



D7.3

Communication and Dissemination Plan



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WP7 Communication and Dissemination

D7.3 Communication and Dissemination Plan

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Executive Summary

This deliverable defines the FitDrive Communication and Dissemination Plan and its execution, outlining the communication and dissemination activities that are envisioned to promote and disseminate the project's results and achievements, spread excellence of the project outcomes, and reach out to the relevant stakeholders interested in their adoption and application.

First, a clear definition of the strategy and the methodology adopted in the project activities is outlined, together with the dissemination tools that are most suitable for their implementation. Furthermore, a detailed description of the evaluation and monitoring procedures is provided, detailing a list of relevant metrics to measure and monitor impact across the stages of the project development. For the sake of impact maximisation in the field of road safety and AI, among the network of potential stakeholders, relevant key profiles are identified and described in a detailed way, each of them representing a specific target group to address with a customised and tailored approach to communicate the project outcomes. Opportunities for dissemination are highlighted, by drawing on partners' resources and planned events intended to showcase their expertise and work in the project.

The deliverable concludes with a general definition of the internal protocols for smooth communication among the members of the Consortium, by issuing a specific set of guidelines regulating internal communication. The deliverable has the long-term objective to manage the communication and dissemination of the project and as such, it will be subject to regular updates according to the project development.

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Abbreviations

C&DP	Communication & Dissemination Plan
KPI	Key Performance Indicator
TG	Target Group(s)



2. FitDrive Context

2.1. Background

Road safety has always been a top priority of the road transport industry. Road transport is known to be the most dangerous transport mode, especially considering the number of accidents that compromise human lives and affect transport operations. Reducing the number of casualties that affect safety is undoubtedly a strenuous challenge.

Driving a car is a complex and dynamic task and there is a wide range of conditions that temporarily affect the ability to drive safely, such as consuming substances or fatigue. The particular lifestyle of professional drivers, for example, include specific behavioural practices spanning from working for long and irregular hours, to having poor sleep due to early starting times. Despite being an underrated physical condition, fatigue causes a series of psychophysical conditions that can inevitably affect driving performance – reduced alertness, longer reaction times, memory problems, poorer psychometric coordination, and less efficient information processing.

Enhancing road safety is one of the most important objectives of our current times and is essential to guarantee the well-being of people and communities as individuals and as a group.

In order to achieve this ambitious goal, it is necessary to first understand what are the factors that lie behind driving actors' actions and behaviours, and what are the steps that need to be taken to prevent the occurrence of unpleasant circumstances.

The aim of FitDrive is to determine, monitor and evaluate the fitness of drivers during their performance, with the aim to achieve a balance between the minimisation of driving-related risks and the preservation of the driver's lifestyle and employment-related mobility independence. The project intends to design, implement, and test a new tool to be used for the monitoring and evaluation of driving performance, cognitive load, physical fatigue, and reaction time. The system aims at creating neurophysiological models able to detect the onset of abnormal driver's fitness based on data obtained from IoT devices during working activities, on board intelligence and smart tachographs. Artificial Intelligent models will associate different kinds of anomalous behaviour to its most probable cause - may it be the use of drugs, medicine, alcohol, or physiological conditions like fatigue and stress. A cloud-based system will communicate to the driver, police patrols, and other relevant infrastructures, all the relevant information to improve road safety.

The project will also develop screening methods to detect new drugs and reduce the time needed to perform the tests.

2.2. Overall Objective

FitDrive vision is an improved European Mobility reinforcing the safety, competitiveness, and performance of European transport processes through innovative solutions for safe, secure, and robust transport operations that make full use of modern information and communication technologies capabilities. More specifically, FitDrive targets the current transport system and aims at increasing its robustness and support safety, security and quality of life considering aspects of infrastructure connection and automation based on innovative solutions. The project will be based on behavioural research and forward-looking activities for policy making and training to promote innovation and meet the set challenges. It will also improve the effectiveness of driver performance and roadside controls, thus enhancing the safety of road transport. FitDrive will design, implement, and test new toolkits and methodologies, for monitoring and evaluating driving performance, cognitive load, physical or mental fatigue and reaction time, providing information to drivers, intelligent road systems, the enterprise and policy roadside controls. The project will also develop a new screening device able to detect multiple impairments affecting the driver's performance, to improve reliability, safety and efficiency while considering cost effective aspects. FitDrive will impact on 1) road safety, preventing and thus reducing fatalities of drivers, 2) professional drivers working conditions, focusing on their overall regular health and 3) roadside random controls increasing their effectiveness by screening, through an innovative screening device, only those drivers revealing an anomalous behaviour. Exploitation will focus on a consistent implementation across Member States of standard interoperable products, new fitness to drive regulation, driving environment and driving training, also contributing to EU road safety targets.

2.3. Specific Aims

FitDrive aims to decrease traffic accidents in 6% by early identification of drivers affected by impairing causes. This main objective of FitDrive orbits around more specific objectives that can be classified as belonging to three main broad categories: science, technology, and impact.

Scientific objectives

S.O-1: Evaluate driving performance and cognitive load, physical fatigue and reaction time



- Develop synthetic neurophysiological models able to detect the onset of abnormal drivers' fitness (e.g., mental overload, fatigue, alcohol), analysing the concomitant variation of specific physiological parameters (brain, heart, ocular activity, skin sweating, facial expression).
- Develop an Artificial Intelligence (AI) system that by using biometric, positional, and contextual data will create an 'individual profile' of the driver's usual behaviour. AI will be then able to monitor the user while driving, detect eventual anomalous behaviour and recognize its most probable cause.
- Perform tests in a set of simulators to collect data related to professional drivers in standard and altered conditions, to have a large database to feed AI.

