TRA

TRANSPORT RESEARCH ARENA

LISBON 2022

GA 859887: MOVING TOGETHER - reimagining mobility worldwide

D5.3 – Demonstration and technical tours plan

Laboratório Nacional de Engenharia Civil, I.P. (LNEC)

Document	
Document identifier	D5.3 - Demonstration and technical tours plan
Due Date of Delivery to EC	30 June 2022
Actual Date of Delivery to EC	
Dissemination level	Public
Work Package	WP5 – Demonstration and Technical visits

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Co-funded by the Horizon 2020 programme of the European Union
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Control Sheet			
Version	**Date**	**Editor**	**Summary of Modifications**
1	06-09-2022		First version sent to WP5 partners (LNEC, ANI, IMT) for comments
2	09-09-2022		Revised version after consultation with WP5 Partners
3	20-06-2023		Revised version after including information about the actual demonstrations and tours performed, as requested by the PO at the Final Review meeting (held on 11.05.2023).

Disclaimer

Contents

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List of abbreviations / acronyms

Acronym	Definition
ANI	Agência Nacional de Inovação, S.A.
EC	European Commission
EU	European Union
GA	Grant Agreement
H2020	Horizon 2020
IMT	Instituto da Mobilidade e dos Transportes, I.P.
LNEC	Laboratório Nacional de Engenharia Civil, I.P.
TRA	Transport Research Arena
VTS	Vessel Traffic System
WP	Work Package

Executive Summary

A major objective of the Transport Research Arena (TRA) LISBON 2022 Conference is to boost research and innovation capacity for the transport sector, throughout a full innovation cycle, from idea to market. Having this in view, the project "Moving Together", which supports the organization of the TRA LISBON 2022, has established that the conference should pursue a smart combination of top-down and bottom-up approaches, including forward-looking **demonstration activities** and **technical tours**.

As such, the outline of the conference programme includes interactive sessions composed among others by demonstration areas (innovative solutions and prototypes can be tested and experienced by the public) and technical tours (illustrating the most pressing societal challenges and good practices as technological and non-technological solutions).

Due to its specific features, the project comprises a separated work package (WP5) fully dedicated to demonstrations and technical visits. WP5 directly deals with the organisation and planification of these activities, ensuring the highest scientific and technical standards.

In the scope of WP5, reports on "Demonstration submission and selection guidelines" (D5.1) and on "Technical tours organisation criteria and procedures report" (D5.2) have already been issued.

The present report refers specifically to the third deliverable for WP5 (D5.3), presenting an overall plan for demonstration activities and technical visits. This plan has been designed in order to provide meaningful and relevant experiences to participants and a larger scale visibility for the Demos and the whole TRA LISBON 2022 conference.

The selection, organisation and planification of both demonstrations and technical tours aims to be comprehensive, meaning it will ensure a multi-modal coverage.

A total of eighteen demonstrations have been approved, encompassing all the priority themes of TRA LISBON 2022, as follows:

- Theme 1 “Smart Solutions and Society” – 4 demonstrations;
- Theme 2 “Green Mobility and Decarbonisation”: 6 demonstrations;
- Theme 3 “Innovative Infrastructure for Europe 2030”: 6 demonstrations;
- Theme 4 “Policies and Economics for a Competitive Europe”; 2 demonstrations.

Regarding the technical tours, a total of 11 visits were organised, covering all transport modes and even intermodal systems, as follows:

- Road: 3 (museum of a public transport company operating buses, trams and funiculars + road administration traffic control centre + city public bike sharing service);
- Railway: 2 (railway operational control centre + metro line construction);
- Maritime: 2 (maritime coordination and control centre + cruise terminal);
- Air: 1 (air traffic control centre)
- Intermodal or multi-modal: 3 (road and railway bridge + two cities integrated management platforms / systems).

In this deliverable, each of the proposed demos and technical tours are described.

From the coordination between the approved demonstrations, the organized technical tours, and TRA LISBON 2022 Conference as a whole, a timetable has been established. Although there were still some uncertainties during the preparation of the events, particularly concerning the health situation, a general framework has been prepared.

The confirmed demos and technical tours have been aligned not only with the TRA LISBON 2022 Conference *motto*, but also with its corresponding themes and subthemes, in order to facilitate a more complete user experience.

The plan that has been established is presented hereafter. The original Deliverable D 5.3 was prepared before the conference, according to the work programme of the Moving Together project. The present report is an update of the original Deliverable and presents information about the actual demonstrations and technical tours performed.

1. Introduction

The Transport Research Arena (TRA) LISBON 2022 Conference will take place at the *Centro de Congressos de Lisboa (CCL)*, Lisbon, from 14th to 17th November 2022. Its priority themes and subthemes are identified within the motto of *Moving Together – Reimagining mobility worldwide*, and cover major challenges and opportunities handled by the current transport and mobility system. Within this motto, citizens, industries, private and public enterprises, cities, and other stakeholders, as well as researchers, are invited to present their latest results and innovative research, as well as practical and commercial applications, in the scope of the various themes and subthemes of TRA LISBON 2022.

A major objective of TRA LISBON 2022 Conference is to boost research and innovation capacity for the transport sector, throughout a full innovation cycle, from idea to market. Having this in view, the project "Moving Together", which supports the organization of the TRA LISBON 2022, has established that the conference should pursue a smart combination of top-down and bottom-up approaches, including forward-looking **demonstration activities** and **technical tours**.

As such, the outline of the conference programme includes interactive sessions composed, among others, by demonstrations areas (innovative solutions and prototypes can be tested and experienced by the public) and technical tours (illustrating the most pressing societal challenges and good practices as technological and non-technological solutions).

Due to its specific features, the project comprises a separated work package (WP5) fully dedicated to demonstrations and technical visits. WP5 directly deals with the organisation and planification of these activities, ensuring the highest scientific and technical standards.

In the scope of WP5, reports on "Demonstration submission and selection guidelines" (D5.1) and on "Technical tours organisation criteria and procedures report" (D5.2) have already been issued.

This report refers specifically to the third deliverable for WP5 (D5.3), presenting an overall plan for demonstration activities and technical visits. This plan has been designed to provide meaningful and relevant experiences to participants as well as a larger scale visibility for the demonstrations and the whole TRA LISBON 2022 conference.

The original Deliverable D 5.3 was prepared before the conference, according to the work programme of the Moving Together project. The present report is an update of the original Deliverable and presents information about the actual demonstrations and technical tours performed.

The selection and planning of both demonstrations and technical tours aimed to be comprehensive, ensuring a multi-modal coverage to reflect the conference themes.

Regarding **demonstrations**, public and private companies and other stakeholders were invited to present their projects, particularly on the latest innovations and technologies under the conference *motto*.

To support the selection and planning of the various types of demonstration proposals that were received to TRA Lisbon 2022 (in a total of 25 submissions), a two-stage process was set-up, consisting of submission of "Expression of Interest" (including evaluation of the proposal and approval by WG5) followed by the development of a full "Demonstration Plan" in cooperation with the conference organizer.

As further detailed in chapter 2 and Annex I, the planned demonstrations cover various modes of transport (road, railway, air, maritime, pipeline, multimodal) and address all the conference themes and originate from different types of activities and organisations (public bodies, universities/research institutions; non-profit organisations, large companies, small or medium enterprises, spin-off/start-up, others).

Likewise, the selected technical tours (11 in total) also cover the full range of transport modes, as identified below:

- Road: 3 technical tours:
  - CARRIS Museum (museum of a public transport company operating buses, trams and funiculars);
  - Road Traffic Control Centre (road administration traffic control centre);
  - GIRA Lisbon Bicycles (city public bike sharing service).

- Railway: 2 technical tours:
  - Railway Operational Control Centre (railway administration control centre);
  - Metro Lisboa (metro line construction);

- Air: 1 technical tour:
  - Lisbon Air Traffic Control Centre (international airport control centre).

- Maritime: 2 technical tours:
  - Centre for Coordination and Control of Maritime Traffic and Safety (maritime control centre);
  - Lisbon Cruise Terminal (international cruise terminal);

- Multimodal: 3 technical tours:
  - Pilar 7 Bridge Experience (road and railway bridge);
  - Lisbon Intelligent Management Platform (city integrated management platform);
  - MobiCascais (city integrated mobility management system).

Chapter 3 provides a full description of the programmed technical tours. Annex II presents some practical information concerning the tours.

The demonstrations and technical tours have been aligned not only with the TRA LISBON 2022 Conference *motto*, but also with its corresponding themes and subthemes, in order to facilitate a more complete user experience.

The timetable for these activities has been established upon coordination between the approved/confirmed demonstrations, the organized technical tours, and the whole TRA LISBON 2022 Conference programme.

2.Demonstrations

2.1 Selection and organisation

Demonstrations are important events that take place within and during TRA Conferences. A dedicated demonstration area enables interactive showcases of state-of-the-art technology innovations for business partners, researchers, and industry stakeholders.

For the forthcoming TRA Lisbon 2022 conference, the demonstration area will be one of its highlights. Designed to accommodate a variety of demonstrations, the area has about 720 m² of indoor and 1000 m² of outdoor space. Extra indoor or outdoor space can be assigned to demonstrations, if needed.

A call for demonstration proposals was launched to select the ones to be exhibited, which should cover all transport modes. A total of 25 submissions were received, whose “Expressions of Interest” are shown in Annex I.

These proposals were evaluated based on their relevance in relation to the defined priority areas of TRA 2022.

As referred in deliverable D5.1, the selection and planning of the demonstrations entailed the following criteria:

- The novelty and significance of the contribution, including its motivation;
- Presentation of the system and the technology, including the inputs, limitations and expected results;
- Explanation of the most critical features and scenarios to be demonstrated;
- Show market applications of technologies and their contribution to sustainable mobility.

After communication of the evaluation results, 18 proponents have proceeded to the final registration of the proposal, according to one of the following specified demonstration types:

- **Demonstration type I (standard) - Indoors**
  - 2 Pitch Presentations at the Live Theatre in two days. A total of 40 minutes time can be used (slots to be booked);
  - Access to floating office space (round table and seats) in the interactive area to enable networking and B2B meetings;
  - 4 sqm space to enable presenting video demonstration of project outcomes/ products/ services in all Conference days;
  - 1 regular registration to attend TRA Conference;
  - Possibility of extra indoor area.

- **Demonstration type II (standard) - Indoors**
  - 4 Pitch presentations at the Live Theatre in 4 days. A total of 120 minutes time can be used (slots to be booked);
  - "Round table + chairs";
  - 6 sqm space to enable presenting video demonstration of project outcomes / products / services on all Conference days;
  - 1 stand with balcony with printed company logo + 1 high stool + 1 Plasma screen with 46";
  - Company logo on the suspended banner;
  - 2 regular registrations to attend TRA Conference;
  - Possibility of extra indoor area.

- **Demonstration type III - Outdoors**
  - 10 sqm space outdoor;
  - 1 regular registration to attend TRA Conference;
  - Possibility of extra outdoor area;
  - Possibility of an optional pitch presentation

2.2 Proposed and confirmed demonstrations

A total of 18 demonstrations have been confirmed, covering all TRA LISBON 2022 priority themes and a significant range of subthemes, as follows:

- Theme 1 "Smart Solutions and Society" – 4 Demos, with the following titles:
  - "Road Condition Monitoring System for Vehicle Fleets" (Demo 4);
  - "AWARD project overview" (Demo 20);
  - "SMARTLAND by TELT and DEMOS HELSINKY" (Demo 21);
  - "Inclusive crash safety" (Demo 23).

- Theme 2 "Green Mobility and Decarbonisation": 6 Demos, entitled:
  - "You ride, you earn" (Demo 7);
  - "ACHILES enhanced AUDI Q2" (Demo 11);
  - "MobileCityGame - Exploring the Mobility Transition towards 2050 with Serious Gaming" (Demo 13);
  - "Innovative, safe electric kick-scooter and inflatable helmet" (Demo 15);
  - "Our decarbonization journey: from ZEETUG to ZEEPORT" (Demo 18);
  - "V_REX – Emission Free Offshore Transport (Demo 21).

- Theme 3 "Innovative Infrastructure for Europe 2030": 6 Demonstrations, whose titles are:
  - "Underground capsule pipeline logistic system – From a feasibility study and LEGO-model to a full-scale pilot installation in a city" (Demo 2);
  - "Live demonstration of i-DREAMS project real-time driver assistance and post-trip gamification technology" (Demo 8);
  - "SAFE-UP: Proactive Safety Systems Demonstrations" (Demo 10);
  - "Safe and Secure software updates for non-stop transport" (Demo 12);
  - "An Iterative Risk Assessment Framework for Climate change Adaptation in Pavement and Maintenance Strategies: A software Demonstration" (Demo 14);
  - "Traffic Speed Deflectometer" (Demo 19).

- Theme 4 "Policies and Economics for a Competitive Europe"; 2 Demonstrations, entitled:
  - "The Mobility Compass - exploring interdisciplinary research networks" (Demo 5);
  - "Presentation of BIKINNOV - CTI - Center for Technology and Innovation" (Demo 25).

Table 1 synthetises the demonstration proposals received, identifying those that have been confirmed for the TRA Conference and those that have been dismissed due to lack of registrations of their proponents.

Table 1 – Demonstration proposals by theme and subtheme

Demo ID: Title Organization name and type	Type of Demo	1 Smart Solutions and Society				2 Green Mobility and Decarbonisation				3 Innovative Infrastructure for Europe 2030				4 Policies and Economics for a Competitive Europe			
		1.1 User-focus and inclusive mobility	1.2 Connected and automated multimodal mobility	1.3 Innovation and the use of data, ITS and AI	1.4 Efficient and Innovative logistics	2.1 Carbon neutrality and zero-emission vehicles	2.2 Energy efficiency, electrification and alternative fuels	2.3 Sustainable interurban and urban mobility	2.4 Greening freight transport	3.1 Single market for TEN-T and the wider Europe	3.2 Intelligent, resilient and cooperative infrastructure systems	3.3 Innovative hubs	3.4 Safety and security	4.1 Transport Planning and Policy for Recovery and Resilience	4.2 Innovative Business and Governance Models	4.3 Internalisation of Transport Externalities and Pricing Carbon	4.4 Supporting Competitiveness & Industrial Policy
Demo 1: Validation of 5G Applications in Transport Peek Traffic B.V. (Non-profit organisation) DISMISSED	(n.a)		(x)														
Demo 2: Underground capsule pipeline logistic system – From a feasibility study and LEGO-model to a full-scale pilot installation in a city Omniloop AB (Spin-off/start-up)											x						
Demo 3: System Integration in the Railway Context: A CCS example TU Berlin (University) DISMISSED	(n.a)												(x)				
Demo 4: Road Condition Monitoring System for Vehicle Fleets JOANNEUM RESEARCH (research institution] **CONFIRMED**	III - Outdoors + 11m², later changed to Indoors			x													
Demo 5: The Mobility Compass - exploring interdisciplinary research networks Saxon State & University Library Dresden (Public bodies) **CONFIRMED**	I (standard) - Indoors																x
Demo 6: Cooperative control of small-scaled automated vehicles SZTAKI Institute for Computer Science and Control (University/research institution) DISMISSED	(n.a)		(x)	(x)													
Demo 7: You ride, you earn Pin Bike (Spin-off/start-up) **CONFIRMED**	I (standard) - Indoors							x									

Demo ID: Title Organization name and type	Type of Demo	1 Smart Solutions and Society				2 Green Mobility and Decarbonisation				3 Innovative Infrastructure for Europe 2030				4 Policies and Economics for a Competitive Europe			
		1.1 User-focus and inclusive mobility	1.2 Connected and automated multimodal mobility	1.3 Innovation and the use of data, ITS and AI	1.4 Efficient and Innovative logistics	2.1 Carbon neutrality and zero-emission vehicles	2.2 Energy efficiency, electrification and alternative fuels	2.3 Sustainable interurban and urban mobility	2.4 Greening freight transport	3.1 Single market for TEN-T and the wider Europe	3.2 Intelligent, resilient and cooperative infrastructure systems	3.3 Innovative hubs	3.4 Safety and security	4.1 Transport Planning and Policy for Recovery and Resilience	4.2 Innovative Business and Governance Models	4.3 Internalisation of Transport Externalities and Pricing Carbon	4.4 Supporting Competitiveness & Industrial Policy
Demo 8: Live demonstration of i-DREAMS project real-time driver assistance and post-trip gamification technology Barraqueiro Transportes, S.A. (Large company) **CONFIRMED**	III - Outdoors												x				
Demo 9: MZIGO – intelligent modular POD solutions CLEANconnect (SME) DISMISSED	(n.a)							(x)	(x)								
Demo 10: SAFE-UP: Proactive Safety systems demos Applus IDIADA (Large company) **CONFIRMED**	II (standard) - Indoors										x		x				
Demo 11: ACHILES enhanced AUDI Q2; Vrije Universiteit Brussel (University) **CONFIRMED**	II (standard) - Indoors					x	x										
Demo 12: Safe and Secure software updates for non-stop transport TTTech Auto AG (Large enterprise) **CONFIRMED**	II (standard) - Indoors												x				
Demo 13: MobileCityGame; Fraunhofer Institute for Systems and Innovation Research ISI (research institution) **CONFIRMED**	II (standard) - Indoors					x		x									
Demo 14: An Iterative Risk Assessment Framework for Climate change Adaptation in Pavement and Maintenance Strategies: A software Demo Maxint (Spin-off/start-up) **CONFIRMED**	I (standard) - Indoors										x						
Demo 15: Innovative, safe electric kick-scooter and inflatable helmet Three o'clock (SME) **CONFIRMED**	II (standard) - Indoors							x									
Demo 16: Supporting an Equitable Road Infrastructure Future with a National Agent Based Model Arup (Large company) DISMISSED	(n.a)													(x)	(x)		
Demo 17: MovingLab German Aerospace Center (research institution) DISMISSED	(n.a)	(x)		(x)													

Demo ID: Title Organization name and type	Type of Demo	1 Smart Solutions and Society				2 Green Mobility and Decarbonisation				3 Innovative Infrastructure for Europe 2030				4 Policies and Economics for a Competitive Europe			
		1.1 User-focus and inclusive mobility	1.2 Connected and automated multimodal mobility	1.3 Innovation and the use of data, ITS and AI	1.4 Efficient and Innovative logistics	2.1 Carbon neutrality and zero-emission vehicles	2.2 Energy efficiency, electrification and alternative fuels	2.3 Sustainable interurban and urban mobility	2.4 Greening freight transport	3.1 Single market for TEN-T and the wider Europe	3.2 Intelligent, resilient and cooperative infrastructure systems	3.3 Innovative hubs	3.4 Safety and security	4.1 Transport Planning and Policy for Recovery and Resilience	4.2 Innovative Business and Governance Models	4.3 Internalisation of Transport Externalities and Pricing Carbon	4.4 Supporting Competitiveness & Industrial Policy
Demo 18: Our decarbonization journey: from ZEETUG to ZEEPORT NAVTEK Naval Technologies (SME) **CONFIRMED**	I (standard) - Indoors					x	x										
Demo 19: Traffic Speed Deflectometer GreenWood Engineering (SME) **CONFIRMED**	III - Outdoors									x							
Demo 20: AWARD project overview; EasyMile **CONFIRMED**	I (standard) - Indoors		x		x												
Demo 21: V_REX – Emission Free Offshore Transport V-Rex GmbH (Spin-off/start-up) **CONFIRMED**	II (standard) - Indoors					x			x								
Demo 22: SMARTLAND by TELT and DEMOS HELSINKY TELT sas (Public bodies) **CONFIRMED**	I (standard) - Indoors		x														
Demo 23: Inclusive crash safety VTI & Transport Research Institute (research institution) **CONFIRMED**	II (standard) - Indoors	x															
Demo 24: Pushing the implementation of Advanced Air Mobility with focus on Medical Emergency uses cases CEiiA (Non-profit organisation) DISMISSED	(n.a)				(x)												
Demo 25: Presentation of BIKINNOV - CTI - Center for Technology and Innovation BIKINNOV (Non-profit organisation) **CONFIRMED**	I (standard) - Indoors																x

2.3 Planned demonstrations

The following is a concise overview of the 18 approved demonstrations for the TRA LISBON 2022 Conference, listed in the order they appear on the conference website.

