	Language	Link
Future transport news	02/06/2022	EU-Funded ULTIMO Project to Deploy Autonomous Shuttles	EN	https://futuretransport-news.com/eu-funded-ultimo-project-to-deploy-autonomous-shuttles/
Bus-news.com	24/11/2022	EU-Funded ULTIMO Project Brings Padam Mobility on Board as Technology Partner for New AV Projects	EN	https://bus-news.com/padam-mobility-as-technology-partner-for-new-av-projects/
UITP.org	1/12/2022	Unlocking large-scale and passenger-centric automated mobility: new project ULTIMO launches	EN	https://www.uitp.org/news/unlocking-large-scale-and-passenger-centric-automated-mobility-new-project-ultimo-launches/
ArgYou	1/12/2022	New autonomous driving buses for Switzerland and the EU	EN	https://argyou.com/en/argyou-news-mobile/autonomous-bus.html
ArgYou	1/12/2022	Neue autonom fahrende Busse für die Schweiz und Europa	DE	https://argyou.com/de/argyou-news-neues-nachrichten-mobile/autonom-fahrende-busse-schweiz-europa.html
FerPress	1/12/2022	UITP lancia ULTIMO, progetto europeo per una mobilità automatizzata su larga scala	IT	https://www.ferpress.it/uitp-lancia-il-nuovo-progetto-europeo-ultimo-per-una-mobilita-automatizzata-su-larga-scala/
Metro Magazine	5/12/2022	New European Project Launches To Examine Automated Mobility	EN	https://www.metro-magazine.com/10188152/new-european-project-launches-to-examine-automated-mobility
Intelligent Transport Magazine	6/12/2022	New project to advance large-scale roll-out of user-centric autonomous vehicle services	EN	https://www.intelligenttransport.com/transport-news/141857/new-project-advance-large-scale-roll-out-user-centric-autonomous-vehicle/
PV Magazine	7/12/2022	Nieuw EU-project Ultimo moet toepassing geautomatiseerde mobiliteit bevorderen	NL	https://pvmagazine.nl/nieuw-eu-project-ultimo-moet-toepassing-

				geautomatiseerde-mobiliteit-bevorderen/
Saam.swiss	8/12/2022	SAAM brings Swiss expertise to the European ULTIMO Project	EN	https://www.saam.swiss/saam-brings-swiss-expertise-to-the-european-ultimo-project/
Eltis.org	22/12/2022	New EU project fosters integration of autonomous vehicles in public transport services in European cities	EN	https://www.eltis.org/in-brief/news/new-eu-project-fosters-integration-autonomous-vehicles-public-transport-services
LemanBlue TV	22/12/2022	Des navettes sans chauffeur circuleront à Genève dès 2025	FR	https://www.lemanbleu.ch/fr/Actualites/Geneve/20221222110837-Des-navettes-sans-chauffeur-circuleront-a-Geneve-des-2025.html
Radio Lac	22/12/2022	Un service de navettes autonomes en projet à Genève	FR	https://www.radiolac.ch/actualite/geneve/un-service-de-navettes-autonomes-en-projet-a-geneve/
MyScience	22/12/2022	55 million to develop the public transport of the future	EN	https://www.myscience.org/news/wire/55_million_to_develop_the_public_transport_of_the_future-2022-unige
India EducationDiary	30/12/2022	University Of Geneva 55 Million To Develop The Public Transport Of The Future	EN	https://indiaeducationdiary.in/university-of-geneva-55-million-to-develop-the-public-transport-of-the-future/
LeMessager	03/01/2023	On verra bientot circuler des navettes autonomes a Geneve	FR	https://www.lemessager.fr/53018/article/2023-01-03/verra-bientot-circuler-des-navettes-autonomes-geneve
Dagsavisen / Ruter's press room	31/01/2023	Self-driving public transport responds to sustainability challenges	EN	In sharepoint folder
World Econimic Forum, Davos	27/01/2023	Driverless buses are arriving soon in these 3 European cities		https://www.weforum.org/agenda/2023/01/autonomous-buses-geneva-project/
Open Geneva	17/02/2023	Encouraging citizen participation to co-create the autonomous public transportation system of the future	EN	https://opengeneva.org/wp-content/uploads/2024/03/EN-version-Press-release-ULTIMO-feb.-2023-1.pdf
Open Geneva	24/02/2023	Open Geneva relève un nouveau défi!	FR	https://mailchi.mp/670b32ef007b/open-geneva-ultimo
Dagsavisen	16/03/2023	Fears scooter-chaos with self-driving cars	NO	https://www-dagsavisen-no.translate.goog/oslo/nyheter/2023/03/16/frykter-sparkesykkel-kaos-med-selvkjorende-biler/?_x_tr_sl=no&_x_tr_tl=en&_x_tr_hl=no&_x_tr_pto=wapp
Nouvo TV documentary series	18/04/2023	Autonomous vehicles, trains, airplanes	FR	https://tv.blue.ch/details/tv/single/Nouvo-id-t036777b5d8c0ff6
Topcarnews	11/5/2023	ZF at UITP Barcelona 2023: Showcasing the autonomous, connected and electrified future of public transportation	EN	https://topcarnews.net/zf-at-uitp-barcelona-2023-showcasing-the-autonomous-connected-and-