S.0-2: Develop an efficient, reliable, cost-effective, and socially acceptable solution for detecting impairing psychoactive substances

- Design and develop a new set of drugs/impairing substances screening device for police roadside controls with a sensitivity of 95%, and sensitivity of 90% at 100 ng/ml THC and 75ng/ml Methamphetamine, specifically studied to noticeably reduce the time needed (less than 2 minutes) and to be applied jointly with the indications provided from the cloud-based system.

Technological objectives

T.O-1: Cloud-based system to evaluate drivers' performance cognitive load, physical fatigue, and reaction time

- Integrate information from the vehicle on board intelligence (speed, acceleration, steering, braking, use of gears), from the driver using non-intrusive IoT devices (i.e., biometrics, smart band) and other sensors, the tachograph, the user personal background and the environment.
- Develop a cloud-based system to collect, store and process the data gathered from heterogeneous data sources, connect the different AI components, and deliver information using web-based user interfaces and portable devices (i.e., smartphone, tablets).

T.O-2: extended CONNECT BOX

- Improve and customize, even developing specific add-ons, the Controller Area Network (CAN Bus) infrastructure equipping most of the recent cars: this device will collect CAN data from the vehicle, provide geolocation, driving

contextual data, act as Bluetooth bridge for the drivers' wearables (non-intrusive IoT devices), environmental sensors, eye trackers, cameras and provide external communication with the cloud platform through long distance network (2G, 3G, 5G).

T.O-3: Smart tachograph development

- Develop smart tachographs to retrieve professional data with new crypto algorithms additional authenticated secure Global Navigation Satellite System (GNSS), additional features for remote early detection facilities (DSRC) and Bluetooth interface.

T.O-4: Successfully test the developed systems

- Integrate all the parts with a focus on interoperability, reliability, acceptability, ethics, and security.
- Perform controlled environment tests with 16 users to optimise the created tools.
- Perform real tests in 3 different sites (Spain, Italy, and Ireland), with 30 final users.

Impact objectives

I.O-1: Impact on fitness to drive and safety

- Create a network of partners and associates in academia and industry and a vibrant innovation ecosystem (start-ups and SMEs) for the quick market uptake of the technologies. Establish interactions and collaborations that will last beyond the project end.
- Establish a network of associates interested in building research collaborations, evaluating outputs, participating in events, and exchanging information.
- Create new training modules for professional drivers and for road patrols based on the tests.
- Use the results in the definition of a new fitness to drive regulation and other related regulation.
- Define and propose new operational standards at a European level for the proper use of FitDrive solutions during the roadside controls and for periodic medical screenings of the professional drivers.
- Create a complementary funding/commercial interest from the public and private sectors to ensure the sustainability, expansion, and adoption.

I.O-2: Communicate and disseminate FitDrive results

- Communicate and disseminate the results to all relevant stakeholders with target-oriented actions.
- Foster the application of FitDrive tool to investigate and prevent other effects of altered conditions.



2.4. Expected Impact

Impact 1: Practical onsite affordable screening devices that reliably measure the driver's fitness and detect the existence of impairing substances (related to objective S.O-2 and T.O-4)

Portable Raman spectroscopy devices will have the advantage of being easily used in the field, through noncontact, non-destructive measurements. This will enhance the speed of the analysis and reduce the exposure of operators. The sample will be measured through a container / test-cassette that prevents or reduces sample preparation and cross-contamination and can provide rapid identification of an uncertain compound. Prices of the newly developed devices (consumable part) will be commensurate with those for existing systems (17-24 €), and preferably they will be 5-10% lower. Devices will drastically shorten analysis time saving up to 60-80% time per analysis and will enable multiparameter detection (several substances in parallel in one measurement). Establishing a modification of graphene monolayers with antibodies for detection of drugs will also optimize detection time, sensitivity (> 95% in low ng/ml range) and specificity (> 95%) for drugs in buffer and saliva.

Through the new electronic readout, results will be more objective and lesser deviations than with optical readout caused by individual operator's misinterpretation will occur. Efficiency of tests will be improved by the pre-selection of drivers to be tested for impairing substances by the FitDrive data framework.

Impact 2 Countermeasures to combat driving impaired by medicines or excessive fatigue. (I.O-1 and T.O-2 and T.O-3 and T.O-4)

The work of all agencies working within road safety is limited by the lack of objective and statistically valid multidimensional data on driving while impaired, and the effect of collateral variables such as age, social and professional classes. FitDrive will definitely highlight the relationship between the "unfit" causes (i.e., alcohol, drugs, fatigue, stress), the immediate hidden unconscious psychophysiological alterations (changes in brain activity, cognitive capacities, etc.), and the resulting unsafe driving behaviours. FitDrive will improve databases through standardized procedures, better data linking and easy-to-accept tools. The creation of a common database with this information will also enable more efficient campaigns and training programs, law, and the development of more innovative devices and systems that may provide new solutions. The developed device will offer an attractive instrumental platform for further applications beyond roadside-testing, e.g., for vehicle interlock systems.

Impact 3 More consistent implementation across Member States of fitness to drive regulation and driver training, contributing to EU road safety targets. (related to objective I.O-2)

Creating enabling environments for fitness to drive in terms of legal, financial, and regulatory frameworks will be promoted in the last step of the project. Findings will be used to give specific policy recommendations on a national level but also on an EU level, with two international workshops that will ensure the transfer of knowledge and new methodologies with key stakeholders and national policymakers, as well as the concerned European Commission services, thereby ensuring their actual application in the real world. Communicating to the European Commission and national administrations on ongoing progress or stumbling blocks (personal behaviours, administrative, financial, or legal barriers) will help to unlock situations. Advocacy work, briefings and potentially press work will be done to help a good transposition process.

FitDrive will also modernise the training of professional and normal drivers with data, technologies, and methodologies from the project, clarify the rules set out in, respectively, the Professional Drivers Directive and EU rules on driving licences and create training for the companies on fatigue management.

