Grant Agreement Number: 768953

Project acronym: ICT4CART

Project full title: ICT Infrastructure for Connected and Automated Road Transport

D9.3

Definition of Communication Strategy & Plan (Version III)

Due delivery date: 31 August 2021

Actual delivery date: 27 August 2021

Organization name of lead participant for this deliverable: ERTICO

Dissemination level		
PU	Public	X
PP	Restricted to other programme participants (including the GSA)	
RE	Restricted to a group specified by the consortium (including the GSA)	
CO	Confidential , only for members of the consortium (including the GSA)	

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768953

Document Control Sheet

Deliverable number:	D9.3
Deliverable responsible:	ERTICO
Work package:	WP9
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Document Revision History			
Version	**Date**	**Modifications Introduced**	
		Modification Reason	**Modified by**
V0.1	14/07/2021	First draft for collecting WP9 partners input	Elisa Todesco (ERTICO)
V0.5	29/07/2021	Second draft for review	Elisa Todesco (ERTICO) Tomislav Pilic (ATE) Elena Krikigianni (SEAB) Edoardo Bonetto (LINKS)
V1.0	23/08/2021	Third draft for final review, including implementation of comments from review and update with latest analytics data	Elisa Todesco (ERTICO) Elena Krikigianni (SEAB)

Abstract
This Communication Strategy and Plan (V III) provides an update of all the communication activities that have been performed during the first 36 months (out of 42) of implementation of ICT4CART. The document describes broad communication and dissemination actions, aimed at reaching a wide range of target groups deploying the appropriate operational means. It will serve as the main reference for all communication activities and events over the course of the project, and outlines the strategies and measures to be employed by the ICT4CART project consortium in order to achieve its communication objectives.

Legal Disclaimer

Abbreviations and Acronyms

Acronym	Definition
AB	Advisory Board
Cfr.	Confront
Dx.y	Deliverable number “y” of the Work Package number “x”
EC	European Commission
EU	European Union
GA	Grant Agreement
ICT	Information and Communication Technology
ICT4CART	Infrastructure for Connected and Automated Road Transport
IT	Information Technology
ITS	Intelligent Transportation System
KPI	Key Performance Indicator
L4	Level Four
MEC	Multi-access Edge Computing
MX	Month number X of the project course – (month in which a specific action takes place)
Q4	Fourth Quarter
R&D	Research and Development
WP	Work Package

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Executive Summary

Context

Connected and automated vehicles are a key focal point of ITS research. To enable and accelerate their deployment in our everyday life, ICT is a prerequisite; this is the frame in which ICT4CART project places itself.

Despite the significant advances in the telecom and IT industries, several ICT challenges related to connectivity, data management, cyber-security and ICT infrastructure architectures still exist, and need to be addressed to enable road vehicle automation.

ICT4CART aims to address the gaps to deployment, bringing together key players from the automotive, telecom and IT industries, to shape the ICT landscape for Connected and Automated Road Transport and to boost EU competitiveness and innovation in this area.

Project scope

ICT4CART's main objective is to design, implement and test in real-life conditions a versatile ICT infrastructure that will enable the transition towards higher levels of automation (up to L4), addressing existing gaps and working with specific key ICT elements, namely hybrid connectivity, data management, cyber-security, data privacy and accurate localisation.

ICT4CART builds on high-value use cases (urban and highway), which will be demonstrated and validated in real-life conditions at ICT4CART test sites in Austria, Germany and Italy. Significant effort will be put on cross-border interoperability, setting up a separate test site at the Italian-Austrian border.

D9.3 Definition of Communication Strategy & Plan (Version III)

This document provides ICT4CART's final communication strategy and plan. It includes a detailed overview on all communication and dissemination actions that have been performed by the ICT4CART consortium from M1 until M36. As granted via the official extension obtained by the project, the publication of *D9.3 Definition of Communication Strategy and Plan (Version III)* has been postponed from M30 to M36. This has allowed the consortium to re-adapt the strategy and the plan including ad hoc mitigation actions to overcome the difficulties imposed by the COVID-19 global pandemic. Moreover, since ICT4CART's original structure foresaw the release of D9.3 six (6) months prior to the end of the project, the release at M36 reflects this original structure.

D9.3 Definition of Communication Strategy and Plan (Version III) summarises the approach that has been used by ICT4CART partners to achieve an effective and efficient communication and dissemination of project news, outcomes and results. Moreover, it highlights key communication

objectives and target audiences that have driven the consortium's communications efforts.

Communication and dissemination activities involve all consortium partners and constitute an essential part of the project development and implementation. To ensure ICT4CART high visibility, outreach and impact on all involved/interested actors, communication and disseminations activities have been carried out as a joint effort by the consortium.

1 Introduction

The current deliverable, named *D9.3 Definition of Communication Strategy & Plan (Version III)*, is an updated reference document for all the communication and dissemination activities carried out within WP9 of ICT4CART project during the three years of its implementation. This is the final update of the document, which follows D9.1 (submitted in M6) and D9.2 (submitted in M18).

D9.3 features a summary of ICT4CART key messages for each target audience group and, at the same time, provides the state-of-the-art of the communication and dissemination activities performed since the official start of the project in M1.Communication and dissemination activities have been carried out by the whole consortium as a joint effort, under the guidance of the WP Leader (ERTICO) and the Tasks Leader, as per the first version of the Communication Strategy and Plan and meeting the requirements of the European Commission (EC)[1][2].

Dissemination and Communication activities have also been adapted and enlarged as needed, with the agreement of each Task Leader and prior informing ICT4CART consortium.

1.1 Purpose of the document

This document ensures that the Communication Strategy and Plan already developed in M6 are up-to-date and that all the related dissemination and communication activities, to ensure ICT4CART's promotion and reaching and widening the audience are being implemented effectively.

1.2 Intended readership

D9.3 ICT4CART Communication Strategy and Plan (VIII) is a public deliverable addressed to any interested reader. Since it summarises the activities that have been carried out since the official start of the project, this document can be used by ICT4CART's consortium members as an extensive set of guidelines to plan and contribute to the project's promotion and diffusion.

[1] https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/communication_en.htm

[2] https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/dissemination-of-results_en.htm

2 Definition of Communication Strategy & Plan

Communication and dissemination of project activities are paramount actions to ensure effectiveness and sustainability of products, results and outputs, within and beyond the project lifetime.

A well-structured communication strategy is an effective instrument to maximise the impact of project results and outcomes, optimise their value and allow their active and concrete use in systems and practices at local, regional, national and European level.

For these purposes, a consistent communication and dissemination strategy allows the consortium to identify, and subsequently measure, the extent to which project results reach the audience and are effective.

In ICT4CART, WP9 "Communication, Dissemination and Exploitation" aims to ensure the broad dissemination of objectives and results throughout the entire project cycle and beyond.

The present document is an update of WP9 deliverables "*D9.1 Definition of Communication Strategy & Plan Version I*" (submitted in M6) and "*D9.2 Definition of Communication Strategy & Plan Version II*" (submitted in M18), which had been designed to provide a structured framework of the communication and dissemination activities to be carried out during and after the ICT4CART project course. The main purpose of those two deliverables was to spread project information and increase stakeholders and public's awareness on the available products and results.

Specifically, the Plan has defined both strategic approach and operational procedures adopted by the consortium, to promote the project and disseminate its objectives and main results. The purpose has been defining a consistent and efficient method of disseminating progress in the project through the planning of communication activities that can help disseminate the ICT4CART project results as widely as possible.

In addition, D9.1 and D9.2 described all the communication procedures to be followed by ICT4CART consortium partners to efficiently promote the project and its results to the different target audiences.

The ICT4CART Communication and Dissemination strategy has been based on five levels of communication, as per the "5 Ws" Lasswell's model[3] (who - Source, what - Message, in which channel or through which medium, to whom – the audience, and to what effect) and has been developed in accordance with the European Commission's (EC) recommendations on Communication and Dissemination[4].

[3] Lasswell, Harold (1948), *The Structure and Function of Communication in Society,* https://pracownik.kul.pl/files/37108/public/Lasswell.pdf.

[4] https://ec.europa.eu/info/sites/info/files/6._sc2_coordinators_day_communication_and_dissemination.pdf.

The strategy ensured a clear agreement amongst partners on the following key elements:

- Specific objectives for each of the target audiences;
- Channels/means to be used according to their special needs and nature;
- Activities to be performed in each development phase and the material to be released depending on the project progress;
- Specific plan and timeline to be followed for the performance of the respective activities;
- Key measures of their effectiveness of communication and dissemination effort and the roles of all participants in the communication flow and the procedures to be followed.

As ICT4CART developments are relevant not only for scientific and technical communities, but also for three different industries (automotive, telecom, IT), as well as for non-technical audiences and general public, ICT4CART partners have been being highly committed to perform dedicated communication activities, to convey the project messages and results to all related stakeholders.
The activities have been implemented using various and appropriate channels and means, aiming to raise attention and collect direct feedback.
In addition, the ICT4CART communication and dissemination activities have been planned and deployed in line with EU Policy and directives[5].

2.1 Objectives

The main objectives as defined in the Communication Strategy and Plan (Version I) are the following:

- To provide consortium partners with a set of useful guidelines to plan and perform communication and dissemination activities, with the final aim of maximising project's impact and reaching the wider audience possible;
- To ensure the production of high quality ICT4CART publications, presentations and other communication material;
- To establish tools and channels for further promotion of the project, its activities, its consortium and the acknowledge the efforts of the European Commission in the field of Connected and Automated Driving to avoid overlaps and possible disclosure of restricted or confidential information;
- To establish a set of communication and dissemination best practices, in order to perform

[5] H2020 Programme Guidance Social media guide for EU funded R&I projects, https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/grant-management/communication_en.html

engaging and relevant dissemination and communication activities and to monitor and record them efficiently;

- To liaise with relevant projects, associations, networks and organisations to ensure the effective and efficient knowledge exchange.

Given that all the objectives listed in the first version of the communication strategy and plan are still relevant, no update is deemed necessary in D9.3.

2.2 Key audience

The identification of ICT4CART target audiences has been a crucial point in developing the Communication Strategy and Plan of the project, to ensure the active engagement of stakeholders in the project communication and dissemination activities.

The consortium has identified, at proposal stage, the target audiences it intends to reach, differentiating the communication and dissemination tools and activities to ensure participation and exploitation of the project results. Namely, ICT4CART key stakeholders are automotive manufacturers, telecom and IT industries, tier 1 suppliers, road operators and authorities, policy makers, research community, and general public. Table 1 (below) identifies the different stakeholders' groups, together with key messages, communication activities and the relevant impact set per different target group.

Main results	Key message & timeline	Target	Communication activities	Relevant impact
Key results of ICT4CART as a EU-funded research project	Scientific, technological, societal achievements of the project (M01-M36)	Research community, policy makers, industrial players, general audience	• Competitive and widely recognisable brand identity; • Creation of a dedicated project website and social media accounts; • Project e-newsletter; • Performance of social media campaigns; • Specialised Press releases and other PR activities; • Bilateral discussions; • Communication kit; • Radio/television interviews; • Scientific publications and technical presentations in renown Conferences and fairs; • Final event and demonstration.	Evidence-based knowledge on ICT infrastructure architectures; Advancing public interest applications; Environmental and social benefits; Increased awareness at EU level and internationally
ICT4CART Architecture	How ICT4CART Architecture responds to the needs and interest of the	IT, Telecom, Automotive industries, road operators, service	• Participation/presentations/demonstrations to relevant events, such as conferences or fairs;	Economic Impact; Environmental Impact; Evidence-based knowledge on

Main results	Key message & timeline	Target	Communication activities	Relevant impact
	targeted audience (M12-M36)	providers and other end user communities, innovative SMEs, standardisation bodies, relevant authorities and policy makers	• Publications in specialised media and related conference proceedings; • Articles in technical magazines and related industry technology publications; • Participation at the ICT4CART Advisory Board and Stakeholder forum; • Bilateral discussions and dedicated presentation in respective technical committees and fora; • Social media activities and campaigns; • ICT4CART Communication kit; • Demo events at ICT4CART test sites (incl. cross-border); • Final event and demonstration.	ICT infrastructure architectures; Reliable data processing; Requirements for interoperability, latency, throughput, etc.; Open up of new market services; Feed into standardisation processes
ICT4CART hybrid communication component	How the adoption of such component will create market opportunities (M12-M36)			
Cyber-security and data privacy mechanisms	Contribution to the future work of large companies and SMEs in the area (M12-M36)			
Scientific results	Contribution of ICT4CART to the research community (M12-M36)	Researchers and scholars interested in the fields touched by ICT4CART	• Conferences (IEEE ITSC, IEEE ITS, TRA, etc.) • Peer-Reviewed publications in journals and magazines; • Final Event and demonstration; • ICT4CART website.	Inform the research community, in EU and beyond, about ICT4CART developments
Basic notions and expected impact	How ICT4CART solutions will improve EU citizens everyday life (M01-M36)	Non-technical audiences and general public	• Mass media (TV, radio) and social media activities; • ICT4CART website; • Communication kit; • Final Event and demonstration;	Economic impact; Social impact; Environmental impact

Table 1: Targeted audience

2.3 Key messages

ICT4CART key messages include the following:

- Raising awareness of the potential benefits of ICT4CART proposed technology;
- Engaging with target audiences to collect feedback for further development;
- Dissemination of project results;
- Engaging with relevant R&D projects, associations/networks, standardisation bodies and organisations to ensure knowledge exchange, interoperability and wide market penetration;
- Engaging new and final users to contribute with inputs and feedbacks throughout the implementation of the project;
- Demonstrating how ICT4CART solutions are relevant for the daily life of European citizens;
- Promoting the EC's work and its support towards Research & Innovation actions in the field

of Smart Mobility and Connected and Automated Driving.