				electrified-future-of-public-transportation-s243051.html
Afia.pt	11/5/2023	ZF at UITP Barcelona 2023: Showcasing the autonomous, connected and electrified future of public transportation	EN	https://afia.pt/zf-at-uitp-barcelona-2023-showcasing-the-autonomous-connected-and-electrified-future-of-public-transportation/
Automotive world	11/5/2023	ZF at UITP Barcelona 2023: Showcasing the autonomous, connected and electrified future of public transportation	EN	https://www.automotiveworld.com/news-releases/zf-at-uitp-barcelona-2023-showcasing-the-autonomous-connected-and-electrified-future-of-public-transportation/
Sustainable Bus	12/5/2023	ZF to showcase new CeTrax 2 with 3-speed transmission at UITP Summit	EN	https://www.sustainable-bus.com/components/zf-uitp-summit-barcelona-2023/
Open Geneva	08/06/2023	Elaborer les services transports publics autonomes en co-créant avec les citoyen-nes	FR	https://opengeneva.org/wp-content/uploads/2023/06/Communique%CC%81-de-presse-Mai-2023-hackathon-ULTIMO.pdf
Erticonetwork	19/06/2023	ERTICO IS PART OF THE CLEAN PUBLIC TRANSPORT AGENDA AT THE UITP SUMMIT	EN	https://erticonetwork.com/ertico-is-part-of-the-clean-public-transport-agenda-at-the-uitp-summit/
Padam Mobility.org	29/09/2023	ULTIMO PROJECT INTRODUCES ITS FIRST AUTOMATED ON-DEMAND SERVICE IN GENEVA POWERED BY PADAM MOBILITY	EN	https://blog.padam-mobility.com/en/2023/09/29/the-ultimo-project-introduces-the-first-automated-on-demand-service-in-geneva-with-padam-mobility-as-technical-partner/
ConnectedAutomateddriving.eu	28/11/2023	ULTIMO autonomous vehicles in Oslo ready for action	EN	https://www.connectedautomateddriving.eu/blog/ultimo-autonomous-vehicles-in-oslo-ready-for-action/
SHOW project website	29/01/2024	ULTIMO project uses SHOW use cases to test automated last-mile logistics in Geneva	EN	https://show-project.eu/2024/01/19/ultimo-project-uses-show-use-cases-to-test-automated-last-mile-logistics-in-geneva/
ConnectedAutomateddriving.eu	21/02/2024	ULTIMO drives transport development in Herford	EN	https://www.connectedautomateddriving.eu/blog/ultimo-drives-transport-development-in-herford/
CCAM.eu	20/03/2024	CCAM brokerage day and super-charged Multicluster meeting on 18-19 March 2024	EN	https://www.ccam.eu/ccam-brokerage-day-and-super-charged-multicluster-meeting-on-18-19-march-2024/

Finally, ULTIMO has been featured in various publications listing innovative CCAM activities, including a report from AustriaTech on CCAM in Austria (link) and the CINEA brochure 'Towards Cooperative Connected & Automated Mobility' (link).

3.7 ULTIMO publications

A first leaflet has been published in M10 of the project. It includes general information about ULTIMO, including its vision, objectives, partners and deployment sites. This publication has been disseminated at sector events to provide a comprehensive overview of ULTIMO in one document to many target audiences, including policymakers. It is available in the library on the website.

Figure 9: ULTIMO leaflet

In Y2 of the project, a second publication will be created with a more detailed focus on the deployment site. While the general leaflet was aimed at a very broad public including citizens, the second publication will be focused on either the industry/operators, or policy makers, depending on project needs. At time of writing this report, the exact aim and set-up of this second publication is being discussed in WP7. In addition to this mid-term publication, a final project publication will also be created at the end of the project, focusing on summarising and recapping results.

Furthermore, the deployment sites may decide to create a publication aimed at local stakeholders, including citizens and passengers. These publications will be in the local language and set out the objectives of the local services, with as main aim to engage local people and create awareness about the relevance of the service. Also these types of publications are currently under discussion.

As already explained in D7.1, the results of the ULTIMO project will also be disseminated through a Project Brief created by UITP. This type of publication is meant to summarise sometimes technical results into a publication widely accessible for different types of stakeholders. The Project Brief will leverage the extensive network of UITP in the public transport sector and will be disseminated widely to reach all desired target groups of the project.

3.8 Scientific publications

Throughout the project's lifetime, various scientific publications will be submitted to conferences and magazines, seeking to disseminate project results to the scientific and academic community.

By March 2024, four peer-reviewed and open access publications have been published in the framework of the ULTIMO project, while one upcoming publication has already been accepted for the TRA event (April 2024, Dublin). They are listed in Table 2.