Road Condition Monitoring System for Vehicle Fleets

Organised by: ESRIUM – Safe and efficient roads project.

Co-organisers: Joanneum Research Forschungsgesellschaft mbh, Virtual Vehicle Research GmbH, ASFINAG Autobahnen- und Schnellstraßen Finanzierungs-Aktiengesellschaft, Finnish Geospatial Research Institute, FH OO Forschungs & Entwicklungs GMBH, Evolit Consulting GmbH, Enide Solutions .S.L, NNG Software Developing and Commercial LLC, Politecnico di Milano.

Description: Scanning the road surface is a surveyor's task or the task of highly specialized and cost-intensive sensing vehicles. There are market companies operating individual scanner vehicles and offering the scanning service (see the business plan for these competitors). One innovation of the sensor platform will be the availability of a scanning system, which can easily be integrated into the customer's vehicle fleet and creates measurements with little additional operational costs compared to the normal vehicle fleet operation. This way, data acquisition becomes cheaper, and the broad, multi-national deployment of sensor systems with equal quality becomes possible.

The Mobility Compass - exploring interdisciplinary research networks

Organised by: Saxon State and University Library Dresden (SLUB).

Description: The Mobility Compass is an open tool for improving networking and interdisciplinary exchange within mobility and transport research. It enables cross-database search for experts of specific research areas and their networks. At the presentation booth, you will get an in-depth look at how the tool works and also valuable tips on how to improve your visibility in research.

You ride, you earn

Organised by: BICIFICATION project.

Co-organiser: Pin Bike.

Description: BICIFICATION would like to demonstrate the patented system certifying urban bike rides tested in Summer 2022 in Braga (Portugal), Istanbul (Turkey), and Tallinn (Estonia). Pin Bike, the technical leader of BICIFICATION, will install the Pin Bike sensor on a bike for the TRA visitors to try. If the kilometers registered by the sensor are aligned with those registered by the Pin Bike

APP installed on the TRA visitors' mobile phones, the Pin Bike dashboard will validate the session and allocate rewards to the riders. Local authorities and urban planners visiting TRA will be able to get a flavour of the data that the Pin Bike dashboard can collect and display, thus acknowledging its efficacy to shape data-driven policies and investments. The tests performed in Summer 2022 in Braga, Istanbul, and Tallinn in the framework of the BICIFICATION project prove that the technological solution provided by Pin Bike can easily serve the specific needs of different urban environments, thus representing an interesting innovation for other local authorities and urban planners visiting TRA 2022.

Live demonstration of i-DREAMS project real-time driver assistance and post-trip gamification technology

Organised by: i-DREAMS project.

Co-organisers: IMOB UHAsselt, Barraqueiro Transportes S.A., CardioID, NTUA, Loughborough University, TUM, KFV, TUD, University of Maribor, DSS, Oseven, ETSC and POLIS.

Description: Participants will be able to experience the power of the i-DREAMS real-time assistance technology in a driving simulator, and will be able to interact with different i-DREAMS technologies, such as the i-DREAMS smartphone app, the i-DREAMS web dashboard and view real-time output from the system. An i-DREAMS instrumented car and bus will be available outside the demonstration area. Short trips will be organized where visitors can see the system live in operation.

SAFE-UP: Proactive Safety System Demos

Orgamised by: the SAFE-UP project.

Co-organiser: Applus+IDIADA, Aimsun, Audi, Autoliv, Bax & Company, Bosch, Cariad, CEA, CERTH, Chalmers University of Technology, Institut für Kraftfahrzeuge (ika) RWTH Aachen University, Technische Hochschule Ingolstadt, Toyota Motor Europe, TNO, Technische Universität Dresden, Eindhoven University of Technology, UniFI: Università degli Studi di Firenze, Virtual Vehicle, ZF Group.

Description: SAFE-UP will exhibit new prototypes of active and passive safety systems integrated into real vehicles. These vehicles can operate under adapted safety-critical scenarios demonstrating the functionality of the systems and their impact on road safety, either by avoiding or mitigating the

effects of road injuries and fatalities. SAFE-UP strives to spread its gathered knowledge on road safety to a broad audience.

ACHILES enhanced AUDI Q2

Organised by: Achiles project.

Co-organiser: Vrije Universiteit Brussel, TECNALIA, TTTech, TTTech Auto, CONTINENTAL, IKERLAN, ELAPHE, AUDI, Fraunhofer LBF, IDIADA.

Description: The ACHILES project enhanced an AUDI Q2 battery electric vehicle with a more efficient E/E control architecture for a new generation of electric vehicles. The newly designed ACHILES powertrain is comprised of two motors, one for each front wheel, two inverters, one battery and a centralized control unit. The final and tested ACHILES Demo Vehicle weighs less, has increased autonomy and smoother dynamics for an overall lower cost. The ACHILES simulation set-up including the centralized computing platform as well as a selection of the innovative components (e.g. brake actuator, new wheel concept) will be exhibited.

Safe and Secure software updates for non-stop transport

Organised by: UP2DATE project.

Co-organiser: IKERLAN, BARCELONA SUPERCOMPUTING CENTER, MAGNETI MARELLI, CAF SIGNALLING, DLR, IAV, TTTech Auto AG.

Description: The overall UP2DATE goal is to provide a new software paradigm for Safe and SEcure Over-the-Air software updates for Mixed-Criticality Cyber-Physical Systems (MCCPS). The paradigm has been implemented through a new software architecture that enables the runtime deployment of new (mixed-criticality) applications remotely (patching existing functions or extending the functionality) in heterogeneous computing platforms. The demonstrator will enable the audience to know more details about UP2DATE solution, the results obtained in different use case (railway, automotive,...) and iterate with a research use case.

MobileCityGame - Exploring the Mobility Transition towards 2050 with Serious Gaming

Organised by: Fraunhofer Institute for Systems and Innovation Research ISI.

Co-organiser: Karlsruhe Institute of Technology KIT, Takomat GmbH, Fraunhofer IOSB.

Description: MobileCityGame offers an action impact experience for professionals and laypersons into city planning. It offers an intuitive frontend to introduce and visualize the complex interrelations, options, and limits of the design of urban mobility systems for citizens, educational institutions, science and urban planners. The users of MobileCityGame should thus gain playful insights into the options, limits, dependencies, and impacts of various urban mobility (policy) approaches. Urban decision-makers can also test and evaluate strategy and action options up to the year 2050 easily, quickly and cost-effectively. It thus complements common procedures for the preparation of transport development plans by adding a strategic and participatory component.

Innovative, safe electric kick-scooter and inflatable helmet

Organised by: DREEM project.

Co-organiser: Three o'clock, Punch Torino and DREEM EU Project partners.

Description: The DREEM eks is a new generation micro-mobility vehicle with many innovative features focused on safety and comfort. The collision alert system, thanks to a camera/sensor at the rear side of the scooter, ensures the possibility to see what happens behind and informs the driver about possible risky situations. The large deck, the rear turn indicators, the three large tires (10" front and 8" rear) and the availability of an on-demand inflatable helmet are also intended to improve safety. From a comfort perspective, the DREEM e-kickscooter can be folded and brought as a suitcase thanks to the front handle.

Our decarbonization journey: from ZEETUG to ZEEPORT

Organised by: Navtek Naval Technologies.

Description: NAVTEK Naval Technologies has developed a series of electric tugboat designs with the first already accumulating more than 2 years of service. Gisas Power was the world's first fully electric harbour tug, built to NAVTEK's ZEETUG30 design. A key aspect of this project was deploying a quick-charging station to keep the zero-emissions electric tug in full operation. This infrastructure is available to charge electric-powered vessels in a port, including a fleet of ZEETUGs under construction at NAVTEK's new shipyard Turkey.

Traffic Speed Deflectometer

Organised by: Greenwood Engineering.

Description: Continuous bearing capacity measurements, replacing dangerous and traditionally point measurements as FWD. The unique TSD technology is developed by Greenwood Engineering and has initiated a shift of paradigm in global pavement engineering.

AWARD project overview

Organised by: AWARD H2020 – Scaling autonomous logistics.

Co-organisers: EasyMile, Continental Teves AG & Co. OHG, Kamag Transporttechnik GmbH & Co.KG, Terberg Benschop BV, Dematic NV, DFDS A/S (DFDS), Cerema, VTT Technical Research Centre of Finland Ltd (VTT), AIT Austrian Institute of Technology GmbH, Applied Autonomy AS (Applied Autonomy), DigiTrans GmbH (DigiTrans), ENIDE SOLUTIONS, S.L. (ENIDE), IRU PROJECTS ASBL, CARA, Navtech Radar Ltd – Short Name to Consortium Navtech, Business Upper Austria – OÖ Wirtschaftsagentur GmbH BIZ-UP, ITS Norway, Linz Center of Mechatronic (LCM), FH OOE Forschungs & Entwicklungs GMBH, Avinor, ADASKY LTD, Foresight Automotive Ltd., BRP-Rotax GmbH & CoKG "ROTAX", CertX AG CertX, Ottopia Technologies Ltd., AUSTRIATECH – Gesellschaft des Bundes für Technologiepolitische Massnahmen GMBH (ATE), Schenker & Co AG / DB Schenker, GIE France Aviation Civile Services (FRACS).

Description: The AWARD project (All-Weather Autonomous Real logistics operations and Demonstrations) will develop and enable a safe autonomous transportation system in a wide range of real-life use cases in a variety of different scenarios. This encompasses the development of an autonomous driving system (ADS) capable of handling adverse environmental conditions such as heavy rain, snowfall, and fog.

V_REX – Emission Free Offshore Transport

Organised by: V-Rex GmbH.

Description: V-REX stands for a brand new and patented sailing technology for offshore transportation. Highly sophisticated and innovative sailing technology is transferred into a totally emission free cargo offshore transporter – the V-REX Cargo. The concept leads to high vessel-speeds which makes the product very interesting. More than that – once a V-REX Cargo is built, he

will sail a whole lifetime without any energy from outside. Only wind and self-produced electric power by water- and wind-generators as well with photo voltaic will propel the vessel his entire lifetime. V-REX Cargo will transport goods under sail at far more than twice the speed than conventional cargo ships. The V-REX Cargo will be also able to load and unload the freight by itself even in very shallow waters.

The concept is going to be realized in 3 steps: 1) The very first step is to build a sport boat, showing the concept. Prototype is already built!; 2) The second step is a scale up version for offshore-racing and a pre-version of the third step; 3) The third step is the V-REX Cargo which can be used for very fast and emission free offshore transportation.

SMARTLAND by TELT and DEMOS HELSINKY

Organised by: TELT Lyon-Turin Tunnel Line project.

Description: Smart Lands is a cartographic project designed around the idea of territories transforming their environmental, social and economic fragility by overturning growth paradigms. Based on this approach, TELT – the public promoter of the Lyon-Turin line on the TEN-T Mediterranean corridor – is engaged in developing strategies for a resilient and efficient mix of railways, cycle paths and long-distance hiking routes to bring Alpine valleys and metropolitan areas closer together.

Inclusive crash safety

Organised by: VTI – Swedish National Road and Transport Research Institute.

Description: VTI presents the development of a set of Seat Evaluation Tools (SETs), an average female (50F) and male (50M) model/prototypes as vehicle seated occupants. The SETs are models of adult humans made for evaluation of the protective performance of vehicle seats in the event of a low severity rear impact, up to 24 km/h. A new set of evaluation tools have been developed for the analysis of occupant protection in low velocity rear collisions. Also, to enable comparison between the protection of the female and male part of the population, in addition to evaluation of the different injury preventing properties of car seats in these situations. This need is based on that the female part of the population is not, yet, represented in the models of the human used to assess the occupant safety of new cars. In addition, injury statistics shows that for several severe and fatal injuries females have a larger risk of these given the same crash circumstances. Welcome to meet

the developers of the two-world unique Seat Evaluation Tools (SETs) and see the models. The project is carried out by VTI within the EU-funded project VIRTUAL. In the stand you can also, via VR, experience what it's like to go with the bus of the future, a safer ride for everyone. An activity within the project Drive 2the Future, an EU-funded project within Horizon Europe.

An Iterative Risk Assessment Framework for Climate Change Adaptation in Pavement and Maintenance Strategies

Organised by: Maxint.

Co-organiser: Technical University of Denmark.

Description: This demonstration proposes an adaptive DSS (Decision Support System) on the basis of adaptivity to Climate change via a risk management framework. The solution uses reliable data from Danish Meteorological Institute (DMI) and other sources of uncertainties. With such combination, we can provide a framework that ensures robustness and real-time capabilities, immediately and long-term. Pavement at freezing temperatures exposed to warmer air over an extended period of time deteriorates and ultimately produces potholes. Streaming this type of information into decision-support tools is at the core of our solution.

Underground capsule pipeline logistic system – From a feasibility study and LEGO-model to a full-scale pilot installation in a city

Organised by: Omniloop, Varberg, Sweden.

Description: An underground capsule pipeline logistic system is proposed for moving and storing everything that fits into a capsule with a diameter of 300 mm and a length of 500 mm, e.g., groceries, hot food, packages, letters, newspapers, personal items, and waste. Transport the last/first/mile/yard all the way to/from the user in apartments and at workplaces. Storing at specified temperatures in the pipes, reducing the need for storage space in buildings and enabling automatic retailing. This gives access to most items and services in a city district within 5 minutes. The feasibility study TRA paper nr 852 is displayed in the poster area. In one scenario, 30% less motor vehicle traffic and emission of carbon, particles, and noise compared with today. The payback time was one year, and the value of the freed street space was higher than the total investment cost.

Circular flows with reusable packaging, cleaning, refurbishing, second-hand, borrowing, sharing, and recycling are made easier. Transport and storage services are preferable offered as a utility where the pipes are co-located with other utility infrastructures as water, sewage, gas, electricity, and fiber. Come and discuss how we together can establish a cluster of actors for taking the concept from a LEGO-model to a full-scale pilot installation in a city. We are working on a € 3 Million application for the EU-call Driving Urban Transition with deadline November 21.

Presentation of BIKINNOV - CTI - Center for Technology and Innovation

Organised by: Abimota.

Description: The BIKINNOV – Bike Value Innovation Center – Association is a collective non-profit entity with legal personality. It operates specifically in the two-wheel industry (vertically), defined as vehicles that are or derive from the bicycle, regardless of the number of wheels and main source of propulsion. BIKINNOV exists for the production, dissemination and transmission of knowledge, oriented to companies in the sector of operation and to the creation of economic value, contributing to the pursuit of specialization objectives of the Portuguese two-wheel Industry: BIKINNOV provides technical and technological support to companies in the two-wheel sector, promoting the use of technology and innovation as tools for improving business competitiveness, increasing added value and qualifying supply, in particular small and medium-sized enterprises (SMEs). BIKINNOV operates in the intermediate space of the innovation system, fostering the development and integration of new processes, services or products based on scientific and technological knowledge and high added value.

2.4 Pitch Presentations Schedule

For indoor Type I and Type II demonstrations, pitch presentations were scheduled in the following order:

14th November – Monday

12h20–12h40: You ride, you earn by BICIFICATION project

12h50–13h10: Live demonstration of i-DREAMS project real-time driver assistance and post-trip gamification technology

13h15–13h45: V_REX – Emission Free Offshore Transport

13:55–14h25: Inclusive crash safety by VTI – Swedish National Road and Transport Research Institute.