Such messages have been addressed to each of the selected target groups and tailored as demanded by the specific opportunity, to ensure a significant impact of the diffused information and engage the audience according to their interests and needs.

3 Key Performance Indicators and other monitoring tools

3.1 ICT4CART's KPIs

D9.1 set a series of KPIs as measurable targets for dissemination activities, in order to ensure that the desired impact is achieved. Table 2 (below) describes the planned ICT4CART's Communication and Dissemination activities to be performed in the different project phases, and expected KPIs. Table 2 also reports the current results achieved for each of the scheduled activities.

Activity	Description	KPI	Expected result	Current result achieved
Brand identity – ERTICO	A coherent and consistent brand identity has been created to ensure ICT4CART visual products to be effective and recognisable, explaining the project meaning and core idea in a clear way.	Logo, procedures and guidelines, Word template, PPT template, visuals that are connected with the brand that is used on the website and flyer	Immediate recognition by stakeholders on all information material and at events when consortium presents project information.	ICT4CART's brand identity has been successfully developed in M6 (cfr. D9.4 Brand Identity and Guidelines) **Status:** achieved
Project website - ERTICO	Launch, maintenance and update of ICT4CART website as a hub of relevant information, news and events related to the project.	Public website with specific sections for the different topics and products.	100 unique visitors per month	Between its launch (M6) and August 2021 (M36), the website registered 675 new users, that means it had on average 233 unique users per month. **Status:** achieved
Communication kit - ERTICO	Production of a communication kit to facilitate the information flow and promotion of the project.	Flagship flyer, ICT4CART newsletter; short videos (starting from M18), roll-up banners, 1 professional video.	A wider understanding of the objectives and aims of the project by stakeholders.	All communication tools have been developed (cfr. D9.5 Communication Tools VI, submitted in M6); two newsletters have been distributed, and other two are planned; the first animated video has been produced in M18[6] . The consortium is producing videos on the demonstrations (2 demonstrations out of 4 carried out so far). **Status:** Partially achieved **Mitigation measure**: Two technical newsletters planned between M37-M42; videos of the demo sites in production. Videos focusing on the demonstrations occurred at the project's demo sites are currently in production and will be leveraged for promotional purposes shortly.

[6] https://www.youtube.com/watch?v=GtUEdaSr0V8

Activity	Description	KPI	Expected result	Current result achieved
Social media channels - ICCS	Social media will be used to spread project-related news, raising awareness about the core topics and achievements, promote ICT4CART events and disseminate public results (deliverables, articles etc.)	LinkedIn project group; ICT4CART twitter account. Project channels will be regularly updated (weekly base); partners will contribute sharing the content on their own corporate accounts.	Timeline: whole duration of the project	
			At least 500 followers for Twitter;	A project twitter account has been created, as it is underlined in task 9.1 description 'Development of the ICT4CART website and social media accounts'. We also sustain ERTICO's account to boost outreach. ICT4CART Twitter account counts 296 followers and approx. 271 tweets plus uncountable retweets, with an average of 1200 impressions/tweet; **Status:** Partially achieved **Mitigation measure**: Communicating the latest project results through project's social media pipelines and promoting them during upcoming conferences and events (e.g. ICT4CART final conference, ITS world 2021 etc)
			at least 150 members for LinkedIn;	ICT4CART LinkedIn group counts 94 members and 34 started discussions **Status:** Partially achieved **Mitigation measure**: Communicating the latest project results through project's social media pipelines and promoting them during upcoming conferences and events (e.g. ICT4CART final conference, ITS world 2021 etc**)**
			at least 10 posts shared per partner in individual social accounts	11 posts on LinkedIn, 39 posts on twitter **Status:** partially achieved **Mitigation measure**: Communicating the latest project results through project's social media pipelines and promoting them during upcoming conferences and events (e.g. ICT4CART final conference, ITS world 2021 etc)
			at least 70 announcements in	11 posts on LinkedIn, 39 posts on twitter, 1 on YouTube, 2 on

Activity	Description	KPI	Expected result	Current result achieved
			social media channels	other social media **Status:** partially achieved **Mitigation measure**: Communicating the latest project results through project's social media pipelines and promoting them during upcoming conferences and events (e.g. ICT4CART final conference, ITS world 2021 etc)
			at least 2 social media campaigns.	One social media campaign has been launched ("Meet ICT4CART: The Interview Series"), counting 15 articles as per August 2021 **Status:** Partially achieved **Mitigation measure:** Launch of a new social media campaign around pilot demo sites
Conferences/events – SEAB	ICT4CART consortium will be presented in relevant conferences and other events. Partners' effort will focus on sharing consortium organised events and attending external sessions to disseminate project content, engaging targeted audience.	List of relevant events with a minimum level of participation guaranteed; minimum number of attendees/participants engaged.	At least 10-15 events attended/year;	- 28 conference presentations - 6 booth/stand presentations **Status:** Achieved
			at least 20 conference publications	- 1 newspaper interview - 13 technical presentations **Status:** Partially achieved **Mitigation measures:** Communicating the latest project results and promoting project outcomes during upcoming conferences and events (e.g. ICT4CART final conference, ITS world 2021 etc**)**
			at least 47 conference presentations	- 15 conference presentations +14 presentation of the technical papers **Status:** partially achieved **Mitigation measures:** Communicating the latest project results and promoting project outcomes during upcoming conferences and

Activity	Description	KPI	Expected result	Current result achieved
				events (e.g. ICT4CART final conference, ITS world 2021 etc)
Technical papers & journal articles – SEAB	ICT4CART technical papers will be published in conference proceedings while research articles will be submitted to peer-reviewed scientific and technology journals.	Technical papers and research articles.	At least 3 papers/year; at least 4 journal articles in total.	14 technical publications **Status:** achieved
Use of EU dissemination networks & tools – ATE	ICT4CART consortium will seek every opportunity to utilise the means offered by the EU such as H2020 magazine & others, to promote project's results.	Publications in EU tools and participation to EU events.	At least 5 publications and at least 5 events attended throughout the implementation of the project.	Success story in EU media, available here: https://bit.ly/2TCq33P Inclusion in the AUTOMATED ROAD TRANSPORT HORIZON 2020 EU brochure, available here: https://ec.europa.eu/inea/sites/inea/files/art_brochure-2019.pdf 2 EU attended events: - (EUCAD 2018, in conjunction withTRA2018 and - EUCAR 2019
Project events	ICT4CART includes in its implementation 3 pilot sites demonstration events and one final International conference to achieve wider communication of activities.	Pilot-site demonstration events; final project event.	3 pilot-site events; & final international conference; at least 50 attendees per event for demonstration events; at least 120 participants for final international conference.	n.a **Status:** Not achieved yet **Mitigation measure**: since the consortium hasn't been able to organise the in person pilot sites events nor any other major event, the partners are planning to have two major final events: one addressing a larger public at ITS World Congress (Hamburg, October 2021); one more technical organised in collaboration with Ulm's city Hall (Ulm, November 2021). Execution of both events will depend on possible health restrictions in place in Germany. Alternatives could be sought if needed.
e-Newsletter	ICT4CART will produce and circulate a project newsletter starting from the end of year 1 to update the audience about project results and events.	4 e-Newsletter issues circulated to a list of subscribers	At least 230 estimated recipients of the project e-newsletter	- 27 subscribers for the first issue of the e-Newsletter; - 54,1% opening rate compared to the average 21% opening

Activity	Description	KPI	Expected result	Current result achieved
				rate for industries[7] - 54 subscribers received the second newsletter; - 39,2% opening rate - 59 subscribers for the ICT4CART GDPR compliant subscribers' list as of July 2021 - The newsletters also downloadable from the project's website, and it has had more than 100 interactions - ERTICO newsletter and shared also by other partners, hence increasing the actual number of readers of the newsletter (estimation: 400-450 recipients). **Status:** Partially achieved **Mitigation measure:** two technical newsletters focused on the demo sites pilots planned to be released in the last 6 months of the project, plus one final newsletter to cover the conclusion of the project and its results. Moreover, to gain more subscribers, a campaign on social media will be launched.
Media coverage - ERTICO	Press releases will be issued frequently to achieve the publication of articles in popular and/or specialized media. ICT4CART partners will use every available local, national and European press contact they have, in order to communicate the overall project advances and results.	Press releases circulated to external press and online media to promote ICT4CART to a wide range of professionals and the general public.	25 estimated pieces of media clips achieved throughout project's implementation.	- 23 pieces of international media clips as of M34 - 1 city press meeting **Status:** Partially achieved **Mitigation measures:** Between M37 and M42 new press releases on the demonstrations and on the final results of the project will be released, so generating more articles and mentions of the project. Moreover, Austriatech will include ICT4CART in their newest report to be released later in 2021.

[7] Source: Mailchimp

Activity	Description	KPI	Expected result	Current result achieved
Liaison & networking activities - ATE	ICT4CART will involve different groups in its activities in order to communicate the basic principles and the implementation of the relevant ICT tools proposed	Liaison with related EU and international R&D initiatives, policy makers and related organizations; creation of synergies with past and future R&D projects and; liaison with already established networks, associations, organizations, related fora and technical communities.	Network with least 10 EU & national projects	Networked with 10 R&D projects **Status:** Achieved
			at least 20 liaison activities performed	16 liaison activities have been established and 6 more are in discussion/planned **Status:** Partially achieved **Mitigation measures**: further liaison acitivites will take place between M36 and M42 (for example, ICT4CART will be joining other 14 EU funded project in a workshop organised in September within the ICTR Conference[8])
			Network with at least 8 organisations/platforms/associations	Networked with 7 organisations/platforms /associations **Status:** Partially achieved **Mitigation measures:** The ITS World Congress will be a great option to network with organisations in order to fully meet the KPI
Standardisation activities - LINKS	In the design and development phase, ICT4CART will contribute to European standardisation thanks to the strong connection with the European Telecommunications Standards Institute (ETSI)	Provide a strategic study on the existing and under development standards relevant for the ICT4CART project; liaise with relevant standardisation groups.	At least 5 standardisation bodies and TCs networked	The demonstration of the parking availability notification service, wrong-way driving and approaching to the toll barrier use cases in the context of the ICT4CART project has been introduced in the ETSI TR 102 638 release 2 that is in drafting phase. Interaction with Rapporteur of ETSI ITS WG1 Work Item on Cooperative Perception Services (ETSI TS 103 324) to introduce proposal of UULM for CPM extension. Interaction with ETSI MEC ISG will be done when implementation of MEC platform and related application will be terminated.

[8] https://ictr.gr/Documents/workshops/WS_I_SHOW.pdf

Activity	Description	KPI	Expected result	Current result achieved
Workshops /special sessions/discussions - SEAB	ICT4CART will include workshops, discussions and special sessions in the variety of channels used to ensure information flow and reach out to the targeted audiences.	Transmit project information, raise awareness, increase the project's impact size, extend the network.	At least 4 special sessions/workshops organised;	4 Special Interest Sessions **Status:** Achieved
			at least 12 discussions in fora, committees and organisations	Discussions around ICT4CART results and outcomes in: EUCAD 2018 Conference, ITS World 2018, ARCADE 2nd Stakeholder workshop, ITS Europe 2019, Automated Vehicles Symposium, EUCAR Safe & Integrated Mobility Programme Board Meeting, ITS World 2019, TRB Annual Meeting 2020, Ricardo corp. organisation, Smart City Week in Trento, Digital Transport Days 2019, ITS Hellas 2019, EUCAD 2021 conference, 2 webinar discussions with ICT4CART AB (in M18 +M35 respectively), 1 ICT4CART stakeholder Forum Campaign discussion in M20. **Status:** achieved
Advisory board & Stakeholder forum - ATE	In the context of the liaison activities, ICT4CART will institute an Advisory Board and a Stakeholder Forum to ensure better diffusion of project's information and monitor dissemination & communication activities.	Promotion of the project's approach for the adoption of automated driving; synchronise efforts, explored synergies and avoid duplication of work.	At least 20 Advisory Board members;	10 Advisory Board members **Status:** achieved; The consortium decided to reduce the amount of the AB to ensure a more manageable size. That was described in D9.2 already
			at least 230 Stakeholder Forum members	>230 Stakeholder Forum members **Status:** achieved **Mitigation measures:** At least 160 followers on twitter that may be counted as Stakeholders on a serious note. 14 organisations, 6 platforms, 14 road authorities, 9 standardisation bodies and 37 projects where in each project the whole consortium was reached
			Any other activity	- Presentation to Ricardo Corp-AIRBUS

Table 2: Communication & Dissemination activities KPIs

The fulfilment of certain KPIs set for ICT4CART's communication and dissemination activities has been offset by COVID-19 global pandemic. In particular, the disruption of the events sector and the cancelation of key conferences and international events targeted by the consortium has constituted a significant setback in achieving the results planned. Nevertheless, the consortium has tried to come up with alternatives, such as webinars in order to keep communicating and disseminating. Finally, thanks to the extension granted to the project, the consortium will work towards reaching all the set KPIs between M37 and M42.