Table 4: ULTIMO peer-reviewed papers

Date	Partner	Title	Authors	Corresponding event/conference/scientific journal	DOI
9/2/2023	UNIGE	An Automotive Reference Testbed with Trusted Security Services	Teri Lenard, Bela Genge, Piroska Haller, Anastasija Collen, Niels Alexander Nijdam	Electronics (journal)	https://doi.org/10.3390/electronics12040888
20/3/2023	UNIGE	Symbiotic Analysis of Security Assessment and Penetration Tests Guiding Real L4 Automated City Shuttles	Meriem Benyahya, Pierre Bergerat, Anastasija Collen, Niels Alexander	Telecom (journal)	https://doi.org/10.3390/telecom4010012
26-29/06/2023	CERTH	EVENT: Real-time Video Feed Anomaly Detection for Enhanced Security in Autonomous Vehicles	Georgios Aivatoglou, Nikolaos Oikonomou, Georgios Spanos, Kristina Livitckaia, Konstantinos Votis, Dimitrios Tzovaras	In 2023 31st Mediterranean Conference on Control and Automation (MED) (pp. 101-106). IEEE.	https://doi.org/10.1109/MED59994.2023.10185766
29/08/2023	UNIGE	A Systematic Review of Threat Analysis and Risk Assessment Methodologies for Connected and Automated Vehicles	Meriem Benyahya, Teri Lenard, Anastasija Collen, Niels Alexander	ARES '23: Proceedings of the 18th International Conference on Availability, Reliability and Security (conference)	https://doi.org/10.1145/3600160.3605084
5/10/2023	UNIGE	Analyses on standards and regulations for connected and automated vehicles: Identifying the certifications roadmap	Meriem Benyahya, Anastasija Collen, Niels Alexander	Transportation Engineering (journal)	https://doi.org/10.1016/j.treng.2023.100205

15-18/04/2024	CERTH, TPG, Siemens, Sensible 4	CCAM for the users; Matching the user needs with vehicle capabilities in ULTIMO project	Evangelia Gaitanidou, Quentin Matthewson, Linda Mathe, Povilas Valiauga	TRA 2024	Not yet published
17-22/03/2024	CERTH	An Accurate Semi-Analytical Model for Periodic Tunable Metasurfaces Electromagnetic Response	Savvas I. Raptis, Alexandros Papadopoulos, Loizos Symeonidis, Antonios Lalas, Christos K. Liaskos, Konstantinos Votis, Dimitrios Tzovaras, Traianos V. Yioultsis	Presented in EUCAP 2024, Glascow. To be published in EUCAP 2024 proceedings in IEEE digital library	Not yet published
To be defined	CERTH	Physics-Informed Metaheuristics for Fast RIS Codebook Compilation	Alexandros I. Papadopoulos, Savvas I. Raptis, Antonios Lalas, Konstantinos Votis, Dimitrios Tyrovolas, Sotiris A. Tegos, Alexandros Pitilakis, Sotiris Ioannidis, George K. Karagiannidis, Christos K. Liaskos	Accepted for publication in IEEE Communica-tions Magazine	Not yet published

3.9 Working with influencers

One innovative method to create awareness among stakeholders is to collaborate with influencers: a form of marketing through (mainly) social media that attempts to engage audiences with the help of people having influence in one particular field.

Also in the field of CCAM there are many influential people with a large online following and an interest to report on new initiatives, projects and products to their follower base. Working together with influencers, for example to show the deployment sites or a ride in an automated vehicle, can be an engaging way to show the progress and outcomes of the ULTIMO project.

Until March 2024, a dedicated list of potential influencers has been created together with the WP7 colleagues. Once the deployments site will kick off their activities, they will be approached appropriately.

4 Partners as ULTIMO Ambassadors: stakeholder engagement & local dissemination

All ULTIMO partners play a vital role in the communication and dissemination strategy. From the start of the project, members have been encouraged to disseminate the ULTIMO vision, objectives and developments to their networks, which include cities and public transport authorities, industry, transport operators, universities and associations, alongside engineering groups and specialists.

Various activities have been (and will be) undertaken to ensure (local) stakeholder engagement. These activities include:

- A participatory process implemented on all three project sides which includes in-person hackathons and online deliberation, with the goal to allow active citizen involvement in exploring, testing and validating use cases;
- Workshops on citizen engagement;
- Local dissemination activities, including informing citizens in the local language;
- Acting as ULTIMO ambassadors through sharing of project content via respective networks;
- Local press outreach, including press releases in local language;
- Local events, especially when services are launched, to inform the wider community about the existence of the services and the benefits it has to offer.

While the exact stakeholder engagement activities from every partner are described in more detail in D7.5 and in the Dissemination Tracker, in this chapter we will provide a more general overview of the dissemination activities undertaken by the partners, whereby we highlight certain examples.

4.1 Local dissemination activities

An essential factor in ensuring uptake, and thus acceptance of ULTIMO solutions and CCAM innovations in general is citizen and stakeholder engagement. To facilitate this, the ULTIMO dissemination & communication strategy has a heavy focus on engaging local stakeholders, including passengers and citizens. Activities have, and will be, focus(ed) on informing stakeholders about ULTIMO and – more broad – about automated mobility, and very practically what the deployment and use of AVs will mean for them.

Partners in the deployment sites (Oslo, Herford and Geneva) have very actively contributed to the dissemination strategy with various activities and materials.

4.1.1 Oslo

For the Oslo site, where the first automated vehicles were deployed in November 2023, many local and international activities were undertaken. Multiple events were organised to inform the local community and retrieve their inputs on automated mobility services, including an event at the "Kuben" High School in Groruddalen and a Hackathon with Ruter employees, organized by Open Geneva. A blog post was written by Ruter's communications department to share information about the hackathon organized with the customer service department. A video has been created about the local school event, which is available on the YouTube channel here.

Plenty news articles (e.g. here and here) were published on the ULTIMO website about activities in the Oslo deployment site, and various social media posts were published. Furthermore, multiple (local) press articles were published reporting on ULTIMO activities, further engaging local citizens. In Figure 10 we can see a social media post about the arrival of the AVs in Oslo, including the very high engagement it generated.