Impact 4 Standardised solutions for evaluating fitness to drive (related to objective S.O-1):

Only a real-time driver physiological monitoring technology could recognise cues of the incoming impairment, thus alerting and/or supporting the driver timely. FitDrive research will contribute to realize a ground-breaking device able to detect and even predict sudden driver's impairments and will pave the way for a new generation of devices for the driver mental state measurement, able to be fully embedded in future vehicles. FitDrive ICT framework and IoT ecosystem will adopt an open, flexible, secure, and reliable architecture design and platform agnostic (based on open, well-know and de-facto standards, open APIs, and virtualized adapters) allowing seamless integration of legacy systems and open cloud standards. FitDrive open API will ensure interoperability to access public data and services for third-party developers to build their own solutions. The FitDrive system will have a noticeable synergy with the introduction of the smart tachograph particularly due to the article 3 "location-based services" of the Regulation EU 2016/799: in fact, having data stored on the cloud, the system will allow police patrols in the near future to know in advance which vehicles should be stopped and controlled, thus further enhancing the controls' effectiveness. New standards will be proposed with the results of the project. In conclusion, the FitDrive tool has not to be intended as limited to the cases directly investigated within the project

(stress, alcohol, drugs, medicines, fatigue), but it will pave the way for a new ground-breaking approach to monitor driver's and users' fitness for multiple purposes.

2.4.1. Other impacts

Automated Vehicles (AVs) do not imply the end of road traffic accidents. Crashes will still occur, particularly during the long transitional period to full automation, if the relationship between the driver and the vehicle is not improved. In fact, autonomous vehicles able to drive in SAE 3 level are expected to shortly enter the market: the characteristics of such a level (the driver should take the control when requested by the system) need different degrees of human attention in a single journey, according to the traffic/infrastructure/weather conditions. For instance, the mortal accident occurred while testing the Tesla AV has been demonstrated to be caused also by a human error: because of a loss of situational awareness, the test driver was not able to counteract to a wrong autopilot manoeuvre. For this transition to occur safely, it is imperative that drivers react in an appropriate and timely manner. It is therefore important that the car's system is able to know and monitor driver's fitness conditions, in order to assess his/her ability to correct car decisions or predict driving performance and eventually take proper countermeasures. These may range from audio signals, flashing visual cues adapted to "catch" the driver attention, up to a safe stop of the vehicle on the right border of the road in the worst cases. Starting with SAE-level 2, psychological constructs such as vigilance, fatigue, drowsiness, sleepiness and how they are interlinked with the overall driver state, play an important role for all efforts in improving road safety. In SAE level 2, the driver needs to monitor the vehicle's guidance as well as the surrounding environment, whereby the automation requires the human to intervene immediately, if a system limit is met. However, basic psychological research indicates that these vigilance tasks are very stressful and accompanied with human failures. Laboratory experiments show that humans miss stimuli after about 15 minutes using standardized vigilance tasks. One possible explanation could be an increasing fatigue level, caused by monotonous tasks transmitting so called passive task-related fatigue. The FitDrive system can be easily integrated in the current and future Human Machine Interfaces (HMI) of semi-autonomous and autonomous vehicles and provide this relevant function. It is to be noted that the FitDrive system, being based on a customized analysis of the driver behaviour, can properly function also on electric vehicles by analysing and profiling the driving habit of each specific driver independently from the type of vehicle (the only difference is that cars with manual transmission will have one more parameter to be analysed with respect to those with automated one or electric cars).

Lastly, the possibility of monitoring driver's fitness, including his/her cognitive and perceptive abilities while driving, would produce a relevant benefit for the whole

automotive industry in the design phase: the recent disciplines of Neuroergonomics and the concept of Human-Centred Design will allow industry to design car interiors and instrumentation actually able to improve drivers' cognitive performance (e.g. devices ease-to-use, alarms in the optimal position to catch drivers' attention, lights colour and sounds not inducing stress, etc.).

2.4.2. Economic and social benefits

According to 2020 Eurostat data, road traffic is the main support for the mobility of economic goods and people, and more than 90% of people and over 75% of goods were transported in 2018 using road infrastructure. The number of participants in the transport activities in Europe has reached no less than 1.2 million operators (public or private), and the transport labour force has risen to over 11 million people in EU countries, based on Directorate-General for Mobility and Transport (DG MOVE) statistics (March 2019). It should not be forgotten that the quality, availability, and affordability of the transport services depend essentially on the competitiveness of commerce, the performance of production activities and, last but not least, the possibility of creating the best business partnerships. Looking into the relationship between transport and the other fields of activity, besides the impact on the economy, it is essential to add the social and environmental impact, generated by the volume and quality of transport services. Consequently, sustainable economic development is decisively influenced by the way in which the transport field evolves. According to European Transport Safety Council (ETSC) data, in the EU27+UK in 2018 there were 25,386 deaths, and about 230,000 seriously injured people. The socio-economic cost of fatal, serious, minor injuries as well as intangible elements is estimated to be about 2% of EU countries' gross domestic product - around Euro 180 billion and twice the EU's annual budget. FitDrive aims at reducing 6% of road accidents related to fatigue, leading to up to 10 billion Euros reduction in the cost of traffic accidents. The FitDrive results will also bring other relevant social and economic benefits by providing a tool for the early identification of risks associated with aging including frailty, physical and cognitive impairment, depression, and falls. Currently, screening tests used to identify some conditions that are known to be risk factors for loss of self-sufficiency and disability in the elderly population (frailty, cognitive impairment, depression) suffer from noticeable biases related to the social and cultural characteristics of elderly individuals and of their daily life environment and require structural calibrations based on the country in which they are carried out, the language, the cultural level and schooling. Currently, the assessment of driving performance is based on experimental technologies, complex and costly: most of these methods are designed to improve the driving comfort and safety. A screening test to identify changes in driving practice that would be easy to perform, standardized and applicable in every context is lacking. In fact, the same scheme described for the roadside



controls can be used for a large-scale screening of possible impairments in the aged population without any task overload for the drivers: by giving a secure access to the data only to their physicians, it will be possible to automatically detect (through an alarm on their computer) the early signs of incoming frailties/illnesses, thus leading to a prompt medical action.