Despite the challenges, some KPIs have already been achieved (e.g. the creation of communication and dissemination materials), while others have been fulfilled proportionally to the actual duration of the project, for example the website's unique visits

The KPI evaluation and monitoring is considered, though, as a project lifelong process. The results of the communication and dissemination strategy will be constantly monitored towards the project end, in order to assess its effectiveness and its progresses and to formulate change requirements where necessary.

3.2 Dissemination procedures and Dissemination Activity Report

SEAB, as T.9.2 Leader, has proceeded, since the project kick-off, with the creation of a repository for ICT4CART events and journals that are considered as valuable opportunities for the project. The repository includes an indicative list of proposed scientific journals and an indicative list of proposed upcoming European and international events (Annex 1) and it is regularly updated mainly by T.9.2 Leader and by the consortium partners. In addition, ICT4CART partners are regularly informed through emails about upcoming key opportunities so they will be able to benefit from them.

Moreover, in order for ICT4CART to produce high quality publications and presentations and to avoid overlaps and possible disclosure of restricted or confidential information, ICCS, as project coordinator, has provided the consortium with a set of dissemination procedures. The procedures include guidelines and set out the main steps to be followed by partners for the publication or presentation of the work done within the framework of the ICT4CART project.

The finalisation of every dissemination and/or communication activity within ICT4CART project is registered and described in the Dissemination activities report template by SEAB, in order to facilitate the constant monitoring and tracking of ICT4CART activities. The report has to be filled in within ten working days after the conclusion of the approved dissemination activity, together with the presented dissemination material (final paper, presentation, poster etc.). The detailed Dissemination procedures, together with the Dissemination activities requests table and the Dissemination activities report, are available on the common collaborative tool (Redmine).

3.3 Dissemination Activities and Event Organisation

3.3.1 Dissemination and event activities plan and coordination

Within ICT4CART Communication Strategy & Plan (Version I), special attention has been paid to the project's dissemination activities, as well as to the event organisation and participation throughout the course of the project. By effectively exploiting such opportunities, ICT4CART aims to achieve wide acceptance and scale up of the project advances and results by a critical mass of interested stakeholders and communities in the automotive industry. These opportunities are referred, but not limited, to the following:

- The participation to European and international conferences, specialised meetings, fora, and working groups;
- The organisation of dedicated events (e.g. Special Interested Sessions, demonstration events, International conference etc.);
- The publication in peer review scientific & technical journals, conference proceedings and high reputational magazines, particularly targeting open access resources;
- The conduction of media related activities such as city press meetings and interviews in prominent national newspapers.

ICT4CART attempts to reach directly the relevant target audiences and to endow ICT4CART project with higher visibility and impact. The effective engagement of the project is being ensured also through technical papers and articles, oral and/or poster presentations, booths and visits to international conferences, press conferences and audio-visuals.

To compensate for the loss of events and disseminations opportunity caused by the global COVID-19 pandemic, ICT4CART consortium is planning at least one closing event that will take place in Q4 of 2021 (another one as a special session of a major vehicular related IEEE conference is under investigation). The ICT4CART Final event is described thoroughly in the paragraph below.

3.3.2 ICT4CART Final Event at ITS World Congress 2021 – Hamburg (Germany)

The final event of ICT4CART will take place on Friday 15 October 2021, from 2 pm till 7 pm at Hamburg (Germany). The ICT4CART's final event will be held in conjunction with the ITS World Congress 2021, the world's largest event for ITS co-organised by our partner ERTICO. Thanks to this opportunity, ICT4CART final event will be well positioned to attract both technical stakeholders and general public from all around the world, hence increasing the chances of future exploitation of the results.

Finally, as the video of the demo sites will be showed at the event in Hamburg, it will also offer a unique opportunity to showcase ICT4CART's demonstrations to interested stakeholders and to the general public and to gather their opinions and feedback[9].

3.3.3 Performed activities

Table 3 (below) lists the activities performed during the first 36 months (M01-M36) of ICT4CART implementation:

Conferences
- Project presentation at the EUCAD 2018 Conference (in conjunction with TRA2018) in Vienna, 20/04/2018, ICCS - Testing of the OBU at the ITS Cooperative Mobility Services Event in France, 25/02/2019, LINKS - Project Presentation at ARCADE 2nd Stakeholder workshop in Brussels, 04/04/2019, ICCS, ASFINAG, SWARCO - Project Presentation at All-Energy exhibition and conference in Glasgow, 15/05/2019, Urban Foresight - Project Presentation at ITS Europe 2019 in Netherlands, 06/06/2019, ICCS - Project Presentation & Panellist at Automated Vehicles Symposium in Orlando, 16/07/2019, ICCS - Project Presentation at EUCAR Safe & Integrated Mobility Programme Board Meeting in Brussels, 19/19/2019, ICCS - Project Presentation at ITS World 2019 in Singapore, 21-25/10/2019, ICCS - Project Presentation at TRB Annual Meeting 2020 in Washington, 16-20/01/2020, ICCS
Special Interest Sessions
- ITS World 2018, SIS36: 'ICT Serving Automated Road Transport', Copenhagen, 18/09/2018, ICCS, ERTICO, IBM-Z, NOKIA - ITS Europe 2019, SIS13: 'Touching the real infrastructure and embracing the unknown', The Netherlands 04/06/2019, SWARCO, SEAB - ITS Europe 2019, SIS14: 'Truck automation & platooning', The Netherlands, 04/06/2019, ICCS - IEEE International Mediterranean Conference on Communications and Networking, 5-8/07/2021, ICCS
Journal Publications/ Technical Papers
- TRA2018, End-to-End latency in HAD applications using cloud technology, Copenhagen, 18/04/2018, Vienna, Austria, "doi: 10.5281/zenodo.1486544", ASFINAG - PKC 2019: Public-Key Cryptography – PKC 2019, Group Signatures with Selective Linkability, 14-17/04/2019, https://doi.org/10.1007/978-3-030-17253-4_7 - IEEE ITSC 2019, Environment Modeling Based on Generic Infrastructure Sensor Interfaces Using a Centralized Labeled-Multi-Bernoulli Filter, 27-30/10/2019, 10.1109/ITSC.2019.8916923 - IEEE ITSC 2019, LACI: Low-effort Automatic Calibration of Infrastructure Sensors, 27-30/10/2019, 10.1109/itsc.2019.8917310 - 2019 IEEE Global Communications Conference (GLOBECOM), Virtual CDN providers: Profit maximization through collaboration, 09-13/12/2019, 10.1109/GLOBECOM38437.2019.9014298 - TRA2020, Enabling automated driving by ICT infrastructure: a reference architecture, March 11, 2020, https://arxiv.org/abs/2003.05229

[9] The agenda of the ICT4CART FE in ITS WG was not ready till the submission of D9.3.

- MFI 2020 (2020 IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems), LMB Filter Based Tracking Allowing for Multiple Hypotheses in Object Reference Point Association, Accepted 03.08.2020, 10.1109/MFI49285.2020.9235251
- IROS 2020 (2020 IEEE/RSJ International Conference on Intelligent Robots and Systems), Multiple Trajectory Prediction with Deep Temporal and Spatial Convolutional Neural Networks, Accepted 01.07.2020
- DeGruyter: AT – Auto-matisierungstechnik, Subjective Logic Reasoning: An Urn Model Intuition and Application to Connected Automated Driving, Accepted 02.12.2020, https://doi.org/10.1515/auto-2020-0097
- IEEE in Transactions on Services Computing (IEEE TSC), Resource Provisioning and Allocation in Function-as-a-Service Edge-Clouds, Accepted 03.01.2021
- Public Key Cryptography 2021, Group Signatures with User-Controlled and Sequential Linkability, under review
- ITS World Congress 2021, Spatial Positioning Token (SPToken) for Smart Parking, under review
- IEEE International Mediterranean Conference on Communications and Networking, Implementation and Latency Assessment of a Prototype for C-ITS Collective Perception, under review
- IEEE MeditCom 2021, Implementation and Latency Assessment of a Prototype for C-ITS Collective Perception, accepted 26.07.2021

EU tools

- ICT4CART success story at EU media, 28/02/2019
- Included in the AUTOMATED ROAD TRANSPORT HORIZON 2020 EU brochure, 03/2019

Booth/Stand presentation

- International Symposium Cybersecurity & IOT, 23/05/2019, AIRBUS
- Smart City Week in Trento, 16-22/09/2019, BRE
- Restart mAI City Plug & Play Conference, 26-28/09/2019, ICCS
- Digital Transport Days 2019, 07-09/10/2019, ERTICO
- ITS Hellas 2019, 17-18/12/2019, SEAB
- Competition winning, Argoverse Motion Forecasting Competition, 12/2019, UULM
- EUCAD 2021 conference, 20-22/04/2021, ICCS

Other activities

- ICT4CART project Overview, Presentation to Ricardo company, 22/11/2018, AIRBUS
- Presentation on the Technical University of Applied Sience in Ulm, at the "1. Innovationskongress Ulm" (first innovation congress Ulm), "Ein virtueller Spiegel: Unterstützung vernetzter automatisierter Fahrzeuge durch Infrastruktursensorik" (A virtual mirror: Support of connected automated vehicles by infrastructure sensors)", 05/05/2019, UULM

Mass Media Publications

- Press meeting at the Ulm townhall, 11/12/2018, Ulm University, Nokia, BMW and Swarco
- Newspaper Interview in the Greek newspaper Kathimerini, 06/05/2019, ICCS
- Press release on Argoverse Motion Forecasting Competition, 20/1/2020, UULM
- Press release on Argoverse Motion Forecasting Competition, 29/1/2020, UULM
- Ground-breaking analysis of Europe's connected and autonomous vehicles market, 26/3/2020, Urban Foresight
- AustriaTech Newsletter, 23/02/2021, AustriaTech[10]

[10] More information regarding the project events will be reported in the framework of WP1 – Project Management

Table 3: ICT4CART performed communication activities M01-M36

3.4 Communication for use cases

ICT4CART consortium will dedicate particular attention to the use cases scheduled during the project implementation.

ICT4CART builds on four specific high-value use cases (urban and highway), which will be demonstrated and validated under real-life conditions at the following test sites[11]:

- Austria - demonstration carried out in May 2021;
- Germany – demonstration still to be carried out in September 2021;
- Italy – demonstration still to be carried out in September 2021;
- Italian-Austrian border – demonstration started in July 2021 and to be finalised in August 2021;

All the above-mentioned have been selected based on specific criteria, such as their alignment with EU policy and relevant fora and initiatives, their significant impact on connected automation, their potential to generalise on the results, and, finally, their level of interest for the consortium members and relevance to their industrial roadmaps.

In D9.1 and D9.2, which were both released before COVID19 health emergency struck, the consortium had defined a specific "communication and dissemination sub-strategy" (detailed in table 4 below) aimed at increase exposure on the work carried out in the demonstration phase and the results obtained. To achieve the best possible results despite the challenging conditions and broadly spread the messages across the selected target audiences, the consortium has re-adapted its strategy where needed, introducing ad hoc mitigation measures.

The consortium has foreseen a specific "sub-strategy" for communication and dissemination to be put in place around the four events, in order to make the most out of them in terms of engagement and exposure.

Activity	Description	Objective	Mitigation measure
Social media activities	Twitter and LinkedIn will be used to share in advance, during and after each use case event the main news and achievements.	Share relevant and engaging content on the goals reached through the use cases events. Enlarge the audience sharing on partners' private network and using relevant hashtags.	No mitigation/substituting activity required, just postponed due to delays in demo site activities.
Articles and press releases	A constant flow of press releases related to each event will be circulated and posted on ICT4CART website and	Keep the project website and channels constantly updated with news and results from the use cases events.	As the global COVID19 pandemic caused a delay in the execution Planning to send a press release on the first two demo sites after

[11] All the listed dates for the demonstration activities are indicative and could be modified upon request of the consortium and/or to comply with possible restrictions related to the ongoing COVID-19 pandemic.