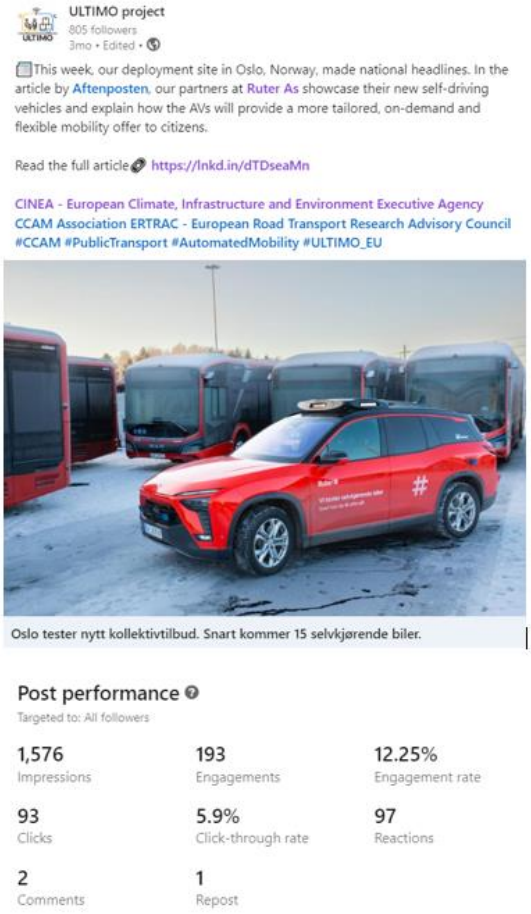

Figure 10: Social media post about Oslo

4.1.2 Geneva

Also in Switzerland the first dissemination activities have kicked off, informing local citizens and press about ULTIMO and the deployment site. In addition to providing information, future user engagement events were held to raise awareness of the mobility of the future. Open

Geneva's promotion of co-creation events, including flyers and posters distributed at universities, libraries and retirement homes, gave the Ultimo project wide public exposure. The Open Geneva community, with its wide range of ages, profiles and skills, has enabled the ULTIMO project to be widely distributed in the canton of Geneva.

Also here, various videos were posted on the YouTube channel, for example interviews with local Hackathon participants and of the trial that included use cases from the SHOW project (to prepare for the ULTIMO LaaS deployment in Geneva).

Partners from the Geneva deployment site have also leveraged their strong contacts with local press, which has resulted in TV and radio appearances, as we can see in Figure 11.

Figure 11: ULTIMO TV appearance- Leman Bleu TV

Herford, Germany

Activities in Herford kicked off late 2023 with a series of workshops that laid the groundwork for the introduction of autonomous transport within Herford's evolving mobility concept.

The workshop series, which began in September 2023, included a joint kick-off event with participants consisting of the regional branch of DB Regio Straße (BVO), representatives from the city of Herford, SVH Stadtverkehr Herford GmbH, and DB's ULTIMO team. The result of these workshops was finally the definition of the test route used in ULTIMO. A news article highlighting this first activity was posted on the website in February 2024.

Finally, the German partners have sent out six press releases about deployment activities to local press, many of which were published in local media website NW Kreis.

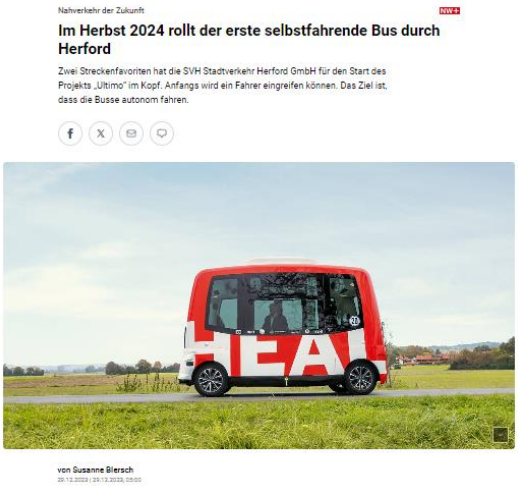

Figure 12: Local news in Herford about ULTIMO demo

Citizen engagement

Citizen engagement is a central aspect in ULTIMO: it raises awareness and interest in the project among future users, ensures that the solutions developed are truly rooted in the needs and preferences of the community and contributes directly to creating a sense of ownership and responsibility for the project, which strengthens its acceptance and implementation.

The partner in charge of citizen engagement is Open Geneva and activities are mainly taking place in WP2 (Passenger use cases and vehicle ODDs for ITS/CCAM). Since project kick-off, multiple hackathons have been organised in Oslo and Geneva: more information about them and about citizen engagement in general can be found in the deliverable 2.3.

Within WP7, partners have ensured insights and outcomes of the citizen engagement actions have been disseminated to a broader public with news articles and social media posts, including a recent article highlighting the vital importance of co-creation when developing user-centric automated mobility services.

Figure 13: Interview with Open Geneva

5 Events

Events have already played a pivotal role in the first phase of the ULTIMO dissemination strategy. Directly starting from project launch, partners have attended conferences and exhibitions, as well as had direct meetings, to raise awareness on ULTIMO and discuss its vision with relevant stakeholders. The events attended by ULTIMO partners are very different in nature and include both large, sector-wide conferences (ITS European Congress, the UITP Global Public Transport Summit, EUCAD, among many others) as well as smaller workshops and meetings.