14h30–14h50: Traffic Speed Deflectometer by Greenwood Engineering

15h00–15h20: An Iterative Risk Assessment Framework for Climate Change Adaptation in Pavement and Maintenance by Maxint

15h30–16h10: MobileCityGame - Exploring the Mobility Transition towards 2050 with Serious Gaming by Fraunhofer Institute for Systems and Innovation Research ISI & Karlsruhe Institute of Technology (KIT)

16h20–16h40: Safe and Secure software updates for non-stop transport by UP2DATE project

16h50–18h50: SMARTLAND by TELT and DEMOS HELSINKY

15th November – Tuesday

9h00–9h30: SAFE-UP: Proactive Safety System Demos by the SAFE-UP project

9h40–10h40: Impact of road maintenance on carbon footprint & Result of European benchmark on new mobility and their impact on roads by ERF, Routes de France and FNTP

10h45–11h05: Traffic Speed Deflectometer by Greenwood Engineering

11h10–11h30: Safe and Secure software updates for non-stop transport by UP2DATE project 11h35–11h55: AWARD project overview by AWARD H2020 – Scaling autonomous logistics 12h00–14h00: ACHILES enhanced AUDI Q2 by Achiles project

14h05–14h25: The Mobility Compass - exploring interdisciplinary research networks by Saxon State and University Library Dresden (SLUB)

14h30–15h00: SAFE-UP: Proactive Safety System Demos by the SAFE-UP project

15h05–15h45: MobileCityGame - Exploring the Mobility Transition towards 2050 with Serious Gaming by Fraunhofer Institute for Systems and Innovation Research ISI & Karlsruhe Institute of Technology (KIT)

15h50–16h10: Road Condition Monitoring System for Vehicle Fleets by ESRIUM – Safe and efficient roads project

16h15–16h35: Safe and Secure software updates for non-stop transport by UP2DATE project 16h40–17h00: Deutsches Zentrum für Luft- und Raumfahrt e. V.- German Aerospace Center 17h00–19h00: Innovative, safe electric kick-scooter and inflatable helmet by DREEM project

16th November – Wednesday

9h00–9h20: Presentation of BIKINNOV - CTI - Center for Technology and Innovation

9h25–9h45: AWARD project overview by AWARD H2020 – Scaling autonomous logistics

9h50–10h10: The Mobility Compass - exploring interdisciplinary research networks by Saxon State and University Library Dresden (SLUB)

10h15–10h55: Our decarbonization journey: from ZEETUG to ZEEPORT 11h00–11h20: Safe and Secure software updates for non-stop transport by UP2DATE project 11h30–12h00: V_REX – Emission Free Offshore Transport

12h05–12h35: SAFE-UP: Proactive Safety System Demos by the SAFE-UP project

12h40–13h10: Inclusive crash safety by VTI – Swedish National Road and Transport Research Institute

13h20–13h40: An Iterative Risk Assessment Framework for Climate Change Adaptation in Pavement and Maintenance by Maxint

13h50–14h10: Road Condition Monitoring System for Vehicle Fleets by ESRIUM – Safe and efficient roads project

14h20–14h40: Live demonstration of i-DREAMS project real-time driver assistance and post-trip gamification technology.

14h50–15h20: Deutsches Zentrum für Luft- und Raumfahrt e. V.- German Aerospace Center

15h30–15h50: Safe and Secure software updates for non-stop transport by UP2DATE project

16h00–16h40: MobileCityGame - Exploring the Mobility Transition towards 2050 with Karlsruhe Institute of Technology (KIT)

16h50–17h20: V_REX – Emission Free Offshore Transport

17H25–17H55: SAFE-UP: Proactive Safety System Demos by the SAFE-UP project

18h00–18h30: Inclusive crash safety by VTI – Swedish National Road and Transport Research Institute

18-40–19h00: Underground capsule pipeline logistic system – From a feasibility study and LEGO-model to a full-scale pilot installation in a city by Omniloop

17th November – Thursday

10h00–10h20: You ride, you earn by BICIFICATION project

10h30–11h00: V_REX – Emission Free Offshore Transport

11h15–11h35: Safe and Secure software updates for non-stop transport by UP2DATE project

11h50–12h20: Inclusive crash safety by VTI – Swedish National Road and Transport Research Institute

12h30–13h00: Presentation of BIKINNOV - CTI - Center for Technology and Innovation

3. Technical tours

3.1 Selection and organization

Technical tours are important events that take place within and during TRA Conferences. These allow local, national and even international multimodal transport entities to showcase their novelties on various operations and techniques and, through networking, allow these companies, to disseminate and market their products and applications to participants and interested parties.

The TRA LISBON 2022 technical tours have the objective to provide to participants close contacts with practical aspects related to all the transport modes and infrastructures in the host country that are somewhat novel or context specific. By participating in the technical tours, attendees will have additional networking opportunities and will be able to discuss and experience something not already utilised in their home countries or business areas, thus providing a possibility for new applications and Business-to-Business contacts. Furthermore, technical tours will also provide an opportunity for accompanying delegates to enjoy the offerings of TRA LISBON 2022.

As referred to in deliverable D5.2, the organisation of the technical tours entailed the following criteria:

- Alignment of its themes not only with the TRA 2022 Conference *motto*, but also with its corresponding themes and subthemes, ensuring that different modes of transport are covered.
- Locations of the tours carefully considered, thus allowing a stress-free commuting between the Conference venue and the tour sites.
- Locations as close as possible to the Conference site (Lisbon).
- Each tour following an efficient management structure, ensuring balanced, safe, and secure participation of all.
- Participants at the technical tours should be registered for at least one-day of the TRA 2022 Conference. Upon registration for the Conference, a form for the technical tours will be provided with specific information regarding each technical tour.
- The number of participants within each tour is well planned before the event to allow an efficient management.

- Safety and security issues should be ensured in advance by each organiser.
- Quality is preferred over quantity.

Based on these criteria, the planning team has selected 11 technical tours, as follows:

TT1. **Pilar 7 Bridge Experience**, consisting of an interactive and immersive experience that allows a unique discovery of the '25 de Abril' Suspension Bridge (road and railway infrastructures).

TT2. **CARRIS Museum**, offering participants the opportunity to travel back in time and getting to know the role of this public transport company in the development of Lisbon City.

TT3. **Road Traffic Control Centre**, enabling participants to acknowledge a road administration control centre, where road traffic is monitored in real time and support to traffic flow and user assistance is provided.

TT4. **Railway Operational Control Centre**, offering attendees an in-depth visit to a railway administration control centre, located in a building conceived to hold all the railway traffic control systems of the central area of Portugal.

TT5. **Centre for Coordination and Control of Maritime Traffic and Safety**, providing an insight into the operations of a maritime administration control centre, located at the entrance of the Tagus River estuary.

TT6. **Lisbon Air Traffic Control Center**, offering participants an insight into the operations of an air navigation control centre, located close to Humberto Delgado Airport, in Lisbon.

TT7. **Metro Lisboa**, providing participants the chance to learn about the expansion project of Lisbon metro line and to visit a metro tunnel under construction.

TT8. **Lisbon Cruise Terminal**, consisting of a tour to an architectural awarded building, part of the Lisbon cruise terminal, that is a reference in the international cruise market and places Lisbon among the best served ports in terms of this activity.

TT9. **Lisbon Intelligent Management Platform**, offering participants an in-depth visit to a city council's management and urban intelligence centre.

TT10. **GIRA Lisbon Bicycles**, giving participants the possibility of discovering a public bike sharing system, whose system integrates electric and conventional bicycles and a set of stations located at strategic points of the city.

TT11. **MobiCascais**, offering participants an insight into an integrated system for the management of the sustainable mobility of a municipality.

3.2 Detailed description of Technical Tours

A detailed description of each technical tour is presented in this section. Practical information concerning each of the tours is presented in Annex II.

TT1 | Pilar 7 Bridge Experience

An interactive and immersive experience that allows an unique discovery of the 25 de Abril' Suspension Bridge

Located in Alcântara, near the Lisbon Congress Centre, this interactive centre allows all visitors to have a unique experience of the "25 de Abril" Suspension Bridge – considered one of the prettiest in the world – via a tour that takes in the exterior areas of this key pillar and the sensory experience of visiting its interior.

It is a trip through the history of its construction and ends with an elevator ride up to a panoramic viewing point that provides an unrivalled view of the city and the river.

Making use of modern multimedia devices, the visit ends with an immersive virtual reality experience of parts of the bridge that are inaccessible.

This tour is suitable for people with disabilities, but an accompanying person is suggested. The access to Pilar 7 Bridge Experience will be by walk from the Conference venue.

TT2 | CARRIS Museum

CARRIS (*Companhia de Carris de Ferro de Lisboa*), founded in 1872, is a public transport company which presently operates buses, trams, funiculars, and a lift in Lisbon. In 2018, CARRIS began an ambitious fleet renewal process, focused on the acquisition of cleaner natural gas-powered buses, full electric buses, and new diesel buses.

The CARRIS Museum was inaugurated in 1999. Its mission is to preserve and conserve the CARRIS collection and publicize its role in the development of Lisbon City. The museum has two different sections and the drive between them is done in a 1901 tram that was remodelled in the 1960s.

This Museum offers the opportunity to travel back in time through a vast collection which includes photographs, uniforms, tickets, officinal equipment, trams and buses, among many other documents and objects of great historical interest. The first part of the Museum was remodelled this year and now integrates areas dedicated to the backstage of the company such as the barber shop or the administrative services. A new room dedicated to the funiculars of Lisbon with special features, for example, a touch screen with the virtual tour of the museum and all the funiculars and the elevator. This way we ensure that the public accesses these scenic spaces and has a more interactive experience that continues into the second part with the entrance on the vehicles.

This tour is suitable for people with disabilities, but an accompanying person is suggested. The access to CARRIS Museum will be by walk from the Conference venue.

TT3 | Road Traffic Control Centre

The Road Traffic Control Centre from Infraestruturas de Portugal (IP) – Portuguese road and railway administration – is located in Almada, at the south bank of the Tagus River. It monitors road traffic in real time, providing support to traffic flow and users assistance. Real time information is available to the users through variable signs, digital platforms and call centre.

This tour is barrier-free accessible. The access to the Road Traffic Control Centre will be by bus, departing from the Conference venue.

TT4 | Railway Operational Control Centre

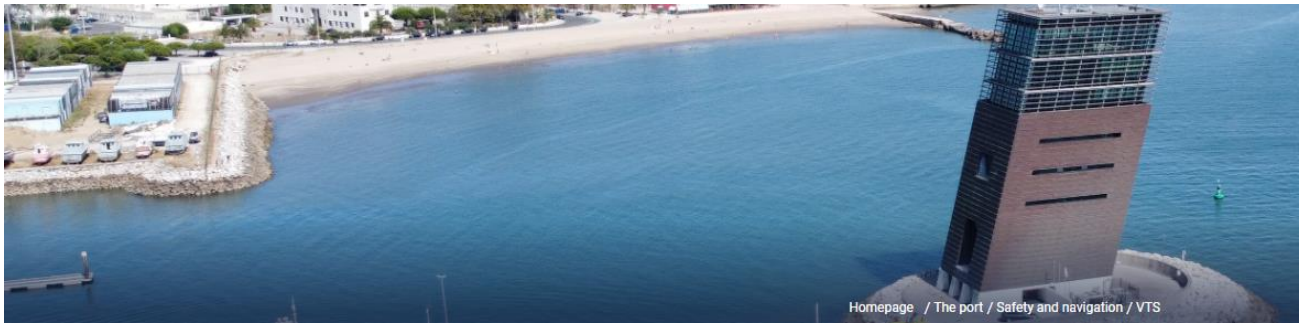
The Railway Operational Control Centre from Infraestruturas de Portugal (IP) – Portuguese road and railway administration –is located close to “Braço de Prata” railway station in Lisbon. It hosts all the command and traffic control systems for the Portuguese railway in the country’s Central Region.

The building was conceived to hold all the railway traffic control systems of the central area of Portugal, and has technical and functional characteristics of great complexity, namely concerning the spatial construction of the Command Room where the geometrics of the ergonomic relation between the operators and the monitoring displays as well the articulation of all the infrastructures are combined as a whole.

The building is structured around a central space for the Control Room and the Situation Room, and the Ground Floor is reserved for the entrance, technical and staff facilities. In the squared body, which goes along the Command Room over the three floors, stand all the circulation and service areas as well the administration.

This tour is barrier-free accessible. The access to the railway Operational Control Centre will be by bus departing from the Conference venue.

TT5 | Centre for Coordination and Control of Maritime Traffic and Safety (VTS)



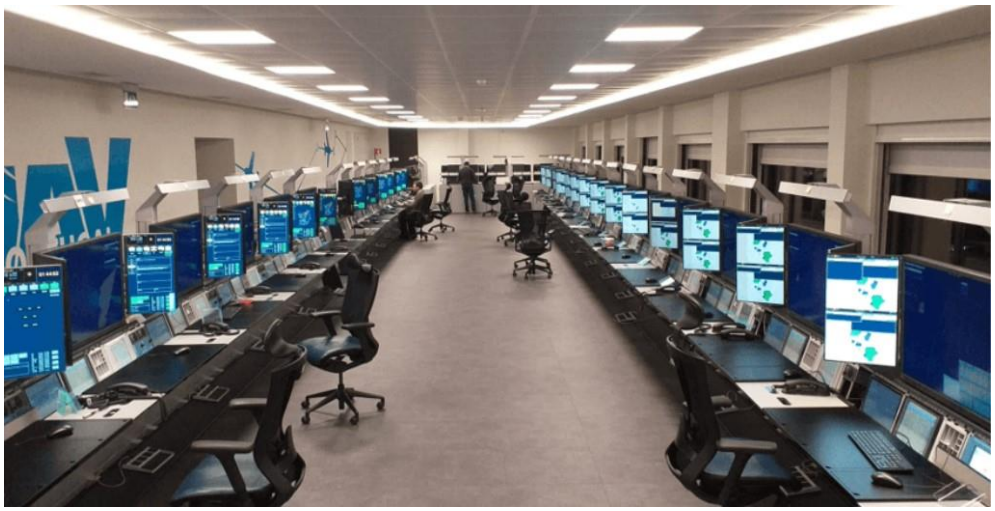
The Centre for Coordination and Control of Maritime Traffic and Safety, installed in the VTS (Vessel Traffic System) Tower in Algés, integrates the pilotage, the coordination and control of traffic and the port environment safety area. It coordinates and controls navigation within the jurisdiction area of APL, S.A., with the Vasco da Gama Bridge as the upstream limit and the entire approach area to the Port of Lisbon downstream; provides information and advises ships sailing in the Tagus estuary or approaching it, within a radius of up to 16.5 nautical miles, centered on the VTS.

The VTS is designed to promote safe and efficient traffic, contribute to the improvement of navigation safety conditions, control the ships' entrance into and departure from the port, plan the stays of commercial ships in the port, enable the assisted navigation system, collaborate in safeguarding human life at sea, collaborate in actions to protect the port environment and prevent illegal activities. With this system, the Port of Lisbon has the most modern technology to provide the support service for port navigation. It integrates the most modern and sophisticated equipment / software for the control and tracking of maritime shipping such as Radars, VHF, AIS, DF, GMDSS, Marigraphs and Meteorological stations, supporting and giving the crucial information for an excellent service. Currently, the VTS has a set of stations all connected to each other by its own autonomous network links, keeping all the information on state-of-the-art dedicated servers, operating 24 hours / 365 days, ensuring data security and operational readiness.

This tour provides an insight into the operations of the Centre for Coordination and Control of Maritime Traffic and Safety, located at the entrance of the Tagus estuary. This will include a brief description of the coordination and control of traffic in port environment safety area and a short visit to the VTS control room.

This tour is barrier-free accessible. The access to the Centre for Coordination and Control of Maritime Traffic and Safety will be by bus departing from the Conference venue.

TT6 | Lisbon Air Traffic Control Center (NAV)



NAV Portugal has the mission to ensure a safe and efficient provision of Air Navigation Services, Its Lisbon Air Traffic Control Center is located close to Humberto Delgado Airport.

NAV Portugal carries out its work on mainland Portugal and in the Portuguese autonomous regions of the Azores and Madeira. The company's head offices are situated next to Lisbon Airport, as well as the Lisbon Air Traffic Control Centre and the company's Training Centre. The Oceanic Control Centre is located on the island of Santa Maria in Azores.

In addition to these two important centres, NAV Portugal also has other infrastructures, providing air traffic services in the control towers of Lisbon, Cascais, Porto, Faro, Funchal, Porto Santo, Santa Maria, Ponta Delgada, Horta and Flores airports.

To fully carry out its mission, NAV Portugal has a considerable amount of equipment and many technical installations (radar, radio, and communications stations) in several points of mainland Portugal and the autonomous regions.

The Oceanic Air Traffic Management System on Santa Maria and the phased entry into service of a new generation of air traffic management systems in Lisbon have been of crucial importance in keeping NAV Portugal in the forefront of air navigation service providers.

This tour is barrier-free accessible. The access to the Lisbon Air Traffic Control Centre will be by bus departing from the Conference venue.

TT7 | Metro Lisboa

According to the approved expansion plan, the lines from Rato (Yellow line) to Cais do Sodré (Green line) will be connected, including the construction of two new stations: Estrela and Santos.

This expansion of the network will reach parts of the city still not covered by the Metro and will link to other public transport operators, namely CP's Lisboa-Cascais railway network and river ports linking Lisboa to Montijo, Seixal and Almada. This increase in public transport supply will comprise new connections and the improvement of existing ones.