Activity	Description	Objective	Mitigation measure
	social channels		summer. ICT4CART will also be included in the upcoming annual monitoring report on automated mobility for 2020 released by AustriaTech on behalf of the Austrian Ministry of Transport. Two technical newsletters on the demonstrations will be issued between M37 and M42.
Local press	The consortium will engage the local press, local radio/news channels and local authorities to actively participate and disseminate the use cases.	Involve citizens and mobilise stakeholders at local level to maximise the events' impact.	**Mitigation measure**: instead of face to face activities and stakeholder's involvement (cancelled due to covid19), the consortium will send press releases to relevant media partners. Key representatives of the European institutions could be invited to evaluate the use cases, but no major event will be organised. The consortium is planning to organise one event in Ulm and one in Hamburg during which key stakeholders will be involved and videos of the demonstrations showed.
Video clips	Videos and shorter video clips will be taken during the event; the footage will be shared as relevant project content.	Create a video information hub on project website and channel to provide engaging content, easy to share and able to reach more final users.	No mitigation/substituting activity required, just delayed due to extension of the project. Videos of the first two demonstrations (Austria and cross-borders) are currently under production and will be published shortly. The videos will be used for communication on social media, as stakeholders' engagement tool at conferences and events, and as a proof that the demonstration was actually carried out (no audience was allowed to attend the demonstrations due to covid-19 restriction).
Interviews	ICT4CART consortium will use the test sites events as an occasion to organise interviews among partners and external experts/stakeholders, to gather relevant insights and enrich the online project content.	Provide a different point of view and elaborate on core topics of the project.	As no face to face event was possible due to the ongoing pandemic, no interview could be carried out. Video interviews will be conducted during the final event of the project, that will take place live in Hamburg in October 2021.
Citizens	Use cases events will be used	Raise awareness at local level and	Video of the demonstrations and

Activity	Description	Objective	Mitigation measure
involvement	as an occasion to engage citizens in the different test sites and encourage them to actively participate to the demonstrations.	extend the number of involved audience creating online traffic on ICT4CART channels.	try to attract people during the event in Hamburg and in Ulm

Table 4: Communication for use cases

4 Liaison and Networking Activities

In order to communicate the ICT4CART basic principles and the implementation of the relevant ICT tools proposed by ICT4CART, the partners have been involving different groups in their activities. Within the framework of Task 9.3, the planning and execution of ICT4CART liaison with related EU and international R&D initiatives, policy makers and related organisations have been carried out. The main outcome of liaison and networking activities is to widely promote the project's holistic approach for the adoption of automated driving, synchronised efforts, explored synergies and avoidance of double work. To achieve this, the focus of Task 9.3 has been:

a) Establishment of the Advisory Board and Stakeholder Forum,
b) Creation of synergies with past and future R&D projects and
c) Liaison with already established networks, associations, organizations, related fora and technical communities.

4.1 Networking and knowledge exchange

To maximise its impact, increase synergies and avoid overlaps ICT4CART are building on existing initiatives and projects in the EU in the field of connected and automated road transport. The Consortium has already established strong links with all major activities, mainly through common partners. Regional, national and European authorities will also be contacted and informed about the benefits of the ICT4CART ICT infrastructure for the promotion of Highly Automated Driving in Road Transport. Figure 1 and Table 5 below provide details in relation to the groups of stakeholders and their engagement plan throughout ICT4CART's implementation:

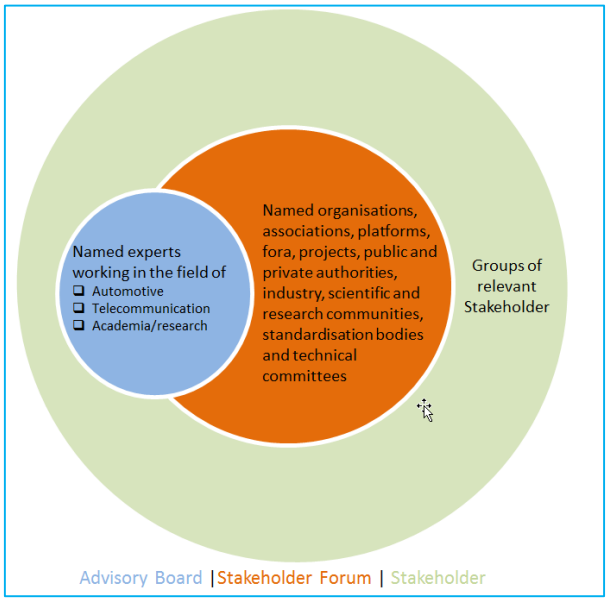

Figure 1: Overview of relevant Stakeholder

Stakeholder engagement plan	Start	End
Identifying stakeholders	M01	M06
Formation of groups and election of representatives for the Advisory Board	M05	M18
Focused engagement with key stakeholders on specific aspects, communication through established channels (meetings, demonstration events)	M13	M36
Communication with the Stakeholder Forum through e-newsletters, social media campaigns, etc.	M13	M36
Up-to-date information provided through the project's website about the consortium's work progress and outcomes to end-users and general public	M07	M36
A number of periodic social media campaigns/activities to inform and attract frequent social media users and invite them to provide feedback. This channel will be used to expand the members of the ICT4CART Stakeholders Forum.	M01	M36
Special press releases and other PR activities will be sent to various media outlets across Europe to promote to a wide range of professionals and the general public.	M01	M36
Scientific publications and technical presentations in renown conferences and fairs	M01	M36
Participation/presentation/demonstrations in relevant events	M01	M36
Bilateral discussions and dedicated presentations in respective technical committees and fora	M01	M36
Creation of synergies with past and future R&D and implementation projects	M01	M36
Liaison activities with networks, associations, organizations, related fora and technical communities	M03	M36

Table 5: ICT4CART Stakeholder engagement plan

4.2 Advisory Board and Stakeholder Forum

To ensure an effective networking and knowledge exchange, an Advisory Board (AB) has been formed by external professionals, involving different groups (automotive, ICT, telecommunication, academia) and utilising the existing networks in the consortium. Thus, a broad pool of experts was set up.

The main objective of the AB is to facilitate ICT4CART partners working in the automotive sector in contacting experts from the related organisations and associations, to inform them about the project's vision and objectives, and consult on the ICT4CART use cases and proposed ICT Infrastructure. The partners working in the field of telecommunication can consult with professionals from the related industry in the AB to get their feedback regarding the proposed hybrid communication approach, network slicing and edge computing in the interoperable IT environment. Academic partners can invite professional researchers as well as professors/researchers in the area of Transport, Telecommunications and Automation from the AB to give them feedback about the proposed infrastructure. The area of expertise of the members of the AB has been highlighted in Table 6 below. Even though the estimated number of AB members reported in the Description of Activities was 20, the ICT4CART Consortium, after thoroughly discussing the matter, has decided to limit this number to ensure a more manageable size, hence relevant contacts and networking with the targeted stakeholders. It was particularly important to the project for the identified areas of expertise and professions to be equally represented. A list of the members of the AB is provided in Table 6 below.

	Area of expertise					Profession					
Organisation/project	**ICT Architecture**	**Hybrid connectivity**	**Data Management**	**Cyber-security / Data privacy**	**Accurate localisation**	**Researcher / academic**	**Road operators**	**Telecom operators**	**ICT/ Equipment**	**OEMs/ Automotive**	**others**
ERAdiate+ Department of International Research Projects http://www.erachair.uniza.sk/	✓		✓	✓		✓					
AUVSI Association for Unmanned Vehicle Systems International https://www.auvsi.org/	✓					✓			✓	✓	✓
AVL List Independent company for the development, simulation and testing of powertrain systems https://www.avl.com/	✓	✓	✓			✓				✓	

	Area of expertise					Profession					
Organisation/project	**ICT Architecture**	**Hybrid connectivity**	**Data Management**	**Cyber-security / Data privacy**	**Accurate localisation**	**Researcher / academic**	**Road operators**	**Telecom operators**	**ICT/ Equipment**	**OEMs/ Automotive**	**others**
Bast German Federal Highway Research Institute http://bast.de/		✓					✓				
Oppida Expert consulting firm in Information Systems Security https://www.cybersecurityintelligence.com/				✓							✓
Chair of Connected Mobility Technical University of Munich https://www.cm.in.tum.de/home/		✓				✓					
DLR German Aerospace Center https://www.dlr.de/EN/					✓	✓					
ECTA European Competitive Telecommunications Association https://www.ectaportal.com/	✓							✓			
MAGYAR KÖZÚT Hungarian Public Road Operator https://internet.kozut.hu/en/		✓					✓				
DRMP Inc. Transportation Design Department. https://drmp.com/											✓

Table 6: ICT4CART Advisory Board members

The AB is the core of a broader group of experts and relevant stakeholders that forms the ICT4CART Stakeholder Forum. The Stakeholder Forum will continuously extend during project's duration and will be kept informed on a regular basis about ICT4CART major achievements and work progress through the ICT4CART e-newsletter, the social media activities, press articles, physical/remote meetings/workshops etc.

Moreover, the Stakeholder Forum members will be invited to the ICT4CART demonstration events to learn more about the proposed solutions and provide feedback according to their needs.

During the project, demonstration events will be held at each ICT4CART test site (Italy, Austria and Germany), in order to showcase the ICT4CART solutions to the members of the Advisory Board and

the Stakeholder Forum, as well as to relevant authorities and standardisation bodies, end user communities, related industries, researchers, academia and any other interested persons. The integration and testing activities at the different test sites will be defined in WP7.

In addition, the ICT4CART's Final International Conference will be held at the end of the project to present project's results through technical and live demonstrations to a large number of stakeholders. The full list of stakeholders is provided in Annex 2.

4.3 Advisory Board & Stakeholder Engagement

A first webinar was held in M18 (February 20th, 2020) in order to introduce the project to the Advisory Board members.

The webinar contained a general overview of the project by the coordinator ICCS as well as presentations on the Communication Infrastructure (WP4, NOKIA), Data and IT Services (WP5, IBM IE) and Cyber Security (WP6, AIRBUS). The Advisory Board members showed interest by questioning the content and providing their opinion on the project. Furthermore, the project partners stayed in contact with the AB in order to get consultancy on various deliverables before they were submitted. The consortium therefore decided to host a second webinar in a later stage, where milestones of the project are to be presented.

The second webinar was held in M35 (July 8th, 2021), where the project partners presented the main results since the first webinar. As in the first webinar, the AB members were given an update on the Communication Infrastructure, Data and IT Services and Cybersecurity. In the second webinar, however, the test sites were introduced, where each system architecture was presented along with the tests that were conducted so far. The AB members were able to exchange with project partners, who haven't participated in the first webinar, thereby strengthening the cooperation between the consortium and the AB. With two successful webinars being conducted, the Advisory Board members were invited to participate in the Final event, which is going to take place at the ITS World Congress in Hamburg in October 2021.

The Stakeholder Forum was contacted in a special campaign in M20, where they have been informed about the project activities and to draw their attention to ICT4CART's social media channels and the newsletter.

4.4 Liaison Activities

Networking with relevant associations, organisations and European R&D initiatives is very important to ensure knowledge exchange between key actors and the adoption of the proposed solutions. First collaborations have already taken place within the framework of joint preparations of various presentations, mostly for conferences and other events (see Table 7 below and Annex 1). Task 9.6 is planning several interactions with standardization bodies. In this first phase, contacts (mainly with ETSI and C-ROADS) have been mostly informative; once ICT4CART will enter the implementation and testing part, more concrete feedback will be asked to the relevant stakeholders engaged in the process. The following section 5 will detail more about the standardisation activities.

No.	Name of organisation	Status of collaboration	On regard to task force/topic
1	INFRAMIX	established	Hybrid infrastructure
2	C-Roads	established	C-ITS. First exchange about broker usage with TF4 of the C-ROADS platform WG2
3	CONCORDA	established	Connected services and technologies
4	C2C CC	established	C-ITS
5	5G-MOBIX	Established	Similar scope as ICT4CART
6	5G-PPP/5GIA	Established	5G project x-Coordination
7	5GAA	Established	5G and automotive
8	ETSI Multi Access EDGE Computing (MEC) group	Established	MEC applications in ICT4Cart LINKS is a group member and can present the ICT4CART activities in the group
9	ETSI Collective Perception Messages Working group	established	use of CPM messages in a real UC
10	WG for intelligent mobility – Electricmobility South-West Germany	established	Intelligent mobility
11	PACV2X	established	French project about cooperative augmented perception in V2X context, PACV2X provided base messages for tolling message definition to ICT4CART
12	MEC-VIEW	established	EPM building and prediction, virtual mirror use case, requirements, mobile network
13	LUKAS	established	hybrid communication, EPM building and prediction, interfaces and messages types, mobile network
14	ETSI working group on Use cases description	established	Description of basic set of applications Release 2, technical report describing additional ITS use cases Contribution about relevant use cases tested in ICT4CART. Publishing is expected in a few months
15	ETSI Working Group 1 - Application Requirements and Services	established	Parking notification service, started discussion for potential service standardization

16	ARCADE	established	Connected services and technologies

Table 7: List of Liaison activities

5 Standardisation Activities

The ICT4CART project aims also at contributing to the standardisation, as stated in section 1.1 of the Grant Agreement. During the design and development phases, the ICT4CART partners agreed about following standard approaches and working towards contributing to European standardisation activities. The main recipient of the ICT4CART standardisation efforts will be the European Telecommunications Standards Institute (ETSI), which has a strong connection with the project itself and was engaged signing a Letter of Support.