In addition, various events have been organised by project partners to engage local communities, notably in the deployment sites and in the framework of citizen engagement activities. In chapter 6, we provide more details on events that will be organised by ULTIMO in the future.

In table 5 we provide an overview of all the events attended by the ULTIMO members.

Table 5: ULTIMO events M1 – M18

Date	Location	Event	ULTIMO contribution	Audience type
10/11/2022	Oslo, Norway	The Norwegian Public Transport Conference	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community, everyone with an interest in mobility
16-17/11/2022	Online	Conference on "Autonomous Vehicles and Public Transport in Europe"	Networking	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community
30/11/2022 - 01/12/2022	Brussels, Belgium	POLIS Annual Conference	Booth/promo/demo activities	Policy makers/cities
8-9/12/2022	Brussels, Belgium	ISO TC 204 WG17 meeting	Development of standards related to CCAM	Standards development organizations
1-3/02/2023	Jacksonville, Florida, USA	UITP North America Forum	Panel discussion during JTA Autonomous Vehicle Network Technical Tour	Policy makers/cities
14-16/02/2023	Brussels, Belgium	Conference on Results from Road Transport Research (RTR conference)	Networking and presenting project	Entire sector, with a focus on academic community and researchers

Date	Location	Event	ULTIMO contribution	Audience type
24/03/2023	Geneva, Switzerland	Futures workshop : Imaginons le Transport Public du Futur	ULTIMO Hackathon	Public/passengers/customers
27-28/03/2023	Oslo, Norway	Mobility 2023	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community
27/28/03/2023	Berlin, Germany	VDV-Congress on Future Autonomous Driving within Public Transport	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community
14/04/2023	Oslo, Norway	MODI	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community
03-04/05/2023	Brussels, Belgium	EUCAD2023; conference and demonstrations	Networking	CCAM Community, including policy-makers
09-11/05/2023	Athens	DEFEA – Defence Exhibition Athens	Presentation of ULTIMO services	Entire defence sector
22-24/05/2023	Lisbon, Portugal	ITS European Congress 2023	Presentation of ULTIMO	CCAM/ITS Community, entire sector
04-07/06/2023	Barcelona, Spain	UITP Global Public Transport Summit	Side-event on ULTIMO vision, material presented at booth, networking	Entire public transport sector, including policy-makers, industry, PTOs and PTAs
15/06/2023	Oslo, Norway	Norwegian Map Authority	Presentation/speaker/panel	Scientific community
26-29/06/2023	Limassol, Cyprus	2023 31st Mediterranean Conference on Control and Automation	Presentation from Georgios Spanos, CERTH/ITI of a scientific paper	Scientific community
29/06/2023	Limassol, Cyprus	Workshop on Control and Cybersecurity in Connected and Autonomous Vehicles, 2023 31st Mediterranean Conference on Control and Automation	Presentation from Antonios Lalas, CERTH/ITI on *RIS-enabled V2X Communications in CCAM: Challenges and Cybersecurity Perspective*	Scientific community

Date	Location	Event	ULTIMO contribution	Audience type
30/06/2023	Oslo, Norway	Norwegian Public Roads Administration, Director	Presentation of ULTIMO	Public Transport Authorities
21/09/2023	Oslo, Norway	Viken Municipality - Mobility Conference	Presentation/speaker/panel	Policy makers/cities
20/08/2023	Oslo, Norway	Smarte Veger	Presentation/speaker/panel	Policy makers/cities
23-24/06/2023	Geneva, Switzerland	Hackathon Ultimo	Hackathon	PTO, Public/passengers/customers
26-30/06/2023	Vienna, Austria	4th International Symposium on Freeway and Tollway Operations	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community
14/08/2023	Arendal, Norway	Arendalsuka	Presentation/speaker/panel	Policy makers/cities
04-10/09/2023	Berlin, Germany	ZUKUNFTSPLATTFORM NAHVERKEHR	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community, everyone with an interest in mobility
31/10/2023	Sursee, Switzerland	SATW TecDay	Presentation/speaker/panel	Public/passengers/customers
11/9/2023	Oslo, Norway	Norwegian Public Roads Administration	Presentation/speaker/panel	Authorities
24/10/2023	Oslo, Norway	Full day at "Kuben" High School in Groruddalen	Community engagement event	Public/passengers/customers
01/11/2023	Oslo, Norway	Urban Growth Administration	Presentation/speaker/panel	Policy makers/cities
13/11/2023	Oslo, Norway	The Taxi Commission ("Drosjeutvalget")	Presentation/speaker/panel	Shared mobility experts
14/11/2023	Glarus, Switzerland	SATW TecDay	Presentation/speaker/panel	Public/passengers/customers
14-17/11/2023	Tokyo, Japan	Mobility Innovation Week Japan 2023	Presentation/speaker/panel	Scientific community