3. FitDrive Communication and Dissemination Overview

3.1. General objectives

Communication and dissemination activities in FitDrive will be conducted to promote the project's actions and outcomes to the targeted audience, ensuring an efficient and effective exploitation of the project's development. Besides showcasing the progress achieved and the technologies devised, the aim of the communication efforts extend the scope of knowledge transfer and information exchange to the targeted audience groups and embrace the long-term objective of collaboration opportunities with other related EU initiatives and relevant stakeholders interested in the project mission.

The main project communication objectives can be pinpointed as follows:

- To identify the main stakeholders of the FitDrive solutions
- To publish and present the project progress, technologies, and results outside the FitDrive Consortium, through scientific and research publications (in renowned international conferences and journals) and participation in relative events (conferences, workshops, and exhibitions), ensuring broad awareness among the academic, ICT, AI-related and Big Data, and the Transport research community
- To design a solid communication strategy of the project raising public awareness, and based on this to establish a leading visual presence in online (and social) media, to further spread excellence, and to exploit additional communication tools to share project updates, news, and results with stakeholders
- To ensure proper know-how exchange and collaboration among the consortium and other related EU initiatives and relevant stakeholders, through a set of scientific and industrial clustering activities
- Contribute to standardisation efforts and standardisation working group organisations

The Communication and Dissemination Plan (C&DP) outlines a regular flow of information and ensures that dissemination occurs as an integral part of the project.

FitDrive is not limited to passive, a-posteriori awareness, and acceptance. Instead, actions will be inherently embedded in many activities, from requirements definition to

final evaluation. Considering the relevance of end-users' awareness, acceptance and participation, specific lines of action (e.g., workshops, promotional/informative flyers, local media, specific sector websites) will target local stakeholders (governments, enterprises, users, etc.). The identification and quantification with KPIs of the most useful dissemination activities to achieve an effective dissemination will be updated on a regular basis. According to the nature of each Partner, the approach will be designed and tailored. The feedback coming from final users will be considered during the entire project. These continuous interactions will promote, improve, and optimize the project results. The strategies will be implemented during the lifetime of FitDrive and beyond, with the commitment of all partners, and will consist of four phases:

- **Inform:** aiming to address all target groups (TG) and provide general information on the project, explore possibilities of getting involved with the projects in the expected activities, to create expectation. For this, corporate identity and materials will be developed as promotional resources in a professional and engaging way. Corporate identity will be used in all external documents and presentations, and it will be composed of a project logo (form and colours) and the design for the brochure, presentations, web pages, and newsletters.
- **Collaborate:** in order to produce outcomes that are relevant it will be necessary to collaborate with commercial players, investors (TG2) and final users (TG3). Surveys and working groups will take place during this phase as well as simulation tests with questionnaires.
- **Involve:** once the knowledge gain during the first project activities has been transformed into functional prototypes, this phase aims at contacting TG2 and later TG3 to tests the tools. Information material aiming at research and scientific institutions (TG1) and international, European, national and local associations (TG4) will be created to generate interest for further exploitation and Innovation potential activities.
- **Disseminate:** project results are expected to influence, promote exploitation and innovation initiatives, so TG4, EU institutions and policy makers (TG5), and the general audience (TG6) will be mainly involved. In order to ensure maximum potential, several workshops will be held at the end of the project as well as participation in conferences, and other events to promote products and new created knowledge (2.2 C, 2.2 D).

3.2. Definition of target groups

The FitDrive communication and dissemination activities are specifically intended to ensure that the project's outcomes reach the wide community and more particularly the relevant groups of audience that can reap the benefits from the project's development and results. The communication efforts will be directed to provide tailored messages for the different target groups, each of them requiring appropriate strategies, channels and tools that will be exploited to communicate the set objectives in the most effective way possible.

The main principle of the dissemination activities is about exploiting the research results generated during the project and creating value within the targeted communities.

The table below provides a visual representation of the initial mapping of the segmented target audiences, highlighting their identity, their related communication strategy and the communication opportunities and channels prioritised to reach out to them. Following, an additional table provides further details for each of the audience categories.

3.2.1. Target Group Segmentation

Table 1: Target group descriptions

TARGET GROUPS	DESCRIPTION
Academia	In fields such as Road safety, Simulation, Materials, Driving Education, ICT, Human Factor, Data Science, the research outcomes will benefit researchers enabling future research in multiple areas of knowledge related with vehicles and users as well as other domains different from transport.
Commercial players and investors	Commercial players in fields of road safety such as: vehicle manufacturers, hardware, and software developers, driving schools & training Centres, testing facilities, insurance companies, manufacturers of new materials, etc. Other sectors not related with transport are expected: health, education, energy, etc.
Final Users	Drivers and users in all transport modes, public transport agencies or municipality services, transport service companies, health, and emergency services.

International, European, national and local associations, Standard associations	Related with road transport such as, Advisory Board organizations and others like: European Road Safety Observatory, Association for European Transport; European Road Safety Charter, ERF, ERTICO, CIECA, ECF, ETSC, EuroTra, FIA Foundation, ITE, ITF, IRU, MOVING International Road Safety Association, EuroSafe, SafetyCube; European Federation of Road Traffic Victims; International Federation of Pedestrians; ASECAP; FEHRL; Responsible Young Drivers Association, DEKRA, Standardization organizations, digital innovation hubs; Public privet partnership & programs.
EU Institutions and policymakers	European Commission, European Parliament, national policy makers, labour organizations and others, as a response to the legal acts and recommendations referring to the actions to be taken in order to perform the FitDrive Project.
General Audience	General public awareness of the effort the EU is doing regarding research and development and interest in new opportunities for the European Enterprises.