Task 9.6, focused on standardisation activities, has started in M13 and it will end in M36. LINKS Foundation is the leader of this task; ICCS, BMW, NOKIA, T-MOB, ASFINAG, ATE are also involved in its implementation.

Task 9.6 working plan can be summarised into the following main objectives:

1. Provide a strategic study on the existing and under development standards relevant for the ICT4CART project. This analysis will be included in Deliverable 9.7 Final report on communication, dissemination and liaison, due in M36. It will help in identifying possible standardisation areas where ICT4CART partners may contribute;

2. Liaise with relevant standardisation groups and ensure that ICT4CART is building upon emerging standards toward facilitating the acceptance and utilisation by the market of the developed solutions within the ICT4CART project.

In the ICT4CART project, the definition of the requirements (WP2) and the ICT4CART architecture (WP3) have been concluded in month 13. The outcomes of these two activities constitute a basis that can be exploited to better define possible areas of contribution to the standardisation. The definition of the requirements and of the architecture can ease to determine the technical solutions to be implemented and, consequently, it is possible to understand which contribution can be provided to a specific Standardisation Body.

At the current stage of the ICT4CART project, several topics have been identified as of interest for potential standardisation activities. Such topics are briefly presented in the following subsections, together with the current status of the related standardisation activity.

5.1 Collective Perception Service

UULM and LINKS are implementing the C-ITS service called Collective Perception Service (CPS), responsible to provide to the connected and automated vehicle the information retrieved from

roadside infrastructure sensors. This service is being standardized in ETSI, and a first ETSI technical report, i.e., ETSI TR 103 562 V2.1.1 (2019-12), that describes the syntax of messages and their generation rules, is available.

A standardisation action has been identified related to this topic: UULM and LINKS will provide feedback to ETSI on the CPS that they are going to implement based on the currently available ETSI technical report.

UULM and LINKS have already interacted with the Rapporteur of the ETSI ITS WG1 Work Item on Cooperative Perception Services (ETSI TS 103 324) to introduce a proposal of UULM for CPM extension. Similar proposals are already under discussions in the Work Item activities. UULM will prepare a report for ETSI on their implementation of the CPM at the end of the testing and demonstration. The report will include description of the suggested changes and the related benefits. This feedback may be helpful to ETSI for refining the CPS technical specification.

5.2 Multi-access Edge Computing (MEC)

The MEC framework is being standardised from ETSI in a dedicated working group. The ICT4CART project can contribute to this standardisation topic since particular effort is devoted to the MEC framework and to the development of related MEC services in the project. LINKS is member of the ETSI's MEC Industry Specification Group and it can be a point of contact for this standardization activity.

The contribution to the MEC standardization will be detailed when the implementation of the MEC framework and related MEC services within the ICT4CART project will be in an advanced stage.

5.3 Second release of ETSI ITS Basic Set of Applications (ETSI TR 102 638)

The demonstration of the parking availability notification service, wrong-way driving and approaching to the toll barrier use cases in the context of the ICT4CART project has been introduced in the ETSI TR 102 638 release 2.

This ETSI Technical Report is in drafting phase, and it contains the second release of Basic Set of Applications to be considered in ETSI ITS. Further standardization activities may start after the publication of this technical report.

5.4 C-ITS message for parking availability

The Italian ICT4CART partners involved in the scenario 1.2 “Parking management” in Verona, Italy, defined the specification of a new type of C-ITS message to provide the information about the parking

lot, and in particular about parking availabilities, to the connected and automated vehicles. The syntax of this message is not standardised, but a C-ITS message for parking information is expected to be present amongst the set of C-ITS messages.

LINKS presented the defined message in the ETSI ITS meeting in June 2020. A standardisation activity could be foreseen for this topic when parking availability service standardization will begin in the context of ETSI ITS standardization activities.

6 Conclusions

This deliverable presented the Communication Strategy & Plan (Version III) of ICT4CART's project. It provides a comprehensive overview of the already developed ICT4CART's approach to communication and it describes the process for the evaluation and monitoring of the communication and dissemination activities' status. It summarises ICT4CART's key messages and target audience and presents the partial results of each activity in comparison with the initial KPIs set in the original Communication Plan. The document includes the state-of-the-art regarding liaison and standardisation's activities that have been carried out so far. D9.3 also featured prominently corrective and mitigation measures adopted by the consortium to overcome the challenges posed by the COVID-19 global pandemic and its effect on communication and dissemination activities.

This deliverable is intended to be a complementary guide to D9.1 and D9.2, on increasing the awareness, interest, and acceptance for ICT4CART project's outcomes for the identified target audiences. It aims at enriching the project's approach to communications and to ensure that information about the project and its results are effectively communicated through its life and beyond.

As final version of the communication plan, D9.3 included an extensive overview on ICT4CART's KPIs, status and, when deemed necessary, mitigation measures and alternative activities planned by the consortium in order to perform a clear, broad and effective promotion of the project and its results.

Annexes

Annex 1 – Repository scientific journals and European and international events for 2021

No.	Title of journal/magazine	Website	Description
		Intelligent Transportation Systems	
1	IEEE Transactions on Intelligent Transportation Systems journal	https://www.ieee-itss.org/its-transactions	T-ITS is published quarterly, in March, June, September, and December. All issues of ITS Transactions are digitally archived in IEEE Xplore. Scope: Improved planning, design, management, and the control of future transportation systems requires conducting both basic and applied research to expand the knowledge base on transportation. The Transactions serve as a forum for the technological aspects of information technology to transportation, and focuses on the design, analysis, and control of information technology as it is applied to transportation systems.
2	IET Intelligent Transport Systems Journal	http://digital-library.theiet.org/content/journals/iet-its	IET Intelligent Transport Systems is an interdisciplinary journal devoted to research into the practical applications of ITS and infrastructures. The scope of the journal includes the following: Sustainable traffic solutions; deployments with enabling technologies; pervasive monitoring ; applications; demonstrations and evaluation; economic and behavioural analyses of ITS services and scenario; data Integration and analytics; information collection and processing; image processing applications in ITS; ITS aspects of electric vehicles; autonomous vehicles; connected vehicle systems; in-vehicle ITS, safety and vulnerable road user aspects; mobility as a service systems; traffic management and control; public transport systems technologies; fleet and public transport logistics; emergency and incident management; demand management and electronic payment systems; traffic related air pollution management; policy and institutional issues; interoperability, standards and architectures; funding scenarios; enforcement; human machine interaction; education, training and outreach.
3	Journal of Intelligent Transportation Systems: Technology, Planning, and Operations	https://www.tandfonline.com/toc/gits20/current	The Journal of Intelligent Transportation Systems is devoted to scholarly research on the development, planning, management, operation and evaluation of intelligent transportation systems. The Journal of Intelligent Transportation Systems is especially interested in research that leads to improved planning and operation of the transportation system through the application of new technologies. The journal is particularly interested in research that adds to the scientific understanding of the impacts that intelligent transportation systems can have on accessibility, congestion, pollution, safety, security, noise, and energy and resource consumption.
4	International Journal of Intelligent	https://link.springer.com/journal/1317	The International Journal of Intelligent Transportation Systems Research provides a global forum for the discussion of

	Transportation Systems Research	7, http://www.its-jp.org/english/ijit/	effective solutions for ITS, to meet the needs of the world. It is the only international platform to foster wide-ranging discussion across disciplines by bringing together a broad-based audience for solutions-oriented information and discussion. The journal serves a multi-disciplinary set of researchers and specialists in fields ranging from transportation, electrical, mechanical, and traffic engineering, as well as in policy planning, economics, and psychology. It reaches across disciplines to find solutions to the difficult issues surrounding the future transportation system and its impact on society. Area covered: Sensor Technology, Communication Technology and ITS Applications, Vehicle Control and Automated Driving, Safety Improvement and Human Interface, Traffic Control, Traffic Planning, Urban Engineering, Transportation Policy, Traffic Economy, Environmental Sustainability, Traffic Psychology, Other Applied Technologies.
5	Journal of Advanced Transportation	https://www.hindawi.com/journals/jat/	The Journal of Advanced Transportation (JAT) is a fully peer reviewed international journal in transportation research areas related to public transit, road traffic, transport networks and air transport. It publishes theoretical and innovative papers on analysis, design, operations, optimization and planning of multi-modal transport networks, transit & traffic systems, transport technology and traffic safety. Urban rail and bus systems, Pedestrian studies, traffic flow theory and control, Intelligent Transport Systems (ITS) and automated and/or connected vehicles are some topics of interest. Highway engineering, railway engineering and logistics do not fall within the aims and scope of JAT.
Communication, Cyber-security, Computing and IoT Technologies			
6	IEEE Communications Magazine	https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=35	IEEE Communications Magazine, considered by most to be their most important member benefit, provides timely information on all aspects of communications: monthly feature articles describe technology, systems, services, market trends, development methods, regulatory and policy issues, and significant global events. These articles are complemented by a variety of departments, including: Conference Calendar, Book Reviews, the Global Communications Newsletter, Scanning the Literature, New products and Product Spotlights, Society News, Your Internet Connection, News from JSAC, and the CommuniCrostic puzzle. Articles are tutorial in nature and written in a style comprehensible to readers outside the specialty of the article. Mathematical equations are generally not used (in justified cases up to three simple equations may be allowed with the consent of the Guest Editor.
7	IEEE Transaction on Mobile Computing	https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=7755	EEE Transactions on Mobile Computing focuses on the key technical issues related to (a) architectures, (b) support services, (c) algorithm/protocol design and analysis, (d) mobile environments, (e) mobile communication systems, (f) applications, and (g) emerging technologies. Topics of interest include, but are not limited to, the following: a) Architectures -

			Mobile networks and hosts, Agents and proxies, Mobility management, mobile agent and proxy architectures Integrated wireline and wireless systems, Planning and standardization. b) Support Services - Mobility and roaming, Nomadic computing, Multimedia Operating system support, Power management. c) Algorithm/Protocol Design and Analysis - Online and mobile environments, Limited bandwidth, Intermittent connectivity. d) Mobile Environments - Data and knowledge management, Performance modelling and characterization, Security, scalability and reliability, Design, management and operation, Systems and technologies. e) Mobile Communication Systems - Wireless, cellular and spread-spectrum systems, Multi-user and multi-access techniques and algorithms, Multi-channel processing, Channel coding, Data coding and compression. f) Applications - Location-dependent and sensitive, Nomadic computing, Wearable computers and body area networks, Multimedia applications and multimedia signal processing, Pervasive computing, Wireless sensor networks. g) Emerging Technologies.
8	IEEE Transactions on Wireless Communications	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=7693	The IEEE Transactions on Wireless Communications publishes high-quality manuscripts on advances in the state-of-the-art of wireless communications. Both theoretical contributions (including new techniques, concepts, and analyses) and practical contributions (including system experiments and prototypes, and new applications) are encouraged. The general scope of the Transactions includes, but is not limited to, the following: Modulation and coding , Detection and estimation, Diversity techniques and equalization, Propagation and channel characterization, Fading countermeasures, Multiuser detection, Signal separation and interference rejection, DSP applications to wireless systems, Broadband wireless communications, Network architectures and protocols, with an emphasis on physical and link layer communication, Adaptive antennas for wireless systems, Multiple access techniques, Space-time processing , Synchronization techniques, Software radio, Resource allocation and interference management, Multirate and multicarrier communications, Security, privacy, and authentication, Experimental and prototype results, Systems and services including mobile satellites, wireless local loops, wireless LANs, wireless PBX, and PCS/cellular. In addition, papers on specific topics or on more non-traditional topics related to specific application areas, are encouraged. Examples include Simulation tools and methodologies for design, analysis, rapid prototyping, performance prediction, and cellular system engineering; Orthogonal frequency division multiplexing; MIMO systems, and Wireless over optical.
9	IET Communications	http://digital-library.theiet.org/content/journals/iet-com	IET Communications covers the fundamental and generic research for a better understanding of communication technologies to harness the signals for better performing communication systems using various wired and/or wireless media. This journal is particularly interested in research papers reporting novel solutions to the dominating problems of noise, interference, timing and errors for reduction systems

			deficiencies such as wasting scarce resources such as spectra, energy and bandwidth.
10	IEEE Transactions on Industrial Informatics	https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=9424	Knowledge in the IST (Information Society Technologies) field envisions a technology bifurcation in the field of intelligent automation systems and real-time middle-ware technologies in the next 5-10 years. This technology bifurcation extends networked embedded intelligence at the real-time production control and re-scheduling levels further than is currently possible, allowing for a completely new range of intelligent automation products and services. Such products and services enables new paradigms of production and new concepts of product-services and new intelligent production automation concepts, which are more agile, flexible and integrated, based on agent-based technology. The scope of the journal considers the industry's transition towards more knowledge-based production and systems organization and considers production from a more holistic perspective, encompassing not only hardware and software, but also people and the way in which they learn and share knowledge. Such a framework accommodates ideas related to: radical shifts in industrial structures with capabilities in networks and mastering; new hybrid technologies; development of new processes and devices and flexible and intelligent manufacturing systems; tools for the control of complex distributed production systems; realization of an ambient intelligence landscape at industrial level. The journal focuses on the following main topics: Flexible, collaborative factory automation, Distributed industrial control and computing paradigms, Internet-based monitoring and control systems, Real-time control software for industrial processes, Java and Jini in industrial environments, Control of wireless sensors and actuators, Systems interoperability and human machine interface.
11	Elsevier Journal of Network and Computer Applications	https://www.journals.elsevier.com/journal-of-network-and-computer-applications	The Journal of Network and Computer Applications welcomes research contributions, surveys and notes in all areas relating to computer networks and applications thereof. The following list of sample-topics is by no means to be understood as restricting contributions to the topics mentioned: • new design techniques, interesting or novel applications, components or standards • computer networks with tools such as WWW • emerging standards for internet protocols • Wireless networks • Mobile Computing • emerging computing models such as cloud computing, grid computing • emerging network protocols such as sensor networks, delay tolerant networks, Internet of things • applications of networked systems for remote collaboration and telemedicine • applications of an educational, transactional and cooperational nature • applications of security in computer and networks