Date	Location	Event	ULTIMO contribution	Audience type
16/11/2023	Brussels, Belgium	ECTRI TG Safety meeting	Presentation	Researchers
24/11/2023	Bergen, Norway	Urban Development Conference 2023 on Mobility	Presentation/speaker/panel	Policy makers/cities
24-25/11/2023	Geneva, Switzerland	Smart City Xperience 2023	Hackathon	Public/passengers/customers
27/11/2023	Vienna, Austria	erenz 2023: Digital besser ankommen	Networking	Authorities
11/12/2023	Vienna, Austria	Forum Automatisierte Mobilität 2023 (BMK)	Networking	Other (AV community Austria including all trials/pilots and test environments supported by the ministry BMK)
13/12/2023	Vienna, Austria	Kooperations-Workshop: Transport von SAF mit dem Binnenschiff	Networking	Authorities, Operators, Industry/Commercial
10-11/01/2024	Oslo, Norway	Ultimo Hackathon Oslo	Hackathon	Public/passengers/customers
12/1/2024	Bulach, Switzerland	SATW TecDay	Presentation/speaker/panel	Public/passengers/customers
22/01/2024	Bærum, Norway	Mobilitet Fornebu	Presentation/speaker/panel	Public/passengers/customers
09/02/2024	Oslo	Oslo eCarExpo	Networking	Industry/commercial
11-13/02/2024	Brussels, Belgium	RTR Conference	Networking	Authorities, Operators, Industry, scientific community
14/02/2024	Teams	SAAM DAY	Networking	Industry/commercial
05/03/2024	Online	PAVE Europe Web panel	Presentation/speaker/panel	CCAM Community
6-7/03/2024	Berlin	VDV-Kongress im Rahmen von mobility move	Presentation/speaker/panel	All target groups: PTOs, PTAs, experts, CCAM community, industry, scientific community
17-22/03/2024	Glasgow, Scotland	18th European Conference on Antennas and Propagation	Presentation from Savvas Raptis, CERTH/ITI of a scientific paper	Scientific community

Date	Location	Event	ULTIMO contribution	Audience type
19/03/2024	Brussels, Belgium	CCAM Association Multicluster meeting	Panel discussion	CCAM community
20/03/2024	Geneva, Switzerland	L'innovation dans la mobilité	Booth/promo/demo activities	Public/passengers/customers
15-18/04/2024	*Dublin, Ireland*	*Transport Research Arena (TRA)*	*Material at booth, session in collaboration with SHOW project, talk at UITP Stand*	Entire PT sector but a focus on the academic/scientific community

5.1 Measuring the impact

If we look at the KPI set for this action (at least 6 events attended in Y1 and at least 15 in Y2) we can already see that ULTIMO has far exceeded its goal. Until M18 ULTIMO partners have attended 45 events.

6 Strengthening CCAM sector: twinning & liaison activities

To expand the reach of ULTIMO, a large focus is on fostering external cooperation with European Horizon projects, other European projects and international projects on CCAM. The liaison and clustering activities with other relevant projects and initiatives allows cross-fertilisation and the creation of synergies with key stakeholders from the sector to maximise project outcomes and impact within the CCAM sector.

Through partners' leading involvement in already running initiatives (e.g. the CCAM Partnership) and other EU CCAM projects (e.g. SHOW and FAME), the Consortium will leverage opportunities for knowledge exchange and partnerships towards exploitation.

6.1 CCAM Partnership

The CCAM Partnership, co-programmed with the European Commission in the Horizon Europe Framework and established in 2021, focuses on collaborative research to accelerate innovation in automated mobility. Its goal is to remove barriers and facilitate the efficient rollout of automation technologies in Europe. The overarching objectives include increasing safety in road transport, ensuring inclusive mobility for all, and strengthening the competitiveness of European industries.

Some ULTIMO partners, who are part of various CCAM Partnership clusters[1], serve as a link between the ULTIMO project and the external European CCAM stakeholders' community. This linkage enables opportunities to bring knowledge back to the project on lessons learned and challenges from other initiatives. Additionally, it allows for the dissemination and exploitation of research outcomes from the ULTIMO project.

For example, in March 2024, ULTIMO was represented in a panel discussion at the CCAM Association Multicluster meeting alongside projects such as SHOW, Hi-Drive, AWARD, MODI, metaCCAZE, and MOBILITIES FOR EU. The discussion focused on sharing lessons learned, addressing challenges, and providing recommendations for future projects.

6.2 International Collaboration

As part of its liaison activities, ULTIMO will work together with international organisations to exchange knowledge and experience and foster collaboration to strengthen the international CCAM community and activities.

In November 2023, ULTIMO signed an MoU (Memorandum of Understanding) with Japanese automated mobility initiative CooL4, (Cooperative Level 4 Automated Mobility Service in mixed environment), funded by METI (Ministry of Economy, Trade and Industry) and MLIT (Ministry of Land, Infrastructure, Transport and Tourism). Under the MoU, CooL4, and ULTIMO commit to exchange know-how, lessons learned, and best practices acquired on the design, development, and demonstration of automated mobility.

Figure 14: ULTIMO signs MoU with Cool4

WP7 will explore further opportunities for collaboration through international conferences and events, such as TRB, IEEE ITCS, ADAS & Autonomous Vehicle Technology Expo, and more.

[1] https://www.ccam.eu/our-actions/clusters/

6.3 Webinar series

To further foster collaboration with other (EU) projects, the ULTIMO partners are at the time of writing preparing a series of webinars focused on various CCAM topics. Here, the idea is to set up a series of webinars organised every 2-3 months, depending on information availability and subject matter experts' schedules. The webinars will be co-organised with relevant EU projects and international guests invited by ULTIMO partners.

The proposed webinar series on CCAM activities can offer multiple benefits for ULTIMO project and contribute to expanding its impact in the sector:

- Increased visibility and outreach of the project
- Knowledge exchange and cross-fertilisation between the projects and international peers
- Improved international collaboration and networking as the webinars can attract new initiatives and projects none of the partners are involved in.