Table 2: Targeted communication

TARGET	COMMUNICATION STRATEGY	COMMUNICATION CHANNELS
Academia universities, scientific and research organizations, technology centres, scientific community, European scientific networks	They expect in-depth and well-structured project information and in particular project method, tests, and research findings, such as scientific articles, reports, conferences, and scientific events.	Conferences, workshops, and journal publications. Outcomes will be used in teaching and learning settings.
Commercial players and investors	They expect in-depth and well-structured information on the project method, design approach, concept, interactions, participation in fairs, and other sector-related events. They will also be provided with general information and business models.	Commercial possibilities will be considered in the Exploitation plan and Stakeholders will be reached via conferences, international workshops, and fairs.

Final users	<p>The communication is envisioned to contain brief and well-structured information about the project as well as in-depth information about products, training material, tests results, regulations.</p>	<p>They will be reached throughout the project with leaflets, newsletters, and final workshop. More general information will be provided via web and social networks.</p>
International, European, national and local associations, Standard associations	<p>Their interest relies mainly in the possibilities for transport safety, infrastructure, and regulations. They expect to find brief and well-structured basic information about the project and in-depth information about the method and research findings potentially relevant for recommendations about new methodologies, tests, products, and economic aspects.</p>	<p>They will be reached in conferences, with two dedicated factsheets and workshops. Additionally, they will be invited to collaborate in specific events or even in the creation of deliverables, reports, and non-scientific publications.</p>
EU Institutions and policymakers	<p>They expect to be able to easily follow and monitor the project's activities and progress through the website content and to be informed of results with direct influence on regulation processes.</p>	<p>Reports, brochures, and the participation of project partners in public consultations will be done.</p>
General Audience	<p>They will receive brief and well-structured basic information about project and activities, to quickly understand the key aspects.</p>	<p>They will be reached via press releases and web content.</p>

4. Communication Instruments

To ensure that the communication efforts effectively and consistently address the specific target groups and engage them in actively participating in the project's activities, it is necessary to identify the most appropriate intersecting communication tools and channels that can address the granularity of the target audience and reach each segment in the best way possible. This blended combination of tools will be subject to periodical review for potential upgrade in their impact.

Well-crafted messages conveyed through the most suitable tools for the specific target groups will be the key to create and measure the impact of the project's activities and results. Effective action will ensure that the project reaches out to the largest pool of policymakers, members of the scientific community, representatives of the public sector and citizens, and promotes the economic and societal benefits of the developed outcomes. Communication started with the launch of the project's website in January 2022 and the creation of the first social media pages. The engine of this machine will continue to run and accelerate in the next months. The first newsletter will be published in Month 18, and a first promotional video is expected to be released in M41.

4.1. Tools

A well-detailed overview of the communication tools is provided below, together with the associated KPIs to measure impact. It is worth noting that the project's communication and dissemination activities is not limited to the project's own channels, but they will be constantly boosted by the consortium partners in their organisation and stakeholder networks. New communication opportunities will be constantly sought and implemented.

4.1.1. Project's corporate identity

Website

The project website, available at fitdrive.eu, is the FitDrive content box displaying all the relevant information concerning FitDrive necessary to convey the message to the wide audience of different stakeholders interested in the project objectives. The content will be frequently updated and expanded as the project moves onto more advanced stages. All the communication material – public reports, videos, newsletters, and deliverables – will be published in a dedicated section.

Partners' websites

In line with the large scale of the project, all partners will use their own websites as one of the main communication channels, and exploit it to spread awareness on FitDrive, with a particular emphasis on their areas of expertise. In this way, all partners will seize the opportunity to increase the project impact, by building on their own networks of stakeholders to disseminate the envisioned project results.

Social media

The project's presence on social media, currently Twitter and LinkedIn, will maximise the communication and dissemination impact of the project by reaching a wide range of potential stakeholders and strengthening relationships with existing ones. All the segmented audience groups will be targeted through the social media activities performance.

The content that is published on social media orbits around four main types of content:

- Reflect the status of the project through updates
- Announce approaching meetings and events that concern FitDrive, may they be organised by the members of the project consortium or attended by them because of project-related interests
- General news on topics of interest, such as road transport and safety, IoT and AI technological advancements applied to the transport sector, etc. - by drawing on unique and third-party content
- Publish content from other EU projects and initiatives in the form of articles, academic papers, and other communication formats

In order to ensure that the social media content is equally shared among the project consortium channels, a designated person will be responsible for communication from each WP leader. AIPSS acts as a community manager of the social media channels of the project and will expect content and updates from each member of the consortium to ensure periodical and timely distribution of the content to be posted on social media accounts and networks.

FitDrive's Twitter and LinkedIn accounts have been launched in December 2021 and a YouTube account is envisioned to be created as soon as the first project video is there, serving as a publication platform for promotional videos.

Promotional videos

The C&DP also envisions the creation of promotional videos that will be designed drawing on footage from consortium meetings, events, workshops, and other meaningful material to showcase the project highlights and promote the newly

developed tools. The live sessions will be recorded with a professional gear and will be edited on available professional video-editing software or online video-editing tools. Once finalised, the videos will be uploaded to the YouTube channel of the project that will be created prior to their publication. They will also be shown at conferences and other events attended by the project partners.