12	IEEE Transactions on Big Data	https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=6687317	The IEEE Transactions on Big Data publishes peer reviewed articles with big data as the main focus. The articles will provide cross disciplinary innovative research ideas and applications results for big data including novel theory, algorithms and applications. Research areas for big data include, but are not restricted to, big data analytics, big data visualization, big data curation and management, big data semantics, big data infrastructure, big data standards, big data performance analyses, intelligence from big data, scientific discovery from big data security, privacy, and legal issues specific to big data. Applications of big data in the fields of endeavor where massive data is generated are of particular interest.
Automation			
13	International Journal of Automation and Control	http://www.inderscience.com/jhome.php?jcode=ijaac	IJAAC addresses the evolution and realisation of the theory, algorithms, techniques, schemes and tools for any kind of automation and control platforms including macro, micro and nano scale machineries and systems, with emphasis on implications that state-of-the-art technology choices have on both the feasibility and practicability of the intended applications. This perspective acknowledges the complexity of the automation, instrumentation and process control methods and delineates itself as an interface between the theory and practice existing in parallel over diverse spheres.
14	IEEE Transactions on Automation Science and Engineering	https://ieeexplore.ieee.org/xpl/aboutJournal.jsp?punumber=8856	The IEEE Transactions on Automation Science and Engineering (T-ASE) publishes fundamental papers on Automation, emphasizing scientific results that advance efficiency, quality, productivity, and reliability. T-ASE encourages interdisciplinary approaches from computer science, control systems, electrical engineering, mathematics, mechanical engineering, operations research, and other fields. T-ASE welcomes results relevant to industries such as agriculture, biotechnology, healthcare, home automation, maintenance, manufacturing, pharmaceuticals, retail, security, service, supply chains, and transportation. T-ASE addresses a research community willing to integrate knowledge across disciplines and industries. For this purpose, each paper includes a Note to Practitioners that summarizes how its results can be applied or how they might be extended to apply in practice.
15	International Journal of Vehicle Autonomous Systems	https://www.inderscience.com/jhome.php?jcode=ijvas	IJVAS is an established international authoritative reference in the field of vehicle autonomous systems research and development.

Date	Event	Location	Website	Important deadlines
5–8 and 11–15 January 2021	100th TRB Annual Meeting VIRTUAL - Committee Meetings	Virtual Event	https://events.jspargo.com/trb21/public/enter.aspx	

Date	Event	Location	Website	Important deadlines
21–22 and 25–29 January 2021	100th TRB Annual Meeting VIRTUAL - Sessions & Exhibits	Virtual Event	https://events.jspargo.com/trb21/public/enter.aspx	
10-12 February 2021	A&T Congress - VIRTUAL	Virtual Event	https://www.aetevent.com	
TBA	IEEE International Conference on Microwaves for Intelligent Mobility (ICMIM2021)	TBA	https://www.icmim-ieee.org/	
10-11 March 2021	AmE 2021 - Automotive meets Electronics	Virtual Event	https://www.ame-konferenz.de/de	
30-31 March 2021	International Business Convention for Innovative Vehicle & Transportation (VTM)	Torino, Italy	https://italy.vehiclemeetings.com	
29 March - 1 April 2021	IEEE Wireless Communications and Networking Conference	tbd	https://wcnc2021.ieee-wcnc.org/	
23-24 April 2021	5th International Conference on ICT for Intelligent Systems	Ahmedabad, India	https://ictis.in/ictis.php	
25-28 April 2021	Vehicular Technology Conference: VTC2021	Helsinki, Finland	https://events.vtsociety.org/vtc2021-spring/	
28-30 April 2021	7th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS)	Virtual Event	http://www.vehits.org	Call for papers: 31 January 2021
26-19/04/2021	Connected & Autonomous Vehicles	Santa Clara Convention Center, Santa Clara, CA	https://tmt.knect365.com/connected-vehicles/	
11-13 May 2021	AutoSens Conference, incl. Award	Detroit Streamlining LIVE	https://auto-sens.com/	

Date	Event	Location	Website	Important deadlines
		and available ON-DEMAND		
19-20 May 2021	Autonomy Digital 2.0	Virtual Event	https://www.autonomy.paris/en/	
30 May - 05 June 2021	2021 IEEE International Conference on Robotics and Automation (ICRA)	Xi'an, China	http://www.icra2021.org/index.aspx	
08 June 2021	Future Mobility Summit 2021	Berlin, Germany	https://www.futuremobilitysummit.de/	
08-09 June 2021	Automated Driving 2021. From Assisted to Autonomous Driving. 7th International ATZ Conference	Wiesbaden, Germany	https://www.atzlive.de/en/events/automated-driving/	
08-10 June 2021	Autonomous Vehicle Technology Expo	Virtual Event	https://www.autonomousvehicletechnologyexpo.com/en/conference.php	
08-11/06/2021	Autonomus Vehicle Technology EXPO 2021	Messe Stuttgart, Germany	https://www.autonomousvehicletechnologyexpo.com/en/conference.php	
8 - 11 June	Joint EuCNC & 6G Summit	Porto, Portugal	https://www.eucnc.eu/	29 January for submission of papers. End February for posters.
17 June 2021	Wissenschaftsforum Mobilität 2021	Duisburg, Germany	https://www.wissenschaftsforum.uni-due.de	Abstract: 31 January 2021
14-18 June 2021	IEEE International Conference on Communications	Montreal, Canada	https://icc2021.ieee-icc.org/	
28 June - 1 July	Mobile World Congress	Barcelona, Spain	https://www.mwcbarcelona.com/	Extended abstract: 30 January 2021
29 June - 02 July 2021	ECC21 European Control Conference	Rotterdam, The Netherlands	https://ecc21.euca-ecc.org	
01-02 July 2021	Tech.AD Europe 2021	Berlin, Germany	https://www.autonomous-driving-berlin.com	Special Session Proposal: 15 March 2021
11-14 July	Euro Athens 2021	Athens, Greece	https://euro2021athens.com/	

Date	Event	Location	Website	Important deadlines
27-30 July 2021	Automated Vehicle Symposium	Virtual Event	https://www.automatedvehiclessymposium.org/home	
02-04 August 2021	IEEE Sensors Applications Symposium 2021	Sundsvall, Sweden	https://2021.sensorapps.org	
to be defined	ICT 2021	to be defined	https://ec.europa.eu/digital-single-market/en/news/ict-2020-leading-digital-age-event-cancelled	
14-16 September 2021	AutoSens Conference, incl. Award	Brussels	https://auto-sens.com/	Initial submission regular and special session papers: 31 March 2021
19-22 September 2021	24th IEEE Intelligent Transportation Systems Conference - ITSC 2021	Indianapolis, IN, USA	https://2021.ieee-itsc.org	
13-14 October	ICT4CART final event	Ulm,Germany		Oct 13 2020 12.00 CET (DEMO DRY TEST), Oct 14 2021 ICT4CART FINAL EVENT and German Demo, Oct15 2021 Demos disassemble (morning) f2f ICT4CART plenary, Oct 16 2021 f2f ICT4CART PLENARY
11-15 October	ITS WORLD CONGRESS	Hamburg, Germany	https://itsworldcongress.com/submissions/	Call for Contributions Submissions close (The deadline for submitting sessions' proposals, business presentations and papers): 12 February 2021
09-11 November 2021	AutoSens Conference, incl. Award	Hong Kong	https://auto-sens.com/	

Annex 2 – Full list of stakeholders and AD members

Stakeholder	Stakeholder Forum
Organisations and associations in the field of automotive or ICT	
ACEA European Automobile Manufacturers' Association https://acea.be/	✓
Amsterdam Group Strategic alliance with the objective to facilitate joint deployment of cooperative ITS in Europe https://amsterdamgroup.mett.nl/	✓
AUVSI Association for Unmanned Vehicle Systems International https://www.auvsi.org/	✓
California PATH California Partners for Advanced Transportation, University of California https://path.berkeley.edu/	✓
ERTRAC European Road Transport Research Advisory Council. Participation in the ERTRAC WG on Connectivity and Automated Driving https://www.ertrac.org	✓
FEHRL Forum of European National Highway Research Laboratories https://www.fehrl.org/	✓
EUCAR European Council for Automated R&D https://eucar.be	✓
TRB Transport Research Board http://www.trb.org/	✓
NDS Association The Navigation Data Standard for map data in automotive eco-systems https://nds-association.org/	✓
EARPA European Automotive Research Partners Association https://www.earpa.eu/	✓
CLEPA European Association of Automotive Suppliers https://clepa.eu	✓
C2C-CC Car 2 Car Communication Consortium https://www.car-2-car.org/	✓

Stakeholder	Stakeholder Forum
5GAA 5G Automotive Association https://5gaa.org/	✓
EATA (LoS signed) European Association for Transactional Analysis https://eatanews.org/	✓
Related platforms and fora	
Open AutoDrive Forum The cross-domain platform driving standardizations in the area of autonomous driving http://www.openautodrive.org/	✓
SENSORIS Innovation Platform Sensor Interface Specification to exchange information between in-vehicle sensors and a dedicated cloud, and between clouds https://sensor-is.org/	✓
EU EIP European ITS Platform - Sub-activity 4.2 https://eip.its-platform.eu/	✓
EATA European Automotive and Telecoms Alliance https://eata.be/	✓
C3S Connected Cars and Cyber Security Chair https://chairec3s.wp.imt.fr/	✓
AVS Automated Vehicle Symposium, Orlando https://www.automatedvehiclessymposium.org/	✓
R&D or implementation projects	
ARCADE Aligning Research & Innovation for Connected and Automated Driving in Europe follow-up project of CARTRE https://connectedautomateddriving.eu/about/arcade-project/	✓
C-Roads Platform of Harmonised C-ITS Deployment in Europe https://www.c-roads.eu/platform.html	✓
CONCORDA Connected Corridor for Driving Automation https://connectedautomateddriving.eu/project/concorda/	✓
L3Pilot SAE Level 3 Driving Automation https://l3pilot.eu/	✓
NeMo Hyper-Network for electroMobility https://nemo-emobility.eu/	✓

Stakeholder	Stakeholder Forum
SAFERtec Security Assurance Framework for Networked Vehicular Technology https://www.safertec-project.eu/	✓
SerIoT Secure and Safe Internet of Things https://seriot-project.eu/	✓
CTI Cybersecurity of Intelligent Transportation https://www.irt-systemx.fr/en/projets/cti/	✓
INFRAMIX Preparing road infrastructure for mixed vehicle traffic flows https://www.inframix.eu/	✓
AUTOPILOT Automated Driving Progressed by Internet of Things https://autopilot-project.eu/	✓
InterCor Interoperable Corridors deploying cooperative intelligent transport systems https://intercor-project.eu/	✓
ABC4Trust Attribute-based Credentials for Trust https://www.abc4trust.eu/	✓
5G-MOBIX 5G for cooperative & connected automated MOBIility on X-border corridors https://www.5g-mobix.com/	✓
interACT Designing cooperative interaction of automated vehicles with other road users in mixed traffic environments https://www.interact-roadautomation.eu/	✓
HEADSTART Harmonised European Solutions for Testing Automated Road Transport https://www.headstart-project.eu/	✓
BRAVE Bringing Gaps for the Adoption of Automated Vehicles https://www.brave-project.eu/	✓
RobustSENSE Reliable, Secure, Trustable Sensors for Automated Driving http://www.robustsense.eu/	✓
MAVEN Managing Automated Vehicles Enhances Network http://www.maven-its.eu/	✓
5G-CARMEN 5G for Connected and Automated Road Mobility in the European unioN https://5gcarmen.eu/	✓
SecForCARS (GER) Security for Connected Automated Vehicles	✓