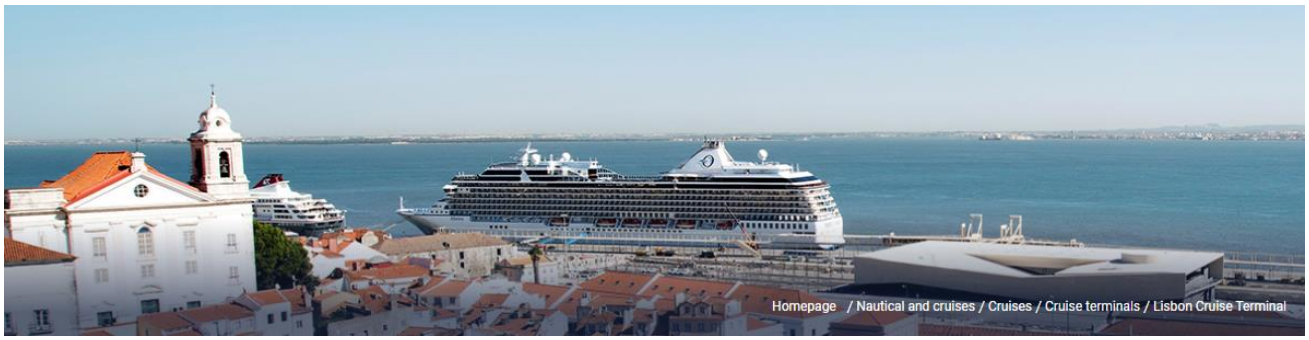
The future Estrela station will serve a residential area of the city, where public transport offer is presently limited to buses. It will be located at the top of Calçada da Estrela/south edge of Jardim da Estrela.

Santos station will be located on the west side of the block defined by Av. D. Carlos I, Rua das Francesinhas, Rua dos Industriais and Travessa do Pasteleiro (between ISEG and Largo da Esperança). The station will have two accesses: at Av. D. Carlos I (Largo da Esperança) and at Travessa do Pasteleiro.

The technical visit will include a tour inside the metro tunnel under construction. Protection equipment will be provided at the site.

This tour is not suitable for people with disabilities. The access to Metro Lisboa will be by bus departing from the Conference venue.

TT8 | Lisbon Cruise Terminal



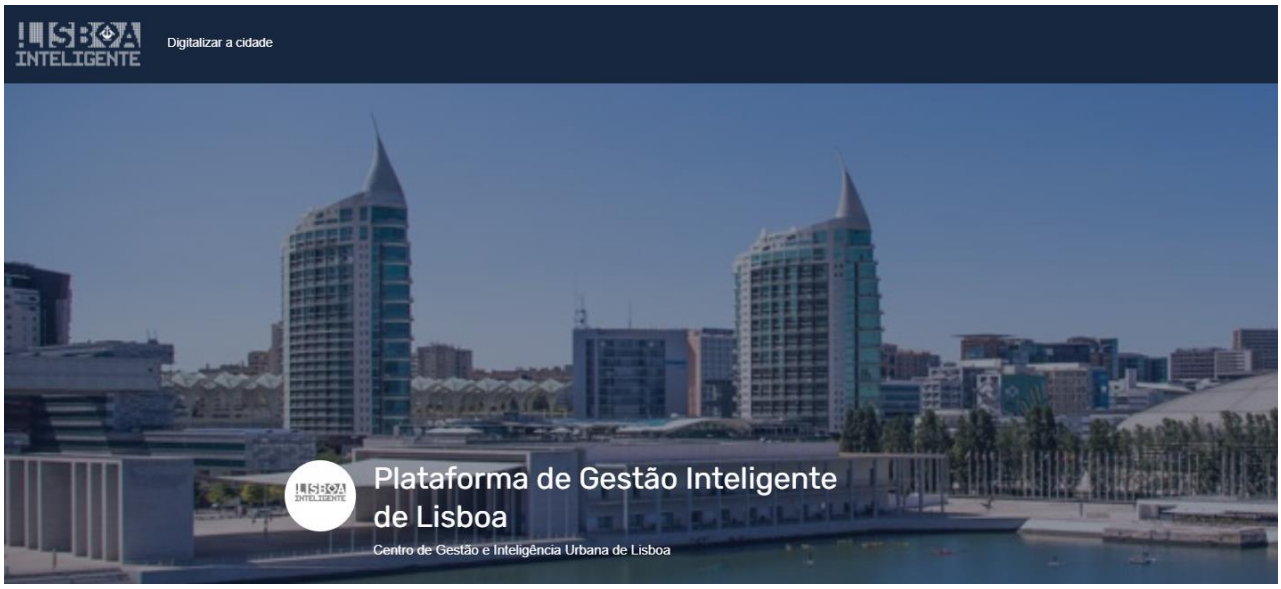
The Lisbon Cruise Terminal is a reference in the international cruise market and places Lisbon among the best served ports in terms of this activity. It integrates the new building and the Santa Apolónia Cruise Terminal, offers the best conditions to accommodate cruise ships and passengers with ever greater demands, thus providing an excellent service to anyone who wants to visit Lisbon on board a cruise ship.

Designed by the architect Carrilho da Graça, the new facility was inaugurated on November 10th, 2017, and won in the same year the Valmor and Municipal Architecture Award, one of the most important architecture awards in Portugal.

Flexibility and accessibility, safety, environmental quality and comfort are the main features of the new facility, which has an area of 13.800 sq. meters. This facility, together with the Santa Apolónia terminal building, is served by a pier 1.490 meters long with capacity to receive ships of various types and dimensions with a draft of up to 12 meters.

This tour is barrier-free accessible. The access to the Lisbon Cruise Terminal will be by bus departing from the Conference venue.

TT9 | Lisbon Intelligent Management Platform (PGIL)



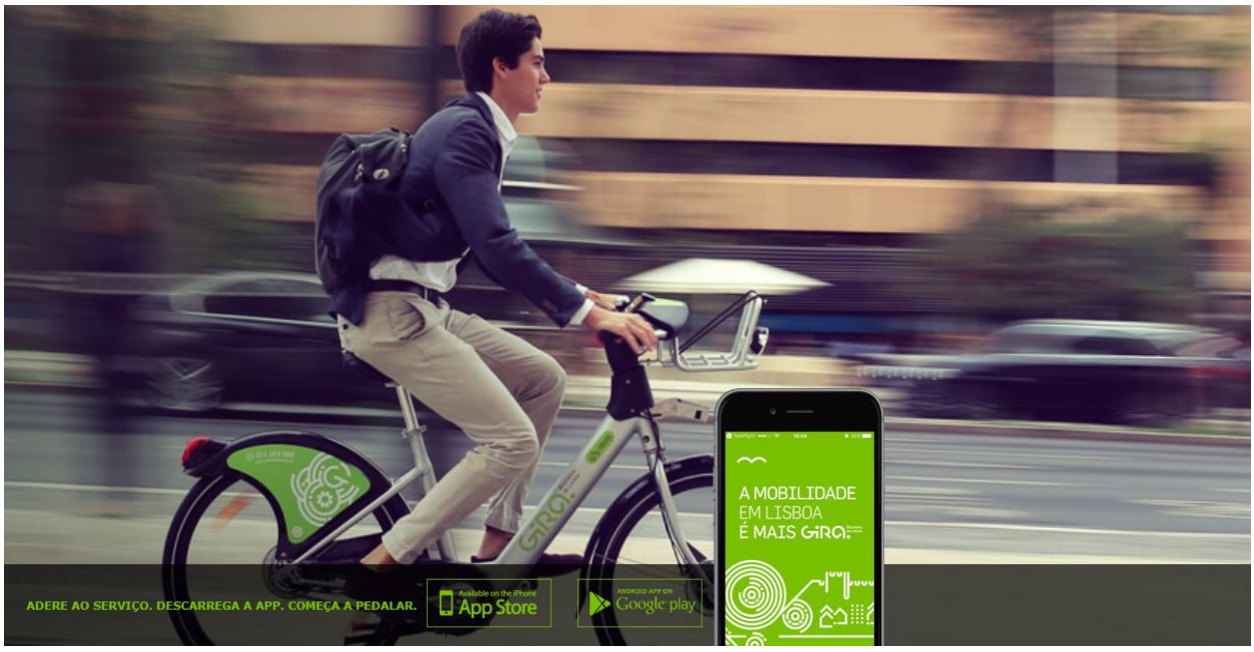
This visit will be promoted by Lisbon City Council's Management and Urban Intelligence Centre. It will cover the design, development and implementation of a data integrator platform, with the capacity to receive, process and make available useful information for the operational and strategic management of the city to the various stakeholders. This will allow the integration of various data sources: internal systems, external systems, sensor data and social networks.

Through its powerful analytical tools, PGIL will enable the processing of information and its availability to nearly 60,000 simultaneous users, including the Integrated Operational Center, the Data Laboratory, the Open Data Portal, Municipal Services, Parish Councils and citizens.

The visit may include an overview of the future system SIM.Lx designed for the intelligent management of the city traffic.

This tour is barrier-free accessible. The access to the Lisbon Intelligent Management Platform will be by bus departing from the Conference venue.

TT10 | GIRA Lisbon Bicycles



This visit will be promoted by Lisbon City Council's EMEL – "Empresa Municipal de Mobilidade e Estacionamento de Lisboa, EPM". GIRA is the public bike sharing service in the City of Lisbon. The system integrates electric and conventional bicycles and a set of stations located at strategic points of the city, allowing to increase the modal choice supply and, thus, to capture different types of users, residents, visitors, workers, students and tourists. Its use is based on digital systems by simply downloading the App on any smartphone. It is from this App that it is possible to know the location of the stations, check which bicycles are available, unlock the chosen bicycle and confirm the end of the trip.

This public bike sharing system aims to contribute to the reduction of road traffic and its externalities (congestion, greenhouse gas emissions and particulate matter emissions, noise and accidents), leading to improvements in the urban environment and public health. Overall, the city aims to contribute to increasing the modal share for cycling, especially in commuting trips, through enabling transferring traffic from individual road-based transport to cycling.

This tour is barrier-free accessible. The access to the GIRA Lisbon Bicycles will be by bus departing from the Conference venue.

TT11 | MobiCascais

The Municipality of Cascais is dedicated to promoting the most sustainable development of its territory and an environmentally friendly urban mobility.

Cascais is a small bay next to the seafront, located about 30 km away from Lisbon, with an area of 97.4 km², home to approximately 215.000 residents, that welcomes around 1.2 million visitors annually.

In 2016, the Municipality launched the integrated sustainable mobility management system designated as MobiCascais. This system is based on a platform that combines different operators and a network of infrastructures and equipment, to offer a diverse and flexible set of mobility solutions and services that meet the needs of the residents, workers, and visitors of Cascais. The main activities that are being developed in the Municipality of Cascais are aimed at the promotion of public transport. These measures are complemented with the promotion of soft mobility and public space regeneration through the supply of new services (shared leisure bicycles, bike sharing, scooter sharing and bike parking) and the development of new bicycle paths. MobiCascais also integrates parking management, which is decisive for modal choice. To encourage the use of the train, parking facilities were also implemented near the train stations.

Other modes of transport are also being integrated, such as car sharing, transport of non-urgent patients, school transport and flexible transport on-demand.

The MobiCascais system is managed by a control center of operations, named Cascais Cockpit, that provides the integrated operational management of mobility, in real time.

All of these actions have allowed Cascais to be the first MaaS experience in Portugal.

Furthermore, in January 2020, Cascais has implemented the Free Mobility Program. This initiative was a bold measure and allows residents, students, and workers of the municipality to have free access to municipal buses and shared bicycles.

For all these reasons, we invite you to come visit us at Cascais. Feel FREE to ride on our modern buses, to try our bikes and scooters, and to enjoy our wonderful landscapes.

3.3 Programme

The technical tours are scheduled from Monday 14th to Thursday 17th November. Visits schedules have been designed to have a minimum interference with Plenary and Strategic Sessions of the TRA Lisbon 2022 Conference program.

The programme is summarised in the tables below.

Table 2 – Technical tours timetable (Monday-Tuesday)

Time		MONDAY 14.11.2022	TUESDAY 15.11.2022						
08:15	08:30						BUS		
08:30	08:45			BUS		BUS	TT7 (30pax)		
08:45	09:00		BUS						
09:00	09:15		TT3 (15 pax)	TT5 (20 pax)	BUS	TT4 (15 pax)			
09:15	09:30								
09:30	09:45		BUS	BUS	TT5 (20 pax)				
09:45	10:00								
10:00	10:15				BUS	BUS	BUS		
10:15	10:30								
10:30	10:45								
10:45	11:00								
…	…	…	…	…	…	…	…	…	…
14:00	14:15								
14:15	14:30								
14:30	14:45			BUS	BUS	BUS		BUS	
14:45	15:00	WALK	WALK				WALK		
15:00	15:15	TT1 (30 pax)	TT2 (25 pax)	TT10 (25pax)	TT11 (20 pax)	TT9 (25 pax)	TT1 (30 pax)	TT6 (20pax)	BUS
15:15	15:30							BUS	TT6 (20pax)
15:30	15:45								
15:45	16:00	WALK					WALK		
16:00	16:15		WALK	BUS		BUS			BUS
16:15	16:30								
16:30	16:45								
16:45	17:00								
17:00	17:15				BUS				
17:15	17:30								

Table 3 – Technical tours timetable (Wednesday)

Time		WEDNESDAY 16.11.2022							
08:15	08:30					BUS			
08:30	08:45		BUS		BUS	TT7 (30pax)	BUS		
08:45	09:00	BUS							
09:00	09:15	TT3 (15 pax)	TT5 (20 pax)	BUS	TT4 (15 pax)		TT8 (25 pax)	BUS	
09:15	09:30								
09:30	09:45	BUS	BUS	TT5 (20 pax)			BUS	TT8 (25 pax)	BUS
09:45	10:00								
10:00	10:15			BUS	BUS	BUS		BUS	TT8 (25 pax)
10:15	10:30								
10:30	10:45								BUS
10:45	11:00								
...	...	...	...	...	...	...	...	...	...
14:00	14:15				BUS				
14:15	14:30								
14:30	14:45		BUS	BUS	TT9 (25 pax)	WALK			
14:45	15:00	WALK							
15:00	15:15	TT2 (25 pax)	TT10 (25pax)	TT11 (20 pax)		TT1 (30 pax)			
15:15	15:30				BUS				
15:30	15:45					WALK			
15:45	16:00								
16:00	16:15	WALK	BUS						
16:15	16:30								
16:30	16:45								
16:45	17:00								
17:00	17:15			BUS					
17:15	17:30								

Table 4 – Technical tours timetable (Thursday)

Time		THURSDAY 17.11.2022					
08:15	08:30					BUS	
08:30	08:45		BUS		BUS	TT7 (30pax)	
08:45	09:00	BUS					
09:00	09:15	TT3 (15 pax)	TT5 (20 pax)	BUS	TT4 (15 pax)		
09:15	09:30						
09:30	09:45	BUS	BUS	TT5 (20 pax)			WALK
09:45	10:00						
10:00	10:15			BUS	BUS	BUS	TT1 (30 pax)
10:15	10:30						
10:30	10:45						
10:45	11:00						WALK

3.4 Participants

Table 5 presents the number of Participants registered to each Technical Tour prior to the beginning of the Conference (R) and the effective attendees (A). It should be noted that TT6 - Lisbon Air Traffic Control Center (NAV) was cancelled due to restrictions in the access of secure areas.

Table 5 – Participants by Technical tours

	Participants									
	14th Nov		15th Nov		16th Nov		17th Nov		Total	
	R	A	R	A	R	A	R	A	R	A
TT1. Pilar 7 Bridge Experience	18	13	11	8	10	14	-	-	39	35
TT2. CARRIS Museum	-	-	5	4	-	-	-	-	5	4
TT3. Road Traffic Control Centre	-	-	15	6	9	8	6	7	30	21
TT4. Railway Operational Control Centre	-	-	10	6	13	6	5	5	28	17
TT5. Centre for Coordination and Control of Maritime Traffic and Safety	-	-	8	8	7	9	11	10	24	27
TT7. Metro Lisboa	-	-	16	11	-	-	9	11	25	22
TT8. Lisbon Cruise Terminal	-	-	-	-	4	3	-	-	4	3
TT9. Lisbon Intelligent Management Platform	-	-	16	14	9	8	-	-	25	22
TT10. GIRA Lisbon Bicycles	-	-	4	3	4	4	-	-	8	7
TT11. MobiCascais	-	-	7	5	9	7	-	-	16	12
Total Participants	**18**	**13**	**92**	**65**	**65**	**59**	**31**	**33**	**206**	**170**

Legend: R= Registered before the beginning of the Conference; A= Attended

4. Conclusions

The selection, organisation and planification both of demonstrations and technical tours aimed to be comprehensive, providing a multimodal coverage.

The final coordination among the approved demonstrations, the organized technical tours, and TRA LISBON 2022 Conference as a whole has been established.

A total of 18 demonstrations have been confirmed, covering all TRA LISBON 2022 priority themes, as follows:

- Theme 1 “Smart Solutions and Society” – 4 Demonstrations;
- Theme 2 “Green Mobility and Decarbonisation”: 6 Demonstrations;
- Theme 3 “Innovative Infrastructure for Europe 2030”: 6 Demonstrations;
- Theme 4 “Policies and Economics for a Competitive Europe”; 2 Demonstrations.

Regarding the technical tours, from the total of 11 visits were organised, 10 visits were carried out, with 170 participants, covering a large range of transport modes, particularly the following:

- Road: 3 tours (museum of a public transport company operating buses, trams and funiculars + road administration traffic control centre + city public bike sharing service);
- Railway: 2 tours (railway operational control centre + metropolitan line construction);
- Maritime: 2 tours (maritime coordination and control centre + cruise terminal);
- Intermodal or multimodal: 3 tours (road and railway bridge + two cities integrated management platforms / systems).