Newsletter

A newly designed newsletter will also be added to the branding repertoire for regular dissemination to the relevant stakeholders. The newsletter covers ongoing project activities and outputs, alongside collaboration initiatives with other topic-related projects. Each issue of the newsletter will initially be emailed out to a mailing list representing the database of relevant stakeholders. It will then be made available in the dedicated news section of the project website and social media channels to ensure that the information is at the disposal of all the interested readers.

Three newsletters are envisioned to be released in Month 18, 30 and 42 of the project development stages, with a potential rescheduling at a later point in time. AIPSS coordinates the production and electronic dissemination of the newsletter and seeks to acquire content from each partner to ensure accuracy of information and highlighting deliverables or activities that are being created at the time of the publication. The newsletter design and dissemination are performed using the mailing software Mailchimp. Registration to the newsletter will be possible by submitting a request through the contact page of the project website.

The newsletter will be compliant with the European GDPR. Each partner will be requested to share the newsletter with their stakeholder networks and invite them to submit their subscription to increase the project outreach. At the end of the project, AIPSS will delete the data from the Mailchimp account to comply with data regulation.

4.1.2. Media, press and professional publications

Open access journals, preferably through the gold model, will be chosen. A free electronic copy of all the conference proceedings and public documents will be stored in online archives freely accessible (Open access). Publications can also be uploaded in some specific bibliographic social networks such as <http://www.citeulike.org>, <http://www.mendeley.com> or <http://www.bibsonomy.org>, or <https://zenodo.org> no later than six months after its original date of publication. Particularly, Zenodo repository has been mentioned during the second consortium meeting as an open-access repository developed under the European OpenAIRE program and operated by CERN that allows researchers to deposit research papers, reports, and materials of any other sort. A

FitDrive Community has been created on the platform and will be exploited for the submission of the produced materials.

FitDrive results are expected to be complex and technical. However, a specific effort will be made to make them easy to share with graphical and textual contents, tailoring them to the best formats to support web-based access, presentations for the general public and demo for prospective customers' decision-makers in order to be used within Communication.

Press releases will be issued by all partners during the project coinciding with important milestones such as local or European events. They will all be made available on the project website. The consortium will actively seek to publish articles in publication outlets such as technical magazines, alongside opportunities for interviews - radio, podcast, newspapers.

4.1.3. Deliverables

Deliverables with the 'public' status will also be available on the project website/Cordis and the list will be updated every month. Non-public deliverables will be uploaded to the institutional repositories set-up at several partner's sites and at the common share site selected.

4.1.4. Conferences, workshops, and fairs

Conferences and workshops at national and international level related to different disciplines will be used for the dissemination of knowledge. During the project lifetime, the conferences and events organised by the European Commission, published on the Commission's Research & Innovation website and on the CORDIS website, will be followed to see if beneficial for the project purposes, and will be included in the list of possible events in the C&DP. In addition, possible actions with other related projects could be performed, such as assisting to conference or network sessions promoted by them, as described in WP7. The FitDrive consortium will take special care of knowledge transfer by public research organizations following the EC Recommendation from April 2008 and Code of Practice when participating and presenting the project outcomes at international conferences and fairs as defined in point 2.2 and finding synergies and collaboration with other publicly funded or EU projects/organisations. In order not to prejudice further patent or licence exploitation all data that may be subject to such restrictions will be identified and publications will be delay until strictly necessary.

Moreover, participation in exhibitions and fairs to publicise the knowledge of new products is expected. Project partners will participate in selected trade fairs among the ones below, if possible, with a booth.

Two international workshops to be held in Brussels (M24 - AIPSS) and Dublin (M32 - EPDA) and a final conference to be held in Rome (AIPSS - M42) will also be organised and classified as high-level international events focused on displaying the project results while granting access to a wider international audience made of: EU officers, regional and national institutions, enterprises, research institutions, and citizens, thus encouraging further dialogue and networking.

Table 3: Planned international events

Activities	Direct range of applications	Expected Impact Timing	Partners	Expected Impact
Two international workshops	Technical - focusing on: 1) Models of the driver behaviour 2) Standards, training, and legal implications of the results	Workshops at month 10 and 24 depending on the actual starting date of the project 1) First international workshop: Brussels (AIPSS) 2) Second international workshop: IRELAND (EPDA)	AIPSS EPDA	180 attendees in total
Final conference	Technical - it will present the FitDrive results	Final conference: ROMA (AIPSS) At month 42, when project outcomes have been produced. Replicability and scalability analysis will be studied.	AIPSS	120 attendees

4.2. Editorial Plan

Table 4: Planned editorial activities

Communication Tool	Frequency
Social Media	Once a week
Promotional videos	At least 2
Newsletters	At least 3
Articles	At least 3
Event	1
Workshops	2

4.2.1. Partners' resources

Other dissemination activities address to the scientific community or more specific groups will be performed by the project partner as included in Table 5:

Table 5: Most relevant dissemination activities planned or considered by partners

	TRAINING	CONFERENCES	ARTICLES	FAIRS
ITCL	Will use the knowledge for the training courses provided to professionals in its installations.	Attend 2 congress with 1 poster, e.g., International Conference on Multimedia Computing and Systems; International Multidisciplinary Modelling & Simulation Multi-conference.	One article in Simulation & Gaming on new simulators for professional drivers in 2023.	Assist to Driving Simulation Conference (DSC) as exhibitors.
AIPSS	Courses for police officers to use FitDrive during roadside controls.	Attend one international conference with a poster and a paper on the FitDrive system.	Two articles on road safety on two Italian specialised magazines.	N/A
MDH	B.Sc, M.Sc, and PhD in computer science students will be engaged in a smaller scale into the project in their study programme. B.Sc/M.Sc/PhD thesis will be a part of this project, also, case studies out of this project will be used as course/lecture materials.	Attend 2 international conferences in Computer Science to present results coming through out the project. Also, support 1 international workshop/conference in road safety. International Symposium Advances in Artificial Intelligence and Applications, IEEE International Conference on Intelligent Transportation Systems, etc	Data analytics using AI and Machine Learning in Journal in Expert Systems with Applications (ESWA) in 2023 Signal processing and Machine Learning in IEEE Transactions on Biomedical Engineering (TBME) Journal in 2024.	
ADSYS	Will use the knowledge for the training of end users with the ICT framework UI.	Support consortium participating in targeted events as part of the dissemination activities.	Support consortium partners to produce papers or articles as part of the dissemination activities.	Support consortium attending targeted events.
EFA	Will organise and make training courses for police officers and truck	Attend at international conference describing the FitDrive device and organise a couple of international seminars for	Different articles on road safety magazines for driving school association and	Profit from its huge network and participate at international events on