Stakeholder	Stakeholder Forum
MEC-View (GER) Mobile Edge Computing based Object Detection for Automated Driving http://www.mec-view.de/	✓
Socrates Paving the way for the future of car mobility https://socrates2.org/	✓
5G CroCo 5GCroCo: 5G Cross-Border Control http://5gcroco.eu/	✓
TransAid Transition Areas for Infrastructure-Assisted Driving https://www.transaid.eu/	✓
Transforming Transport https://transformingtransport.eu/	✓
vi-DAS Vision Inspired Driver Assistance Systems http://www.vi-das.eu/	✓
AVENUE The use of Autonomous Vehicles in public transport https://h2020-avenue.eu/	✓
FABULOS Future Automated Bus Urban Level Operation Systems https://fabulos.eu/	✓
Levitate (AUT) Societal Level Impacts of Connected and Automated Vehicles https://www.ait.ac.at/themen/transportshyoptimierung-logistik/projects/levitate/	✓
MANTRA (AUT) Making full use of Automation for National road Transport Authorities https://projekte.ffg.at/projekt/3041586	✓
STAPLE SiTE Automation Practical Learning http://stapleproject.eu/	✓
AVENUE 21 (AUT) Automated Mobility in cities http://avenue21.city/	✓
DIRIZON Advanced options for authorities in light of automation and Digitalisation horizon 2040 https://www.dirizon-cedr.com/	✓
MEC-View Mobile Edge Computing Based Object Detection for Automated Driving http://www.mec-view.de/	✓

Stakeholder	Stakeholder Forum
LUKAS Local environment model for cooperative, automated driving in complex traffic situations. https://www.uni-due.de/ptt/projekte/lukas.php	✓
Enable – S3 European Initiative to Enable Validation for Highly Automated Safe and Secure Systems https://www.enable-s3.eu/	✓
TrustVehicle Improved Trustworthiness and Weather-Independence of Conditionally Automated Vehicles in Mixed Traffic Scenarios https://www.trustvehicle.eu/	✓
Infrastructure and road authorities (regional, national and European) Organizations (public or private) responsible for the correct management of road infrastructure	
POLIS Network Network of European cities and regions cooperating for innovative transport solutions https://www.polisnetwork.eu/	✓
BaSt German Federal Highway Research Institute http://bast.de/	✓
ITF-OECD International Transport Forum at the Organisation for Economic Co-operation and Development https://www.itf-oecd.org/	✓
Greek Ministry of Infrastructure and Transport http://www.yme.gr/	✓
Greek Ministry of Telecommunications and Networks	✓
ERTRAC European Road Transport Research Advisory Council. https://www.ertrac.org	✓
BMVIT Austrian Federal Ministry of Transport, Innovation and Technology https://www.bmvit.gv.at/	✓
RWS Dutch Ministry of Infrastructure and the Environment http://www.rijkswaterstaat.nl/	✓
BMVI German Federal Ministry of Transport and Digital Infrastructure https://www.bmvi.de/	✓
DG Move The Commission's Directorate-General for Mobility and Transport responsible for EU policy on mobility and transport.	✓

Stakeholder	Stakeholder Forum
https://ec.europa.eu/transport/home_en	
DG Connect The Directorate-General for Communications Networks, Content and Technology is the Commission department responsible to develop a digital single market to generate smart, sustainable and inclusive growth in Europe. https://ec.europa.eu/info/index_en	✓
RTD Directorate-General for Research and Innovation https://ec.europa.eu/info/departments/research-and-innovation	✓
NHTSA National Highway Traffic Safety Administration https://www.nhtsa.gov/	✓
ANSSI National Cybersecurity Agency of France https://www.ssi.gouv.fr/en/	✓
Standardisation bodies and technical committees	
CEN European Committee for Standardization https://www.cen.eu/	✓
3GPP The 3rd Generation Partnership Project uniting telecommunications standard development organisations https://www.3gpp.org/	✓
OneM2M Standards for Machine 2 Machine and the Internet of Things http://www.onem2m.org/	✓
ISO - WG3 extended Vehicles International Organisation for Standardization https://www.iso.org/	✓
SAE International Global association in the aerospace, automotive and commercial-vehicle industries https://www.sae.org/	✓
UNECE Transport World Forum for Harmonization of Vehicle Regulations https://www.unece.org/	✓
TISA-TPEG Traveller Information services Association https://tisa.org/technologies/tpeg/	✓
IEC International Electrotechnical Commission. International Standards and Conformity Assessment for all electrical, electronic and related technolgies https://www.iec.ch/	✓
ETSI (signed LoS) European Standards Organisation https://etsi.org/	✓