Annex I | Demonstrations expressions of interest

Demo 1 | Validation of 5G Applications in Transport

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	Peek Traffic B.V.
Organisation type:	Non-profit organisation
Other partners / organisations involved in your proposal:	VTT (FI), TNO (NL), University of Surrey (UK), NTUA (GR)
Contact Person	
Contact Person name	Meng Lu
Contact Person address	Basicweg 16, Amersfoort
Contact Person country	The Netherlands
Contact Person telephone	+31 645054735
Contact Person email	meng.lu@wklm.eu
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	Validation of 5G Applications in Transport
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	We plan to run the demonstrations at the stand of 5G-HEART in the Exhibition Hall, which may take maximum 50 min. We expect to have a stand (8 m2) at the Exhibition. Our demonstrations plan to cover transport use cases and scenarios, such as Platooning (High bandwidth in-vehicle situational awareness, See-through for platooning), Automated/Assisted Driving (Smart junctions and network assisted, Cooperative collision avoidance, QoS for advanced driving, Human tachograph), Support for Remote Driving (Teleoperated support), Vehicle Data Services (OTA updates, Smart traffic corridors, Location based advertising, E2E slicing, Vehicle sourced high definition, HD mapping, Environmental services).

C - Innovative aspects of your demonstration	The demonstration targets 5G applications in the transport vertical industry especially for improving utility, efficient processes, and safety. It defines vertical use cases by using the fifth generation wireless mobile telecommunications technology. The innovative aspects are reflected in the approaches (based on the next generation wireless mobile telecommunications technology) developed for matching the needs and requirements of this vertical industry, and for coping with huge challenges from the network and connectivity (especially concerning, e.g. latency, reliability, throughput (user-experienced data rate) and connection density).
D - What are the main target groups of your demonstration?	End users Academics
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	200
G - How can TRA LISBON 2022 participants take part into the demonstration?	One can join in person or online. The advantage of F2F is to have some discussions and Q&A. Online participants can only see the broadcasting results. Actually there is no limitation of participants that can take part in one run of the demonstration, if we can get a stand in the Exhibition Hall. 200 is just an estimation of the on site visitors of TRA 2022 who are interested in this topic and will be available to visit the Exhibition Hall.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.2 - Connected and Automated Multimodal Mobility

Demo 2 | Urban under-ground capsule pipeline for packages and waste

Organisation	
Organisation name (registered name and name in English).	Omniloop AB
Organisation type:	Spin-off/start-up
Other partners / organisations involved in your proposal:	Wells, Eng-Larsson, Johnsson, Anderberg
Contact Person	
Contact Person name	Sten Wandel
Contact Person address	Bandholtzgatan 27A, 432 52 Varberg
Contact Person country	Sverige
Contact Person telephone	+46707284773
Contact Person email	sten.wandel@omniloop.se
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	Urban under-ground capsule pipeline for packages and waste
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	A fully functional scale model of part of an installation in a city. See www.omniloop.se. Three terminals connected with an underground pipe, switch, and fans for propulsion. One terminal is connected to road transport for transfer of goods or capsules between modes. First a person from Omniloop demonstrates how to use the system, then the audience will try themselves. Finally they will fill in a questionnaire and some will be interviewed.

C - Innovative aspects of your demonstration	This is the the first modern urban capsule pipeline. It is a further development of the pneumatic tube transport systems used today in most hospitals for transport of samples to labs, blood bags and medicine, which in its turn was a further development of the pneumatic mail transport systems in 44 cities 1853-2002. In contrast to other last mile technologies as drones in the air or on side walks, Omniloop delivers the goods to a terminal within 50 m from the user of the goods or from the sender of the waste or the goods. Fully implemented, it has the capacity to reduce road/street traffic and CO2 emissions by 30% and free 5-8 sqm street space to a value that in most case is higher the than cost of the whole system.
D - What are the main target groups of your demonstration?	End users Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	25
G - How can TRA LISBON 2022 participants take part into the demonstration?	The participants will use the system themselves, discuss potential uses cases and improvements, fill in a questionnaire, and some will be interviewed. The result will contribute to the story book Pipeville 2030 and further product developments.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.2 - Intelligent, Resilient, and Cooperative Infrastructure Systems

Demo 3 | System Integration in the Railway Context: A CCS example

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	TU Berlin, Chair of Railway Operations and Infrastructure
Organisation type:	University/research institution
Other partners / organisations involved in your proposal:	Hasso Plattner Institute, Operating Systems and Middleware
Contact Person	
Contact Person name	Birgit Milius
Contact Person address	Salzufer 17-19, 10587 Berlin
Contact Person country	Germany
Contact Person telephone	004915150158394
Contact Person email	birgit.milius@tu-berlin.de
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	System Integration in the Railway Context: A CCS example
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if	Digitalisation and automatization are not only technical challenges for railways but also that concern all processes, operational as well as organisational. An important one is stringent development and certification. Railways have a very strict and fixed set of rules and regulations. Before a system can be taken into operation it needs to be shown that the system is safe and reliable. With the high number of systems that will need to be deployed in the future resources can and might become a limiting factor. Therefore we need to think about how we can become faster and more efficient while at the same time meeting the reliability requirements. The demonstration will show a process starting from a track layout and end with a full automation of the systems under tests. Thus, it exemplifies how a thorough integration process for railway CCS systems can look like. Specifically, the process consists of: Data extraction from a planning document in the EULYNX DataPrep XML format

possible, be no longer than 50 min.):	Applying the track layout to a simulated, generic interlocking that is used as a driver for integration tests Configuring EULYNX object controllers using the configuration interface defined by EULYNX Baseline 4.1 Deriving a complete set of test cases for the given infrastructure and performing integration tests in full automation, across multiple test centre locations The different steps will be explained and in the end one can see how automatically the correct control of a signal and/or a switch is possible as part of an integration test. The given demonstration is at the core of the development of a whole testing suite which is set up for railway signalling systems. A complete run should take about 20 minutes and we assume that 10 to 12 people can listen/watch at the same time. We need a booth of approximately 3x3 meters.
C - Innovative aspects of your demonstration	The demonstration combines railway engineering and computer science in a way which was not done before. The idea of automatically generating and testing the core functionalities of an interlocking system allows for a very efficient and reliable approach which will then allow faster and more reliable certification processes. As certification of the new digital systems is a key challenge this whole approach can significantly alter today's processes and be an important facilitator for introducing a modern, digital railway which we in turn need to reach the very important CO2 reduction goals as part of a positive climate change.
D - What are the main target groups of your demonstration?	End users Academics Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	12
G - How can TRA LISBON 2022 participants take part into the demonstration?	We will make sure that the presentation is interactive, including question/answer-time, pushing buttons etc.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.4 - Safety and Security

Demo 4 | Road Condition Monitoring System for Vehicle Fleets

Organisation	
Organisation name (registered name and name in English).	JOANNEUM RESEARCH Forschungsgesellschaft mbH
Organisation type:	University/research institution
Other partners / organisations involved in your proposal:	Virtual Vehicle Research GmbH, ASFINAG Autobahnen- und Schnellstraßen-Finanzierungs-Aktiengesellschaft, Finnish Geospatial Research Institute, FH OO FORSCHUNGS & ENTWICKLUNGS GMBH, Evolit Consulting GmbH, ENIDE SOLUTIONS .S.L, NNG Software Developing and Commercial LLC, Politecnico di Milano
Contact Person	
Contact Person name	Martina Uray
Contact Person address	Steyrergasse 17, 8010 Graz
Contact Person country	Austria
Contact Person telephone	+43 316 876 1736
Contact Person email	martina.uray@joanneum.at
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	ESRIUM
Grant number	101004181
Programme	H2020-SPACE-EGNSS-2019-2020
A - Title of the demonstration:	Road Condition Monitoring System for Vehicle Fleets

B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	The demonstration consists of two parts: (i) a sensor system deployable on vehicle fleets of road operators and (ii) a digital map of road condition and road damage, which is derived from the sensor data. The key innovation is a homogeneous, accurate and recent digital map of road surface damage and road wear ("road wear map"). It will contain unique information, which is of value to multiple stakeholders. Road operators will be able to lower the road maintenance effort by optimal planning of construction works. Further, they will be able to lower road wear and increase traffic safety especially for heavy vehicles. Considering the market introduction of partly automated truck fleets, the precise track of these vehicles can be adjusted by communicating precise routing recommendations in- and cross-lane, e.g. via C-ITS. Truck fleet operators following these recommendations can receive tolling benefits, and increase the general safety for their vehicle fleet. These opportunities are addressed by utilizing C-ITS infrastructure and EGNSS based localization in planning the trajectories of such automated vehicles. On additional innovation is a precision localization service, which provides reliable localization information of road damages and of the vehicles using the roads. Considering a European-level business-case, only Galileo may provide such a service in homogeneous quality, even at very remote locations on the European continent. Space needed: 20m2 Duration of one run: 30min
C - Innovative aspects of your demonstration	Scanning of the road surface currently is a surveyor's task, or the task of highly specialized and cost intensive sensing vehicles. There are companies in the market, operating individual scanner vehicles and offering the scanning service (see the business plan for these competitors). One innovation of the sensor platform will be the availability of a scanning system, which can easily be integrated to the customer's vehicle fleet and creates measurements with little additional operational costs, as compared to the normal vehicle fleet operation. In this way, data acquisition becomes cheaper, and the broad, multi-national deployment of sensor systems with equal quality becomes possible.
D - What are the main target groups of your demonstration?	Academics Public authorities
E - Where will the demonstration take place?	Strictly outside
F - Maximum number of participants that can take part in one run of the demonstration?	25
G - How can TRA LISBON 2022 participants take part into the demonstration?	Spectators of presentation and demo
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.3 - Innovation and the Use of Data ITS and AI

Demo 5 | The Mobility Compass - exploring interdisciplinary research networks

Organisation	
Organisation name (registered name and name in English).	Saxon State and University Library Dresden (SLUB)
Organisation type:	Public bodies (e.g., authorities, agencies)
Contact Person	
Contact Person name	Matthias Fuchs
Contact Person address	Zellescher Weg 18, 01069 Dresden
Contact Person country	Germany
Contact Person telephone	+49 351 4677 345
Contact Person email	matthias.fuchs@slub-dresden.de
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	The Mobility Compass - exploring interdisciplinary research networks
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	Interdisciplinary research groups are an important factor in the development of sustainable solutions in the transport and mobility sector. However, identifying relevant network partners can involve a great deal of effort due to the numerous research disciplines and networking platforms. The non-commercial Mobility Compass (www.mobility-compass.eu) therefore serves to support efficient networking and to provide a better view of the academic research landscape in europe. Runtime per demonstration: 10 min Necessary space: 4m2 (table with one or two screens)
C - Innovative aspects of your demonstration	The Mobility Compass enables a new way on the search for research partners. This is achieved by aggregating, indexing and linking data related to research results from different data sources and presenting them in an innovative explorative approach. For example, by selecting relevant topics of a funding call in the Topic-Graph, a set of people can be identified who may be suitable as partners. In addition to detailed information on researchers, relationships between specific topics are also shown in the Mobility Compass.

D - What are the main target groups of your demonstration?	End users Academics
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	10
G - How can TRA LISBON 2022 participants take part into the demonstration?	At the conference, the Mobility Compass and its functions will be demonstrated on one or two screens. In addition, the technologies used to aggregate and present the data will be explained in more detail where necessary. Participants can also test the Mobility Compass themselves on site and provide direct feedback.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	4 - Policies and Economics for a Competitive Europe
4 - Policies and Economics for a Competitive Europe	
Please select up to two secondary subthemes:	4.4 - Supporting Competitiveness & Industrial Policy

Demo 6 | The Mobility Compass - exploring interdisciplinary research networks

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	SZTAKI Institute for Computer Science and Control
Organisation type:	University/research institution
Contact Person	
Contact Person name	Balazs Nemeth
Contact Person address	13-17. Kende utca, 111 Budapest
Contact Person country	Hungary
Contact Person telephone	+3612796278
Contact Person email	balazs.nemeth@sztaki.hu
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	Cooperative control of small-scaled automated vehicles
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	The demonstration presents the cooperative control of small-scaled automated vehicles and drones in augmented reality environment. The goal of the cooperation is to coordinate the motions of two vehicles and two drones, i.e., to fly the drones from vehicles to vehicles without collision. The cooperation through a hierarchical control structure is realized, which contains robust control elements and machine-learning-based elements. The presented indoor test scenario is a small-scaled example of a logistic transportation process, whose goal is to guarantee the safe transport of deliveries. Moreover, the part of the demonstration is a presentation of a video, which is about the realization of the method with the coordination of real test vehicles in ZalaZONE Automotive Proving Ground, Hungary. The presentation “Collision-free motion control with learning features for automated vehicles in roundabouts” provides the theoretical background of the proposed cooperative control method.

C - Innovative aspects of your demonstration	The presented hierarchical control design provides a general framework for solving coordination problems of automated vehicles, mobile robots and drones. In the control design machine-learning-based elements are incorporated, and simultaneously, as a noevl results, guarantees on the safety performance level is achieved. The effectiveness of the method is also demonstrated by it application on real test vehicles, which on video records for the audience is shown. A further innovative aspect of the demonstration is its connection to the augmented reality (AR), i.e., the demonstration highlights the effectiveness of AR in the testing of cooperative functionalities for transportation systems.
D - What are the main target groups of your demonstration?	Academics
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	10
G - How can TRA LISBON 2022 participants take part into the demonstration?	The participants can view the demonstration and can take part in the augmented reality scenarios.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.2 - Connected and Automated Multimodal Mobility 1.3 - Innovation and the Use of Data ITS and AI

Demo 7 | You ride, you earn

Organisation	
Organisation name (registered name and name in English).	Pin Bike
Organisation type:	Spin-off/start-up
Other partners / organisations involved in your proposal:	BICIFICATION
Contact Person	
Contact Person name	Annarita Leserri
Contact Person address	km 32,700, SP231, 70033 Corato BA
Contact Person country	Italia
Contact Person telephone	+393299555325
Contact Person email	leserri@pin.bike
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	BICIFICATION
Grant number	KAVA no. 22010 of EIT Urban Mobility BP2021-2022
Programme	EIT Urban Mobility
A - Title of the demonstration:	You ride, you earn
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how	BICIFICATION would like to demonstrate the patented system certifying urban bike rides tested in Summer 2022 in Braga (Portugal), Istanbul (Turkey), and Tallinn (Estonia). Pin Bike, the technical leader of BICIFICATION, will install the Pin Bike sensor on a bike for the TRA visitors to try. If the kilometers registered by the sensor are aligned with those registered by the Pin Bike APP installed on the TRA visitors' mobile phones, the Pin Bike dashboard will validate the session and allocate rewards to the riders. Local authorities and urban planners visiting TRA will be able to get a flavour of the data

much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	that the Pin Bike dashboard can collect and display, thus acknowledging its efficacy to shape data-driven policies and investments. The tests performed in Summer 2022 in Braga, Istanbul, and Tallinn in the framework of the BICIFICATION project prove that the technological solution provided by Pin Bike can easily serve the specific needs of different urban environments, thus representing an interesting innovation for other local authorities and urban planners visiting TRA 2022.
C - Innovative aspects of your demonstration	The uniqueness of the BICIFICATION technical solution provided by Pin Bike is mainly based on the patented system combining registrations by the Pin Bike APP and the Pin Bike sensor. Unlike many other systems only based on APPs, Pin Bike is the only one that can certify the truthfulness of bike rides. Moreover, other similar technical solutions do not provide local authorities with useful data to inform their policies and investments fostering sustainable mobility. Another selling proposition is the engagement of local shop owners that can receive the credits earned by urban riders, thus multiplying the positive effect of active and sustainable mobility and encouraging the environmental and social activism of a whole local community.
D - What are the main target groups of your demonstration?	Public authorities Other target groups
E - Where will the demonstration take place?	Strictly inside (update May, 30th Inside and outside, original Strictly outside)
F - Maximum number of participants that can take part in one run of the demonstration?	100 (update May, 30th 1000; original 300)
G - How can TRA LISBON 2022 participants take part into the demonstration?	General TRA visitors can download the Pin Bike APP and ride a bike where the Pin Bike sensor is installed. Their sessions will be validated by the Pin Bike dashboard, whose data will be particularly interesting for local authorities and urban planners visiting the event.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.3 - Sustainable Inter-urban and Urban Mobility

Demo 8 | Live demonstration of Horizon 2020 i-DREAMS project real-time driver assistance and post-trip gamification technology

Organisation	
Organisation name (registered name and name in English).	Barraqueiro Transportes, S.A.
Organisation type:	Large company
Other partners / organisations involved in your proposal:	NTUA, Loughborough University, ETSC, OSeven, TUM, KFV, DSS, CardioID, POLIS, Univerza v Mariboru and TU Delft
Contact Person	
Contact Person name	Mariana Almeida
Contact Person address	Av. Santos e Castro s/n, 1769-022 Lisboa
Contact Person country	Portugal
Contact Person telephone	+351 932 050 306
Contact Person email	mariana.almeida@rodest.pt
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	i-DREAMS
Grant number	814761
Programme	European Union's Horizon 2020 research and innovation programme
A - Title of the demonstration:	Live demonstration of Horizon 2020 i-DREAMS project real-time driver assistance and post-trip gamification technology
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and	In the Horizon 2020 i-DREAMS project a methodology and technological platform was set up to define, develop, test and validate a 'Safety Tolerance Zone' (STZ) for driving. The STZ prevents drivers from getting too close to the boundaries of unsafe operation by mitigating risks in real-time and coaching the driver after the trip. What's unique about the i-DREAMS system is that it takes into account different

future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	parameters from the vehicle, the environment and the driver to make a real-time assessment of driving risk and provide recommendations while driving in an intelligent way. After each trip, the i-DREAMS smartphone app adopts gamification principles to challenge and coach drivers towards sustainable behaviour change (a safer driving style). The proposed demonstration will include all components of the integrated suite of technologies (e.g., camera, CardioWheel, intervention display, wristband, GPS, event recorder, smartphone app, web dashboard, etc.). Participants will be able to test the technology and view (anonymized) driving results from drivers (bus, truck, car) currently using the technology across 5 different EU countries.
C - Innovative aspects of your demonstration	- Participants will be able to experience the power of the i-DREAMS real-time assistance technology in a driving simulator. - Participants will be able to interact with different i-DREAMS technologies, such as the i-DREAMS smartphone app, the i-DREAMS web dashboard and view real-time output from the system - An i-DREAMS instrumented car and bus will be available outside the demonstration area. Short trips will be organized where visitors can see the system live in operation
D - What are the main target groups of your demonstration?	Academics Public authorities Other target groups
E - Where will the demonstration take place?	Inside and outside
F - Maximum number of participants that can take part in one run of the demonstration?	15
G - How can TRA LISBON 2022 participants take part into the demonstration?	- Visitors for the indoor activity (driving simulator) are free to walk-in and participate (i.e. take a seat and drive in the simulator). During the indoor demo, at least two assistants will be available to support participants and answer any questions from participants, only one visitor can participate at a time. Around 6 to 8 visitors per hour can be included. - Visitors for the outdoor activity (on-road test) will be requested to register on paper for a specific timeslot to participate in the outdoor live demo. An instrumented bus or private vehicle will be available in which visitors will be able to participate as a passenger and observe the operation of the i-DREAMS system in real-life. I-DREAMS staff will be available to operate the vehicle, showcase the technology and answer any questions. In the instrumented vehicles, more visitors can participate simultaneously. In the instrumented car 3 participants can take place, while in the instrumented bus around 15 participants can participate simultaneously. During a short drive (about 20 minutes) the i-DREAMS technology will be demonstrated.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.4 - Safety and Security