The first few webinars can be jointly organised with the SHOW, AI4CCAM, and FAME projects. Additional projects and guests will be determined in collaboration with Task members.

The target audiences will be as follows:

- Professionals in the public transportation sector
- Researchers and academics interested in autonomous technologies
- Government officials involved in transportation policy

In March 2024, WP7, led by UITP and with help of other partners, is in the process of defining the topics of the first webinars, their timelines, and responsible for organisation. The initial plan is to launch the first webinar in May/June 2024. A first report on the webinars will be given in D7.3.

7 Impact and KPI assessment

Within ULTIMO, there is a proactive and ongoing assessment of impact achieved in and by the project via internal and external communication and dissemination. Set under T7.4, all the user related content will be evaluated during the whole project by proactive measurements and an internal evaluation process will be created and implemented in close collaboration with all the partners relying on a constant feedback or mirroring loop about the projects progress identified by the consortium and each of the partners.

In this report we will look at the KPIs as set in D7.1, and report whether the KPI has been achieved or not (Table 6). In case a KPI is not yet, (part of) the dissemination will be slightly edited to see how we can achieve the KPIs in the next reporting period.

Note for Table 6: seeing we are currently in Y2 of the project this column has already been included.

7.1.1 Communication and dissemination KPIs

Table 6: ULTIMO Communications KPIs

KPI	Year 1 target	Year 2 target	KPI Y1 met?	Comments
Communication & dissemination strategy	Communication & Dissemination plan & 1st year activities available	Updated plan & 2nd year activities available	Yes	/
Website	Web stats: 500 visits	Web stats: 1000 visits	Yes and far exceeded	With nearly 5000 visits, 14,500 pageviews and nearly 1,500 unique visitors, the ULTIMO website is a very successful tool in the project's dissemination strategy.
News feeds	10 articles/news on project's and partners' websites	15 articles/news on project's and partners' websites	Yes and far exceeded	So far, 20 news articles have been published on the ULTIMO website alone. Adding to this the many articles that have appeared on partner's websites (Table 3), we can say this KPI has been far exceeded.
Publications	• First project leaflet created • 500 copies of 1st leaflet distributed	First leaflet: 1000 copies distributed	Yes	While it has not been tracked how many copies partners have exactly printed, the first leaflet has been utilised at multiple events, and is also available on the project website.
Technical leaflet				KPI set for Y4: at least 75 downloads. No data available for now, as leaflet has not yet been created.
E-Newsletter	• 1 annual newsletter sent out • At least 60 subscribers	• 2 annual newsletter sent out • At least 100 subscribers	Partly.	While the first newsletter has been sent out and had a good opening rate, we were short 10 subscribers. Increase of e-newsletter subscribers will be an extra focus in the next period.

KPI	Year 1 target	Year 2 target	KPI Y1 met?	Comments
Social media	4 posts/month Twitter and LinkedIn (and multiplication in partners accounts)	5 posts/month Twitter and LinkedIn (and multiplication in partners accounts)	Yes	From M1 – M18, there were on average 9 posts per month on ULTIMO social media channels (in total 92 posts on X and 77 posts on LinkedIn).
Videos	First video created focussed on general objectives		Yes	Apart from the general video, various other video material was produced by ULTIMO.
Attending events	At least 6	At least 15	Yes and far exceeded	By M18, ULTIMO partners have (re)presented ULTIMO at 45 events.
Presentations about ULTIMO given			Yes	KPI is given for Y4: 15 presentations given. By M18, ULTIMO partners have already given over 35 presentations on the project, so we have already exceeded this KPI.
Organisation of own events	4	6	Yes	By M18, ULTIMO partners have organised 6 events (including side-events at large conferences).
Scientific publications	-	-	Yes	KPI set-up for Y4: 15 scientific publications. So far ULTIMO partners have published 4 peer-reviewed publications, so we are well on track to meet this KPI.
Press releases	At least 2 (to be distributed through all Partners channels)	At least 1 (including local press releases)	Yes	In total, ULTIMO partners have published 12 press releases.
Concertation /Twinning			Well on track	KPI set for Y4: • Collaborate with at least 2 projects (either adopting ULTIMO services or collaborating on recommendations) and;

KPI	Year 1 target	Year 2 target	KPI Y1 met?	Comments
				• At least 2 events organised jointly with other projects ULTIMO partners on track to meet this objective, e.g. through development of webinar series.
Know-how exchange			Well on track	KPI set for Y4: at least 5 'substantive exchanges'. ULTIMO partners well on track to meet this: much collaboration ongoing with other initiatives.
Exploitation	-	1st issue of exploitation plans	Yes	D7.5 submitted in M18.

ULTIMO impact strategy

In ULTIMO, many KPIs are defined at the beginning of the project, among them dedicated KPIs on communication impact. Some of them have been newly defined in the proposal and some of the KPIs are mirrored from the AVENUE and SHOW projects, to enable comparative evaluations. Other KPIs are defined by the partners and the pilots. All KPIs will be assessed towards the end of the project, some of the monitored KPIs are already analysed at mid-term review wherever possible, such as some of the WP7 KPIs.

All partners are dedicated to develop impact on technological, societal, scientific and public (media) levels. Information generated in the context of ULTIMO is tested regularly for digital impact on all the relevant channels which are most frequently used by the users in general and by the AV community in particular.