Annex 3 – ICT4CART website analytics

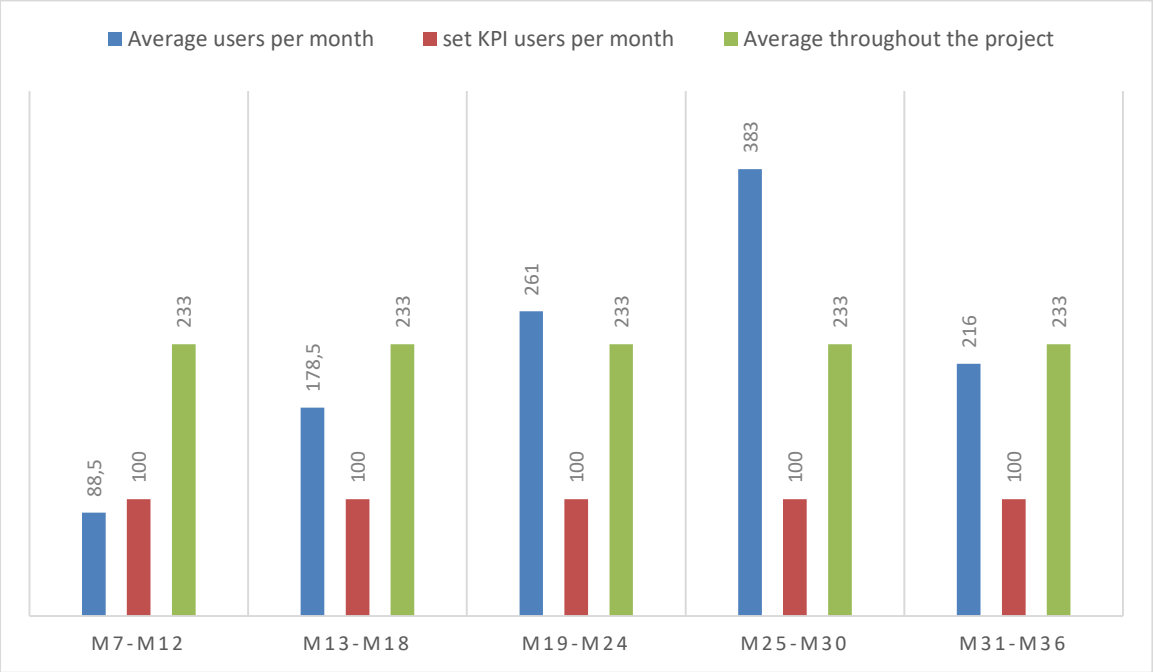

Figure 2: Data ICT4CART website users

Source: google analytics. Period monitored: M07-M36

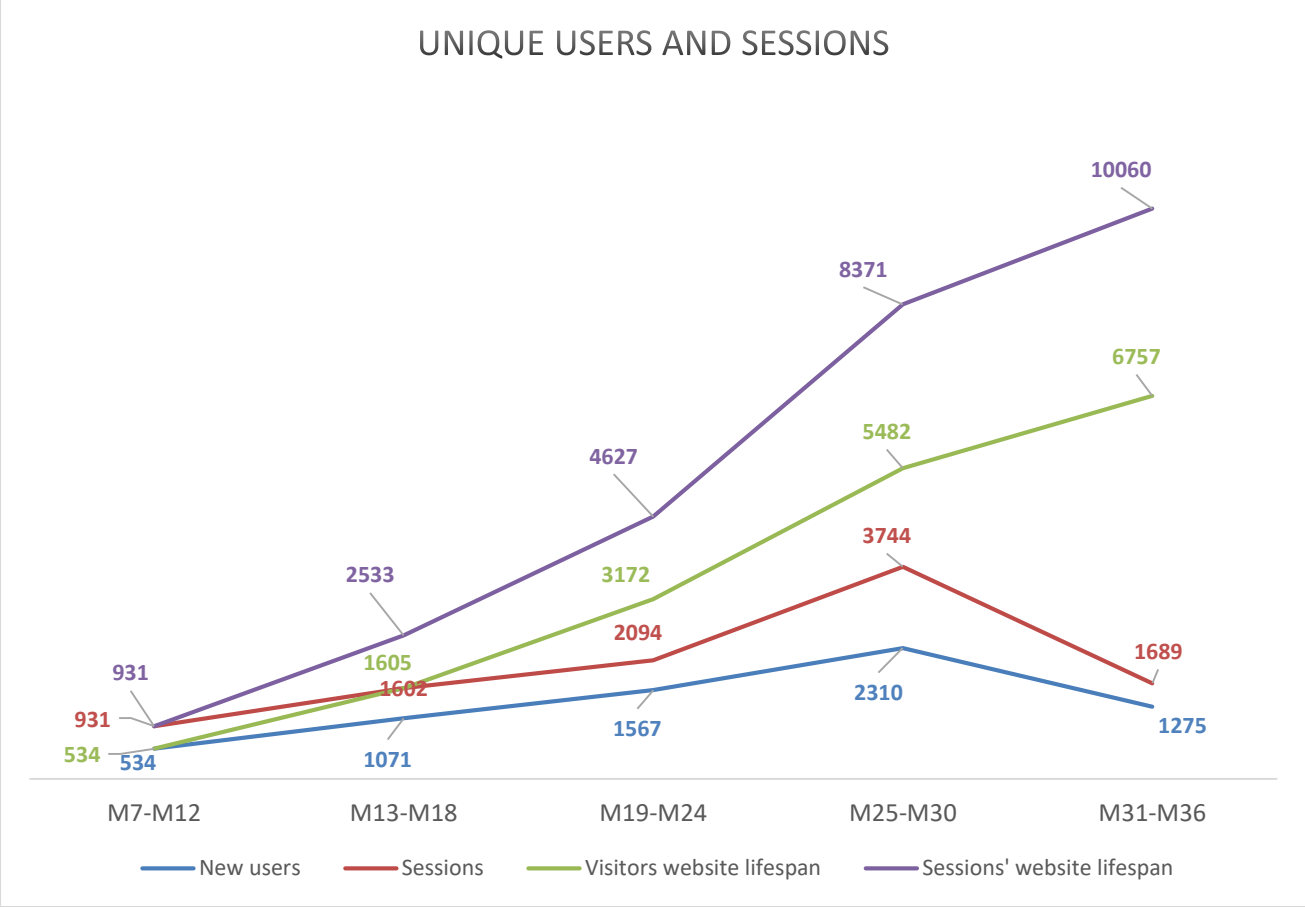

Figure 3: Data ICT4CART website sessions and visitors

Source: google analytics. Period monitored: M07-M36

Figure 4: ICT4CART website new and returning visitors

Source: google analytics. Period monitored: M07-M36

Annex 4 – ICT4CART Social Media analytics

Twitter Analytics

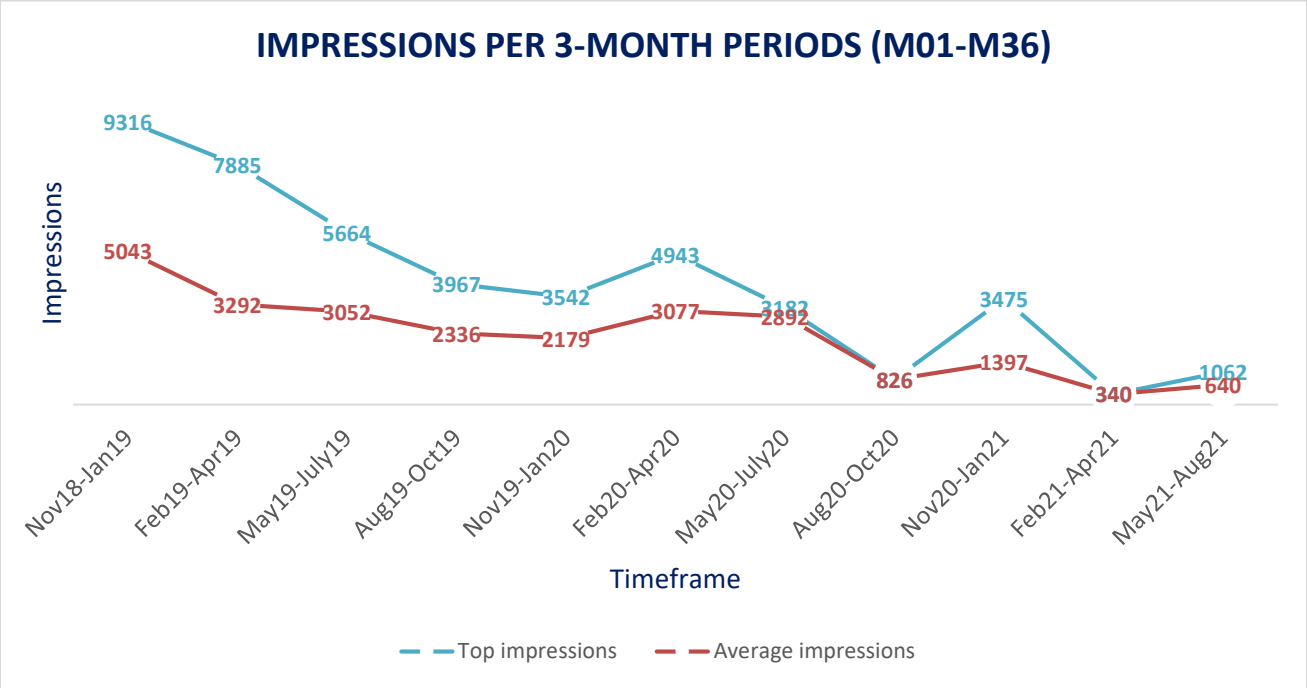

Figure 5: : ICT4CART Twitter analytics – Impressions

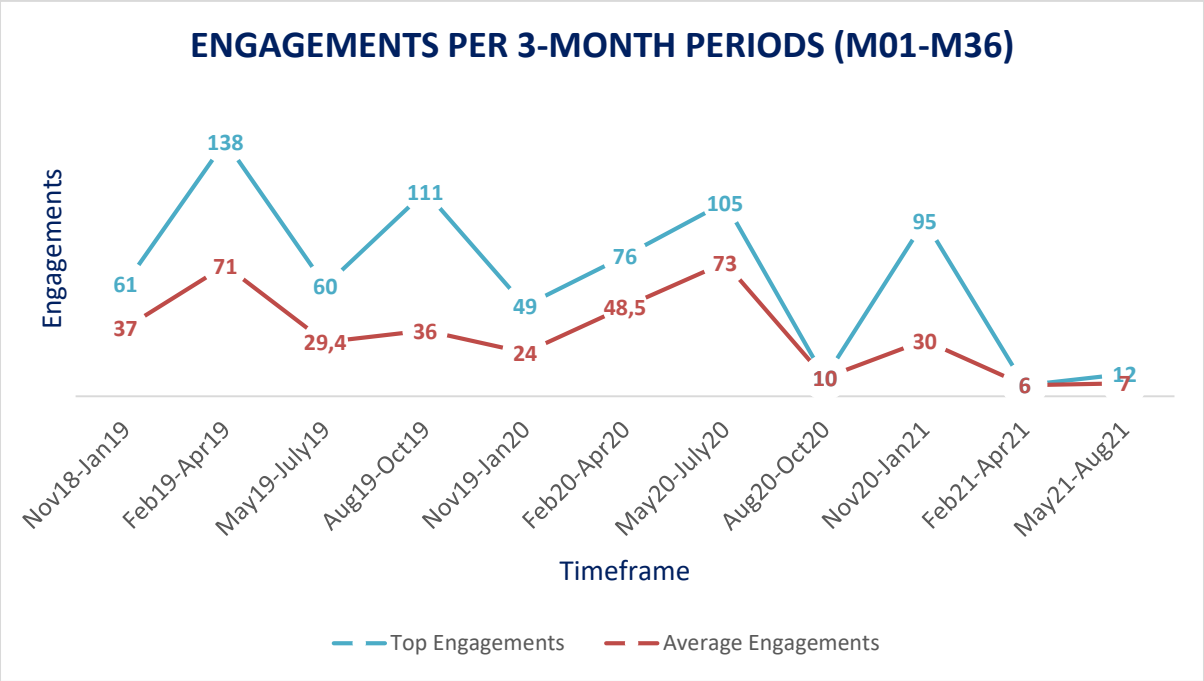

Figure 6:ICT4CART Twitter analytics – Engagements

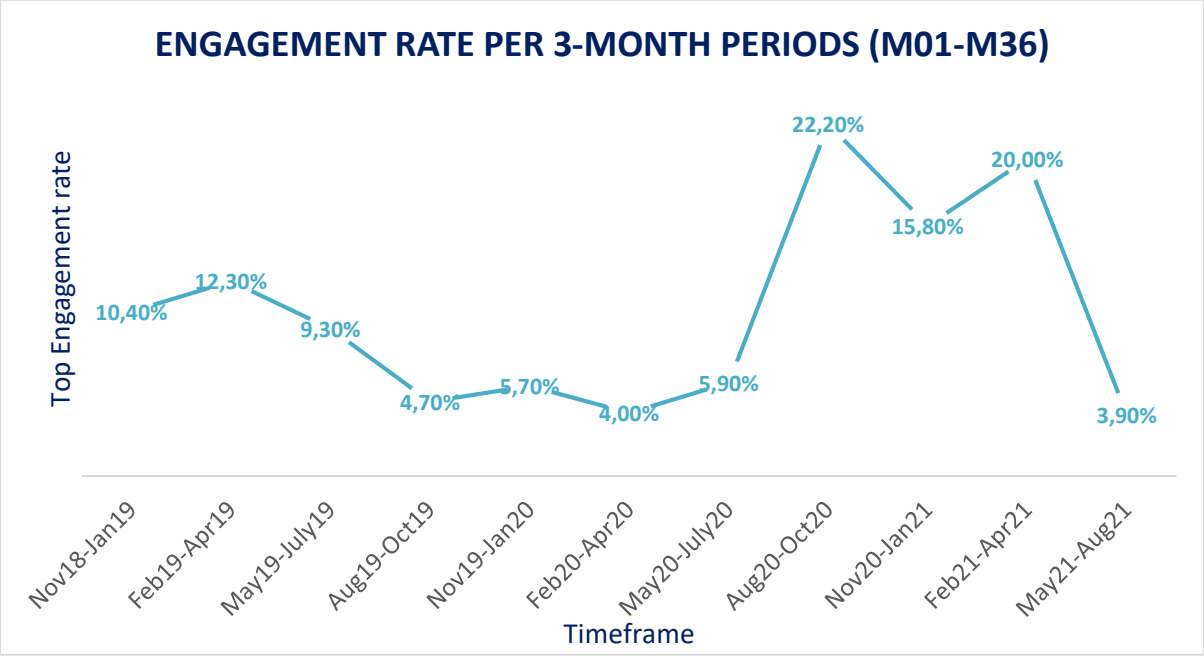

Figure 7: ICT4CART Twitter analytics – Engagement rate

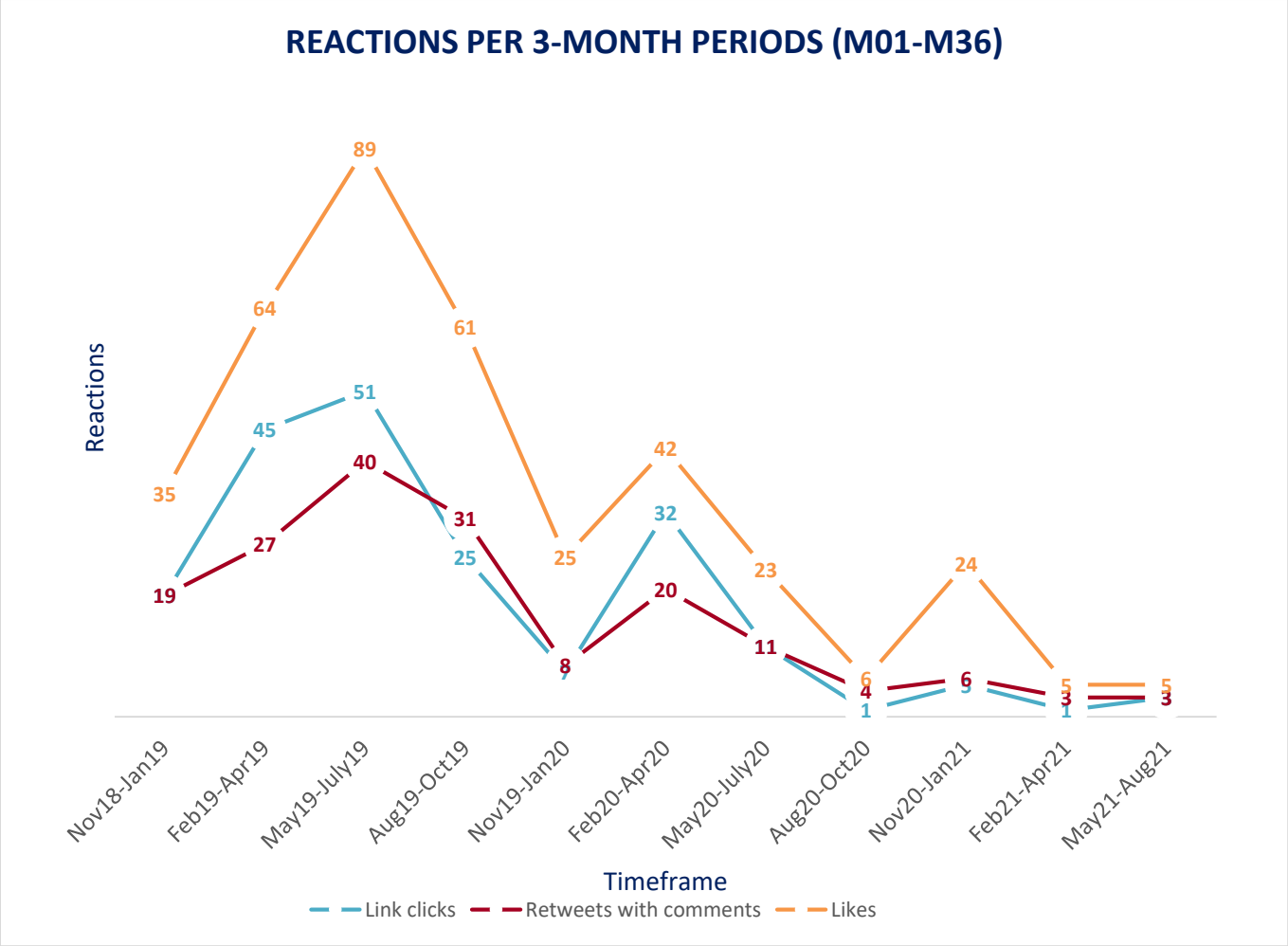

Figure 8: ICT4CART Twitter analytics – Reactions

Annex 5 – ICT4CART media engagement overview

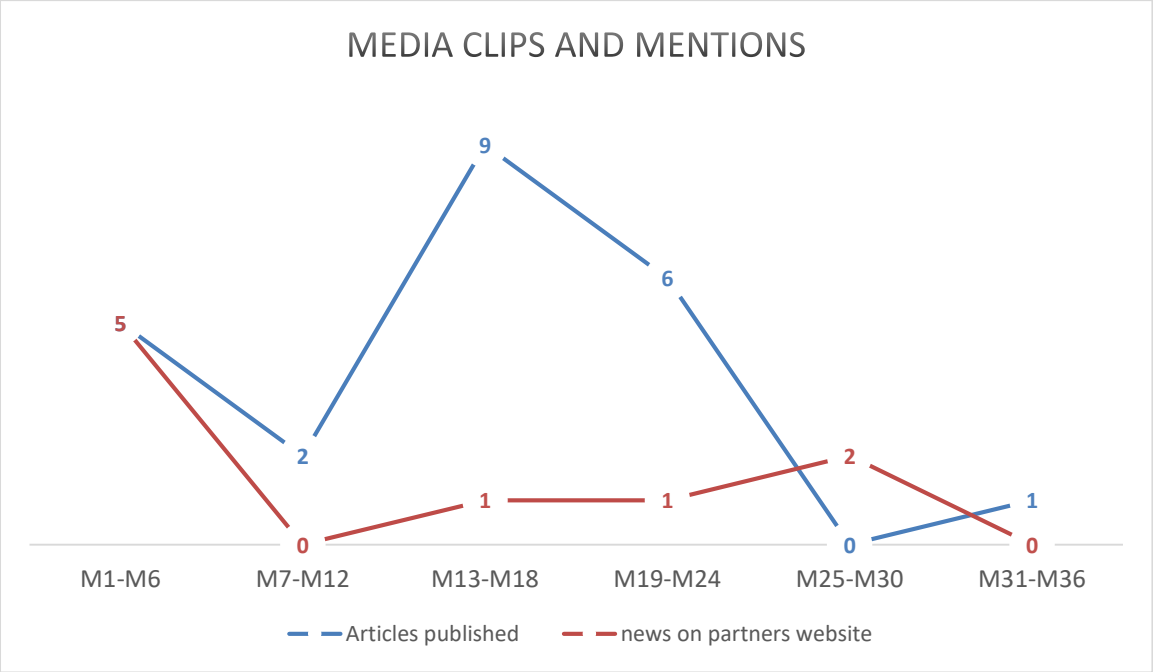

Figure 9:Data ICT4CART media clips and mentions

Source: Meltwater. Period monitored: M01-M36