Demo 9 | MZIGO – intelligent modular POD solutions

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	CLEANconnect +MZIGO
Organisation type:	Small or medium enterprise
Other partners / organisations involved in your proposal:	MZIGO
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Contact Person email	Joris.Claeys@CLEAN-connect.net
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	MZIGO – intelligent modular POD solutions
Grant number	1st phase EIC Accelerator approved, 2nd step in process for submission 15/06/2022
Programme	EIC Accelerator
A - Title of the demonstration:	MZIGO – intelligent modular POD solutions
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	MZIGO – intelligent modular POD solutions designed - engineered - connected Intelligent Physical & Digital Standardised Connectivity Realising Physical Internet & Ecological Consciousness modular, multimodal, swap body, physical & digital connected • integrating First/Last-Mile Distribution & Long-Distance Multimodal Cross-Border Transportation with Global Transport Sector servicing the Global Supply Chains (maritime shipping and ports), • linking shippers with retail sector or via City Hubs for e-commerce & retail distribution in cities & urban areas. Facilitating synchromodal, fit-for-purpose compatible transport and data standards, realising interoperability and net-zero ecological impact across SCS for: • cities as logistics hubs for integrated e-commerce package and retail distribution in CC&Ua from/to CHs • L-DMMc-b transport to/from large DC zones, ports and maritime operations.

	MZIGO 15ft containers are stackable or used as swap boxes, equipped with remote automated legs. Up to 3 containers can be linked for long distance transportation, using remote and online (CHaaS) InterLocks and QuickLocks for flatbed/trailer mounting or on rail wagons, IWW and SSS vessels. Equipped with optional IoT & telematics, inside battery compartment & roof solar panels for self-sustainable energy requirements & communication with MZIGO's Open Digital Platform, supporting SaaS, MaaS, BaaS, EaaS, CHaaS & other cloud-based services facilitating synchro-modality, cost-effective & ecological conscious routing, and space & equipment optimisation along supply chain segments. MZIGO is committed to regenerative design and materials use of its equipment pool and applies the principles of circular economy in its life-cycle products. MZIGO vision: smart, interoperable, compatible and efficient cargo equipment service provider across supply chain segments • simplifying distributed logistics • supporting CCAM (ACES) trends • single-source visibility • optimised utilisation of assets & infrastructure • autonomous vehicles, equipment & cargo handling • net-zero impact on environment & public health Resulting in ecological eco-systems, connecting and realising gains for all supply chain actors, shippers, receivers & cities. www.MZIGO.eu Follow us on LinkedIn & Twitter: @MZIGO.eu www.linkedin.com/company/mzigo-eu www.twitter.com/MZIGO.eu demonstration time: 15 minutes space needed: 5m2
C - Innovative aspects of your demonstration	MZIGO's innovation unfolds in its Physical & Digital Connectivity of modular PODs as Intelligent Transportation Solutions, ecological engineered, realising the Physical Internet. MZIGO containers are equipped with solar panels for energy independence, IoT & communication telematics, measuring POD & cargo conditions, geo-positioning for route & cargo optimisation, promoting ecological consciousness on (re-)routing decisions. MZIGO's PODs are designed as a modular set of which the containers can be connected up to 3 units, using remotely or online operated InterLock (CHaaS), integrated into its structure, for long-distance transportation. Communication with chassis locking system, using QuickLock technology, creating an extra layer of automation & security, functioning as swap boxes, fitted with automatic support legs, supporting fully autonomous operations at DCs & City Hubs. MZIGO solutions remove current frustrations & challenges: • non-compatible & -interoperable across supply chain segments • no synchronisation of routing, cargo & data • pollution, not-fit-for-purpose vehicles in densely populated areas • ocean containers stuck in hinterland (demurrage & geo-imbalance) • environmental, economic & social negative impacts MZIGO provides a holistic relieve for all parties caused by ongoing increase in e-commerce, requiring efficient interoperability between different supply segments. MZIGO facilitates the important roles of City Hubs, enablilng 'cities as logistics hubs'.
D - What are the main target groups of your demonstration?	End users Public authorities Other target groups
E - Where will the demonstration take place?	Inside and outside
F - Maximum number of participants that can take part in one run of the demonstration?	30
G - How can TRA LISBON 2022 participants take part into the demonstration?	demo's during the conference at the exhibit hall and requested participation in livinglabs

H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.3 - Sustainable Inter-urban and Urban Mobility 2.4 - Greening Freight Transport

Demo 10 | SAFE-UP: Proactive Safety systems demos

Organisation	
Organisation name (registered name and name in English).	Applus IDIADA
Organisation type:	Large company
Other partners / organisations involved in your proposal:	AIMSUN AUDI BOSCH CEA CERTH CHALMERS IKA THI TME TNO TUD TUE UNIFI VIF ZF BAX AUTOLIV CARIAD
Contact Person	
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Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	SAFE-UP
Grant number	861570
Programme	H2020
A - Title of the demonstration:	SAFE-UP: Proactive Safety systems demos
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if	SAFE-UP Project has 4 demos which some will be available in September - October 2022. Demo 1 aims to advance the occupant protection system and reduce the risk of severe occupant injuries in new seating positions by implementing an occupant monitoring system and an adaptive restraint system. The occupant monitoring system, which consists of cameras (see image below) will be installed in a VW Golf provided by THI. The vehicle will showcase how the occupant monitoring system detects occupant positions, postures and belt usages. The restraint system (i.e., seat belts, airbags) will be adapted according to the information provided by the occupant monitoring system. Demo 2 will include advanced sensor technology for reliable and robust object detection in all weather conditions, particularly for improving VRU detection under bad weather conditions with more accurate object detection and sensor data fusion. The prototype, consisting of 6 radars, 1 video camera, and 1 Lidar (see images below) will be installed in a VW Golf car provided by BOSCH. Demo 2 will be tested

possible, be no longer than 50 min.):	in different rain and fog conditions at THI's facilities. This will allow the vehicle to have an improved 360º view that will serve as input for the advanced vehicle dynamics systems for emergency braking/steering. Demo 3 will consist of a collision-free path planner which will allow the vehicle safety system to avoid crashes by combining autonomous emergency steering (AES) and autonomous emergency braking (AEB) manoeuvres based on the perceived environment information and risk management. To improve the safety performance, Demo 3 will integrate predicted information on road users (e.g. their intentions or motions) which will be integrated with the trajectory planning and control for accident avoidance by vehicle dynamics interventions. It will be built in a VW Golf car provided by BOSCH Demo 4 involves V2X communications to increase safety in situations involving cars and VRUs (Vulnerable Road Users). Both exchange information in real-time using ETSI ITS-G5 technology in order to detect collision situations and inform the drivers and the VRUs via timely warnings. Non-connected VRUs are detected by a fixed infrastructure unit (RSU) and this information is transmitted to the vehicles via V2X as well. In case the driver is not following the warning, the vehicle will use the V2X information from the VRUs and the RSU to feed its perception system and react autonomously to avoid the collision.
C - Innovative aspects of your demonstration	The demos will show new prototypes of safety systems and tools integrated in real vehicles to the public. The vehicles are functional and can reproduce adapted demo safety critical scenarios to show the functionality of the systems and the same time show the importance of the those systems and road safety and the mitigations in road accidents, injuries and fatalities. One of the objectives of SAFE-UP is to disseminate future road safety knowledge to the wide audience and general public.
D - What are the main target groups of your demonstration?	End users Other target groups
E - Where will the demonstration take place?	Inside and outside
F - Maximum number of participants that can take part in one run of the demonstration?	100
G - How can TRA LISBON 2022 participants take part into the demonstration?	in Demo 1 they can go inside the static vehicle and test the monitoring occupant system. For the other demos wide number of public can see at the same time the demos
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.2 - Intelligent, Resilient, and Cooperative Infrastructure Systems 3.4 - Safety and Security

Demo 11 | ACHILES enhanced AUDI Q2

Organisation	
Organisation name (registered name and name in English).	Vrije Universiteit Brussel
Organisation type:	University/research institution
Other partners / organisations involved in your proposal:	TECNALIA, TTTech, TTTech Auto, CONTINENTAL, IKERLAN, ELAPHE, AUDI, Fraunhofer LBF, IDIADA
Contact Person	
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Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	ACHILES
Grant number	824311
Programme	H2020
A - Title of the demonstration:	ACHILES enhanced AUDI Q2
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much	An enhanced AUDI Q2 battery electric vehicle is available to demonstrate the innovations related to a more efficient E/E control system architecture for a new generation of electric vehicles. The newly designed ACHILES powertrain is comprised of two motors, one for each front wheel, two inverters, one battery and a centralized control unit. The final and tested ACHILES Demo Vehicle weighs less, has increased autonomy and smoother dynamics for an overall lower cost. We would require around 10m2. In our vision the demo vehicle would not be driven around but it would stay static (indoors) and we would explain/show the different innovations 1 by 1 (see below). One session would take 20 minutes but it also can be "ad hoc" (on request). In

space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	addition we would like to show some videos and bring extra components to allow view from all directions.
C - Innovative aspects of your demonstration	The innovations include: - E-motors for the front-wheel direct drive and out-of-phase control which allows the car to operate the motor intentionally inefficiently, causing high losses and braking torque, in case the battery is fully charged, and regenerative braking cannot be used. Such a braking mode will be of paramount importance to effectively enable OEMs to downsize the friction brakes. - A novel torque vectoring technology, provides the vehicle with the ability to vary the torque to each motor driven wheel to improve the vehicle dynamics, efficiency and safety. - New wheel concept and electromechanical braking system: pure-by-wire brake system that uses of electric brake actuators and is driven by a motor at each wheel, instead of hydraulic fluid. The new wheel concept includes 20 inch wheels, noncorroding aluminum discs, redesigned brake calipers with novel retraction elements and newly developed software. - A Central Computing Platform which is highly modular and enables software functions to be re-used regardless of the car type. The CCP employs a multi-core approach, allowing to manage a defined number of SoCs (System on Chip) like a safety host (CPU1) and a performance host (CPU2). Furthermore the Vehicle Simulation Framework, a high fidelity multi domain model developed can also be demonstrated in an interactive way.
D - What are the main target groups of your demonstration?	End users Academics
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	15
G - How can TRA LISBON 2022 participants take part into the demonstration?	Via listening to the explanations and looking at the components/connected videos/simulation environment.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.1 - Carbon Neutrality and Zero-emission Vehicles 2.2 - Energy Efficiency, Electrification and Alternative Fuels

Demo 12 | Safe and Secure software updates for non-stop transport

Organisation	
Organisation name (registered name and name in English).	TTTech Auto AG
Organisation type:	LARGE ENTERPRISE
Other partners / organisations involved in your proposal:	IKERLAN, BARCELONA SUPER COMPUTING, MARELLI, CAF SIGNALLING, DLR, IAV
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Contact Person email	marcela.alzin@tttech.com
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	YES
E.U. Funded Project	
Project acronym	UP2DATE
Grant number	871465
Programme	HORIZON 2020
A - Title of the demonstration:	Safe and Secure software updates for non-stop transport
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and	The overall UP2DATE goal is to provide a new software paradigm for Safe and SEcure Over-the-Air software updates for Mixed-Criticality Cyber-Physical Systems (MCCPS). The paradigm has been implemented through a new software architecture that enables the runtime deployment of new (mixed-criticality) applications remotely (patching existing functions or extending the functionality) in heterogeneous computing platforms.

how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	In a short time, UP2DATE solution will be necessary in the transport sector due to two main reasons: (a) the devices will require more frequently security patches and (b) the increase in SW complexity to overcome new functionalities like autonomous driving that imply errors to be solved or validation of applications during application execution. Moreover, UP2DATE will be harmonized with new Safety and security standards regarding software updates and the use of high-performance platforms like UNECES WP29, ISO 24089… The demonstrator will enable the audience to know more details about UP2DATE solution, the results obtained in different use case (railway, automotive,…) and iterate with a research use case. This research use case will be a small bot that is running in the demonstrator area with the audience stopping whenever an obstacle is found. During execution audience will be able to launch software updates on this bot and check the actual power of UP2DATE solution. To sum up, the demonstration will be composed of a short presentation, some videos and the iteration with the research use case. The required time taking into account the set-up will be 20 minutes and it would be enough with 250m2 depending on the number of attendants.
C - Innovative aspects of your demonstration	Safe and secure updates of modules while the system is running.
D - What are the main target groups of your demonstration?	Industrial partners from transport sector interested on the technology developed within UP2DATE and the results obtained in real use cases (automotive and railway sector).
E - Where will the demonstration take place?	The demonstrator will take place in demonstration area inside, where a big screenshot should be required and wifi connection.
F - Maximum number of participants that can take part in one run of the demonstration?	There is no limitation as long as there is a screen where we envision to show the demo recorded as we explain it.
G - How can TRA LISBON 2022 participants take part into the demonstration?	For the time being we only thought they could get access to the server to decide which upload to execute or to initiate an upload. Depending on the demonstrator the could iterate with a SAFEBOT that is around while a software is updated within it.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Software updates in a safe way will be able to answer the need generated due to security threads. This is covered in Theme 3 (Innovative Infrastructure for Europe 2030) and SubTheme 3.4 (Safety and Security).
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	
1 – Smart Solutions and Society 2 – Green Mobility and Decarbonisation **3 - Innovative Infrastructures for Europe 2030** 4 – Policies and Economics for a Competitive Europe	
Please select up to two secondary subthemes (https://traconference.eu/conference-topics/):	SubTheme 3.4 (Safety and Security).

Demo 13 | MobileCityGame - Exploring the Mobility Transition towards 2050 with Serious Gaming

Organisation	
Organisation name (registered name and name in English).	Fraunhofer Institute for Systems and Innovation Research ISI
Organisation type:	University/research institution
Other partners / organisations involved in your proposal:	Karlsruhe Institute of Technology KIT, Takomat GmbH, Fraunhofer IOSB
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Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	MobileCityGame - Exploring the Mobility Transition towards 2050 with Serious Gaming
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	MobileCityGame offers an action impact experience for professionals and laypersons into city planning. It offers an intuitive frontend to introduce and visualize the complex interrelations, options, and limits of the design of urban mobility systems for citizens, educational institutions, science and urban planners. The users of MobileCityGame should thus gain playful insights into the options, limits, dependencies, and impacts of various urban mobility (policy) approaches. Urban decision-makers can also test and evaluate strategy and action options up to the year 2050 easily, quickly and cost-effectively. It thus complements common procedures for the preparation of transport development plans by adding a strategic and participatory component. MobileCityGame is a “serious game" based on validated environmental, travel and behavioural models. The modular system covers the following sub-areas: • Population and spatial development, • mobility services and infrastructures, • behavioural trends and new technologies, and • energy systems. The overall model forms the computational core of the application MobileCityGame for iOS and Android devices, connected to a user interface for the City of Karlsruhe. Players can choose from a variety of measures to influence and improve the local mobility system and the cityscape, develop future scenarios and experience their choices' effects along the basic principles of sustainability by

	visualizing impacts on the environment, on local acceptance and satisfaction as well as on local budgets. In the demonstration area 2 - 3 visitors can interactively test the game on provided tablets. Game developers will be present to explain the game background and functions and give support where necessary. One run of the game takes 10 to 20 minutes. Other visitors are invited to observe the plays. The plasma screen can be used to stream the gameplay of one of the tablets. At times when no play is running, an explanatory presentation with screenshots will be displayed on the screen. As the game is freeware, anyone can also download the game to their iOS or Android device. The slots at the Live Theatre will be used to present an overview of the conceptual and scientific background of the game.
C - Innovative aspects of your demonstration	To our knowledge, MobileCityGame is the first implementation of a full scale calibrated transportation model running on mobile devices, which allows the assessment of the wide range of transport sector, urban design and promotion measures. On iOS and Android devices a travel demand model covering travel generation, destination choice and mode choice allows to flexibly combine a wide range of different measures with a realistic assessment of their combined net impact on climate emissions, community financing and citizens' satisfaction. This is supported by dynamic modules on population, local attractiveness by trip purpose, infrastructures, vehicle fleets, new technologies and services, as well as the energy market. Reducing complexity while preserving only the essential interrelationships, interdependencies and impacts of different optional strategies and measures is the main scientific challenge of the MobileCityGame project. Fields of application and specific requirements of those are explored by involving potential users from public administration, mobility providers, and civil society and transferred into a suitable game design. In addition, with testing new participatory formats using the simulation game, MobileCityGame also provides information on the preferences of the players by evaluating the course of the game. Thereby valuable information for social science mobility re-search can be gained.
D - What are the main target groups of your demonstration?	End users Academics Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	6
G - How can TRA LISBON 2022 participants take part into the demonstration?	By interactively playing a serious game on site and by downloading the MobileCityPrototype to private iOS and Android devices.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.1 - Carbon Neutrality and Zero-emission Vehicles 2.3 - Sustainable Inter-urban and Urban Mobility