	drivers for the use of FitDrive device.	driving instructors and post-licence trainers.	for different road safety stakeholders.	training and road safety.
UNISAP	Master graduations in Biomedical Engineering and PhD Doctorates in Biophysics, on the analysis of bio-signals and the development of machine-learning algorithms and AI for the evaluation of mental and emotional states related to driving habits and automatic recognition of impairing causes. Seminars within the course of Electronic Bioengineering and Clinical Applications - Telemedicine and Robotics.	Participation to 2 relevant international conferences on bioengineering and neuroscience, with both poster and papers submissions, such as: i) IEEE-EMBC (2021 Mexico, 2022 UK); ii) OHBM (2021, Korea, 2022, UK); iii) Neuro-ergonomics (2021, Germany). There will be also the possibility of organizing mini symposia within such conferences in order to enhance dissemination impact.	Automatic classification of drivers' mental states under ADC, as topic for at the least 2 papers on international peer-reviewed journals via open access such as: IEEE Review in Biomedical Engineering (IEEE RBME), PLoS ONE, IEEE Transaction in Biomedical Engineering (IEEE TBME), Frontiers in Human Neuroscience. Results will also publish in collateral research on additional papers.	UNISAP is very active also in the aviation field, yearly participating at the World ATM Congress and SESAR Innovation Days. FitDrive will be presented there in order to foster its cross-fertilization.
SEC		Participation at 1 -2 international conferences in the context of safety, Traffic, enforcement, or similar, like International Council on Alcohol, Drugs and Traffic Safety Conference in Rotterdam 2022, or General Police Equipment Exhibition & Conference (GPEC).		Participation at 1 -2 international trade shows e.g., GPEC, SICUR or Europoltech as exhibitors.
XEE	Will deploy training on boarding materials for all B2B Fleets managed in order to present the	Attend a conference (such as AutomotiveUI, CHI, UMAP, MobileHCI)	Will write article on the XEE website about how data can change behaviours.	Will present the solution to the french tradeshow FloteAutto.

	FitDrive device and how to use it.			
EPDA	Will create online courses in European languages to educate drivers on the FitDrive device, the legislation relating to the device and the appropriate manner of engagement with the authorities enforcing the legislation.	Attend the Union of International Chauffeurs and Routiers (UICR) congress and several transport related conferences and exhibitions where we are asked to speak on various topics and FitDrive will be promoted.	Write and publish articles on EPDA and UICR website. Circulate these articles to the truck and coach magazines throughout Europe.	Promote FitDrive at the World Professional Driver Championships with other partners.
ASELSAN		Attend tachograph experts group forum (held by DG-MOVE) with a presentation.		

For an effective execution of the above activities, the C&DP will be updated at month 12, 24, 42 to consider the situation at the date and arrange the adequate tasks (e.g., changing the date on a workshop to reach a wider audience).

All project partners will contribute to improve communication and dissemination activities through their existing platforms, by sharing relevant content, publications, press releases and newsletters on their websites and social media profiles. This will ensure communication leverages the substantial reach of partners' existing networks as well as building on new channels of communication.

The task leader will liaise on a regular basis with other WP leaders to exchange information on communication and dissemination activities, for example through quarterly update meetings.

4.2.2. Liaison with other projects

The European Commission has financed a number of projects with similar or related objectives under the same call H2020-MG-2018-2019-2020.

The FitDrive project has already identified synergies with the Panacea project, coordinated by the National Institute for Transport in Sweden, and focused on designing, developing, and testing a holistic driving ability assessment system for truck and taxi drivers, courier service riders and other commercial users. In light of similar

focus areas – detecting fitness to drive and impairing driving behaviours – the EU-funded FitDrive and Panacea projects, as a result of previously arranged internal meetings, have joined efforts to mutually support each other’s communication strategies. Moreover, a joint meeting showcasing the project results as well as illustrating issues concerning data sharing and standardisation, is expected to occur the 1st of June 2022.

More specifically, the joint efforts will be polarised on:

- Social media supporting each other’s activities
- Mutual reference on each other’s website under a heading ‘Collaborations’ in the consortium section
- Equal sharing of PD, pilot data, intermediate conclusions, and results if IPR allows
- Joint creation of driving behavioural models
- Joint standardisation work and policy recommendations for public administrations
- Joint event on 1 June 2022
- Excel sheet sharing updates on each other’s news and papers – to be checked periodically
- Joint scientific publications – to be discussed when we have more info about project development.

Regular monthly meetings are envisioned to occur from April to June 2022 for the joint workshop organisation.

5. Monitoring and evaluation methods

5.1. Monitoring

Communication covers all actions that will help create knowledge of the project and its results achieved beyond the consortium and the stakeholders involved. This maximises the contribution of the project allowing the attraction of a wide number of stakeholders to embrace and benefit from the FitDrive exploitable results.

The main objective is to ensure a high-quality communication strategy execution.