Each ULTIMO deployment site is supported systematically to achieve its most possible local, regional and national impact in each of the countries involved and in their national/regional language when showing the AVs fully in operation. The partners will proactively promote the pilot presentations and the new vehicles with regards to a broader impact also in all other countries.

The "impact first" strategy analyses proactively and ad hoc all contents generated and delivers the impact KPIs directly to the teams working on the contents, on the use cases and on the pilot sites, with the aim of having the strongest possible positive immediate impact on the users, passengers, transportation as well as on society as a hole and to the AV expert community and on all other interested the stakeholders. On the ULTIMO website even a new API (ArgYou.com) with impact first measures was tested for the first time (beta) for creating and ultimate direct user-impact on the online text while writing and editing the website content under https://ultimo-he.eu.

On the digital channels, like search engines, social media and e-platforms a continuous project name monitoring is measuring the online impact of ULTIMO by researching important specific keywords names and brands and their communication KPIs during the four years period of the project.

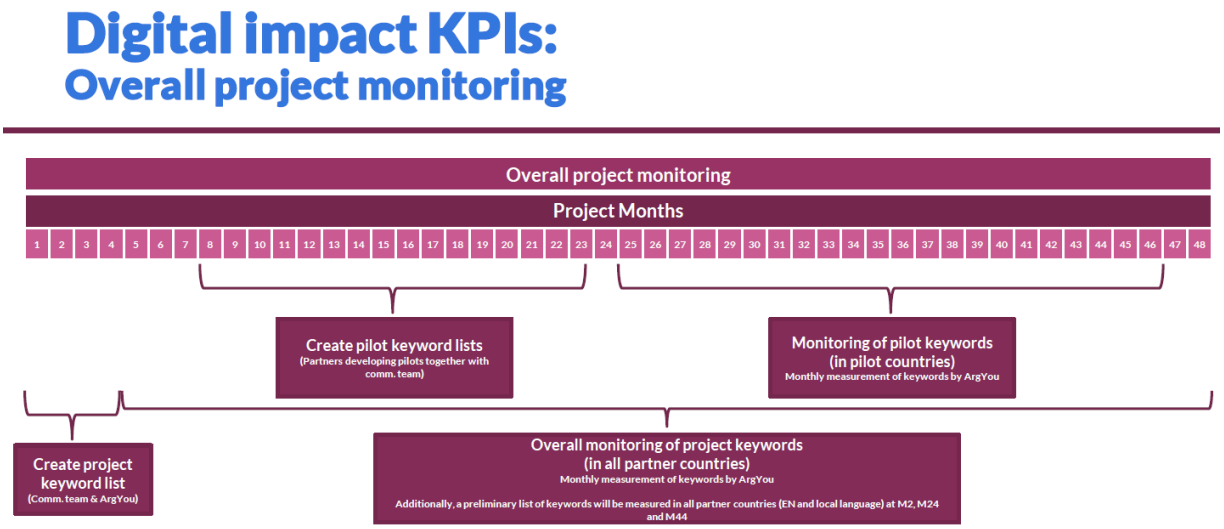

Figure 15: Visualisation of the overall project keyword monitoring strategy

8 Conclusions

When analysing and evaluating M1-M18 of the ULTIMO project in terms of communication and dissemination, we can see that through a wide variety of (digital) communication materials and tools, the attendance and organisation of various events, media and press outreach, collaboration with other (international) CCAM initiatives, and targeted (local) activities, the project is on a very good track to fulfil its communications objectives and achieve the desired outcomes of the project.

Already in the first phase of the project, which is focused on 'increasing public visibility about ULTIMO and inform stakeholders about objectives and planned outcome', ULTIMO has been established as a strong brand whereby it has communicated its vision to all of its relevant stakeholders, including policy-makers, operators and passengers and citizens. Here, the use of partners' networks have been vital: they have been acting as true ambassadors for the project and have mobilised their networks.

All KPIs have been met except for one (the newsletter), with many of them already far exceeding the KPI set for Y2 or even Y4 (the end of the project).

In the months and years to come, the focus of the ULTIMO Consortium when it comes to dissemination will shift to achieving active involvement of practitioners and stakeholders in deployment sites and beyond, whereby certain activities in particular will carry the focus as of M18:

- Local dissemination by the partners will be even more important than in Y1. Also highlighting the activities/achievements of the deployment sites from central channels will be important: their lessons learned are incredibly valuable for the sector;

- Twinning and liaison activities will truly kick-off, and a series of webinars is currently in the making. The organisation of own events will further enhance ULTIMO as a brand and frontrunner on the deployment of automated mobility services;
- Strongly linked with twinning and liaison activities, also international collaboration will become more important in the mid and last phases of the project, whereby know-how exchange and cooperation is vital to ensure sufficient sector impact;
- Dissemination of ULTIMO learnings and results at sector events, including large conferences such as TRA and the UITP Summit, but equally smaller-scale workshops and meetings;
- Extra efforts will be undertaken to create a larger followers' base for the newsletter;
- A constant focus will remain on communications activities: through insightful articles and interviews on the website, relevant content on social media (and high engagement), videos, press and media outreach, ULTIMO will further position itself as a leading source on the large-scale, user-centric deployment of automated vehicles

Ultimately, all dissemination and communication activities within ULTIMO will aim to position the project as a true reference in the field of automated mobility, seeking to create a project legacy that will be utilised and referenced long after project completion.