Demo 14 | An Iterative Risk Assessment Framework for Climate change Adaptation in Pavement and Maintenance Strategies: A software Demonstration

Organisation	
Organisation name (registered name and name in English).	Maxint
Organisation type:	Spin-off/start-up
Other partners / organisations involved in your proposal:	Technical University of Denmark
Contact Person	
Contact Person name	Shahrzad M. Pour
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Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	An Iterative Risk Assessment Framework for Climate change Adaptation in Pavement and Maintenance Strategies: A software Demonstration
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	This demonstration proposes an adaptive DSS (Decision Support System) on the basis of adaptivity to Climate change via a risk management framework. The solution uses reliable data from Danish Meteorological Institute (DMI) and other sources of uncertainties. With such combination, we can provide a framework that ensures robustness and real-time capabilities, immediately and long-term. Pavement at freezing temperatures exposed to warmer air over an extended period of time deteriorates and ultimately produces potholes. Streaming this type of information into decision-support tools is at the core of our solution. The impact of climate change has similar effects and requires proactive and prompt solutions. Stakeholder knowledge and strategy are accounted for. Regarding the methodology behind the risk assessment, Bayesian Believe Network(BBN) has been employed in an iterative manner. A study shows the lack of centrality, knowledge, time and funding are the current barriers to adaptive strategies for climate changes (Palutikof et al, 2019 (https://link.springer.com/article/10.1007/s10584-019-02445-2)). From this study, two drivers appeal to our demonstration, perception of risk and community preference, which accommodates the feasibility of the demonstration. A bottom-up approach, where operational and strategic actions will be made from

	the evaluation of vulnerabilities in road assets, is used, bridging the current gap between said units. The adaptive supportive tool we propose is a practical application by nature and a demonstration is thus paramount.
C - Innovative aspects of your demonstration	Our demonstration functions as a proof of concept application for a research-based startup, envisioned by Smart Assessment, Smart Integration via Robustness and Real-time capabilities with below innovations: Smart Assessment Aspect: This is realized via robustness & real-time capabilities. Robustness is obtained via using a Dynamic Risk Assessment Framework, which iteratively re-assess the risk of climate change on the road asset, upon changes in the vulnerability factors. Vulnerability factors are extreme precipitation, extreme temperature, sea level rise, and zero-point crossing. Robustness capability is achieved by reassessing the risk and proposing new cost-benefit analysis regarding the costs for the next maintenance horizon. Smart Integration Aspect: This happens by introducing the online communication to ingest the real-time data to the risk framework core. Messaging queues is the candidate platform. So different levels of planning (strategic(PMS), tactical/operational (MMS)) can inform the system. Online communication provides an opportunity to have a two-way communication between the levels, consequently, inform relevant subunits with the new result of the risk assessment for the next strategic/tactical/operational pavement and maintenance strategies.
D - What are the main target groups of your demonstration?	Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	100
G - How can TRA LISBON 2022 participants take part into the demonstration?	It is a software demonstration, and the data projector might might be required.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.2 - Intelligent, Resilient, and Cooperative Infrastructure Systems

Demo 15 | Innovative, safe electric kick-scooter and inflatable helmet

Organisation	
Organisation name (registered name and name in English).	Three o'clock
Organisation type:	Small or medium enterprise
Other partners / organisations involved in your proposal:	Punch Torino and DREEM EU Project partners
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Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	DREEM
Grant number	101007085
Programme	Horizon 2020
A - Title of the demonstration:	Innovative, safe electric kickscooter and inflatable helmet
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for	We propose the demonstration of the innovative electric kickscooter and inflatable helmet that have been designed and developed as part of the European DREEM project. The eks offers improved safety compared to existing micro-mobility vehicles and the helmet is ultra-protective and compact. They can deployed in the very short term on the market as testing in real conditions with users is currently taking place as part of the project in 3 pilot

one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	sites in Europe (Tractebel company in Brussels, University of Gothenburg, and in Turin by staff at 5T and Punch Torino). About 30 -45 minutes is estimated for the demonstration and 5m2. If possible, in addition to presenting the innovative features of the eks and helmet, participants could test ride the eks.
C - Innovative aspects of your demonstration	The DREEM eks is a new generation micro-mobility vehicle with many innovative features focused on safety and comfort. The collision alert system, thanks to a camera/sensor at the rear side of the scooter, ensures the possibility to see what happens behind and informs the driver about possible risky situations. The large deck, the rear turn indicators, the three large tires (10" front and 8" rear) and the availability of an on-demand inflatable helmet are also intended to improve safety. From a comfort perspective, the DREEM e-kickscooter can be folded and brought as a suitcase thanks to the front handle. The Bumpair helmet is an innovative helmet that uses the shock-absorption properties of the air to provide an ultra-protective and ultra-compact helmet. Its patented technology is the result of more than 50 years of scientific research on airbag safety products and three years of specific engineering research. From a safety perspective, the design ensures the protection of the brain up to four times more than the recommendations of the European standards for safety and protection. The air's capacity for deformation and instantaneous absorption allows the Bumpair helmet to absorb the shock eight times more effectively than other conventional helmets. Its ultra-light weight (300g) and ground-breaking design allow the user to deflate it and store it in any pocket or bag until the next use, which makes it especially attractive for urban commuters.
D - What are the main target groups of your demonstration?	End users Public authorities Other target groups
E - Where will the demonstration take place?	Inside and outside
F - Maximum number of participants that can take part in one run of the demonstration?	8
G - How can TRA LISBON 2022 participants take part into the demonstration?	Participants can text ride the electric kickscooter and test the helmet, providing their insights before, during and after the drive.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.3 - Sustainable Inter-urban and Urban Mobility

Demo 16 | Sup\porting an Equitable Road Infrastructure Future with a National Agent Based Model

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	Arup
Organisation type:	Large company
Other partners / organisations involved in your proposal:	Transport Infrastructure Ireland
Contact Person	
Contact Person name	Gerry Casey
Contact Person address	Arup, London, UK
Contact Person country	UK
Contact Person telephone	+44 7967 762658
Contact Person email	gerard.casey@arup.com
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	Supporting an Equitable Road Infrastructure Future with a National Agent Based Model
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one	The City Modelling Lab have developed a national scale model to simulate a variety of potential transport changes. Using a range of supporting data and developed tooling and software, we have tested changes such as the impact of a number of potential pricing futures on different communities across the network and explored innovative ways to pilot new solutions for the Irish public. Our work has enabled TII to assess the consequences of potential transport policies, seeking to improve a wider set of beneficial outcomes, including reductions in carbon emissions and service reliability for people. Our work will result in greater foresight for TII into the enterprise risks challenges and opportunities the national road network and will support a robust strategy for the future of mobility the national road network in Ireland. It will also seek to maximise the funding available for transportation infrastructure and other taxation funded sectors, such as health and education seeking to ensure that the needs of the many and the few are considered throughout; and that the future that TII wishes to embody will provide for a more fair and equitable transport network for Irish users. The new strategy will not only

run should, if possible, be no longer than 50 min.):	provide mutually advantageous benefits to the TII and the Irish Public, but also offer greater transparency and clarity to public stakeholders. One demonstration = 15mins
C - Innovative aspects of your demonstration	National agent and activity based model - one of the largest of its kind. Used for innovative scenario testing for a challenging and topical policy problem.
D - What are the main target groups of your demonstration?	End users Academics Public authorities
E - Where will the demonstration take place?	Inside and outside
F - Maximum number of participants that can take part in one run of the demonstration?	20
G - How can TRA LISBON 2022 participants take part into the demonstration?	Watching, listening and asking questions!
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	4 - Policies and Economics for a Competitive Europe
4 - Policies and Economics for a Competitive Europe	
Please select up to two secondary subthemes:	4.1 - Transport Planning and Policy for Recovery and Resilience 4.2 - Innovative Business and Governance Models

Demo 17 | MovingLab

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	German Aerospace Center
Organisation type:	University/research institution
Other partners / organisations involved in your proposal:	none
Contact Person	
Contact Person name	Matthias Heinrichs
Contact Person address	Rudower Chaussee 7, 12489 Berlin
Contact Person country	Germany
Contact Person telephone	+493067055174
Contact Person email	matthias.heinrichs@dlr.de
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	MovingLab
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	The MovingLab is a sytem to collect tracking information of movements for enhanced trip surveys. Based on the tracking information start and destination of trips, mode of transport and trip purpose for frequently visited destinations are computed. Based on these information specific web-based surveys can be presentet, fitting apropirate location (geo-fence) and person-attributes, e.g. bicycle users riding over an accident hotspot. The results of these surveys are dispayed on a smart table presenting an interactive map, which can be zoomed/panned/tilted and filtered on several attributes like mode, person age trip length to interpret the obtained data intuetively. This table with some example data can be presented at the TRA2022. Furthermore we can start a tracking campaign among the conference participants and display their mobility patterns during the TRA2022 in Lisbon from the second day on.

C - Innovative aspects of your demonstration	The MovingLab has three innovative main aspects: First, it tracks of mobility behaviour and automattically determents trips and modes, which are verified by the user via an interactive smartphone App or web-site. Second, it presents geo-fenced and person-group specific questionaries to obtain knowledge about the motives for route and mode choice. Third, the results are interactivly displayed to researchers and customers to analyze and explain the findings of a survey.
D - What are the main target groups of your demonstration?	End users Academics Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	10
G - How can TRA LISBON 2022 participants take part into the demonstration?	The participants can watch the data on the smarttable and browse through the presented campaigns by themselve. If a tracking demonstration among TRA participants is performed. the participants can analyze and see the collected data from the previous day(s).
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.1 - User Focus and Inclusive Mobility 1.3 - Innovation and the Use of Data ITS and AI

Demo 18 | World's first proven electric tugboat ZEETUG30

Organisation	
Organisation name (registered name and name in English).	Navtek Naval Technologies
Organisation type:	Small or medium enterprise
Contact Person	
Contact Person name	Eser Tekin
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Contact Person country	Turkey
Contact Person telephone	+905428150976
Contact Person email	esert@navtek.net
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	World's first proven electric tugboat ZEETUG30
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	NAVTEK Naval Technologies has developed a series of electric tugboat designs with the first already accumulating more than 750 days of service. Gisas Power was the world's first fully electric harbour tug, built to NAVTEK's ZEETUG30 design (see www.zeetug.com). It has been operating in Tuzla Bay, Turkey since Q1 2020 with Corvus-supplied batteries on board and is recharged in an hour from a dedicated station at the quayside. A first 750 days of service, Gisas Power completed 1,981 jobs with more than 2,500 motor running hours and accumulative charging of around 492 kWh. A remarkable 410 tonnes of CO2 and 1 tonne NOx avoided after 750 days. Furthermore, public health impacts of PM (Particulate Matter) and similar pollution and significant marine noise pollution have also been avoided. Its operating expenditure savings are impressive too, being 50% cheaper on fuel than a tug using marine diesel oil, and maintenance and repair costs are 79% less. A key aspect of this project was deploying a quick-charging station to keep the zero-emissions electric tug in full operation. This infrastructure is available to charge electric-powered vessels in a port, including a fleet of ZEETUGs under construction at NAVTEK's new shipyard Turkey. We will run a video about the ZEETUG30 and deliver presentations on the results of more than 750 days of operation during TRA 2022 as a class proven commercial vessel.
C - Innovative aspects of your demonstration	Designing such a tugboat was a highly challenging project that involved nearly two years of studying normal conventional dizel powered tugboats to optimise the required energy demand for the daily operation of such a small and powerful (1400KWh) vessel. That involves highly sophisticated energy and operation management, intelligent software development, battery configuration and design of the vessel. Furthermore, onshore power supply was another challenging task. We managed to build a Quick Charging Station that can charge the vessel 90% in 52 minutes. The vessel itself and the

	onshore quick charging station combined are a unique innovation as there is no other proven vessel yet to be built in the world.
D - What are the main target groups of your demonstration?	End users
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	2
G - How can TRA LISBON 2022 participants take part into the demonstration?	As observers
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.1 - Carbon Neutrality and Zero-emission Vehicles 2.2 - Energy Efficiency, Electrification and Alternative Fuels

Demo 19 | Traffic Speed Deflectometer

Organisation	
Organisation name (registered name and name in English).	Greenwood Engineering
Organisation type:	Small or medium enterprise
Contact Person	
Contact Person name	Pernille Jeppesen
Contact Person address	H. J. Holstvej 3-5C, 2605 Brondby
Contact Person country	Denmark
Contact Person telephone	+4560559899
Contact Person email	pernille@greenwood.dk
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	Traffic Speed Deflectometer
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	Continuous bearing capacity measurements
C - Innovative aspects of your demonstration	Continuous bearing capacity measurements, replacing dangerous and traditionally point measurements as FWD. The unique TSD technology is developed by Greenwood Engineering and has initiated a shift of paradigm in global pavement engineering

D - What are the main target groups of your demonstration?	End users Public authorities
E - Where will the demonstration take place?	Strictly outside
F - Maximum number of participants that can take part in one run of the demonstration?	4
G - How can TRA LISBON 2022 participants take part into the demonstration?	They can get a demonstration inside the truck
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.1 - Single Market for TEN-T with the Wider Europe

Demo 20 | AWARD project overview

Organisation	
Organisation name (registered name and name in English).	AWARD H2020 project
Organisation type:	Other
Other partners / organisations involved in your proposal:	1). EasyMile: www.easymile.com, 2). Continental Teves AG & Co. OHG: https://www.continental.com, 3). Kamag Transporttechnik GmbH & Co.KG, 4). Kamag http://www.kamag.com, 5). Terberg Benschop BV: www.terbergbenschop.nl/en, 6). Dematic NV (part of Kion Group): https://www.kiongroup.com/en/, 7). DFDS A/S (DFDS): www.dfds.com, 8). Cerema: https://www.cerema.fr/fr, 9). VTT Technical Research Centre of Finland Ltd (VTT): www.vtt.fi, 10). AIT Austrian Institute of Technology GmbH: www.ait.ac.at, 11). Applied Autonomy AS (Applied Autonomy): www.appliedautonomy.no, 12). DigiTrans GmbH (DigiTrans):https://www.testregion-digitrans.at/, 13). ENIDE SOLUTIONS, S.L. (ENIDE): http://www.enide.com, 14). IRU PROJECTS ASBL (IRU): www.iru.org, 15). CARA: www.cara.eu, 16). Navtech Radar Ltd - Short Name to Consortium Navtech: https://navtechradar.com/, 17). Business Upper Austria – OÖ Wirtschaftsagentur GmbH BIZ-UP: http://www.biz-up.at 18). ITS Norway: https://its-norway.no/, 19). LINZ CENTER OF MECHATRONIC (LCM): http://www.lcm.at, 20). FH OOE FORSCHUNGS & ENTWICKLUNGS GMBH, (LOG): www.fh-ooe.at; www.logistikum.at, 21). Avinor: https://avinor.no/en/, 22). ADASKY LTD: www.adasky.com, 23). Foresight Automotive Ltd.: https://www.foresightauto.com/, 24). BRP-Rotax GmbH & CoKG "ROTAX": www.rotax.com, 25). CertX AG CertX: www.certx.com, 26). Ottopia Technologies Ltd.: https://ottopia.tech, 27). AUSTRIATECH - GESELLSCHAFT DES BUNDES FÜR TECHNOLOGIEPOLITISCHE MASSNAHMEN GMBH (ATE): www.austriatech.at, 28). Schenker & Co AG / DB Schenker: https://www.dbschenker.com/at-de, 29). GIE FRANCE AVIATION CIVILE SERVICES (FRACS): www.fracs.aero
Contact Person	
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Contact Person country	Spain
Contact Person telephone	*34657759948
Contact Person email	vesna.boskovic@enide.com
Demonstration	

Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	AWARD
Grant number	101006817
Programme	This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006817.
A - Title of the demonstration:	AWARD overview
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	Max time: 40min Space: 4m2 DEMO: *We will give a presentation on TractEasy autonomous tow tractor and AWARD-H2020 project, explaining the relation between the two. TractEasy, the* driverless vehicle developed by the project coordinator EasyMile (https://easymile.com/) and TLD (http://www.tld-gse.com) is able of towing 25t to allow smart logistics in an ¨industry 4.0¨ environment. TractEasy is used to perform a demo of the use cases of AWARD H2020, mainly its usage at ports and airports. BACKGROUND: Connected and automated driving systems for commercial vehicles have great potential. They can improve the safety and efficiency of freight transport both in confined areas and in mixed traffic (hub-to-hub) and make logistics operations more competitive. Significant progress has been made in the field of autonomous truck driving with numerous prototypes. However, there is still a gap to fill to ensure the uptake of this breakthrough technology and the future advent of an overall autonomous logistic chain. The current inabilities of autonomous heavy-duty vehicles to work with the right safety and functional level for 24/7 availability (e.g., harsh weather conditions) hinder their deployment, along with the lack of a harmonized regulatory framework. Against this background, the AWARD project (All-Weather Autonomous Real logistics operations and Demonstrations) will develop and enable a safe autonomous transportation system in a wide range of real-life use cases in a variety of different scenarios. This encompasses the development of an autonomous driving system (ADS) capable of handling adverse environmental conditions such as heavy rain, snowfall, and fog. The ADS solution will be based on multiple sensor modalities to address 24/7 availability. The ADS will then be integrated into multiple vehicle types used in low-speed areas. To achieve the AWARD objectives, a consortium of 29 partners from 12 countries is teaming up, coordinated by Easymile. Together, the partners have extended relevant experience in the development and worldwide deployment of connected and automated transport systems.
C - Innovative aspects of your demonstration	The AWARD project (All-Weather Autonomous Real logistics operations and Demonstrations) will develop and enable a safe autonomous transportation system in a wide range of real-life use cases in a variety of different scenarios. This encompasses the development of an autonomous driving system (ADS) capable of handling adverse environmental conditions such as heavy rain, snowfall, and fog.
D - What are the main target groups of your demonstration?	End users Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	50