5.2. Communication and Dissemination Indicators

With the view to carrying out an accurate and regular monitoring and assessment of the communication and dissemination activities to measure their impact on the audience, it is necessary to keep track of the execution plan through the support of specific metrics and insights:

- Analytics related to the FitDrive website and social media accounts. AIPSS will use web tools for analysing traffic, user behaviour and acquisition to understand their major interests and areas of improvement.
- Number of organised events and attendants.
- Number of subscribers to the project newsletters.
- Number of news, articles and interviews.
- Number of views of the project videos.
- Number of comments and interactions coming from the targeted audience groups.
- Number of relevant events project partners participate in.
- Number of press releases distributed.

5.3. Communication and Dissemination KPIs

In compliance with D1.2, Communication's KPIs are listed in a spreadsheet on the FitDrive repository of the consortium and are evaluated and updated on a regular basis (minimum every consortium meeting).

Table 6: Communication and Dissemination KPIs

TOOL	CHARACTERISTICS	KPI
DISSEMINATION COMMUNICATION	Communicate and disseminate the results to all relevant stakeholders with target-oriented actions. Foster the application of FITDrive tool to investigate and prevent other effects of altered conditions.	M7
PROJECT WEBSITE	Created and coordinated by AIPSS. Together with the consortium, the functionalities and content will be elaborated based on the strategy developed in the C&DP. Displays information, ways to engage in the process, reports and project updates, a schedule of events, social media feeds, printing materials and public deliverables. Web maintenance where no new functionality will be developed by only bugs will be fixed and carried out by AIPSS beyond the project execution. The web will be created in English. It will take an engaging user-centred design approach to ensure that it fulfils stakeholders' needs and expectations. Website traffic and social media reach will be monitored, and the strategy will be improved throughout.	M4 published - 1500 visits
SOCIAL MEDIA	All partners will publish relevant content through media tools and resources created for the project: creation of LinkedIn group and other social media groups as well as publication in websites and social media owned by each partner, An event on Facebook will be created and boosted for some workshops. An interactive dashboard, agglomerating all the tweets using a pre-defined hashtag (e.g., #fitdrive). Comments will be studied to improve the tools and project results. International events such as the ones from AIPSS, EFA or EPDA will be live streamed when possible. The full-length files will be further split into micro videos of 2/3 minutes and quote pictures that will be used for constant posting on social media, personalised adds of the FitDrive project to the target groups identified.	Start in M4 - 300 followers 20.000 impacts
VIDEOS	15-30 second videos will be developed to promote project objectives, the online platform and to transfer the best strategies identified. Videos may include the following: 1) video to promote project objectives, 2) video about how to use the new developed tools.	M24 - 2 videos
NEWSLETTERS	Disseminated in the project website during project duration. A paper version will be distributed at community gatherings.	M18, 30, 42 3 Newsletters
PROMOTIONAL MATERIAL	Posters (English), presentations and leaflets (translated in up to 7 European languages - Spanish, English, Italian, French, Turkish, German, and Swedish) will be employed during the communication and dissemination phases and addressed to	Start in M6 3000 copies

	the TG. They will have informative, explanatory (awareness) and recruiting roles. All the materials will be included on the website, spread across the prospective multi-channel network of FitDrive and employed in events, trade fairs, update workshops and conferences.	
DELIVERABLE	Public deliverables - fully public (reduced version if the full version contains confidential information) available on the project website/Cordis. Restricted/confidential deliverables - publication of general information, progress, and highlights on web.	M1 - M42 Table 3.1 C
OTHER PROJECTS	Other project leaders related with FitDrive will be contacted for coordinating communication actions and participation in events.	5 projects

The Key Performance Indicators (KPIs) in question are 180 attendees in total in the two international workshops and 120 attendees in the final conference in Rome. AIPSS and its linked third party 'ROMATRE' university (engineering department) are used to organize this kind of events both in Rome and Brussels with an attendance composed by road managers and other relevant stakeholders in the road transport and road safety fields. The feedback coming from the final users will be considered during the entire project and will ensure an adequate acceptance of the project outcomes. A specific part of the communication campaign will also be targeted to the road police authorities, in order to gather feedbacks also from the side of those expected to actually utilise the FitDrive tools. These continuous interactions will promote, improve, and optimize the project results.

6. Internal Communication

This paragraph is devoted to reporting the guidelines driving the internal communication and dissemination process of FitDrive that are mentioned in Section 4 of D1.2 to ensure a smooth and up to date communication exchange among all the members of the FitDrive consortium. To facilitate communication, the contact details of all people contributing to the project are gathered in one file in the project repository – “Contact Details FD” – located in the root of the WP1 folder.

The communication between the project partners will also be included in the C&DP as it will also be important for effective project execution. Media for the partners include email, discussion forums, an intranet chat tool (MS Teams, Skype, etc.), MS Teams and other repositories to exchange documents, etc.

In line with the common goal of increasing visibility and impact of the project key results, a well organised internal communication is crucial for the achievement of the objectives of WP7. The project partners will be regularly exposed to continuous communication exchange through regular calls, e-mails, and meetings, making sure that each member of the consortium is informed and plays an active part in the FitDrive communication efforts. To this end, interim reports will be asked of each project partner every six months and online reporting sheets will be created and shared among all project partners for an easy accessibility and information submission.

6.1. Coordination

AIPSS will edit and review all content provided by the project partners to be published via the project’s own dissemination channels to guarantee a harmonious and consistent project branding image, tone, style, and content.

Communication and dissemination activities will be monitored and coordinated by AIPSS, and all FitDrive related content should be directed to AIPSS.

7. Conclusion

This deliverable aims at delivering a clear outline of the communication and dissemination strategy and plan employed to showcase and spread excellence on the project outcomes and results. Besides specifying the monitoring and evaluation procedures to measure and keep track of the impact of the communication and dissemination efforts, it also provides further details on the internal communication workings of the consortium, by highlighting the organizational structure that will enable a smooth internal communication among the Consortium partners.