G - How can TRA LISBON 2022 participants take part into the demonstration?	They can watch, listen, ask questions.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.2 - Connected and Automated Multimodal Mobility 1.4 - Efficient and Innovative Logistics

Demo 21 | V_REX – Emission Free Offshore Transport

Organisation	
Organisation name (registered name and name in English).	V-Rex GmbH
Organisation type:	Spin-off/start-up
Other partners / organisations involved in your proposal:	V-REX is an Independent Company, supported by FFG (Austrian R&D Fund)
Contact Person	
Contact Person name	Peter Steinkogler
Contact Person address	Teichweg 1; 4813 Altmünster
Contact Person country	Austria
Contact Person telephone	+4369913334333
Contact Person email	peter@v-rex.at
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
A - Title of the demonstration:	V_REX – Emission Free Offshore Transport
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	V_REX stands for a new approach to emission free offshore transport. Part of the Powerpointpresentation will be the: - unique Sailconcept of the V_REX which uses forces on a sailboat in the most efficient way -Technical innovations which are necessary to turn the Concept into a finished Product - automized System to handle the vessel - the 3 Steps of Development: - Sport-Vessel – Prototype already existing - Ocean Racer – Upscale Version of the Sport-Vessel for Offshore use - Cargo Transporter – emission free offshore transportation vessel - Possibilities and Chances and applications for an emission free Cargo Transporter V_REX CARGO - Status quo of the project incl. Introduction of our finished V_REX Prototype. - Next steps of the Project and possibilities to participate or collaboration with V_REX company. One presentation will last appr. 45 min. Our understanding is that we get once per day (part of ordered Demonstration Typ II Indoor) the chance to speak in front of a auditorium. From our ordered boot (Demonstration Typ II Indoor) it would be possible to speak in front of 5-10 People. (6m² Space of the Booth)

C - Innovative aspects of your demonstration	Innovation aspects come from a patented Sail-Concept which use the forces on a sailboat in the most efficient way. The concept leads to high vessel-speeds which make the product very interesting for emission free transportation. For handling the vessel, we use modern automized systems to support the pilot or, in the future sail autonomically. V_REX combines a new way how to sail. Unused knowledge from the nature transferred into a modern and patented technology. Automatization and high tech composite-materials are the add on of our V_REX Cargo. And by doing so this new concept for transport goods on a much faster vessel than any other offshore cargo transportation sets a new level only by using electricity generated by water turbines, photovoltaic and of course wind power.
D - What are the main target groups of your demonstration?	End users Academics Public authorities Other target groups
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	10
G - How can TRA LISBON 2022 participants take part into the demonstration?	visit the stand, participate on the daily presentations, take part on the discussion
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	2 - Green Mobility and Decarbonisation
2 - Green Mobility and Decarbonisation	
Please select up to two secondary subthemes:	2.1 - Carbon Neutrality and Zero-emission Vehicles 2.4 - Greening Freight Transport

Demo 22 | Smart SUSA Valley

Organisation	
Organisation name (registered name and name in English).	TELT sas
Organisation type:	Public bodies (e.g., authorities, agencies)
Contact Person	
Contact Person name	iacopo faggiani
Contact Person address	via monti 9 torino
Contact Person country	italy
Contact Person telephone	00393384978338
Contact Person email	iacopofaggiani@gmail.com
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	TELT TURIN LION TUNNEL LINE
Grant number	8 BLN
Programme	SMART SUSA VALLEY, DIGITAL TO HELP PEOPLE
A - Title of the demonstration:	SMART SUSA VALLEY
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is	Upon our return to a world connected through travel, we have to face the challenge of respecting the needs of both the environment and of the transport industry. TELT has joined forces with Demos Helsinki to propose a renewed interpretation of public transportation infrastructure, seen as a way to reconnect regions across different planes of reference. This interpretation, based on the EU Green Deal strategy, sees the European map as a cross-border network that encourages and enables multimodal transport projects, while respecting the environment and enabling local economies to flourish. The key objectives of this strategy are (1) to support the different regions' decarbonisation goals and to promote green growth while also (2) ensuring a fair transition for the communities and the travel

approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	industry alike. Starting from this project, the promoters invite people to consider the role of mobility infrastructure for passengers, not just ambitious engineering works. They also shape the development and lifestyles of local communities. Furthermore, they represent one of the most tangible aspects of national political economies that can decide the fate of entire regions. European infrastructures are promoted and financed for the common good, in order to increase the capacity to move sustainably across regions, to link labour markets, to grant fast access to the resources of the Union and of course, to facilitate intercultural exchanges.
C - Innovative aspects of your demonstration	• Green Mobility and Decarbonisation - SUSTAINABLE INTERURBAN AND URBAN MOBILITY • Innovative Infrastructure for Europe 2030 - INTELLIGENT, RESILIENT AND COOPERATIVE INFRASTRUCTURE SYSTEMS
D - What are the main target groups of your demonstration?	End users Academics Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	100
G - How can TRA LISBON 2022 participants take part into the demonstration?	yes
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.2 - Connected and Automated Multimodal Mobility

Demo 23 | Inclusive crash safety

Organisation	
Organisation name (registered name and name in English).	Swedish National Road and Transport Research Institute - VTI
Organisation type:	University/research institution
Other partners / organisations involved in your proposal:	Virutal
Contact Person	
Contact Person name	Eva Ankarberg
Contact Person address	Olaus Magnus väg 35
Contact Person country	Sverige
Contact Person telephone	+46703778243
Contact Person email	eva.ankarberg@vti.se
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	Virtual
Grant number	768960
Programme	Horizon 2020
Demonstration	
A - Title of the demonstration:	Gender equality in crash safety
B- Brief description of the proposed demonstration referring to the feasibility of	We will display two concept prototypes of a seat evalution tools that are based on an average male and an average female. Visitors will be able to meet the devleopers and watch videos of the tools being in use. We will also display 3 D-printed versions in scale 1:16 of the tool, also a male version.

application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	For this we need approximately 4 square meters. There will be no specific sessions, vistors are welcome to come and go as they please.
C - Innovative aspects of your demonstration	Display of concept prototypes of seat evalutation tools that represents both genders.
D - What are the main target groups of your demonstration?	End users Academics Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	15
G - How can TRA LISBON 2022 participants take part into the demonstration?	They are welcome to touch and feel the tools and talk to the developers. Plus watch videos of the tool in action.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.1 - User Focus and Inclusive Mobility

Demo 24 | Pushing the implementation of Advanced Air Mobility with focus on Medical Emergency uses cases

[Dismissed due to lack of registration]

Organisation	
Organisation name (registered name and name in English).	CEiiA – Centro de Engenharia e Desenvolvimento
Organisation type:	Non-profit organisation
Other partners / organisations involved in your proposal:	
Contact Person	
Contact Person name	Inês Folhadela Furtado
Contact Person address	Porto
Contact Person country	Portugal
Contact Person telephone	916849247
Contact Person email	mailto:emailines.furtado@ceiia.com
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	No
Demonstration	
A - Title of the demonstration:	Pushing the implementation of Advanced Air Mobility with focus on Medical Emergency uses cases
B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is	This project is focused on developing enabling technologies for Advanced Air Mobility and exploit the benefits of cargo drones for Emergency Medical Response and Logistics.

approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	
C - Innovative aspects of your demonstration	We are integrating horizontal with vertical mobility and we are focused on creating Safety Devices and Mechanisms to apply for the approval of local and European authorities to start flying closer to areas that fall under the medium and high-risk categories.
D - What are the main target groups of your demonstration?	End users Public authorities
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	7
G - How can TRA LISBON 2022 participants take part into the demonstration?	Attending
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	1 - Smart Solutions and Society
1 - Smart Solutions and Society	
Please select up to two secondary subthemes:	1.4 - Efficient and Innovative Logistics

Demo 25 | Presentation of BIKINNOV - CTI - Center for Technology and Innovation

Organisation	
Organisation name (registered name and name in English).	BIKINNOV – BIKE VALUE INNOVATION CENTER ASSOCIATION
Organisation type:	Non-profit organisation
Other partners / organisations involved in your proposal:	AM2R and ABIMOTA
Contact Person	
Contact Person name	Gil Nadais
Contact Person address	Rua Ramiro Soares de Miranda 133 Brejo, 3750-866 Borralha
Contact Person country	Portugal
Contact Person telephone	+351962096989
Contact Person email	geral@bikinnov.pt
Demonstration	
Is the proposed demonstration linked to a project that has received E.U. funding?	Yes
E.U. Funded Project	
Project acronym	AM2R
Grant number	AM2R - 2022 - CO5i0101-02
Programme	PRR
Demonstration	
A - Title of the demonstration:	BIKINNOV – BIKE VALUE INNOVATION CENTER - ASSOCIATION

B- Brief description of the proposed demonstration referring to the feasibility of application in the current and future context of transport and mobility. (please also refer to how much time is needed for one run of the demonstration and how much space (m2) is approximately necessary; please note that the overall time for one run should, if possible, be no longer than 50 min.):	The BIKINNOV - Bike Value Innovation Center - Association is a collective non-profit entity. BIKINNOV exists for the production, dissemination and transmission of knowledge, oriented to companies in the sector of operation and to the creation of economic value, contributing to the pursuit of specialization objectives of the Portuguese two-wheel Industry: BIKINNOV provides technical and technological support to companies in the two-wheel sector, promoting the use of technology and innovation as tools for improving business competitiveness, increasing added value and qualifying supply, in particular small and medium-sized enterprises (SMEs). BIKINNOV operates in the intermediate space of the innovation system, fostering the development and integration of new processes, services or products based on scientific and technological knowledge and high added value.
C - Innovative aspects of your demonstration	BIKINNOV provides technical and technological support to companies in the two-wheel sector, promoting the use of technology and innovation as tools for improving business competitiveness, increasing added value and qualifying supply, in particular small and medium-sized enterprises (SMEs).
D - What are the main target groups of your demonstration?	Other target groups
E - Where will the demonstration take place?	Strictly inside
F - Maximum number of participants that can take part in one run of the demonstration?	50
G - How can TRA LISBON 2022 participants take part into the demonstration?	Participants who visit TRA LISBON 2022 can participate.
H - Alignment with TRA LISBON 2022 themes and subthemes:	Yes
I - Please select the main theme of TRA LISBON 2022 aligned with your demonstration:	3 - Innovative Infrastructures for Europe 2030
3 - Innovative Infrastructures for Europe 2030	
Please select up to two secondary subthemes:	3.2 - Intelligent, Resilient, and Cooperative Infrastructure Systems

Annex II | Technical tours practical information

Co-funded by the Horizon 2020 programme of the European Union
GA 859887 - MOVING TOGETHER

TT1 | Pilar 7 Bridge Experience

Schedules:

Monday, 14 November 2022: 15:00 – 15:45 (Departure: 14:45)

Tuesday, 15 November 2022: 15:00 – 15:45 (Departure: 14:45)

Wednesday, 16 November 2022: 15:00 – 15:45 (Departure: 14:45)

Thursday, 17 November 2022: 10:00 – 10:45 (Departure: 9:45)

Limit per visit: 30 pax

Place: Avenida da Índia, Pilar 7 da Ponte 25 de Abril, 1349-028 Lisboa

Distance: app. 0,6 km

Important information

- Please be at the Technical Tour meeting point 10 minutes before departure. Joint walk to the Pilar 7 Bridge Experience.
- This tour is suitable for people with disabilities, an accompanying person is suggested.
- Due to the visit to secure areas during the tour, all participants must bring identification (Passport or ID Card) to validate the access at the entrance prior to the visit.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT2 | CARRIS Museum

Schedules:

Tuesday, 15 November 2022: 15:00 – 16:00 (Departure: 14:45)

Wednesday, 16 November 2022: Time: 15:00 – 16:00 (Departure: 14:45)

Limit per visit: 25 pax

Place: Rua Primeiro de Maio, 101 1300-472 Alcântara, Lisboa

Distance: app. 0,6 km from CCL

Important information

- Please be at the Technical Tour meeting point 10 minutes before departure. Joint walk to the CARRIS Museum.
- This tour is suitable for people with disabilities, an accompanying person is suggested.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT3 | Traffic Control Centre

Schedules:

Tuesday, 15 November 2022: 9:00 – 9:30 (Departure: 8:45)

Wednesday, 16 November 2022: 9:00 – 9:30 (Departure: 8:45)

Thursday, 17 November 2022: 9:00 – 9:30 (Departure: 8:45)

Limit per visit: 15 pax

Place: Praça da Portagem, 2809-013 Almada

Distance: app. 7.1 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- Panoramic photographs can be taken, but video recording is prohibited.
- The use of a mask inside the operating room is mandatory.
- Due to the existence of secure areas during the tour, all participants must bring ID Card to validate the access at the entrance prior to the visit.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT4 | Railway Operational Control Centre

Schedules:

Tuesday, 15 November 2022: 9:00 – 10:00 (Departure: 8:30)

Wednesday, 16 November 2022: 9:00 – 10:00 (Departure: 8:30)

Thursday, 17 November 2022: 9:00 – 10:00 (Departure: 8:30)

Limit per visit: 15 pax

Place: R. do Vale Formoso 104, 1950-258 Lisboa

Distance: app. 13.6 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- During the visit it is absolutely forbidden: the use of cell phones, take pictures or film.
- Due to the existence of secure areas during the tour, all participants must bring ID Card to validate the access at the entrance prior to the visit.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT5 | The Centre for Coordination and Control of Maritime Traffic and Safety (VTS)

Schedules:

Tuesday, 15 November 2022: 9:00 – 9:30 (Departure: 8:30)

Tuesday, 15 November 2022: 9:30 – 10:00 (Departure: 9:00)

Wednesday, 16 November 2022: 9:00 – 9:30 (Departure: 8:30)

Wednesday, 16 November 2022: 9:30 – 10:00 (Departure: 9:00)

Thursday, 17 November 2022: 9:00 – 9:30 (Departure: 8:30)

Thursday, 17 November 2022 9:30 – 10:00 (Departure: 9:00)

Limit per visit: 20 pax

Place: Torre VTS (https://goo.gl/maps/guMiTHrtFwATwL359)

Distance: app. 8 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- Due to the existence of secure areas during the tour, all participants must bring ID Card to validate the access at the entrance prior to the visit.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT6 | Lisbon Air Traffic Control Center (NAV)

Schedules:

Tuesday, 15 November 2022: 15:00 – 15:30 (Departure: 14:30)

Tuesday, 15 November 2022: 15:30 – 16:00 (Departure: 15:00)

Limit per visit: 20 pax

Place: NAV Portugal, Aeroporto Humberto Delgado, R. D Edifício 121, 1700-008 Lisboa

Distance: app. 12.6 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- Due to the existence of secure areas during the tour, all participants must bring ID Card to validate the access at the entrance prior to the visit.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT7 | Metro Lisboa

Schedules:

Tuesday, 15 November 2022: 8:30 – 10:00 (Departure: 8:15)

Wednesday, 16 November 2022: 8:30 – 10:00 (Departure: 8:15)

Thursday, 17 November 2022: 8:30 – 10:00 (Departure: 8:15)

Limit per visit: 30 pax

Place: Line Cais do Sodré – Santos

Distance: up to 5 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is not suitable for people with disabilities.
- Personal Protection Equipment is required and will be provided at the beginning of the tour.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT8 | Lisbon Cruise Terminal

Schedules:

Wednesday, 16 November 2022: 9:00 – 9:30 (Departure: 8:30)

Wednesday, 16 November 2022: 9:30 – 10:00 (Departure: 9:00)

Wednesday, 16 November 2022: 10:00 – 10:30 (Departure: 9:30)

Limit per visit: 25 pax

Place: Terminal de Cruzeiros de Lisboa, Doca Jardim do Tabaco Terminal de Cruzeiros de Lisboa, Av. Infante Dom Henrique, 1100-651 Lisboa

Distance: app. 6.3 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- Due to the existence of secure areas during the tour, all participants must bring ID Card to validate the access at the entrance prior to the visit.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT9 | Lisbon Intelligent Management Platform (PGIL)

Schedules:

Tuesday, 15 November 2022: 15:00 – 16:00 (Departure: 14:30)

Wednesday, 16 November 2022: 14:30 – 15:30 (Departure: 14:00)

Limit per visit: 25 pax

Place: CIUL - Picoas Plaza Núcleo 6-E,1º, R. Viriato 13E, 1050-233 Lisboa

Distance: app. 7.2 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT10 | GIRA Lisbon Bicycles

Schedules:

Tuesday, 15 November 2022: 15:00 – 16:00 (Departure: 14:30)

Wednesday, 16 November 2022: 15:00 – 16:00 (Departure: 14:30)

Limit per visit: 25 pax

Place: Avenida Infante Dom Henrique 328 Lisboa

Distance: app. 12.5 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is barrier-free accessible.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.

TT11 | MobiCascais

Schedules:

Tuesday, 15 November 2022: 15:00 – 17:00 (Departure: 14:30)

Wednesday, 16 November 2022: 15:00 – 17:00 (Departure: 14:30)

Limit per visit: 20 pax

Place: Mobi Cascais

Distance: app. 25 km from CCL

Important information

- A shuttle bus from Lisboa Congress Centre will be provided. Please be at the Technical Tour meeting point 10min before departure.
- This tour is not suitable for people with disabilities.
- The provider reserves the right to cancel this Technical Tour due to a low participant number. In this case all payments already made will be refunded.